United States
Securities and Exchange Commission
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2016
or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 1-14036

DST Systems, Inc.
(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	**43-1581814** (I.R.S. Employer identification no.)
333 West 11th Street, Kansas City, Missouri (Address of principal executive offices)	**64105** (Zip code)

(816) 435-1000
Registrant's telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each Exchange on which registered
Common Stock, $0.01 Per Share Par Value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web-site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

Aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant as of June 30, 2016:
Common Stock, $0.01 par value—$3,824,656,457

Number of shares outstanding of the Registrant's common stock as of January 31, 2017:
Common Stock, $0.01 par value—31,546,703

Documents incorporated by reference: Portions of our Proxy Statement to be filed on or about on March 28, 2017 are incorporated into Part III

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The brand, service or product names or marks referred to in this Annual Report are trademarks or services marks, registered or otherwise, of DST Systems, Inc. or its consolidated subsidiaries.

PART I

Item 1. Business

DST Systems, Inc. is a global provider of technology-based information processing and servicing solutions. References below to "DST," "the Company," "we," "us" and "our" may refer to DST Systems, Inc. exclusively or to one or more of our consolidated subsidiaries. We provide business solutions through a unique blend of industry knowledge and experience, technological expertise and service excellence to clients in the asset management, brokerage, retirement, healthcare and other markets. The Company was formed in 1969. Through a reorganization in August 1995, we are a corporation organized in the State of Delaware.

NARRATIVE DESCRIPTION OF BUSINESS

DST uses our proprietary software applications to provide sophisticated information processing and servicing solutions through strategically unified data management and business processing solutions to clients globally within the asset management, brokerage, retirement, healthcare and other markets. Our wholly-owned data centers provide the secure technology infrastructure necessary to support our solutions.

We manage our business through two operating segments: Financial Services and Healthcare Services. Our investments in equity securities, private equity investments, real estate and certain financial interests have been aggregated into an Investments and Other segment.

In connection with the execution of our strategic plan, which includes focusing on the Financial Services and Healthcare markets, we sold our North American Customer Communications business on July 1, 2016. Additionally, during 2016, our Board of Directors approved a plan for management to divest of our United Kingdom ("U.K.") Customer Communications business. As a result of this significant shift in the strategic direction of our operations, we have classified the results of the Customer Communications businesses sold and being sold as discontinued operations in our consolidated financial statements for all periods presented. The net after-tax proceeds from the sale are being used in accordance with the Company's capital plan, including investments in the business, share repurchases, strategic acquisitions, debt repayments and other corporate purposes.

During 2016, we acquired all of the membership interests of Kaufman Rossin Fund Services LLC ("KRFS"), a full-service provider of specialized hedge fund administration services to the global financial community. KRFS' hedge fund services include accounting and valuation, back-office outsourcing, investor services, treasury services, and customized reporting.

For the year ended December 31, 2016, DST's operating revenues were $1,474.4 million. Segment operating revenues, as a percentage of consolidated operating revenues (excluding intersegment revenues), were 71.0%, 28.9%, and 0.1% contributed from the Financial Services, Healthcare Services, and Investments and Other segments, respectively.

FINANCIAL SERVICES SEGMENT

Through the Financial Services segment, we provide investor, investment, advisor/intermediary and asset distribution services to companies within the financial services industry. Utilizing our proprietary software applications, we offer our clients information processing solutions to support direct and intermediary sales of mutual funds, alternative investments, securities brokerage accounts and retirement plans. This includes transaction processing; account opening and maintenance; reconciliation of trades, positions and cash; corporate actions; regulatory reporting and compliance functions; and tax reporting. We also support full reporting to investors for confirmations, statements and tax forms, web access, and electronic delivery of documents.

Services are provided either under a remote processing ("Remote") model or on a business process outsourcing ("BPO") basis, either directly by DST or through Boston Financial Data Services, Inc. ("BFDS"), our domestic joint venture with State Street Corporation ("State Street"), utilizing our proprietary software applications, including our TA 2000® and TRAC® systems. Our BPO service offerings are enhanced by AWD®, our proprietary workflow software, which is also licensed separately to third parties.

In the United States ("U.S."), we provide services to mutual funds, brokerage firms, retirement plans and alternative investment funds (such as real estate investment trusts "REITs"). In Australia and the U.K., we license our wealth management platform to provide solutions related to participant accounting and recordkeeping for wealth management, "wrap platforms" and retirement savings ("superannuation") industries/markets. Our primary customers are funds and fund managers. We also offer investor services on a Remote and BPO basis internationally (U.K., Canada, Ireland and Luxembourg) solely through International

Financial Data Services, U.K. ("IFDS U.K.") and International Financial Data Services, L.P. ("IFDS L.P."), (collectively, "IFDS"), which are joint ventures with State Street.

Accounts serviced under shareowner recordkeeping arrangements with the mutual fund and alternative investment sponsors are referred to as "registered accounts." Registered accounts include both tax-advantaged and non tax-advantaged accounts on the books of the transfer agent. We also contract directly with broker/dealers to manage brokerage subaccounts.

We deliver a comprehensive suite of asset servicing, distribution solutions and asset management for open-end mutual funds, closed-end funds, exchange-traded funds and alternative investment funds. Focusing on the needs of small- to medium-sized funds that require a broad set of customizable services, we provide compliance, creative services, medallion distribution, fund administration, fund accounting, legal, tax administration, transfer agency and asset management services.

Our distribution services range from consulting to active wholesaling and marketing, including closed-end funds IPO launch platform services. We also offer products designed to assist clients in meeting the expanding needs associated with distributing U.S. investment products through financial intermediaries.

We serve as the asset manager to proprietary open-end mutual funds, closed-end funds and exchange-traded funds through active management and through the utilization of sub-advisors and index providers. Additionally, we offer data analytics and consulting services in both the U.S. and U.K. to help our clients gain actionable insights into the needs and preferences of their customers.

We typically have multi-year agreements with our clients. Financial Services' fees are primarily charged to the client based on the number of accounts, participants or transactions processed. For subaccounts, broker/dealers provide a portion of the services directly. As a result, our revenue per account is generally higher for registered accounts than for subaccounts. On a more limited basis, we also generate revenue through asset-based fee arrangements, subscriptions and/or seat licensing and from investment earnings related to cash balances maintained in our full service transfer agency bank accounts.

The Financial Services segment's largest customer accounted for 10.5% of the segment's operating revenues in 2016 and the five largest Financial Services customers collectively accounted for 28.0% of the segment's operating revenues in 2016. Financial Services' customers in 2016 included our joint ventures with State Street, BFDS (which was the segment's second largest customer) and IFDS U.K. (which was the segment's third largest customer). Collectively, these joint ventures accounted for approximately 12.4% of the segment's operating revenues in 2016.

Sources of new business for the Financial Services segment include: (i) existing clients, particularly with respect to complementary and new products and services, (ii) companies relying on their own in-house capabilities and not using outside vendors, (iii) companies using competitors' systems, and (iv) new entrants into the markets served by Financial Services. We consider our existing client base to be one of our best sources of new business. We believe that competition in the markets in which the Financial Services segment operates is based largely on price, quality of service, features offered, the ability to handle rapidly changing volumes, response to security and compliance needs, product innovation, and responsiveness. Our competitors are primarily financial institutions and in-house systems. Our financial institution competitors may have an advantage because they can take into consideration the value of their clients' funds on deposit or under management when pricing their services. We believe there is significant competition in our markets and our ability to compete effectively is dependent in part on access to capital.

HEALTHCARE SERVICES SEGMENT

The Healthcare Services segment uses our proprietary software applications to provide healthcare organizations with pharmacy, healthcare administration, and health outcomes optimization solutions to satisfy their information processing, quality of care, cost management and payment integrity needs. Our healthcare solutions include claims adjudication, benefit management, care management, business intelligence and other ancillary services. The Healthcare Services segment's five largest customers accounted for 51.4% of segment operating revenues in 2016, including 17.8% from its largest customer. Effective January 2017, two of our Healthcare Services customers began transitioning off of our systems, which is expected to result in lower overall segment revenue growth during 2017 as compared to 2016.

Our healthcare services are marketed to health insurance companies, health plans and benefits administrators. Customers primarily consist of managed care organizations, preferred provider organizations, third-party administrators, dental, vision, and behavioral health organizations operating commercial and government sponsored programs such as the Health Insurance Exchanges that operate under the Patient Protection and Affordable Care Act, Medicare Advantage, Medicare Part D and Medicaid.

We compete with other third-party providers and companies that perform their services in-house with licensed or internally developed systems and processes. We believe that we compete effectively in the market due to our ongoing investment in our products and the development of new products to meet the evolving business requirements of our customers.

Our competitors' healthcare administration and health outcomes optimization solutions are primarily based on complete replacement of a payer's core system. We believe that a component application approach shifts the focus away from core application replacement to one in which clients have more alternatives for modernization of the business operation. With a component approach, health payer clients can still choose core application replacement if warranted, or adopt component applications that address only those areas of the business that offer the most opportunity of improvement for the customer, resulting in protection of the client's current IT investment and reduced disruption to its business operation.

Pharmacy Solutions

We use our proprietary software applications, supporting technology and enhanced clinical expertise to provide pharmacy health management solutions supporting commercial, Medicaid and Medicare Part D plans. These services include pharmacy claims administration, pharmacy network solutions, government programs administration, formulary and rebate management, trend control and quality compliance programs, member services, and discount drug card programs. RxNova, our proprietary claims processing system, is a highly scalable and comprehensive system for the administration of pharmacy benefits, prescription claims adjudication, eligibility, pharmacy management, and related activities. This benefit management solution provides substantial flexibility to accommodate varying provider requirements, allows point-of-sale monitoring, and provides control of pharmacy plan benefits with online benefit authorization.

We generally derive revenue from our pharmacy-solutions business on a transactional fee basis. Fees are earned on pharmacy claims processing and payments services, pharmacy and member call center services, formulary and rebate administration, administration or management of clinical programs, pharmacy network management, member and plan web services and management information and reporting.

Healthcare Administration

We use our proprietary software applications to provide medical claim administration services and health plan compliance and revenue integrity services for payers and providers in the domestic healthcare industry. Healthcare administration services are offered on a software license, Remote and BPO basis. Our solutions, combined with our health outcomes optimization solutions described below, are offered as stand-alone component solutions to complement health plans, existing operations or systems, or as an integrated core administration package of solutions.

Claims administration services include claims processing, benefit plan management, eligibility and enrollment management, provider contract administration, mail receipt and processing, imaging/data capture and retention, fulfillment, utilization management, and customer service. Health plan compliance and revenue integrity services include a retrospective review of medical records to accurately capture members' health status through proper hierarchical condition categories.

Healthcare administration revenues are generally derived from fees charged on a per member/per month basis or transactional basis. We also realize revenue from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase.

Health Outcomes Optimization

We also provide health outcomes optimization solutions through the use of our integrated care management and population health analytics applications and professional services for health plans and providers in the domestic healthcare industry. Our Integrated Care Management solution is a real-time, intuitive, workflow-driven solution suite that assists customers to improve member outcomes and manage costs. Our population health technology provides organizations with the ability to measure and manage federal and state required quality management initiatives, provider network quality and efficiency, member health programs, and risk adjustment on an integrated system. In addition to our proprietary systems, we are the exclusive distributor of Johns Hopkins' Adjusted Clinical Groups ("ACG"), a patient classification system developed by Johns Hopkins University. The ACG System is a software tool that provides health plans the ability to easily identify their at-risk population and stratify them into the optimal care management program for both the member's needs and the health plan's goals for that member.

Professional services include business and industry consulting, risk adjustment, compliance and regulatory consulting, behaviorally based interventions, healthcare quality incentive management, medical management (disease, care, and utilization), HEDIS, managed information technology, software engineering, operations process engineering and management consulting.

Health outcomes optimization revenues are generally derived from fees charged based on a per member/per month basis. We also realize revenue from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase. Additionally, we derive professional service revenues from fees for implementation services, custom programming and data center operations.

INVESTMENTS AND OTHER SEGMENT

The Investments and Other segment is comprised of our investments in equity securities, private equity investments, real estate and other financial interests. The assets held are primarily passive in nature.

At December 31, 2016, the Investments and Other segment held investments in available-for-sale equity securities with a market value of approximately $180.1 million, including approximately 2.2 million shares of State Street with a market value of $169.6 million based on closing exchange values at December 31, 2016.

We also own partnership interests in certain real estate joint ventures that lease office space to us, certain of our unconsolidated affiliates and unrelated third parties. We also own various office and retail properties, undeveloped land and an underground storage facility.

SOFTWARE DEVELOPMENT AND MAINTENANCE

DST’s software development and maintenance efforts are focused on introducing new products and services, as well as enhancing our existing products and services. The software development, maintenance and enhancements costs, including capitalized software development costs, were $217.3 million, $205.5 million and $171.1 million for the years ended December 31, 2016, 2015 and 2014, respectively.

INTELLECTUAL PROPERTY

We hold U.S. patents, U.S. copyrights and trademarks covering various aspects of the information processing and computer software services and products provided by the Financial Services and Healthcare Services segments. The duration of the patent term is generally 20 years from its earliest application filing date. The patent term is not renewable. The durations of the copyrights depend on a number of factors, such as who created the work and whether he or she was employed by us at the time. The trademark rights generally will continue for as long as we maintain usage of the trademarks. We believe our copyrights are adequate to protect our original works of authorship. We believe that although the patents, trademarks and copyrights related to the segments are valuable, our success primarily depends upon our product and service quality, marketing and service skills. Despite patent, trademark and copyright protection, we may be vulnerable to competitors who attempt to imitate our systems or processes. In addition, other companies and inventors may receive patents that contain claims applicable to our systems and processes.

EMPLOYEES

We had approximately 5,700 employees in the U.S. and approximately 2,700 employees internationally within our continuing operations at December 31, 2016. Additionally, our joint ventures, BFDS, IFDS U.K. and IFDS L.P. had approximately 2,200 employees in the U.S. and 7,000 employees internationally at December 31, 2016. We also had approximately 1,400 employees internationally that are included within our discontinued operations. Except for certain employees of DST Output (Nottingham) Limited, a U.K. subsidiary included within our discontinued operations, none of our employees are represented by a labor union or covered by a collective bargaining agreement. We consider our employee relations to be good.

SEGMENT, GEOGRAPHIC AREA AND OTHER FINANCIAL INFORMATION

This discussion of the business of DST Systems, Inc. should be read in conjunction with, and is qualified by reference to, Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) under Item 7 herein. In addition, the information set forth in the first paragraph and under the headings “Introduction” and “Seasonality” in the MD&A and the segment and geographic information included in Item 8, Note 17 are incorporated herein by reference in partial response to this Item 1.

AVAILABLE INFORMATION

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports will be made available free of charge on or through our Internet website (*www.dstsystems.com*) as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). In addition, our corporate governance guidelines and the charters of the Audit Committee, the Corporate Governance/Nominating Committee, and Compensation Committee of the DST Board of Directors are available at *investors.dstsystems.com/govdocs*. These guidelines and charters are available in print to any stockholder who requests them. Written requests may be made to the DST Corporate Secretary, 333 West 11th Street, Kansas City, Missouri 64105, and oral requests may be made by calling the DST Corporate Secretary's Office at (816) 435-8655. An individual may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E. Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site (*http://www.sec.gov*) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the following factors, which could materially affect our business, financial condition or results of operations in future periods. While we believe we have identified and discussed below the key risk factors affecting our business, there may be additional risks and uncertainties not currently known to us or that we currently deem to be immaterial that may adversely affect our business, financial condition, operating results or share price in the future.

Risks Related to Our Business

Trends or events affecting our clients or their industries could decrease the demand for our products and services and the loss of, reduction of business with, or less favorable terms with any of our significant customers could materially harm our business and results of operations.

We derive our revenues from the delivery of products and services to clients primarily in the mutual fund, brokerage, investment management, healthcare, and other financial service (e.g., insurance, banking and financial planning) industries. Demand for our products and services among companies in those industries could decline for many reasons. If demand for our products decreases or any of the industries we serve decline or fail or consolidate, reducing the number of potential clients, our business and our operating results could be adversely affected.

On a consolidated basis, for the year ended December 31, 2016, our five largest customers (excluding BFDS and IFDS, our 50%-owned joint ventures with State Street) accounted for approximately 22.0% of our consolidated operating revenues. For the same period, the Healthcare Services segment's five largest customers accounted for approximately 51.4% of our revenue in that segment, including 17.8% from its largest customer. Because of our significant customer concentration, particularly in the Healthcare Services segment, our revenue could fluctuate significantly due to changes in economic conditions, the use of competitive products, or the loss of, reduction of business with, or less favorable terms with any of our significant customers, and a delay or default in payment by any significant customer could materially harm our business and results of operations.

Events that adversely affect our clients' businesses, rates of growth or numbers of customers they serve could decrease demand for our products and services and the number of transactions we process. Events that could adversely affect our clients' businesses include decreased demand for our customers' products and services, adverse conditions in our customers' markets or adverse economic conditions generally. We may be unsuccessful in predicting the needs of changing industries and whether potential customers will accept our products or services. We also may invest in technology or infrastructure for specific customers and not realize additional revenue from such investments. If trends or events do not occur as we expect, our business could be negatively impacted.

We depend on information technology, and any failures of or damage to, attack on or unauthorized access to our information technology systems could result in significant costs and reputational damage.

We have developed and maintained, and our businesses depend on, information technology, including elements both internal and external, to record and process a large volume of complex transactions and other data, including personally identifiable information regarding financial and health matters. In certain circumstances, vendors have access to such data in order to assist us with responsibilities, such as producing benefit plan identification cards, maintaining software we license on our own behalf or resell to others, or helping clients comply with anti-money laundering regulations. Any interruptions, delays, breakdowns, or breach, including as a result of cybersecurity breaches or breaches of our environments and procedures or those of our vendors, could result in significant data losses or theft of our or our customers' intellectual property, proprietary business information or personally identifiable information. In recent years, several health care and financial services firms were victims of computer systems hacking attacks, resulting in the disruption of services to clients, loss or misappropriation of sensitive or private data, and reputational harm. Rapid advances in technology, and the limits and costs of technology, skills and manpower, may prevent us from anticipating, identifying, preventing or addressing all potential security threats and breaches. A cybersecurity breach could negatively affect our reputation as a trusted product and service provider by adversely affecting the market's perception of the security or reliability of our products or services. In addition, a system breach could result in other negative consequences, including remediation costs, disruption of internal operations, increased cybersecurity protection costs, lost revenues, regulatory penalties, and litigation.

The demand for our products and services could decrease if we do not continually address our clients' technology and capacity requirements.

Our clients use technology-based products and services in the complex and rapidly changing markets in which they operate. We may not have effective and efficient processes to support the design, set-up, quality assurance, and maintenance activities for the timely implementation of new client services, migration of existing clients onto new or different platforms, and ongoing servicing that meets the needs of the business and clients. We must substantially invest in technology and systems to meet customer requirements for technology and capacity. If we do not meet clients' technology and capacity requirements in advance of our competitors or if the investments we make are not cost-effective or do not result in successful products or services, our business could be adversely affected.

The success of the information technology transformation initiative will depend on the timing, extent and cost of implementation; performance of third-parties; upgrade requirements; and availability and reliability of the various technologies required to provide such transformation.

We must continually invest in our information technology in order to continually meet our clients' needs. We are implementing a multi-year information technology transformation initiative intended to reduce operating costs, increase information security, upgrade infrastructure, implement automation, provide access to emerging technologies and position us to take advantage of market opportunities. If we fail to provide an enhanced client experience, our ability to retain and attract clients and to maintain and grow revenues could be adversely affected. Using new and sophisticated technology on a very large scale entails risks. For example, deployment of new software may adversely affect the performance of existing services on our existing platforms and decrease the customer experience. If implementation of our information technology transformation initiative were delayed or costs exceed expected amounts, our margins could be adversely affected and such effects could be material. If the delivery of services expected to be deployed on modernized architecture were delayed due to technological constraints, performance of third-party suppliers, or other reasons, the cost of providing such services could become higher than expected, which could result in higher costs to clients, potentially resulting in decisions to purchase services from our competitors, which would adversely affect our revenues, profitability and cash flow from operations.

We have made and may continue to make acquisitions and divestitures that involve numerous risks and uncertainties.

Our business strategy anticipates that we will supplement internal growth by pursuing acquisitions of complementary businesses. We may be unable to identify suitable businesses to acquire. We compete with other potential buyers for the acquisition of other complementary businesses. Information we obtain about an acquisition target may be limited and there can be no assurance that an acquisition will perform as expected or positively impact our financial performance. Potential acquisitions involve risk, including the risk we would be unable to effectively integrate the acquired technologies, operations and personnel into our business, and the risk that management's attention and our capital would be diverted from other areas of our business. The anticipated benefits of our acquisitions may not materialize. Future acquisitions or dispositions could result in the issuance of capital stock, incurrence of debt, contingent liabilities or expenses, or write-offs of goodwill and other intangible assets, any of which could harm our financial condition. If we cannot complete acquisitions, our growth may be limited and our financial condition may be adversely affected.

In addition, we have divested, and may in the future divest, businesses that are no longer a part of our ongoing strategic plan. These divestitures similarly require significant investment of time and resources, may disrupt our business, distract management from other responsibilities and may result in continued responsibility for the divested business, including through indemnification, for a period of time following the transaction, which could adversely affect our financial results.

If our new investments and business initiatives are not successful, our financial condition and prospects could be adversely affected.

We are investing heavily in our technology to improve existing products and services and add new products and services to address the needs of existing or new clients. Our investments may not lead to successful deployment or increases in the number of accounts or transactions. If we are not successful in creating value from our investments by increasing sales or reducing expenses, our financial condition and prospects could be harmed.

An increase in subaccounting services performed by brokerage firms has and will continue to adversely impact our revenues.

We service open-end and closed-end funds registered under the Investment Company Act of 1940, including mutual funds, exchange-traded funds, interval funds and exchange-listed closed-end funds, as well as private funds, collective investment trusts and other accounts under shareowner recordkeeping arrangements which we refer to as registered accounts. These arrangements are distinguished from broker subaccounts, which are serviced under contract with a broker/dealer. Our clients may adopt the broker subaccount structure. We offer subaccounting services to brokerage firms that perform shareowner subaccounting. As the recordkeeping functions in connection with subaccounting are more limited than traditional shareowner accounting, the fees charged are generally lower on a per unit basis. Brokerage firms that obtain agreements from our clients to use a broker subaccount structure cause accounts currently on our traditional recordkeeping system to convert to our subaccounting system, or to the subaccounting systems of other service providers, which generally results in lower revenues. While subaccounting conversions have generally been limited to our non tax-advantaged mutual fund accounts, such conversions have begun to extend to the tax-advantaged accounts (such as retirement and Section 529 accounts) we service, which could adversely affect our business and operating results.

Consolidation in or among our customers and potential customers could result in a reduction of customers or reduction in use of our services.

Mergers or acquisitions of or consolidations among our customers or between our customers and other entities could reduce the number of our customers and potential customers and result in the discontinuation or reduction in use of our services. This could adversely affect our revenues even if these events do not reduce the aggregate number of customers or the activities of the consolidated entities. Any of these developments could materially and adversely affect our business, financial condition, operating results and cash flows.

Our businesses are subject to substantial competition.

We are subject to intense competition from other established service providers in all industries we serve. Some of our competitors are able to bundle service offerings and offer more appealing pricing structures. Some of our clients, or the clients they serve, may develop, have developed or are developing the in-house capacity to perform the transaction processing and recordkeeping services they have paid us to perform. Additionally, some of our competitors and clients have greater financial and human resources and access to capital than we do.

In the financial and healthcare markets we serve, we compete based on a variety of factors, including investment performance, the range of products offered, brand recognition, business reputation, financial strength, stability and continuity of client and other intermediary relationships, quality of service, and level of fees charged for services. We continue to face market pressures regarding fee levels in certain products and services offered.

Our failure to successfully compete in any of our material operating businesses could have a material adverse effect on our operating results. Competition could also affect the revenue mix of services we provide, resulting in decreased revenues in lines of business with higher profit margins.

We may not be able to sustain critical operations and provide essential products and services during system failures or catastrophic events.

Damage to our facilities could impact our operations or financial condition. The performance of our services also depends upon facilities that house central computer operations or operating centers. Significant damage to any of our operating facilities could interrupt the operations at those facilities and interfere with our ability to serve customers. Moreover, in the event of a catastropic event we may not be able to execute our business resumption strategies for data processing and capabilities, and we may not have the ability to recover critical data, programs, applications, and data processing capabilities in a timely manner; any of these could impact our ability to serve our clients.

We operate internationally and are thus exposed to currency fluctuations and foreign political, economic and other conditions that could adversely affect our revenues from or support by foreign operations.

Inherent risks in our international business activities could decrease our international sales and also could adversely affect our ability to receive important support from our international operations, which could have a material adverse effect on our overall financial condition, operating results, and cash flow. These risks include potentially unfavorable foreign economic conditions, political conditions or national priorities, foreign government regulation, potential expropriation of assets by foreign governments, changes in intellectual property legal protections and remedies, the failure to bridge cultural differences, and limited or prohibited access to our foreign operations and the support they provide. We may also have difficulty repatriating any profits or be adversely affected by currency fluctuations in our international business.

Various events may cause our financial results to fluctuate from quarter-to-quarter or year-to-year. The nature of these events might inhibit our ability to anticipate and act in advance to counter them.

We may be unsuccessful in determining or controlling when and whether events occur that could cause varying financial results. Unfavorable results may occur that we did not anticipate or take advance action to address. We incur significant costs to develop products used to service our existing and potential client operations. The timing of these expenses may fluctuate as new client contracts are signed or existing client contracts are renewed, causing our results to vary accordingly. Factors contributing to the variability of our results include increased costs of supplies, increased costs relating to existing and potential client operations, and hiring staff to develop new and existing products. The timing of our fees associated with new and existing client contracts, including changes in recognition as a result of changes in accounting principles, may also cause results to vary from period to period.

Our revenues may decrease due to declines in the levels of participation and activity in the securities markets.

We generate significant revenues from the transaction processing fees we earn for our services. These revenue sources are substantially dependent on the levels of participation and activity in the securities markets. The number of unique securities positions held by investors through our clients and our clients' customer trading volumes reflect the levels of participation and activity in the markets, which are impacted by market prices and the liquidity of the securities markets, among other factors. We could continue to be negatively impacted by the volatile markets as certain of our fees are tied to the asset bases of our clients. The occurrence of significant market volatility or decreased levels of participation would likely result in reduced revenues and decreased profitability from our business operations. Additionally, we may be exposed to operational or other risks in connection with any systematic failures in the markets, or the default due to market-related failures of one or more counterparties with whom we transact.

We also derive significant revenues from asset management, administration and distribution contracts with clients. Under these contracts, the fees paid to us are based on a variety of factors, including the market value of assets under management ("AUM"), assets under administration ("AUA") and number of transactions processed. AUM, AUA or the number of transactions processed may decline for various reasons, causing results to vary. Factors that could decrease AUM and AUA (and therefore revenues) include declines in the market value of the assets in the funds (and accounts as applicable) managed, administered and distributed, redemptions and other withdrawals from, or shifts among, the funds (and accounts as applicable) managed, administered and distributed, as well as market conditions generally.

Our revenues may decrease due to changes in asset management, administration and distribution fees and industry trends

The asset management, administration and distribution business is highly competitive and we compete for investors and clients on the basis of factors such as performance, reputation, service, and cost. Underperformance of any of our proprietary and client products, damage to our reputation, or service-related issues could lead to redemptions or terminations. Additionally, the asset management industry has generally been subject to fee compression and asset flows to lower cost products. Such a trend may result in fee compression in asset management, administration and distribution related contracts. The asset management, administration and distribution contracts may be terminated by the parties thereto, and the board of directors or trustees of certain funds may terminate investment management, administration and distribution agreements for any reason and without penalty. The factors and trends described above could have a material adverse effect on revenues.

Investment decisions with respect to cash balances, market returns or losses on investments, and limits on insurance applicable to cash balances held in bank and brokerage accounts, including those held by us and as agent on behalf of our clients, could expose us to losses of such cash balances and adversely affect revenues attributable to cash balance deposit investments.

As part of our transaction processing and other services, we maintain and manage large bank and investment accounts containing client funds, which we hold as agent, as well as operational funds. Our revenues include investment earnings related to client fund cash balances. Our choices in selecting investments, or market conditions that affect the rate of return on or the availability of investments, could have an adverse effect on the level of such revenues. The amounts held in our operational and client deposit accounts could exceed the limits of government insurance programs of organizations such as the Federal Deposit Insurance Corporation and the Securities Investors Protection Corporation, exposing us to the risk of loss. Any substantial loss would have an adverse impact on our business and our financial condition.

Operational errors in the performance of our services or contractual obligations, as well as unknown or undetected defects, could lead to liability for claims, client loss and result in reputational damage.

The failure to properly perform our services or contractual obligations could result in our clients and/or certain of our subsidiaries being subjected to losses including censures, fines, or other sanctions by applicable regulatory authorities, and we could be liable to parties who are financially harmed by those errors. Despite testing, defects or errors may occur in our existing or new services, which could cause us to compromise customer data, lose revenues, lose clients, divert development resources, or damage our reputation, any of which could harm our business.

Our revenues could decrease if client contracts are terminated or fail to renew or if clients renegotiate contracts or utilize our services at lower than anticipated levels.

We derive most of our revenue by selling products and services under long-term contracts, many of which contain terms and conditions based on anticipated levels of utilization of our services. We cannot unilaterally extend the terms of our client contracts when they expire. Contracts can terminate during the term of agreement for various reasons, including through "termination for convenience" clauses in some contracts that enable clients to cancel by written notice. Our revenues could decrease as a result of terminations or non-renewals of client contracts; extensions of client contracts under, or contract re-negotiations resulting in, less favorable terms; or utilization of services at less than anticipated levels.

We are substantially dependent on our intellectual property rights, and a claim for infringement or a requirement to indemnify a client for infringement could adversely affect us.

We have made substantial investments in software and other intellectual property on which our business is highly dependent. Businesses we acquire also often depend on intellectual property portfolios, which increase the challenges we face in protecting our strategic advantage. Any disclosure, loss, invalidity of, or failure to protect our intellectual property could negatively impact our competitive position and, ultimately, our business. Our protection of our intellectual property rights in the U.S. or abroad may not be adequate and others, including our competitors, may use our proprietary technology without our consent. Furthermore, litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, or to determine the validity and scope of the proprietary rights of others. Such litigation could result in substantial costs and diversion of resources and could harm our business, financial condition, results of operations and cash flows.

To the extent available, we rely on patent, trade secret and copyright laws; however, significant portions of our proprietary intellectual property is not protected by patents. We also utilize nondisclosure and other contractual agreements and security measures to protect our proprietary technology. We cannot guarantee these measures will be effective. Our products and services rely on technology developed by others, including open source software, and we have no control over possible infringement of someone else's intellectual property rights by the provider of this technology. The owner of the rights could seek damages from us rather than or in addition to the persons who provide the technology to us. We could be subject at any time to intellectual property infringement claims that are costly to evaluate and defend. Our clients may also face infringement claims, allege that such claims relate to our products and services, and seek indemnification from us. Any loss of our intellectual property rights, or any significant claim of infringement or indemnity for violation of the intellectual property rights, or any significant claim of infringement or indemnity for violation of the intellectual property rights of others, could have a material adverse effect on our financial condition, operating results, and cash flows.

Our investments in funds and other companies could decline in value.

We hold significant investments in available-for-sale equity securities of other companies, primarily State Street Corporation, and other financial interests that are subject to fluctuations in market prices. A significant decline in the value of our equity investments could have a material adverse effect on our financial condition or operating results. We may not always be able to sell those investments at higher prices than we paid for them or than the value of the consideration used to acquire them.

From time to time we add new investment strategies to our investment product offerings by providing the initial cash investments as "seed capital." The seed capital investments may decline in value. A significant decline in their value could have a material adverse effect on our financial condition or operating results.

We are a limited partner in various private equity funds and have future capital commitments related to certain private equity fund investments. These investments are illiquid. Generally, private equity fund securities are non-transferable or are subject to long holding periods, and withdrawals from the private equity firm partnerships are typically not permitted. Even when transfer restrictions do not apply, there is generally no public market for the securities. Therefore, we may not be able to sell the securities at a time when we desire to do so. We may not always be able to sell those investments at the same or higher prices than we paid for them. We also participate in joint ventures with other companies. These joint venture investments could require further capital contributions.

We have restrictive covenants in our debt agreements, which may restrict our flexibility to operate our business. If we do not comply with these restrictive covenants, our failure could result in material and adverse effects on our operating results and our financial condition.

Our debt agreements contain customary restrictive covenants, including limitations on consolidated indebtedness, liens, investments, subsidiary investments, and asset dispositions, and require us to maintain certain leverage and interest coverage ratios. Failure to comply with these covenants could result in an event of default that, if not cured or waived, could result in reduced liquidity for the Company and could have a material adverse effect on our operating results and financial condition. In addition, an event of default or declaration of acceleration under one of our debt agreements could result in a cross default under one or more of our other debt agreements, including our financing agreements. This would have a material adverse impact on our liquidity, financial position and results of operation.

Regulatory and Litigation Risks

We and our unconsolidated affiliates are subject to regulation. Any regulatory violations, changes or uncertainties could adversely affect our business.

A number of our businesses are subject to U.S. or foreign regulation, including privacy, licensing, processing, recordkeeping, investment adviser, broker/dealer, retirement, reporting and related regulations. New products and services we plan to offer may also be subject to regulation, either directly or as a downstream provider to customers or clients. Such regulations cover all aspects of our businesses including, but not limited to, sales and trading methods, trade practices among broker/dealers, use and safekeeping of customers' funds and securities, capital structure of securities firms, net capital, anti-money laundering efforts, healthcare, recordkeeping and the conduct of directors, officers and employees. Any violation of applicable regulations could expose us or those businesses to civil or criminal liability, significant fines or sanctions, damage our reputation, the revocation of licenses, censures, or a temporary suspension or permanent bar from conducting business, which could adversely affect our business or our financial results. Governmental changes, changing interpretation of regulations, and uncertainties surrounding services we provide could increase our costs of business, result in penalties, or diminish business, which could materially and adversely affect our financial results.

The SEC or other regulatory agencies may issue regulations impacting mutual fund service providers, which could adversely affect our business. The Department of Labor ("DOL") recently issued fiduciary regulations that, if not delayed, repealed or substantially altered in the near future, are likely to impact our business.

The SEC or other regulatory agencies may issue regulations impacting third-party service providers of mutual funds and other fund-types products, such as distributors, administrators, or custodians, (collectively referred to as "mutual funds"), which could adversely affect our business. The SEC may issue additional regulations under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank Act") or other legislative authority that would require brokers and financial intermediaries that distribute mutual funds to make more detailed fee disclosures at the point-of-sale. Additionally, brokers and financial intermediaries may become, in some instances, subject to a new DOL-imposed fiduciary standard-of-care that, if applicable, could cause them to alter their methods of distribution, share class structure, and/or wholesaling activities. It is not yet clear what impact they may have on such activities. It is also unclear whether the regulations will be delayed, repealed or substantially altered in the near future. We cannot predict all of the requirements the SEC or FINRA may impose. Regulations that would cause current distribution channels or interest in mutual fund investing to change could decrease the number of accounts on our systems as a result of changes in client offerings or the attractiveness of offerings to customers of our clients. The biggest impact of the fiduciary regulations is expected to fall on brokers and registered investment advisers who give individualized non-discretionary advice in the "retail" marketplace, but discretionary investment managers in the "institutional" space are also expected to be affected, primarily in connection with sales of investment products and services. To the extent that our business units, clients, unaffiliated intermediary partners and retirement plan service providers fit into these categories, this could adversely affect our business and operating results. Additionally, to the extent the Dodd- Frank Act and/or DOL regulations impact the operations, financial condition, liquidity and capital requirements of unaffiliated financial institutions with whom we transact business, those institutions may seek to pass on increased costs, reduce their capacity to transact, or otherwise present inefficiencies in their interactions with us.

Our clients are subject to regulation that could affect our business.

Our clients are subject to extensive regulation, including investment adviser, broker/dealer and privacy regulations applicable to services we provide to the financial services industry and insurance, privacy and other regulations applicable to services we provide to the healthcare industry. Changes in, and any violation by our clients of, applicable laws and regulations (whether related to the services we provide or otherwise) could diminish their business or financial condition and thus their demand for our products and services or could increase our cost of continuing to provide services to such industries. Demand could also decrease if we do not continue to offer products and services that help our clients comply with regulations. For example, our accounts in our Healthcare Services segment are impacted by the Affordable Care Act, including the Health Insurance Marketplace. Changes to the Affordable Care Act may be enacted by Congress in response to the new administration's stated agenda, and we cannot predict the impact that will have on our customers and their demand for our services.

Our businesses expose us to risks of claims and losses that could be significant and damage our reputation and business prospects.

Our proprietary applications and related consulting and other services include the processing or clearing of financial and healthcare transactions for our clients and their customers and the design of benefit plans and compliance programs. The dollar amount of transactions processed or cleared is vastly higher than the revenues we derive from providing these services. In the event we make transaction processing or operational errors, or mismanage any process, we could be exposed to claims for any resulting processing delays, disclosure of protected information, miscalculations, mishandling of pass-through disbursements or other processes, and failure to follow a client's instructions or meet specifications. Additionally, we may be subject to claims or liability resulting from a failure of third parties (including regulatory authorities) to recognize the limitations of our role as our clients' agent or consultant, and we may be subject to claims or liability resulting from fraud committed by third parties. We may be exposed to the risk of counterparty breaches or failure to perform. We may be subject to claims, including class actions, for reimbursements, losses or damages arising from any transaction processing or operational error, or from process mismanagement. Because of the sensitive nature of the financial and healthcare transactions we process, our liability and any alleged damages may significantly exceed the fees we receive for performing the service at issue. Litigation could include class action claims based upon, among other theories, various regulatory requirements and consumer protection and privacy laws that class action plaintiffs may attempt to use to assert private rights of action. Any of these claims and related settlements or judgments could affect our operating results, damage our reputation, decrease demand for our services, or cause us to make costly operating changes.

Risks Related to Corporate Governance or our Equity Securities

We do not control certain businesses in which we have significant ownership.

We invest in joint ventures and other unconsolidated affiliates as part of our business strategy, and part of our net income is derived from our pro rata share of the earnings of those businesses. Despite owning significant equity interests in those companies and having directors on their boards, we do not control their operations, strategies or financial decisions. The other owners may have economic, business or legal interests or goals that are inconsistent with our goals or the goals of the businesses we co-own. Our pro rata share of any losses due to unfavorable performance of those companies could negatively impact our financial results.

Some of our joint venture investments are subject to buy-sell agreements, which could, among other things, restrict us from selling our interests even if we were to determine it would be prudent to do so.

We own interests in unconsolidated entities, including Boston Financial Data Services, International Financial Data Services Limited Partnership, International Financial Data Services Limited, and various real estate joint ventures. Our interests in such unconsolidated entities are subject to buy/sell arrangements, which could restrict our ability to sell our interests even if we were to determine it would be prudent to do so. These arrangements could also allow us to purchase the other owners' interests to prevent someone else from acquiring them and we cannot control the timing of occasions to do so. The businesses or other owners may encourage us to increase our investment in or make contributions to the businesses at an inopportune time.

Various plans, agreements, laws and organizational documents may have anti-takeover effects.

Provisions in our Certificate of Incorporation, Bylaws, certain plans and agreements, and applicable laws could make it more difficult for a party to make a tender offer for our shares or complete a takeover that is not approved by our Board of Directors. The provisions include:

- super-majority stockholder approval required for certain actions;
- specific procedures for stockholders to nominate new directors;
- the Board's authority to issue and set the terms of preferred stock;
- various rights of joint venture co-owners, lenders and certain customers and executives in the event of a change in control;
- public reporting of ownership and of changes in ownership by stockholders with at least a 5% interest in us; and
- legal restrictions on business combinations with certain stockholders.

Because of contractual commitments, a change in control could affect our operating results and weaken our management retention and incentive tools.

A change in control of the Company could trigger various rights and obligations in service agreements with certain customers and in agreements governing our joint ventures. A change in control could also allow some clients to terminate their agreements with us or to obtain rights to use our processing software. We are parties to joint venture agreements that allow other co-owners to buy our equity interests if we undergo a change in control. Under certain executive equity-based and other incentive compensation awards, benefit programs and employment agreements with our management, a change in control by itself, or an individual's termination of employment without "cause" or resignation for "good reason" (each as defined in applicable agreements) after a change in control could accelerate funding, payment or vesting of equity grants, as applicable, under such agreements and programs. This accelerated funding, vesting or payment may decrease an employee's incentive to continue employment with us. We have adopted an executive severance plan which, among other things, provides benefits to participating senior officers and executives who are terminated in connection with a change of control. Certain other executive officers have agreements with us that require us to continue to employ them for three years after a change in control or to pay certain amounts if we terminate their employment without cause or they resign for good reason following a change in control. The executives might not be incented to achieve desired results for the new owners of our business, and the cost of keeping the executives on the payroll might deter potential new owners from acquiring us or hinder new owners from hiring replacement management.

We may not pay cash dividends on our common stock in the future.

Future cash dividends will depend upon our financial condition, earnings and other factors deemed relevant by our Board of Directors. Payment of dividends is subject to applicable laws and to restrictions in applicable debt agreements.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our main operating facilities, including our corporate headquarters, are located in Kansas City, Missouri and consist of 1.1 million square feet of office space, of which 54% is owned and 46% is leased, and 162,000 square feet of owned data center space. Additionally, we own an aggregate 222,000 square feet of space consisting primarily of a back-up data center in St. Louis, Missouri and office space in California and the United Kingdom. We lease an aggregate of 697,000 square feet of other office space and production space in North America, India, Thailand, Australia and Canada. Of the 2.2 million square feet of space identified above, the Company leases and subleases approximately 153,000 square feet to third-parties. Approximately 81%, 16% and 3% of the remaining square footage is utilized by the Financial Services, Healthcare Services and Investments and Other segments, respectively. In addition, we also lease approximately 556,000 square feet of other office space and production space in the United Kingdom for operations that are included within our discontinued operations. We also own undeveloped land in Kansas City, Missouri and California and an underground facility with approximately 538,000 square feet in Kansas City, Missouri, of which 497,000 square feet is leased to third parties. Our real estate joint ventures own 2.7 million square feet of real estate, of which 2.2 million square feet is occupied by third parties or is vacant. We believe our facilities are currently adequate for their intended purposes and are adequately maintained.

The following table summarizes the square footage of U.S. real estate facilities wholly-owned by DST or owned through unconsolidated affiliates of DST as of December 31, 2016 (in millions):

	DST wholly-owned (1)	Joint venture-owned (2)
Occupied by DST or unconsolidated affiliates	0.5	0.5
Occupied by third parties or vacant	0.2	2.2
Total	0.7	2.7

(1) Amounts exclude square footage of wholly-owned data centers and an underground facility located below our Kansas City, Missouri data center

(2) Amounts exclude a joint venture-owned 1,000 room convention hotel and facilities owned and occupied by BFDS and IFDS

Item 3. Legal Proceedings

We are involved in various legal proceedings arising in the normal course of our businesses. While the ultimate outcome of such legal proceedings cannot be predicted with certainty, management believes, after consultation with legal counsel, that the final outcome in such proceedings, in the aggregate, would not have a material adverse effect on our consolidated financial condition, results of operations or cash flows.

Item 4. Mine Safety Disclosures

None.

Executive Officers of the Registrant

The following list presents certain information with respect to each of our executive officers as of February 28, 2017.

Jonathan J. Boehm, age 56, is our Executive Vice President and Head of our Healthcare businesses. He re-joined the Company in 1997 after prior service in the early 1980s. Prior to becoming an Executive Vice President managing our Healthcare businesses in 2009, he served as Group Vice President - Mutual Funds Full Service. He is responsible for our Healthcare Services segment, including DST HealthCare Holdings, Inc. and its subsidiaries DST Health Solutions and Argus Health Systems.

Edmund J. Burke, age 56, is our Executive Vice President and President of ALPS. ALPS includes the Corporation's investment management and asset servicing businesses. ALPS Holdings, Inc. became a wholly-owned subsidiary of the Company during 2011. Mr. Burke joined ALPS in 1991 and has served as President since 2000. As part of his responsibilities for the ALPS group of companies, Mr. Burke is President and Trustee of Clough Global Long/Short Fund, Clough Global Allocation Fund, Clough Global Equity Fund and Clough Global Opportunities Fund; Trustee of Liberty All-Star Equity Fund; Director of Liberty All-Star Growth Fund, Inc., and Chairman of the Board and President of Financial Investors Trust. Each of these funds operates as a registered investment company pursuant to the Investment Company Act of 1940.

Gregg Wm. Givens, age 56, is our Senior Vice President, Chief Financial Officer and Treasurer. He assumed the roles of Chief Financial Officer and Treasurer in January of 2014. He joined the Company in 1996 as an officer and served as Vice President and Chief Accounting Officer from 1999 through 2013.

Stephen C. Hooley, age 53, is our Chairman of the Board, Chief Executive Officer and President. He became Chief Executive Officer on September 12, 2012 and Chairman of the Board in July 2014. He joined the Company in mid-2009 as President and Chief Operating Officer. He served from 2004 through mid-2009 as President and Chief Executive Officer of BFDS. He served from 2009 through April 2013 as non-executive Chairman of BFDS. From 2007 through March 2013, he served as Chief Executive Officer of IFDS L.P.

Vercie L. Lark, age 54, is our Executive Vice President and Head of our Financial Services businesses. He joined the Company as Vice President and Chief Information Officer in June 2010 and assumed his current title in April 2016. Mr. Lark previously served since July 2009 as Vice President and Chief Information Officer of CenturyLink, Inc., a provider of voice, broadband and video services. He had served since 2008 as the Chief Information Officer of Embarq Corporation, which was acquired in 2009 by CenturyLink.

Maria Mann, age 54, is Senior Vice President and Chief Information Officer. She joined the Company in April 2016. From 2011 through April 2016, she served as Chief Technology Officer at JP Morgan Chase and Co., a multinational banking and financial services holding company. She is responsible for our global information technology infrastructure and architecture functions, global information privacy and security, and global information technology sourcing as well as risk and corporate applications.

William Slattery, age 61, is Chief Executive Officer of DSTi Holdings Limited and Chairman of IFDS Ltd. He joined the Company in January 2017. Prior to joining DST, Mr. Slattery was Head of the Investment Servicing business for State Street Europe and held various executive positions at State Street since 2003. Before joining State Street, Mr. Slattery was Managing Director and Head of Global Risk Management at Deutsche Asset Management and Member of the Group Risk Board of Deutsche Bank AG. His earlier career included 23 years at the Central Bank of Ireland, including senior leadership roles with responsibility of Ireland's International Financial Services Centre and as Deputy Head of Banking Supervision. Mr. Slattery, who has over 30 years in the financial services industry, was a former Chairman of Financial Services Ireland and was a member of the Public Expenditure Review Group.

Mary E. Sweetman, age 53, is Senior Vice President and Chief Human Resources Officer. She joined the Company in June 2013 as a vice president and assumed her current title in March 2014. Prior to joining the Company, she had served since 2007 as Senior Vice President, Human Resources for Furniture Brands International, a home furnishings designer and manufacturer that, following her departure from that company, filed for bankruptcy in September 2013.

Randall D. Young, age 60, became Senior Vice President, General Counsel and Secretary in mid-2013. Since 2002, he had served as Vice President, General Counsel and Secretary. He joined the Company as a Vice President in 1995.

PART II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The Company's common stock trades under the symbol "DST" on the New York Stock Exchange ("NYSE"). As of February 13, 2017, there were approximately 35,600 beneficial owners of our common stock.

The following table provides the quarterly prices of, and quarterly cash dividends paid on, the Company's common stock for the two-year period ended December 31, 2016. Future cash dividends will depend upon financial condition, earnings and other factors deemed relevant by DST's Board of Directors. Payment of dividends is subject to applicable laws and to restrictions in applicable debt agreements. On January 25, 2017, the DST Board of Directors declared a quarterly cash dividend of $0.35 per share on DST's common stock. The dividend will be payable on March 10, 2017, to stockholders of record at the close of business on February 24, 2017.

	Dividend	High	Low
2015			
1st Quarter	$ 0.30	$ 109.81	$ 91.95
2nd Quarter	0.30	125.70	109.68
3rd Quarter	0.30	133.42	95.03
4th Quarter	0.30	124.52	105.08
2016			
1st Quarter	$ 0.33	$ 111.80	$ 97.92
2nd Quarter	0.33	120.79	106.15
3rd Quarter	0.33	125.07	115.73
4th Quarter	0.33	117.08	94.63

The prices set forth above do not include commissions and do not necessarily represent actual transactions. The closing price of our common stock on the NYSE on December 31, 2016 was $107.15.

Stock Repurchases

The following table sets forth information with respect to shares of our common stock purchased by us during the quarter ended December 31, 2016.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total $ Amount of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Amount That May Yet Be Purchased Under the Plans or Programs
October 1 - October 31	675,677 (1)	$ 111.09	$ 74,999,936	$ 150,000,077
November 1 - November 30	567 (1)	103.47	—	150,000,077
December 1 - December 31	234 (1)	107.65	—	150,000,077
Total	676,478	$ 111.31	$ 74,999,936	$ 150,000,077 (2)

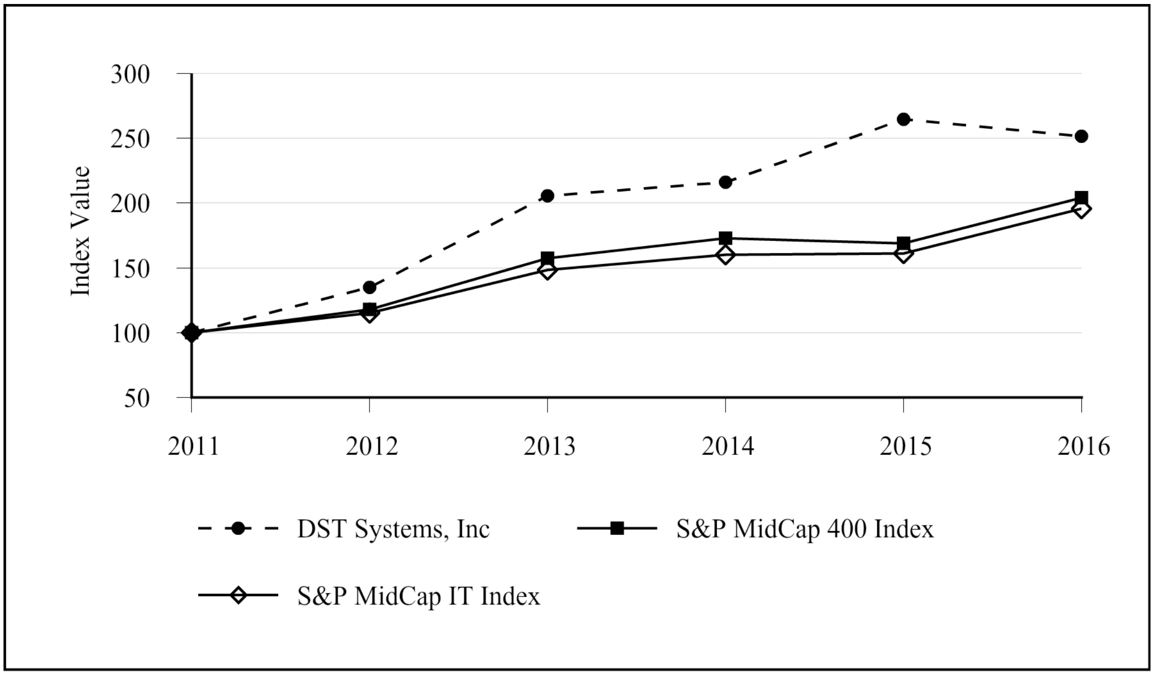
(1) For the three months ended December 31, 2016, we purchased, in accordance with the 2015 Equity and Incentive Plan, 1,383 shares of our common stock for participant income tax withholding in conjunction with stock option exercises or from the vesting of restricted stock shares, as requested by the participants or from shares surrendered in satisfaction of option exercise price. These purchases were not made under the publicly-announced repurchase plans or programs, but were allowed by the rules of the Compensation Committee of our Board of Directors. Of these shares, 582 shares were purchased in October 2016, 567 shares were purchased in November 2016, and 234 shares were purchased in December 2016.

(2) On June 13, 2016 our Board of Directors authorized a new $300.0 million share repurchase plan. The plan allows, but does not require, the repurchase of common stock in open market and private transactions. The plan does not have an expiration date. We have entered and may enter into one or more plans with our brokers or banks for pre-authorized purchases within defined limits pursuant to Rule 10b5-1 to affect all or a portion of such share repurchases.

Stock Performance Graph

The following graph shows the changes in value since December 31, 2011 of an assumed investment of $100 in: (i) DST Common Stock; (ii) the stocks that comprise the S&P 400 MidCap index(1); and (iii) the stocks that comprise the S&P 400 MidCap Index - Information Technology Sector(1) ("S&P MidCap IT Index"). The table following the graph shows the dollar value of those investments as of December 31, 2016 and as of December 31 for each of the five preceding years. The value for the assumed investments depicted on the graph and in the table has been calculated assuming that cash dividends, if any, are reinvested at the end of each quarter in which they are paid.

Comparison of Cumulative Five Year Total Return



	As of December 31,					
	2011	2012	2013	2014	2015	2016
DST Systems, Inc	$ 100.00	$ 135.05	$ 205.56	$ 216.01	$ 264.52	$ 251.44
S&P MidCap 400 Index	100.00	117.88	157.37	172.74	168.98	204.03
S&P MidCap IT Index	100.00	115.21	148.38	160.13	161.11	195.70

(1) Standard & Poor's Corporation, an independent company, prepares the S&P 400 MidCap Index and the S&P Midcap IT Index.

Item 6. Selected Financial Data

The following table sets forth selected consolidated financial data of the Company. The selected consolidated financial data should be read in conjunction with and are qualified by reference to "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 of this Form 10-K and our audited consolidated financial statements, including the notes thereto, and the report of the independent registered public accounting firm thereon and the other financial information included in Item 8 of this Form 10-K. We completed the sale of our North American Customer Communications business in 2016 and our Board of Directors approved a plan for management to pursue the divestiture of our United Kingdom Customer Communications business. As a result, the Customer Communications segment, as well as certain business previously reported in the Financial Services segment that were part of the 2016 sale, have been reported as discontinued operations and excluded from the amounts in the table below. Prior period amounts have been adjusted to be consistent with the current period presentation.

	Year Ended December 31,				
	2016 (1)	2015 (2)	2014 (3)	2013 (4)	2012 (5)
Income Statement Data:	(dollars in millions, except per share amounts)				
Operating revenues (excluding out-of-pockets)	$ 1,474.4	$ 1,405.0	$ 1,445.5	$ 1,368.2	$ 1,277.8
Operating income	247.3	232.7	262.7	271.8	202.9
Other income, net	22.7	204.5	373.1	242.8	373.3
Income from continuing operations before income taxes and non-controlling interest	279.2	458.8	744.7	503.1	565.0
Income from continuing operations attributable to DST Systems, Inc.	179.0	309.7	560.8	324.7	383.7
Basic earnings per share - Continuing operations attributable to DST Systems, Inc. (6)	5.43	8.60	14.01	7.51	8.55
Diluted earnings per share - Continuing operations attributable to DST Systems, Inc. (6)	5.37	8.50	13.86	7.37	8.38
Non-GAAP diluted earnings per share - Continuing operations attributable to DST Systems, Inc. (6) (7)	5.73	4.93	4.97	4.22	3.98
Cash dividends per share of common stock	1.32	1.20	1.20	1.20	0.80

	December 31,				
	2016 (1)	2015 (2)	2014 (3)	2013 (4)	2012 (5)
Balance Sheet Data:	(dollars in millions)				
Total assets	$ 2,771.8	$ 2,813.2	$ 2,942.9	$ 3,090.5	$ 3,392.5
Total debt	508.2	562.1	546.8	675.6	1,003.7
Stockholders' equity	1,115.2	1,046.0	1,236.4	1,183.8	1,079.7

(1) In 2016, we acquired Kaufman Rossin Fund Services LLC. Additionally, we recorded net gains on securities and other investments of $16.3 million, which is included in Other income, net, in the Consolidated Statement of Income.

(2) In 2015, we acquired the following businesses: kasina LLC, Red Rocks Capital LLC and Wealth Management Systems Inc. Additionally, we recorded net gains on securities and other investments of $199.3 million, which is included in Other income, net, in the Consolidated Statement of Income.

(3) In 2014, we recorded a pretax gain of $100.5 million on the sale of the wholly-owned subsidiary, DST Global Solutions, Ltd., which is included in Gain on sale of business in the Consolidated Statement of Income. In addition, we recorded net gains on securities and other investments of $343.5 million, which were included in Other income, net on the Consolidated Statement of Income.

(4) In 2013, we recorded net gains on securities and other investments of $222.8 million, which were included in Other income, net on the Consolidated Statement of Income

(5) In 2012, we recorded net gains on securities and other investments of $293.7 million and dividend income from a private company investment of $48.4 million, both of which are included in Other income, net, in the Consolidated Statement of Income.

(6) During the years ended December 31, 2016, 2015, 2014, 2013, and 2012, we repurchased 2.7 million, 3.6 million, 4.7 million, 3.8 million and 1.8 million shares of our common stock, respectively.

(7) Non-GAAP diluted earnings per share have been calculated by taking into account the impact of certain items that are not necessarily ongoing in nature, do not have a high level of predictability associated with them or are non-operational items. Management believes the exclusion of these items provides a useful basis for evaluating underlying business unit performance, but non-GAAP diluted earnings should not be considered in isolation and is not in accordance with, or a substitute for, evaluating business unit performance utilizing GAAP financial information. A description of the use of non-GAAP financial information and a reconciliation of diluted earnings per share from continuing operations attributable to DST Systems, Inc. and non-GAAP diluted earnings per share from continuing operations attributable to DST Systems, Inc. is below.

Use of Non-GAAP Financial Information

In addition to reporting financial information in accordance with accounting principles generally accepted in the United States of America ("GAAP"), we have disclosed non-GAAP financial information which has been reconciled to the corresponding GAAP measures in the following financial schedules titled "Reconciliation of Reported Diluted Earnings per Share to Non-GAAP Diluted Earnings per Share - Continuing Operations Attributable to DST Systems, Inc." In making these adjustments to determine the non-GAAP results, we take into account the impact of items that are not necessarily ongoing in nature, that do not have a high level of predictability associated with them or that are non-operational in nature. Generally, these items include net gains on dispositions of business units, net gains (losses) associated with securities and other investments, restructuring and impairment costs, and other similar items. Beginning in 2016, we have also included acquired intangible asset amortization for all periods presented. Management believes the exclusion of these items provides a useful basis for evaluating underlying business unit performance, but should not be considered in isolation and is not in accordance with, or a substitute for, evaluating business unit performance utilizing GAAP financial information. Management uses non-GAAP measures in its budgeting and forecasting processes and to further analyze our financial trends and "operational run-rate," as well as in making financial comparisons to prior periods presented on a similar basis. We believe that providing such adjusted results allows investors and other users of our financial statements to better understand our comparative operating performance for the periods presented.

DST's management uses each of these non-GAAP financial measures in its own evaluation of our performance, particularly when comparing performance to past periods. Our non-GAAP measures may differ from similar measures by other companies, even if similar terms are used to identify such measures. Although our management believes non-GAAP measures are useful in evaluating the performance of our business, we acknowledge that items excluded from such measures may have a material impact on our financial information calculated in accordance with GAAP. Therefore, management typically uses non-GAAP measures in conjunction with GAAP results. These factors should be considered when evaluating our results.

Reconciliation of Reported Diluted Earnings per Share to Non-GAAP Diluted Earnings per Share - Continuing Operations Attributable to DST Systems, Inc.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
Reported GAAP Diluted Earnings per Share	$ 5.37	$ 8.50	$ 13.86	$ 7.37	$ 8.38
Adjusted to remove:					
Net gains on securities and other investments	(0.33)	(3.42)	(5.26)	(3.14)	(4.54)
Amortization of intangible assets	0.44	0.32	0.28	0.25	0.29
Restructuring charges	0.30	0.06	0.20	0.06	0.25
Income tax items	0.12	(0.43)	(0.91)	(0.24)	(0.40)
Net gain on sale of business	(0.16)	—	(2.64)	—	—
Software impairment	0.11	—	—	—	—
Reversal of accrued contingent consideration	(0.12)	—	—	—	—
Equity in earnings of unconsolidated affiliates items	—	(0.06)	(0.09)	(0.10)	(0.20)
Business development/advisory expenses	—	0.02	0.09	—	0.02
Net (gains) losses on real estate assets	—	(0.06)	—	0.04	0.09
Gain on contract to repurchase common stock	—	—	(0.45)	—	—
Loss accruals (loss accrual reversal)	—	—	(0.12)	0.06	0.04
Charitable contribution of securities	—	—	0.01	—	(0.06)
Contract termination payments received, net	—	—	—	(0.08)	—
Insurance Solutions asset impairment and other costs	—	—	—	—	0.11
Adjusted Non-GAAP Diluted Earnings per Share	$ 5.73	$ 4.93	$ 4.97	$ 4.22	$ 3.98

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

FORWARD LOOKING STATEMENTS

This report contains "forward-looking statements" - that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance and financial condition, and often contain words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "see," "will," "would," or "target." Forward-looking statements by their nature address matters that are, to different degrees, uncertain.

For us, particular risks and uncertainties that could cause our actual results to be materially different than those expressed in our forward-looking statements include:

- the effects of competition in the businesses in which we operate;
- changes in customer demand and our ability to provide products and services on terms that are favorable to us;
- changes in law, economic and financial conditions;
- the impacts of breaches or potential breaches of network, information technology or data security, natural disasters, terrorist attacks or acts of war or significant litigation and any resulting financial impact not covered by insurance;
- our investments in joint ventures or other unconsolidated affiliates; for example, some of our joint venture investments are subject to contractual obligations which could restrict us from selling such interests;
- the effectiveness of our risk management framework;
- the impact of regulation and regulatory, investigative and legal proceedings and legal compliance risks, including the impact of financial services regulation and litigation and potential SEC or DOL regulations impacting third-party distributors of mutual funds;
- our investments in funds and other companies may decline;
- our ability to successfully complete acquisitions or integrate acquired businesses; and
- the other factors that are described in Item 1A, "Risk Factors" of this Form 10-K.

These or other uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements. This document includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially.

Future economic and industry trends that could potentially impact our financial statements or results of operations are difficult to predict. These forward-looking statements are based on information as of the date of this report and we assume no obligation to publicly update or revise our forward-looking statements even if experience or future changes make it clear that any projected results expressed or implied therein will not be realized.

Introduction

DST Systems, Inc. and our consolidated subsidiaries ("we," "our," "us," the "Company" or "DST") use proprietary software applications to provide sophisticated information processing and servicing solutions through strategically unified data management and business processing solutions to clients globally within the asset management, brokerage, retirement, healthcare and other markets. Our wholly-owned data centers provide the secure technology infrastructure necessary to support our solutions.

We manage our business through two operating segments: Financial Services and Healthcare Services. Our investments in equity securities, private equity investments, real estate and certain financial interests have been aggregated into an Investments and Other segment.

In connection with the execution of our strategic plan, which includes focusing on the Financial Services and Healthcare markets, we sold our North American Customer Communications business for cash consideration of $410.7 million on July 1, 2016. We recorded a pretax gain of $341.5 million on the sale during 2016. Additionally, during the second quarter 2016, our Board of Directors approved a plan for management to divest of our U.K. Customer Communications business. As a result of this significant shift in the strategic direction of our operations, we have classified the results of the businesses sold and being sold as discontinued operations in our Consolidated Statement of Income for all periods presented. The net after-tax proceeds from the sale are being used in accordance with the Company's capital plan, including investments in the business, share repurchases, strategic acquisitions, debt repayments and other corporate purposes.

Financial Services Segment

DST's proprietary software applications enable us to offer our customers information processing solutions that enable them to capture, analyze and report their investors' transactions. Examples of the services we provide include tracking of purchases, redemptions, exchanges and transfers of shares; maintaining investor identification and ownership records; reconciling cash and share activity; processing dividends; reporting sales; performing tax and other compliance functions; and providing information for printing of investor trade confirmations, statements and year-end tax forms.

Services are provided either under a remote processing model or on a BPO basis. Our BPO service offerings are enhanced by our proprietary workflow software, AWD, which is also licensed separately to third parties.

In the U.S. we provide services to mutual funds, brokerage firms, retirement plans and alternative investment funds (such as real estate investment trusts) either directly or through BFDS, our joint venture with State Street. In Australia and the U.K., we license software solutions to funds and fund managers, who perform participant accounting and recordkeeping for the wealth management and retirement savings market. We also provide investor services on a Remote and BPO basis internationally (U.K., Canada, Ireland and Luxembourg) solely through IFDS U.K. and IFDS L.P., which are joint ventures with State Street.

Financial Services fees are primarily charged to the client based on the number of accounts, participants or transactions processed. For subaccounts, a portion of the services we provide for registered accounts are provided directly by the broker/ dealer. As a result, our revenue per account is generally higher for registered accounts than for subaccounts. On a more limited basis, we also generate revenue through asset-based fee arrangements and from investment earnings related to cash balances maintained in our full service transfer agency bank accounts. We typically have multi-year agreements with our clients. We receive revenues for processing services and products provided under various agreements with unconsolidated affiliates. We believe that the terms of our contracts with unconsolidated affiliates are fair to us and are no less favorable to us than those obtained from unaffiliated parties. Our operating revenues derived from sales to unconsolidated affiliates, primarily BFDS and IFDS, were $138.5 million, $134.9 million and $135.1 million for the years ended December 31, 2016, 2015, and 2014, respectively.

We continue to evaluate the products and services we offer within the Financial Services segment and have identified certain offerings in which the increased risk and required investment resulting from recent regulations outweighs the benefit we expect to receive. As a result of this evaluation, during 2016 we made the decision to exit certain non-core products and services. We expect the exit of these businesses will result in approximately $8.6 million less operating revenue and $3.8 million less operating income on an annual basis. Additionally, in November 2016, we sold a wholly-owned foreign subsidiary that provides water billing software and services solutions for cash consideration of approximately $6.1 million, subject to customary working capital post-closing adjustments. This business had approximately $5.4 million of operating revenue and $1.2 million of operating income on an annual basis. As these decisions were the result of a tactical review of our products and services, and not the result of a significant shift in strategic direction, the revenue and operating income from these products and services are included within our continuing operations. We are also continuing to monitor changes in the financial services industry, including the shift from direct products to fee-based platforms which could reduce the number of direct mutual fund registered accounts we service.

On February 24, 2016, we acquired all of the membership interests of KRFS, for $94.7 million in cash, after giving effect to a $0.3 million adjustment agreed upon in June 2016 to settle working capital under the terms of the agreement. KRFS is an independent, full-service provider of specialized hedge fund administration services to the global financial community. KRFS' hedge fund services include accounting and valuation, back-office outsourcing, investor services, treasury services, and customized reporting. We expect the acquisition to provide us with additional opportunities within the alternative investment marketplace and expand our asset administration service offerings.

During 2015, we acquired all of the membership interests of kasina LLC, a strategic advisory firm to the asset management industry, and Red Rocks Capital LLC, an asset manager which focuses on listed private equity and other private asset investments. In 2015, we also acquired all of the outstanding common stock of Wealth Management Systems Inc., a provider of technology-based rollover services in the retirement marketplace.

In December 2015, we entered into a ten year contract with a new client to provide both subaccounting and mutual fund servicing solutions. The client converted approximately 10.0 million subaccounts onto our platform during 2016 and based on current volumes, is expected to convert approximately 2.3 million registered accounts onto our platform by the end of 2017. Implementation efforts have resulted in increased costs that are expected to continue through 2017 as we convert the client onto our platform.

During 2014, we sold our wholly-owned U.K. subsidiary, DST Global Solutions Limited and certain related affiliates (together, "Global Solutions"). Global Solutions provided post-trade, middle-, and back-office investment management software applications, implementation and other professional services.

Healthcare Services Segment

The Healthcare Services segment uses our proprietary software applications to provide healthcare organizations a variety of medical and pharmacy benefit solutions to satisfy their information processing, quality of care, cost management concerns and payment integrity programs, while achieving compliance and improving operational efficiencies. Our healthcare solutions include claims adjudication, benefit management, care management, business intelligence and other ancillary services. We also continue to expand and enhance our Healthcare Services' offerings to ensure we are able to address the changing needs of our clients within the complex and highly regulated health industries which we serve. For example, our pharmacy management business continues to make investments to expand our clinical, network, and analytic capabilities to help our customers and prospective customers achieve the best possible outcomes for their members and to allow us to more effectively compete in the broader competitive pharmacy benefit manager ("PBM") market. Historically, we have acted as an agent within our pharmacy-solutions business and, accordingly, recognized revenue on a net basis. As our enhanced products evolve and we expand our pharmacy-solutions service offerings, we will evaluate the provisions within our new pharmacy network and customer contracts to determine whether we are acting as a principal or an agent in the transactions. If we determine that we are acting as a principal in the transactions, we will report the transactions on a gross basis, resulting in significantly higher revenues and costs reflected within our consolidated financial statements.

We generally derive revenue from our pharmacy-solutions business on a transactional fee basis. Fees are earned on pharmacy claims processing and payments services, pharmacy and member call center services, pharmaceutical rebate administration, administration or management of clinical programs, pharmacy network management, member and plan web services and management information and reporting. Further, revenues include investment earnings related to client cash balances maintained in our bank accounts. Medical claim processing revenues are generally derived from fees charged on a per member/per month basis or transactional basis. We also realize revenue from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase. Additionally, we derive professional service revenues from fees for implementation services, custom programming and data center operations.

During 2016, two of our Healthcare Services customers notified us that they would begin transitioning their services off our systems effective January 2017. We continue to expect our Healthcare Services segment to achieve strong revenue growth through a combination of new client wins and organic growth. However, we now expect this growth will derive from a smaller revenue base, which will result in lower overall segment revenue growth during 2017 as compared to 2016.

Investments and Other Segment

The Investments and Other segment is comprised of our real estate consolidated subsidiaries and joint ventures, investments in equity securities, private equity investments and other financial interests. The assets held by this segment are primarily passive in nature.

The Investments and Other segment's revenues are derived from rental income from third-party real estate leases. Rental income is recorded as revenue when, based on lease terms, it is earned. The Investments and Other segment records investment income (dividends, interest and net gains or losses on investment securities) within Other income, net. The Investments and Other segment derives part of its income from its pro rata share in the earnings or losses of certain unconsolidated affiliates. We make lease payments to certain real estate joint ventures.

Seasonality

Generally, we do not have significant seasonal fluctuations in our business operations. Processing volumes for mutual fund customers within our Financial Services segment are usually highest during the quarter ended March 31 due primarily to processing year-end transactions during January. We have historically added operating equipment in the last half of the year in preparation for processing year-end transactions, which has the effect of increasing costs for the second half of the year. Revenues and operating results from individual license sales vary depending on the timing and size of the contracts.

New Authoritative Accounting Guidance

See Item 8, Financial Statements and Supplementary Data - Note 2, "Significant Accounting Policies - New authoritative accounting guidance."

Critical Accounting Policies and Estimates

The following discussion and analysis of our financial condition, results of operations and cash flows are based upon our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosures of contingent assets and liabilities. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements: revenue recognition; software capitalization and amortization; depreciation of fixed assets; valuation of long-lived and intangible assets and goodwill; accounting for investments; and accounting for income taxes.

Revenue recognition

We recognize revenue when it is realized or realizable and it is earned. The majority of our revenues are derived from computer processing and services and are recognized upon completion of the services provided. Software license fees, maintenance fees and other ancillary fees are recognized as services are provided or delivered and all customer obligations have been met. We generally do not have payment terms from customers that extend beyond one year. Billing for services in advance of performance is recorded as deferred revenue.

We recognize revenue when the following criteria are met: 1) persuasive evidence of an arrangement exists; 2) delivery has occurred or services have been rendered; 3) the sales price is fixed or determinable; and 4) collectibility is reasonably assured. If there is a customer-specific acceptance provision in a contract or if there is uncertainty about customer acceptance, the associated revenue is deferred until we have evidence of customer acceptance.

Revenue arrangements with multiple deliverables are evaluated to determine if the deliverables (items) can be divided into more than one unit of accounting. An item can generally be considered a separate unit of accounting if both of the following criteria are met: 1) the delivered item(s) has value to the customer on a standalone basis and 2) if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Once separate units of accounting are determined, the arrangement consideration should be allocated at the inception of the arrangement to all deliverables using the relative selling price method. Relative selling price is obtained from sources such as vendor-specific objective evidence, which is based on the separate selling price for that or a similar item or from third-party evidence such as how competitors have priced similar items. If such evidence is unavailable, we use our best estimate of the selling price, which includes various internal factors such as our pricing strategy and market factors.

We derive over 90% of our revenues as a result of providing processing and services under contracts. The majority of our fees are billed on a monthly basis, generally with thirty-day collection terms. Revenues are recognized for monthly processing and services upon performance of the services.

Our standard business practice is to bill monthly for development, consulting and training services on a time and materials basis. In some cases we bill a fixed fee for development and consulting services. For fixed fee arrangements, we recognize revenue on a "proportionate performance" basis.

We derive less than 10% of our revenues from licensing products. We license our wealth management products, AWD products and healthcare administration processing software solutions. Perpetual software license revenues are recognized at the time the contract is signed, the software is delivered and no future software obligations exist. Deferral of software license revenue billed results from delayed payment provisions, disproportionate discounts between the license and other services or the inability to unbundle certain services. Term software license revenues are recognized ratably over the term of the license agreement. While license fee revenues are not a significant percentage of our total operations, they can significantly impact earnings in the period in which they are recognized. Revenues from individual license sales depend heavily on the timing, size and nature of the contract. We recognize revenues for maintenance services ratably over the contract term, after collectibility has been reasonably assured.

We may enter into arrangements with broker/dealers or other third parties to sell or market closed-end fund shares. Depending on the arrangement, we may earn distribution fees for marketing and selling the underlying fund shares. Conversely, we may incur distribution expenses, including structuring fees, finders' fees and referral fees paid to unaffiliated broker/dealers or introducing parties for marketing and selling underlying fund shares of a closed-end fund we sponsor. While distribution revenues and expenses are not significant percentages of our operating revenues or costs and expenses, they can significantly impact operations and earnings in the period in which they are recognized.

We have entered into various agreements with related parties, principally unconsolidated affiliates, under which we provide data processing and software services. We believe that the terms of our contracts with related parties are fair to us and are no less favorable than those obtained from unaffiliated parties.

We assess collection based on a variety of factors, including past collection history with the customer and the credit-worthiness of the customer. We generally do not request collateral from our customers. If we determine that collection of revenues is not reasonably assured, revenue is deferred and is recognized at the time it becomes reasonably assured, which is generally upon receipt of cash. Allowances for billing adjustments and doubtful account expense are estimated as revenues are recognized. Allowances for billing adjustments are recorded as reductions in revenues and doubtful account expense is recorded within Costs and expenses. The annual amounts for these items are immaterial to our consolidated financial statements.

Software capitalization and amortization

We make substantial investments in software to enhance the functionality and facilitate the delivery of our processing services as well as our sale of licensed products. Purchased software is recorded at cost and is amortized on a straight-line basis over the estimated economic life, which is generally three to five years. We also develop a large portion of our software internally. We capitalize software development costs for computer software developed or obtained for internal use after the preliminary project phase has been completed and management has committed to funding the project. For computer software to be sold, leased or otherwise marketed to third parties, we capitalize software development costs which are incurred after the products reach technological feasibility but prior to the general release of the product to customers. The capitalized software development costs are generally amortized on a straight-line basis over the estimated economic life, which is generally three to five years.

Significant management judgment is required in determining what projects and costs associated with software development will be capitalized and in assigning estimated economic lives to the completed projects. Management specifically evaluates software development projects and analyzes the percentage of completion as compared to the initial plan and subsequent forecasts, milestones achieved and the commitment to continue funding the projects. Significant changes in any of these items may result in discontinuing capitalization of development costs, as well as immediately expensing previously capitalized costs. We review, on a quarterly basis, our capitalized software for possible impairment.

Depreciation of fixed assets

Our approach on personal property, specifically technology equipment is to own the property as opposed to leasing it where practicable. We believe this approach provides us with better flexibility for disposing or redeploying the asset as it nears the completion of its economic life. We depreciate technology equipment using accelerated depreciation methods over the following lives: (1) non-mainframe equipment—three years; (2) mainframe central processing unit—four years; and (3) mainframe direct access storage devices—five years. We depreciate furniture and fixtures over estimated useful lives, principally three to five years, using accelerated depreciation methods. We depreciate leasehold improvements using the straight-line method over the lesser of the term of the lease or life of the improvements. Management judgment is required in assigning economic lives to fixed assets. Management specifically analyzes fixed asset additions, remaining net book values and gain/loss upon disposition of fixed assets to determine the appropriateness of assigned economic lives. Significant changes in any of these items may result in changes in the economic life assigned and the resulting depreciation expense.

Valuation of long-lived and intangible assets and goodwill

Goodwill and indefinite-lived intangible assets are not amortized but are evaluated for impairment. We evaluate the impairment of goodwill at least annually (as of October 1) and evaluate identifiable intangibles, long-lived assets and related assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that could trigger an impairment review include the following: significant under-performance relative to expected historical or projected future operating results; significant changes in the manner of our use of the acquired assets or our strategy for the overall business; and significant negative industry or economic trends. When it is determined that the carrying value of intangibles, long-lived assets or goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we assess actual impairment based on gross cash flows.

Our assessment of goodwill for impairment may first include a qualitative assessment that considers various factors, including those described above as well as growth in operating revenues and income from operations of our reporting units since our last quantitative assessment. A quantitative assessment is performed if the qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying amount or if a qualitative assessment is not performed.

Our quantitative assessment of goodwill for impairment includes comparing the fair value to the net book value of our reporting units. We estimate fair value using a combination of discounted cash flow models and market approaches. If the fair value of a reporting unit exceeds its net book value, goodwill is not impaired and no further testing is necessary. If the net book value of a reporting unit exceeds its fair value, we perform a second test to measure the amount of impairment loss, if any. To measure the amount of any impairment loss, we determine the implied fair value of goodwill in the same manner as if the affected reporting unit was being acquired in a business combination. Specifically, we allocate the fair value of the affected reporting unit to all of the assets and liabilities of that unit, including any unrecognized intangible assets, in a hypothetical calculation that would yield the implied fair value of goodwill. If the implied fair value of goodwill is less than the goodwill recorded on our balance sheet, an impairment charge is recorded for the difference.

Our 2016, 2015 and 2014 annual goodwill impairment tests determined that goodwill was not impaired, except during 2016 for the goodwill held at the Customer Communications U.K. reporting unit, which is included as a component of discontinued operations, as further described in Item 8, Financial Statements and Supplemental Data - Note 4, "Discontinued Operations."

Accounting for investments

We have three significant types of investments: 1) investments in available-for-sale securities, the largest of which is our investment in State Street common stock; 2) investments in unconsolidated affiliates, which is comprised principally of BFDS, IFDS U.K., IFDS L.P. and certain real estate joint ventures; and 3) investments in private equity funds and other investments accounted for under the cost method.

We account for investments in entities in which we own less than 20% and do not have significant influence in accordance with authoritative guidance related to accounting for certain investments in debt and equity securities, which requires us to designate our investments as trading or available-for-sale. Available-for-sale securities are reported at fair value with unrealized gains and losses excluded from earnings and recorded net of deferred taxes directly to Accumulated other comprehensive income within Stockholders' equity.

We record an investment impairment charge for an investment with a gross unrealized holding loss resulting from a decline in value that is other than temporary. Future adverse changes in market conditions or poor operating results of underlying investments could result in losses or an inability to recover the carrying value of the investments that may not be reflected in an investment's current carrying value, thereby possibly requiring an impairment charge in the future, which could have a material effect on our financial position.

The equity method of accounting is used for investments in entities, partnerships and similar interests (including investments in private equity funds where we are the limited partner) in which we have significant influence but do not control. We classify these investments as unconsolidated affiliates. Under the equity method, we recognize income or losses from our pro-rata share of these unconsolidated affiliates' net income or loss, which changes the carrying value of the investment of the unconsolidated affiliate. In certain cases, pro-rata losses are recognized only to the extent of our investment and advances to the unconsolidated affiliate.

The cost method of accounting is used for these investments when we have a de minimis ownership percentage and do not have significant influence. Our cost method investments are held at the lower of cost or market.

Accounting for income taxes

We account for income taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in an entity's financial statements or tax returns. Judgment is required in addressing the future tax consequences of events that have been recognized in our consolidated financial statements or tax returns (e.g., realization of deferred tax assets, changes in tax laws or interpretations thereof).

In addition, we are subject to examination of our income tax returns by the Internal Revenue Service ("IRS") and other tax authorities. A change in the assessment of the outcomes of such matters could materially impact our consolidated financial statements. The calculation of tax liabilities involves dealing with uncertainties in the application of complex tax regulations. We recognize liabilities for potential tax exposures based on our estimate of whether, and the extent to which, additional taxes may be required. If we ultimately determine that payment of these amounts is unnecessary, then we reverse the liability and recognize a tax benefit during the period in which we determine that the liability is no longer necessary. We also recognize tax benefits to the extent that it is more likely than not that our positions will be sustained if challenged by the taxing authorities. To the extent we prevail in matters for which liabilities have been established, or are required to pay amounts in excess of our liabilities, our effective tax rate in a given period may be materially affected. An unfavorable tax settlement would require cash payments and may result in an increase in our effective tax rate in the year of resolution. A favorable tax settlement would be recognized as a reduction in our effective tax rate in the year of resolution. We report interest and penalties related to uncertain income tax positions within income tax expense.

Results of Operations

The following table summarizes our consolidated operating results (in millions). Additional information regarding our segments is included below under the caption, "Year to Year Business Segment Comparisons."

	Year Ended December 31,			Change 2016 vs 2015		Change 2015 vs 2014	
	2016	2015	2014	$	%	$	%
Operating revenues	$ 1,474.4	$ 1,405.0	$ 1,445.5	$ 69.4	4.9 %	$ (40.5)	(2.8)%
Out-of-pocket reimbursements	82.3	69.0	59.3	13.3	19.3 %	9.7	16.4 %
Total revenues	1,556.7	1,474.0	1,504.8	82.7	5.6 %	(30.8)	(2.0)%
Costs and expenses	1,213.4	1,150.2	1,149.1	63.2	5.5 %	1.1	0.1 %
Depreciation and amortization	96.0	91.1	93.0	4.9	5.4 %	(1.9)	(2.0)%
Operating income	247.3	232.7	262.7	14.6	6.3 %	(30.0)	(11.4)%
Interest expense	(23.5)	(23.8)	(26.3)	(0.3)	(1.3)%	(2.5)	(9.5)%
Gain on sale of business	5.5	—	100.5	5.5	(100.0)%	(100.5)	100.0 %
Other income, net	22.7	204.5	373.1	(181.8)	(88.9)%	(168.6)	(45.2)%
Equity in earnings of unconsolidated affiliates	27.2	45.4	34.7	(18.2)	(40.1)%	10.7	30.8 %
Income from continuing operations before income taxes and non-controlling interest	279.2	458.8	744.7	(179.6)	(39.1)%	(285.9)	(38.4)%
Income taxes	101.1	149.2	183.9	(48.1)	(32.2)%	(34.7)	(18.9)%
Net income from continuing operations before non-controlling interest	178.1	309.6	560.8	(131.5)	(42.5)%	(251.2)	(44.8)%
Income from discontinued operations, net of tax	248.3	48.5	32.5	199.8	412.0 %	16.0	49.2 %
Net income	426.4	358.1	593.3	68.3	19.1 %	(235.2)	(39.6)%
Net loss attributable to non-controlling interest	0.9	0.1	—	0.8	800.0 %	0.1	100.0 %
Net income attributable to DST Systems, Inc.	$ 427.3	$ 358.2	$ 593.3	$ 69.1	19.3 %	$ (235.1)	(39.6)%

Revenues

Consolidated total revenues (including out-of-pocket ("OOP") reimbursements) increased $82.7 million or 5.6% during the year ended December 31, 2016 as compared to December 31, 2015 and decreased $30.8 million or 2.0% during the year ended December 31, 2015 as compared to December 31, 2014. Consolidated operating revenues increased $69.4 million or 4.9% in 2016 as compared to 2015 and decreased $40.5 million or 2.8% in 2015 as compared to 2014.

Consolidated OOP reimbursements increased $13.3 million or 19.3% in 2016 as compared to 2015 and increased $9.7 million or 16.4% in 2015 as compared to 2014. The increases in consolidated OOP reimbursements in 2016 and 2015 are primarily attributable to increased client volumes in the Financial Services segment.

Costs and expenses

Consolidated costs and expenses (including OOP reimbursements) increased $63.2 million or 5.5% during the year ended December 31, 2016 as compared to December 31, 2015 and increased $1.1 million or 0.1% during the year ended December 31, 2015 as compared to December 31, 2014. Reimbursable operating expenses included in costs and expenses were $82.3 million, $69.0 million and $59.3 million in 2016, 2015 and 2014, respectively. Excluding reimbursable operating expenses, costs and expenses increased $49.9 million in 2016 as compared to 2015 and decreased $8.6 million in 2015 as compared to 2014.

As a result of changes in our business environment, from time to time we will restructure one or more of our businesses to enhance operational efficiency. During the year ended December 31, 2016, we incurred $10.4 million of employee and lease termination costs as a result of a restructuring initiative within the Financial Services segment. During the year ended December 31, 2015, we incurred $3.4 million of pretax charges related to employee termination costs as a result of a restructuring initiative within the Healthcare Services segment which involved the closure of an operating location at the end of the existing lease term in mid-2016. During the year ended December 31, 2014, we incurred $8.5 million of pretax charges related to employee and lease termination costs related to a restructuring initiative within our Financial Services segment.

Depreciation and amortization

Consolidated depreciation and amortization increased $4.9 million or 5.4% during the year ended December 31, 2016 as compared to December 31, 2015 and decreased $1.9 million or 2.0% during the year ended December 31, 2015 as compared to December 31, 2014.

Operating income

Consolidated operating income increased $14.6 million or 6.3% to $247.3 million during the year ended December 31, 2016 as compared to 2015 and decreased $30.0 million or 11.4% to $232.7 million during the year ended December 31, 2015 as compared to 2014.

Interest expense

Interest expense was $23.5 million, $23.8 million and $26.3 million during the years ended December 31, 2016, 2015 and 2014, respectively. Interest expense decreased 1.3% during 2016 as compared to 2015 and 9.5% during 2015 as compared to 2014 primarily from lower weighted average debt balances outstanding.

Gain on sale of business

On November 1, 2016, we sold DST Billing Solutions Limited ("Billing Solutions") for cash consideration of approximately $6.1 million, subject to customary working capital post-closing adjustments. Operating revenue and income generated for the Billing Solutions business sold was approximately $4.0 million and $0.7 million, respectively, for the year ended December 31, 2016. We recorded a pretax gain of $5.5 million on the sale of the business during 2016.

On November 30, 2014, we sold Global Solutions for cash consideration of $95.0 million, subject to customary working capital post-closing adjustments. Of the $95.0 million in proceeds received, $9.5 million was restricted for a period of eighteen months from the transaction, for purposes of payment of potential obligations under the terms and conditions of the sale agreement. The $9.5 million of restricted proceeds held in escrow was received by DST during 2016. During 2015, we received cash proceeds of $7.9 million in settlement of the working capital post-closing adjustment. We recorded a pretax gain of $100.5 million on the sale of the business during 2014. Our pretax gain exceeded our sale proceeds primarily from the reclassification of cumulative translation adjustments due to the substantial liquidation of certain foreign entities, partially offset by transaction costs. The carrying value of the entities sold was minimal.

Operating revenue generated from the Global Solutions businesses sold was approximately $61.4 million for the year ended December 31, 2014. Operating income generated from the Global Solutions businesses sold was approximately $6.9 million for the year ended December 31, 2014.

Other income, net

The components of other income, net are as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Net realized gains from the disposition of available-for-sale securities	$ 2.3	$ 168.4	$ 181.4
Net gains on private equity funds and other investments	16.5	35.7	27.8
Dividend income	5.8	8.3	11.4
Private company investment dividend	—	—	33.2
Gain on sale of private company investment	—	—	103.6
Gain on contract to repurchase shares of DST Common Stock	—	—	18.1
Miscellaneous items	(1.9)	(7.9)	(2.4)
Other income, net	$ 22.7	$ 204.5	$ 373.1

Included in the net realized gains from the disposition of available-for-sale securities during 2015 and 2014 were gains of $157.3 million and $169.3 million, respectively, from the sale of approximately 2.3 million and 2.6 million shares of State Street during 2015 and 2014, respectively. There were no sales of State Street shares during 2016.

We recorded a net gain on private equity funds and other investments of $16.5 million, $35.7 million and $27.8 million during the years ended December 31, 2016, 2015 and 2014, respectively, primarily due to distributions received from certain of our private equity fund investments resulting in realized gains. Future adverse changes in market conditions or poor operating results of underlying investments could result in losses or an inability to recover the carrying value of the investments and may require an impairment charge in the future, which could have a material effect on our net income.

In 2014, we received cash dividends of $33.2 million from a cost method investment in a privately-held company. Following receipt of the dividend, we sold our remaining interest in the privately-held company, resulting in pre-tax cash proceeds and a related gain of $103.6 million.

We repurchased $200.0 million of our common stock from a group of stockholders including George L. Argyros, Julia A. Argyros, and certain of their affiliates (collectively, "the Argyros Group" or "Argyros") during 2014. The price paid per share was determined in connection with the secondary offering of Argyros' DST common stock in May 2014. In connection with this share repurchase, we recorded a non-cash gain of $18.1 million during the year ended December 31, 2014 resulting from the change in stock price between the date the share repurchase price became fixed and the settlement date.

We receive dividend income from certain investments held, of which State Street is the most significant. State Street's quarterly dividend per common share was $0.38, $0.34 and $0.30 per share during 2016, 2015 and 2014, respectively. Dividends received from State Street common stock were $3.1 million, $3.2 million and $6.6 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Equity in earnings of unconsolidated affiliates

Equity in earnings of unconsolidated affiliates is as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
International Financial Data Services U.K.	$ 10.0	$ 22.5	$ 12.6
International Financial Data Services L.P.	2.2	7.4	6.5
Boston Financial Data Services, Inc.	8.3	5.3	5.1
Other unconsolidated affiliates	6.7	10.2	10.5
Total	$ 27.2	$ 45.4	$ 34.7

Additional condensed financial information of our significant operating unconsolidated affiliates, BFDS, IFDS U.K. and IFDS L.P., is presented below (in millions):

	Year Ended December 31,		
	2016	2015	2014
Total revenues	$ 1,097.7	$ 1,081.2	$ 1,111.0
Costs and expenses	994.6	947.8	1,009.7
Depreciation and amortization	41.0	38.9	39.1
Operating income	62.1	94.5	62.2
Non-operating income (loss)	(2.8)	2.8	3.4
Income before income taxes	59.3	97.3	65.6
Income taxes	18.3	27.0	17.0
Net income	$ 41.0	$ 70.3	$ 48.6

Equity in earnings of IFDS decreased $17.7 million during the year ended December 31, 2016, as compared to 2015, primarily attributable to lower revenues recognized related to the ongoing client conversion activities and higher operating costs as IFDS expands its infrastructure to address increasing regulatory, compliance and security needs.

The multi-year implementation efforts for the previously announced two wealth management clients continue to progress, however the scope and timing continues to be adjusted as client requirements evolve. In 2014, IFDS began capitalizing a significant portion of the software development costs being incurred to develop the wealth management platform for the U.K. market resulting in approximately £146.2 million (£73.1 million at DST's 50% ownership) of capitalized costs through December 31, 2016. These costs will continue to be incurred as the platform is completed.

Equity in earnings of IFDS increased $10.8 million during the year ended December 31, 2015, as compared to 2014, primarily attributable to higher revenues recognized related to the ongoing client conversion activities of the wealth management platform clients in the U.K., organic growth at existing customers and new client processing revenues. Partially offsetting the increased revenues are higher operating costs as IFDS expands its infrastructure to prepare for the addition of new clients and associated service offerings as well as negative foreign currency impacts in both the U.K. and Canada.

IFDS shareowner accounts serviced on their shareowner accounting platforms were 22.6 million at December 31, 2016, an increase of 0.5 million accounts or 2.3% as compared to December 31, 2015. The increase was primarily due to organic growth and new client conversions. IFDS shareowner accounts serviced were 22.1 million at December 31, 2015, a decrease of 1.7 million accounts or 7.1% as compared to December 31, 2014. The decline in accounts from 2014 to 2015 was driven by the transition of one of IFDS' clients off of the FAST platform and onto the wealth management platform in 2015.

Equity in earnings of BFDS increased $3.0 million during the year ended December 31, 2016 as compared to 2015. The increase was primarily attributable to higher ancillary and non-operating revenues as well as a reduction in operating costs. Equity in earnings of BFDS increased $0.2 million during the year ended December 31, 2015 as compared to 2014. The increase was primarily attributable to a reduction in operating costs.

Our equity in earnings of other unconsolidated affiliates was $6.7 million during the year ended December 31, 2016, a decrease of $3.5 million as compared to 2015. The decrease was primarily due to a $3.6 million gain resulting from the sale of real estate by an unconsolidated affiliate during 2015. Our equity in earnings of other unconsolidated affiliates was $10.2 million during the year ended December 31, 2015, an decrease of $0.3 million as compared to 2014. The decrease was primarily due to a $5.7 million gain recognized upon the sale of an unconsolidated affiliate during 2014, partially offset by a $3.6 million gain resulting from the sale of real estate by an unconsolidated affiliate during 2015.

Income taxes

Our effective tax rate was 36.2%, 32.5% and 24.7% for the years ended December 31, 2016, 2015 and 2014, respectively. The effective tax rates in each of the three years ended December 31, 2016 were affected by tax benefits relating to certain international operations and recognition of state tax benefits associated with income apportionment rules. Our income tax rate for 2016 was higher than the statutory federal income tax rate of 35% primarily attributable to state income taxes, transaction related taxes, and a change in the proportional mix of domestic and international income, partially offset by federal income tax credits for foreign income taxes and research and development costs.

Our effective income tax rate for 2015 was favorably impacted by a $11.9 million benefit from the completion of the IRS examination of previously filed federal income tax refund claims for Domestic Manufacturing Deductions, research and experimentation credits and capital losses for the period 2010 as well as other remeasurements during the period.

Our effective income tax rate for 2014 was favorably impacted by the reversal of $30.8 million of uncertain tax position liabilities, net of additions, primarily related to statute expirations.

Excluding the effect of discrete period items, we expect our effective tax rate to be approximately 37% in 2017. The 2017 tax rate can be affected as a result of variances among the estimates and amounts of 2017 sources of taxable income (e.g., domestic consolidated, joint venture and/or international), the realization of tax credits, adjustments which may arise from the resolution of tax matters under review and our assessment of our liability for uncertain tax positions.

Income from discontinued operations, net of tax

Income from discontinued operations, net of tax increased $199.8 million during the year ended December 31, 2016 as compared to 2015 and increased $16.0 million or 49.2% during the year ended December 31, 2015 as compared to 2014. The increase is primarily attributable to the $234.7 million gain, net of tax, on the sale of our North American Customer Communications business partially offset by the goodwill and asset impairments in our U.K. Customer Communications business.

In February 2017, we updated our impairment analysis utilizing new information received regarding our U.K. Customer Communications business which indicated the carrying value exceeded the fair value of the business. As a result, we recorded an impairment charge of $17.0 million, which is included as a component of discontinued operations for the year ended December 31, 2016. The impairment resulted in the write-down of goodwill and long-lived assets based on the estimated fair value of the business. No tax benefit was recognized for this impairment charge. These amounts reflect management's preliminary estimates and subsequent negotiations and the closing on any sale of this business could result in further adjustments to this impairment.

YEAR TO YEAR BUSINESS SEGMENT COMPARISONS

FINANCIAL SERVICES SEGMENT

The following table presents the financial results of the Financial Services segment (in millions):

	Year Ended December 31,			Change			
				2016 vs 2015		2015 vs 2014	
	2016	2015	2014	$	%	$	%
Operating revenues	$ 1,090.2	$ 1,063.8	$ 1,088.8	$ 26.4	2.5 %	$ (25.0)	(2.3)%
Out-of-pocket reimbursements	73.9	61.7	52.6	12.2	19.8 %	9.1	17.3 %
Total revenues	1,164.1	1,125.5	1,141.4	38.6	3.4 %	(15.9)	(1.4)%
Costs and expenses	908.3	869.8	867.9	38.5	4.4 %	1.9	0.2 %
Depreciation and amortization	79.7	71.6	72.2	8.1	11.3 %	(0.6)	(0.8)%
Operating income	$ 176.1	$ 184.1	$ 201.3	$ (8.0)	(4.3)%	$ (17.2)	(8.5)%
Operating margin	16.2%	17.3%	18.5%				

The following table summarizes the Financial Services segment's statistical metrics (in millions, except as noted):

	December 31, 2016	December 31, 2015	December 31, 2014
U.S. shareowner accounts processed:			
Registered accounts - non tax-advantaged	25.3	27.0	29.6
IRA mutual fund accounts	21.1	21.8	22.3
Other retirement accounts	8.0	8.2	8.1
Section 529 and Educational IRAs	7.5	8.4	8.8
Registered accounts - tax-advantaged	36.6	38.4	39.2
Total registered accounts	61.9	65.4	68.8
Subaccounts	42.1	31.3	28.6
Total U.S. shareowner accounts	104.0	96.7	97.4
International shareowner accounts processed:			
IFDS U.K.	8.9	8.8	11.3
IFDS L.P. (Canada)	13.7	13.3	12.5
Total international shareowner accounts	22.6	22.1	23.8
Defined contribution participant accounts	6.8	7.0	7.2
ALPS *(in billions of U.S. dollars)*:			
Assets Under Management	$ 17.2	$ 14.7	$ 15.3
Assets Under Administration	$ 179.1	$ 140.4	$ 176.9
Automatic Work Distributor workstations *(in thousands)*	212.7	211.4	212.5

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Changes in registered accounts:			
Beginning balance	65.4	68.8	71.2
New client conversions	0.1	—	—
Subaccounting conversions to DST platforms	(0.9)	(1.8)	(0.6)
Subaccounting conversions to non-DST platforms	(0.5)	(1.1)	(1.9)
Conversions to non-DST platforms	(0.7)	(0.3)	(1.0)
Organic growth (decline)	(1.5)	(0.2)	1.1
Ending balance	61.9	65.4	68.8
Changes in subaccounts:			
Beginning balance	31.3	28.6	25.7
New client conversions	10.7	—	—
Conversions from non-DST registered platforms	—	1.1	0.7
Conversions from DST's registered accounts	0.9	1.8	0.6
Organic growth (decline)	(0.8)	(0.2)	1.6
Ending balance	42.1	31.3	28.6
Changes in defined contribution participant accounts:			
Beginning balance	7.0	7.2	6.9
New client conversions	—	0.1	0.3
Organic decline	(0.2)	(0.3)	—
Ending balance	6.8	7.0	7.2

Comparison of 2016 versus 2015 results

Operating revenues

Financial Services segment operating revenues of $1,090.2 million reflect an increase of $26.4 million or 2.5% in 2016 as compared to 2015. The increase in operating revenues during the year ended December 31, 2016 was primarily driven from businesses acquired during 2015 and 2016, which contributed $31.8 million of incremental operating revenues as well as increased professional services revenues associated with our international wealth management platform business. During 2016, we also completed the conversion of approximately 10.0 million subaccounts associated with the previously announced new client, which resulted in incremental revenues. These increases were partly offset by a decline in mutual fund registered shareowner account processing revenue due to lower registered accounts, primarily as a result of subaccounting conversions, lower revenue due to extending certain long-term contracts with lower pricing, and approximately $6.1 million of negative foreign currency movements during 2016 as compared to the year ended December 31, 2015. Additionally, software license revenues were $31.2 million for the year ended December 31, 2016, a decrease of $2.3 million as compared to 2015.

Costs and expenses

Financial Services segment costs and expenses for the year ended December 31, 2016 were $908.3 million, an increase of $38.5 million as compared to 2015. Costs and expenses in the Financial Services segment are primarily comprised of compensation and benefit costs, but also include technology related expenditures and reimbursable operating expenses. Reimbursable operating expenses included in costs and expenses were $73.9 million in 2016, an increase of $12.2 million as compared to 2015.

Excluding reimbursable operating expenses, Financial Services costs and expenses increased $26.3 million or 3.3% for the year ended December 31, 2016 as compared to 2015. On this basis, the increase in costs and expenses during 2016 was primarily from acquisitions completed during 2015 and 2016, which included approximately $33.7 million of incremental expenses. Also, contributing to the increase in costs and expenses were the restructuring activities, which resulted in $10.4 million of employee and lease termination costs during the year ended December 31, 2016 to enhance operational efficiency within the Financial Services segment, increased costs incurred to enhance the network infrastructure utilized across all of our operating business and incremental costs to service new and existing clients. During the year ended December 31, 2016, we also recognized a $6.0 million software impairment. These costs and expenses were partially offset by the reversal of approximately $6.5 million of accrued performance-related contingent consideration, a $9.6 million reduction of stock compensation expense as certain performance-based stock units ("PSU") are no longer expected to vest, savings realized from cost containment initiatives and $7.2 million of foreign currency movements.

Depreciation and amortization

Financial Services segment depreciation and amortization costs for the year ended December 31, 2016 were $79.7 million, an increase of $8.1 million or 11.3% as compared to 2015. The increase in 2016 was primarily attributable to incremental amortization associated with acquired intangibles from the acquisitions completed in 2015 and 2016 as well as increased depreciation from capitalized costs incurred to enhance our network infrastructure and increase security and regulatory compliance. The increase in 2016 was also attributable to the acceleration of depreciation on certain capitalized software during 2016.

Operating income

Financial Services segment operating income for 2016 was $176.1 million, a decrease of $8.0 million or 4.3% as compared to 2015. The decrease in Financial Services operating income was primarily due to restructuring costs incurred during 2016, a software impairment charge, and increased costs incurred to enhance our network infrastructure, maintain security and regulatory compliance. These decreases were partially offset by the reversal of accrued performance-related contingent consideration, higher operating revenues and cost containment efforts during 2016, as well as a reduction of stock compensation expense as certain PSUs are no longer expected to vest. The impacts on operating income from foreign currency movements were not significant.

Comparison of 2015 versus 2014 results

Operating revenues

Financial Services segment operating revenues of $1,063.8 million decreased $25.0 million or 2.3% in 2015 as compared to 2014. The decrease in operating revenues during the year ended December 31, 2015 as compared to December 31, 2014 was primarily due to the sale of Global Solutions in November of 2014 and foreign currency movements. Global Solutions contributed $61.4 million of operating revenue for the year ended December 31, 2014 and foreign currency movements reduced operating revenue by approximately $16.2 million during 2015 as compared to the year ended December 31, 2014. Excluding Global Solutions 2014 results and the foreign currency impacts, Financial Services operating revenues increased $52.6 million or 5.1% for the year ended December 31, 2015 as compared to 2014, primarily driven from year-over-year growth across a number of our service offerings. Specifically, operating revenues increased as a result of increased professional services revenue associated with our wealth management platform business as well as organic and new client growth within our Retirement and Brokerage Solutions businesses. Additionally, the businesses acquired during 2015 contributed $10.4 million of operating revenues during the year ended December 31, 2015. The increases were partially offset by decreased revenue from our U.S. registered shareowner account processing due to lower registered accounts primarily as a result of subaccounting conversions. Additionally, software license revenues (excluding Global Solutions) were $33.5 million for the year ended December 31, 2015, a decrease of $0.4 million as compared to 2014.

Costs and expenses

Financial Services segment costs and expenses for the year ended December 31, 2015 were $869.8 million, an increase of $1.9 million as compared to 2014. Reimbursable operating expenses included in costs and expenses were $61.7 million for the year ended December 31, 2015, an increase of $9.1 million as compared to 2014. Additionally, Global Solutions incurred $49.3 million of costs and expenses for the year ended December 31, 2014 and foreign currency movements reduced costs and expenses by $16.4 million for the year ended December 31, 2015.

Excluding reimbursable operating expenses, the Global Solutions 2014 results and foreign currency impacts, Financial Services costs and expenses increased $25.7 million or 3.4% for the year ended December 31, 2015 as compared to 2014. On this basis, the increase in costs and expenses during 2015 was primarily from acquisitions completed during 2015, which included approximately $4.7 million of incremental expenses related to performance-related contingent consideration. The increase in costs and expenses was also attributable to increased security, regulatory compliance and network infrastructure costs, as well as higher costs associated with new business initiatives as we expand our service offerings and expand our wealth management platform in the U.K. These costs and expenses were partially offset by lower transaction and advisory costs of $1.2 million in 2015 as compared to $5.6 million of advisory and transaction costs incurred during 2014 in connection with the Argyros transaction and $13.0 million of costs incurred in 2014 related to restructuring activities.

Depreciation and amortization

Financial Services segment depreciation and amortization costs for the year ended December 31, 2015 were $71.6 million, a decrease of $0.6 million or 0.8% as compared to 2014. The decrease in 2015 was primarily attributable to the sale of Global Solutions in 2014, partially offset by increased amortization costs associated with acquired intangibles from the acquisitions completed during 2015.

Operating income

Financial Services segment operating income for 2015 was $184.1 million, a decrease of $17.2 million or 8.5% as compared to 2014. Global Solutions contributed income from operations of $6.9 million in 2014. Excluding Global Solutions, operating income decreased $10.3 million or 5.3%. The decrease in Financial Services operating income was primarily from higher operating expenses due to investments in our systems and infrastructure and the development of new business initiatives. Operating income was also adversely impacted by approximately $6.2 million of incremental expense resulting from amortization of acquired intangibles and expense for performance-related contingent consideration associated with our 2015 acquisitions. These decreases were partially offset by lower costs incurred as a result of restructuring activities undertaken in 2014.

HEALTHCARE SERVICES SEGMENT

The following table presents the financial results of the Healthcare Services segment (in millions):

	Year Ended December 31,			Change			
				2016 vs 2015		2015 vs 2014	
	2016	2015	2014	$	%	$	%
Operating revenues	$ 426.2	$ 376.4	$ 382.1	$ 49.8	13.2 %	$ (5.7)	(1.5)%
Out-of-pocket reimbursements	8.5	8.2	6.9	0.3	3.7 %	1.3	18.8 %
Total revenues	434.7	384.6	389.0	50.1	13.0 %	(4.4)	(1.1)%
Costs and expenses	345.1	321.3	308.5	23.8	7.4 %	12.8	4.1 %
Depreciation and amortization	15.6	18.6	19.5	(3.0)	(16.1)%	(0.9)	(4.6)%
Operating income	$ 74.0	$ 44.7	$ 61.0	$ 29.3	65.5 %	$ (16.3)	(26.7)%
Operating margin	17.4%	11.9%	16.0%				

The following tables summarize the Healthcare Services segment's statistical metrics (in millions):

	December 31,		
	2016	2015	2014
DST Health Solutions covered lives	22.8	26.0	24.2

	Year Ended December 31,		
	2016	2015	2014
Argus pharmacy paid claims	507.0	494.4	486.6

Comparison of 2016 versus 2015 results

Operating revenues

Healthcare Services segment operating revenues of $426.2 million increased $49.8 million or 13.2% in 2016 compared to 2015. The increase in operating revenue during the year ended December 31, 2016 was primarily from new medical claims processing clients implemented during 2016, organic growth and expansion of high-value services we are offering to existing clients in both the medical and pharmacy businesses. Operating revenues included approximately $8.0 million of software license fee revenues for the year ended December 31, 2016, a decrease of $1.1 million as compared to 2015.

Costs and expenses

Healthcare Services segment costs and expenses for the year ended December 31, 2016 were $345.1 million, an increase of $23.8 million as compared to 2015. Costs and expenses are primarily comprised of compensation and benefits costs but also include technology-related expenditures. Reimbursable operating expenses included in costs and expenses were $8.5 million in 2016, an increase of $0.3 million as compared to 2015. Excluding reimbursable operating expenses, costs and expenses were $336.6 million for 2016, an increase of $23.5 million as compared to 2015. On this basis, the increase in costs and expenses during 2016 was primarily attributable to increased staffing costs incurred to support the higher medical transaction volumes due to the growth in BPO services. These costs and expenses were partially offset by restructuring costs that occurred during 2015 that did not recur during 2016 and a $2.4 million reduction of stock compensation expense as certain PSUs are no longer expected to vest.

Depreciation and amortization

Healthcare Services segment depreciation and amortization costs for the year ended December 31, 2016 were $15.6 million, a decrease of $3.0 million or 16.1% as compared to 2015.

Operating income

Healthcare Services segment operating income for 2016 was $74.0 million, an increase of $29.3 million or 65.5% as compared to 2015. The increase in operating income was primarily attributable to higher revenues from organic growth and new medical claims processing clients implemented in 2016, resulting in enhanced economies of scale as clients were converted as well as a reduction of stock compensation expense as certain PSUs are no longer expected to vest. These increases were partially offset by increased staffing costs incurred to support the higher medical transaction volumes due to the growth in BPO services.

Comparison of 2015 versus 2014 results

Operating revenues

Healthcare Services segment operating revenues of $376.4 million decreased $5.7 million or 1.5% in 2015 as compared to 2014. The decrease in operating revenues for the year ended December 31, 2015 was primarily from lower pharmacy claims processing revenues resulting from a partial client deconversion on January 1, 2015. This decrease was largely offset by increased pharmacy and medical claims transaction volumes due to organic growth and higher BPO revenues. Operating revenues included approximately $9.1 million of software license fee revenues for the year ended December 31, 2015, an increase of $0.5 million as compared to 2014.

Costs and expenses

Healthcare Services segment costs and expenses for the year ended December 31, 2015 were $321.3 million, an increase of $12.8 million as compared to 2014. Reimbursable operating expenses included in costs and expenses were $8.2 million in 2015, an increase of $1.3 million as compared to 2014. Excluding reimbursable operating expenses, costs and expenses were $313.1 million for 2015, an increase of $11.5 million as compared to 2014. On this basis, the increase in costs and expenses during 2015 was primarily from a $3.4 million restructuring charge and increased staffing costs to support the expansion of our clinical, network and analytic capabilities in order to more effectively compete in the broader competitive PBM market. Staffing costs also increased in order to service the higher medical transaction volumes due to growth in BPO services which generally require more support. Additionally, costs increased in 2015 in order to implement several new clients expected to transition onto our medical claims platform in 2016. Costs were also higher due to the resolution of a previously disclosed regulatory inquiry which resulted in the reversal of $4.0 million previously accrued in excess of the final settlement amount of $2.0 million during 2014. The increased costs and expenses were partially offset by an incremental $5.7 million liability recorded during 2014 related to processing errors involving certain pharmacy claim transactions which did not recur in 2015.

Depreciation and amortization

Healthcare Services segment depreciation and amortization costs for the year ended December 31, 2015 were $18.6 million, a decrease of $0.9 million or 4.6% as compared to 2014.

Operating income

Healthcare Services segment operating income for 2015 was $44.7 million, a decrease of $16.3 million or 26.7% as compared to 2014. The decrease in operating income was primarily attributable to decreased revenues from lower pharmacy claims processing revenues resulting from a partial client deconversion on January 1, 2015. Additionally, the decrease in operating income was due to a restructuring charge and increased staffing costs incurred to expand our capabilities and service offerings as well as service growth in our BPO services that generally require a higher level of support. Costs also increased as a result of the implementation efforts for several new clients which transitioned onto our medical claims platform in 2016. The increase in costs were also due to the resolution of a previously disclosed regulatory inquiry which resulted in the reversal of $4.0 million previously accrued in excess of the final settlement amount of $2.0 million during 2014. The increased costs and expenses were offset by an incremental $6.4 million liability recorded during 2014 related to processing errors involving certain pharmacy claim transactions which did not recur in 2015.

INVESTMENTS AND OTHER SEGMENT

Investments and Other segment had an operating loss of $2.8 million for the year ended December 31, 2016, and operating income of $3.9 million and $0.4 million during the years ended December 31, 2015 and 2014, respectively. Operating income decreased $6.7 million during 2016 as compared to 2015, primarily from the $3.7 million gain on sale of real estate during the year ended December 31, 2015 that did not recur in 2016, lower rental income from third-party real estate leases and incremental expense associated with the charitable contributions of marketable securities to a donor-advised fund during 2016. These were partially offset by lower occupancy costs during the year ended December 31, 2016 as compared to the same period in 2015. Operating income increased $3.5 million during 2015 as compared to 2014, primarily from the $3.7 million gain on sale of real estate, partially offset by lower operating revenues.

LIQUIDITY AND CAPITAL RESOURCES

Company's Assessment of Short-term and Long-term Liquidity

We believe that our existing cash balances and other current assets, together with cash provided by operating activities and, as necessary, our revolving credit facilities, are sufficient to meet our operating and debt service requirements and other current liabilities for at least the next 12 months. Further, we believe that our longer term liquidity and capital requirements will also be met through cash provided by operating activities, bank credit facilities and other investments.

At December 31, 2016, total cash and cash equivalents were $195.5 million, of which $152.3 million was held outside of the U.S. Most of the amounts held outside the U.S. could be repatriated to the U.S. but, under current law, would be subject to U.S. federal and state income taxes, less foreign tax credits. We have accrued for U.S. federal and state tax liabilities on the earnings of our international subsidiaries except when the earnings are considered indefinitely reinvested outside of the U.S. The repatriation of these earnings could result in additional U.S. federal and state income tax payments in future years. We utilize a variety of funding strategies in an effort to ensure that our worldwide cash is available in the locations in which it is needed.

At December 31, 2016, we had approximately $794.8 million of availability under our domestic revolving credit facilities. There are no credit facilities with outstanding amounts as of December 31, 2016 that are scheduled to mature in 2017, except for $105.0 million of Series B Senior Notes that are scheduled to mature in August 2017.

Sources and Uses of Cash

We had $195.5 million, $79.5 million and $139.6 million of cash and cash equivalents at December 31, 2016, 2015 and 2014, respectively. Our primary source of liquidity has historically been cash provided by operations. In addition, we have used proceeds from the sale of investments to fund other investing and financing activities. Principal uses of cash are operations, reinvestment in our proprietary technologies, capital expenditures, investment purchases, seed money investments, business acquisitions, payments on debt, stock repurchases and dividend payments. Information on our consolidated cash flows for the years ended December 31, 2016, 2015 and 2014 is presented in the Statement of Cash Flows, categorized by operating activities, investing activities, and financing activities.

The sale of our North American Customer Communications business on July 1, 2016 resulted in cash consideration of approximately $341.5 million, net of tax. The after-tax proceeds from the sale are being used in accordance with the Company's capital plan, including investments in the business, share repurchases, strategic acquisitions, debt repayments and other corporate purposes.

Operating Activities

Cash flows provided from continuing operating activities were $162.7 million during the year ended December 31, 2016. Operating cash flows from continuing operating activities during 2016 resulted principally from income from continuing operations of $178.1 million, adjusted for non-cash or non-operating items of $90.4 million, and a use of cash due to changes in operating assets and liabilities of $105.8 million. Significant changes in operating assets and liabilities include a $26.9 million use of cash related to accrued compensation and benefits, a $16.6 million source of cash resulting from accounts payable and accrued liabilities, a $16.0 million use of cash related to accounts receivable and a $67.9 million use of cash related to timing of tax payments.

Cash flows provided from continuing operating activities were $135.7 million for the year ended December 31, 2015. Operating cash flows from continuing operations during 2015 resulted principally from income from continuing operations of $309.6 million, adjusted for non-cash or non-operating items of $110.3 million, and a use of cash due to changes in operating assets and liabilities of $63.6 million. Significant changes in operating assets and liabilities include a $10.6 million use of cash related to accounts receivable, and a $31.6 million use of cash related to timing of tax payments.

Cash flows provided from continuing operating activities were $242.4 million for the year ended December 31, 2014. Operating cash flows from continuing operating activities during 2014 resulted principally from income from continuing operations of $560.8 million. The most significant operating assets and liabilities change during 2014 was a $23.2 million use of cash related to timing of tax payments.

We have had significant proceeds from the sale of investments which have been included within investing activities on the Statement of Cash Flows. The income taxes paid on the gains from these investment sales are required to be treated as an operating cash outflow. Income tax expense resulting from these investment sales will reduce operating cash flows in the period that taxes are paid. Income taxes paid related to gains on the sale of investments and other non-operating assets during the years ended December 31, 2016, 2015 and 2014 were $1.4 million, $87.1 million and $70.4 million, respectively.

Investing Activities

Cash flows used in continuing investing activities were $117.3 million for the year ended December 31, 2016. Sources of our cash inflows were net investment activities (proceeds from investment sales, net of investments in securities) of $59.5 million, offset by cash used to acquire KRFS of $93.5 million, capital expenditures of $60.4 million, as well as approximately $28.0 million of cash loaned to IFDS U.K. during 2016.

Cash flows used in continuing investing activities during 2015 of $102.4 million were primarily attributable to net investment activities (proceeds from investment sales, net of investments in securities) of $192.2 million, which includes $176.1 million of pretax proceeds from the sale of State Street stock. These sources of cash were offset by $117.4 million of cash used to acquire kasina LLC, Red Rocks Capital LLC and Wealth Management Systems Inc. during 2015 and $88.9 million used to purchase capital assets, as well as higher restricted cash balances for client fund obligations.

Cash flows provided from continuing investing activities were $335.1 million for the year ended December 31, 2014, primarily attributable to net investment activities (proceeds from investment sales, net of investments in securities) of $343.0 million, which includes $190.3 million of pretax proceeds from the sale of State Street stock. Additionally, in 2014 cash flows from investing activities increased due to proceeds received from sale of Global Solutions of $77.4 million and proceeds from sale of non-operating real estate of $32.2 million. These cash inflows were partially offset by capital expenditures of $82.6 million.

Capital Expenditures

The following table summarizes capital expenditures by segment (in millions):

	Year Ended December 31,		
	2016	2015	2014
Financial Services segment	$ 55.0	$ 82.3	$ 72.2
Healthcare Services segment	5.4	6.1	10.1
Investments and Other segment	—	0.5	0.3
	$ 60.4	$ 88.9	$ 82.6

During 2016, 2015 and 2014, we capitalized software development costs of $21.5 million, $23.3 million and $28.8 million, respectively, which are included within the capital expenditures listed above. Capital expenditures using debt are treated as non-cash transactions and are not included in the annual capital expenditure amounts above. We anticipate our 2017 capital expenditures for continuing operations to total approximately $70.0 million. Future capital expenditures are expected to be funded primarily by cash flows from operating activities or through borrowings on our revolving credit facilities.

Financing Activities

Cash flows used in continuing financing activities totaled $374.8 million, $278.7 million and $526.8 million during the years ended December 31, 2016, 2015 and 2014, respectively.

Common Stock Issuances and Repurchases

We received cash proceeds of $5.3 million, $11.8 million and $13.0 million from the issuance of common stock from the exercise of employee stock options during the years ended December 31, 2016, 2015 and 2014, respectively. The value of shares received in exchange for satisfaction of the exercise price and for tax-withholding obligations arising from the exercise of options to purchase our stock or from the vesting of restricted shares are included in Common stock repurchased in the Consolidated Statement of Cash Flows.

On June 13, 2016, our Board of Directors authorized a new $300.0 million share repurchase plan, which allows, but does not require, the repurchase of common stock in open market and private transactions. The plan does not have an expiration date. We repurchased 2.7 million shares of our common stock for $300.0 million during the year ended December 31, 2016. Subsequently, during January and February 2017, we repurchased an additional 0.7 million shares of our common stock for $75.0 million resulting in approximately $75.0 million remaining under our existing share repurchase plan authorized in 2016. Under previous share repurchase plans, we expended $400.0 million for approximately 3.6 million shares and $200.0 million for approximately 2.2 million shares during the years ended December 31, 2015 and 2014, respectively.

As of March 23, 2014, Argyros beneficially owned 9.2 million shares or approximately 22% of DST common shares. During March 2014, we entered into an agreement under which we agreed to a two-step process to assist Argyros with the disposition of a substantial portion of its common stock ownership in DST. To implement Argyros' disposition, we facilitated the May 2014 registered, secondary common stock offering of $450.0 million (before any overallotment option) of DST common stock beneficially owned by Argyros. Concurrent with the closing of the secondary offering and based upon a price determined in the secondary offering, DST repurchased, and simultaneously retired, 2.4 million shares of our common stock from Argyros for $200.0 million. In connection with this share repurchase, we recorded a non-cash gain of $18.1 million during the year ended December 31, 2014 resulting from the change in stock price between the date the share repurchase price became fixed and the settlement date.

Dividends

We paid cash dividends of $1.32 per common share in 2016 and $1.20 per common share in both 2015 and 2014. The total cash paid for dividends in 2016, 2015 and 2014 was $43.4 million, $43.1 million and $47.6 million, respectively.

On January 25, 2017, our Board of Directors declared a quarterly cash dividend of $0.35 per share on our common stock, payable on March 10, 2017, to shareholders of record at the close of business on February 24, 2017. Future cash dividends will depend upon financial condition, earnings and other factors deemed relevant by our Board of Directors.

Client Funds Obligations

Client funds obligations represent our contractual obligations to remit funds to satisfy client pharmacy claim obligations and are recorded on the balance sheet when incurred, generally after a claim has been processed by us. In addition, client funds obligations include transfer agency client balances invested overnight. We had $564.6 million, $533.4 million and $399.6 million of client funds obligations at December 31, 2016, 2015 and 2014, respectively.

Debt Activity

During 2016, we had the following primary sources of debt financing: our syndicated revolving credit facility; accounts receivable securitization program; and privately placed senior notes (the "Senior Notes"). We had $508.2 million, $562.1 million and $552.9 million of debt outstanding at December 31, 2016, 2015 and 2014, respectively, a decrease of $53.9 million during 2016 and an increase of $9.2 million during 2015.

The decrease in debt outstanding during 2016 was primarily resulting from the utilization of the proceeds from the sale of our North American Customer Communications business to pay down outstanding balances, partially offset by borrowings to fund the KRFS business acquisition, share repurchases and working capital uses. The increase in debt outstanding during 2015 was primarily from higher borrowings on the syndicated revolving credit facility, partially offset by the repayment of the Series A Senior Notes and the pay down of the accounts receivable securitization line. In 2015, we renewed our accounts receivable securitization program for a three year term through May 2018.

Our debt agreements contain customary restrictive covenants, including limitations on consolidated indebtedness, liens, investments, subsidiary indebtedness, asset dispositions and require certain consolidated leverage and interest coverage ratios to be maintained. We are currently in compliance with these covenants. A default under certain of our borrowings could trigger defaults under certain of our other debt obligations, which in turn could result in their maturities being accelerated. Our debt arrangements are further described in Item 8, Financial Statements and Supplementary Data - Note 10, "Debt."

Contractual Obligations and Commercial Commitments

The following table sets forth our contractual obligations and commercial commitments (in millions):

	Payment Due by Period				
	Total	**Less than 1 Year**	**1 - 3 Years**	**3 - 5 Years**	**More than 5 Years**
Debt obligations	$ 508.5	$ 208.5	$ 140.0	$ 160.0	$ —
Operating lease obligations	80.5	18.8	30.3	19.1	12.3
Software license agreements	63.5	50.1	11.8	1.6	—
Other	30.7	13.8	15.8	0.9	0.2
	$ 683.2	$ 291.2	$ 197.9	$ 181.6	$ 12.5

Interest obligations on our outstanding debt are not included in the table above. The syndicated revolving credit facility contains grid schedules that adjust borrowing costs up or down based upon our consolidated leverage ratio. The grid schedules may result in fluctuations in borrowing costs ranging from 1.00% to 1.70% over Eurodollar and 0.00% to 0.70% over base rate, as defined. The Senior Notes have fixed interest rates and are comprised of $105.0 million of 4.86% Series B Senior Notes, $65.0 million of 5.06% Series C Senior Notes and $160.0 million of 5.42% Series D Senior Notes. In addition to the financial instruments listed above, the program fees incurred on proceeds from the sale of receivables under our accounts receivable securitization program are determined based on variable interest rates associated with LIBOR.

We have liabilities for income tax uncertainties of $69.8 million at December 31, 2016. These obligations are classified as non-current on our Consolidated Balance Sheet as resolution of these matters is expected to take more than a year; however, the ultimate timing of resolution is uncertain.

Other Commercial Commitments

In the normal course of business, to facilitate transactions of services and products and other business assets, we have agreed to indemnify certain parties with respect to certain matters. We have agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, or out of intellectual property infringement or other claims made by third parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. At December 31, 2016, except for certain immaterial items, there were no liabilities for guarantees or indemnifications as it is not possible to determine either the maximum potential amount under these indemnification agreements or the timing of any such payments due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made under these agreements have not had a material impact on our consolidated financial position, results of operations or cash flows.

Off-Balance Sheet Arrangements

An off-balance sheet arrangement is any transaction, agreement or other contractual arrangement involving an unconsolidated entity under which a company has (1) made guarantees, (2) a retained or a contingent interest in transferred assets, (3) an obligation under derivative instruments classified as equity, or (4) any obligation arising out of a material variable interest in an unconsolidated entity that provides financing, liquidity, market risk or credit risk support to the company, or that engages in leasing, hedging or research and development arrangements with the company.

We believe that our guarantee arrangements will not have a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, capital expenditures, capital resources, liquidity or results of operations. These arrangements are described above and in Item 8, Financial Statements and Supplementary Data - Note 16, "Commitments and Contingencies."

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The operation of our businesses and our financial results can be affected by changes in equity pricing, interest rates and currency exchange rates. Changes in interest rates and exchange rates have not materially impacted our consolidated financial position, results of operations or cash flows.

Available-for-sale equity price risk

Our investments in available-for-sale equity securities are subject to price risk. The fair value of our available-for-sale investments as of December 31, 2016 was approximately $180.5 million. The impact of a 10% change in fair value of these investments would have been approximately $11.2 million to comprehensive income. Changes in equity values of our investments have had and could have a material effect on our comprehensive income (loss) and financial position.

Interest rate risk

We and certain of our joint ventures derive service revenues from investment earnings related to cash balances maintained in bank accounts on which we are the agent for clients. The balances maintained in the bank accounts will fluctuate. For the year ended December 31, 2016, DST and BFDS had average daily cash balances of approximately $2.0 billion maintained in such accounts, of which approximately $1.2 billion were maintained at BFDS. We estimate that a 100 basis point change in the short-term interest earnings rate would equal approximately $7.1 million of net income (loss).

At December 31, 2016, we had $508.2 million of debt, of which $178.2 million was subject to variable interest rates (Federal Funds rates, LIBOR rates, Prime rates). We estimate that a 10% increase in interest rates would not have a significant impact to our consolidated pretax earnings or to the fair value of our debt.

The effect of changes in interest rates on our variable rate debt is mitigated by changes in interest rates attributable to balance earnings.

Foreign currency exchange rate risk

The operation of our subsidiaries in international markets results in our exposure to movements in currency exchange rates. The principal currencies involved are the British pound, Canadian dollar, Australian dollar, Thai baht and Indian rupee. Our international subsidiaries use the local currency as the functional currency. We translate our assets and liabilities at year-end exchange rates and translate income and expense accounts at average rates during the year. Currency exchange rate fluctuations have not historically significantly affected our consolidated financial results.

At December 31, 2016, our international subsidiaries for our continuing operations had approximately $135.3 million in total assets and for the year ended December 31, 2016, these international subsidiaries recorded net income of approximately $25.4 million. We estimate that a 10% change in exchange rates would have changed total consolidated assets by approximately $13.5 million. Furthermore, a 10% change in exchange rates based upon historical earnings in international operations would have changed consolidated net income for 2016 by approximately $2.5 million.

We have entered into foreign currency cash flow and economic hedging programs to mitigate the impact of movements in foreign currency (principally British pound, Australian dollar and Thai baht) on our operations. The total notional value of our foreign currency derivatives is $105.9 million at December 31, 2016. The fair value of the contracts that qualify for hedge accounting resulted in a liability of $0.1 million at December 31, 2016. We estimate that a 10% change in exchange rates would result in a $0.4 million change in other comprehensive income. The fair value of the contracts that do not qualify for hedge accounting resulted in a liability of $0.3 million at December 31, 2016. We estimate a 10% change in exchange rates on these contracts would result in a $5.5 million change to consolidated net income. Gains and losses on the derivative instruments are largely offset by changes in the underlying hedged items, resulting in a minimal impact on earnings.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders of DST Systems, Inc.:

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of DST Systems, Inc. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of Management on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

Kansas City, Missouri
February 28, 2017

DST Systems, Inc.
Consolidated Balance Sheet
(dollars in millions, except per share amounts)

	December 31, 2016	December 31, 2015
Assets		
Current assets		
Cash and cash equivalents	$ 195.5	$ 79.5
Funds held on behalf of clients	500.5	480.2
Client funding receivable	64.1	53.2
Accounts receivable (includes related party receivables of $19.7 and $20.8)	215.5	214.8
Other assets	70.0	49.8
Current assets held for sale	72.6	178.0
	1,118.2	1,055.5
Investments	377.4	418.2
Unconsolidated affiliates	331.2	312.2
Properties, net	235.7	256.7
Intangible assets, net	142.6	135.8
Goodwill	516.4	458.3
Other assets	50.3	57.0
Noncurrent assets held for sale	—	119.5
Total assets	$ 2,771.8	$ 2,813.2
Liabilities		
Current liabilities		
Current portion of debt	$ 208.5	$ 5.6
Client funds obligations	564.6	533.4
Accounts payable	62.9	51.2
Accrued compensation and benefits	101.7	126.5
Deferred revenues and gains	23.5	50.4
Income taxes payable	22.0	—
Other liabilities	78.1	66.2
Current liabilities held for sale	30.1	115.4
	1,091.4	948.7
Long-term debt	299.7	556.5
Income taxes payable	69.8	73.8
Deferred income taxes	151.5	104.7
Other liabilities	22.9	23.9
Noncurrent liabilities held for sale	—	44.5
Total liabilities	1,635.3	1,752.1
Commitments and contingencies (Note 16)		
Redeemable Non-controlling Interest	21.3	15.1
Stockholders' Equity		
Preferred stock, $0.01 par, 10 million shares authorized and unissued	—	—
Common stock, $0.01 par, 400 million shares authorized, and 50.0 million shares issued	0.5	0.5
Additional paid-in capital	129.5	136.7
Retained earnings	2,379.2	1,996.6
Treasury stock, at cost	(1,410.6)	(1,129.7)
Accumulated other comprehensive income	16.6	41.9
Total stockholders' equity	1,115.2	1,046.0
Total liabilities, redeemable non-controlling interest and stockholders' equity	$ 2,771.8	$ 2,813.2

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.
Consolidated Statement of Income
(in millions, except per share amounts)

	Year Ended December 31, 2016	2015	2014
Operating revenues	$ 1,474.4	$ 1,405.0	$ 1,445.5
Out-of-pocket reimbursements	82.3	69.0	59.3
Total revenues (includes related party revenues of $150.7, $150.3 and $148.8)	1,556.7	1,474.0	1,504.8
Costs and expenses	1,213.4	1,150.2	1,149.1
Depreciation and amortization	96.0	91.1	93.0
Operating income	247.3	232.7	262.7
Interest expense	(23.5)	(23.8)	(26.3)
Gain on sale of business	5.5	—	100.5
Other income, net	22.7	204.5	373.1
Equity in earnings of unconsolidated affiliates	27.2	45.4	34.7
Income from continuing operations before income taxes and non-controlling interest	279.2	458.8	744.7
Income taxes	101.1	149.2	183.9
Income from continuing operations before non-controlling interest	178.1	309.6	560.8
Income from discontinued operations, net of tax	248.3	48.5	32.5
Net income	426.4	358.1	593.3
Net loss attributable to non-controlling interest	0.9	0.1	—
Net income attributable to DST Systems, Inc.	$ 427.3	$ 358.2	$ 593.3
Weighted average common shares outstanding	33.0	36.0	40.0
Weighted average diluted shares outstanding	33.3	36.4	40.5
Basic earnings per share:			
Continuing operations attributable to DST Systems, Inc.	$ 5.43	$ 8.60	$ 14.01
Discontinued operations	7.53	1.35	0.81
Basic earnings per share	$ 12.96	$ 9.95	$ 14.82
Diluted earnings per share:			
Continuing operations attributable to DST Systems, Inc.	$ 5.37	$ 8.50	$ 13.86
Discontinued operations	7.45	1.33	0.80
Diluted earnings per share	$ 12.82	$ 9.83	$ 14.66
Cash dividends per share of common stock	$ 1.32	$ 1.20	$ 1.20

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.
Consolidated Statement of Comprehensive Income
(in millions)

	Year Ended December 31,		
	2016	2015	2014
Net income attributable to DST Systems, Inc.	$ 427.3	$ 358.2	$ 593.3
Other comprehensive loss, net of tax and reclassifications to earnings:			
Unrealized holding gains (losses) on available-for-sale securities	10.1	(123.2)	(93.6)
Unrealized gains on cash flow hedges	—	0.2	0.2
Foreign currency translation adjustments	(35.4)	(22.0)	(27.9)
Other comprehensive loss	(25.3)	(145.0)	(121.3)
Comprehensive income	$ 402.0	$ 213.2	$ 472.0

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.
Consolidated Statement of Changes in Stockholders' Equity
(in millions)

	Common Stock						
	Shares Outstanding	Par Value	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income	Total Stockholders' Equity
December 31, 2013	41.8	$ 1.0	$ 187.3	$ 3,777.7	$ (3,090.4)	$ 308.2	$ 1,183.8
Comprehensive income:							
Net income attributable to DST Systems, Inc.	—	—	—	593.3	—	—	593.3
Other comprehensive loss	—	—	—	—	—	(121.3)	(121.3)
Dividends	—	—	0.7	(48.3)	—	—	(47.6)
Amortization of share based compensation	—	—	21.0	—	—	—	21.0
Issuance of common stock	0.5	—	(8.0)	—	28.0	—	20.0
Repurchase of common stock	(4.7)	—	—	—	(424.5)	—	(424.5)
Retirement of treasury stock	—	(0.5)	(98.3)	(2,639.8)	2,738.6	—	—
Other	—	—	11.7	—	—	—	11.7
December 31, 2014	37.6	0.5	114.4	1,682.9	(748.3)	186.9	1,236.4
Comprehensive income:							
Net income attributable to DST Systems, Inc.	—	—	—	358.2	—	—	358.2
Other comprehensive loss	—	—	—	—	—	(145.0)	(145.0)
Dividends	—	—	1.4	(44.5)	—	—	(43.1)
Amortization of share based compensation	—	—	27.9	—	—	—	27.9
Issuance of common stock	0.3	—	(5.2)	—	23.9	—	18.7
Repurchase of common stock	(3.6)	—	—	—	(405.3)	—	(405.3)
Other	—	—	(1.8)	—	—	—	(1.8)
December 31, 2015	34.3	0.5	136.7	1,996.6	(1,129.7)	41.9	1,046.0
Comprehensive income:							
Net income attributable to DST Systems, Inc.	—	—	—	427.3	—	—	427.3
Other comprehensive loss	—	—	—	—	—	(25.3)	(25.3)
Dividends	—	—	1.3	(44.7)	—	—	(43.4)
Amortization of share based compensation	—	—	16.3	—	—	—	16.3
Issuance of common stock	0.4	—	(24.5)	—	34.9	—	10.4
Repurchase of common stock	(2.7)	—	—	—	(315.8)	—	(315.8)
Other	—	—	(0.3)	—	—	—	(0.3)
December 31, 2016	32.0	$ 0.5	$ 129.5	$ 2,379.2	$ (1,410.6)	$ 16.6	$ 1,115.2

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.
Consolidated Statement of Cash Flows
(in millions)

	Year Ended December 31, 2016	2015	2014
Cash flows—operating activities:			
Net income	$ 426.4	$ 358.1	$ 593.3
Less: income from discontinued operations	248.3	48.5	32.5
Income from continuing operations	178.1	309.6	560.8
Depreciation and amortization	96.0	91.1	93.0
Net gains on investments	(2.4)	(163.6)	(281.8)
Gains on sale of properties and businesses	(5.6)	(4.5)	(101.3)
Amortization of share-based compensation	12.2	24.1	17.7
Equity in earnings of unconsolidated affiliates	(27.2)	(45.4)	(34.7)
Cash dividends from unconsolidated affiliates	0.4	3.5	1.8
Gain on contract to repurchase common stock	—	—	(18.1)
Deferred income taxes	17.0	(15.5)	1.4
Changes in accounts receivable	(16.0)	(10.6)	(6.1)
Changes in other assets	(0.8)	(9.4)	1.1
Changes in client funds obligations	10.9	9.9	(6.9)
Changes in client funding receivable	(10.9)	(9.9)	6.9
Changes in accounts payable and accrued liabilities	16.6	(1.8)	3.9
Changes in income taxes payable	(67.9)	(31.6)	(23.2)
Changes in deferred revenues and gains	(4.6)	(2.1)	0.4
Changes in accrued compensation and benefits	(26.9)	(7.7)	8.0
Other, net	(6.2)	(0.4)	19.5
Net cash provided from continuing operating activities	162.7	135.7	242.4
Net cash provided from discontinued operating activities	26.4	84.5	70.1
Net cash provided from operating activities	189.1	220.2	312.5
Cash flows—investing activities:			
Cash paid for capital expenditures	(60.4)	(88.9)	(82.6)
Investments in securities	(258.3)	(166.4)	(76.4)
Proceeds from (investments in and advances to) unconsolidated affiliates, net	(23.8)	11.1	10.0
Proceeds from sale / maturities of investments	317.8	358.6	419.4
Net increase in restricted cash and cash equivalents held to satisfy client funds obligations	(20.3)	(113.5)	(44.9)
Proceeds from sale of properties	5.7	6.1	32.2
Acquisition of businesses, net of cash and cash equivalents acquired	(93.5)	(117.4)	—
Proceeds from sale of businesses, net of cash and cash equivalents sold	14.5	7.9	77.4
Other, net	1.0	0.1	—
Net cash provided from (used in) continuing investing activities	(117.3)	(102.4)	335.1
Net cash provided from (used in) discontinued investing activities	412.9	104.9	(30.4)
Net cash provided from investing activities	295.6	2.5	304.7
Cash flows—financing activities:			
Proceeds from issuance of common stock	5.3	11.8	13.0
Principal payments on debt	(5.1)	(46.4)	(132.3)
Net proceeds (repayments) on accounts receivable securitization program	103.2	(120.0)	(30.0)
Net borrowings (repayments) on revolving credit facilities	(151.1)	181.8	33.9
Net increase in client funds obligations	20.3	124.0	39.9
Receipt of third party capital in investment fund	7.1	15.0	—
Common stock repurchased	(315.8)	(405.3)	(406.4)
Payment of cash dividends	(43.4)	(43.1)	(47.6)
Excess tax benefits from share based compensation	4.7	5.6	6.1
Other, net	—	(2.1)	(3.4)

DST Systems, Inc.
Consolidated Statement of Cash Flows, continued
(in millions)

	December 31,		
	2016	2015	2014
Net cash used for continuing financing activities	(374.8)	(278.7)	(526.8)
Net cash used for discontinued financing activities	—	(6.1)	(1.2)
Net cash used for financing activities	(374.8)	(284.8)	(528.0)
Net increase (decrease) in cash and cash equivalents, including cash within assets held for sale	109.9	(62.1)	89.2
Cash and cash equivalents, beginning of year	89.6	151.7	62.5
Cash and cash equivalents, end of year	199.5	89.6	151.7
Less: cash and cash equivalents held for sale	4.0	10.1	12.1
Cash and cash equivalents of continuing operations, end of year	$ 195.5	$ 79.5	$ 139.6

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.

Notes to Consolidated Financial Statements

1. Description of Business

DST Systems, Inc. and consolidated subsidiaries ("we," "our," "us," the "Company" or "DST") use proprietary software applications to provide sophisticated information processing and servicing solutions, through strategically unified business processing and data management, to clients globally within the asset management, brokerage, retirement, healthcare and other markets. Our wholly-owned data centers provide the secure technology infrastructure necessary to support our solutions.

We manage our business through our two operating segments, Financial Services and Healthcare Services. Investments in equity securities, private equity investments, real estate and certain financial interests have been aggregated into the Investments and Other segment.

On July 1, 2016, we completed the sale of our North American Customer Communications business. Additionally, during 2016, our Board of Directors approved a plan for management to pursue the divestiture of our United Kingdom Customer Communications business. As a result, beginning in 2016, the Customer Communications segment, as well as certain businesses previously reported within the Financial Services segment that were part of the July 1, 2016 sale, have been reported as discontinued operations. Prior period amounts have been adjusted to be consistent with the current discontinued operations presentation. See Note 4, Discontinued Operations, for additional information.

2. Significant Accounting Policies

Principles of consolidation

The consolidated financial statements include all majority-owned subsidiaries of the Company. Intercompany balances and transactions have been eliminated. Certain amounts in the 2015 and 2014 consolidated financial statements have been reclassified to conform to the 2016 presentation.

We consolidate any entity in which we have a controlling financial interest. Under the voting interest model, generally the investor that has voting control (usually more than 50% of an entity's voting interests) consolidates the entity. Under the variable interest entity ("VIE") model, the party that has the power to direct the entity's most significant economic activities and the ability to participate in the entity's economics consolidates the entity. An entity is considered a VIE if it possesses one of the following characteristics: 1) the entity is thinly capitalized; 2) residual equity holders do not control the entity; 3) equity holders are shielded from economic losses; 4) equity holders do not participate fully in an entity's residual economics; and 5) the entity was established with non-substantive voting interests.

For consolidated subsidiaries that are less than wholly owned, the third-party holdings of equity interests are referred to as non-controlling interests. Non-controlling interests that are redeemable or convertible for cash or other assets at the option of the holder are classified separate from stockholders' equity on the Consolidated Balance Sheet. The portion of net income (loss) attributable to the non-controlling interest for such subsidiaries is presented as net income (loss) attributable to non-controlling interest in the Consolidated Statement of Income.

We have the following significant operating joint ventures: BFDS; IFDS U.K.; and IFDS L.P. We do not have a controlling financial interest in these entities and therefore account for the financial results of these operating joint ventures using the equity method of accounting.

We are the lessee in a series of operating leases covering a large portion of our Kansas City, Missouri-based leased office facilities. The lessors are generally joint ventures (in which we have a 50% ownership) that have been established specifically to purchase, finance and engage in leasing activities with the joint venture partners and unrelated third parties. Our analysis of our real estate joint ventures for all periods presented indicate that none qualified as a VIE and, accordingly, they have not been consolidated.

We provide investment management services to, and have transactions with, various exchange traded funds, mutual funds and other investment products sponsored by the Company in the normal course of business. We generally are considered to have a controlling financial interest in a fund when we own a majority of the outstanding controlling shares, which may arise as a result of seed capital investments in newly launched investment products from the time of initial launch to the time that the fund becomes majority-held by third-party investors.

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ from those estimates.

Revenue recognition

We recognize revenue when it is realized or realizable and it is earned. The majority of our revenues are derived from computer processing and services and are recognized upon completion of the services provided. Software license fees, maintenance fees and other ancillary fees are recognized as services are provided or delivered and all customer obligations have been met. We generally do not have payment terms from customers that extend beyond one year. Revenue from operating leases is recognized monthly as the rent accrues. Billing for services in which cash is collected in advance of performance is recorded as deferred revenue. Allowances for billing adjustments and doubtful account expense are estimated as revenues are recognized. Allowances for billing adjustments are recorded as reductions in revenues and doubtful account expense is recorded within Costs and expenses. The annual amounts for these items are immaterial to our consolidated financial statements.

We recognize revenue when the following criteria are met: 1) persuasive evidence of an arrangement exists; 2) delivery has occurred or services have been rendered; 3) the sales price is fixed or determinable; and 4) collectibility is reasonably assured. If there is a customer-specific acceptance provision in a contract or if there is uncertainty about customer acceptance, the associated revenue is deferred until we have evidence of customer acceptance.

Revenue arrangements with multiple deliverables are evaluated to determine if the deliverables (items) can be divided into more than one unit of accounting. An item can generally be considered a separate unit of accounting if both of the following criteria are met: 1) the delivered item(s) has value to the customer on a standalone basis and 2) if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Once separate units of accounting are determined, the arrangement consideration is allocated at the inception of the arrangement to all deliverables using the relative selling price method. Relative selling price is obtained from sources such as vendor-specific objective evidence, which is based on the separate selling price for that or a similar item or from third-party evidence such as how competitors have priced similar items. If such evidence is unavailable, we use our best estimate of the selling price, which includes various internal factors such as our pricing strategy and market factors.

Software license revenues are recognized at the time the contract is signed, the software is delivered and no future software obligations exist. Deferral of software license revenue results from delayed payment provisions, disproportionate discounts between the license and other services or the inability to unbundle certain services. We recognize revenues for maintenance services ratably over the contract term, after collectibility has been reasonably assured.

Reimbursements received for "out-of-pocket" ("OOP") expenses, such as postage and telecommunications charges, are recorded as revenue on an accrual basis. Because these additional revenues are offset by the reimbursable expenses incurred, they have minimal impact on income from operations and net income. For each segment, total revenues are reported in two categories, operating revenues and OOP reimbursements. OOP expenses are included in costs and expenses.

Costs and expenses

Costs and expenses include all costs, excluding depreciation and amortization, incurred to produce revenues. We believe that the nature of our business as well as our organizational structure, in which virtually all officers and associates have operational responsibilities, does not allow for a meaningful segregation of selling, general and administrative costs. These costs, which we believe to be immaterial, are also included in costs and expenses. Substantially all depreciation and amortization is directly associated with the production of revenues.

Cash equivalents

Short-term liquid investments with original maturities of 90 days or less are considered cash equivalents. Due to the short-term nature of these investments, carrying value approximates market value.

Client funds/obligations

Funds held on behalf of clients

In connection with providing data processing services for our clients, we may hold client funds on behalf of transfer agency clients and pharmacy processing clients. End-of-day available client bank balances for full service mutual fund transfer agency clients are invested overnight. Invested balances are returned to the full service mutual fund transfer agency client accounts the following business day. Funds received from clients for the payment of pharmacy claims incurred by its members are invested until the claim payments are presented to the bank. These amounts are included in funds held on behalf of clients in the Consolidated Balance Sheet and represent assets that are restricted for use.

Client funding receivable

Client funding receivables represent amounts due to us for pharmacy claims paid in advance of receiving client funding and for pharmacy claims processed for which client funding requests have not been made.

Client funds obligations

Client funds obligations represent our contractual obligations to remit funds to satisfy client pharmacy claim obligations and are recorded on the balance sheet when incurred, generally after a claim has been processed by us. In addition, client funds obligations include transfer agency client balances invested overnight.

We have reported the cash flows related to the purchases of investment funds (available-for-sale securities) held on behalf of clients and the cash flows related to the proceeds from the sales/maturities of investment funds held on behalf of clients on a gross basis in the investing section of the Consolidated Statement of Cash Flows. We have reported the cash inflows and outflows related to client fund investments on a net basis within net (increase) decrease in restricted cash and cash equivalents held to satisfy client funds obligations in the investing section of the Consolidated Statement of Cash Flows. We have reported the cash flows related to client funds used in investing activities on a net basis within net increase (decrease) in client funds obligations in the financing section of the Consolidated Statement of Cash Flows.

Investments

The equity method of accounting is used for investments in entities, partnerships and similar interests (including investments in private equity funds where we are the limited partner) in which we have significant influence but do not control. Under the equity method, we recognize income or losses from our pro-rata share of these unconsolidated affiliates' net income or loss, which changes the carrying value of the investment of the unconsolidated affiliate. In certain cases, pro-rata losses are recognized only to the extent of our investment in and advances to the unconsolidated affiliate.

The cost method of accounting is used for these investments when we have a de minimis ownership percentage and do not have significant influence. Our cost method investments are held at the lower of cost or market.

Investments classified as available-for-sale securities are reported at fair value with unrealized gains and losses excluded from earnings and recorded net of deferred taxes directly to stockholders' equity as accumulated other comprehensive income. Investments in trading securities are reported at fair value with unrealized gains and losses included in earnings. Investments classified as held-to-maturity securities are recorded at amortized cost, which approximates fair value.

Investment funds which are consolidated as a result of our seed capital investment are considered investment companies and therefore we retain the specialized industry accounting principles of these investment products in our consolidated financial statements. Upon consolidation of a fund, the underlying securities of the fund are reflected at fair value with gains and losses included in Other income, net in the Consolidated Statement of Income.

Security transactions and investment income

Security transactions are accounted for on the trade date. Security gains and losses are calculated on the specific identification method. Dividend income is recorded on the ex-dividend date. Interest income, adjusted for discounts and premiums, is recorded on the accrual basis.

Property and equipment

Property and equipment are recorded at cost with major additions and improvements capitalized. Cost includes the amount of interest cost associated with significant capital additions. Depreciation of buildings is recorded using the straight-line method over 30 to 40 years. Technology equipment, furniture, fixtures and other equipment are depreciated using accelerated methods over the estimated useful lives, principally three to five years. Software is depreciated using the straight-line method over the estimated useful lives, generally three to five years. Leasehold improvements are depreciated using the straight-line method over the lesser of the term of the lease or life of the improvements. We review, on a quarterly basis, our property and equipment for possible impairment.

Purchased software is recorded at cost and is amortized over the estimated economic life, which is generally three to five years. We capitalize costs for the development of internal use software, including coding and software configuration costs and costs of upgrades and enhancements, after the preliminary project phase has been completed and management has committed to funding the project. These costs are amortized on a straight-line basis, depending on the nature of the project, generally over a three to five year period. We review, on a quarterly basis, our capitalized software for possible impairment.

Development costs for software that will be sold or licensed to third parties, prior to the achievement of technological feasibility, are expensed as incurred. We capitalize software development costs for software that will be sold or licensed to third parties which are incurred after the products reach technological feasibility but prior to the general release of the product to customers. These capitalized development costs are amortized on a product-by-product basis using the greater of the amount computed by taking the ratio of current year's gross revenues to current and anticipated future gross revenues or the amount computed by the straight-line method over the estimated useful life of the product, which is generally three to five years. We evaluate the net realizable value of capitalized software development costs on a product-by-product basis.

Goodwill and intangible assets

We have recorded goodwill and intangible assets in connection with various acquisitions of businesses. Intangible assets at December 31, 2016 and 2015 primarily represent customer relationships and other definite lived intangible assets (trade names, non-compete agreements, etc.) acquired. The estimated useful life on these intangible assets ranges from 3 to 19 years. The weighted average amortization period at December 31, 2016 for customer relationships and other intangible assets is 14.7 and 8.7 years, respectively.

We assess the impairment of goodwill at least annually (as of October 1) and assess identifiable intangibles, long-lived assets and related assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Intangible assets that have finite lives will continue to be amortized over their useful lives.

Our assessment of goodwill for impairment for 2016 included a quantitative assessment that compared the fair value to the net book value of our reporting units. The fair value of the reporting units was estimated using the present value of expected future cash flows and substantially exceeded the carrying value of the reporting units. For 2015, we performed a qualitative assessment that considered various factors, including growth in operating revenues and income from operations of our reporting units since our last quantitative assessment in 2014. Our 2016, 2015 and 2014 annual goodwill impairment tests determined that goodwill was not impaired, except during 2016 for the goodwill held at the Customer Communications U.K. reporting unit, which is included as a component of discontinued operations, as further described in Note 4, Discontinued Operations.

Income taxes

We recognize the amount of income taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. Deferred income tax effects of transactions reported in different periods for financial reporting and income tax return purposes are recorded by the liability method. This method gives consideration to the future tax consequences of deferred income or expense items and differences between the income tax and financial accounting statement bases of assets and liabilities and immediately recognizes changes in income tax laws upon enactment. The income statement effect is generally derived from changes in deferred income taxes on the balance sheet.

From time to time, we enter into transactions for which the tax treatment under the Internal Revenue Code or applicable state tax laws is uncertain. We provide federal and/or state income taxes on such transactions, together with related interest, net of income tax benefit, and any applicable penalties in accordance with accounting guidance for income tax uncertainties. We record income tax uncertainties that are estimated to take more than 12 months to resolve as non-current. Interest and penalties related to unrecognized tax benefits, if any, are recorded in income tax expense.

Foreign currency translation

Our international subsidiaries use the local currency as the functional currency. We translate our assets and liabilities at period-end exchange rates. Income and expense accounts are translated at average rates during the period.

Earnings per share

Basic earnings per share are determined by dividing net income by the weighted average number of common shares outstanding during the year. Diluted earnings per share are determined by including the dilutive effect of all potential common shares outstanding during the year. See Note 13, Equity, for additional details regarding our earnings per share computation.

Derivative and hedging activities

We recognize all derivatives as either assets or liabilities in the balance sheet and measure those instruments at fair value and the changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and, if it is, the type of hedge transaction. From time to time, we utilize derivatives to manage interest rate and foreign currency risks. We do not enter into derivative arrangements for speculative purposes. At December 31, 2016 and 2015, we had derivative instruments outstanding as described in Note 11, Hedging Transactions and Derivative Financial Instruments.

Comprehensive income

Our comprehensive income consists of net income and unrealized gains or losses on available-for-sale securities, our proportional share of unconsolidated affiliates' other comprehensive income (limited by the carrying value of the investment), unrealized gains or losses on our cash flow hedges and foreign currency translation adjustments, which are presented in the Consolidated Statement of Comprehensive Income, net of tax and reclassifications to earnings.

Share-based compensation

We have share-based compensation plans covering our employees and our non-employee directors and have outstanding share awards (primarily in the form of stock options, restricted stock, restricted stock units and performance stock units) under each of these plans. We recognize the cost of employee services received in exchange for awards of equity instruments based on the grant date fair value of those awards offset by estimates of compensation costs related to awards that are not expected to vest. For share-based awards granted, we expense the grant date fair value of these awards using the straight-line method over the service period. Amortization for the grant date fair value of share-based awards containing both service and performance features depends on our judgments on whether the performance conditions will be achieved.

New authoritative accounting guidance

In November 2016, the Financial Accounting Standards Board ("FASB") issued guidance which requires the statement of cash flows to explain changes during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. The guidance is effective January 1, 2018 and requires retrospective application. Early adoption is permitted. We are currently evaluating the standard and the impact it will have on our consolidated financial statements.

In October 2016, the FASB issued guidance which requires the recognition of income tax consequences for intra-entity transfers of assets other than inventory. The guidance is effective January 1, 2018 and requires modified retrospective application. Early adoption is permitted. We are currently evaluating the standard and the impact it will have on our consolidated financial statements.

In August 2016, the FASB issued guidance to clarify how certain transactions are presented and classified in the statement of cash flows. The guidance is effective January 1, 2018 with early adoption permitted. We do not expect the adoption of this new standard to have a material impact on our consolidated financial statements.

In March 2016, the FASB issued guidance which simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification of related amounts within the statement of cash flows. The guidance is effective January 1, 2017, with early adoption permitted. We expect increased volatility in earnings as the excess tax benefits driven by changes in our stock price will be recorded to the Consolidated Statement of Income upon adoption.

In February 2016, the FASB issued guidance which requires lessees to reflect most leases on their balance sheet as assets and obligations. The guidance is effective January 1, 2019 with early adoption permitted. The standard is to be applied under the modified retrospective method, with elective reliefs, which requires application of the new guidance for all periods presented. We are currently evaluating the standard and the impact it will have on our consolidated financial statements and related disclosures.

In January 2016, the FASB issued guidance which updates the reporting model for certain financial instruments, including the requirement for equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. The guidance is effective January 1, 2018 and requires a cumulative-effective adjustment as of the beginning of the fiscal year of adoption. Early adoption is permitted as of the beginning of the fiscal year of adoption. We are currently evaluating the standard and the impact it will have on our consolidated financial statements.

In September 2015, the FASB issued guidance which requires that an acquirer recognize adjustments to provisional amounts in a business combination that are identified during the measurement period in the reporting period in which the adjustment amounts are determined. Effects on earnings as a result of the change to the provisional amounts should be recorded in the same period's financial statements and calculated as if the accounting had been completed at the acquisition date. The guidance was adopted on January 1, 2016 and did not have a material impact on our consolidated financial statements.

In February 2015, the FASB issued guidance which changes the way reporting enterprises evaluate whether (a) they should consolidate limited partnerships and similar entities, (b) fees paid to a decision maker or service provider are variable interests in a Variable Interest Entity ("VIE"), and (c) variable interests in a VIE held by related parties of the reporting enterprise require the reporting enterprise to consolidate the VIE. It also eliminates the VIE consolidation model based on majority exposure to variability that applied to certain investment companies and similar entities. In connection with the adoption of the guidance on January 1, 2016, the Company reevaluated all of its investment products for consolidation and determined that certain of its investments in private equity funds met the definition of a VIE as our equity interests lacked the characteristics of a controlling financial interest. The revised consolidation guidance did not result in consolidation of any of our investments. See Note 5, Investments, for additional details regarding our investments in variable interest entities.

In May 2014, the FASB issued guidance which requires companies to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration it expects to be entitled in exchange for those goods or services. The new standard and subsequently issued amendments will become effective for us beginning with the first quarter 2018, and although permitted, we will not early adopt this guidance. We are in the process of selecting the method of adoption, either the full retrospective or modified retrospective transition approach, however we have not yet determined the method by which the standard will be adopted. In addition, we are currently evaluating the impacts of the application of the new standard to our existing portfolio of customer contracts and will continue to review new contracts entered into prior to the adoption of the new standard. While we expect the adoption of the standard will change the timing of when revenue is recognized for certain revenue streams, we anticipate that the majority of our contracts with customers will be accounted for under the series deliverable guidance in the new standard which will likely result in no change as compared to current revenue recognition. We expect to continue finalizing our assessment of the expected impact of adoption throughout 2017.

3. Significant Business Transactions and Events

Significant Business Acquisitions

Acquisition of Kaufman Rossin Fund Services LLC

On February 24, 2016, we acquired all of the membership interests of KRFS, for $94.7 million in cash, after giving effect to a $0.3 million adjustment agreed upon in June 2016 to settle working capital under the terms of the agreement. DST financed the acquisition through cash-on-hand and available lines of credit. KRFS is an independent, full-service provider of specialized hedge fund administration services to the global financial community. KRFS' hedge fund services include accounting and valuation, back-office outsourcing, investor services, treasury services, and customized reporting. We expect the acquisition to provide us with additional opportunities within the alternative investment marketplace and expand our asset administration service offerings.

The factors described above, combined with the synergies expected from combining our operations with the acquired entity and the resulting expansion of the service offerings available to our clients, are the basis for the acquisition price paid resulting in $61.0 million of goodwill recorded, all of which is expected to be deductible for tax purposes. KRFS is included within the Financial Services segment. The transaction was accounted for using the acquisition method of accounting, and as such, assets acquired, liabilities assumed, and consideration transferred were recorded at their estimated fair values on the acquisition date.

The following table summarizes the aggregate acquisition-date fair value of the consideration transferred for the acquisition of KRFS and the amounts recognized as of the acquisition date for the assets acquired and liabilities assumed (in millions):

Consideration	
Cash paid	$ 94.7
Recognized amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	$ 1.0
Accounts receivable	2.9
Other current assets	0.1
Investments	0.5
Properties (1)	6.8
Intangible assets	23.4
Goodwill	61.0
Total assets	95.7
Deferred revenue	0.6
Other current liabilities	0.4
Total liabilities	1.0
Net assets acquired	$ 94.7

(1) Includes $6.5 million of acquired software with a weighted-average useful life of 6 years.

The following table summarizes the intangible assets acquired and estimated weighted-average useful lives as of the acquisition date (in millions):

	Fair Value	Weighted-Average Useful Life
Customer relationships	$ 22.5	10 years
Other	0.9	3 years
	$ 23.4	

The operating results of KRFS were combined with our operating results subsequent to the acquisition date. Approximately $20.9 million of revenues and $1.1 million of pretax income of the acquired business are included in the Consolidated Statement of Income for the year ended December 31, 2016. Pro-forma results of operations, assuming this acquisition was made at the beginning of the earliest period presented, have not been presented as the effect of this acquisition is not material to our results.

The following acquisitions during 2015 are included within the Financial Services segment:

Acquisition of kasina LLC

On January 1, 2015, we acquired all of the membership interests of kasina LLC, a strategic advisory firm to the asset management industry for $9.0 million of upfront cash consideration and up to $2.1 million of performance-related contingent consideration, based on the terms of the agreement, which were amended during 2016. The contingent consideration requires, subject to certain exceptions, future employment over the course of the performance period. The acquisition provides us with additional opportunities to provide a combination of advisory, research, technology and analytics to asset managers.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Acquisition of Red Rocks Capital LLC

On July 31, 2015, we acquired all of the membership interests of asset manager Red Rocks Capital LLC, which focuses on listed private equity and other private asset investments, for $45.0 million of upfront cash consideration and up to $20.0 million of performance-related contingent consideration. The performance-related contingent consideration is based on the achievement of certain annual revenue targets of the acquired business over an approximate four year period from the closing date and requires, subject to certain exceptions, future employment over the course of the performance period. We expect the acquisition to provide us with additional opportunities within the alternative investment marketplace to enhance our ongoing asset management strategy.

Acquisition of Wealth Management Systems Inc.

On August 21, 2015, we acquired all of the outstanding common stock of Wealth Management Systems Inc., a provider of technology-based rollover services, for cash consideration of $65.1 million, which includes a $1.1 million adjustment agreed upon in December 2015 to settle working capital under the provisions of the purchase agreement. A post-closing settlement amount of $0.2 million was received in January 2016, and is included in Other Assets on the Consolidated Balance Sheet at December 31, 2015. Wealth Management Systems Inc. automates the migration of assets from retirement plans to investment management platforms. We expect the acquisition to provide us with additional opportunities to expand rollover service options to new and existing customers and enhance our ongoing retirement and asset management strategies.

The factors described above, combined with the synergies expected from combining our operations with each of the acquired entities and the resulting expansion of the service offerings available to our clients, are the basis for the acquisition prices paid resulting in $75.8 million of goodwill recorded, of which approximately $40.0 million is expected to be deductible for tax purposes. The transactions were accounted for using the acquisition method of accounting, with assets acquired, liabilities assumed, and consideration transferred recorded at their estimated fair values on the acquisition dates.

The following table summarizes the aggregate acquisition-date fair value of the consideration transferred for the acquisitions of kasina LLC, Red Rocks Capital LLC, and Wealth Management Systems Inc. and the amounts recognized as of the acquisition date for the assets acquired and liabilities assumed (in millions):

Consideration		
Cash paid	$	118.8
Fair value of contingent consideration		0.8
Fair value of total consideration transferred	$	119.6
Recognized amounts of identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	$	1.6
Accounts receivable		4.2
Other current assets		0.2
Properties (1)		3.3
Intangible assets		49.5
Goodwill		75.8
Total assets		134.6
Accounts payable		0.2
Accrued compensation and benefits		0.4
Deferred revenue		5.5
Other current liabilities		0.7
Deferred income tax liabilities		8.2
Total liabilities		15.0
Net assets acquired	$	119.6

(1) Includes $3.0 million of acquired software

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following table summarizes the intangible assets acquired and estimated weighted average useful lives as of acquisition dates (in millions):

	Fair Value	Weighted Average Useful Life
Customer relationships	$ 48.0	17 years
Other	1.5	7 years
	$ 49.5	

The operating results of kasina LLC, Red Rocks Capital LLC, and Wealth Management Systems Inc. were combined with our operating results subsequent to the acquisition dates. Approximately $10.4 million of revenues and $9.3 million of pretax losses of the acquired businesses are included in the Consolidated Statement of Income for the year ended December 31, 2015. Pro-forma results of operations, assuming these acquisitions were made at the beginning of the earliest period presented, have not been presented as the effect of these acquisitions are not material to our results.

Sale of Business

On November 30, 2014, we sold Global Solutions for cash consideration of $95.0 million, subject to customary working capital post-closing adjustments. Of the $95.0 million in proceeds received, $9.5 million was restricted for a period of eighteen months from the transaction, for purposes of payment of potential obligations that may arise based upon the terms and conditions of the sale agreement. The $9.5 million of restricted proceeds held in escrow was received by us during 2016. In addition, during 2015, we received cash proceeds of $7.9 million in settlement of the working capital post-closing adjustments.

Operating revenue generated from the Global Solutions businesses sold was approximately $61.4 million for the year ended December 31, 2014. Operating income generated from the Global Solutions businesses sold was approximately $6.9 million for the year ended December 31, 2014. We recorded a pretax gain of $100.5 million on the sale of the business during 2014. Our pretax gain exceeded our sale proceeds primarily from the reclassification of cumulative translation adjustments due to the substantial liquidation of certain foreign entities, partially offset by transaction costs. The carrying value of the entities sold was minimal.

Restructuring Initiatives

As a result of changes in our business environment, from time to time we will restructure one or more of our businesses to enhance operational efficiency.

During the year ended December 31, 2016, we incurred pretax restructuring charges related to employee termination costs of $9.9 million and lease termination costs of $0.5 million within the Financial Services segment.

During the year ended December 31, 2015, we incurred $3.4 million of pretax charges related to employee termination costs as a result of a restructuring initiative within the Healthcare Services segment which includes the closure of an operating location at the end of the existing lease term in mid-2016.

During the year ended December 31, 2014, the Financial Services segment incurred $8.5 million of pretax charges related to employee and lease termination costs for restructuring initiatives. The costs were comprised of employee termination costs of $8.3 million and lease termination costs of $0.2 million. These expenses have been included in Costs and expenses in the Consolidated Statement of Income.

As of December 31, 2016, 2015 and 2014, we had a remaining liability of $0.6 million, $4.1 million and $6.4 million, respectively, associated with these restructuring activities.

4. Discontinued Operations

On July 1, 2016, pursuant to the Purchase Agreement dated June 14, 2016, we completed the sale of our North American Customer Communications business for cash consideration of $410.7 million, after giving effect to a $0.7 million adjustment agreed upon in December 2016 to settle working capital and other matters under the terms of the agreement. We recorded an estimated pretax gain of $341.5 million on the sale during 2016, which has been presented as a component of discontinued operations. Included within the pretax gain was the unamortized deferred gain of approximately $39.9 million related to the sale and leaseback of our four North American Customer Communications' production facilities for pretax proceeds totaling approximately $129.0 million in October 2015. Amortization expense, which was being recognized on a straight-line basis over the lease term, was approximately $1.5 million and $0.6 million for the years ended December 31, 2016 and 2015, respectively, and has been presented as a component of discontinued operations.

Pursuant to the terms of the transaction, we will continue to provide certain information technology and operations processing activities to the North American Customer Communications business for an estimated period of 12 to 18 months following the transaction. Additionally, we will continue to incur costs for certain print related services provided by the disposed business for an estimated period of 3 to 5 years following the transaction. The information technology and operations processing activities we performed after the sale of the business resulted in approximately $8.8 million of continuing cash inflows from the business sold and the costs incurred for certain print related services provided by the business sold resulted in continuing cash outflows of approximately $19.9 million for the period from July 1, 2016 through December 31, 2016. The revenues previously eliminated in consolidation that have continued post-transaction were approximately $19.3 million, $13.8 million and $15.9 million for the years ended December 31, 2016, 2015 and 2014, respectively. The expenses previously eliminated in consolidation that have continued post-transaction were approximately $34.8 million, $19.3 million and $36.8 million for the years ended December 31, 2016, 2015 and 2014, respectively. These revenues and expenses associated with these continued activities have been classified within continuing operations for all periods presented. The offsetting expenses and revenues previously recorded within Customer Communications and eliminated in consolidation have been reclassified to discontinued operations for all periods presented.

Additionally, during the second quarter 2016, our Board of Directors approved a plan for management to pursue the divestiture of our United Kingdom Customer Communications business, which we anticipate will be completed within the required one year period. As a result of this significant shift in the strategic direction of our operations, we have classified the results of the businesses sold or being sold as discontinued operations in our Consolidated Statement of Income and Statement of Cash Flows for all periods presented. Additionally, the related assets and liabilities associated with the discontinued operations are classified as held for sale in our Consolidated Balance Sheet.

The following table summarizes the assets and liabilities classified as held for sale in our Consolidated Balance Sheet (in millions):

	December 31, 2016	December 31, 2015
Assets		
Cash and cash equivalents	$ 4.0	$ 10.1
Accounts receivable	38.9	140.1
Investments	—	0.3
Unconsolidated affiliates	0.2	0.3
Properties, net	9.9	64.6
Intangible assets, net	11.2	20.6
Goodwill	—	24.8
Other assets	8.4	36.7
Total assets held for sale	$ 72.6	$ 297.5
Liabilities		
Current portion of debt	$ 0.4	$ —
Accounts payable	13.2	33.7
Accrued compensation and benefits	3.8	26.7
Deferred revenues and gains	0.8	5.5
Long-term debt	1.7	—
Income taxes payable	1.0	—
Other liabilities	9.2	94.0
Total liabilities held for sale	$ 30.1	$ 159.9

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following table summarizes the comparative financial results of discontinued operations which are presented as Income from discontinued operations, net of tax on our Consolidated Statement of Income (in millions):

	Year Ended December 31,		
	2016	2015	2014
Operating revenues	$ 389.0	$ 608.0	$ 596.5
Out-of-pocket reimbursements	409.0	743.1	648.0
Total revenues	798.0	1,351.1	1,244.5
Costs and expenses	747.6	1,247.3	1,160.3
Depreciation and amortization (including goodwill impairment)	28.9	30.9	38.0
Operating income	21.5	72.9	46.2
Interest expense	—	(0.3)	(0.3)
Other income, net.	—	—	0.4
Equity in earnings of unconsolidated affiliates	0.3	0.4	0.7
Net gain on business disposition	341.5	—	—
Income before income taxes	363.3	73.0	47.0
Income taxes	115.0	24.5	14.5
Income from discontinued operations, net of tax	$ 248.3	$ 48.5	$ 32.5

In April 2016, we completed the sale of our U.K. Customer Communications' Bristol production facilities for pretax proceeds totaling approximately $16.0 million. Concurrent with this sale, we leased back approximately two-thirds of the facilities under a 12-year lease. The rent payments and associated rent expense of the Bristol production facilities are approximately $0.7 million per year over the 12-year lease term.

In February 2017, we updated our impairment analysis utilizing new information received (level 3 in the fair value hierarchy) regarding our U.K. Customer Communications business which indicated the carrying value exceeded the fair value of the business. As a result, we recorded an impairment charge of $17.0 million, which is included as a component of discontinued operations for the year ended December 31, 2016. The impairment resulted in the write-down of goodwill and long-lived assets of the business based on the estimated fair value. There was no tax benefit recognized for this impairment charge as it is not expected to be deductible for tax purposes. These amounts reflect management's preliminary estimates and subsequent negotiations and the closing on any sale of this business could result in further adjustments to this impairment.

5. Investments

Investments are as follows (in millions):

	Carrying Value	
	December 31, 2016	December 31, 2015
Available-for-sale securities:		
State Street Corporation	$ 169.6	$ 144.8
Other available-for-sale securities	10.9	74.7
	180.5	219.5
Other:		
Trading securities	7.9	14.8
Seed capital investments, at fair value	61.0	50.7
Cost method, private equity and other investments	128.0	133.2
	196.9	198.7
Total investments	$ 377.4	$ 418.2

Certain information related to our available-for-sale securities is as follows (in millions):

	December 31,	
	2016	2015
Book cost basis	$ 28.4	$ 83.4
Gross unrealized gains	152.1	136.2
Gross unrealized losses	—	(0.1)
Market value	$ 180.5	$ 219.5

At December 31, 2016 and 2015, our carrying value of available-for-sale investments was $180.5 million and $219.5 million, respectively, the majority of which was from the ownership of 2.2 million shares of State Street as of December 31, 2016. State Street is a financial services corporation that provides investment servicing and investment management services and products to institutional investors. The aggregate market value of our investments in available-for-sale securities, including State Street's common stock, presented above was based on the closing price on the New York Stock Exchange at the respective year end. Deferred tax liabilities associated with the available-for-sale investments were approximately $62.2 million and $54.8 million at December 31, 2016 and 2015, respectively.

During the years ended December 31, 2016, 2015 and 2014, we received $61.2 million, $303.5 million and $278.9 million, respectively, from the sale of investments in available-for-sale securities. Gross realized gains of $6.1 million, $175.1 million and $184.0 million and gross realized losses of $3.8 million, $6.7 million and $2.6 million, were recorded in 2016, 2015 and 2014, respectively, from the sale of available-for-sale securities. In addition, we recorded losses on available-for-sale securities of $0.2 million, $4.8 million and $2.3 million related to other-than-temporary investment impairments for the years ended December 31, 2016, 2015 and 2014, respectively. These gains and losses are included as a component of Other income, net in the Consolidated Statement of Income. The fair value and gross unrealized losses of securities in a continuous loss position at December 31, 2016 and 2015 were not significant.

We consolidate the investments of open-end funds in which we own a controlling interest as a result of our seed capital investments. Seed capital investments of $61.0 million and $50.7 million at December 31, 2016 and 2015, respectively, are comprised primarily of equity securities as well as $8.4 million and $10.8 million of cash collateral deposited with a broker for securities sold short at December 31, 2016 and 2015, respectively.

We are a limited partner in various private equity funds which are primarily accounted for using the cost method. Our involvement in the financing operations of the private equity fund investments is generally limited to our investments in the entities. At December 31, 2016 and 2015, our carrying value of these private equity fund investments was approximately $111.2 million and $117.2 million, respectively. At December 31, 2016, we had future capital commitments related to these private equity fund investments of approximately $3.8 million. Additionally, we have other investments with a carrying value of $16.8 million and $16.0 million at December 31, 2016 and 2015, respectively.

In 2014, we received cash dividends of $33.2 million from a cost method investment in a privately-held company. Following receipt of the dividend, we sold our remaining interest in the privately-held company, resulting in pre-tax cash proceeds and a related gain of $103.6 million.

We record lower of cost or market valuation adjustments on private equity fund investments and other cost method investments when impairment conditions are present. During the year ended December 31, 2016, we recorded no impairments on cost method investments. During the years ended December 31, 2015 and 2014, we recorded $0.2 million and $2.2 million, respectively, of impairments on cost method investments related to adverse market conditions or poor performance of the underlying investment.

As a result of the revised consolidation guidance, we determined that our investments in private equity funds meet the definition of a VIE; however, the private equity fund investments were not consolidated as we do not have the power to direct the entities' most significant economic activities. The maximum risk of loss related to our private equity fund investments is limited to the carrying value of our investments in the entities plus any future capital commitments. At December 31, 2016 and 2015, our maximum risk of loss associated with these VIE's, which is comprised of our investment and required future capital commitments, was $115.0 million and $120.9 million, respectively.

6. Unconsolidated Affiliates

Unconsolidated affiliates are as follows (in millions):

		Carrying Value	
	2016 Ownership Percentage	December 31, 2016	December 31, 2015
Unconsolidated affiliates:			
International Financial Data Services U.K.	50%	$ 133.3	$ 124.3
International Financial Data Services L.P.	50%	73.2	75.2
Boston Financial Data Services, Inc.	50%	91.2	82.9
Other unconsolidated affiliates		33.5	29.8
Total		$ 331.2	$ 312.2

IFDS U.K., IFDS L.P. and BFDS are joint ventures of the Company and State Street. IFDS U.K. provides processing for U.K. unit trusts and related products on a BPO, Remote and shared services basis. IFDS L.P., through its wholly-owned subsidiaries, provides shareowner accounting and recordkeeping to international markets, primarily Canada, Ireland and Luxembourg. In terms of operating revenues, IFDS U.K. was the third largest customer of the Financial Services Segment during the year ended December 31, 2016. BFDS combines the use of the Company's shareholder recordkeeping services with the marketing and custodial capabilities of State Street to provide BPO and shared-service shareowner accounting and recordkeeping services to mutual fund companies. BFDS also offers settlement administration services, teleservicing and full-service support for defined contribution plans using DST's proprietary software. In terms of operating revenues, BFDS was the second largest customer of the Financial Services segment during 2016, 2015 and 2014.

Our investments in other unconsolidated affiliates are primarily comprised of various joint ventures which own and lease real estate to our operating businesses as well as other third parties. One of these investments is a 50% ownership of Pershing Road Development Company, LLC, a limited special purpose real estate joint venture which leases approximately 1.1 million square feet of office space to the U.S. government. This investment has a zero carrying value at December 31, 2016 and 2015 as a result of losses incurred on an interest rate swap which is held by the joint venture.

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Notes to Consolidated Financial Statements (continued)

Equity in earnings of unconsolidated affiliates, is as follows (in millions):

	Year Ended December 31, 2016	2015	2014
International Financial Data Services U.K.	$ 10.0	$ 22.5	$ 12.6
International Financial Data Services L.P.	2.2	7.4	6.5
Boston Financial Data Services, Inc.	8.3	5.3	5.1
Other unconsolidated affiliates	6.7	10.2	10.5
Total	$ 27.2	$ 45.4	$ 34.7

Certain condensed financial information of our unconsolidated affiliates is presented below (in millions):

Income Statement Data:	Year Ended December 31, 2016	2015	2014
Revenues	$ 1,248.6	$ 1,225.7	$ 1,247.3
Costs and expenses	1,192.4	1,132.7	1,188.2
Net income	56.2	93.0	59.1

Balance Sheet Data:	December 31, 2016	2015
Current assets	$ 570.2	$ 515.2
Noncurrent assets	823.8	823.5
Current liabilities	423.0	313.0
Noncurrent liabilities	396.6	444.0
Partners' and stockholders' equity	574.4	581.7

The following tables summarize related party transactions and balances outstanding with our unconsolidated affiliates (in millions):

	Year Ended December 31, 2016	2015	2014
Operating revenues from unconsolidated affiliates	$ 138.5	$ 134.9	$ 135.1
Amounts paid to unconsolidated affiliates for products, services and leases*	36.8	27.3	23.8
Distributions received from unconsolidated affiliates	3.5	15.3	12.6

	December 31, 2016	2015
Advances/Loans to unconsolidated affiliates	$ 31.4	$ 6.4
Trade accounts receivable from unconsolidated affiliates	19.7	20.8
Total amounts receivable from unconsolidated affiliates	$ 51.1	$ 27.2
Amounts payable to unconsolidated affiliates*	$ 3.4	$ 5.0

* Excludes amounts owed under or paid on the BFDS installment loan. See additional discussion of installment loan within Note 10, Debt.

On March 29, 2016, we and State Street each provided a subordinate loan of approximately $15.0 million to IFDS U.K. in which the principal plus accrued and unpaid interest is payable in full at maturity in March 2021. Additionally, we and State Street each provided an additional subordinate loan of approximately $13.0 million to IFDS U.K. on September 30, 2016. The principal plus accrued and unpaid interest is payable in full at maturity in September 2021. Subsequently, on February 27, 2017, DST provided an additional subordinate loan of approximately $12.5 million to IFDS U.K. in which the principal plus accrued and unpaid interest is payable in full at maturity in February 2022.

7. Fair Value Measurements

Authoritative accounting guidance on fair value measurements establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

As of December 31, 2016 and 2015, we held certain investment assets and liabilities that are required to be measured at fair value on a recurring basis. These investment assets include money market funds, available-for-sale equity securities and trading securities whereby fair value is determined using quoted prices in active markets. Accordingly, the fair value measurements of these investments have been classified as Level 1 in the table below. Fair value for deferred compensation liabilities that are credited with deemed gains or losses of the underlying hypothetical investments, primarily equity securities, has been classified as Level 1 in the tables below. In addition, we have interest rate and foreign currency derivative instruments that are required to be reported at fair value. Fair value for the derivative instruments was determined using inputs from quoted prices for similar assets and liabilities in active markets that are directly or indirectly observable. Accordingly, our derivative instruments have been classified as Level 2 in the tables below.

The following tables present assets and liabilities measured at fair value on a recurring basis (in millions):

		Fair Value Measurements at Reporting Date Using		
	December 31, 2016	Quoted prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds (1)	$ 437.0	$ 437.0	$ —	$ —
Equity securities (2)	188.4	188.4	—	—
Seed capital investments (2)	61.0	61.0	—	—
Deferred compensation liabilities (3)	(7.9)	(7.9)	—	—
Securities sold short (3)	(8.2)	(8.2)	—	—
Derivative instruments (3)	(0.4)	—	(0.4)	—
Total	$ 669.9	$ 670.3	$ (0.4)	$ —

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

		Fair Value Measurements at Reporting Date Using		
	December 31, 2015	Quoted prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds (1)	$ 210.1	$ 210.1	$ —	$ —
Equity securities (2)	234.3	234.3	—	—
Seed capital investments (2)	50.7	50.7	—	—
Deferred compensation liabilities (3)	(14.8)	(14.8)	—	—
Securities sold short (3)	(10.7)	(10.7)	—	—
Derivative instruments (3)	(0.3)	—	(0.3)	—
Total	$ 469.3	$ 469.6	$ (0.3)	$ —

(1) Included in Cash and cash equivalents, Funds held on behalf of clients, and Other current assets on our Consolidated Balance Sheet.
(2) Included in Investments on our Consolidated Balance Sheet.
(3) Included in Other liabilities on our Consolidated Balance Sheet.

At December 31, 2016 and 2015, we held approximately $11.5 million and $6.1 million, respectively, of investments in pooled funds, which are measured using net asset value as a practical expedient for fair value and therefore excluded from the table above. The investments in pooled funds are included within the $128.0 million and $133.2 million of cost method, private equity and other investments at December 31, 2016 and 2015, respectively, disclosed within Note 5, Investments.

8. Property and Equipment

Property and equipment and related accumulated depreciation are as follows (in millions):

	December 31, 2016	December 31, 2015
Land	$ 34.2	$ 35.9
Buildings	160.3	181.5
Technology equipment	213.0	200.5
Software	508.2	489.4
Furniture, fixtures and other equipment	122.1	138.0
Leasehold improvements	76.4	72.2
Construction-in-progress	18.3	13.6
	1,132.5	1,131.1
Less accumulated depreciation and amortization	896.8	874.4
Properties, net	$ 235.7	$ 256.7

In December 2014, we entered into a transaction under which Industrial Revenue Bonds ("IRBs") are issued by a municipality to finance the purchase and/or construction of certain real and personal property. Pursuant to the terms of the IRBs, we transferred title of certain fixed assets to the municipality. Tax benefits associated with the IRBs include a provision for a 10-year property tax abatement and sales tax exemption on the property financed with the proceeds of the IRBs. The municipality holds legal title to the bond financed assets and leases them to us subject to an option to purchase for nominal consideration, which we may exercise at any time. We are the bondholder as well as the lessee of the property purchased with the IRBs proceeds. We record the property on our Consolidated Balance Sheet as all risks and benefits remain with us, along with a capital lease obligation to repay the proceeds of the IRBs. Moreover, as holder of the bonds, we have the right to offset the amounts due under the leases with the amounts due to us from the bonds. Accordingly, no net debt associated with the IRBs is reflected in our Consolidated Balance Sheet. Upon maturity or redemption of the bonds, which is within our sole control, title to the leased property reverts back to us. At December 31, 2016 and 2015, we held IRBs with an aggregate principal amount of $87.6 million and $73.2 million, respectively.

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Notes to Consolidated Financial Statements (continued)

At December 31, 2016 and 2015, there was approximately $2.5 million and $11.8 million, respectively, of assets under capital lease, net of accumulated depreciation of $2.2 million and $10.7 million, respectively, included in the above table. Depreciation expense for the years ended December 31, 2016, 2015 and 2014, was $78.2 million, $77.6 million and $80.7 million, respectively.

Included in software is $57.7 million of proprietary software acquired in business combinations. At both December 31, 2016 and 2015, the net book value of this acquired software was $14.5 million.

The following table summarizes software development costs for our proprietary systems and software products (in millions):

	Year Ended December 31,		
	2016	2015	2014
Capitalized software development costs	$ 21.5	$ 23.3	$ 28.8
Amortization of capitalized software development costs	22.9	25.5	25.3

Non-capitalizable software development costs are included in costs and expenses and the amortization of capitalized software development costs are included in depreciation and amortization expense in the Consolidated Statement of Income.

9. Intangible Assets and Goodwill

Intangible Assets

The following table summarizes intangible assets (in millions):

	December 31, 2016		December 31, 2015	
	Carrying Amount	Accumulated Amortization	Carrying Amount	Accumulated Amortization
Amortizable intangible assets				
Customer relationships	$ 203.6	$ 71.0	$ 181.1	$ 57.5
Other	28.5	18.5	27.6	15.4
Total	$ 232.1	$ 89.5	$ 208.7	$ 72.9

Amortization expense of intangible assets for the years ended December 31, 2016, 2015 and 2014 was $16.6 million, $12.5 million and $11.2 million, respectively. Annual amortization for intangible assets recorded as of December 31, 2016 is estimated to be (in millions):

2017	$ 16.8
2018	16.6
2019	15.5
2020	13.1
2021	12.7
Thereafter	67.9
Total	$ 142.6

Goodwill

The following tables summarize the changes in the carrying amount of goodwill for the years ended December 31, 2016 and 2015, by segment (in millions):

	December 31, 2015	Acquisitions	Impairments	Other	December 31, 2016
Financial Services	$ 303.3	$ 61.0	$ —	$ (2.9)	$ 361.4
Healthcare Services	155.0	—	—	—	155.0
Total	$ 458.3	$ 61.0	$ —	$ (2.9)	$ 516.4

	December 31, 2014	Acquisitions	Impairments	Other	December 31, 2015
Financial Services	$ 234.6	$ 75.8	$ —	$ (7.1)	$ 303.3
Healthcare Services	155.0	—	—	—	155.0
Total	$ 389.6	$ 75.8	$ —	$ (7.1)	$ 458.3

We test goodwill for impairment on an annual basis as of October 1 and at other times if a significant change in circumstances indicates it is more likely than not that the fair value of these assets has been reduced. The valuation of goodwill requires assumptions and estimates of many critical factors, including revenue and market growth, operating cash flows, market multiples and discount rates. Our 2016 annual goodwill impairment test determined that the estimated fair value of each of our reporting units substantially exceeds the carrying value of the reporting units.

Due to the new segment reporting effective as of January 1, 2015, goodwill of approximately $6.7 million was reallocated to the Financial Services segment from the former Customer Communications segment based on the relative fair values of the businesses transfered. As mentioned in Note 1, Description of Business, we completed the sale of our North American Customer Communications business and announced our intent to dispose of our United Kingdom Customer Communications business during 2016. As a result, the Customer Communications segment has been reported as discontinued operations. Prior period amounts above have been revised to reflect the reallocated goodwill.

10. Debt

The Company is obligated under notes and other indebtedness as follows (in millions):

	December 31,	
	2016	2015
Accounts receivable securitization program	$ 103.2	$ —
Revolving credit facilities	75.0	226.1
Senior notes	330.0	330.0
Related party credit agreements	—	1.5
Other indebtedness, net of unamortized debt issuance costs	—	4.5
	508.2	562.1
Less current portion of debt	208.5	5.6
Long-term debt	$ 299.7	$ 556.5

Accounts receivable securitization program

We securitize certain of our domestic accounts receivable through an accounts receivable securitization program with a third-party bank. The maximum amount that can be outstanding under this program is $150.0 million. The facility matures in May 2018, unless renewed. As a result of the sale of the North American Customer Communications business, it was removed from the accounts receivable securitization program resulting in a reduction in the receivables eligible to be borrowed against in 2016.

Under the terms of the accounts receivable securitization program, (a) we periodically acquire accounts receivable originated by certain of our domestic subsidiaries, including, but not limited to, DST Health Solutions, DST Technologies and Argus Health Systems (the "Subsidiary Originators"), (b) we transfer receivables originated by us and receivables acquired from the Subsidiary Originators, on a periodic basis, to a wholly-owned bankruptcy remote special purpose subsidiary of DST (the "SPE"), and (c) the SPE then sells undivided interests in the receivables to the bank. We retain servicing responsibility over the receivables. The program contains customary restrictive covenants as well as customary events of default.

We have continuing involvement with the transferred assets because we maintain servicing responsibilities for the accounts receivable assets included in the accounts receivable securitization program. Accounts receivable assets transferred from us to our wholly-owned, bankruptcy remote special purpose subsidiary contain restrictions because they are not available to satisfy the creditors of any other person, including DST or any of our subsidiaries or affiliates. Further, neither we nor the SPE guarantees collectibility of the receivables or the creditworthiness of obligors. The SPE retains an interest in the receivables in excess of the amount transferred to the conduit, and such receivables continue to be recognized on the Consolidated Balance Sheet. The carrying value of the retained interest approximates its estimated fair value at the balance sheet date. We believe increases in the level of assumed interest rates and/or credit losses compared to assumptions in effect at the balance sheet date by 10% or 20% would not materially affect the fair value of the retained interest at the reporting date.

The outstanding amount under the program was $103.2 million at December 31, 2016. There was no outstanding amount under the program at December 31, 2015. During the years ended December 31, 2016, 2015 and 2014 total proceeds from the accounts receivable securitization program were approximately $895.5 million, $1,037.7 million and $1,024.7 million, respectively, and total repayments were approximately $792.3 million, $1,157.7 million and $1,054.7 million, respectively, which comprise the net cash flow in the financing section of the Consolidated Statement of Cash Flows.

Aggregate transfers of undivided interests in the receivables from the SPE to the bank were $1,459.9 million and $1,807.2 million for the years ended December 31, 2016 and 2015, respectively. The impact on net income stemming from these transfers was not material. Costs associated with the accounts receivable securitization program are included in interest expense on the Consolidated Statement of Income. The program costs applicable to the outstanding amount of undivided interests in the receivables are generally based on LIBOR plus an applicable margin.

Revolving credit facilities

On October 1, 2014, we entered into a new syndicated credit facility ("Credit Facility"). The Credit Facility provides for a revolving unsecured line in an aggregate principal amount of up to $850.0 million. The interest rates applicable to loans under the Credit Facility are generally based on Eurodollar, Federal Funds or prime rates plus applicable margins as defined in the agreement. The Credit Facility contains grid schedules that adjust borrowing costs up or down based upon our consolidated leverage ratio. The grid schedules may result in fluctuations in borrowing costs ranging from 1.00% to 1.70% over Eurodollar and 0.00% to 0.70% over base rate, as defined. Additionally, we pay an annual facility fee of 0.125% to 0.30%. Among other provisions, the Credit Facility requires certain leverage and interest coverage ratios to be maintained. If any event of default occurs and is continuing, all amounts payable under the credit agreement may be declared immediately due and payable. The Credit Facility also contains customary restrictive covenants and cross-default provisions. The maturity date for the Credit Facility is October 1, 2019. Amounts borrowed on the Credit Facility were $75.0 million and $226.1 million at December 31, 2016 and 2015, respectively.

We have various unsecured revolving lines of credit to support our consolidated subsidiaries' operations that provide total borrowings of up to $25.0 million. Borrowings on these lines of credit are available at variable rates of interest based on the LIBOR or the bank's Prime rate and mature during 2017. At December 31, 2016 and 2015, there were no borrowings under any of these lines of credit.

During the years ended December 31, 2016, 2015 and 2014, total proceeds from our revolving credit facilities were approximately $977.1 million, $1,053.6 million and $929.8 million, respectively, and total repayments were approximately $1,128.2 million, $871.8 million and $895.9 million respectively, which comprise the net cash flows presented within the financing section of the Consolidated Statement of Cash Flows.

Senior notes

During 2010, we issued $370.0 million of aggregate principal of privately placed senior notes (collectively, the "Senior Notes") pursuant to a note purchase agreement dated August 9, 2010 (the "Agreement"). The Senior Notes are comprised of $40.0 million of 4.19% Series A Senior Notes due August 9, 2015, $105.0 million of 4.86% Series B Senior Notes due August 9, 2017, $65.0 million of 5.06% Series C Senior Notes due August 9, 2018 and $160.0 million of 5.42% Series D Senior Notes due August 9, 2020. We repaid the Series A Senior Notes at maturity during 2015.

Interest on the Senior Notes is payable semi-annually in February and August of each year. We may prepay the Senior Notes at any time, in an amount not less than 10% of the aggregate principal amount of the Senior Notes then outstanding, at a price equal to 100% of the principal amount being prepaid, plus accrued and unpaid interest and a "make-whole" prepayment premium.

Pursuant to the Agreement, any Company subsidiary required to become a party to or otherwise guarantee the syndicated line of credit facility or other indebtedness in excess of $100.0 million, must also guarantee our obligations under the Senior Notes. The Agreement contains customary restrictive covenants, as well as certain customary events of default, including cross-default provisions. Among other provisions, the Agreement limits our ability to incur or create liens, sell assets, issue priority indebtedness and change lines of business. The Agreement also requires certain leverage and interest coverage ratios to be maintained.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Related party credit agreements

We acquired certain intangible assets in 2011 from BFDS in exchange for an installment loan that was payable over five years. The loan was repaid during 2016. The amount outstanding at December 31, 2015 was $1.5 million.

Other indebtedness

We had other indebtedness, which was primarily comprised of debt assumed in a 2006 business acquisition. The debt assumed was repaid during 2016. The amount outstanding at December 31, 2015 was $3.4 million and was payable in monthly installments with a fixed interest rate of 5.6%.

Future principal payments of indebtedness at December 31, 2016 are as follows (in millions):

2017	$ 208.5
2018	65.0
2019	75.0
2020	160.0
Total	$ 508.5

The weighted average interest rates on our short-term borrowings were 2.36% and 1.67% for the years ended December 31, 2016 and 2015, respectively. Based upon the borrowing rates currently available to us for indebtedness with similar terms and average maturities, the carrying value of long-term debt, with the exception of the Senior Notes, is considered to approximate fair value at December 31, 2016 and 2015. The estimated fair value of the Senior Notes was derived principally from quoted prices (level 2 in the fair value hierarchy).

The carrying and fair value of the Senior Notes were as follows (in millions):

	December 31,			
	2016		2015	
	Carrying Value	Estimated Fair Value	Carrying Value	Estimated Fair Value
Senior notes—Series B	$ 105.0	$ 106.7	$ 105.0	$ 108.5
Senior notes—Series C	65.0	67.5	65.0	68.2
Senior notes—Series D	160.0	172.1	160.0	172.8
Total	$ 330.0	$ 346.3	$ 330.0	$ 349.5

11. Hedging Transactions and Derivative Financial Instruments

We are directly and indirectly affected by changes in certain market conditions. When determined appropriate, we use derivative instruments as a risk management tool to mitigate the potential impact of certain market risks. The primary market risks managed by us through the use of derivative instruments are foreign currency exchange rate risk and interest rate risk. We may use various types of derivative instruments including, but not limited to, forward contracts, option contracts and swaps. We do not enter into derivative arrangements for speculative purposes.

We determine the fair values of our derivatives based on quoted market prices that are directly or indirectly observable as further described within Note 7, Fair Value Measurements. The fair value of our derivative instruments is reflected on a gross, rather than net, basis and is not significant to the consolidated financial statements as of December 31, 2016 or 2015.

Cash flow hedging strategy

We use cash flow hedges to minimize the variability in cash flows of assets or liabilities or forecasted transactions caused by fluctuations in foreign currency exchange rates or interest rates. The changes in the fair values of derivatives designated as cash flow hedges are recorded in Accumulated Other Comprehensive Income ("AOCI") and are reclassified into the line item in the Consolidated Statement of Income in which the hedged items are recorded in the same period the hedged items affect earnings. The changes in fair values of hedges that are determined to be ineffective are immediately reclassified from AOCI into earnings. The length of time for which we hedge our exposure to future cash flows is typically one to two years.

We have entered into a foreign currency cash flow hedging program to reduce the risk that our net cash outflows from intercompany purchases of services from our international subsidiaries could be adversely affected by fluctuations in foreign currency exchange rates. We entered into forward foreign currency contracts (Thai baht) to hedge certain portions of forecasted cash flows denominated in foreign currencies. The total notional values of derivatives that were designated and qualified for our foreign currency cash flow hedging program were $14.3 million and $13.5 million as of December 31, 2016 and 2015, respectively.

We monitor the mix of short-term debt and long-term debt regularly. From time to time, we manage our risk to interest rate fluctuations through the use of derivative financial instruments. We have not entered into interest rate swap agreements during the years ended December 31, 2016 and 2015.

The pretax impact that changes in the fair values of derivatives designated as cash flow hedges had on AOCI and earnings was not significant during the years ended December 31, 2016, 2015, and 2014. There were no gains or losses recognized into income as a result of hedge ineffectiveness during the years ended December 31, 2016, 2015 or 2014. As of December 31, 2016, we estimate that amounts to be reclassified into earnings during the next 12 months are $0.1 million.

Economic (nondesignated) hedging strategy

In addition to derivative instruments that are designated and qualify for hedge accounting, we also use certain derivatives as economic hedges of foreign currency exposure. Although these derivatives were not designated for hedge accounting, they are effective economic hedges. The changes in fair values of economic hedges are immediately recognized into earnings.

We use foreign currency economic hedges to offset the earnings impact that fluctuations in foreign currency exchange rates have on certain intercompany loans denominated in nonfunctional currencies, primarily the British pound and Australian dollar. The foreign currency economic hedging program consists of rolling, monthly forward foreign currency contracts which settle on the last day of each month. As a result, there are minimal unrealized gains or losses at the end of the period related to these contracts. The total notional values of derivatives related to our foreign currency economic hedges were $91.6 million and $125.4 million as of December 31, 2016 and 2015, respectively.

12. Income Taxes

Deferred tax assets and liabilities are determined based on the differences between the financial statement and tax bases of assets and liabilities as measured by the enacted tax rates that are expected to be in effect when these differences reverse. Deferred tax expense (benefit) is generally the result of changes in the assets or liabilities for deferred taxes.

The following summarizes pretax income from continuing operations (in millions):

	Year Ended December 31,		
	2016	2015	2014
U.S.	$ 248.2	$ 451.9	$ 627.9
International	31.0	6.9	116.8
Total	$ 279.2	$ 458.8	$ 744.7

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Provision for income taxes (benefits) from continuing operations consists of the following components (in millions):

	Year Ended December 31, 2016	2015	2014
Current			
Federal	$ 57.7	$ 147.4	$ 207.8
State and local	11.4	10.2	(23.8)
International	15.0	7.1	(1.5)
Total current	84.1	164.7	182.5
Deferred			
Federal	19.9	(13.5)	5.3
State and local	(1.9)	0.5	(1.3)
International	(1.0)	(2.5)	(2.6)
Total deferred	17.0	(15.5)	1.4
Total provision for income taxes	$ 101.1	$ 149.2	$ 183.9

Following are the reconciliations of our effective income tax rates and the U.S. federal income tax statutory rate (in millions):

	Year Ended December 31, 2016	2015	2014
Provision for income taxes using the statutory rate in effect	$ 97.7	$ 160.6	$ 260.7
Tax effect of:			
State and local income taxes, net	5.9	4.3	8.6
International income taxes, net	2.5	(1.0)	(1.9)
Gain on sale of DST Global Solutions Ltd.	—	—	(33.6)
Earnings of U.S. unconsolidated affiliates	(2.3)	(1.5)	(1.4)
Valuation allowance (reversal), net	(0.9)	1.2	0.8
Tax credits	(5.0)	(7.7)	(7.9)
Uncertain tax positions (reversal), net	1.7	(7.9)	(30.8)
Dividend received deduction	(0.8)	(1.2)	(2.6)
Domestic production activities deduction	(1.7)	(0.1)	(3.1)
Repatriation	1.0	1.9	0.7
Gain on share repurchase	—	—	(6.3)
Other	3.0	0.6	0.7
Total provision for income taxes	$ 101.1	$ 149.2	$ 183.9
Effective tax rate	36.2%	32.5%	24.7%
Statutory federal tax rate	35.0%	35.0%	35.0%

The federal and state deferred tax assets (liabilities) recorded on the Consolidated Balance Sheet are as follows (in millions):

	December 31,	
	2016	2015
Liabilities:		
Deferred cancellation of debt income	$ (36.4)	$ (55.4)
Investments in available-for-sale securities	(62.2)	(54.8)
Unconsolidated affiliates and investments	(27.9)	(9.7)
Accumulated depreciation and amortization	(65.3)	(41.8)
Prepaid expenses	(5.5)	(8.1)
Total deferred tax liabilities	(197.3)	(169.8)
Assets:		
Deferred compensation and other employee benefits	23.2	36.4
Net operating loss	8.5	12.8
Accrued liabilities	26.9	30.8
Other	1.4	3.1
Total deferred tax assets	60.0	83.1
Valuation allowance	(6.0)	(10.5)
Net deferred tax liability	$ (143.3)	$ (97.2)

We have approximately $10.8 million of federal net operating losses as of December 31, 2016 as a result of prior year business combinations. These net operating losses begin to expire in 2028 and are available to reduce future income taxes. Since these net operating losses were generated by an entity prior to its acquisition by DST, our utilization is subject to certain limitations imposed by the Internal Revenue Code. We do not anticipate that such limitations will prohibit the utilization of the federal net operating loss carryforwards prior to their expiration. We have approximately $49.5 million of state net operating losses as of December 31, 2016. These net operating losses begin to expire in 2023.

We have approximately $0.7 million and $9.3 million of net operating loss carryforwards as of December 31, 2016 in Canada and the U.K., respectively. The Canada carryforwards begin to expire in 2032. The U.K. carryforwards do not expire but their utilization may be limited to offset only income with certain characteristics.

A valuation allowance is recorded against deferred tax assets if, based on the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. In evaluating the realizability of certain international net deferred tax assets, we also anticipate that limitations may result in the benefit of these amounts not being realized and have established corresponding valuation allowances as of December 31, 2016 and 2015 of $5.7 million and $10.5 million, respectively. In evaluating certain state net operating losses, we anticipate that limitations may result in the benefit of these amounts not being realized and have established a corresponding valuation allowance of $0.3 million as of December 31, 2016.

We provide deferred taxes for unremitted earnings of U.S. unconsolidated affiliates net of the 80% dividends received deduction provided for under current tax law. Through December 31, 2016, the cumulative amount of such unremitted earnings was $91.9 million. These amounts would become taxable to us if distributed by the affiliates as dividends, in which case we would be entitled to the dividends received deduction for 80% of the dividends; alternatively, these earnings could be realized by the sale of the affiliates' stock, which would give rise to tax at federal capital gains rates and state ordinary income tax rates, to the extent the stock sale proceeds exceeded our tax basis. Deferred taxes provided on unremitted earnings through December 31, 2016 and 2015 were $6.5 million and $6.0 million, respectively.

We record U.S. tax on the undistributed earnings of foreign subsidiaries unless the subsidiaries' earnings are considered indefinitely reinvested outside the U.S. Distributions in 2016, 2015, and 2014 resulted in incremental taxes of $1.0 million, $1.9 million and $0.7 million, respectively. We recorded approximately $2.6 million and $2.7 million of related income tax liability, net of credits, on unremitted earnings in 2016 and 2015, respectively.

We intend to indefinitely reinvest the earnings in the businesses of our other foreign subsidiaries. As a consequence, no federal or state income taxes or foreign withholding taxes have been provided for amounts which would become payable, if any, on the distribution of such earnings. In the event of such a distribution, we may be able to offset, at least in part, the U.S. federal income tax consequences of such a distribution with foreign income tax credits which would become creditable as a result of such a distribution. Due to the uncertainty of the manner in which the undistributed earnings would be brought back to the

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

U.S., the tax laws in effect at that time, as well as the ability of the Company to claim foreign tax credits, it is not practicable for us to determine the income tax we would incur, if any, if such earnings were distributed. As of December 31, 2016, accumulated undistributed earnings considered permanently reinvested were $113.6 million, which is inclusive of discontinued operations.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits is as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Balance at beginning of year	$ 60.3	$ 69.8	$ 102.2
Additions based on tax positions related to the current year	3.5	9.0	15.1
Additions for tax positions of prior years	2.7	2.2	0.9
Reductions for tax positions of prior years	(7.7)	(19.5)	(17.6)
Settlements	(1.2)	(0.4)	—
Statute expirations	—	(0.8)	(30.8)
Balance at end of year	$ 57.6	$ 60.3	$ 69.8

Included in the net unrecognized tax benefit at December 31, 2016, 2015 and 2014 were $40.9 million, $42.0 million and $51.8 million, respectively, of tax positions which, if recognized, would affect the effective tax rate. We recognize interest and penalties accrued related to unrecognized tax benefits in income taxes, which is consistent with the recognition of these items in prior reporting periods. The liability for interest and penalties associated with unrecognized tax benefits decreased $1.1 million during the year ended December 31, 2016 to $10.4 million. The liability for interest and penalties increased $2.1 million during the year ended December 31, 2015.

Although it is difficult to predict when all uncertain tax positions will reverse due to the unknown timing of the completion of examination periods, it is possible that aggregate income tax amounts of approximately $10.0 million to $13.0 million may reverse during 2017.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. An IRS examination for the tax year ended December 31, 2010 was completed in September 2015. Federal tax years 2011 through 2016 are subject to examination while various years from 2007 through 2016 are under or are subject to various state, local, and foreign income tax examinations by taxing authorities. We do not believe that the outcome of any examination will have a material impact on our financial statements.

During 2015, the IRS completed its examination of the previously filed federal income tax refund claims for Domestic Manufacturing Deductions, research and experimentation credits and capital losses for the period 2010. As a result, during 2015 we recognized income tax benefits of $11.9 million, resulting from the reversal of previously reserved tax positions related to these matters as well as other remeasurements during the period.

An IRS examination for the tax year ended December 31, 2014 is expected to begin during 2017.

13. Equity

Earnings per share

The computation of basic and diluted earnings per share is as follows (in millions, except per share amounts):

	Year Ended December 31, 2016	2015	2014
Income from continuing operations attributable to DST Systems, Inc.	$ 179.0	$ 309.7	$ 560.8
Income from discontinued operations, net of tax	248.3	48.5	32.5
Net income attributable to DST Systems, Inc.	$ 427.3	$ 358.2	$ 593.3
Weighted average common shares outstanding	33.0	36.0	40.0
Incremental shares from restricted stock units and stock options	0.3	0.4	0.5
Weighted average diluted shares outstanding	33.3	36.4	40.5
Basic earnings per share			
Continuing operations attributable to DST Systems, Inc.	$ 5.43	$ 8.60	$ 14.01
Discontinued operations	7.53	1.35	0.81
Basic earnings per share	$ 12.96	$ 9.95	$ 14.82
Diluted earnings per share			
Continuing operations attributable to DST Systems, Inc.	$ 5.37	$ 8.50	$ 13.86
Discontinued operations	7.45	1.33	0.80
Diluted earnings per share	$ 12.82	$ 9.83	$ 14.66

We had approximately 32.0 million and 34.3 million shares outstanding at December 31, 2016 and 2015, respectively. There were no shares from options to purchase common stock excluded from the diluted earnings per share calculation because they were anti-dilutive for the years ended December 31, 2016 and 2015.

We have authorized 10.0 million shares of preferred stock, of which no shares are currently issued or outstanding.

Other comprehensive income (loss)

AOCI balances, net of tax consist of the following (in millions):

	Unrealized Gains on Available-for-Sale Securities	Unrealized Loss on Cash Flow Hedges	Foreign Currency Translation Adjustments	Accumulated Other Comprehensive Income
Balance, December 31, 2014	$ 207.2	$ (0.3)	$ (20.0)	$ 186.9
Net current period other comprehensive income (loss)	(123.2)	0.2	(22.0)	(145.0)
Balance, December 31, 2015	84.0	(0.1)	(42.0)	41.9
Net current period other comprehensive income (loss)	10.1	—	(35.4)	(25.3)
Balance, December 31, 2016	$ 94.1	$ (0.1)	$ (77.4)	$ 16.6

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Additions to and reclassifications out of AOCI attributable to the Company (in millions):

	Year Ended December 31,					
	2016		2015		2014	
	Pretax	Net of Tax	Pretax	Net of Tax	Pretax	Net of Tax
Available-for-sale securities:						
Unrealized gains (losses) on available-for-sale securities	$ 18.1	$ 11.4	$ (35.6)	$ (21.8)	$ 28.1	$ 15.7
Reclassification of gains into net earnings on available-for-sale securities (1)	(2.1)	(1.3)	(163.5)	(101.4)	(179.1)	(109.3)
Net change in available-for-sale securities	16.0	10.1	(199.1)	(123.2)	(151.0)	(93.6)
Cash flow hedges:						
Unrealized gains (losses) on cash flow hedges	0.1	—	0.4	0.4	0.2	0.1
Reclassification of losses (gains) into net earnings on foreign currency cash flow hedges (2)	—	—	(0.5)	(0.3)	0.2	0.1
Reclassification of losses into net earnings on interest rate cash flow hedges (3)	—	—	0.2	0.1	0.1	—
Net change in cash flow hedges	0.1	—	0.1	0.2	0.5	0.2
Cumulative translation adjustments:						
Reclassification into net earnings upon liquidation of foreign entities (4)	(0.5)	(0.5)	—	—	(41.9)	(41.9)
Current period translation adjustments	(34.9)	(34.9)	(22.0)	(22.0)	14.0	14.0
Net cumulative translation adjustments	(35.4)	(35.4)	(22.0)	(22.0)	(27.9)	(27.9)
Total other comprehensive loss	$ (19.3)	$ (25.3)	$ (221.0)	$ (145.0)	$ (178.4)	$ (121.3)

(1) Realized (gains)/losses on available-for-sale securities are recognized in Other income, net.
(2) Reclassification to net earnings of derivatives qualifying as effective foreign currency cash flow hedges are recognized in Costs and expenses.
(3) Reclassification to net earnings of derivatives qualifying as effective interest rate cash flow hedges are recognized in Interest expense.
(4) Reclassification upon liquidation of foreign entities are recognized in Gain on sale of business or Income from discontinued operations, net of tax.

One of our unconsolidated affiliates has an interest rate swap liability with a fair market value of $33.1 million, $44.7 million and $50.2 million at December 31, 2016, 2015 and 2014, respectively. The unconsolidated affiliate used inputs from quoted prices for similar assets and liabilities in active markets that are directly or indirectly observable relating to the measurement of the interest rate swap. Our 50% proportionate share of this interest rate swap liability was $16.5 million, $22.4 million and $25.1 million at December 31, 2016, 2015 and 2014, respectively. We record in investments and AOCI our proportionate share of this liability in an amount not to exceed the carrying value of our investment in this unconsolidated affiliate. Because the carrying value of this unconsolidated affiliate investment balance was zero at both December 31, 2016 and 2015, no interest rate swap liability or change in AOCI was recorded.

Stock repurchases and retirements

On June 13, 2016, our Board of Directors authorized a new $300.0 million share repurchase plan, which allows, but does not require, the repurchase of common stock in open market and private transactions. The plan does not have an expiration date. We repurchased 2.7 million shares of our common stock for $300.0 million during the year ended December 31, 2016, which exhausted our prior share repurchase plan. Subsequently, during January and February 2017, we repurchased an additional 0.7 million shares of our common stock for $75.0 million which left approximately $75.0 million remaining under our existing share repurchase plan authorized in 2016. Under previous share repurchase plans, we expended $400.0 million for approximately 3.6 million shares and $200.0 million for approximately 2.2 million shares during the years ended December 31, 2015 and 2014, respectively.

As of March 23, 2014, the Argyros Group beneficially owned 9.2 million shares or approximately 22% of DST common shares. During March 2014, we entered into an agreement under which we agreed to a two-step process to assist Argyros with the disposition of a substantial portion of their common stock ownership in DST. To implement Argyros' disposition, we facilitated the May 2014 registered, secondary common stock offering of $450.0 million (before any overallotment option) of DST common stock beneficially owned by Argyros. Concurrent with the closing of the secondary offering and based upon a price determined in the secondary offering, we repurchased, and simultaneously retired, 2.4 million shares of our common stock from Argyros for $200.0 million. In connection with this share repurchase, we recorded a non-cash gain of $18.1 million during 2014 resulting from the change in stock price between the date the share repurchase price became fixed and the settlement date. The retirement of the shares during 2014 reduced Common stock by $0.1 million, Additional paid-in capital by $4.8 million and Retained earnings by $213.2 million within the Consolidated Balance Sheet.

Additionally, we retired 42.9 million shares of treasury stock for $2,520.5 million on October 31, 2014. The retirement of the shares during 2014 reduced Common stock by $0.4 million, Additional paid-in capital by $93.5 million and Retained earnings by $2,426.6 million.

Shares received in exchange for tax withholding obligations and payment of the exercise price arising from the exercise of options to purchase our stock or from the vesting of equity awards are included in common stock repurchased in the Consolidated Statement of Cash Flows. The amounts of such share withholdings and exchanges were $15.8 million, $5.3 million and $6.4 million during the years ended December 31, 2016, 2015 and 2014, respectively.

We had 18.0 million and 15.7 million shares of common stock held in treasury at December 31, 2016 and 2015, respectively.

Dividends

In 2016, 2015 and 2014, we paid cash dividends per common share of $1.32, $1.20 and $1.20, respectively. The total dividends paid for the years ended December 31, 2016, 2015 and 2014 were $44.7 million, $44.5 million and $48.3 million, respectively. The cash paid for dividends in 2016, 2015 and 2014 was $43.4 million, $43.1 million, and $47.6 million, respectively. The remaining amount of the dividends represent dividend equivalent shares of restricted stock units in lieu of the cash dividend.

On January 25, 2017, our Board of Directors declared a quarterly cash dividend of $0.35 per share on our common stock, payable on March 10, 2017, to shareholders of record at the close of business on February 24, 2017.

Share-based compensation

The DST Systems, Inc. 2015 Equity and Incentive Plan (the "Employee Plan") became effective on May 12, 2015. The Employee Plan amends, restates, and renames the DST Systems, Inc. 2005 Equity Incentive Plan in order to, among other things, combine (for all future grants) the DST Systems, Inc. 2005 Non-Employee Directors' Award Plan (the "Directors' Plan") with the Employee Plan. The term of the Employee Plan, subject to the right of the Board of Directors to amend or terminate the Employee Plan at any time, is from May 12, 2015 until the earlier of May 11, 2025 or the date on which all shares subject to the Employee Plan have been delivered and the restrictions on all awards granted under the plan have lapsed, according to the Employee Plan's provisions. All awards granted pursuant to the Directors' Plan before May 9, 2015 remain subject to the terms and conditions of the Directors' Plan. We have outstanding share awards (primarily in the form of stock options and restricted stock) under each of the plans. The Employee Plan has been approved by our Board of Directors and shareholders.

The number of shares of common stock reserved for delivery under the Employee Plan, subject to certain limitations and adjustments, is the sum of (a) 2.6 million shares, plus (b) any shares required to satisfy substitute awards, as defined by the Employee Plan. If any shares subject to an award granted after May 12, 2015 are forfeited or such awards terminate or lapse without the delivery of such shares, those shares shall become available for grant under the Employee Plan. As of December 31, 2016, approximately 2.1 million shares were available under the Employee Plan. The Employee Plan provides for the availability of shares of our common stock for the grant of awards to employees, consultants and non-employee directors of the Company, its consolidated subsidiaries, and its unconsolidated affiliates and joint ventures. Awards under the Employee Plan may take the form of shares, dividend equivalents, options, stock appreciation rights, performance units, restricted stock, restricted stock units, annual incentive awards, service awards and substitute awards (each as defined in the plan).

Options under the Employee Plan vest and generally become fully exercisable over three years of continued employment, depending upon the grant type. The fair value of each option grant is estimated on the date of grant using a Black-Scholes option pricing model. There were no stock options granted or canceled during 2016, 2015 or 2014. All outstanding options were fully vested at December 31, 2016 and 2015. The total aggregate intrinsic values of options exercised for all plans during the years ended December 31, 2016, 2015 and 2014 were $5.8 million, $15.4 million and $13.1 million, respectively.

A summary of stock option activity is presented in the table below (shares in millions):

Options	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2015	0.4	$ 45.67		
Exercised	(0.1)	46.73		$ 5.8
Outstanding at December 31, 2016	0.3	45.41	3.9	
Exercisable at December 31, 2016	0.3	$ 45.41	3.9	

Grants of restricted stock may consist of restricted stock awards ("RSAs"), restricted stock units ("RSUs") or performance-based stock units ("PSUs"). Grants of restricted stock are valued at the date of grant based on the value of DST's common stock and are expensed using the straight-line method over the service period or, in the case of performance based vesting awards, over the expected period to achieve the required performance criteria. Except for restrictions placed on the transferability of the restricted stock, holders of RSAs have full stockholders' rights during the term of restriction, including voting rights and the right to receive cash dividends, if any. Grants of RSUs do not confer full stockholder rights such as voting rights and cash dividends, but provide for additional dividend equivalent RSU awards in lieu of cash dividends. Unvested shares of restricted stock may be forfeited upon termination of employment with the Company depending on the circumstances of the termination, or failure to achieve the required performance condition, if applicable.

Included in the non-vested outstanding restricted stock at December 31, 2016 are approximately 0.2 million of restricted stock that contain service features and 0.7 million that contain performance features. Management judgment is required to estimate amortization expense during the service period associated with awards containing performance features.

A summary of the status of non-vested restricted stock as of December 31, 2016, and changes during the year is presented in the table below (shares in millions):

Non-vested Restricted Stock	Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2015	0.9	$ 91.32
Granted	0.5	107.49
Vested	(0.4)	81.54
Forfeited	(0.1)	84.19
Non-vested at December 31, 2016	0.9	$ 104.76

The fair value of restricted stock which vested during the years ended December 31, 2016, 2015 and 2014 was $30.2 million, $9.6 million and $9.7 million, respectively.

At December 31, 2016, we had $66.6 million of total unrecognized compensation expense (included in Additional paid-in capital on the Consolidated Balance Sheet) related to share-based compensation arrangements, net of estimated forfeitures. Based on awards currently outstanding, we estimate that compensation expense attributable to the restricted stock grants will be approximately $11.4 million for 2017, $6.8 million for 2018, and $1.5 million for 2019. Future compensation expense is not projected on approximately $46.9 million of unrecognized compensation expense as the related awards are not currently expected to achieve their required performance features and therefore are not expected to vest.

The Consolidated Statement of Income for the years ended December 31, 2016, 2015 and 2014 reflects share-based compensation expense of $16.3 million, $27.9 million and $21.0 million, respectively. These amounts are inclusive of discontinued operations. The total tax benefits recognized in earnings from share-based compensation arrangements for the years ended December 31, 2016, 2015 and 2014, were approximately $6.4 million, $10.9 million and $8.2 million, respectively. Excess tax benefits of $4.7 million, $5.6 million and $6.1 million were classified as financing cash inflows during the years ended December 31, 2016, 2015 and 2014, respectively. Cash proceeds from options exercised for the years ended December 31, 2016, 2015 and 2014 were $5.3 million, $11.8 million and $13.0 million, respectively. We generally issue shares out of treasury to satisfy stock option exercises.

Stock purchase plans

The 2000 DST Systems, Inc. Employee Stock Purchase Plan (“ESPP”), which provided employees the right to purchase Company shares at a discount, was suspended effective January 1, 2006.

Redeemable non-controlling interest

As a result of our seed capital investment during 2015, there is a non-controlling investor group which owned approximately 47% and 37% of a consolidated open-end fund as of December 31, 2016 and 2015, respectively. The amount included on the Consolidated Balance Sheet at December 31, 2016 and 2015 associated with the redeemable non-controlling interest was $21.3 million and $15.1 million, respectively. During the years ended December 31, 2016 and 2015, the net loss attributable to the non-controlling interest was $0.9 million and $0.1 million, respectively.

14. Benefit Plans

We sponsor defined contribution plans that cover domestic and non-domestic employees following the completion of an eligibility period. Employer contribution expenses from continuing operations under these plans totaled $35.0 million, $33.9 million and $30.7 million during the years ended December 31, 2016, 2015 and 2014, respectively.

We have active and non-active non-qualified deferred compensation plans for senior management, certain highly compensated employees and directors. Certain of the active plans permit existing participants to defer a portion of their compensation until termination of their employment, at which time payment of amounts deferred is made in a lump sum or annual installments. Deferred amounts earn interest at a rate determined by the Board of Directors or are credited with deemed gains or losses of the underlying hypothetical investments. Amounts deferred under these plans were approximately $12.7 million and $20.4 million at December 31, 2016 and 2015, respectively. Changes in the liability are recorded as adjustments to compensation expense. The underlying investments, which are classified as trading securities, are recorded at fair market value with changes recorded as adjustments to other income, net.

15. Supplemental Cash Flow Information

Supplemental disclosure of cash flow information (in millions):

	Year Ended December 31,		
	2016	2015	2014
Cash payments:			
Interest paid during the year	$ 22.9	$ 24.3	$ 25.2
Income taxes paid during the year	164.5	217.4	205.4
Non cash investing and financing activities:			
Changes in accrued capital expenditures	2.0	4.0	3.3
Gain on contract to repurchase common stock	—	—	18.1
Charitable contribution of marketable securities	2.0	—	0.5
Deposits with broker for securities sold short	8.4	10.8	—
Securities sold short	8.2	10.7	—

16. Commitments and Contingencies

The following table sets forth our contractual cash obligations for our continuing operations including debt obligations, minimum rentals for the non-cancelable term of all operating leases and obligations under software license and other agreements (in millions):

	Debt	Operating Leases	Software License Agreements	Other	Total
2017	$ 208.5	$ 18.8	$ 50.1	$ 13.8	$ 291.2
2018	65.0	17.2	6.5	11.3	100.0
2019	75.0	13.1	5.3	4.5	97.9
2020	160.0	10.2	1.6	0.4	172.2
2021	—	8.9	—	0.5	9.4
Thereafter	—	12.3	—	0.2	12.5
Total	$ 508.5	$ 80.5	$ 63.5	$ 30.7	$ 683.2

Debt includes the accounts receivable securitization program, Senior Notes, revolving credit facilities and other indebtedness as described in Note 10, Debt. We also have letters of credit of $5.9 million and $10.6 million outstanding for December 31, 2016 and 2015, respectively. Letters of credit are provided by our debt facility.

We have future obligations under certain operating leases. The operating leases, which include facilities, data processing and other equipment, have remaining lease terms ranging from 1 to 10 years excluding options to extend the leases for various lengths of time. Certain leases have clauses that call for the annual rents to be increased during the term of the lease. Such lease payments are expensed on a straight-line basis. We also lease certain facilities from unconsolidated real estate affiliates.

The following rental costs were incurred (in millions):

	Year Ended December 31,		
	2016	2015	2014
Rent expense	$ 22.2	$ 23.6	$ 26.8
Occupancy expenses included in above amounts that were charged by unconsolidated real estate affiliates	5.9	6.8	11.4

Obligations under software license agreements generally relate to purchase obligations under maintenance agreements that support the software license.

We have entered into agreements with certain officers whereby upon defined circumstances constituting a change in control of the Company, certain benefit entitlements are automatically funded and such officers are entitled to specific cash payments upon termination of employment. Additionally, we have adopted the DST Systems, Inc. Executive Severance Plan which provides certain benefits to participants in the event of a qualifying termination under the plan.

We are involved in various legal proceedings arising in the normal course of our business. While the ultimate outcome of these legal proceedings cannot be predicted with certainty, it is the opinion of management, after consultation with legal counsel, that the final outcome in such proceedings, in the aggregate, would not have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

Other contractual commitments

In the normal course of business, to facilitate transactions of services and products and other business assets, we have agreed to indemnify certain parties with respect to certain matters. We have agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, data and confidentiality obligations, or out of intellectual property infringement or other claims made by third parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. At December 31, 2016, except for certain immaterial items, there were no liabilities for guarantees or indemnifications as it is not possible to determine either the maximum potential amount under these indemnification agreements or the timing of any such payments due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made under these agreements have not had a material impact on our consolidated financial position, results of operations or cash flows.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

17. Segment and Geographic Information

Our operating business units offer sophisticated information processing and software services and products. We present these businesses as two operating segments, Financial Services and Healthcare Services. Investments in the Company's equity securities, private equity investments, real estate and certain financial interests are included in the Investments and Other segment.

As mentioned in Note 1, Description of Business, we completed the sale of our North American Customer Communications business and announced our intent to dispose of our United Kingdom Customer Communications business during 2016. As a result, the Customer Communications segment, as well as certain businesses previously reported within the Financial Services segment that were part of the July 1, 2016 sale, have been reported as discontinued operations. Prior periods have been adjusted to be consistent with the current presentation.

We evaluate the performance of our segments based on income before interest expense, income taxes, and non-controlling interest. Intersegment revenues are reflected at rates prescribed by us and may not be reflective of market rates.

Summarized financial information concerning our segments is shown in the following tables (in millions):

	Year Ended December 31, 2016				
	Financial Services	Healthcare Services	Investments/ Other	Elimination Adjustments	Consolidated Total
Operating revenues	$ 1,047.3	$ 426.2	$ 0.9	$ —	$ 1,474.4
Intersegment operating revenues	42.9	—	—	(42.9)	—
Out-of-pocket reimbursements	73.9	8.5	—	(0.1)	82.3
Total revenues	1,164.1	434.7	0.9	(43.0)	1,556.7
Costs and expenses	908.3	345.1	3.0	(43.0)	1,213.4
Depreciation and amortization	79.7	15.6	0.7	—	96.0
Operating income (loss)	176.1	74.0	(2.8)	—	247.3
Gain on sale of business	5.5	—	—	—	5.5
Other income (loss), net	(2.2)	0.1	24.8	—	22.7
Equity in earnings of unconsolidated affiliates	21.2	0.5	5.5	—	27.2
Earnings from continuing operations before interest, income taxes and non-controlling interest	$ 200.6	$ 74.6	$ 27.5	$ —	$ 302.7

	Year Ended December 31, 2015				
	Financial Services	Healthcare Services	Investments/ Other	Elimination Adjustments	Consolidated Total
Operating revenues	$ 1,025.5	$ 376.4	$ 3.1	$ —	$ 1,405.0
Intersegment operating revenues	38.3	—	—	(38.3)	—
Out-of-pocket reimbursements	61.7	8.2	—	(0.9)	69.0
Total revenues	1,125.5	384.6	3.1	(39.2)	1,474.0
Costs and expenses	869.8	321.3	(1.7)	(39.2)	1,150.2
Depreciation and amortization	71.6	18.6	0.9	—	91.1
Operating income	184.1	44.7	3.9	—	232.7
Other income (loss), net	(2.1)	(0.1)	206.7	—	204.5
Equity in earnings of unconsolidated affiliates	35.3	0.3	9.8	—	45.4
Earnings from continuing operations before interest, income taxes and non-controlling interest	$ 217.3	$ 44.9	$ 220.4	$ —	$ 482.6

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

	Year Ended December 31, 2014				
	Financial Services	Healthcare Services	Investments/ Other	Elimination Adjustments	Consolidated Total
Operating revenues	$ 1,056.3	$ 382.1	$ 7.1	$ —	$ 1,445.5
Intersegment operating revenues	32.5	—	—	(32.5)	—
Out-of-pocket reimbursements	52.6	6.9	—	(0.2)	59.3
Total revenues	1,141.4	389.0	7.1	(32.7)	1,504.8
Costs and expenses	867.9	308.5	5.4	(32.7)	1,149.1
Depreciation and amortization	72.2	19.5	1.3	—	93.0
Operating income	201.3	61.0	0.4	—	262.7
Gain on sale of business	100.5	—	—	—	100.5
Other income, net	19.5	0.1	353.5	—	373.1
Equity in earnings of unconsolidated affiliates	29.8	0.5	4.4	—	34.7
Earnings from continuing operations before interest, income taxes and non-controlling interest	$ 351.1	$ 61.6	$ 358.3	$ —	$ 771.0

Earnings before interest, income taxes and non-controlling interest in the segment reporting information above less interest expense of $23.5 million, $23.8 million and $26.3 million for the years ended December 31, 2016, 2015 and 2014, respectively, are equal to income before income taxes and non-controlling interest on a consolidated basis for the corresponding year.

Information concerning the revenues of principal geographic areas is as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Revenues:(1)			
U.S.	$ 1,417.2	$ 1,350.6	$ 1,323.7
International			
U.K.	78.1	65.6	58.5
Canada	19.3	21.7	64.9
Australia	25.4	20.5	25.8
Others	16.7	15.6	31.9
Total international	139.5	123.4	181.1
Total revenues	$ 1,556.7	$ 1,474.0	$ 1,504.8

(1) Revenues are attributed to countries based on location of the client.

Information concerning total assets by reporting segment is as follows (in millions):

	December 31,	
	2016	2015
Financial Services	$ 1,717.1	$ 1,611.2
Healthcare Services	552.2	405.3
Investments and Other	431.4	502.7
Assets held for sale	72.6	297.5
Elimination Adjustments	(1.5)	(3.5)
Total assets	$ 2,771.8	$ 2,813.2

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Information concerning the long-lived assets (properties and other non-current assets) of principal geographic areas is as follows (in millions):

	December 31,	
	2016	2015
Long-lived assets:		
U.S.	$ 249.9	$ 274.7
International		
U.K.	25.9	29.1
Canada	0.4	5.6
Australia	8.0	2.6
Others	1.8	1.7
Total international	36.1	39.0
Total long-lived assets	$ 286.0	$ 313.7

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

18. Quarterly Financial Data (Unaudited)

(in millions, except per share amounts):

	Year Ended December 31, 2016				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Operating revenues	$ 361.3	$ 373.9	$ 365.5	$ 373.7	$ 1,474.4
Out-of-pocket reimbursements	19.4	16.6	21.2	25.1	82.3
Total revenues	380.7	390.5	386.7	398.8	1,556.7
Costs and expenses	306.9	320.4	289.6	296.5	1,213.4
Depreciation and amortization	22.1	24.2	22.8	26.9	96.0
Operating income	51.7	45.9	74.3	75.4	247.3
Interest expense	(6.1)	(6.5)	(5.4)	(5.5)	(23.5)
Gain on sale of business	—	—	—	5.5	5.5
Other income, net	6.3	7.0	6.7	2.7	22.7
Equity in earnings of unconsolidated affiliates	6.7	10.2	7.0	3.3	27.2
Income from continuing operations before income taxes and non-controlling interest	58.6	56.6	82.6	81.4	279.2
Income taxes	20.1	22.1	31.6	27.3	101.1
Income from continuing operations before non-controlling interest	38.5	34.5	51.0	54.1	178.1
Income (loss) from discontinued operations, net of tax	18.5	18.7	222.8	(11.7)	248.3
Net income	57.0	53.2	273.8	42.4	426.4
Net (income) loss attributable to non-controlling interest	1.1	(0.2)	(0.5)	0.5	0.9
Net income attributable to DST Systems, Inc.	$ 58.1	$ 53.0	$ 273.3	$ 42.9	$ 427.3
Weighted average common shares outstanding	33.8	33.3	32.7	32.1	33.0
Weighted average diluted shares outstanding	34.3	33.6	33.0	32.5	33.3
Basic earnings per share:					
Continuing operations attributable to DST Systems, Inc.	$ 1.17	$ 1.03	$ 1.54	$ 1.70	$ 5.43 (1)
Discontinued operations	0.55	0.56	6.81	(0.36)	7.53 (1)
Basic earnings per share	$ 1.72	$ 1.59	$ 8.35	$ 1.34	$ 12.96 (1)
Diluted earnings per share:					
Continuing operations attributable to DST Systems, Inc.	$ 1.16	$ 1.03	$ 1.53	$ 1.68	$ 5.37 (1)
Discontinued operations	0.54	0.55	6.75	(0.36)	7.45 (1)
Diluted earnings per share	$ 1.70	$ 1.58	$ 8.28	$ 1.32	$ 12.82 (1)
Cash dividends per share of common stock	$ 0.33	$ 0.33	$ 0.33	$ 0.33	$ 1.32

(1) Earnings per share are computed independently for each of the quarters presented. Accordingly, the accumulation of quarterly earnings per share may not equal the total computed for the year.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

	Year Ended December 31, 2015				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Operating revenues	$ 340.0	$ 349.3	$ 353.4	$ 362.3	$ 1,405.0
Out-of-pocket reimbursements	15.7	14.2	18.2	20.9	69.0
Total revenues	355.7	363.5	371.6	383.2	1,474.0
Costs and expenses	277.5	289.7	287.1	295.9	1,150.2
Depreciation and amortization	21.4	21.7	22.9	25.1	91.1
Operating income	56.8	52.1	61.6	62.2	232.7
Interest expense	(6.1)	(5.8)	(5.8)	(6.1)	(23.8)
Other income, net	83.3	92.2	14.4	14.6	204.5
Equity in earnings of unconsolidated affiliates	14.7	12.7	11.8	6.2	45.4
Income from continuing operations before income taxes and non-controlling interest	148.7	151.2	82.0	76.9	458.8
Income taxes	55.6	55.7	15.9	22.0	149.2
Income from continuing operations before non-controlling interest	93.1	95.5	66.1	54.9	309.6
Income from discontinued operations, net of tax	14.7	12.0	9.0	12.8	48.5
Net income	107.8	107.5	75.1	67.7	358.1
Net loss attributable to non-controlling interest	—	—	—	0.1	0.1
Net income attributable to DST Systems, Inc.	$ 107.8	$ 107.5	$ 75.1	$ 67.8	$ 358.2
Weighted average common shares outstanding	37.2	36.6	35.7	34.5	36.0
Weighted average diluted shares outstanding	37.6	37.0	36.2	35.0	36.4
Basic earnings per share:					
Continuing operations attributable to DST Systems, Inc.	$ 2.50	$ 2.61	$ 1.85	$ 1.59	$ 8.60 (1)
Discontinued operations	0.40	0.33	0.25	0.37	1.35 (1)
Basic earnings per share	$ 2.90	$ 2.94	$ 2.10	$ 1.96	$ 9.95 (1)
Diluted earnings per share:					
Continuing operations attributable to DST Systems, Inc.	$ 2.48	$ 2.58	$ 1.83	$ 1.57	$ 8.50 (1)
Discontinued operations	0.39	0.33	0.25	0.37	1.33 (1)
Diluted earnings per share	$ 2.87	$ 2.91	$ 2.08	$ 1.94	$ 9.83 (1)
Cash dividends per share of common stock	$ 0.30	$ 0.30	$ 0.30	$ 0.30	$ 1.20

(1) Earnings per share are computed independently for each of the quarters presented. Accordingly, the accumulation of quarterly earnings per share may not equal the total computed for the year.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures and Changes in Internal Control Over Financial Reporting

As of the end of the fiscal year for which this Annual Report on Form 10-K is filed, the Company's Chief Executive Officer and Chief Financial Officer evaluated the effectiveness of the Company's disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures (i) are effective for recording, processing, summarizing and reporting, within the time periods specified in the Securities and Exchange Commission's rules and forms, the information required to be disclosed by the Company in reports that it files or submits under the Securities Exchange Act of 1934 (the "Exchange Act"), and (ii) include controls and procedures designed to ensure that information required to be disclosed by the Company in such reports is accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. There has been no change in the Company's internal control over financial reporting that occurred during the last fiscal quarter of the fiscal year for which this Annual Report on Form 10-K is filed that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Report of Management on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, the Company conducted an evaluation of the effectiveness of our internal control over financial reporting based on the 2013 framework in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control—Integrated Framework*, management concluded that our internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to the information set forth under the captions "Board of Directors," and "Beneficial Ownership - Section 16(a) Beneficial Ownership Reporting Compliance" in our Proxy Statement relating to our 2017 Annual Meeting of Stockholders ("Definitive Proxy Statement"). Information concerning executive officers is set forth under "Executive Officers of the Registrant" in Part I of this Annual Report on Form 10-K and incorporated herein by reference.

We have adopted the Code of Business Conduct, which applies to all of our directors, officers and employees. The Code of Business Conduct is publicly available on our website at www.dstsystems.com. If we make any amendment to our Code of Business Conduct, other than a technical, administrative or non-substantive amendment, or if we grant any waiver, including any implicit waiver, from a provision of the Code of Business Conduct that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, we will disclose the nature of the amendment or waiver on our website at the same location. Also, we may elect to disclose the amendment or waiver in a current report on Form 8-K filed with the SEC.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to the information set forth under the captions "Compensation Discussion and Analysis," "Non-Employee Director Compensation," "Committee Reports - Compensation Committee Report" and "Compensation Committee Matters" in the Definitive Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information set forth in response to Item 403 (a) and (b) of Regulation S-K under the heading "Beneficial Ownership" in our Definitive Proxy Statement is hereby incorporated herein by reference.

The Company has no knowledge of any arrangement the operation of which may at a subsequent date result in a change of control of the Company.

The following table provides information as of December 31, 2016 about DST stock that may be issued under the 2005 Equity Incentive Plan and the Employee Plan upon the exercise of options, warrants and rights, as well as other year-end information about our equity compensation plans.

Equity Compensation Plan Information

Plan Category	A Number of securities to be issued upon exercise of options, warrants and rights outstanding as of December 31, 2016(#)	B Weighted average exercise price of outstanding options, warrants and rights shown in column A ($)	C Number of securities remaining available for issuance as of December 31, 2016 under equity compensation plans (excluding securities reflected in column A)(#)
Equity compensation plans approved by stockholders	1,261,208 (1)	$ 12.20	2,087,352 (2)
DST Systems, Inc. 2000 Employee Stock Purchase Plan ("ESPP")	None	None	589,844 (3)
Equity compensation plans not approved by stockholders	None	None	None

(1) This column includes securities that have been granted and may be issued at a future date in connection with stock option grants, restricted stock units, and performance stock units under the 2005 Equity Incentive Plan and the Employee Plan. 806,254 shares were granted prior to May 2015 under the 2005 Equity Incentive Plan and 454,954 shares were granted under the Employee Plan, which was adopted and effective May 12, 2015. Column A does not include:

- Service awards of DST stock that were earned under the Employee Plan in recognition of years of service (five shares for five years of employment, ten shares for ten years, and so forth in five year increments) during the year ended December 31, 2016 is 14,205. The average grant date fair value of those shares granted as service awards during 2016 was $115.57.

(2) These are the shares available for issuance in connection with the granting of annual incentive awards, stock options, stock appreciation rights, restricted stock, stock awards, restricted stock units, performance stock units, deferred stock, dividend equivalents, service awards, substitute awards, or any other right, interest or option relating to shares of DST stock granted pursuant to the Employee Plan.

(3) The ESPP was suspended beginning for plan year 2006 and no shares have been issued for the 2006 through 2016 plan years. The suspension will continue until otherwise determined by the Committee. The number shown is the number available for issuance should the Committee lift the suspension.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is incorporated by reference to the information set forth under the captions "Certain Relationships and Related Transactions" and "Board of Directors - Director Independence" in our Definitive Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information required by this item is incorporated by reference to the information set forth under the caption "Independent Registered Public Accounting Firm" in our Definitive Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) List of documents filed as part of this report

(1) Consolidated Financial Statements

The consolidated financial statements and related notes, together with the report of PricewaterhouseCoopers LLP, appear in Part II, Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

The consolidated financial statements consist of the following:

1. Consolidated Balance Sheet as of December 31, 2016 and 2015;
2. Consolidated Statement of Income for the three years ended December 31, 2016;
3. Consolidated Statement of Comprehensive Income for the three years ended December 31, 2016;
4. Consolidated Statement of Changes in Stockholders' Equity for the three years ended December 31, 2016;
5. Consolidated Statement of Cash Flows for the three years ended December 31, 2016; and
6. Notes to Consolidated Financial Statements.

(2) Consolidated Financial Statement Schedules

All schedules have been omitted because they are not applicable, are insignificant or the required information is shown in the consolidated financial statements or notes thereto.

(3) List of Exhibits

The exhibits filed as part of this report are listed in the Exhibit Index.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DST SYSTEMS, INC.

By: /s/ STEPHEN C. HOOLEY

Stephen C. Hooley
Chairman, Chief Executive Officer, and President

Dated: February 28, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Company and in the capacities indicated on February 28, 2017.

* JOSEPH C. ANTONELLIS Joseph C. Antonellis Director	* CHARLES E. HALDEMAN, JR. Charles E. Haldeman, Jr. Director
Jerome H. Bailey Director	* SAMUEL G. LISS Samuel G. Liss Director
* LYNN DORSEY BLEIL Lynn Dorsey Bleil Director	/s/ STEPHEN C. HOOLEY Stephen C. Hooley Chairman, Chief Executive Officer, and President (Principal Executive Officer)
* LOWELL L. BRYAN Lowell L. Bryan Director	/s/ GREGG WM. GIVENS Gregg Wm. Givens Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)
* GARY D. FORSEE Gary D. Forsee Director	/s/ DOUGLAS W. FLEMING Douglas W. Fleming Vice President, Chief Accounting Officer (Principal Accounting Officer) * Individually and as attorney in-fact

DST Systems, Inc.
Form 10-K Annual Report
for the Period Ended
December 31, 2016
Exhibit Index

Exhibit no.	Exhibit Description	Form	Incorporated by Reference: SEC File No.	Incorporated by Reference: Exhibit	Incorporated by Reference: Filing Date	Filed/ Furnished Herewith
(2) Plan of acquisition, reorganization, arrangement, liquidation or succession						
2.1	Agreement of Limited Partnership for International Financial Data Services Limited Partnership, effective as of January 31, 2001, by and among the Company, State Street Corporation, and entities related to the Company and State Street Corporation	10-K	1-14036	2.1	2/28/2011	
2.2	Agreement, dated as of December 23, 1992 by and among State Street Boston Corporation, DST Systems International B.V., and Clarke & Tilley Limited (currently, International Financial Data Services Limited) Portions of this agreement have been redacted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended	10-K	1-14036	2.2	2/28/2011	
2.3	Share Transfer Restriction and Option Agreement, dated as of December 23, 1992, by and among the Company, State Street Boston Corporation, and Clarke & Tilley Limited (currently, International Financial Data Services Limited)	10-K	1-14036	2.3	2/28/2011	
2.4	Merger Agreement, dated as of July 19, 2011, by and among DST Systems, Inc., Kettle Holdings, Inc., ALPS Holdings, Inc. and LM ALPS SR LLC, on behalf of the Company Stockholders and Participating Optionholders	8-K	1-14036	2.1	7/21/2011	
2.5	Purchase Agreement, by and among DST Systems, Inc. and certain of its affiliates and Broadridge Financial Solutions, Inc. and certain of its affiliates, dated as of June 14, 2016	8-K	1-14036	2.1	6/14/2016	
(3) Articles of Incorporation and Bylaws						
3.1	Restated Certificate of Incorporation, dated May 12, 2015	8-K	1-14036	3.3	5/14/2015	
3.2	Amended and Restated Bylaws, dated February 26, 2016	8-K	1-14036	3.1	2/29/2016	
(4) Instruments defining the rights of security holders, including indentures						
4.1	Paragraphs fourth, fifth, sixth, seventh, tenth, eleventh, and twelfth of Exhibit 3.1		1-14036			
4.2	Article I, Sections 1, 2, 3, 4 and 11 of Article II, Article V, Article VIII, Article IX, and Article X of Exhibit 3.2		1-14036			
4.3	Note Purchase Agreement, dated August 9, 2010, by and among the Company and the Purchasers named therein, and the forms of the Series A Notes, Series B Notes, Series C Notes and Series D Notes.	8-K		4.1	8/11/2010	

The Company agrees to furnish to the Commission a copy of any long-term debt agreements that do not exceed 10 percent of the total assets of the Company upon request.

Exhibit no.	Exhibit Description	Form	Incorporated by Reference SEC File No.	Exhibit	Filing Date	Filed/ Furnished Herewith
(10) Material Contracts						
10.1	Amended and Restated Joint Venture Agreement, effective October 31, 2006, between State Street Corporation and DST. Portions of this agreement have been redacted pursuant to a granted request for confidential treatment filed with the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended	10-Q	1-14036	10.1	11/9/2006	
10.2	Consent under Note Purchase Agreement, by and among the Company and Purchasers named therein, dated April 17, 2014	8-K	1-14036	10.2	4/23/2014	
10.3.1	The Credit Agreement among the Company, Bank of America N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, and other lenders, dated as of October 1, 2014 ("Syndicated Agreement")	8-K	1-14036	10.1	10/2/2014	
10.3.2	First Amendment, dated June 5, 2015 to the Syndicated Agreement	10-Q	1-14036	10.4	8/4/2015	
10.4	Agreement, by and among the Company and the Argyros Group, dated January 22, 2013	8-K	1-14036	99.2	1/23/2013	
10.5	Agreement, by and among the Company and the Argyros Group, dated March 23, 2014	8-K	1-14036	99.2	3/24/2014	
10.6	Stock Repurchase and Offering Agreement, between the Company and the Argyros Group dated May 5, 2014	8-K	1-14036	99.1	5/5/2014	
10.7	Governance and Standstill Agreement, between the Company and the Argyros Group dated May 5, 2014	8-K	1-14036	99.2	5/5/2014	
10.8	Registration Rights Agreement, between the Company and the Argyros Group dated May 5, 2014	8-K	1-14036	99.3	5/5/2014	
10.9	Amended and Restated Receivables Purchase Agreement, dated May 15, 2014, among Fountain City Finance, the Company, certain Subsidiary Originators and Wells Fargo Bank, National Association	8-K	1-14036	10.1	5/21/2014	
10.10.1	Originator Purchase Agreement, dated May 21, 2009, among the Company and certain of its subsidiaries ("Originator Purchase Agreement")	8-K	1-14036	10.2	5/21/2014	
10.10.2	First Amendment and Joinder Agreement to Originator Purchase Agreement, dated as of May 19, 2011	8-K	1-14036	10.3	5/21/2014	
10.10.3	Second Amendment to Originator Purchase Agreement, dated as of May 17, 2012	8-K	1-14036	10.4	5/21/2014	
10.10.4	Third Amendment and Joinder Agreement to Originator Purchase Agreement, dated as of May 16, 2013	8-K	1-14036	10.5	5/21/2014	
10.10.5	Fourth Amendment to Originator Purchase Agreement dated as of November 26, 2014	10-K	1-14036	10.2	2/26/2015	

Exhibit no.	Exhibit Description	Form	Incorporated by Reference SEC File No.	Exhibit	Filing Date	Filed/ Furnished Herewith
10.11	Purchase and Contribution Agreement, dated as of May 21, 2009, between the Company and Fountain City Finance, LLC	8-K	1-14036	10.6	5/21/2014	
10.12	First Omnibus Amendment to Transfer Documents, dated as of February 28, 2010, among Fountain City Finance, LLC, Enterprise Funding Company LLC, Bank of America, National Association, and the Company and certain of its subsidiaries	8-K	1-14036	10.7	5/21/2014	
10.13.1	Receivable Sale Agreement, dated as of November 26, 2014 by and among Wells Fargo Bank, National Association, Fountain City Finance, LLC, DST Systems, Inc. and DST Global Solutions North America Ltd.	10-K	1-14036	10.3	2/26/2015	
10.13.2	Amendment No. 1, dated May 14, 2015 to the Amended and Restated Receivable Purchase Agreement dated May 15, 2014 among Fountain City Finance, LLC, Wells Fargo Bank, N.A., DST and Certain DST subsidiaries	8-K	1-14036	10.1	5/15/2015	
10.13.3	Receivables Sale Agreement dated as of June 30, 2016, among Wells Fargo Bank, National Association; Fountain City Finance, LLC; the Company; and certain subsidiaries of the Company	8-K	1-14036	10.1	7/7/2016	
Executive Compensation Plans or Arrangements						
10.14	Employment Agreement between the Company and Stephen C. Hooley, dated as of June 30, 2009	8-K	1-14036	10.1	7/2/2009	
10.15	Employment Agreement between the Company and Randall D. Young, dated December 31, 2008	8-K	1-14036	10.1	2/26/2015	
10.16.1	Employment Agreement, between Manoochehr Abbaei and DST Brokerage Solutions, LLC, dated April 29, 2011					*
10.16.2	Retention Bonus Agreement, between Manoochehr Abbaei and DST Systems, Inc., dated June 14, 2016	8-K	1-14036	10.1	6/24/2016	
10.17.1	Employment Offer, between DSTi Holdings Limited and William Slattery, dated December 23, 2016					*
10.17.2	Terms and Conditions of Employment, between DSTi Holdings Limited and William Slattery, dated December 23, 2016					*
10.18	Form of Indemnification Agreement for Executive Officers and Directors	8-K	1-14036	99.4	5/5/2014	
10.19	Executive Severance Plan	10-K	1-14036	10.2	2/27/2014	
10.20	DST Systems, Inc. 2015 Equity and Incentive Plan, adopted effective May 12, 2015	8-K	1-14036	10.1	5/14/2015	
10.21	DST Systems, Inc. 2015 Directors' Deferred Fee Plan, adopted effective May 12, 2015	8-K	1-14036	10.2	8/4/2015	

Exhibit no.	Exhibit Description	Form	Incorporated by Reference SEC File No.	Exhibit	Filing Date	Filed/ Furnished Herewith
10.22	Form of Deferred Cash Award for performance year 2013	10-K	1-14036	10.4	2/27/2014	
10.23	Form of Stock Option Award Agreement (time vesting)	10-K	1-14036	10.2	2/29/2012	
10.24	Form of Restricted Stock Unit Agreement (time vesting) for time RSU awards during 2013	10-K	1-14036	10.2	3/1/2013	
10.25	Form of Restricted Stock Unit Agreement (time vesting) for time RSU awards after 2013	10-K	1-14036	10.5	2/26/2015	
10.26	Form of Restricted Stock Unit Agreement (time vesting) for RSU awards after 2014	10-Q	1-14036	10.2	3/31/2015	
10.27	Form of Performance Stock Unit Agreement for PSU awards during 2013	10-K	1-14036	10.5	3/1/2013	
10.28	Form of Performance Stock Unit Agreement for PSU awards after 2013	10-K	1-14036	10.6	2/27/2014	
10.29	Form of Performance Stock Unit Agreement for PSU awards after 2014	10-Q	1-14036	10.1	3/31/2015	
10.30	Form of Performance Stock Unit Agreement for PSU awards after 2016	8-K	1-14036	10.1	2/26/2016	
(12) Statement re: Computation of Ratios						
12	Computation of Ratio of Earnings to Fixed Charges					*
(21) Subsidiaries of the Company						
21	Subsidiaries of the Registrant					*
(23) Consents of experts and counsel						
23	Consent of PwC					*
(24) Power of Attorney						
24	Power of Attorney					*
(31) and (32) Officer Certifications						
31.1	Certification of Chief Executive Officer Pursuant to Securities Exchange Act of 1934 Rule 13a-14(a)					*
31.2	Certification of Chief Financial Officer Pursuant to Securities Exchange Act of 1934 Rule 13a-14(a)					*
32.0	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002					*

(101) Formatted in XBRL (Extensible Business Reporting Language)

The following financial information from DST's Annual Report on Form 10-K for the period ended December 31, 2016, filed with the SEC on February 28, 2017, formatted in Extensible Business Reporting Language ("XBRL"): (i) the Consolidated Statement of Income for the years ended December 31, 2016, 2015 and 2014, (ii) the Consolidated Balance Sheet at December 31, 2016 and 2015, (iii) the Consolidated Statement of Other Comprehensive Income for the years ended December 31, 2016, 2015 and 2014, (iv) the Consolidated Statement of Changes in Stockholders' Equity for the years ended December 31, 2016, 2015 and 2014, (v) the Consolidated Statement of Cash Flows for the years ended December 31, 2016, 2015 and 2014, and (vi) Notes to Consolidated Financial Statements.

Section 1: 10-K (10-K)

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United States
Securities and Exchange Commission
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2017

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 1-14036

DST Systems, Inc.
(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	**43-1581814** (I.R.S. Employer identification no.)
333 West 11th Street, Kansas City, Missouri (Address of principal executive offices)	**64105** (Zip code)

(816) 435-1000
Registrant's telephone number, including area code
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each Exchange on which registered
Common Stock, $0.01 Per Share Par Value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web-site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a	Smaller reporting company ☐	Emerging growth company☐

smaller reporting company)

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

Aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant as of June 30, 2017:
Common Stock, $0.01 par value—$3,746,186,932

Number of shares outstanding of the Registrant’s common stock as of January 31, 2018:
Common Stock, $0.01 par value—59,313,526

Documents incorporated by reference: None.

DST Systems, Inc.
2017 Form 10-K Annual Report
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The brand, service or product names or marks referred to in this Annual Report are trademarks or services marks, registered or otherwise, of DST Systems, Inc., our consolidated subsidiaries or our joint ventures.

PART I

Item 1. Business

DST Systems, Inc. is a global provider of technology-based information processing and servicing solutions. References below to "DST," "the Company," "we," "us" and "our" may refer to DST Systems, Inc. exclusively or to one or more of our consolidated subsidiaries. We provide business solutions through a unique blend of industry knowledge and experience, technological expertise and service excellence to clients in the asset management, brokerage, retirement, healthcare and other markets. The Company was formed in 1969. Through a reorganization in August 1995, we are a corporation organized in the State of Delaware.

NARRATIVE DESCRIPTION OF BUSINESS

DST uses our proprietary software applications to provide sophisticated information processing and servicing solutions through strategically unified data management and business process solutions to clients globally within the asset management, brokerage, retirement, healthcare and other markets. Our wholly-owned data centers provide the secure technology infrastructure necessary to support our solutions.

On January 11, 2018, we entered into an Agreement and Plan of Merger (the "Merger Agreement") with SS&C Technologies Holdings, Inc. ("SS&C") and Diamond Merger Sub, Inc., a Delaware corporation and an indirect wholly owned subsidiary of SS&C ("Merger Sub"), pursuant to which, among other things, Merger Sub will merge with and into DST, with DST surviving as a wholly owned subsidiary of SS&C (the "Merger").

At the effective time of the Merger (the "Effective Time"), each share of common stock, par value $0.01 per share, of DST issued and outstanding immediately prior to the Effective Time (subject to certain exceptions as provided in the Merger Agreement) shall be converted into the right to receive $84.00 in cash, without interest, for a total enterprise value of approximately $5.4 billion, including assumption of debt. The transaction is currently expected to close before the end of the second quarter of 2018 and is subject to the satisfaction of certain customary conditions as set forth in the Merger Agreement; however, there can be no assurances as to the actual closing or the timing of the closing.

In March 2017, we acquired State Street Corporation's ("State Street") ownership interest in our joint ventures Boston Financial Data Services, Inc. ("BFDS") and International Financial Data Services, U.K. ("IFDS U.K."), as well as other investments and real estate held by International Financial Data Services, L.P. ("IFDS L.P."). BFDS and IFDS U.K. were consolidated in our financial results from the date control of these entities was obtained.

We sold our North American Customer Communications business on July 1, 2016 and sold our United Kingdom ("U.K.") Customer Communications business on May 4, 2017. We have classified the results of the Customer Communications businesses sold as discontinued operations in our consolidated financial statements for all periods presented.

Beginning in 2017, DST established a new reportable segment structure that reflects how management is now operating the business and making resource allocations following the acquisitions of the remaining interests in IFDS U.K. and BFDS, as well as the recent reductions in non-core investment assets. The Company's operating business units are now reported as three operating segments (Domestic Financial Services, International Financial Services and Healthcare Services). Prior periods have been revised to reflect the new reportable operating segments.

For the year ended December 31, 2017, DST's operating revenues were $2,086.7 million. Segment operating revenues, as a percentage of consolidated operating revenues (excluding intersegment revenues), were 54.2%, 25.8%, and 20.0% contributed from the Domestic Financial Services, International Financial Services, and Healthcare Services segments, respectively.

DOMESTIC FINANCIAL SERVICES SEGMENT

Through the Domestic Financial Services segment, we provide investor, investment, advisor/intermediary and asset distribution services to companies within the United States ("U.S.") financial services industry. Utilizing our proprietary software applications, we offer our clients information processing solutions to support direct and intermediary sales of mutual funds, alternative investments, securities brokerage accounts and retirement plans. This includes transaction processing; account opening and maintenance; reconciliation of trades, positions and cash; corporate actions; regulatory reporting and compliance functions; and tax reporting. We also support full reporting to investors for confirmations, statements and tax forms, web access, and electronic delivery of documents.

Services are provided either on a remote processing ("Remote") or business process outsourcing ("BPO") basis utilizing our proprietary software applications, including our TA 2000® and TRAC® systems. Our BPO service offerings are enhanced by

AWD®, our proprietary workflow software, which is also licensed separately to third parties. In the U.S., we provide services to mutual funds, brokerage firms, retirement plans and alternative investment funds (such as real estate investment trusts "REITs").

Accounts serviced under shareowner recordkeeping arrangements with the mutual fund and alternative investment sponsors are referred to as "registered accounts." Registered accounts include both tax-advantaged and non tax-advantaged accounts on the books of the transfer agent. We also contract directly with broker/dealers to manage brokerage subaccounts.

Additionally, we deliver a comprehensive suite of asset servicing, distribution solutions and asset management for open-end mutual funds, closed-end funds, exchange-traded funds and alternative investment funds. Focusing on the needs of small- to medium-sized funds that require a broad set of customizable services, we provide compliance, creative services, medallion distribution, fund administration, fund accounting, legal, tax administration, transfer agency and asset management services.

Our distribution services range from consulting to active wholesaling and marketing, including closed-end funds IPO launch platform services. We also offer products designed to assist clients in meeting the expanding needs associated with distributing U.S. investment products through financial intermediaries.

We serve as the asset manager to proprietary open-end mutual funds, closed-end funds and exchange-traded funds through active management and through the utilization of sub-advisors and index providers. Additionally, we offer data analytics and consulting services in the U.S. to help our clients gain actionable insights into the needs and preferences of their customers.

We typically have multi-year agreements with our clients. Domestic Financial Services segment fees are primarily charged to the client based on the number of accounts, participants or transactions processed. For subaccounts, broker/dealers provide a portion of the services directly. As a result, our revenue per account is generally higher for registered accounts than for subaccounts. On a more limited basis, we also generate revenue through asset-based fee arrangements, subscriptions and/or seat licensing and from investment earnings related to cash balances maintained in our full service transfer agency bank accounts.

The Domestic Financial Services segment's largest client accounted for 10.0% of the segment's operating revenues in 2017 and the five largest Domestic Financial Services clients collectively accounted for 18.8% of the segment's operating revenues in 2017.

Sources of new business for the Domestic Financial Services segment include: (i) existing clients, particularly with respect to complementary and new products and services, (ii) companies relying on their own in-house capabilities and not using outside vendors, (iii) companies using competitors' systems, and (iv) new entrants into the markets we serve. We believe that competition in the markets in which the Domestic Financial Services segment operates is based largely on price, quality of service, features offered, the ability to handle rapidly changing volumes, response to security and compliance needs, product innovation, and responsiveness. Our competitors are primarily financial institutions and in-house systems. Our financial institution competitors may have an advantage because they may take into consideration the value of their clients' funds on deposit or under management when pricing their services. We believe there is significant competition in our markets and our ability to compete effectively is dependent in part on access to capital.

INTERNATIONAL FINANCIAL SERVICES SEGMENT

We offer investor and policyholder administration and technology services on a Remote and BPO basis in the U.K. and, through our joint venture IFDS L.P., in Canada, Ireland and Luxembourg, utilizing our proprietary FAST platform and IFDS L.P.'s iFAST platform. Additionally, in Australia and the U.K., we provide solutions related to participant accounting and recordkeeping for wealth management, "wrap platforms" and retirement savings ("superannuation") industries/markets through use of our wealth management platform (Bluedoor) and our life and pension administration system (Percana).

Our primary clients are mutual fund managers, insurers, and platform providers. International Financial Services fees are primarily charged to the client based on the number of accounts or transactions processed. We also realize revenues from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase. Additionally, we derive professional service revenues from the fees for implementation services, custom programming and data center operations. We typically have multi-year agreements with our clients.

The International Financial Services segment's largest client accounted for 24.4% of the segment's operating revenues in 2017 and the five largest International Financial Services clients collectively accounted for 55.7% of the segment's operating revenues in 2017.

Sources of new business for International Financial Services segment include: (i) existing clients, particularly with respect to complementary and new products and services, (ii) companies relying on their own in-house capabilities and not using outside vendors, (iii) companies using competitors' systems, and (iv) new entrants into the markets we serve. We believe that competition in the markets in which the International Financial Services segment operates is based largely on price, quality of service, features offered, the ability to handle rapidly changing volumes, response to security and compliance needs, product innovation, and responsiveness. We believe there is significant competition in our markets and our ability to compete effectively is dependent in part on access to capital.

HEALTHCARE SERVICES SEGMENT

The Healthcare Services segment uses our proprietary software applications to provide healthcare organizations with pharmacy, healthcare administration, and health outcomes optimization solutions to satisfy their information processing, quality of care, cost management and payment integrity needs. Our healthcare solutions include claims adjudication, benefit management, care management, business intelligence and other ancillary services. The Healthcare Services segment's five largest clients accounted for 48.7% of segment operating revenues in 2017, including 18.6% from its largest client.

Our healthcare services are marketed to health insurance companies, health plans and benefits administrators. Clients primarily consist of managed care organizations, preferred provider organizations, third-party administrators, dental, vision, and behavioral health organizations operating commercial and government sponsored programs such as the Health Insurance Exchanges that operate under the Patient Protection and Affordable Care Act, Medicare Advantage, Medicare Part D and Medicaid.

We compete with other third-party providers and companies that perform their services in-house with licensed or internally developed systems and processes. We believe that we compete effectively in the market due to our ongoing investment in our products and the development of new products to meet the evolving business requirements of our clients.

Our competitors' healthcare administration and health outcomes optimization solutions are primarily based on complete replacement of a payer's core system. We believe that a component application approach shifts the focus away from core application replacement to one in which clients have more alternatives for modernization of the business operation. With a component approach, health payer clients can still choose core application replacement if warranted, or adopt component applications that address only those areas of the business that offer the most opportunity of improvement for the client, resulting in protection of the client's current IT investment and less disruption to its business operation.

Pharmacy Solutions

We use our proprietary software applications, supporting technology and enhanced clinical expertise to provide pharmacy health management solutions supporting commercial, Medicaid and Medicare Part D plans. These services include pharmacy claims administration, pharmacy network solutions, government programs administration, formulary and rebate management, trend control and quality compliance programs, member services, and discount drug card programs. RxNova, our proprietary claims processing system, is a highly scalable and comprehensive system for the administration of pharmacy benefits, prescription claims adjudication, eligibility, pharmacy management, and related activities. This benefit management solution provides substantial flexibility to accommodate varying provider requirements, allows point-of-sale monitoring, and provides control of pharmacy plan benefits with online benefit authorization.

We generally derive revenue from our pharmacy-solutions business on a transactional fee basis. Fees are earned on pharmacy claims processing and payments services, pharmacy and member call center services, formulary and rebate administration, administration or management of clinical programs, pharmacy network management, member and plan web services and management information and reporting. We also receive investment earnings on cash balances maintained in our bank accounts related to funds held to satisfy our client's pharmacy claim obligations.

Healthcare Administration

We use our proprietary software applications to provide medical claim administration services and health plan compliance and revenue integrity services for payers and providers in the domestic healthcare industry. Healthcare administration services are offered on a software license, Remote and BPO basis. Our solutions, combined with our health outcomes optimization solutions described below, are offered as stand-alone component solutions to complement health plans, existing operations or systems, or as an integrated core administration package of solutions.

Claims administration services include claims processing, benefit plan management, eligibility and enrollment management, provider contract administration, mail receipt and processing, imaging/data capture and retention, fulfillment, utilization management, and customer service. Health plan compliance and revenue integrity services include a retrospective review of medical records to accurately capture members' health status through proper hierarchical condition categories.

Healthcare administration revenues are generally derived from fees charged on a per member/per month basis or transactional basis. We also realize revenue from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase.

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Health Outcomes Optimization

We provide health outcomes optimization solutions through the use of our integrated care management and population health analytics applications and professional services for health plans and providers in the domestic healthcare industry. Our Integrated Care Management solution is a real-time, intuitive, workflow-driven solution suite that assists clients to improve member outcomes and manage costs. Our population health technology provides organizations with the ability to measure and manage federal and state required quality management initiatives, provider network quality and efficiency, member health programs, and risk adjustment on an integrated system. In addition to our proprietary systems, we are the exclusive distributor of Johns Hopkins' Adjusted Clinical Groups ("ACG"), a patient classification system developed by Johns Hopkins University. The ACG System is a software tool that provides health plans the ability to easily identify their at-risk population and stratify them into the optimal care management program.

Professional services include business and industry consulting, risk adjustment, compliance and regulatory consulting, behaviorally based interventions, healthcare quality incentive management, medical management (disease, care, and utilization), HEDIS, managed information technology, software engineering, operations process engineering and management consulting.

Health outcomes optimization revenues are generally derived from fees charged based on a per member/per month basis. We also realize revenue from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase. Additionally, we derive professional service revenues from fees for implementation services, custom programming and data center operations.

SOFTWARE DEVELOPMENT AND MAINTENANCE

DST's software development and maintenance efforts are focused on introducing new products and services, as well as enhancing our existing products and services. The software development, maintenance and enhancement costs, including capitalized software development costs, were $243.0 million, $217.3 million and $205.5 million for the years ended December 31, 2017, 2016 and 2015, respectively.

INTELLECTUAL PROPERTY

We hold U.S. patents, U.S. copyrights and trademarks covering various aspects of the information processing and computer software services and products provided by the Domestic Financial Services, International Financial Services and Healthcare Services segments. The duration of the patent term is generally 20 years from its earliest application filing date. The patent term is not renewable. The durations of the copyrights depend on a number of factors, such as who created the work and whether he or she was employed by us at the time. The trademark rights generally will continue for as long as we maintain usage of the trademarks. We believe our copyrights are adequate to protect our original works of authorship. We believe that although the patents, trademarks and copyrights related to the segments are valuable, our success primarily depends upon our product and service quality, marketing and service skills. Despite patent, trademark and copyright protection, we may be vulnerable to competitors who attempt to imitate our systems or processes. In addition, other companies and inventors may receive patents that contain claims applicable to our systems and processes.

EMPLOYEES

We had approximately 14,200 total employees at December 31, 2017, of which approximately 7,500 employees were located in the U.S. and approximately 6,700 employees were located internationally. Additionally, our joint ventures had approximately 1,500 employees in Canada, Ireland, Luxembourg and the U.S. at December 31, 2017. None of our employees are represented by a labor union or covered by a collective bargaining agreement, and we consider our employee relations to be good.

SEGMENT, GEOGRAPHIC AREA AND OTHER FINANCIAL INFORMATION

This discussion of the business of DST Systems, Inc. should be read in conjunction with, and is qualified by reference to, Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") under Item 7 herein. In addition, the information set forth under the headings "Forward Looking Statements," "Introduction" and "Seasonality" in the MD&A and the segment and geographic information included in Item 8, Financial Statements and Supplementary Data - Note 17, "Segment and Geographic Information" are incorporated herein by reference in partial response to this Item 1.

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AVAILABLE INFORMATION

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports will be made available free of charge on or through our Internet website (*www.dstsystems.com*) as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). In addition, our corporate governance guidelines and the charters of the Audit Committee, the Corporate Governance/Nominating Committee, and Compensation Committee of the DST Board of Directors are available at *investors.dstsystems.com/govdocs*. These guidelines and charters are available in print to any stockholder who requests them. Written requests may be made to the DST Corporate Secretary, 333 West 11th Street, Kansas City, Missouri 64105, and oral requests may be made by calling the DST Corporate Secretary's Office at (816) 435-8655. We do not intend for information contained on our website to be part of this Annual Report on Form 10-K. An individual may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E. Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site (*http://www.sec.gov*) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors

In addition to the other information set forth in this report, you should carefully consider the following factors, which could materially affect our business, financial condition, results of operations or cash flows in future periods. While we believe we have identified and discussed below the key risk factors affecting our business, there may be additional risks and uncertainties not currently known to us or that we currently deem to be immaterial that may adversely affect our business, financial condition, results of operations, cash flows or share price in the future.

Risks Related to Our Business

Trends or events affecting our clients or their industries could decrease the demand for our products and services and the loss of, reduction of business with, or less favorable terms with any of our significant clients could materially harm our business and results of operations.

We derive our revenues from the delivery of products and services to clients primarily in the mutual fund, brokerage, investment management, other financial service (e.g., insurance, banking and financial planning), healthcare and pharmacy industries. Demand for our products and services among companies in those industries could decline for many reasons. If demand for our products or services decreases or any of the industries we serve decline or fail or consolidate, reducing the number of potential clients, our business and our operating results could be adversely affected.

On a consolidated basis, for the year ended December 31, 2017, our five largest clients accounted for approximately 23.7% of our consolidated operating revenues. For the same period, the Healthcare Services segment's five largest clients accounted for approximately 48.7% of our revenues in that segment, including 18.6% from its largest clients. Because of our significant client concentration, particularly in the Healthcare Services segment, our revenues could fluctuate significantly due to changes in economic conditions, the use of competitive products, or the loss of, reduction of business with, or less favorable terms with any of our significant clients, and a delay or default in payment by any significant client could materially harm our business and results of operations.

Events that adversely affect our clients' businesses, rates of growth or numbers of clients they serve could decrease demand for our products and services and the number of transactions we process. Events that could adversely affect our clients' businesses include decreased demand for our clients' products and services, adverse conditions in our clients' markets or adverse economic conditions generally. We may be unsuccessful in predicting the needs of changing industries and whether potential clients will accept our products or services. We also may invest in technology or infrastructure for specific clients and not realize additional revenue from such investments. If trends or events do not occur as we expect, our business could be negatively impacted.

We depend on information technology, and any failures of or damage to, attack on or unauthorized access to our information technology systems or those of third parties on which we rely could result in significant costs and reputational damage.

We have developed and maintained, and our businesses depend on, information technology, including elements both internal and external, to record and process a large volume of complex transactions and other data, including personally identifiable information regarding financial and health matters. In certain circumstances, vendors have access to such data in order to assist us with responsibilities, such as producing benefit plan identification cards, maintaining software we license on our own behalf or for resell to others, or helping clients comply with anti-money laundering regulations. Any interruptions, delays, breakdowns, or breach, including as a result of cybersecurity breaches or breaches of our environments and procedures or those of our vendors, could result in significant data losses or theft of our or our clients' intellectual property, proprietary business information or personally identifiable information. Several health care and financial services firms have been victims of computer systems hacking attacks, resulting in the disruption of services to clients, loss or misappropriation of sensitive or private data, and reputational harm. Rapid advances in technology, and the limits and costs of technology, skills and manpower, may prevent us from anticipating, identifying, preventing or addressing all potential security threats and breaches. A cybersecurity breach involving our systems or those of third parties on which we rely could negatively affect our reputation as a trusted product and service provider by adversely affecting the market's perception of the security or reliability of our products or services. In addition, a system breach could result in other negative consequences, including remediation costs, disruption of internal operations, increased cybersecurity protection costs, lost revenues, regulatory penalties, and litigation.

The demand for our products and services could decrease if we do not continually address our clients' technology and capacity requirements.

Our clients use technology-based products and services in the complex and rapidly changing markets in which they operate. Our processes to support the design, set-up, quality assurance, and maintenance activities for the timely implementation of new client services, migration of existing clients onto new or different platforms, and ongoing servicing may not meet the needs of our business and clients. We must substantially invest in technology and systems to meet client requirements for technology and capacity. If we do not meet clients' technology and capacity requirements in advance of our competitors or if the investments we make are not cost-effective or do not result in successful products or services, our business could be adversely affected.

The success of our information technology transformation initiative will depend on the timing, extent and cost of implementation; performance of third-parties; upgrade requirements; and availability and reliability of the various technologies required to provide such transformation.

We must continually invest in our information technology in order to continually meet our clients' needs. We are implementing a multi-year information technology transformation initiative intended to reduce operating costs, increase information security, upgrade infrastructure, expand automation, provide access to emerging technologies and position us to take advantage of market opportunities. If we fail to provide an enhanced client experience with this initiative, our ability to retain and attract clients and to maintain and grow revenues could be adversely affected. Using new and sophisticated technology on a very large scale entails risks. For example, deployment of new software may adversely affect the performance of existing services on our existing platforms and decrease the client experience. If implementation of our information technology transformation initiative results in delayed services or costs of the initiative exceed expected amounts, our margins could be adversely affected and such effects could be material. If the delivery of services expected to be deployed on modernized architecture were delayed due to technological constraints, performance of third-party suppliers, or other reasons, the cost of providing such services could become higher than expected, which could result in higher costs to clients, potentially resulting in decisions to purchase services from our competitors, which would adversely affect our revenues, profitability and cash flow from operations.

We have made and may continue to make acquisitions and divestitures that involve numerous risks and uncertainties.

Our business strategy anticipates that we will supplement internal growth by pursuing acquisitions of complementary businesses. We may be unable to identify suitable businesses to acquire. We compete with other potential buyers for the acquisition of other complementary businesses. Information we obtain about an acquisition target may be limited and there can be no assurance that an acquisition will perform as expected or positively impact our financial performance. Potential acquisitions involve risk, including the risk we would be unable to effectively integrate the acquired technologies, operations and personnel into our business, and the risk that management's attention and our capital would be diverted from other areas of our business. The anticipated benefits of our acquisitions may not materialize. Future acquisitions or dispositions could result in the issuance of capital stock, incurrence or assumption of debt, contingent liabilities or expenses, or write-offs of goodwill and other intangible assets, any of which could harm our financial condition. If we cannot complete acquisitions, our growth may be limited and our financial condition may be adversely affected.

In addition, we have divested, and may in the future divest, businesses that are no longer a part of our ongoing strategic plan. These divestitures similarly require a significant investment of time and resources, may disrupt our business, distract management from other responsibilities and may result in continued responsibility for the divested business, including through indemnification, for a period of time following the transaction, which could adversely affect our financial results.

If our new investments and business initiatives are not successful, our financial condition and prospects could be adversely affected.

We have invested, and continue to invest heavily in our technology to improve existing products and services and add new products and services to address the needs of existing or new clients. Our investments may not lead to successful deployment or increases in the number of accounts or transactions. If we are not successful in creating value from our investments by increasing sales or reducing expenses, our financial condition and prospects could be harmed.

An increase in subaccounting services performed by brokerage firms has and will continue to adversely impact our revenues.

We service open-end and closed-end funds registered under the Investment Company Act of 1940, including mutual funds, exchange-traded funds, interval funds and exchange-listed closed-end funds, as well as private funds, collective investment trusts and other accounts under shareowner recordkeeping arrangements which we refer to as registered accounts. These arrangements are distinguished from broker subaccounts, which are serviced under contract with a broker/dealer. Our clients may adopt the broker subaccount structure. We offer subaccounting services to brokerage firms that perform shareowner subaccounting. As the recordkeeping functions in connection with subaccounting are more limited than traditional shareowner accounting, the fees charged are generally lower on a per unit basis. Brokerage firms that obtain agreements from our clients to use a broker subaccount structure cause accounts currently on our traditional recordkeeping system to convert to our subaccounting system, or to the subaccounting systems of other service providers, which generally results in lower revenues. While subaccounting conversions have generally been limited to our non tax-advantaged mutual fund accounts, such conversions have begun to extend to the tax-advantaged accounts (such as retirement and Section 529 accounts) we service, which could adversely affect our business and operating results.

Consolidation in or among our clients and potential clients could result in a reduction of clients or reduction in use of our products or services.

Mergers or acquisitions of or consolidations among our clients or between our clients and other entities could reduce the number of our clients and potential clients and result in the discontinuation or reduction in use of our products or services. This could adversely affect our revenues even if these events do not reduce the aggregate number of clients or the activities of the consolidated entities. Any of these developments could materially and adversely affect our business, financial condition, operating results and cash flows.

Our businesses are subject to substantial competition.

We are subject to intense competition from other established service providers in all industries we serve. Some of our competitors are able to bundle service offerings and offer more appealing pricing structures. Some of our clients, or the clients they serve, may develop, have developed or are developing the in-house capacity to perform the transaction processing and recordkeeping services they have paid us to perform. Additionally, some of our competitors and clients have greater financial and human resources and access to capital than we do.

In the financial and healthcare markets we serve, we compete based on a variety of factors, including investment performance, the range of products or services offered, brand recognition, business reputation, financial strength, stability and continuity of client and other intermediary relationships, quality of service, and level of fees charged for products and services. We continue to face market pressures regarding fee levels in certain products and services offered.

Our failure to successfully compete in any of our material operating businesses could have a material adverse effect on results of operations. Competition could also affect the revenue mix of products or services we provide, resulting in decreased revenues in lines of business with higher profit margins.

We may not be able to sustain critical operations and provide essential products and services during system failures or catastrophic events.

Damage to our systems or facilities or those of third parties on which we rely could impact our operations or financial condition. The performance of our services also depends upon facilities that house central computer operations or operating centers, including facilities provided by third parties on which we rely. Significant damage to any of our operating facilities or those of third parties on which we rely could interrupt the operations at those facilities and interfere with our ability to serve clients. Moreover, in the event of a catastrophic event we may not be able to execute our business resumption strategies for data processing and capabilities, and we may not have the ability to recover critical data, programs, applications, and data processing capabilities in a timely manner; any of these could impact our ability to serve our clients. In addition, it is possible that hardware failures or errors or technical deficiencies in our systems or those of third parties on which we rely could similarly result in data loss or corruption. Any failure of our systems or facilities or those of third parties on which we rely could expose us to liability and damages relating to such failure, which could have a material adverse effect on our business and results of operations.

We operate internationally and are thus exposed to currency fluctuations and foreign political, economic and other conditions that could adversely affect our revenues from or support by foreign operations.

Inherent risks in our international business activities could decrease our international sales and also could adversely affect our ability to receive important support from our international operations, which could have a material adverse effect on our overall financial condition, operating results, and cash flow. These risks include potentially unfavorable foreign economic conditions, political conditions or national priorities, foreign government regulation, potential expropriation of assets by foreign governments, changes in intellectual property legal protections and remedies, the failure to bridge cultural differences, and limited or prohibited access to our foreign operations and the support they provide. We may also have difficulty repatriating any profits or be adversely affected by currency fluctuations in our international business.

As a result of the December 2016 referendum in the U.K. to exit the European Union (commonly referred to as "Brexit"), the value of the British pound has fluctuated greatly as compared to the US dollar. The relative strengthening of the dollar relative to the British pound may adversely affect our revenues and operating results. Any withdrawal of the U.K. from the European Union could significantly disrupt the movement of goods, services and people between the U.K. and the European Union; the financial services industry could be particularly sensitive to Brexit and it could result in increased legal and regulatory complexities for our operations. There can be no assurance that these disruptions and regulatory changes would not have a material adverse effect on our business, financial condition, or operating results.

Various events may cause our financial results to fluctuate from quarter-to-quarter or year-to-year. The nature of these events might inhibit our ability to anticipate and act in advance to counter them.

We may be unsuccessful in determining or controlling when and whether events occur that could cause varying financial results. Unfavorable results may occur that we did not anticipate or take advance action to address. We incur significant costs to develop products and services used to service our existing and potential client operations. The timing of these expenses may fluctuate as new client contracts are signed or existing client contracts are renewed or terminated, causing our results to vary accordingly. Factors contributing to the variability of our results include increased costs of supplies, increased costs relating to existing and potential client operations, and hiring staff to develop new and existing products. The timing of our fees associated with new and existing client contracts, including changes in recognition as a result of changes in accounting principles, may also cause results to vary from period to period.

Our revenues may decrease due to declines in the levels of participation and activity in the securities markets.

We generate significant revenues from the transaction processing fees we earn for our products and services. These revenue sources are substantially dependent on the levels of participation and activity in the securities markets. The number of unique securities positions held by investors through our clients and our clients' customer trading volumes reflect the levels of participation and activity in the markets, which are impacted by market prices and the liquidity of the securities markets, among other factors. We could continue to be negatively impacted by the volatile markets as certain of our fees are tied to the asset bases of our clients. The occurrence of significant market volatility or decreased levels of participation would likely result in reduced revenues and decreased profitability from our business operations. Additionally, we may be exposed to operational or other risks in connection with any systematic failures in the markets, or the default due to market-related failures of one or more counterparties with whom we transact.

We also derive significant revenues from asset management, administration and distribution contracts with clients. Under these contracts, the fees paid to us are based on a variety of factors, including the market value of assets under management ("AUM"), assets under administration ("AUA") and number of transactions processed. AUM, AUA or the number of transactions processed may decline for various reasons, causing results to vary. Factors that could decrease AUM and AUA (and therefore revenues) include declines in the market value of the assets in the funds (and accounts as applicable) managed, administered and distributed, redemptions and other withdrawals from, or shifts among, the funds (and accounts as applicable) managed, administered and distributed, as well as market conditions generally.

Our revenues may decrease due to changes in asset management, administration and distribution fees and industry trends.

The asset management, administration and distribution business is highly competitive and we compete for investors and clients on the basis of factors such as performance, reputation, service, and cost. Underperformance of any of our proprietary and client products and services, damage to our reputation, or service-related issues could lead to redemptions or terminations. Additionally, the asset management industry has generally been subject to fee compression and asset flows to lower cost products or services. Such a trend may result in fee compression in asset management, administration and distribution related contracts. The asset management, administration and distribution contracts may be terminated by the parties thereto, and the board of directors or trustees of certain funds may terminate investment management, administration and distribution agreements for any reason and without penalty. The factors and trends described above could have a material adverse effect on revenues.

Investment decisions with respect to cash balances, market returns or losses on investments, and limits on insurance applicable to cash balances held in bank and brokerage accounts, including those held by us and as agent on behalf of our clients, could expose us to losses of such cash balances and adversely affect revenues attributable to cash balance deposit investments.

As part of our transaction processing and other services, we maintain and manage large bank and investment accounts containing client funds, which we hold as agent, as well as operational funds. Our revenues include investment earnings related to client fund cash balances. Our choices in selecting investments, or market conditions that affect the rate of return on or the availability of investments, could have an adverse effect on the level of such revenues. The amounts held in our operational and client deposit accounts could exceed the limits of government insurance programs of organizations such as the Federal Deposit Insurance Corporation and the Securities Investors Protection Corporation, exposing us to the risk of loss. Any substantial loss would have an adverse impact on our business and our financial condition.

Operational errors in the performance of our services or contractual obligations, as well as unknown or undetected defects, could lead to liability for claims, client loss and result in reputational damage.

The failure to properly perform our services or contractual obligations could result in our clients and/or certain of our subsidiaries being subjected to losses including censures, fines, or other sanctions by applicable regulatory authorities, and we could be liable to parties who are financially harmed by those errors. Despite testing, defects or errors may occur in our existing or new services, which could cause us to compromise client data, lose revenues, lose clients, divert development resources, or damage our reputation, any of which could harm our business.

Our revenues could decrease if client contracts are terminated or fail to renew or if clients renegotiate contracts or utilize our services at lower than anticipated levels.

We derive most of our revenue by selling products and services under multi-year contracts, many of which contain terms and conditions based on anticipated levels of utilization of our services. We cannot unilaterally extend the terms of our client contracts when they expire. Contracts can terminate during the term of agreement for various reasons, including through "termination for convenience" clauses in some contracts that enable clients to cancel by written notice. Our revenues could decrease as a result of terminations or non-renewals of client contracts; extensions of client contracts under, or contract re-negotiations resulting in, less favorable terms; or utilization of services at less than anticipated levels.

We are substantially dependent on our intellectual property rights, and a claim for infringement or a requirement to indemnify a client for infringement could adversely affect us.

We have made substantial investments in software and other intellectual property on which our business is highly dependent. Businesses we acquire also often depend on intellectual property portfolios, which increase the challenges we face in protecting our strategic advantage. Any disclosure, loss, invalidity of, or failure to protect our intellectual property could negatively impact our competitive position and, ultimately, our business. Our protection of our intellectual property rights in the U.S. or abroad may not be adequate and others, including our competitors, may use our proprietary technology without our consent. Furthermore, litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, or to determine the validity and scope of the proprietary rights of others. Such litigation could result in substantial costs and diversion of resources and could harm our business, financial condition, results of operations and cash flows.

To the extent available, we rely on patent, trade secret and copyright laws; however, significant portions of our proprietary intellectual property are not protected by patents. We also utilize nondisclosure and other contractual agreements and security measures to protect our proprietary technology. We cannot guarantee these measures will be effective. Our products and services rely on technology developed by others, including open source software, and we have no control over possible infringement of someone else's intellectual property rights by the provider of this technology. The owner of the rights could seek damages from us rather than or in addition to the persons who provide the technology to us. We could be subject at any time to intellectual property infringement claims that are costly to evaluate and defend. Our clients may also face infringement claims, allege that such claims relate to our products and services, and seek indemnification from us. Any loss of our intellectual property rights, or any significant claim of infringement or indemnity for violation of the intellectual property rights, or any significant claim of infringement or indemnity for violation of the intellectual property rights of others, could have a material adverse effect on our financial condition, operating results, and cash flows.

Our investments in funds and our joint ventures could decline in value.

From time to time we add new investment strategies to our investment product offerings by providing the initial cash investments as "seed capital." The seed capital investments may decline in value. A significant decline in their value could have a material adverse effect on our financial condition or operating results.

We are a limited partner in various private equity funds and have future capital commitments related to certain private equity fund investments. These investments are illiquid. Generally, private equity fund securities are non-transferable or are subject to long holding periods, and withdrawals from the private equity firm partnerships are typically not permitted. Even when transfer restrictions do not apply, there is generally no public market for the securities. Therefore, we may not be able to sell the securities at a time when we desire to do so. We may not always be able to sell those investments at the same or higher prices than we paid for them. We also participate in joint ventures with other companies. These joint venture investments could require further capital contributions.

We have restrictive covenants in our debt agreements, which may restrict our flexibility to operate our business. If we do not comply with these restrictive covenants, our failure could result in material and adverse effects on our operating results and our financial condition.

Our debt agreements contain customary restrictive covenants, including limitations on consolidated indebtedness, liens, investments, subsidiary investments, and asset dispositions, and require us to maintain certain leverage and interest coverage ratios. Failure to comply with these covenants could result in an event of default that, if not cured or waived, could result in reduced liquidity for the Company and could have a material adverse effect on our operating results and financial condition. In addition, an event of default or declaration of acceleration under one of our debt agreements could result in a cross default under one or more of our other debt agreements, including our financing agreements. This would have a material adverse impact on our liquidity, financial position and results of operation.

Regulatory and Litigation Risks

We and our unconsolidated affiliates are subject to regulation. Any regulatory violations, changes or uncertainties could adversely affect our business.

A number of our businesses are subject to U.S. or foreign regulation, including privacy, licensing, processing, recordkeeping, investment adviser, broker/dealer, retirement, data protection, reporting and related regulations. New products and services we plan to offer may also be subject to regulation, either directly or as a downstream provider to customers or clients. Such regulations cover all aspects of our businesses including, but not limited to, sales and trading methods, trade practices among broker/dealers, use and safekeeping of clients' funds and securities, use of client and employee data, capital structure of securities firms, net capital, anti-money laundering efforts, healthcare, recordkeeping and the conduct of directors, officers and employees. Any violation of applicable regulations could expose us or those businesses to civil or criminal liability, significant fines or sanctions, damage our reputation, the revocation of licenses, censures, or a temporary suspension or permanent bar from conducting business, which could adversely affect our business or our financial results. Governmental changes, changing interpretation of regulations, and uncertainties surrounding services we provide could increase our costs of business, result in penalties, or diminish business, which could materially and adversely affect our financial results.

The SEC or other regulatory agencies may issue regulations impacting mutual fund service providers, which could adversely affect our business. The Department of Labor ("DOL") issued fiduciary regulations in 2016 that, if not delayed, repealed or substantially altered in the near future, are likely to impact our business.

The SEC or other regulatory agencies may issue regulations impacting third-party service providers of mutual funds and other fund-types products, such as distributors, administrators, or custodians, (collectively referred to as "mutual funds"), which could adversely affect our business. The SEC may issue additional regulations under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank Act") or other legislative authority that would require brokers and financial intermediaries that distribute mutual funds to make more detailed fee disclosures at the point-of-sale. Additionally, many brokers and financial intermediaries have become subject to a new DOL-imposed fiduciary standard-of-care that is causing them to review, and may impact, their methods of distribution, share class structures, and/or wholesaling activities. Although the DOL rule is fully effective, the current administration has delayed implementation of the best interest contract exemption, providing an extended transition period for distributors to address their new fiduciary status. It remains unclear whether the regulations will be replaced by an SEC standard, repealed or substantially altered within the near future. We cannot predict all of the requirements the SEC or FINRA may impose. Additionally, we cannot predict whether the SEC or FINRA proposal will provide a unified standard with the DOL rule, or whether it will provide a patchwork of standards that depend on the type of account in which the retirement assets are invested. Additionally, while the industry would prefer a united federal fiduciary standard, individual states such as Nevada, New York and Maryland have recently begun to explore their own legislative options to provide a fiduciary standard for investment advice. Regulations that cause current distribution channels or interest in mutual fund investing to change could decrease the number of accounts on our systems as a result of changes in client offerings or the attractiveness of offerings to customers of our clients. The fiduciary regulations are expected to primarily impact brokers and registered investment advisers who give individualized non-discretionary advice in the "retail" marketplace, but discretionary investment managers in the "institutional" space are also expected to be affected, primarily in connection with the sale of investment products and services. To the extent that our business units, clients, unaffiliated intermediary partners and retirement plan service providers fit into these categories, this could adversely affect our business and operating results. Additionally, to the extent the Dodd-Frank Act and/or DOL regulations impact the operations, financial condition, liquidity and capital requirements of unaffiliated financial institutions with whom we transact business, those institutions may seek to pass through increased costs to us or they may reduce their transactional volume which is a primary source of our revenues.

Our clients are subject to regulation that could affect our business.

Our clients are subject to extensive regulation, including investment adviser, broker/dealer and privacy regulations applicable to products and services we provide to the financial services industry and insurance, privacy and other regulations applicable to services we provide to the healthcare industry. Changes in, and any violation by our clients of, applicable laws and regulations (whether related to the products and services we provide or otherwise) could diminish their business or financial condition and thus their demand for our products and services or could increase our cost of continuing to provide our products and services to such industries. Demand could also decrease if we do not continue to offer products and services that help our clients comply with regulations. For example, our accounts in our Healthcare Services segment are impacted by the Affordable Care Act, including the Health Insurance Marketplace. Changes to the Affordable Care Act may be enacted by Congress in response to the current administration's stated agenda, and we cannot predict the impact that will have on our clients and their demand for our products and services.

Our businesses expose us to risks of claims and losses that could be significant and damage our reputation and business prospects.

Our proprietary applications and related consulting and other services include the processing or clearing of financial and healthcare transactions for our clients and their customers and the design of benefit plans and compliance programs. The dollar amount of transactions processed or cleared is vastly higher than the revenues we derive from providing these services. In the event we make transaction processing or operational errors, or mismanage any process, we could be exposed to claims for any resulting processing delays, disclosure of protected information, miscalculations, mishandling of pass-through disbursements or other processes, and failure to follow a client's instructions or meet specifications. Additionally, we may be subject to claims or liability resulting from a failure of third parties (including regulatory authorities) to recognize the limitations of our role as our clients' agent or consultant, and we may be subject to claims or liability resulting from fraud committed by third parties. We may be exposed to the risk of counterparty breaches or failure to perform. We may be subject to claims, including class actions, for reimbursements, losses or damages arising from any transaction processing or operational error, or from process mismanagement. Because of the sensitive nature of the financial and healthcare transactions we process, our liability and any alleged damages may significantly exceed the fees we receive for performing the service at issue. Litigation could include class action claims based upon, among other theories, various regulatory requirements and consumer protection and privacy laws that class action plaintiffs may attempt to use to assert private rights of action. Any of these claims and related settlements or judgments could affect our operating results, damage our reputation, decrease demand for our products and services, or cause us to make costly operating changes.

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Changes in tax laws, including the recently enacted federal tax legislation commonly referred to as the Tax Cuts and Jobs Act of 2017 ("Tax Act"), as well as other factors, could cause us to experience fluctuations in our tax obligations and effective tax rate in 2018 and thereafter.

We are subject to income taxes as well as non-income based taxes in federal and various state jurisdictions. We are currently evaluating the Tax Act with our professional advisers. We have recognized the provisional tax impacts, based on reasonable estimates, related to the one-time deemed mandatory repatriation of undistributed accumulated foreign earnings and the revaluation of deferred tax assets and liabilities and have included these amounts in our consolidated financial statements for the year ended December 31, 2017. The ultimate impact may differ from these provisional amounts, possibly materially, due to among other things, additional analysis, changes in interpretations and assumptions we have made, additional regulatory guidance that may be issued, and actions we may take as a result of the Tax Act. In addition, because of the uncertainties relating to the future application of the Tax Act and actions we may take in the future, the effect of the Tax Act on us in 2018 and future years may change significantly and cannot be predicted.

We are subject to audits by tax authorities from time to time in federal and state jurisdictions. Tax authorities may disagree with certain positions we have taken and assess additional taxes and penalties. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our results of operations.

Risks Related to Corporate Governance or our Equity Securities

We do not control certain businesses in which we have significant ownership.

We invest in joint ventures and other unconsolidated affiliates as part of our business strategy, and part of our net income is derived from our pro rata share of the earnings of those businesses. Despite owning significant equity interests in those companies and having directors on their boards, we do not control their operations, strategies or financial decisions. The other owners may have economic, business or legal interests or goals that are inconsistent with our goals or the goals of the businesses we co-own. Our pro rata share of any losses due to unfavorable performance of those companies could negatively impact our financial results.

Some of our joint venture investments are subject to buy-sell agreements, which could, among other things, restrict us from selling our interests even if we were to determine it would be prudent to do so.

We own interests in unconsolidated entities and various real estate joint ventures. Our interests in such unconsolidated entities are subject to buy/sell arrangements, which could restrict our ability to sell our interests even if we were to determine it would be prudent to do so. These arrangements could also allow us to purchase the other owners' interests to prevent someone else from acquiring them and we cannot control the timing of occasions to do so. The businesses or other owners may encourage us to increase our investment in or make contributions to the businesses at an inopportune time.

In addition, some of the agreements governing our joint venture arrangements include buy/sell provisions that provide a party to the arrangement with the option to purchase the other party's interests upon such other party's change of control at a purchase price that may be less than fair market value. For instance, consummation of the proposed Merger would constitute a change of control of the Company under the partnership agreement of IFDS L.P. and, as a result, the other partner would have the option to purchase our interests in IFDS L.P. at a price equal to book value, unless another purchase provision in the partnership agreement was triggered prior to the change of control. Book value may be substantially less than fair market value at the time of any sale of our interests upon a change of control.

Provisions in our Certificate of Incorporation, Bylaws, certain plans and agreements, and applicable laws could discourage, delay or prevent a change in control of us that a stockholder may consider favorable.

The provisions include:

- super-majority stockholder approval required for certain actions;
- specific procedures for stockholders to nominate new directors;
- the Board's authority to issue and set the terms of preferred stock;
- various rights of joint venture co-owners and contractual counterparties, including rights of lenders and certain clients and executives in the event of a change in control;
- public reporting of ownership and of changes in ownership by stockholders with at least a 5% interest in us; and
- legal restrictions on business combinations with certain stockholders.

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Because of contractual commitments, a change in control could affect our operating results and weaken our management retention and incentive tools.

A change in control of the Company could trigger various rights and obligations in service agreements with certain clients and other agreements. A change in control could also allow some clients to terminate their agreements with us or to obtain rights to use our processing software. Under certain executive equity-based and other incentive compensation awards, benefit programs and employment agreements with our management, a change in control by itself, or an individual's termination of employment without "cause" or resignation for "good reason" (each as defined in applicable agreements) after a change in control could accelerate funding, payment or vesting of equity grants, as applicable, under such agreements and programs. This accelerated funding, vesting or payment may decrease an employee's incentive to continue employment with us. We have adopted an executive severance plan which, among other things, provides benefits to participating senior officers and executives who are terminated in connection with a change of control. Certain other executive officers have agreements with us that require us to continue to employ them for three years after a change in control or to pay certain amounts if we terminate their employment without cause or they resign for good reason following a change in control. The executives might not be incented to achieve desired results for the new owners of our business, and the cost of keeping the executives on the payroll might deter potential new owners from acquiring us or hinder new owners from hiring replacement management.

We may not pay cash dividends on our common stock in the future.

Future cash dividends will depend upon our financial condition, earnings and other factors deemed relevant by our Board of Directors. Payment of dividends is subject to applicable laws and to restrictions in applicable debt agreements. We are currently precluded from declaring dividends pursuant to the definitive Merger Agreement with SS&C, as further described in Item 8, Financial Statements and Supplementary Data - Note 1, "Description of Business."

Risks Related to our Proposed Merger Transaction with SS&C

The consummation of the Merger is subject to many conditions and if these conditions are not satisfied or waived, the Merger will not be completed.

We cannot provide any assurance that the Merger will be completed or that there will not be a delay in the completion of the Merger. Our ability to consummate the Merger is subject to risks and uncertainties, including, but not limited to, the risks that the conditions to the Merger are not satisfied, or if possible, waived, including, among others, (a) receipt of the approval by the affirmative vote of the holders of a majority of the outstanding shares of Company common stock entitled to vote (the "Company Stockholder Approval"); (b) receipt of certain regulatory approvals; and (c) the absence of governmental restraints or prohibitions preventing the consummation of the Merger. The process to obtain the requisite approvals could prevent, or substantially delay, the consummation of the Merger.

The closing of the Merger is also dependent on the accuracy of representations and warranties made by the parties to the Merger Agreement (subject to customary materiality qualifiers and other customary exceptions), the performance in all material respects by the parties of obligations imposed under the Merger Agreement and the receipt of officer certificates by the other party certifying the satisfaction of the preceding conditions. We cannot provide any assurance as to whether or when the conditions to the closing of the Merger will be satisfied or waived or as to whether or when the Merger will be consummated.

Regulatory approvals may not be received, may take longer than expected or may impose conditions that are not presently anticipated or that cannot be met.

Before the Merger may be completed, various approvals, authorizations and declarations of non-objection must be obtained from certain regulatory and governmental authorities. Subject to the terms and conditions of the Merger Agreement, each party has agreed to use their reasonable best efforts to cooperate with each other party in taking any and all actions, and to do all things reasonably necessary, appropriate or desirable, to consummate and make effective the Merger and the other transactions contemplated by the Merger Agreement, including obtaining any requisite approvals. These approvals include approval of, or under, the Hart-Scott-Rodino Antitrust Improvements Act of 1976, approval under the competition law of Ireland and approvals of the Financial Industry Regulatory Authority, the United Kingdom's Financial Conduct Authority, the Central Bank of Ireland and Luxembourg's Commission de Surveillance du Secteur Financier.

These regulatory and governmental entities may impose conditions on the granting of such approvals and if such regulatory and governmental entities seek to impose such conditions, lengthy negotiations may ensue among such regulatory or governmental entities, SS&C and DST. Such conditions and the process of obtaining regulatory approvals could have the effect of delaying completion of the Merger and such conditions may not be satisfied for an extended period of time.

We cannot assure you that these regulatory clearances and approvals will be timely obtained or obtained at all, or that the granting of these regulatory clearances and approvals will not involve the imposition of regulatory remedies on the completion of the Merger, including requiring changes to the terms of the Merger agreement. These conditions or changes could result in the conditions to the closing of the Merger not being satisfied.

The special meeting of our stockholders at which the adoption and approval of the Merger Agreement will be considered may take place before all of the required regulatory approvals have been obtained and before regulatory remedies, if any, are known. In this event, if the Company Stockholder Approval is obtained, we and SS&C may subsequently agree to regulatory remedies without further seeking stockholder approval, even if such regulatory remedies could have an adverse effect on us, SS&C or the combined company, except as required by applicable law.

The Merger Agreement contains restrictions on our ability to pursue other alternatives to the Merger and, in specified circumstances, could require us to pay SS&C a termination fee of $165.0 million.

The Merger Agreement contains non-solicitation provisions that, subject to limited exceptions, restrict our ability to solicit, initiate or knowingly facilitate or knowingly encourage any inquiry, discussion, offer or request that constitutes, or would reasonably be expected to lead to, an alternative proposal. Further, subject to limited exceptions, consistent with applicable law, the Merger Agreement provides that our Board of Directors will not fail to make, withdraw, qualify or modify, in a manner adverse to SS&C, its recommendation that our stockholders vote in favor of approving the Merger. Although our Board of Directors is permitted to take certain actions in response to a superior proposal or an intervening event if it determines that the failure to do so would reasonably be expected to be inconsistent with its fiduciary duties, doing so in specified situations could require us to pay SS&C a termination fee. There also is a risk that the requirement to pay the termination fee to SS&C in certain circumstances may result in a potential acquiror proposing to pay a lower per share price to acquire us than it might otherwise have proposed to pay.

The Merger Agreement may be terminated in accordance with its terms and the Merger will not be completed.

The Merger Agreement may be terminated if the Merger is not consummated on or before July 11, 2018 (subject to extension to November 11, 2018 by either party if all conditions are satisfied other than regulatory approvals) or if the Company Stockholder Approval has not been obtained. In addition, SS&C and DST may elect to terminate the Merger Agreement in certain other circumstances, including by SS&C if DST's Board of Directors shall have changed its recommendation to stockholders and by DST in order to enter into an agreement providing for a superior proposal.

Upon a termination of the Merger Agreement due to entry into an agreement with respect to a superior proposal, and as a result of DST's Board of Directors making a change of recommendation prior to the receipt of the Company Stockholder Approval, we will be required to pay SS&C a termination fee of $165.0 million.

Failure to consummate the Merger could negatively impact DST and our future operations.

If the Merger Agreement is terminated in accordance with its terms and the Merger is not consummated, our ongoing business may be adversely affected by a variety of factors. Our business may be adversely impacted by (i) the failure to pursue other beneficial opportunities during the pendency of the Merger, (ii) payment of certain significant transaction costs relating to the Merger without receiving the anticipated benefits and (iii) the focus of our management on the Merger for an extended period of time rather than on other management opportunities or other beneficial opportunities for our Company. The market price of Company common stock may also decline as a result of any such failures to the extent that the current market prices reflect a market assumption that the Merger will be completed.

We may be negatively impacted if the Merger Agreement is terminated and DST seeks but is unable to find another business combination or strategic transaction offering equivalent or more attractive consideration than the consideration to be provided in the Merger, or if we become subject to litigation related to entering into or failing to consummate the Merger, including direct actions by our stockholders against the directors and/or officers for breaches of fiduciary duty or derivative actions brought by our stockholders. Furthermore, we may experience negative reactions from our stockholders, clients and employees in the event the Merger is not consummated.

We will be subject to business uncertainties and contractual restrictions until the Merger is consummated.

Uncertainty about the effect of the Merger on clients, counterparties to contracts, employees and other parties may have an adverse effect on us. These uncertainties could disrupt our business and cause clients, suppliers, vendors, partners and others that deal with us to defer entering into contracts with us or making other decisions concerning us or seek to change or cancel existing business relationships with us. These uncertainties may also impair our ability to attract, retain and motivate key personnel until the Merger is completed and for a period of time thereafter. Employee retention and recruitment may be particularly challenging prior to completion of the Merger, as employees and prospective employees may experience uncertainty about their future roles following the Merger.

The Merger Agreement restricts us, without the consent of SS&C, from making certain acquisitions and divestitures, entering into certain contracts, incurring certain indebtedness and expenditures, paying dividends, and taking other specified actions until the earlier of the completion of the Merger or the termination of the Merger Agreement. These restrictions may prevent us from pursuing attractive business opportunities that may arise prior to the completion of the Merger. Furthermore, the preparation for the integration of the two companies may place a significant burden on management and internal resources. Any significant diversion of management attention away from ongoing business and any difficulties encountered in the transition and integration process could affect our financial results prior to and/or following the completion of the Merger and could limit us from pursuing attractive business opportunities and making other changes to our business prior to completion of the Merger or termination of the Merger Agreement.

Completion of the Merger may trigger change in control or other provisions in certain agreements to which DST is a party.

The completion of the transactions may trigger change in control or other provisions in certain agreements to which DST is a party. If SS&C and DST are unable to negotiate waivers of those provisions, the counterparties may exercise their rights and remedies under the agreements, potentially terminating the agreements or seeking monetary damages. Even if SS&C and DST are able to negotiate waivers, the counterparties may require a fee for such waivers or seek to renegotiate the agreements on terms less favorable to DST.

For example, consummation of the proposed Merger would constitute a change of control of the Company under the partnership agreement of IFDS L.P. and, as a result, the other partner would have the option to purchase our interests in IFDS L.P. at a price equal to book value, which may be substantially less than fair market value, unless another purchase provision in the partnership agreement was triggered prior to the change of control.

We will incur substantial transaction fees and costs in connection with the Merger.

We expect to incur significant costs, expenses and fees for professional services and other transaction costs in connection with the Merger. A material portion of these expenses are payable by us whether or not the Merger is completed.

Further, while we have assumed that a certain amount of transaction expenses will be incurred, factors beyond our control could affect the total amount or the timing of these expenses. Many of the expenses that will be incurred, by their nature, are difficult to estimate accurately. These expenses may exceed the costs historically borne by DST. These costs could adversely affect the financial condition and results of our operations prior to the Merger.

Any legal proceedings in connection with the Merger could delay or prevent the completion of the Merger.

Transactions such as the Merger often give rise to lawsuits by stockholders or other third parties. One of the conditions to the closing of the Merger is that no judgment, order, injunction, ruling or decree, preliminary, temporary or permanent, or other legal restraint or prohibition and no action, proceeding, binding order or determination by any governmental entity, will be in effect preventing or otherwise making illegal the consummation of the Merger. In connection with the Merger, plaintiffs may file lawsuits against us and/or our directors and officers in connection with the Merger. Such legal proceedings could also prevent or delay the completion of the Merger and result in additional costs. In addition, if any lawsuit is successful in obtaining an injunction prohibiting us or SS&C from consummating the Merger on the agreed upon terms, the injunction may prevent the Merger from being completed within the expected timeframe, or at all. If the Merger is prevented or delayed, the lawsuits could result in substantial costs, including any costs associated with the indemnification of directors. The defense or settlement of any lawsuit or claim that remains unresolved at the time the Merger is completed may adversely affect our business, financial condition or results of operations.

We may waive one or more of the conditions to the Merger without resoliciting the Company Stockholder Approval.

We may determine to waive, in whole or in part, one or more of the conditions to our obligations to complete the Merger, to the extent permitted by applicable laws. We will evaluate the materiality of any such waiver and its effect on our stockholders in light of the facts and circumstances at the time to determine whether any amendment of this proxy statement and resolicitation of proxies is required or warranted. In some cases, if our Board determines that such a waiver is warranted but that such waiver or its effect on our stockholders is not sufficiently material to warrant resolicitation of proxies, we have the discretion to complete the Merger without seeking further stockholder approval. Any determination whether to waive any condition to the Merger or as to resoliciting stockholder approval or amending this proxy statement as a result of a waiver will be made by us at the time of such waiver based on the facts and circumstances as they exist at that time.

The opinion of our financial advisor will not reflect changes in circumstances between the signing of the Merger Agreement and the completion of the Merger.

We have not obtained an updated opinion in connection with the Merger from our financial advisor, Merrill Lynch, Pierce, Fenner & Smith Incorporated ("BofA Merrill Lynch"), as of the date of this Form 10-K and do not expect to receive an updated opinion prior to the completion of the Merger. Changes in our operations and prospects, general market and economic conditions and other factors that may be beyond our control, and on which the opinion of BofA Merrill Lynch was based, may significantly alter the value of our Company or the price of our common stock by the time the Merger is completed. The opinion does not speak as of the time the Merger will be completed or as of any date other than the date of the opinion. Because BofA Merrill Lynch will not be updating its opinion, which was issued in connection with the execution of the Merger Agreement on January 11, 2018, the opinion will not address the fairness of the Merger consideration from a financial point of view at the time the Merger is completed.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our main operating facilities, including our corporate headquarters, are located in Kansas City, Missouri and consist of 1.1 million square feet of office space, of which 69% is owned and 31% is leased, and 160,000 square feet of owned data center space. Additionally, we own an aggregate 524,000 square feet of space consisting primarily of a back-up data center in St. Louis, Missouri and office space in Massachusetts, California and the United Kingdom. We lease an aggregate of 1.2 million square feet of other office space and production space in North America, United Kingdom, India, Ireland, Thailand, Australia and Canada. Of the 3.0 million square feet of space identified above, the Company leases and subleases approximately 54,000 square feet to third-parties. Approximately 65%, 24% and 11% of the remaining square footage is utilized by the Domestic Financial Services, International Financial Services and Healthcare Services segments, respectively. We also own undeveloped land in Kansas City, Missouri and California and an underground facility with approximately 538,000 square feet in Kansas City, Missouri, of which 497,000 square feet is leased to third parties. Our real estate joint ventures own 2.5 million square feet of real estate, of which 2.2 million square feet is occupied by third parties or is vacant. We believe our facilities are currently adequate for their intended purposes and are adequately maintained.

Item 3. Legal Proceedings

The information set forth under the heading "Legal Proceedings" in Item 8. Financial Statement and Supplementary Data - Note 16, "Commitments and Contingencies" is incorporated herein by reference.

We are involved in various other legal proceedings arising in the normal course of our businesses. At this time, we do not believe any material losses under these claims to be probable. While the ultimate outcome of such legal proceedings cannot be predicted with certainty, it is in the opinion of management, after consultation with legal counsel, that the final outcome in such proceedings, in the aggregate, would not have a material adverse effect on our consolidated financial condition, results of operations or cash flows.

Item 4. Mine Safety Disclosures

None.

PART II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The Company's common stock trades under the symbol "DST" on the New York Stock Exchange ("NYSE"). As of February 22, 2018, there were approximately 7,798 registered holders of our common stock. In May 2017, our Board of Directors declared a two-for-one stock split of DST's outstanding common stock effected in the form of a stock dividend, which was paid on June 8, 2017. All share and per share data, excluding treasury shares, have been retroactively adjusted for all periods presented to reflect the stock split as if the stock split had occurred at the beginning of the earliest period presented.

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The following table provides the quarterly high and low prices of, and quarterly cash dividends paid on, the Company's common stock for the two-year period ended December 31, 2017. We are currently precluded from declaring dividends pursuant to the Merger Agreement with SS&C, as further described in Item 8, Financial Statements and Supplementary Data - Note 1, "Description of Business."

	Dividend	High	Low
2016			
1st Quarter	$ 0.16	$ 54.40	$ 47.50
2nd Quarter	0.17	58.91	51.80
3rd Quarter	0.17	61.03	56.47
4th Quarter	0.16	57.28	46.30
2017			
1st Quarter	$ 0.18	$ 60.48	$ 53.36
2nd Quarter	0.18	61.81	58.14
3rd Quarter	0.18	61.67	50.27
4th Quarter	0.18	62.63	54.50

The prices set forth above do not include commissions and do not necessarily represent actual transactions. The closing price of our common stock on the NYSE on December 31, 2017 was $62.07.

Stock Repurchases

The following table sets forth information with respect to shares of our common stock purchased by us during the quarter ended December 31, 2017.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total $ Amount of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
October 1 - October 31	309,054 (1)	$ 57.92	$ 17,668,473	$ 207,331,540
November 1 - November 30	762,037 (1)	59.68	45,478,375	161,853,165
December 1 - December 31	192,116 (1)	61.82	11,853,122	150,000,043
Total	1,263,207	$ 59.57	$ 74,999,970	$ 150,000,043 (2)

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(1) For the three months ended December 31, 2017, we purchased, in accordance with the 2015 Equity and Incentive Plan, 4,445 shares of our common stock for participant income tax withholding in conjunction with stock option exercises or from the vesting of restricted shares, as requested by the participants or from shares surrendered in satisfaction of the option exercise price. These purchases were not made under the publicly-announced repurchase plans or programs, but were allowed by the rules of the Compensation Committee of our Board of Directors. Of these shares, 4,054 shares were purchased in October 2017 and 391 shares were purchased in December 2017.

(2) On May 9, 2017 our Board of Directors authorized a new $300.0 million share repurchase plan. The plan allows, but does not require, the repurchase of common stock in open market and private transactions. The plan does not have an expiration date. During 2017, we entered into one or more plans with our brokers or banks for pre-authorized purchases within defined limits pursuant to Rule 10b5-1 to affect all or a portion of such share repurchases. We are currently precluded from executing additional stock repurchases pursuant to the Merger Agreement with SS&C, as further described in Item 8, Financial Statements and Supplementary Data - Note 1, "Description of Business."

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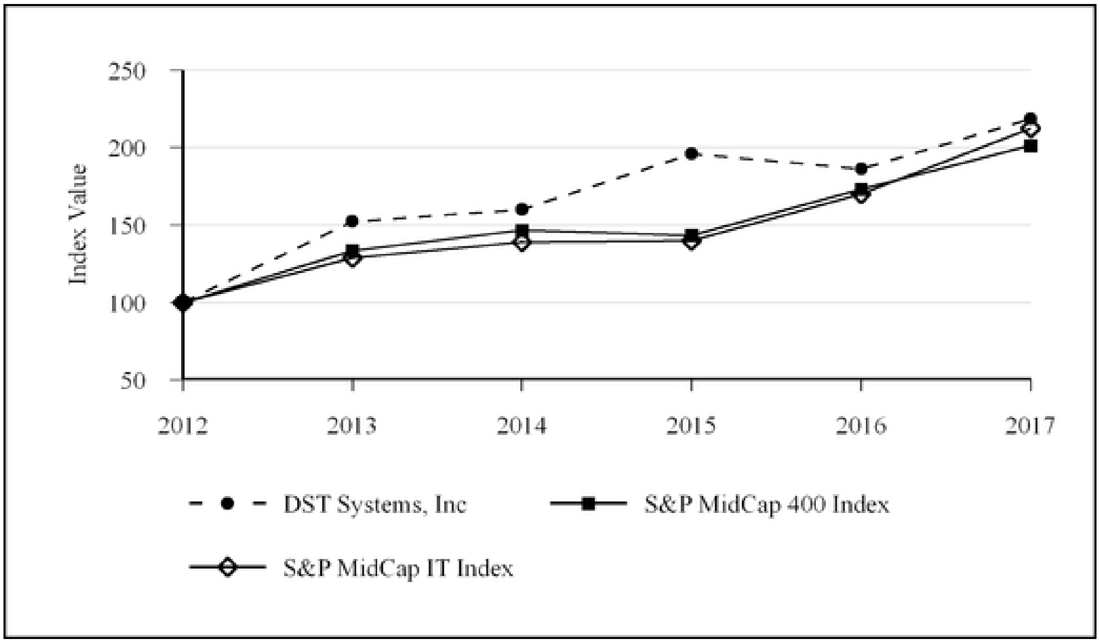
Stock Performance Graph

The following graph shows the changes in value since December 31, 2012 of an assumed investment of $100 in: (i) DST Common Stock; (ii) the stocks that comprise the S&P MidCap 400 Index[1]; and (iii) the stocks that comprise the S&P MidCap 400 Index - Information Technology Sector[1] ("S&P MidCap IT Index"). The table following the graph shows the dollar value of those assumed investments as of December 31, 2017 and as of December 31 for each of the five preceding years. The value for the assumed investments depicted on the graph and in the table has been calculated assuming that cash dividends, if any, are reinvested at the end of each quarter in which they are paid.

Comparison of Cumulative Five Year Total Return



	As of December 31,											
	2012		2013		2014		2015		2016		2017	
DST Systems, Inc	$	100.00	$	152.21	$	159.95	$	195.87	$	186.18	$	218.36
S&P MidCap 400 Index		100.00		133.50		146.54		143.35		173.08		201.20
S&P MidCap IT Index		100.00		128.80		138.99		139.85		169.87		212.46

(1) Standard & Poor's Corporation, an independent company, prepares the S&P MidCap 400 Index and the S&P Midcap IT Index.

The performance graph and related text are being furnished to and not filed with the SEC, and will not be deemed to be "soliciting material" or subject to Regulation 14A or 14C under the Securities Exchange Act of 1934 or to the liabilities of Section 18 of the Securities Exchange Act of 1934, and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent we specifically incorporate such information by reference into such a filing.

Item 6. Selected Financial Data

The following table sets forth selected consolidated financial data of the Company. The selected consolidated financial data should be read in conjunction with and are qualified by reference to "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 of this Form 10-K and our audited consolidated financial statements, including the notes thereto, and the report of the independent registered public accounting firm thereon and the other financial information included in Item 8 of this Form 10-K.

	Year Ended December 31,				
	2017 (1)	2016 (2)	2015 (3)	2014 (4)	2013 (5)
Income Statement Data:	(dollars in millions, except per share amounts)				
Operating revenues (excluding out-of-pockets)	$ 2,086.7	$ 1,474.4	$ 1,405.0	$ 1,445.5	$ 1,368.2
Operating income	285.2	247.3	232.7	262.7	271.8
Other income, net	219.0	22.7	204.5	373.1	242.8
Income from continuing operations before income taxes and non-controlling interest	531.9	279.2	458.8	744.7	503.1
Income from continuing operations attributable to DST Systems, Inc.	447.0	179.0	309.7	560.8	324.7
Basic earnings per share - continuing operations attributable to DST Systems, Inc. (6)	7.28	2.71	4.30	7.00	3.75
Diluted earnings per share - continuing operations attributable to DST Systems, Inc. (6)	7.20	2.68	4.25	6.93	3.69
Non-GAAP diluted earnings per share - continuing operations attributable to DST Systems, Inc. (6) (7)	3.36	2.87	2.47	2.49	2.11
Cash dividends per share of common stock	0.72	0.66	0.60	0.60	0.60

	December 31,				
	2017 (1)	2016 (2)	2015 (3)	2014 (4)	2013 (5)
Balance Sheet Data:	(dollars in millions)				
Total assets	$ 2,938.2	$ 2,771.8	$ 2,813.2	$ 2,942.9	$ 3,090.5
Total debt	620.8	508.2	562.1	546.8	675.6
Stockholders' equity	1,241.2	1,115.2	1,046.0	1,236.4	1,183.8

(1) In 2017, we recorded a $43.8 million net gain on previously held equity interests and $159.8 million of net gains on securities and other investments, which are included in Other income, net, in the Consolidated Statement of Income primarily as a result of the acquisition of State Street's ownership in both BFDS and IFDS U.K. Additionally, as a result of a termination agreement reached with a wealth management platform client, operating revenues of $93.2 million related to previously deferred revenues and contractual termination payments received were recognized and bad debt expense, severance and other costs and expenses of $38.9 million were recorded in Costs and expenses within the Consolidated Statement of Income.

(2) In 2016, we acquired Kaufman Rossin Fund Services LLC. Additionally, we recorded net gains on securities and other investments of $16.3 million, which is included in Other income, net, in the Consolidated Statement of Income.

(3) In 2015, we acquired the following businesses: kasina LLC, Red Rocks Capital LLC and Wealth Management Systems Inc. Additionally, we recorded net gains on securities and other investments of $199.3 million, which is included in Other income, net, in the Consolidated Statement of Income.

(4) In 2014, we recorded a pretax gain of $100.5 million on the sale of our wholly-owned subsidiary, DST Global Solutions, Ltd., which is included in Gain on sale of business in the Consolidated Statement of Income. In addition, we recorded net gains on securities and other investments of $343.5 million, which were included in Other income, net in the Consolidated Statement of Income.

(5) In 2013, we recorded net gains on securities and other investments of $222.8 million, which were included in Other income, net in the Consolidated Statement of Income

(6) During the years ended December 31, 2017, 2016, 2015, 2014, and 2013, we repurchased 5.1 million, 5.4 million, 7.2 million, 9.4 million and 7.6 million shares of our common stock, respectively, on a post stock split basis.

(7) The reconciliation of reported diluted earnings per share to non-GAAP diluted earnings per share is presented below under the heading "Use of Non-GAAP Financial Information."

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Use of Non-GAAP Financial Information

In addition to reporting financial information in accordance with accounting principles generally accepted in the United States of America ("GAAP"), we have disclosed non-GAAP financial information which has been reconciled to the corresponding GAAP measures in the following financial schedules titled "Reconciliation of Reported Diluted Earnings per Share to Non-GAAP Diluted Earnings per Share - Continuing Operations Attributable to DST Systems, Inc." In making these adjustments to determine the non-GAAP results, we take into account the impact of items that are not necessarily ongoing in nature, that do not have a high level of predictability associated with them or that are non-operational in nature. Generally, these items include net gains on dispositions of businesses, net gains (losses) associated with securities and other investments, acquired intangible asset amortization, restructuring and impairment costs, and other similar items. Our non-GAAP diluted earnings per share is also adjusted for the income tax impact of the above items, as applicable. The income tax impact of each item is calculated by applying the statutory rate and local tax regulations in the jurisdiction in which the item was incurred. Additionally, income tax is adjusted to remove the impacts of large discrete or unusual items. Management believes the exclusion of these items provides a useful basis for evaluating underlying business unit performance, but should not be considered in isolation and is not in accordance with, or a substitute for, evaluating business unit performance utilizing GAAP financial information. Management uses non-GAAP measures in its budgeting and forecasting processes and to further analyze our financial trends and "operational run-rate," as well as in making financial comparisons to prior periods presented on a similar basis. We believe that providing such adjusted results allows investors and other users of our financial statements to better understand our comparative operating performance for the periods presented.

Our management uses this non-GAAP financial measure in its own evaluation of the Company's performance, particularly when comparing performance to past periods. Our non-GAAP measures may differ from similar measures by other companies, even if similar terms are used to identify such measures. Although our management believes non-GAAP measures are useful in evaluating the performance of its business, we acknowledge that items excluded from such measures may have a material impact on our financial information calculated in accordance with GAAP. Therefore, management typically uses non-GAAP measures in conjunction with GAAP results. These factors should be considered when evaluating our results.

Reconciliation of Reported Diluted Earnings per Share to Non-GAAP Diluted Earnings per Share - Continuing Operations Attributable to DST Systems, Inc.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
Reported GAAP Diluted Earnings per Share	$ 7.20	$ 2.68	$ 4.25	$ 6.93	$ 3.69
Adjusted to remove:					
Net gains on securities and other investments	(2.57)	(0.26)	(2.74)	(4.24)	(2.53)
Amortization of intangible assets	0.57	0.35	0.26	0.22	0.21
Restructuring charges	0.38	0.23	0.05	0.16	0.04
Income tax items	(0.49)	0.06	(0.22)	(0.46)	(0.13)
Business development/advisory expenses	0.30	—	0.02	0.07	—
Equity in earnings of unconsolidated affiliates items	(0.54)	—	(0.05)	(0.07)	(0.08)
Charitable contribution of securities	0.02	—	—	0.01	—
Contract termination payments received, net	(0.86)	—	—	—	(0.07)
Gain on previously held equity interest	(0.70)	—	—	—	—
Loss accruals (loss accrual reversal)	0.05	—	—	(0.05)	0.03
Net gain on sale of business	—	(0.07)	—	(1.24)	—
Software impairment	—	0.09	—	—	—
Reversal of accrued contingent consideration	—	(0.10)	—	—	—
Net (gains) losses on real estate assets	—	—	(0.05)	—	0.04
Gain on contract to repurchase common stock	—	—	—	(0.22)	—
Income tax effect of adjustments	—	(0.11)	0.95	1.38	0.91
Adjusted Non-GAAP Diluted Earnings per Share	$ 3.36	$ 2.87	$ 2.47	$ 2.49	$ 2.11

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

FORWARD LOOKING STATEMENTS

This report contains "forward-looking statements" - that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance and financial condition, and often contain words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "see," "will," "would," or "target." Forward-looking statements by their nature address matters that are, to different degrees, uncertain.

For us, particular risks and uncertainties that could cause our actual results to be materially different than those expressed in our forward-looking statements include:

- the effects of competition in the businesses in which we operate;
- changes in client demand and our ability to provide products and services on terms that are favorable to us;
- changes in law, economic and financial conditions;
- the impacts of breaches or potential breaches of network, information technology or data security, natural disasters, terrorist attacks or acts of war or significant litigation and any resulting financial impact not covered by insurance;
- the effectiveness of our risk management framework;
- the impact of regulation and regulatory, investigative and legal proceedings and legal compliance risks, including the impact of financial services regulation and litigation and potential SEC or DOL regulations impacting third-party distributors of mutual funds;
- our investments in funds and other companies may decline;
- our ability to successfully complete acquisitions or integrate acquired businesses;
- the risk that the proposed Merger with SS&C will not be consummated within the expected time period or at all, including the risk that the Company may be unable to obtain stockholder approval as required for the Merger and conditions to the closing of the Merger may not be satisfied or waived on a timely basis or otherwise;
- the risk that a governmental entity or a regulatory body may prohibit, delay or refuse to grant approval for the consummation of the Merger and may require conditions, limitations or restrictions in connection with such approvals that can adversely affect the anticipated benefits of the proposed Merger or cause the parties to abandon the proposed Merger;
- the risk that the business of the Company may suffer as a result of uncertainty surrounding the Merger or the potential adverse changes to business relationships resulting from the proposed Merger;
- the risk that the Merger may involve unexpected costs, liabilities or delays;
- the risk that legal proceedings may be initiated related to the Merger and the outcome of any legal proceedings related to the Merger may be adverse to the Company; and
- the other factors that are described in Item 1A, "Risk Factors" of this Form 10-K.

These or other uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. This document includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially.

Future economic and industry trends that could potentially impact our financial statements or results of operations are difficult to predict. These forward-looking statements are based on information as of the date of this report. We assume no obligation to publicly update or revise our forward-looking statements even if experience or future changes make it clear that any projected results expressed or implied therein will not be realized, except as may be required by law.

Introduction

DST Systems, Inc. and our consolidated subsidiaries use proprietary software applications to provide sophisticated information processing and servicing solutions through strategically unified data management and business process solutions to clients globally within the asset management, brokerage, retirement, healthcare and other markets. Our wholly-owned data centers provide the secure technology infrastructure necessary to support our solutions. In order to position the Company to take advantage of new and emerging technologies, we are embarking on an information technology transformation effort which will increase our operating expenses for the near term. We expect these investments will result in lower centralized infrastructure costs and a more agile platform on which to deliver future capabilities.

On January 11, 2018, we entered into a Merger Agreement wherein SS&C will acquire DST. Under the terms of the agreement, SS&C will purchase DST in an all-cash transaction for $84.00 per share plus the assumption of debt, equating to an enterprise value of approximately $5.4 billion. We have agreed to customary covenants in the Merger Agreement, including with respect to the operation of our business prior to the closing of the transaction or termination of the agreement, such as restrictions on making certain acquisitions and divestitures, entering into certain contracts, incurring certain indebtedness and expenditures, paying dividends, repurchasing stock and taking other specified actions. The transaction is subject to DST stockholder approval, clearances by the relevant regulatory authorities and other customary closing conditions and is currently expected to close by the end of the second quarter 2018; however, there can be no assurances as to the actual closing or the timing of the closing. Consummation of the proposed Merger would constitute a change of control of DST under the partnership agreement of IFDS L.P. and, as a result, the other partner would have the option to purchase our interests in IFDS L.P. at a price equal to book value, unless another purchase provision in the partnership agreement was triggered prior to the change of control.

In March 2017, we acquired State Street's ownership interests in our joint ventures BFDS and IFDS U.K., as well as other investments and real estate held by IFDS L.P. The BFDS acquisition was effectuated through a non-taxable exchange of our State Street common stock with a fair value of $163.4 million for State Street's ownership interest in BFDS. We also acquired State Street's ownership interest in IFDS U.K., and IFDS L.P.'s ownership in IFDS Percana and IFDS Realty U.K. for total cash consideration of $234.9 million.

In May 2017, we completed the sale of our U.K. Customer Communications business for cash consideration of $43.6 million. We recorded a pretax gain of $2.6 million on the sale during 2017. We sold our North American Customer Communications business for cash consideration of $410.7 million on July 1, 2016 and we recorded a pretax gain of $341.5 million on the sale in 2016. We have classified the results of the businesses sold as discontinued operations in our Consolidated Statements of Income for all periods presented. The net after-tax proceeds from these sales are being used in accordance with the Company's capital plan, including investments in the business, share repurchases, strategic acquisitions, debt repayments and other corporate purposes, subject to the restrictions set forth in the Merger Agreement with SS&C.

Beginning in 2017, DST established a new reportable segment structure that reflects how management is now operating the business and making resource allocations following the acquisitions of IFDS U.K. and BFDS, as well as the recent reductions in non-core investment assets. The Company's operating business units are now reported as three operating segments (Domestic Financial Services, International Financial Services and Healthcare Services). Prior periods have been revised to reflect the new reportable operating segments.

Domestic Financial Services Segment

Through the Domestic Financial Services segment, we provide investor, investment, advisor/intermediary and asset distribution services to companies within the U.S. financial services industry. Utilizing our proprietary software applications, we offer our clients information processing solutions that enable them to capture, analyze and report their investors' transactions including direct and intermediary sales of mutual funds, alternative investments, securities brokerage accounts and retirement plans. Examples of the services we provide include tracking of purchases, redemptions, exchanges and transfers of shares; maintaining investor identification and ownership records; reconciling cash and share activity; processing dividends; reporting sales; and performing tax and other compliance functions. We also support full reporting to investors for confirmations, statements and tax forms, web access, and electronic delivery of documents.

Services are provided either on a Remote or BPO basis utilizing our proprietary software applications. Our BPO service offerings are enhanced by our proprietary workflow software, which is also licensed separately to third parties.

Domestic Financial Services fees are primarily charged to the client based on the number of accounts, participants or transactions processed. For subaccounts, a portion of the services we provide for registered accounts are provided directly by the broker/dealer. As a result, our revenue per account is generally higher for registered accounts than for subaccounts. On a more limited basis, we also generate revenue through asset-based fee arrangements and from investment earnings related to cash balances maintained in our full service transfer agency bank accounts. We typically have multi-year agreements with our clients. We are continuing to monitor changes in the financial services industry, including the shift from direct products to fee-based platforms which could reduce the number of direct mutual fund registered accounts we service.

In December 2017, we entered into a ten year contract with a new client to provide both mutual fund and retirement servicing solutions. Based on current volumes, the client is expected to convert approximately 2.0 million registered accounts and 0.3 million retirement accounts onto our platforms during mid to late 2019. This new client currently performs their processing in-house and in order to assist the new client with covering the costs to transition to our platforms we have agreed to pay them $13.0 million in transition assistance during the conversion, of which $2.0 million was paid in December 2017. The total amounts will be amortized as a reduction to revenue over the course of the ten year contractual term.

Additionally in December 2017, we renewed our largest Domestic Financial Services client to a new seven year contract. Based upon our new rate structure, we expect our operating revenue in 2018 associated with this client to be relatively consistent with the 2017 revenue.

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As part of the continuing strategic review of our operations, we decided not to renew a long-term surety bond insurance agreement which expired in December 2017 as the proposed revised terms were no longer economically advantageous. This agreement historically generated approximately $14.0 million of annual revenue.

On February 24, 2016, we acquired all of the membership interests of Kaufman Rossin Fund Services LLC ("KRFS"), an independent, full-service provider of specialized hedge fund administration services to the global financial community. KRFS' hedge fund services include accounting and valuation, back-office outsourcing, investor services, treasury services, and customized reporting.

During 2015, we acquired all of the membership interests of kasina LLC, a strategic advisory firm to the asset management industry, and Red Rocks Capital LLC, an asset manager which focuses on listed private equity and other private asset investments. In 2015, we also acquired all of the outstanding common stock of Wealth Management Systems Inc., a provider of technology-based rollover services in the retirement marketplace.

In December 2015, we entered into a ten year contract with a new client to provide both subaccounting and mutual fund servicing solutions. The client converted approximately 10.0 million subaccounts onto our platform during 2016 and converted approximately 2.6 million registered accounts onto our platform during the third quarter of 2017.

International Financial Services Segment

We offer investor and policyholder administration and technology services on a Remote and BPO basis in the U.K. and, through our joint venture IFDS L.P., in Canada, Ireland, and Luxembourg. Additionally, in Australia and in the U.K., we provide solutions related to participant accounting and recordkeeping for wealth management, "wrap platforms" and retirement savings ("superannuation") industries/markets through use of our wealth management platform and our life and pension administration system.

Our primary clients are mutual fund managers, insurers and platform providers. International Financial Services fees are primarily charged to the client based on the number of accounts or transactions processed. We also realize revenues from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage increases. Additionally, we derive professional service revenues from fees for implementation services, custom programming and data center operations. We typically have multi-year agreements with our clients.

In November 2016, we sold a wholly-owned foreign subsidiary that provides water billing software and services solutions for cash consideration of approximately $6.1 million. This business had approximately $5.4 million of operating revenue and $1.2 million of operating income on an annual basis. As these decisions were the result of a tactical review of our products and services, and not the result of a significant shift in strategic direction, the revenue and operating income from these products and services are included within our continuing operations.

During 2017, we reached a termination agreement with a wealth management platform client who had engaged us for a multi-year development and implementation effort as well as post-implementation services. The termination agreement resulted in incremental operating revenues of $93.2 million for the year ended December 31, 2017 as we accelerated recognition of previously deferred revenue and recognized termination payments received. Additionally, our International Financial Services segment has been notified that two of our clients, which have collectively contributed approximately $33.0 million of annual revenue, will be migrating off our FAST platform in stages through the end of 2018.

Healthcare Services Segment

The Healthcare Services segment uses our proprietary software applications to provide healthcare organizations a variety of medical and pharmacy benefit solutions to satisfy their information processing, quality of care, cost management concerns and payment integrity programs, while achieving compliance and improving operational efficiencies. Our healthcare solutions include claims adjudication, benefit management, care management, business intelligence and other ancillary services. We also continue to expand and enhance our Healthcare Services' offerings to ensure we are able to address the changing needs of our clients within the complex and highly regulated health industries which we serve. For example, our pharmacy management business continues to make investments to expand our clinical, network, and analytic capabilities to help our clients and prospective clients achieve the best possible outcomes for their members and to allow us to more effectively compete in the broader competitive pharmacy benefit manager ("PBM") market. Historically, we have acted as an agent within our pharmacy-solutions business and, accordingly, recognized revenue on a net basis. As our enhanced products evolve and we expand our pharmacy-solutions service offerings, we will evaluate the provisions within our new pharmacy network and client contracts to determine whether we are acting as a principal or an agent in the transactions. If we determine that we are acting as a principal in the transactions, we will report the transactions on a gross basis, resulting in significantly higher revenues and costs reflected within our consolidated financial statements.

We generally derive revenue from our pharmacy-solutions business on a transactional fee basis. Fees are earned on pharmacy claims processing and payments services, pharmacy and member call center services, pharmaceutical rebate administration, administration or management of clinical programs, pharmacy network management, member and plan web services and management information and reporting. Further, revenues include investment earnings related to client cash balances maintained in our bank accounts. Medical claim processing revenues are generally derived from fees charged on a per member/per month basis or transactional basis. We also realize revenue from fixed-fee license agreements that include provisions for ongoing support and maintenance and for additional license payments in the event that usage or members increase. Additionally, we derive professional service revenues from fees for implementation services, custom programming and data center operations.

During 2017, we renewed our pharmacy services contract with our Healthcare Services segment's third largest client extending the term of the contract through December 31, 2020. As previously announced, two of our Healthcare Services clients transitioned their services off our systems during 2017. Additionally, we have been notified that one of our largest Healthcare Services clients, which contributed approximately $50.0 million of annual revenue, will be migrating off our medical claims processing platform in stages through the end of 2019.

Seasonality

Generally, we do not have significant seasonal fluctuations in our business operations. Processing volumes for mutual fund clients within our Domestic and International Financial Services segment are usually highest during the quarter ended March 31 due primarily to processing year-end transactions during January. We have historically added operating equipment in the last half of the year in preparation for processing year-end transactions, which has the effect of increasing costs for the second half of the year. Revenues and operating results from individual license sales vary depending on the timing and size of the contracts.

New Authoritative Accounting Guidance

See Item 8, Financial Statements and Supplementary Data - Note 2, "Significant Accounting Policies - New authoritative accounting guidance."

Critical Accounting Policies and Estimates

The following discussion and analysis of our financial condition, results of operations and cash flows are based upon our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosures of contingent assets and liabilities. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements: revenue recognition; software capitalization and amortization; depreciation of fixed assets; valuation of long-lived and intangible assets and goodwill; accounting for investments; and accounting for income taxes.

Revenue recognition

We recognize revenue when it is realized or realizable and it is earned. The majority of our revenues are derived from computer processing and services and are recognized upon completion of the services provided. Software license fees, maintenance fees and other ancillary fees are recognized as services are provided or delivered and all client obligations have been met. We generally do not have payment terms from clients that extend beyond one year. Billing for services in advance of performance is recorded as deferred revenue.

We recognize revenue when the following criteria are met: 1) persuasive evidence of an arrangement exists; 2) delivery has occurred or services have been rendered; 3) the sales price is fixed or determinable; and 4) collectability is reasonably assured. If there is a client-specific acceptance provision in a contract or if there is uncertainty about client acceptance, the associated revenue is deferred until we have evidence of client acceptance.

Revenue arrangements with multiple deliverables are evaluated to determine if the deliverables (items) can be divided into more than one unit of accounting. An item can generally be considered a separate unit of accounting if both of the following criteria are met: 1) the delivered item(s) has value to the client on a standalone basis and 2) if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Once separate units of accounting are determined, the arrangement consideration should be allocated at the inception of the arrangement to all deliverables using the relative selling price method. Relative selling price is obtained from sources such as vendor-specific objective evidence, which is based on the separate selling price for that or a similar item or from third-party evidence such as how competitors have priced similar items. If such evidence is unavailable, we use our best estimate of the selling price, which includes various internal factors such as our pricing strategy and market factors.

We derive over 90% of our revenues as a result of providing processing and services under contracts. The majority of our fees are billed on a monthly basis, generally with thirty-day collection terms. Revenues are recognized for monthly processing and services upon performance of the services.

Our standard business practice is to bill monthly for development, consulting and training services on a time and materials basis. In some cases we bill a fixed fee for development and consulting services. For fixed fee arrangements, we recognize revenue on a "proportionate performance" basis. We periodically provide upfront cash payments to our clients to assist with the significant upfront costs associated with converting to new systems. Such payments are treated as a reduction of revenue over the term of the related contract.

We derive less than 10% of our revenues from licensing products. We license our wealth management products, life and pension administration system, AWD products and healthcare administration processing software solutions. Perpetual software license revenues are recognized at the time the contract is signed, the software is delivered and no future software obligations exist. Deferral of software license revenue billed results from delayed payment provisions, disproportionate discounts between the license and other services or the inability to unbundle certain services. Term software license revenues are recognized ratably over the term of the license agreement. While license fee revenues are not a significant percentage of our total operations, they can significantly impact earnings in the period in which they are recognized. Revenues from individual license sales depend heavily on the timing, size and nature of the contract. We recognize revenues for maintenance services ratably over the contract term, after collectability has been reasonably assured.

We may enter into arrangements with broker/dealers or other third parties to sell or market closed-end fund shares. Depending on the arrangement, we may earn distribution fees for marketing and selling the underlying fund shares. Conversely, we may incur distribution expenses, including structuring fees, finders' fees and referral fees paid to unaffiliated broker/dealers or introducing parties for marketing and selling underlying fund shares of a closed-end fund we sponsor. While distribution revenues and expenses are not significant percentages of our operating revenues or costs and expenses, they can significantly impact operations and earnings in the period in which they are recognized.

We have entered into various agreements with related parties, principally unconsolidated affiliates, under which we have historically provided data processing and software services. We believe that the terms of our contracts with related parties are fair to us and are no less favorable than those obtained from unaffiliated parties.

We assess collection based on a variety of factors, including past collection history with the client and the credit-worthiness of the client. We generally do not request collateral from our client. If we determine that collection of revenues is not reasonably assured, revenue is deferred and is recognized at the time it becomes reasonably assured, which is generally upon receipt of cash. Allowances for billing adjustments and bad debt expense are estimated as revenues are recognized. Allowances for billing adjustments are recorded as reductions in revenues and bad debt expense is recorded within Costs and expenses. The annual amounts for these items are generally immaterial to our consolidated financial statements.

Software capitalization and amortization

We make substantial investments in software to enhance the functionality and facilitate the delivery of our processing services as well as our sale of licensed products. Purchased software is recorded at cost and is amortized on a straight-line basis over the estimated economic life, which is generally three to five years. We develop a large portion of our software internally. We capitalize software development costs for computer software developed or obtained for internal use after the preliminary project phase has been completed and management has committed to funding the project. For computer software to be sold, leased or otherwise marketed to third parties, we capitalize software development costs which are incurred after the products reach technological feasibility but prior to the general release of the product to clients. The capitalized software development costs are generally amortized on a straight-line basis over the estimated economic life, which is generally three to five years.

Significant management judgment is required in determining what projects and costs associated with software development will be capitalized and in assigning estimated economic lives to the completed projects. Management specifically evaluates software development projects and analyzes the percentage of completion as compared to the initial plan and subsequent forecasts, milestones achieved and the commitment to continue funding the projects. Significant changes in any of these items may result in discontinuing capitalization of development costs, as well as immediately expensing previously capitalized costs. We review, on a quarterly basis, our capitalized software for possible impairment.

Depreciation of fixed assets

For personal property, we generally prefer to own rather than lease the property when practicable. We believe this approach provides us with better flexibility for disposing or redeploying the asset as it nears the completion of its economic life. We depreciate technology equipment using accelerated depreciation methods over the following lives: (1) non-mainframe equipment—three years; (2) mainframe central processing unit—four years; and (3) mainframe direct access storage devices—five years. We depreciate furniture and fixtures over estimated useful lives, principally three to five years, using accelerated depreciation methods. We depreciate leasehold improvements using the straight-line method over the lesser of the term of the lease or life of the improvements. Management judgment is required in assigning economic lives to fixed assets. Management specifically analyzes fixed asset additions, remaining net book values and gain/loss upon disposition of fixed assets to determine the appropriateness of assigned economic lives. Significant changes in any of these items may result in changes in the economic life assigned and the resulting depreciation expense.

Valuation of long-lived and intangible assets and goodwill

Goodwill and indefinite-lived intangible assets are not amortized but are evaluated for impairment. We evaluate the impairment of goodwill at least annually (as of October 1) and evaluate identifiable intangibles, long-lived assets and related assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that could trigger an impairment review include the following: significant under-performance relative to expected historical or projected future operating results; significant changes in the manner of our use of the acquired assets or our strategy for the overall business; and significant negative industry or economic trends. When it is determined that the carrying value of intangibles, long-lived assets or goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we assess actual impairment based on cash flows.

Our assessment of goodwill for impairment may first include a qualitative assessment that considers various factors, including those described above as well as growth in operating revenues and income from operations of our reporting units since our last quantitative assessment. A quantitative assessment is performed if the qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying amount or if a qualitative assessment is not performed.

Our quantitative assessment of goodwill for impairment includes comparing the fair value of a reporting unit with its net book value, including goodwill. We estimate fair value using a combination of discounted cash flow models and market approaches. If the fair value of a reporting unit exceeds its net book value, goodwill of the reporting unit is considered not impaired. If the net book value of a reporting unit exceeds its fair value, we recognize an impairment loss equal to the excess, limited to the total amount of goodwill allocated to that reporting unit. After a goodwill impairment loss is recognized, the adjusted carrying amount of goodwill becomes its new accounting basis.

Our 2017, 2016 and 2015 annual goodwill impairment tests determined that goodwill was not impaired, except during 2016 for the goodwill held at the Customer Communications U.K. reporting unit, which is included as a component of discontinued operations, as further described in Item 8, Financial Statements and Supplemental Data - Note 4, "Discontinued Operations."

Accounting for investments

We have four significant types of investments: 1) investments in available-for-sale securities; 2) investments in unconsolidated affiliates, which are comprised principally of IFDS L.P. and certain real estate joint ventures; 3) investments in private equity funds and other investments accounted for under the cost method; and 4) seed capital investments accounted for at fair value.

We account for investments in entities in which we own less than 20% and do not have significant influence in accordance with authoritative guidance related to accounting for certain investments in debt and equity securities, which requires us to designate our investments as trading or available-for-sale. Available-for-sale securities are reported at fair value with unrealized gains and losses excluded from earnings and recorded net of deferred taxes directly to Accumulated other comprehensive income within Stockholders' equity.

We regularly review investment securities for impairment based on both quantitative and qualitative criteria that include the extent to which cost exceeds fair value, the duration of any market decline, and the financial health of and specific prospects for the issuer. We record an investment impairment charge for an investment with a gross unrealized holding loss resulting from a decline in value that is other than temporary. Future adverse changes in market conditions or poor operating results of underlying investments could result in losses or an inability to recover the carrying value of the investments that may not be reflected in an investment's current carrying value, thereby possibly requiring an impairment charge in the future, which could have a material effect on our financial position.

The equity method of accounting is used for investments in entities, partnerships and similar interests (including investments in private equity funds where we are the limited partner) in which we have significant influence but do not control. We classify these investments as unconsolidated affiliates. Under the equity method, we recognize income or losses from our pro-rata share of these unconsolidated affiliates' net income or loss, which changes the carrying value of the investment of the unconsolidated affiliate. In certain cases, pro-rata losses are recognized only to the extent of our investment and advances to the unconsolidated affiliate.

The cost method of accounting is used for these investments when we have a de minimis ownership percentage and do not have significant influence. Our cost method investments are held at the lower of cost or market.

Accounting for income taxes

We account for income taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in an entity's financial statements or tax returns. Judgment is required in addressing the future tax consequences of events that have been recognized in our consolidated financial statements or tax returns (e.g., realization of deferred tax assets, changes in tax laws or interpretations thereof).

On December 22, 2017, the United States enacted tax reform legislation commonly known as the Tax Cuts and Jobs Act (the "Tax Act"), resulting in significant modifications to existing U.S. tax law, including but not limited to, (1) lowering the corporate federal income tax rate from 35% to 21% effective January 1, 2018; (2) eliminating the domestic production activity deduction; (3) implementing a territorial tax system; and (4) imposing a one-time repatriation tax on deemed repatriated earnings of foreign subsidiaries. The SEC staff issued Staff Accounting Bulletin 118 ("SAB 118") which provides additional clarification in situations where we do not have the necessary information available, prepared, or analyzed in reasonable detail to complete the accounting for certain income tax effects of the Tax Act for the reporting period in which the Tax Act was enacted. We have recognized the provisional tax impacts, based on reasonable estimates, related to the one-time deemed mandatory repatriation of post-1986 undistributed foreign subsidiary earnings and profits through the year ended December 31, 2017 ("Transition Tax") and the revaluation of deferred tax assets and liabilities and has included these amounts in its consolidated financial statements for the year ended December 31, 2017. The ultimate impact may differ from these provisional amounts, possibly materially, due to among other things, additional analysis, changes in interpretations and assumptions we have made, additional regulatory guidance that may be issued, and actions we may take as a result of the Tax Act. We intend to complete our accounting under the Tax Act within the measurement period set forth in SAB 118.

In addition, we are subject to examination of our income tax returns by the Internal Revenue Service ("IRS") and other tax authorities. A change in the assessment of the outcomes of such matters could materially impact our consolidated financial statements. The calculation of tax liabilities involves dealing with uncertainties in the application of complex tax regulations. We recognize liabilities for potential tax exposures based on our estimate of whether, and the extent to which, additional taxes may be required. If we ultimately determine that payment of these amounts is unnecessary, then we reverse the liability and recognize a tax benefit during the period in which we determine that the liability is no longer necessary. We also recognize tax benefits to the extent that it is more likely than not that our positions will be sustained if challenged by the taxing authorities. To the extent we prevail in matters for which liabilities have been established, or are required to pay amounts in excess of our liabilities, our effective tax rate in a given period may be materially affected. An unfavorable tax settlement would require cash payments and may result in an increase in our effective tax rate in the year of resolution. A favorable tax settlement would be recognized as a reduction in our effective tax rate in the year of resolution. We report interest and penalties related to uncertain income tax positions within income tax expense.

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Results of Operations

The following table summarizes our consolidated operating results (in millions). Additional information regarding our segments is included below under the caption, "Year to Year Business Segment Comparisons."

	Year Ended December 31,			Change			
				2017 vs 2016		2016 vs 2015	
	2017	2016	2015	$	%	$	%
Operating revenues	$ 2,086.7	$ 1,474.4	$ 1,405.0	$ 612.3	41.5 %	$ 69.4	4.9 %
Out-of-pocket reimbursements	131.5	82.3	69.0	49.2	59.8 %	13.3	19.3 %
Total revenues	2,218.2	1,556.7	1,474.0	661.5	42.5 %	82.7	5.6 %
Costs and expenses	1,805.0	1,213.4	1,150.2	591.6	48.8 %	63.2	5.5 %
Depreciation and amortization	128.0	96.0	91.1	32.0	33.3 %	4.9	5.4 %
Operating income	285.2	247.3	232.7	37.9	15.3 %	14.6	6.3 %
Interest expense	(26.8)	(23.5)	(23.8)	(3.3)	(14.0)%	(0.3)	(1.3)%
Gain on sale of business	—	5.5	—	(5.5)	(100.0)%	5.5	100.0 %
Other income, net	219.0	22.7	204.5	196.3	864.8 %	(181.8)	(88.9)%
Equity in earnings of unconsolidated affiliates	54.5	27.2	45.4	27.3	100.4 %	(18.2)	(40.1)%
Income from continuing operations before income taxes and non-controlling interest	531.9	279.2	458.8	252.7	90.5 %	(179.6)	(39.1)%
Income taxes	84.3	101.1	149.2	(16.8)	(16.6)%	(48.1)	(32.2)%
Net income from continuing operations before non-controlling interest	447.6	178.1	309.6	269.5	151.3 %	(131.5)	(42.5)%
Income from discontinued operations, net of tax	4.5	248.3	48.5	(243.8)	(98.2)%	199.8	412.0 %
Net income	452.1	426.4	358.1	25.7	6.0 %	68.3	19.1 %
Net (income) loss attributable to non-controlling interest	(0.6)	0.9	0.1	(1.5)	(166.7)%	0.8	800.0 %
Net income attributable to DST Systems, Inc.	$ 451.5	$ 427.3	$ 358.2	$ 24.2	5.7 %	$ 69.1	19.3 %

Revenues

Consolidated total revenues (including out-of-pocket ("OOP") reimbursements) increased $661.5 million or 42.5% during the year ended December 31, 2017 as compared to the year ended December 31, 2016 and increased $82.7 million or 5.6% during the year ended December 31, 2016 as compared to the year ended December 31, 2015. Consolidated operating revenues increased $612.3 million or 41.5% in 2017 as compared to 2016 primarily due to the acquisition of the remaining interests in BFDS and IFDS U.K. in 2017 which collectively contributed $601.8 million of incremental operating revenue during 2017. Consolidated operating revenues increased $69.4 million or 4.9% in 2016 as compared to 2015 primarily as a result of the acquisitions of KRFS in February 2016, Red Rocks Capital LLC in July 2015 and Wealth Management Systems Inc. in August 2015.

Prior to the acquisitions of BFDS and IFDS U.K., we received revenues for processing services and products provided under agreements with these entities. Our operating revenues derived from sales to these entities were $138.5 million and $134.9 million for the years ended December 31, 2016, and 2015, respectively, and $35.2 million in the first quarter of 2017. The operating results of BFDS and IFDS U.K. were consolidated within our operating results subsequent to the acquisition dates.

Consolidated OOP reimbursements increased $49.2 million or 59.8% in 2017 as compared to 2016 and increased $13.3 million or 19.3% in 2016 as compared to 2015. The increase in consolidated OOP reimbursements in 2017 is primarily attributable to the acquisition of the remaining interests in BFDS and IFDS U.K. The increase in consolidated OOP reimbursements in 2016 is primarily attributable to increased client volumes in the Domestic Financial Services segment.

Costs and expenses

Consolidated costs and expenses (including OOP reimbursements) increased $591.6 million or 48.8% in 2017 as compared to 2016 and increased $63.2 million or 5.5% in 2016 as compared to 2015. Costs and expenses are primarily comprised of compensation and benefit costs, reimbursable operating expenses, information technology spend and professional fees. Reimbursable operating expenses included in costs and expenses were $131.5 million, $82.3 million and $69.0 million in 2017, 2016 and 2015, respectively. Excluding reimbursable operating expenses, costs and expenses increased $542.4 million in 2017 as compared to 2016 and increased $49.9 million in 2016 as compared to 2015.

The increase in costs and expenses in 2017, exclusive of reimbursable expenses, is primarily attributable to the consolidation of BFDS and IFDS U.K. following the acquisitions of the remaining interests in these entities during 2017. Share-based compensation expense increased $31.4 million during the year ended December 31, 2017 primarily driven by the prior year reversal of accrued performance-related share-based compensation expense as 2015 PSUs were not expected to achieve the required performance criteria combined with increased share-based compensation expense in 2017 related to 2016 and 2017 PSUs that are currently expected to vest at a higher conversion rate than target. In addition, we recorded increased bad debt expense and a significant charitable contribution transaction in 2017.

As a result of changes in our business environment, including the transition of certain Health Services clients off of our systems, the termination of a wealth management client in the International Financial Services segment, and the acquisitions of the remaining interests in BFDS and IFDS U.K., we have implemented restructuring initiatives to right-size our organization and enhance operational efficiencies, as well as achieve synergies from our recent acquisitions. During the year ended December 31, 2017, we incurred pretax restructuring charges primarily related to employee terminations and related costs of $23.4 million in Costs and expenses. Annualized savings achieved from the actions taken from March 2017 through October 2017 are currently expected to be approximately $22.0 million within the Domestic Financial Services segment, approximately $7.0 million within the International Financial Services segment and approximately $13.0 million within the Healthcare Services segment.

During the years ended December 31, 2016 and 2015, we incurred $10.4 million and $3.4 million of pretax restructuring charges, respectively.

Depreciation and amortization

Consolidated depreciation and amortization increased $32.0 million or 33.3% during the year ended December 31, 2017 as compared to the year ended December 31, 2016 primarily as a result of the acquisitions of the remaining interests in BFDS and IFDS U.K. and increased $4.9 million or 5.4% during the year ended December 31, 2016 as compared to the year ended December 31, 2015 primarily as a result of the acquisition of KRFS.

Operating income

Consolidated operating income increased $37.9 million or 15.3% to $285.2 million during the year ended December 31, 2017 as compared to 2016 and increased $14.6 million or 6.3% to $247.3 million during the year ended December 31, 2016 as compared to 2015.

Interest expense

Interest expense was $26.8 million, $23.5 million and $23.8 million during the years ended December 31, 2017, 2016 and 2015, respectively. Interest expense increased 14.0% during 2017 as compared to 2016 primarily due to higher borrowings as a result of the acquisition of IFDS U.K. and higher borrowing rates on the $350.0 million of debt issued in the fourth quarter of 2017. Interest expense decreased 1.3% during 2016 as compared to 2015 primarily from lower weighted average debt balances outstanding.

Gain on sale of business

On November 1, 2016, we sold DST Billing Solutions Limited ("Billing Solutions") for cash consideration of approximately $6.1 million. Operating revenue and income generated for the Billing Solutions business sold was approximately $4.0 million and $0.7 million, respectively, for the year ended December 31, 2016. We recorded a pretax gain of $5.5 million on the sale of the business during 2016.

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Other income, net

The components of other income, net are as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Net realized gains from the disposition of available-for-sale securities	$ 155.9	$ 2.3	$ 168.4
Net gain on previously held equity interests	43.8	—	—
Net gain on private equity funds and other investments	15.4	16.5	35.7
Dividend income	3.5	5.8	8.3
Miscellaneous items	0.4	(1.9)	(7.9)
Other income, net	$ 219.0	$ 22.7	$ 204.5

Included in the net realized gains from the disposition of available-for-sale securities during 2015 were gains of $157.3 million from the sale of approximately 2.3 million shares of State Street common stock as compared to no sales of State Street shares during 2016. We recognized a realized gain of $145.1 million from the exchange of State Street common stock for the remaining interests in BFDS in 2017. We also recognized a realized gain of $10.4 million from the charitable contribution of our remaining State Street shares in 2017. Additionally, as a result of the 2017 acquisitions, we recorded a net pretax gain of $43.8 million on the step-up of our previous 50% ownership interests in BFDS and IFDS U.K. during the year ended December 31, 2017.

We recorded a net gain on private equity funds and other investments of $15.4 million, $16.5 million and $35.7 million during the years ended December 31, 2017, 2016 and 2015, respectively, primarily due to distributions received from certain of our private equity fund investments resulting in realized gains. Future adverse changes in market conditions or poor operating results of underlying investments could result in losses or an inability to recover the carrying value of the investments and may require an impairment charge in the future, which could have a material effect on our net income.

We receive dividend income from certain investments held. The decline in dividend income for the year ended December 31, 2017 was primarily driven by our reduction of our investment in State Street common stock in March 2017. Dividends received from State Street common stock were $0.1 million, $3.1 million and $3.2 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Equity in earnings of unconsolidated affiliates

Equity in earnings of unconsolidated affiliates is as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
International Financial Data Services U.K.	$ 1.0	$ 10.0	$ 22.5
International Financial Data Services L.P.	18.3	2.2	7.4
Boston Financial Data Services, Inc.	3.6	8.3	5.3
Other unconsolidated affiliates	31.6	6.7	10.2
Total	$ 54.5	$ 27.2	$ 45.4

Equity in earnings of IFDS U.K. decreased $9.0 million during the year ended December 31, 2017, as compared to 2016, primarily as a result of the discontinuation of equity method accounting subsequent to our acquisition of the remaining interests in IFDS U.K. Equity in earnings of IFDS U.K. decreased $12.5 million during the year ended December 31, 2016, as compared to 2015, primarily attributable to lower revenues recognized related to client conversion activities and higher operating costs as IFDS U.K. expanded its infrastructure to address increasing regulatory, compliance and security needs.

Equity in earnings of IFDS L.P. increased $16.1 million during the year ended December 31, 2017, as compared to 2016, primarily as a result of $10.2 million of realized gains on the step-up of certain investments and real estate assets that were distributed from the joint venture to DST and State Street immediately prior to the acquisitions by DST of the remaining interests in IFDS U.K. and BFDS. Equity in earnings of IFDS L.P. decreased $5.2 million during the year ended December 31, 2016, as compared to 2015.

Equity in earnings of BFDS decreased $4.7 million during the year ended December 31, 2017 as compared to 2016. The decrease was primarily as a result of the discontinuation of equity method accounting subsequent to the acquisition of the remaining interests in BFDS in March 2017. Equity in earnings of BFDS increased $3.0 million during the year ended

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December 31, 2016 as compared to 2015. The increase was primarily attributable to higher ancillary and non-operating revenues as well as a reduction in operating costs.

Our equity in earnings of other unconsolidated affiliates was $31.6 million during the year ended December 31, 2017, an increase of $24.9 million as compared to 2016. The increase was primarily due to a $23.0 million increase resulting from a gain on the step-up of real estate distributed from Broadway Square Partners, LLP ("Broadway Square Partners"), an unconsolidated affiliate, during 2017. Our equity in earnings of other unconsolidated affiliates was $6.7 million during the year ended December 31, 2016, a decrease of $3.5 million as compared to 2015. The decrease was primarily due to a $3.6 million gain resulting from the sale of real estate by an unconsolidated affiliate during 2015.

As of December 31, 2017, approximately $40.8 million of our consolidated retained earnings represents undistributed earnings in our unconsolidated affiliates accounted for by the equity method of accounting.

Income taxes

Our effective tax rate was 15.8%, 36.2% and 32.5% for the years ended December 31, 2017, 2016 and 2015, respectively. Our income tax rate for 2017 was lower than the statutory federal income tax rate of 35% primarily due to the non-taxable nature of the BFDS exchange transaction, the impacts of the Tax Act, the adoption of new accounting guidance issued for tax benefits on employee share-based compensation transactions, benefits realized from the settlement of uncertain tax positions, and a change in the proportional mix of domestic and international transactions. The 2017 impact of the Tax Act was a $13.7 million tax benefit, primarily from the net impact of the revaluation of our deferred tax assets and liabilities utilizing the enacted tax rate at the time they are anticipated to be realized less the estimated tax associated with the deemed mandatory repatriation of undistributed accumulated foreign earnings. This reflects our current estimate of the U.S. income tax effects of the Tax Act, however these are provisional amounts subject to adjustment during the one year measurement period provided pursuant to guidance in SAB 118.

Our effective income tax rate for 2016 was higher than the statutory federal income tax rate of 35% primarily attributable to state income taxes, transaction related taxes, and a change in the proportional mix of domestic and international income, partially offset by federal income tax credits for foreign income taxes and research and development costs.

Our effective income tax rate for 2015 was favorably impacted by an $11.9 million benefit from the completion of the IRS examination of previously filed federal income tax refund claims for Domestic Manufacturing Deductions, research and experimentation credits and capital losses for 2010 as well as other remeasurements during the period.

Excluding the effect of discrete period items, we currently expect our effective tax rate to be approximately 26.5% in 2018. The 2018 tax rate can be affected as a result of variances among the estimates and amounts of 2018 sources of taxable income (e.g., domestic consolidated, joint venture and/or international), the realization of tax credits, adjustments which may arise from the resolution of tax matters under review, our assessment of our liability for uncertain tax positions, changes in interpretations and assumptions we have made, federal tax regulations and guidance that may be issued by the U.S. Department of the Treasury and actions we may take as a result of the Tax Act.

Income from discontinued operations, net of tax

Income from discontinued operations, net of tax decreased $243.8 million during the year ended December 31, 2017 as compared to 2016 and increased $199.8 million during the year ended December 31, 2016 as compared to 2015. The decrease during the year ended December 31, 2017 was primarily due to the sale of our North American Customer Communications business in July 2016, partially offset by the sale of our U.K. Customer Communications business in May 2017. The increase during the year ended December 31, 2016 was primarily attributable to the $234.7 million gain, net of tax, on the sale of our North American Customer Communications business partially offset by $17.0 million of goodwill and asset impairments in our U.K. Customer Communications business.

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YEAR TO YEAR BUSINESS SEGMENT COMPARISONS

DOMESTIC FINANCIAL SERVICES SEGMENT

The following table presents the financial results of the Domestic Financial Services segment (in millions):

	Year Ended December 31,			Change			
				2017 vs 2016		2016 vs 2015	
	2017	2016	2015	$	%	$	%
Operating revenues	$ 1,187.2	$ 995.8	$ 983.1	$ 191.4	19.2 %	$ 12.7	1.3 %
Out-of-pocket reimbursements	111.8	73.0	60.7	38.8	53.2 %	12.3	20.3 %
Total revenues	1,299.0	1,068.8	1,043.8	230.2	21.5 %	25.0	2.4 %
Costs and expenses	1,072.2	829.0	792.3	243.2	29.3 %	36.7	4.6 %
Depreciation and amortization	86.8	77.3	67.7	9.5	12.3 %	9.6	14.2 %
Operating income	$ 140.0	$ 162.5	$ 183.8	$ (22.5)	(13.8)%	$ (21.3)	(11.6)%
Operating margin	11.8%	16.3%	18.7%				

The following table summarizes the Domestic Financial Services segment's statistical metrics (in millions, except as noted):

	December 31,		
	2017	2016	2015
Domestic mutual fund shareowner accounts processed:			
Registered accounts - non tax-advantaged	24.2	25.3	27.0
IRA mutual fund accounts	20.5	21.1	21.8
Other retirement accounts	7.8	8.0	8.2
Section 529 and Educational IRAs	7.8	7.5	8.4
Registered accounts - tax-advantaged	36.1	36.6	38.4
Total registered accounts	60.3	61.9	65.4
Subaccounts	46.2	42.1	31.3
Total domestic mutual fund shareowner accounts processed	106.5	104.0	96.7
Defined contribution participant accounts	7.2	6.8	7.0
ALPS *(in billions of U.S. dollars)*:			
Assets Under Management	$ 18.4	$ 17.2	$ 14.7
Assets Under Administration	$ 225.9	$ 179.1	$ 140.4

	Year Ended December 31,		
	2017	2016	2015
Changes in registered accounts:			
Beginning balance	61.9	65.4	68.8
New client conversions	3.0	0.1	—
Subaccounting conversions to DST platforms	(0.9)	(0.9)	(1.8)
Subaccounting conversions to non-DST platforms	(1.0)	(0.5)	(1.1)
Conversions to non-DST platforms	(0.3)	(0.7)	(0.3)
Organic decline	(2.4)	(1.5)	(0.2)
Ending balance	60.3	61.9	65.4
Changes in subaccounts:			
Beginning balance	42.1	31.3	28.6
New client conversions	0.3	10.7	—
Conversions from non-DST registered platforms	1.6	—	1.1
Conversions from DST's registered accounts	0.9	0.9	1.8
Conversions to non-DST platforms	(0.4)	—	—
Organic growth (decline)	1.7	(0.8)	(0.2)
Ending balance	46.2	42.1	31.3
Changes in defined contribution participant accounts:			
Beginning balance	6.8	7.0	7.2
New client conversions	0.5	—	0.1
Organic decline	(0.1)	(0.2)	(0.3)
Ending balance	7.2	6.8	7.0

Comparison of 2017 versus 2016 results

Operating revenues

Domestic Financial Services segment operating revenues of $1,187.2 million reflect an increase of $191.4 million or 19.2% in 2017 as compared to 2016. The increase in operating revenues during the year ended December 31, 2017 was primarily attributable to the acquisition of the remaining interest in BFDS, which contributed $176.6 million of incremental operating revenues. Excluding the BFDS operating revenues in 2017, operating revenues for the Domestic Financial Services segment for the year ended December 31, 2017 increased $14.8 million or 1.5%. This increase in operating revenues for the year ended December 31, 2017 was partially due to a $5.0 million increase in revenue at ALPS resulting from an insurance claim reimbursement of $2.0 million received in fourth quarter 2017 as compared to a reduction to ALPS revenue of $3.0 million during 2016 for the processing error that generated the insurance claim. In addition, operating revenues were higher as a result of increased fund flows and higher market performance at ALPS, partially offset by decreased revenues resulting from the exit of certain product offerings and lower subaccounting and mutual fund registered shareowner account processing revenues. Additionally, software license revenues were $17.7 million for the year ended December 31, 2017, a decrease of $3.9 million as compared to 2016.

Costs and expenses

Domestic Financial Services segment costs and expenses for the year ended December 31, 2017 were $1,072.2 million, an increase of $243.2 million as compared to 2016. Reimbursable operating expenses included in costs and expenses were $111.8 million in 2017, an increase of $38.8 million as compared to 2016.

Excluding reimbursable operating expenses, Domestic Financial Services costs and expenses increased $204.4 million or 27.0% for the year ended December 31, 2017 as compared to 2016. This increase was primarily attributable to $176.3 million of incremental costs and expenses from the consolidation of BFDS following the acquisition of the remaining interest in that entity in 2017 and higher share-based compensation expense which increased $25.2 million during the year ended December 31, 2017 as compared to the prior year.

In addition, costs and expenses increased from higher integration and restructuring costs related to our BFDS acquisition and higher information technology transformation spend partially offset by the non-recurrence of a software impairment recorded in 2016. We recorded restructuring charges of $16.3 million and $10.4 million during the years ended December 31, 2017 and 2016, respectively. During the year ended December 31, 2017, we also recognized $11.6 million of expense related to a charitable contribution of our remaining State Street stock.

Depreciation and amortization

Domestic Financial Services segment depreciation and amortization costs for the year ended December 31, 2017 were $86.8 million, an increase of $9.5 million or 12.3% as compared to 2016. The increase in 2017 was primarily attributable to incremental amortization associated with acquired intangibles from the recent acquisitions as well as increased depreciation from capitalized costs incurred to enhance our network infrastructure, security and regulatory compliance.

Operating income

Domestic Financial Services segment operating income for 2017 was $140.0 million, a decrease of $22.5 million or 13.8% as compared to 2016. The decrease in Domestic Financial Services operating income was primarily due to higher share-based compensation expense, higher advisory and restructuring costs due to the integration activities for the recently acquired BFDS business and increased depreciation and amortization expense. Operating income also decreased due to an increase in information technology transformation spend, partially offset by higher revenues.

Comparison of 2016 versus 2015 results

Operating revenues

Domestic Financial Services segment operating revenues of $995.8 million increased $12.7 million or 1.3% in 2016 as compared to 2015. The increase in operating revenues during the year ended December 31, 2016 as compared to the year ended December 31, 2015 was primarily driven from businesses acquired during 2015 and 2016, which contributed $31.8 million of incremental operating revenues. During 2016, we also completed the conversion of approximately 10.0 million subaccounts associated with a previously announced new client, which resulted in incremental revenues. These increases were partly offset by a decline in mutual fund registered shareowner account processing revenue due to lower registered accounts, primarily as a result of subaccounting conversions, and lower revenue due to extending certain long-term contracts with lower pricing. Additionally, software license revenues were $21.6 million for the year ended December 31, 2016, a decrease of $0.9 million as compared to 2015.

Costs and expenses

Domestic Financial Services segment costs and expenses for the year ended December 31, 2016 were $829.0 million, an increase of $36.7 million as compared to 2015. Reimbursable operating expenses included in costs and expenses were $73.0 million for the year ended December 31, 2016, an increase of $12.3 million as compared to 2015.

Excluding reimbursable operating expenses, Domestic Financial Services costs and expenses increased $24.4 million or 3.3% for the year ended December 31, 2016 as compared to 2015. On this basis, the increase in costs and expenses during 2016 was primarily from acquisitions completed during 2015 and 2016, which included approximately $33.7 million of incremental expenses. Also, contributing to the increase in costs and expenses were the restructuring activities, which resulted in $10.4 million of employee and lease termination costs during the year ended December 31, 2016 to enhance operational efficiency within the Domestic Financial Services segment. We also incurred increased costs to enhance the network infrastructure utilized across all of our operating businesses and incremental costs to service new and existing clients. During the year ended December 31, 2016, we also recognized a $6.0 million software impairment. These costs and expenses were partially offset by the reversal of accrued performance-related share-based compensation expense as 2015 PSUs were not expected to achieve the required performance criteria required for vesting and further savings realized from cost containment initiatives.

Depreciation and amortization

Domestic Financial Services segment depreciation and amortization costs for the year ended December 31, 2016 were $77.3 million, an increase of $9.6 million or 14.2% as compared to 2015. The increase in 2016 was primarily attributable to incremental amortization associated with acquired intangibles from the acquisitions completed in 2015 and 2016 as well as increased depreciation from capitalized costs incurred to enhance our network infrastructure and increase security and regulatory compliance. The increase in 2016 was also attributable to the acceleration of depreciation on certain capitalized software during 2016.

Operating income

Domestic Financial Services segment operating income for 2016 was $162.5 million, a decrease of $21.3 million or 11.6% as compared to 2015. The decrease in Domestic Financial Services operating income was primarily due to restructuring costs incurred during 2016, a software impairment charge, and increased costs incurred to enhance our network infrastructure, maintain security and regulatory compliance. These decreases were partially offset by the reversal of accrued performance-related share-based compensation expense, higher operating revenues and cost containment efforts during 2016.

INTERNATIONAL FINANCIAL SERVICES SEGMENT

The following table presents the financial results of the International Financial Services segment (in millions):

	Year Ended December 31,			Change			
				2017 vs 2016		2016 vs 2015	
	2017	2016	2015	$	%	$	%
Operating revenues	$ 538.4	$ 110.9	$ 93.4	$ 427.5	385.5%	$ 17.5	18.7 %
Out-of-pocket reimbursements	12.2	1.2	1.7	11.0	916.7%	(0.5)	(29.4)%
Total revenues	550.6	112.1	95.1	438.5	391.2%	17.0	17.9 %
Costs and expenses	449.3	98.2	86.1	351.1	357.5%	12.1	14.1 %
Depreciation and amortization	30.7	3.1	4.8	27.6	890.3%	(1.7)	(35.4)%
Operating income	$ 70.6	$ 10.8	$ 4.2	$ 59.8	553.7%	$ 6.6	157.1 %
Operating margin	13.1%	9.7%	4.5%				

The following table summarizes the International Financial Services segment's statistical metrics (in millions, except as noted):

	December 31,		
	2017	2016	2015
International mutual fund shareowner accounts processed:			
IFDS U.K.	8.6	8.9	8.8
IFDS L.P. (Unconsolidated affiliate principally based in Canada)	14.5	13.7	13.3
Total international mutual fund shareowner accounts processed	23.1	22.6	22.1

Comparison of 2017 versus 2016 results

Operating revenues

International Financial Services segment operating revenues of $538.4 million reflect an increase of $427.5 million or 385.5% in 2017 as compared to 2016. The increase in operating revenues during the year ended December 31, 2017 was primarily driven by the acquisition of the remaining interest in IFDS U.K., which contributed $425.2 million of incremental operating revenues, including the financial impacts resulting from the termination of a wealth management client agreement. The termination agreement resulted in incremental operating revenues of $93.2 million for the year ended December 31, 2017 as DST accelerated recognition of previously deferred revenue and recognized termination payments received. Additionally, software license revenues were $12.5 million for the year ended December 31, 2017, an increase of $2.6 million as compared to 2016. These increases were partly offset by lower revenues as a result of the previously discussed client termination in mid-2017 as well as the sale of DST Billing Solutions during 2016.

Costs and expenses

International Financial Services segment costs and expenses for the year ended December 31, 2017 were $449.3 million, an increase of $351.1 million as compared to 2016. Costs and expenses in the International Financial Services segment are primarily comprised of compensation and benefit costs as well as technology-related expenditures. Reimbursable operating expenses included in costs and expenses were $12.2 million in 2017, an increase of $11.0 million as compared to 2016.

Excluding reimbursable operating expenses, International Financial Services costs and expenses increased $340.1 million for the year ended December 31, 2017 as compared to 2016 primarily due to the acquisition of the remaining interests in IFDS U.K. Additionally, in connection with the termination agreement described above, we incurred bad debt expense of $34.5 million for previously invoiced services performed prior to the termination and $5.2 million of other termination-related charges.

Depreciation and amortization

International Financial Services segment depreciation and amortization costs for the year ended December 31, 2017 were $30.7 million, an increase of $27.6 million as compared to 2016. The increase in 2017 was primarily attributable to incremental amortization of intangible assets and depreciation of fixed assets from the acquisition of the remaining interests in IFDS U.K.

Operating income

International Financial Services segment operating income for 2017 was $70.6 million, an increase of $59.8 million or 553.7% as compared to 2016. The increase in International Financial Services operating income was primarily due to the impact of the termination of the wealth management client agreement of $53.5 million, including the recognition of previously deferred revenue and termination payments received as described above. The increase in operating income was also due to the higher revenues resulting from the acquisition of the remaining interest in IFDS U.K., partially offset by higher costs and expenses due to on-going development and implementation efforts for wealth management platform clients, share-based compensation expense, and restructuring charges.

Comparison of 2016 versus 2015 results

Operating revenues

International Financial Services segment operating revenues of $110.9 million increased $17.5 million or 18.7% in 2016 as compared to 2015. The increase in operating revenues during the year ended December 31, 2016 as compared to the year ended December 31, 2015 was primarily due to the increased professional services revenues associated with our international wealth management platform business. Software license revenues were $9.9 million for the year ended December 31, 2016, a decrease of $1.1 million as compared to 2015.

Costs and expenses

International Financial Services segment costs and expenses for the year ended December 31, 2016 were $98.2 million, an increase of $12.1 million as compared to 2015. Reimbursable operating expenses included in costs and expenses were $1.2 million for the year ended December 31, 2016, a decrease of $0.5 million as compared to 2015.

Excluding reimbursable operating expenses, International Financial Services costs and expenses increased $12.6 million or 14.9% for the year ended December 31, 2016 as compared to 2015. On this basis, the increase in costs and expenses during 2016 was primarily from higher staffing costs to support the increase in professional services revenues.

Depreciation and amortization

International Financial Services segment depreciation and amortization costs for the year ended December 31, 2016 were $3.1 million, a decrease of $1.7 million or 35.4% as compared to 2015. The decrease in 2016 was primarily attributable to lower depreciation from lower capital expenditures.

Operating income

International Financial Services segment operating income for 2016 was $10.8 million, an increase of $6.6 million or 157.1% as compared to 2015. The increase in International Financial Services operating income was primarily due to the increased professional services revenues associated with our international wealth management platform business.

HEALTHCARE SERVICES SEGMENT

The following table presents the financial results of the Healthcare Services segment (in millions):

	Year Ended December 31,			Change			
				2017 vs 2016		2016 vs 2015	
	2017	2016	2015	$	%	$	%
Operating revenues	$ 418.5	$ 426.2	$ 376.4	$ (7.7)	(1.8)%	$ 49.8	13.2 %
Out-of-pocket reimbursements	7.5	8.5	8.2	(1.0)	(11.8)%	0.3	3.7 %
Total revenues	426.0	434.7	384.6	(8.7)	(2.0)%	50.1	13.0 %
Costs and expenses	340.9	345.1	321.3	(4.2)	(1.2)%	23.8	7.4 %
Depreciation and amortization	10.5	15.6	18.6	(5.1)	(32.7)%	(3.0)	(16.1)%
Operating income	$ 74.6	$ 74.0	$ 44.7	$ 0.6	0.8 %	$ 29.3	65.5 %
Operating margin	17.8%	17.4%	11.9%				

The following tables summarize the Healthcare Services segment's statistical metrics (in millions):

	December 31,		
	2017	2016	2015
DST Health Solutions covered lives	21.8	22.8	26.0

	Year Ended December 31,		
	2017	2016	2015
Argus pharmacy paid claims	500.0	507.0	494.4

Comparison of 2017 versus 2016 results

Operating revenues

Healthcare Services segment operating revenues of $418.5 million decreased $7.7 million or 1.8% in 2017 compared to 2016. The decrease in operating revenue during the year ended December 31, 2017 was primarily due to the previously announced client transitions off of our systems, which resulted in approximately $46.5 million of lower revenues. Excluding client migrations, Healthcare Services operating revenues increased by $38.8 million or 10.2%. On this basis, the increase in operating revenues primarily resulted from organic growth and the expansion of the high-value services that we are offering to existing clients in both the medical and pharmacy businesses. These increases were partially offset by reductions in membership related to exchanges and lower consulting and development revenues which we believe is the result of a decline in healthcare technology spending due to the ongoing uncertainty around government policy changes. Additionally, operating revenues included approximately $9.8 million of software license fee revenues for the year ended December 31, 2017, an increase of $1.8 million as compared to 2016.

Costs and expenses

Healthcare Services segment costs and expenses for the year ended December 31, 2017 were $340.9 million, a decrease of $4.2 million as compared to 2016. Reimbursable operating expenses included in costs and expenses were $7.5 million in 2017, a decrease of $1.0 million as compared to 2016. Excluding reimbursable operating expenses, costs and expenses were $333.4 million for 2017, a decrease of $3.2 million as compared to 2016. On this basis, the decrease in costs and expenses during 2017 was primarily due to lower staffing needs resulting from the previously announced client migrations, partially offset by increased restructuring charges and increased share-based compensation expense. We recorded $4.4 million of restructing charges in 2017, as compared to none in 2016.

Depreciation and amortization

Healthcare Services segment depreciation and amortization costs for the year ended December 31, 2017 were $10.5 million, a decrease of $5.1 million or 32.7% as compared to 2016. The decrease is attributable to lower capital expenditures and an intangible asset becoming fully amortized during 2017.

Operating income

Healthcare Services segment operating income for 2017 was $74.6 million, an increase of $0.6 million or 0.8% as compared to 2016. The slight increase in operating income was primarily attributable to organic growth and the expansion of the high-value services that we are offering to existing clients in both the medical and pharmacy businesses and decreases in depreciation and amortization. These increases were partially offset by the negative impact of client migrations, restructuring charges, and increased share-based compensation expenses.

Comparison of 2016 versus 2015 results

Operating revenues

Healthcare Services segment operating revenues of $426.2 million increased $49.8 million or 13.2% in 2016 as compared to 2015. The increase in operating revenues for the year ended December 31, 2016 was primarily from new medical claims processing clients implemented during 2016, organic growth and the expansion of high-value services we are offering to existing clients in both the medical and pharmacy businesses. Operating revenues included approximately $8.0 million of software license fee revenues for the year ended December 31, 2016, a decrease of $1.1 million as compared to 2015.

Costs and expenses

Healthcare Services segment costs and expenses for the year ended December 31, 2016 were $345.1 million, an increase of $23.8 million as compared to 2015. Reimbursable operating expenses included in costs and expenses were $8.5 million in 2016, an increase of $0.3 million as compared to 2015. Excluding reimbursable operating expenses, costs and expenses were $336.6 million for 2016, an increase of $23.5 million as compared to 2015. On this basis, the increase in costs and expenses during 2016 was primarily attributable to increased staffing costs incurred to support the higher medical transaction volumes due to the growth in BPO services. These costs and expenses were partially offset by restructuring costs that occurred during 2015 that did not recur during 2016 and a $2.4 million reduction of share-based compensation expense as certain PSUs were no longer expected to vest.

Depreciation and amortization

Healthcare Services segment depreciation and amortization costs for the year ended December 31, 2016 were $15.6 million, a decrease of $3.0 million or 16.1% as compared to 2015 primarily due to lower capital expenditures.

Operating income

Healthcare Services segment operating income for 2016 was $74.0 million, an increase of $29.3 million or 65.5% as compared to 2015. The increase in operating income was primarily attributable to higher revenues from organic growth and new medical claims processing clients implemented in 2016, resulting in enhanced economies of scale as clients were converted as well as a reduction of share-based compensation expense as certain PSUs were no longer expected to vest. These increases were partially offset by increased staffing costs incurred to support the higher medical transaction volumes due to the growth in BPO services.

LIQUIDITY AND CAPITAL RESOURCES

Company's Assessment of Short-term and Long-term Liquidity

We believe that our existing cash balances and other current assets, together with cash provided by operating activities and, as necessary, our revolving credit facilities, are sufficient to meet our operating and debt service requirements and other current liabilities for at least the next 12 months. Further, we believe that our longer term liquidity and capital requirements will also be met through cash provided by operating activities, bank credit facilities and other investments.

At December 31, 2017, total cash and cash equivalents were $80.5 million, of which $46.0 million was held outside of the U.S. Although the amounts held outside the U.S. have been taxed through the Transition Tax, these amounts could be subject to other taxes such as withholding taxes and local taxes. We have accrued for withholding taxes and local taxes on the earnings of our international subsidiaries except when the earnings are considered indefinitely reinvested outside of the U.S. The repatriation of these earnings could result in additional withholding and local tax payments in future years. We utilize a variety of funding strategies in an effort to ensure that our worldwide cash is available in the locations in which it is needed.

At December 31, 2017, we had approximately $990.7 million of availability under our domestic revolving credit facilities, including our accounts receivable securitization program. Debt obligations, classified as long-term when originally issued, existing as of December 31, 2017 that are scheduled to mature in 2018 include $65.0 million of Series C 2010 Senior Notes that are scheduled to mature in August 2018 and $3.7 million of payments related to outstanding mortgages. We are scheduled to issue $65.0 million of Series C 2017 Senior Notes in August 2018 which are expected to be utilized to repay the Series C 2010 Senior Notes.

We may need to access debt and equity markets in the future if unforeseen costs or opportunities arise, to fund acquisitions or investments or to repay indebtedness. If we need to obtain new debt or equity financing in the future, the terms and availability of such financing may be impacted by economic and financial market conditions as well as our financial condition and results of operations at the time we seek additional financing. We currently have $585.0 million of additional capacity pursuant to the master note purchase agreement dated November 14, 2017 that could be utilized for future debt issuances.

Sources and Uses of Cash

We had $80.5 million, $195.5 million and $79.5 million of cash and cash equivalents at December 31, 2017, 2016 and 2015, respectively. Our primary source of liquidity has historically been cash provided by operations. In addition, we have used proceeds from the sale of investments to fund other investing and financing activities. Principal uses of cash are operations, reinvestment in our proprietary technologies, capital expenditures, investment purchases, business acquisitions, payments on debt, stock repurchases and dividend payments. Additionally, we expect to incur significant transaction costs associated with the completion of the Merger. Information on our consolidated cash flows for the years ended December 31, 2017, 2016 and 2015 is presented in the Consolidated Statement of Cash Flows, categorized by operating activities, investing activities, and financing activities.

The sale of our North American Customer Communications business on July 1, 2016 and our U.K. Customer Communications business on May 4, 2017 resulted in cash consideration of approximately $410.7 million and $43.6 million, respectively, net of tax. The after-tax proceeds from the sales were used in accordance with the Company's capital plan, including investments in the business, share repurchases, strategic acquisitions, debt repayments and other corporate purposes.

Operating Activities

Cash flows provided from continuing operating activities were $164.0 million during the year ended December 31, 2017. Operating cash flows from continuing operating activities during 2017 resulted principally from income from continuing operations of $447.6 million, adjusted for non-cash or non-operating items of $108.2 million including depreciation and amortization, equity in earnings of unconsolidated affiliates, net gains on investments and gains recognized on the step up of the carrying value of our previously held equity interests in unconsolidated affiliates as a result of the acquisitions of the remaining interests in BFDS and IFDS U.K., and a use of cash due to changes in operating assets and liabilities of $175.4 million. Significant changes in operating assets and liabilities include a $127.9 million use of cash related to other assets primarily due to up-front payments made to clients which are expected to be recovered over the clients' contractual arrangements and higher prepaid software costs, a $39.9 million use of cash for accounts payable and accrued liabilities, and a $29.6 million use of cash related to deferred revenue and gains primarily as a result of the wealth management platform client termination.

Cash flows provided from continuing operating activities were $162.7 million for the year ended December 31, 2016. Operating cash flows from continuing operations during 2016 resulted principally from income from continuing operations of $178.1 million, adjusted for non-cash or non-operating items of $90.4 million including depreciation and amortization and equity in earnings from unconsolidated affiliates, and a use of cash due to changes in operating assets and liabilities of $105.8 million. Significant changes in operating assets and liabilities include a $26.9 million use of cash related to accrued compensation and benefits, a $16.6 million source of cash resulting from accounts payable and accrued liabilities, a $16.0 million use of cash related to accounts receivable, and a $67.9 million use of cash related to timing of income tax payments.

Cash flows provided from continuing operating activities were $135.7 million for the year ended December 31, 2015. Operating cash flows from continuing operating activities during 2015 resulted principally from income from continuing operations of $309.6 million, adjusted for non-cash or non-operating items of $110.3 million including depreciation and amortization, equity in earnings of unconsolidated affiliates and net gains on investments, and a use of cash due to changes in operating assets and liabilities of $63.6 million. Significant changes in operating assets and liabilities include a $10.6 million use of cash related to accounts receivable, and a $31.6 million use of cash related to timing of income tax payments.

Investing Activities

Cash flows used in continuing investing activities were $0.7 million for the year ended December 31, 2017. Sources of our cash inflows were net investment activities (proceeds from investment sales, net of investments in securities) of $39.8 million, fluctuations in funds held on behalf of clients of $43.3 million and distributions received from unconsolidated affiliates of $32.7 million, primarily from IFDS L.P in connection with the acquisition of the remaining interests in BFDS and IFDS U.K., offset by cash used to acquire IFDS U.K. (net of cash acquired) of $38.9 million and capital expenditures of $78.8 million.

Cash flows used in continuing investing activities during 2016 of $117.3 million were primarily attributable to net investment activities (proceeds from investment sales, net of investments in securities) of $59.5 million, offset by cash used to acquire KRFS of $93.5 million, capital expenditures of $60.4 million, fluctuations in funds held on behalf of clients of $20.3 million, as well as approximately $28.0 million of cash loaned to IFDS U.K. during 2016.

Cash flows used in continuing investing activities were $102.4 million for the year ended December 31, 2015, primarily attributable to net investment activities (proceeds from investment sales, net of investments in securities) of $192.2 million, which includes $176.1 million of pretax proceeds from the sale of State Street stock. These sources of cash were offset by $117.4 million of cash used to acquire kasina LLC, Red Rocks Capital LLC and Wealth Management Systems, Inc. during 2015, $88.9 million used to purchase capital assets, as well as $113.5 million due to fluctuations in funds held on behalf of clients.

Capital Expenditures

The following table summarizes capital expenditures by segment (in millions):

	Year Ended December 31,		
	2017	2016	2015
Domestic Financial Services segment	$ 63.3	$ 52.4	$ 79.0
International Financial Services segment	8.8	2.6	3.8
Healthcare Services segment	6.7	5.4	6.1
	$ 78.8	$ 60.4	$ 88.9

During 2017, 2016 and 2015, we capitalized software development costs of $24.1 million, $21.5 million and $23.3 million, respectively, which are included within the capital expenditures listed above. Capital expenditures using debt are treated as non-cash transactions and are not included in the annual capital expenditure amounts above.

Financing Activities

Cash flows used in continuing financing activities totaled $317.4 million, $374.8 million and $278.7 million during the years ended December 31, 2017, 2016 and 2015, respectively.

Common Stock Issuances and Repurchases

We received cash proceeds of $2.8 million, $5.3 million and $11.8 million from the issuance of common stock from the exercise of employee stock options during the years ended December 31, 2017, 2016 and 2015, respectively. The value of shares received in exchange for satisfaction of the exercise price and for tax-withholding obligations arising from the exercise of options to purchase our stock or from the vesting of restricted shares are included in Common stock repurchased in the Consolidated Statement of Cash Flows.

As of December 31, 2016, we had $150.0 million of capacity remaining under our share repurchase plan authorized in 2016. On May 9, 2017, our Board of Directors authorized a new $300.0 million share repurchase plan, which allows, but does not require, the repurchase of common stock in open market and private transactions. We repurchased the equivalent of 5.0 million shares of our common stock on a post stock split basis for $300.0 million during the year ended December 31, 2017, which left approximately $150.0 million remaining under our share repurchase plan authorized in 2017. The 2017 share repurchase plan does not have an expiration date, however we are currently precluded from executing additional stock repurchases pursuant to the Merger Agreement with SS&C. Under previous share repurchase plans, we expended $300.0 million for approximately 5.4 million shares on a post stock split basis and $400.0 million for approximately 7.2 million shares on a post stock split basis during the years ended December 31, 2016 and 2015, respectively.

Dividends

We paid cash dividends of $0.72, $0.66 and $0.60 per common share in 2017, 2016 and 2015, respectively. The total cash paid for dividends in 2017, 2016 and 2015 was $43.7 million, $43.4 million and $43.1 million, respectively. We are currently precluded from declaring dividends pursuant to the Merger Agreement with SS&C.

Client Funds Obligations

Client funds obligations represent our contractual obligations to remit funds to satisfy client pharmacy claim obligations and are recorded on the balance sheet when incurred, generally after a claim has been processed by us. In addition, client funds obligations include transfer agency client balances invested overnight. Our contractual obligations to remit funds to satisfy client obligations are primarily sourced by funds held on behalf of clients. We had $504.2 million, $564.6 million and $533.4 million of client funds obligations at December 31, 2017, 2016 and 2015, respectively.

Debt Activity

During 2017, we had the following primary sources of debt financing: our syndicated revolving credit facility; accounts receivable securitization program; and privately placed senior notes (the "2010 Senior Notes" and "2017 Senior Notes"). We had $620.8 million, $508.2 million and $562.1 million of debt outstanding at December 31, 2017, 2016 and 2015, respectively, an increase of $112.6 million during 2017 and a decrease of $53.9 million during 2016.

The increase in debt outstanding during 2017 resulted primarily from issuing $350.0 million of 2017 Senior Notes in November 2017, the assumption of a mortgage as a result of the acquisition of the remaining interests in IFDS U.K. and the assumption of a mortgage associated with a real estate distribution from Broadway Square Partners, partially offset by a reduction in amounts outstanding under our accounts receivable securitization program and revolving credit facilities. Proceeds from the 2017 Senior Notes were primarily used to pay down our revolving credit facilities. The decrease in debt outstanding during 2016 resulted primarily from the utilization of the proceeds from the sale of our North American Customer Communications business to pay down outstanding balances, partially offset by borrowings to fund the KRFS business acquisition, share repurchases and working capital uses.

Our debt agreements contain customary restrictive covenants, including limitations on consolidated indebtedness, liens, investments, subsidiary indebtedness, asset dispositions and require certain consolidated leverage and interest coverage ratios to be maintained. We are currently in compliance with these covenants. A default under certain of our borrowings could trigger defaults under certain of our other debt obligations, which in turn could result in their maturities being accelerated. Our debt arrangements are further described in Item 8, Financial Statements and Supplementary Data - Note 10, "Debt."

Contractual Obligations and Commercial Commitments

The following table sets forth our contractual obligations and commercial commitments as of December 31, 2017 (in millions):

	Payment Due by Period				
	Total	Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
Debt obligations	$ 623.3	$ 83.7	$ 187.3	$ 1.5	$ 350.8
Operating lease obligations	104.0	23.8	35.5	27.2	17.5
Software license agreements	135.0	34.9	63.6	36.5	—
Other	39.2	18.9	15.8	4.5	—
	$ 901.5	$ 161.3	$ 302.2	$ 69.7	$ 368.3

Interest obligations on our outstanding debt are not included in the table above. The syndicated revolving credit facility contains grid schedules that adjust borrowing costs up or down based upon our consolidated leverage ratio. The grid schedules may result in fluctuations in borrowing costs ranging from 1.00% to 1.70% over Eurodollar and 0.00% to 0.70% over base rate, as defined. The 2010 Senior Notes outstanding have fixed interest rates and are comprised of $65.0 million of 5.06% Series C Senior Notes and $160.0 million of 5.42% Series D Senior Notes. The $350.0 million of 2017 Senior Notes outstanding have an average fixed interest rate of approximately 4.0%. In addition to the financial instruments listed above, the program fees incurred on proceeds from the sale of receivables under our accounts receivable securitization program are determined based on variable interest rates associated with LIBOR plus an applicable margin.

We have liabilities for income tax uncertainties of $67.7 million at December 31, 2017. These obligations are classified as non-current on our Consolidated Balance Sheet as resolution of these matters is expected to take more than a year; however, the ultimate timing of resolution is uncertain. As we are unable to make a reasonably reliable estimate as to when payments may occur for our unrecognized tax benefits, our liability for income tax uncertainties is not included in the table above.

Due to the enactment of the Tax Act, we recorded a provisional income tax payable related to the Transition Tax of $8.4 million, of which $7.3 million is reported as noncurrent as it is not expected to be paid within one year. As permitted by the Tax Act, the Transition Tax will be paid over an eight-year period, beginning in 2018, and will not accrue interest. This provisional amount, as well as the current estimated timing of payments, is subject to change based on additional guidance from and interpretations by U.S. regulatory and standard-setting bodies and changes in assumptions.

Other Commercial Commitments

In the normal course of business, to facilitate transactions of services and products and other business assets, we have agreed to indemnify certain parties with respect to certain matters. We have agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, or out of intellectual property infringement or other claims made by third parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. At December 31, 2017, except for certain immaterial items, there were no liabilities for guarantees or indemnifications as it is not possible to determine either the maximum potential amount under these indemnification agreements or the timing of any such payments due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made under these agreements have not had a material impact on our consolidated financial position, results of operations or cash flows.

SS&C Merger Agreement

Under certain circumstances, we would be required to pay a termination fee of $165.0 million to SS&C in the event the Merger Agreement with SS&C is terminated.

Off-Balance Sheet Arrangements

An off-balance sheet arrangement is any transaction, agreement or other contractual arrangement involving an unconsolidated entity under which a company has (1) made guarantees, (2) a retained or a contingent interest in transferred assets, (3) an obligation under derivative instruments classified as equity, or (4) any obligation arising out of a material variable interest in an unconsolidated entity that provides financing, liquidity, market risk or credit risk support to the company, or that engages in leasing, hedging or research and development arrangements with the company.

We believe that our guarantee arrangements will not have a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, capital expenditures, capital resources, liquidity or results of operations. These arrangements are described above and in Item 8, Financial Statements and Supplementary Data - Note 16, "Commitments and Contingencies."

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The operation of our businesses and our financial results can be affected by changes in interest rates and currency exchange rates. Changes in interest rates and exchange rates have not materially impacted our consolidated financial position, results of operations or cash flows.

Interest rate risk

We derive service revenues from investment earnings related to cash balances maintained in bank accounts on which we are the agent for clients. The balances maintained in the bank accounts will fluctuate. For the year ended December 31, 2017, DST had average daily cash balances of approximately $2.0 billion maintained in such accounts. We estimate that a 100 basis point change in the short-term interest earnings rate would equal approximately $8.6 million of net income (loss).

At December 31, 2017, we had $620.8 million of debt, of which $14.9 million was subject to variable interest rates (LIBOR rates). We estimate that a 10% increase in interest rates would not have a significant impact to our consolidated pretax earnings or to the fair value of our debt.

The effect of changes in interest rates on our variable rate debt is mitigated by changes in interest rates attributable to balance earnings.

Foreign currency exchange rate risk

The operation of our subsidiaries in international markets results in our exposure to movements in currency exchange rates. The principal currencies involved are the British pound, Canadian dollar, Australian dollar, Thai baht and Indian rupee. Our international subsidiaries use the local currency as the functional currency. We translate our assets and liabilities at year-end exchange rates and translate income and expense accounts at average rates during the year. Currency exchange rate fluctuations have not historically significantly affected our consolidated financial results.

At December 31, 2017, our international subsidiaries for our continuing operations had approximately $758.1 million in total assets and for the year ended December 31, 2017, these international subsidiaries recorded net income of approximately $70.4 million. We estimate that a 10% change in exchange rates would have changed total consolidated assets by approximately $75.8 million. Furthermore, a 10% change in exchange rates based upon historical earnings in international operations would have changed consolidated net income for 2017 by approximately $7.0 million.

We have entered into foreign currency cash flow and economic hedging programs to mitigate the impact of movements in foreign currency (principally British pound, Australian dollar, Thai baht and Indian rupee) on our operations. The total notional value of our foreign currency derivatives was $101.1 million at December 31, 2017. The fair value of the contracts that qualify for hedge accounting resulted in an asset of $0.2 million at December 31, 2017. We estimate that a 10% change in exchange rates would result in a $0.9 million change in other comprehensive income. The fair value of the contracts that do not qualify for hedge accounting resulted in a liability of $0.3 million at December 31, 2017. We estimate a 10% change in exchange rates on these contracts would result in a $4.8 million change to consolidated net income. Gains and losses on the derivative instruments are largely offset by changes in the underlying hedged items, resulting in a minimal impact on earnings.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of DST Systems, Inc.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of DST Systems, Inc. and its subsidiaries as of December 31, 2017 and December 31, 2016, and the related consolidated statements of income, of comprehensive income, of changes in stockholders’ equity and cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and December 31, 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report of Management on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in the Report of Management on Internal Control over Financial Reporting, management has excluded Boston Financial Data Services, Inc. (“BFDS”) and International Financial Data Services Limited (“IFDS UK”) from its assessment of internal control over financial reporting as of December 31, 2017 because the entities were acquired by the Company in a purchase business combination during 2017. We have also excluded BFDS and IFDS UK from our audit of internal control over financial reporting. BFDS is a wholly-owned subsidiary whose total assets and total revenues excluded from management’s assessment and our audit of internal control over financial reporting represent 15% and 13%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017. IFDS UK is a wholly-owned subsidiary whose total assets and total revenues excluded from management’s assessment and our audit of internal control over financial reporting represent 25% and 22%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017.

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Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

Kansas City, Missouri
February 28, 2018

We have served as the Company's auditor since 1969.

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DST Systems, Inc.
Consolidated Balance Sheet
(dollars in millions, except per share amounts)

	December 31, 2017	December 31, 2016
Assets		
Current assets		
Cash and cash equivalents	$ 80.5	$ 195.5
Funds held on behalf of clients	454.5	500.5
Client funding receivable	47.0	64.1
Accounts receivable (includes related party receivables of $6.7 and $19.7)	363.8	215.5
Other assets	91.9	70.0
Current assets held for sale	—	72.6
	1,037.7	1,118.2
Investments	199.7	377.4
Unconsolidated affiliates	94.0	331.2
Properties, net	349.8	235.7
Intangible assets, net	283.1	142.6
Goodwill	799.1	516.4
Other assets	174.8	50.3
Total assets	$ 2,938.2	$ 2,771.8
Liabilities		
Current liabilities		
Current portion of debt	$ 83.7	$ 208.5
Client funds obligations	504.2	564.6
Accounts payable	101.2	62.9
Accrued compensation and benefits	137.9	101.7
Deferred revenues and gains	28.3	23.5
Income taxes payable	5.0	22.0
Other liabilities	111.0	78.1
Current liabilities held for sale	—	30.1
	971.3	1,091.4
Long-term debt	537.1	299.7
Income taxes payable	75.0	69.8
Deferred income taxes	62.0	151.5
Other liabilities	51.6	22.9
Total liabilities	1,697.0	1,635.3
Commitments and contingencies (Note 16)		
Redeemable Non-controlling Interest	—	21.3
Stockholders’ Equity		
Preferred stock, $0.01 par, 10 million shares authorized and unissued	—	—
Common stock, $0.01 par, 400 million shares authorized, and 64.4 million and 82.0 million shares issued, respectively	0.6	0.8
Additional paid-in capital	112.7	129.2
Retained earnings	1,489.3	2,379.2
Treasury stock, at cost	(362.8)	(1,410.6)
Accumulated other comprehensive income	1.4	16.6
Total stockholders’ equity	1,241.2	1,115.2

Total liabilities, redeemable non-controlling interest and stockholders' equity	$ 2,938.2	$ 2,771.8

The accompanying notes are an integral part of these financial statements.

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DST Systems, Inc.
Consolidated Statement of Income
(in millions, except per share amounts)

	Year Ended December 31, 2017	2016	2015
Operating revenues	$ 2,086.7	$ 1,474.4	$ 1,405.0
Out-of-pocket reimbursements	131.5	82.3	69.0
Total revenues (includes related party revenues of $58.5, $150.7 and $150.3)	2,218.2	1,556.7	1,474.0
Costs and expenses	1,805.0	1,213.4	1,150.2
Depreciation and amortization	128.0	96.0	91.1
Operating income	285.2	247.3	232.7
Interest expense	(26.8)	(23.5)	(23.8)
Gain on sale of business	—	5.5	—
Other income, net	219.0	22.7	204.5
Equity in earnings of unconsolidated affiliates	54.5	27.2	45.4
Income from continuing operations before income taxes and non-controlling interest	531.9	279.2	458.8
Income taxes	84.3	101.1	149.2
Income from continuing operations before non-controlling interest	447.6	178.1	309.6
Income from discontinued operations, net of tax	4.5	248.3	48.5
Net income	452.1	426.4	358.1
Net (income) loss attributable to non-controlling interest	(0.6)	0.9	0.1
Net income attributable to DST Systems, Inc.	$ 451.5	$ 427.3	$ 358.2
Weighted average common shares outstanding	61.4	66.0	72.0
Weighted average diluted shares outstanding	62.1	66.6	72.9
Basic earnings per share:			
Continuing operations attributable to DST Systems, Inc.	$ 7.28	$ 2.71	$ 4.30
Discontinued operations	0.07	3.76	0.67
Basic earnings per share	$ 7.35	$ 6.47	$ 4.97
Diluted earnings per share:			
Continuing operations attributable to DST Systems, Inc.	$ 7.20	$ 2.68	$ 4.25
Discontinued operations	0.07	3.73	0.67
Diluted earnings per share	$ 7.27	$ 6.41	$ 4.92
Cash dividends per share of common stock	$ 0.72	$ 0.66	$ 0.60

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.
Consolidated Statement of Comprehensive Income
(in millions)

	Year Ended December 31,		
	2017	2016	2015
Net income attributable to DST Systems, Inc.	$ 451.5	$ 427.3	$ 358.2
Other comprehensive loss, net of tax (Note 13):			
Available-for-sale securities	(93.2)	10.1	(123.2)
Cash flow hedges	0.2	—	0.2
Defined benefit pension	4.1	—	—
Foreign currency translation	73.7	(35.4)	(22.0)
Other comprehensive loss, net of tax	(15.2)	(25.3)	(145.0)
Comprehensive income	$ 436.3	$ 402.0	$ 213.2

The accompanying notes are an integral part of these financial statements.

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DST Systems, Inc.
Consolidated Statement of Changes in Stockholders' Equity
(in millions)

	Common Stock						
	Shares Outstanding	Par Value	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income	Total Stockholders' Equity
December 31, 2014	75.2	$ 0.8	$ 114.1	$ 1,682.9	$ (748.3)	$ 186.9	$ 1,236.4
Comprehensive income:							
Net income attributable to DST Systems, Inc.	—	—	—	358.2	—	—	358.2
Other comprehensive loss	—	—	—	—	—	(145.0)	(145.0)
Dividends	—	—	1.4	(44.5)	—	—	(43.1)
Amortization of share-based compensation	—	—	27.9	—	—	—	27.9
Issuance of common stock	0.6	—	(5.2)	—	23.9	—	18.7
Repurchase of common stock	(7.2)	—	—	—	(405.3)	—	(405.3)
Other	—	—	(1.8)	—	—	—	(1.8)
December 31, 2015	68.6	0.8	136.4	1,996.6	(1,129.7)	41.9	1,046.0
Comprehensive income:							
Net income attributable to DST Systems, Inc.	—	—	—	427.3	—	—	427.3
Other comprehensive loss	—	—	—	—	—	(25.3)	(25.3)
Dividends	—	—	1.3	(44.7)	—	—	(43.4)
Amortization of share-based compensation	—	—	16.3	—	—	—	16.3
Issuance of common stock	0.8	—	(24.5)	—	34.9	—	10.4
Repurchase of common stock	(5.4)	—	—	—	(315.8)	—	(315.8)
Other	—	—	(0.3)	—	—	—	(0.3)
December 31, 2016	64.0	0.8	129.2	2,379.2	(1,410.6)	16.6	1,115.2
Comprehensive income:							
Net income attributable to DST Systems, Inc.	—	—	—	451.5	—	—	451.5
Other comprehensive loss	—	—	—	—	—	(15.2)	(15.2)
Dividends	—	—	1.0	(44.7)	—	—	(43.7)
Amortization of share-based compensation	—	—	44.2	—	—	—	44.2
Issuance of common stock	0.4	—	(21.2)	—	24.2	—	3.0
Repurchase of common stock	(5.1)	—	—	—	(314.3)	—	(314.3)
Distribution of treasury stock for stock split	—	(0.2)	(40.5)	(1,297.2)	1,337.9	—	—
Other	—	—	—	0.5	—	—	0.5
December 31, 2017	59.3	$ 0.6	$ 112.7	$ 1,489.3	$ (362.8)	$ 1.4	$ 1,241.2

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.
Consolidated Statement of Cash Flows
(in millions)

	Year Ended December 31,		
	2017	2016	2015
Cash flows—operating activities:			
Net income	$ 452.1	$ 426.4	$ 358.1
Less: income from discontinued operations	4.5	248.3	48.5
Income from continuing operations	447.6	178.1	309.6
Depreciation and amortization	128.0	96.0	91.1
Net gains on investments	(153.8)	(2.4)	(163.6)
Gain recognized on step-up of unconsolidated affiliates	(43.8)	—	—
Gains on sale of properties and businesses	(0.6)	(5.6)	(4.5)
Amortization of share-based compensation	43.6	12.2	24.1
Equity in earnings of unconsolidated affiliates	(54.5)	(27.2)	(45.4)
Cash dividends from unconsolidated affiliates	—	0.4	3.5
Deferred income taxes	(27.1)	17.0	(15.5)
Changes in accounts receivable	13.9	(16.0)	(10.6)
Changes in other assets	(127.9)	(0.8)	(9.4)
Changes in client funds obligations	(17.1)	10.9	9.9
Changes in client funding receivable	17.1	(10.9)	(9.9)
Changes in accounts payable and accrued liabilities	(39.9)	16.6	(1.8)
Changes in income taxes payable	12.1	(67.9)	(31.6)
Changes in deferred revenues and gains	(29.6)	(4.6)	(2.1)
Changes in accrued compensation and benefits	(10.2)	(26.9)	(7.7)
Other, net	6.2	(6.2)	(0.4)
Net cash provided from continuing operating activities	164.0	162.7	135.7
Net cash provided from (used in) discontinued operating activities	(12.1)	26.4	84.5
Net cash provided from operating activities	151.9	189.1	220.2
Cash flows—investing activities:			
Cash paid for capital expenditures	(78.8)	(60.4)	(88.9)
Investments in securities	(62.8)	(258.3)	(166.4)
Proceeds from (investments in and advances to) unconsolidated affiliates, net	32.7	(23.8)	11.1
Proceeds from sale / maturities of investments	102.6	317.8	358.6
Net increase (decrease) in restricted cash and cash equivalents held to satisfy client funds obligations	43.3	(20.3)	(113.5)
Proceeds from sale of properties	—	5.7	6.1
Acquisition of businesses, net of cash and cash equivalents acquired	(38.9)	(93.5)	(117.4)
Proceeds from sale of businesses, net of cash and cash equivalents sold	1.2	14.5	7.9
Other, net	—	1.0	0.1
Net cash used in continuing investing activities	(0.7)	(117.3)	(102.4)
Net cash provided from discontinued investing activities	40.6	412.9	104.9
Net cash provided from investing activities	39.9	295.6	2.5
Cash flows—financing activities:			
Proceeds from issuance of common stock	2.8	5.3	11.8
Principal payments on debt	(108.2)	(5.1)	(46.4)
Proceeds from issuance of senior notes	350.0	—	—
Net proceeds (repayments) on accounts receivable securitization program	(88.3)	103.2	(120.0)
Net borrowings (repayments) on revolving credit facilities	(75.0)	(151.1)	181.8
Net increase (decrease) in client funds obligations	(43.3)	20.3	124.0
Receipt of third party capital in investment fund	0.8	7.1	15.0
Common stock repurchased	(310.6)	(315.8)	(405.3)
Payment of cash dividends	(43.7)	(43.4)	(43.1)

The accompanying notes are an integral part of these financial statements.

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DST Systems, Inc.
Consolidated Statement of Cash Flows, continued
(in millions)

	December 31,		
	2017	**2016**	**2015**
Excess tax benefits from share-based compensation	—	4.7	5.6
Other, net	(1.9)	—	(2.1)
Net cash used for continuing financing activities	(317.4)	(374.8)	(278.7)
Net cash used for discontinued financing activities	(0.2)	—	(6.1)
Net cash used for financing activities	(317.6)	(374.8)	(284.8)
Effect of exchange rates on cash and cash equivalents	6.8	—	—
Net increase (decrease) in cash and cash equivalents, including cash within assets held for sale	(119.0)	109.9	(62.1)
Cash and cash equivalents, beginning of year	199.5	89.6	151.7
Cash and cash equivalents, end of year	80.5	199.5	89.6
Less: cash and cash equivalents held for sale	—	4.0	10.1
Cash and cash equivalents of continuing operations, end of year	$ 80.5	$ 195.5	$ 79.5

The accompanying notes are an integral part of these financial statements.

DST Systems, Inc.

Notes to Consolidated Financial Statements

1. Description of Business

DST Systems, Inc. and consolidated subsidiaries ("we," "our," "us," the "Company" or "DST") use proprietary software applications to provide sophisticated information processing and servicing solutions, through strategically unified business processing and data management, to clients globally within the asset management, brokerage, retirement, healthcare and other markets. Our wholly-owned data centers provide the secure technology infrastructure necessary to support our solutions.

On January 11, 2018, we entered into an Agreement and Plan of Merger (the "Merger Agreement") wherein SS&C Technologies Holdings, Inc. ("SS&C") will acquire DST (the "Merger"). Under the terms of the agreement, SS&C will purchase DST in an all-cash transaction for $84.00 per share plus the assumption of debt, equating to an enterprise value of approximately $5.4 billion. The Company has agreed to customary covenants in the Merger Agreement, including with respect to the Company's operation of its business prior to the closing of the transaction or termination of the agreement, such as restrictions on making certain acquisitions and divestitures, entering into certain contracts, incurring certain indebtedness and expenditures, paying dividends, repurchasing stock and taking other specified actions. The transaction is subject to DST stockholder approval, clearances by the relevant regulatory authorities and other customary closing conditions and is currently expected to close by the end of the second quarter 2018; however, there can be no assurances as to the actual closing or the timing of the closing. Under certain circumstances, we would be required to pay a termination fee of $165.0 million to SS&C in the event the Merger Agreement with SS&C is terminated.

In March 2017, we acquired State Street Corporation's ("State Street") ownership interest in our joint ventures Boston Financial Data Services, Inc. ("BFDS") and International Financial Data Services U.K. Limited ("IFDS U.K."), as well as other investments and real estate held by International Financial Data Services, L.P. ("IFDS L.P."). BFDS and IFDS U.K. were consolidated in our financial results from the date control of these entities was obtained. See Note 3, "Significant Business Transactions," for additional information.

Beginning in 2017, DST established a new reportable segment structure that separates the previously reported Financial Services segment into two new segments, Domestic Financial Services and International Financial Services, based upon the geographical location of the revenue-generating business. The activity within the previously reported Investments and Other segment has now been included in either the Domestic or International Financial Services segments based on the business supported. The Healthcare Services segment remains unchanged. The new segment presentation is reflective of how management is now operating the business and making resource allocations following the acquisitions of the remaining interests in BFDS and IFDS U.K., as well as the recent reductions in non-core investment assets. The Company's operating business units are now reported as three operating segments (Domestic Financial Services, International Financial Services and Healthcare Services). Prior periods have been revised to reflect the new reportable operating segments.

In May 2017, our Board of Directors declared a two-for-one stock split of DST's outstanding common stock effected in the form of a stock dividend, which was paid on June 8, 2017 to shareholders of record at the close of business on May 26, 2017. In connection with the stock split, 16.5 million treasury shares were used to settle a portion of the distribution. All share and per share data, excluding treasury shares, have been retroactively adjusted for all periods presented to reflect the stock split, as if the stock split had occurred at the beginning of the earliest period presented.

We sold our North American Customer Communications business on July 1, 2016 and sold our United Kingdom ("U.K.") Customer Communications business on May 4, 2017. We have classified the results of the Customer Communications businesses sold as discontinued operations in our consolidated financial statements for all periods presented. See Note 4, "Discontinued Operations," for additional information.

2. Significant Accounting Policies

Principles of consolidation

The consolidated financial statements include all majority-owned subsidiaries of the Company. Intercompany balances and transactions have been eliminated. Certain amounts in the 2016 and 2015 consolidated financial statements have been reclassified to conform to the 2017 presentation. The adjustments to prior years relate to the 2017 stock split and segment realignment.

We consolidate any entity in which we have a controlling financial interest. Under the voting interest model, generally the investor that has voting control (usually more than 50% of an entity's voting interests) consolidates the entity. Under the variable interest entity ("VIE") model, the party that has the power to direct the entity's most significant economic activities and the ability to participate in the entity's economics consolidates the entity. An entity is considered a VIE if it possesses one of the following characteristics: 1) the entity is thinly capitalized; 2) residual equity holders do not control the entity; 3) equity holders are shielded from economic losses; 4) equity holders do not participate fully in an entity's residual economics; and 5) the entity was established with non-substantive voting interests.

For consolidated subsidiaries that are less than wholly owned, the third-party holdings of equity interests are referred to as non-controlling interests. Non-controlling interests that are redeemable or convertible for cash or other assets at the option of the holder are classified separate from stockholders' equity on the Consolidated Balance Sheet. The portion of net income (loss) attributable to the non-controlling interest for such subsidiaries is presented as net income (loss) attributable to non-controlling interest in the Consolidated Statement of Income.

We had the following significant operating joint ventures prior to March 2017: BFDS; IFDS U.K.; and IFDS L.P. We did not have a controlling financial interest in these entities and therefore accounted for the financial results of these operating joint ventures using the equity method of accounting. In March 2017, we acquired State Street's ownership in both BFDS and IFDS U.K., which resulted in control of the entities. As such, they were consolidated in our financial results from the date control was obtained. We continue to account for IFDS L.P. as an equity method investment.

We are the lessee in a series of operating leases covering a large portion of our Kansas City, Missouri-based leased office facilities. The lessors are generally joint ventures (in which we have a 50% ownership) that have been established specifically to purchase, finance and engage in leasing activities with the joint venture partners and unrelated third parties. Our analysis of our real estate joint ventures for all periods presented indicate that none qualified as a VIE and, accordingly, they have not been consolidated.

We provide investment management services to, and have transactions with, various exchange traded funds, mutual funds and other investment products sponsored by the Company in the normal course of business. We generally are considered to have a controlling financial interest in a fund when we own a majority of the outstanding controlling shares, which may arise as a result of seed capital investments in newly launched investment products from the time of initial launch to the time that the fund becomes majority-held by third-party investors.

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ from those estimates.

Revenue recognition

We recognize revenue when it is realized or realizable and it is earned. The majority of our revenues are derived from computer processing and services and are recognized upon completion of the services provided. Software license fees, maintenance fees and other ancillary fees are recognized as services are provided or delivered and all client obligations have been met. We periodically provide upfront cash payments to our clients to assist with the significant upfront costs associated with converting to new systems. Such payments are initially recorded within Other assets on the Consolidated Balance Sheet and treated as a reduction of revenue over the term of the related contract. We generally do not have payment terms from clients that extend beyond one year. Revenue from operating leases is recognized monthly as the rent accrues. Billing for services in which cash is collected in advance of performance is recorded as deferred revenue. Allowances for billing adjustments and bad debt expense are estimated as revenues are recognized. Allowances for billing adjustments are recorded as reductions in revenues and bad debt expense is recorded within Costs and expenses. The annual amounts for these items are generally immaterial to our consolidated financial statements, however in 2017 we had $37.5 million of bad debt expense, which is reflected in Costs and expenses, primarily as a result of a client termination agreement.

We recognize revenue when the following criteria are met: 1) persuasive evidence of an arrangement exists; 2) delivery has occurred or services have been rendered; 3) the sales price is fixed or determinable; and 4) collectability is reasonably assured. If there is a client-specific acceptance provision in a contract or if there is uncertainty about client acceptance, the associated revenue is deferred until we have evidence of client acceptance.

Revenue arrangements with multiple deliverables are evaluated to determine if the deliverables (items) can be divided into more than one unit of accounting. An item can generally be considered a separate unit of accounting if both of the following criteria are met: 1) the delivered item(s) has value to the client on a standalone basis and 2) if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Once separate units of accounting are determined, the arrangement consideration is allocated at the inception of the arrangement to all deliverables using the relative selling price method. Relative selling price is obtained from sources such as vendor-specific objective evidence, which is based on the separate selling price for that or a similar item or from third-party evidence such as how competitors have priced similar items. If such evidence is unavailable, we use our best estimate of the selling price, which includes various internal factors such as our pricing strategy and market factors.

Software license revenues are recognized at the time the contract is signed, the software is delivered and no future software obligations exist. Deferral of software license revenue results from delayed payment provisions, disproportionate discounts between the license and other services or the inability to unbundle certain services. We recognize revenues for maintenance services ratably over the contract term, after collectability has been reasonably assured.

Reimbursements received for "out-of-pocket" ("OOP") expenses, such as postage and telecommunications charges, are recorded as revenue on an accrual basis. Because these additional revenues are offset by the reimbursable expenses incurred, there is minimal impact on income from operations and net income. For each segment, total revenues are reported in two categories, operating revenues and OOP reimbursements. OOP expenses are included in costs and expenses.

Costs and expenses

Costs and expenses include all costs, excluding depreciation and amortization, incurred to produce revenues. We believe that the nature of our business as well as our organizational structure, in which virtually all officers and associates have operational responsibilities, does not allow for a meaningful segregation of selling, general and administrative costs. These costs, which we believe to be immaterial, are also included in costs and expenses. Substantially all depreciation and amortization is directly associated with the production of revenues.

Cash equivalents

Short-term liquid investments with original maturities of 90 days or less are considered cash equivalents. Due to the short-term nature of these investments, carrying value approximates market value.

Client funds/obligations

Funds held on behalf of clients

In connection with providing data processing services for our clients, we may hold client funds on behalf of transfer agency clients and pharmacy processing clients. End-of-day available client bank balances for full service mutual fund transfer agency clients are invested overnight. Invested balances are returned to the full service mutual fund transfer agency client accounts the following business day. Funds received from clients for the payment of pharmacy claims incurred by its members are invested until the claim payments are presented to the bank. These amounts are included in funds held on behalf of clients in the Consolidated Balance Sheet and represent assets that are restricted for use.

Client funding receivable

Client funding receivables represent amounts due to us for pharmacy claims paid in advance of receiving client funding and for pharmacy claims processed for which client funding requests have not been made.

Client funds obligations

Client funds obligations represent our contractual obligations to remit funds to satisfy client pharmacy claim obligations and are recorded on the balance sheet when incurred, generally after a claim has been processed by us. In addition, client funds obligations include transfer agency client balances invested overnight.

We have reported the cash flows related to the purchases of investment funds (available-for-sale securities) held on behalf of clients and the cash flows related to the proceeds from the sales/maturities of investment funds held on behalf of clients on a gross basis in the investing section of the Consolidated Statement of Cash Flows. We have reported the cash inflows and outflows related to client fund investments on a net basis within net (increase) decrease in restricted cash and cash equivalents held to satisfy client funds obligations in the investing section of the Consolidated Statement of Cash Flows. We have reported the cash flows related to client funds used in investing activities on a net basis within net increase (decrease) in client funds obligations in the financing section of the Consolidated Statement of Cash Flows.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Investments

The equity method of accounting is used for investments in entities, partnerships and similar interests (including investments in private equity funds where we are the limited partner) in which we have significant influence but do not control. Under the equity method, we recognize income or losses from our pro-rata share of these unconsolidated affiliates' net income or loss, which changes the carrying value of the investment of the unconsolidated affiliate. In certain cases, pro-rata losses are recognized only to the extent of our investment in and advances to the unconsolidated affiliate.

The cost method of accounting is used for these investments when we have a de minimis ownership percentage and do not have significant influence. Our cost method investments are held at the lower of cost or market. These investments do not have readily determinable fair values and the fair value of a cost-method investment is not required to be estimated unless there are identifiable events or changes in circumstances that may have a significant adverse effect on the fair value of the investment.

Investments classified as available-for-sale securities are reported at fair value with unrealized gains and losses excluded from earnings and recorded net of deferred taxes directly to stockholders' equity as accumulated other comprehensive income. Investments in trading securities are reported at fair value with unrealized gains and losses included in earnings. Investments classified as held-to-maturity securities are recorded at amortized cost, which approximates fair value. Fair value adjustments and realized gains and losses are determined on a specific identification basis.

We regularly review investment securities for impairment based on both quantitative and qualitative criteria that include the extent to which cost exceeds fair value, the duration of any market decline, and the financial health of and specific prospects for the issuer. We record an investment impairment charge for an investment with a gross unrealized holding loss resulting from a decline in value that is other than temporary.

Investment funds which are consolidated as a result of our seed capital investment are considered investment companies and therefore we retain the specialized industry accounting principles of these investment products in our consolidated financial statements. Upon consolidation of a fund, the underlying securities of the fund are reflected at fair value with gains and losses included in Other income, net in the Consolidated Statement of Income.

Security transactions and investment income

Security transactions are accounted for on the trade date. Security gains and losses are calculated on the specific identification method. Dividend income is recorded on the ex-dividend date. Interest income, adjusted for discounts and premiums, is recorded on the accrual basis.

Property and equipment

Property and equipment are recorded at cost with major additions and improvements capitalized. Cost includes the amount of interest cost associated with significant capital additions. Depreciation of buildings is recorded using the straight-line method over 30 to 40 years. Technology equipment, furniture, fixtures and other equipment are depreciated using accelerated methods over the estimated useful lives, principally three to five years. Software is depreciated using the straight-line method over the estimated useful lives, generally three to five years. Leasehold improvements are depreciated using the straight-line method over the lesser of the term of the lease or life of the improvements. We review, on a quarterly basis, our property and equipment for possible impairment.

Purchased software is recorded at cost and is amortized over the estimated economic life, which is generally three to five years. We capitalize costs for the development of internal use software, including coding and software configuration costs and costs of upgrades and enhancements, after the preliminary project phase has been completed and management has committed to funding the project. These costs are amortized on a straight-line basis, depending on the nature of the project, generally over a three to five year period. We review, on a quarterly basis, our capitalized software for possible impairment.

Development costs for software that will be sold or licensed to third parties, prior to the achievement of technological feasibility, are expensed as incurred. We capitalize software development costs for software that will be sold or licensed to third parties which are incurred after the products reach technological feasibility but prior to the general release of the product to clients. These capitalized development costs are amortized on a product-by-product basis using the greater of the amount computed by taking the ratio of current year's gross revenues to current and anticipated future gross revenues or the amount computed by the straight-line method over the estimated useful life of the product, which is generally three to five years. We evaluate the net realizable value of capitalized software development costs on a product-by-product basis.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Goodwill and intangible assets

We have recorded goodwill and intangible assets in connection with various acquisitions of businesses. Intangible assets at December 31, 2017 and 2016 primarily represent client relationships and other definite lived intangible assets (trade names, non-compete agreements, etc.) acquired. The estimated useful life on these intangible assets ranges from 3 to 19 years. The weighted average amortization period at December 31, 2017 for client relationships and other intangible assets is 13.0 and 8.7 years, respectively.

We assess the impairment of goodwill at least annually (as of October 1) and assess identifiable intangibles, long-lived assets and related assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Intangible assets that have finite lives will continue to be amortized over their useful lives.

Our assessments of goodwill for impairment for 2017 and 2016 included a quantitative assessment that compared the fair value to the net book value of our reporting units. The fair value of the reporting units was estimated using the present value of expected future cash flows. For 2015, we performed a qualitative assessment that considered various factors, including growth in operating revenues and income from operations of our reporting units since our last quantitative assessment in 2014. Our 2017, 2016 and 2015 annual goodwill impairment tests determined that goodwill was not impaired, except during 2016 for the goodwill held at the Customer Communications U.K. reporting unit, which was included as a component of discontinued operations as of December 31, 2016, as further described in Note 4, "Discontinued Operations."

Income taxes

We recognize the amount of income taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. Deferred income tax effects of transactions reported in different periods for financial reporting and income tax return purposes are recorded by the liability method. This method gives consideration to the future tax consequences of deferred income or expense items and differences between the income tax and financial accounting statement bases of assets and liabilities and immediately recognizes changes in income tax laws upon enactment. The income statement effect is generally derived from changes in deferred income taxes on the balance sheet.

From time to time, we enter into transactions for which the tax treatment under the Internal Revenue Code or applicable state tax laws is uncertain. We provide federal and/or state income taxes on such transactions, together with related interest, net of income tax benefit, and any applicable penalties in accordance with accounting guidance for income tax uncertainties. We record income tax uncertainties that are estimated to take more than 12 months to resolve as non-current. Interest and penalties related to unrecognized tax benefits, if any, are recorded in income tax expense.

Foreign currency translation

Our international subsidiaries use the local currency as the functional currency. We translate our assets and liabilities at period-end exchange rates. Income and expense accounts are translated at average rates during the period.

Earnings per share

Basic earnings per share are determined by dividing net income by the weighted average number of common shares outstanding during the year. Diluted earnings per share are determined by including the dilutive effect of all potential common shares outstanding during the year. See Note 13, "Equity," for additional details regarding our earnings per share computation.

Derivative and hedging activities

We recognize all derivatives as either assets or liabilities in the balance sheet and measure those instruments at fair value and the changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and, if it is, the type of hedge transaction. From time to time, we utilize derivatives to manage interest rate and foreign currency risks. We do not enter into derivative arrangements for speculative purposes. At December 31, 2017 and 2016, we had derivative instruments outstanding as described in Note 11, "Hedging Transactions and Derivative Financial Instruments." We include cash flows related to derivative instruments qualifying for hedge accounting and economic hedges in the same category as the item being hedged in the Consolidated Statement of Cash Flows.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Comprehensive income

Our comprehensive income consists of net income and unrealized gains or losses on available-for-sale securities, our proportional share of unconsolidated affiliates' other comprehensive income (limited by the carrying value of the investment), unrealized gains or losses on our cash flow hedges, changes in defined benefit pension items and foreign currency translation adjustments, which are presented in the Consolidated Statement of Comprehensive Income, net of tax and reclassifications to earnings.

Share-based compensation

We have share-based compensation plans covering our employees and our non-employee directors and have outstanding share awards (primarily in the form of stock options, restricted stock units and performance stock units) under each of these plans. We recognize the cost of employee services received in exchange for awards of equity instruments based on the grant date fair value of those awards. For share-based awards that contain a service feature, we expense the grant date fair value of these awards using the straight-line method over the service period. For share-based awards containing both service and performance features, amortization of expense depends on our judgments whether the performance conditions will be achieved and is incurred over the expected period to achieve the required performance criteria. We account for forfeitures as they occur rather than using an estimated forfeiture rate.

Contingencies

Loss contingencies from legal proceedings and claims may occur from government investigations, shareholder lawsuits, contractual claims, tax and other matters. Accruals are recognized when it is probable that a liability will be incurred and the amount of loss can be reasonably estimated. Gain contingencies (including contingent proceeds related to business divestitures) are not recognized until realized. Legal fees are expensed as incurred.

New authoritative accounting guidance

Recently Adopted Accounting Pronouncements

In January 2017, the Financial Accounting Standards Board ("FASB") issued guidance which simplifies goodwill impairment testing including eliminating the requirement to calculate the implied fair value of goodwill in determining the existence and value of a goodwill impairment. The guidance was adopted by us on January 1, 2017 and effective for our annual goodwill impairment assessment for 2017.

In March 2016, the FASB issued guidance which simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification of related amounts within the statement of cash flows. The guidance was adopted by us on January 1, 2017 and resulted in approximately $3.0 million of excess tax benefits being recognized in Income taxes in the Consolidated Statement of Income for the year ended December 31, 2017. We also elected to account for forfeitures as they occur rather than using an estimated forfeiture rate. The impact to our consolidated financial statements was not material.

Accounting Pronouncements Pending Adoption

In August 2017, the FASB issued guidance which simplifies the hedge accounting model and includes new permitted methodologies for measuring changes in the fair value of hedged risks and new presentation and disclosure requirements. The guidance is effective January 1, 2019 and requires a modified retrospective application for existing hedges on the date of adoption. Early adoption is permitted. We are currently evaluating the standard and the impact it will have on our consolidated financial statements, however we do not expect it to have a material impact on our consolidated financial statements.

In November 2016, the FASB issued guidance which requires the statement of cash flows to explain changes during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. The guidance is effective January 1, 2018 and requires retrospective application. Early adoption is permitted. Beginning January 1, 2018, we will include restricted cash and restricted cash equivalents associated with funds held on behalf of clients, as a component of cash, cash equivalents, restricted cash and restricted cash equivalents in the Consolidated Statement of Cash Flows. The impact on our consolidated financial statements will be limited to cash flows from investing activities.

In October 2016, the FASB issued guidance which requires the recognition of income tax consequences for intra-entity transfers of assets other than inventory. The guidance is effective January 1, 2018 and requires modified retrospective application. Early adoption is permitted. We have evaluated the standard and concluded it will not impact our consolidated financial statements and related disclosures.

In February 2016, the FASB issued guidance which requires lessees to reflect most leases on their balance sheet as assets and obligations. The guidance is effective January 1, 2019 with early adoption permitted. The standard will be applied under the modified retrospective method, with elective reliefs, which requires application of the new guidance for all periods presented. We are currently evaluating the standard and the impact it will have on our consolidated financial statements and related disclosures, however we currently expect that the most significant changes will be related to the recognition of right-of-use assets and lease liabilities in our Consolidated Balance Sheet, with no material impact to our Consolidated Statement of Income.

In January 2016, the FASB issued guidance which updates the reporting model for certain financial instruments, including the requirement for equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. The guidance is effective January 1, 2018 and requires a cumulative-effective adjustment as of the beginning of the fiscal year of adoption. Beginning January 1, 2018, our private equity funds and other investments currently accounted for under the cost method, as well as our available-for-sale securities, will be measured at fair value each reporting period resulting in increased volatility in our Consolidated Statement of Income. We expect to record a $34.7 million pre-tax increase to Investments and Stockholders’ Equity upon adoption of this guidance.

In May 2014, the FASB issued guidance which requires companies to recognize revenue to depict the transfer of promised goods or services to clients in an amount that reflects the consideration it expects to be entitled in exchange for those goods or services. The new standard and subsequently issued amendments is effective January 1, 2018. We will adopt the guidance using the modified retrospective transition approach. We continue to evaluate the impacts of the application of the new standard to our client contracts and expect the adoption of the standard will change the timing of when revenue is recognized for certain revenue streams. We currently anticipate that the majority of our contracts with clients that include account- and/or transaction-based processing fees will be accounted for under the series deliverable guidance in the new standard which will likely result in minimal changes as compared to our historical revenue recognition. These revenues will continue to be recognized over time as a single stand-ready performance obligation. As such, we do not currently anticipate significant changes in current systems or processes and do not believe there will be a material impact of adopting the new revenue standard on our consolidated financial statements.

3. Significant Business Transactions and Events

Significant Business Acquisitions

Acquisition of the remaining interest in BFDS

On March 27, 2017, we entered into a series of definitive agreements to acquire State Street’s equity interest in our BFDS joint venture, which provides shareholder recordkeeping, intermediary and investor services, and regulatory compliance solutions to financial services clients in the United States. We also acquired an investment in a privately-held company and the equity interest in IFDS Realty, LLC, which holds the real estate assets used in BFDS’ operations, through a distribution from IFDS L.P., our 50/50 joint venture with State Street. As a result of these transactions, we expect to enhance the strategic value we can provide to our clients through full service capabilities while also realizing internal synergies through increased scale and operational efficiencies.

The BFDS transaction, which closed on March 30, 2017, was structured as a non–taxable exchange under Section 355 of the Internal Revenue Code. At closing, DST delivered to State Street approximately 2.0 million shares of State Street common stock with a closing date fair value of $163.4 million (with a cost basis for tax purposes of approximately $1.1 million and a cost basis for book purposes of approximately $16.8 million) in exchange for State Street’s equity interest in BFDS. The number of shares delivered at closing was calculated using the negotiated fair value of $157.6 million and the closing price of State Street’s stock at signing. BFDS is included within the Domestic Financial Services segment.

The acquisition of State Street’s 50% equity interest in BFDS was accounted for as a step-acquisition. Accordingly, we remeasured our previously held non-controlling equity interest in BFDS to the estimated fair value of $151.1 million, resulting in a gain of $56.0 million recorded at the acquisition date, within Other income, net in the Consolidated Statement of Income. The fair value of the previously held equity interest in BFDS was determined using various valuation techniques, including market comparable transactions and discounted cash flow analysis adjusted for a control premium. These fair value measurements are based on significant inputs, such as forecasted cash flows and discount rates, that are not observable in the market (Level 3). In addition, we recognized a $146.6 million gain in Other income, net in the Consolidated Statement of Income related to the State Street shares exchanged in the transaction.

The factors described above, combined with the synergies expected from combining our operations with the acquired entity and the resulting enhanced clarity in the service offerings available to our clients, are the basis for the acquisition price paid resulting in $68.7 million of goodwill included in total assets of the Domestic Financial Services segment, none of which is expected to be deductible for tax purposes.

The transaction was accounted for using the acquisition method of accounting, and as such, assets acquired, liabilities assumed, and consideration transferred were recorded at their estimated fair values on the acquisition date. Subsequent to the acquisition date, our initial purchase price allocation and estimate of fair value for certain intangible assets and related income tax effects were adjusted based on facts and circumstances existing at the acquisition date. Future adjustments to the purchase price allocation could be significant as valuations for tangible, intangible assets and contingent liabilities are finalized and the associated income tax impacts are determined.

The following table summarizes the aggregate acquisition-date fair value of the consideration transferred for the acquisition of BFDS and the amounts recognized as of the acquisition date for the assets acquired and liabilities assumed (in millions):

Consideration		
Fair value of common stock used to acquire the remaining equity interests in BFDS, certain investments and real estate	$	163.4
Estimated fair value of DST's previously-held equity interests (1)		151.1
Effective settlement of pre-existing relationships		(5.9)
Total consideration transferred	$	308.6
Recognized amounts of identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	$	96.8
Accounts receivable		81.6
Other current assets		3.6
Investments (2)		35.8
Properties (3)		22.6
Intangible assets		57.2
Goodwill		68.7
Deferred income taxes		2.2
Other assets		3.2
Total assets		371.7
Accounts payable		5.2
Accrued compensation and benefits		15.4
Deferred revenue		2.1
Other current liabilities		7.4
Other liabilities		33.0
Total liabilities		63.1
Net assets acquired	$	308.6

(1) Equals the estimated fair value of DST's previously-held equity interest in BFDS valued at $151.1 million, which represents an approximate 7.5% discount to the acquisition price for State Street's equity interests in BFDS prior to the acquisition date. The difference between the fair value of State Street common stock transferred of $163.4 million and the $151.1 million represents an estimate of a control premium, which has not been included in the valuation of DST's previous non-controlling interest.

(2) As a result of the acquisition of the remaining interests in BFDS, we acquired certain investments associated with active deferred compensation plans for senior management and certain highly compensated employees. Approximately $3.7 million of the underlying investments were in DST common stock. As a result, the common stock was considered effectively repurchased at the acquisition date and reclassified to Treasury stock in the Consolidated Balance Sheet.

(3) Includes $2.0 million of acquired software with a weighted-average useful life of 5 years.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following table summarizes the intangible assets acquired and estimated weighted-average useful lives as of the acquisition date (in millions):

	Fair Value	Weighted-Average Useful Life
Client relationships	$ 57.2	13 years

The operating results of BFDS were combined with our operating results subsequent to the acquisition date. Approximately $206.9 million of total revenues, net of intercompany eliminations, and $28.8 million of pretax income of the acquired business is included in the Consolidated Statement of Income for the year ended December 31, 2017.

Acquisition of the remaining interests in IFDS U.K.

On March 27, 2017, we acquired State Street’s ownership of our IFDS U.K. joint venture, an investor and policy holder administrative services and technology provider to the collective funds, insurance, and retirement industries, for $141.0 million. Additionally, we acquired from our IFDS L.P. joint venture both the equity interest in IFDS Realty U.K. LLC (“IFDS Realty U.K.”), which holds certain real estate utilized by the U.K. business, and the equity interest in IFDS Percana Group Ltd. (“IFDS Percana”) for total cash consideration of $68.0 million. As a result of DST’s 50% ownership in IFDS L.P., approximately half of the cash consideration DST paid to IFDS L.P. was distributed to DST in the form of a distribution, resulting in net cash paid for the acquisition, after cash distributions of approximately $175.0 million. The acquisition was funded through cash on hand and our existing debt facilities. In addition, concurrent with the acquisition of the remaining interests in IFDS U.K., we also purchased State Street’s notes receivable from IFDS U.K. for cash consideration of $25.9 million, which approximated the fair value of the note at the acquisition date. We will continue to service offshore and cross-border markets in Canada, Ireland and Luxembourg through IFDS L.P., our 50/50 joint venture with State Street. IFDS U.K., IFDS Realty U.K. and IFDS Percana are included within the International Financial Services segment. As a result of these transactions, we expect to enhance the strategic value we can provide to our clients through full service capabilities while also realizing internal synergies through increased scale and operational efficiencies.

The acquisition of State Street’s 50% equity interest in IFDS U.K. was accounted for as a step-acquisition. Accordingly, we remeasured our previously held non-controlling equity interest in IFDS U.K. to the estimated fair value of $136.8 million, resulting in a loss of $12.2 million at the acquisition date, which is included in Other income, net in the Consolidated Statement of Income. The fair value of the previously held equity interest in IFDS U.K. was determined using various valuation techniques, including market comparable transactions and discounted cash flow analysis adjusted for a control premium. These fair value measurements are based on significant inputs, such as forecasted cash flows and discount rates, that are not observable in the market (Level 3).

The factors described above, combined with the benefits expected from the opportunities for enhanced efficiencies in our delivery model, are the basis for the acquisition price paid resulting in $196.7 million of goodwill included in total assets of the International Financial Services segment, of which $18.9 million is expected to be deductible for tax purposes.

The transaction was accounted for using the acquisition method of accounting, and as such, assets acquired, liabilities assumed, and consideration transferred were recorded at their estimated fair values on the acquisition date. Subsequent to the acquisition date, our initial purchase price allocation and estimate of fair value for certain intangible assets and related income tax effects were adjusted based on facts and circumstances existing at the acquisition date. Future adjustments to the purchase price allocation could be significant as valuations for certain tangible assets, intangible assets and contingent liabilities are finalized and associated income tax impacts are determined.

The following table summarizes the aggregate acquisition-date fair value of the consideration transferred for the acquisition of the remaining interests in IFDS U.K., IFDS Realty U.K. and IFDS Percana and the amounts recognized as of the acquisition date for the assets acquired and liabilities assumed (in millions):

Consideration		
Cash paid to acquire the remaining equity interests in IFDS U.K. and other related interests (1)	$	234.9
Estimated fair value of previously-held equity interests (2)		136.8
Effective net settlement of pre-existing relationships		54.5
Total consideration transferred	$	426.2
Recognized amounts of identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	$	99.2
Accounts receivable		101.7
Other current assets		14.4
Properties (3)		94.7
Intangible assets		104.0
Goodwill		196.7
Deferred income taxes		11.6
Other assets		2.1
Total assets		624.4
Current portion of long-term debt		2.8
Accounts payable		29.1
Accrued compensation and benefits		23.6
Deferred revenue		31.1
Other current liabilities		61.7
Long-term debt		26.3
Other liabilities		23.6
Total liabilities		198.2
Net assets acquired	$	426.2

(1) Cash paid is comprised of cash payments to acquire State Street's equity interest in IFDS U.K. and a note receivable from IFDS U.K., as well as IFDS L.P.'s equity interests in IFDS Percana and IFDS Realty U.K.

(2) Equals the estimated fair value of DST's previously-held equity interest in IFDS U.K. valued at $136.8 million, which represents an approximate 3.0% discount to the acquisition price for State Street's equity interests in IFDS U.K. prior to the acquisition date. The difference between the $141.0 million of cash paid to acquire State Street's equity interests in IFDS U.K. and the $136.8 million represents an estimate of a control premium, which has not been included in the valuation of DST's previous non-controlling interest.

(3) Includes $21.0 million of acquired software with a weighted-average useful life of 6 years.

The following table summarizes the intangible assets acquired and estimated weighted-average useful lives as of the acquisition date (in millions):

	Fair Value		Weighted-Average Useful Life
Client relationships	$	104.0	10 years

The operating results of IFDS U.K. were combined with our operating results subsequent to the acquisition date. Approximately $436.7 million of total revenues, net of intercompany eliminations, and $79.0 million of pretax income of the acquired business is included in the Consolidated Statement of Income for the year ended December 31, 2017. These amounts include the financial impact of a formal termination agreement that was reached with a wealth management platform client for whom we were completing multi-year development and implementation efforts. As a result of this agreement, during 2017, DST recognized previously deferred revenue and termination payments received totaling $93.2 million as incremental operating revenue. DST also incurred bad debt expense of $34.5 million for previously invoiced services for which payment will now not be collected and $5.2 million of other termination-related charges.

In April 2017, we signed an amendment to an existing servicing agreement, which extends in excess of ten years, with a U.K. wealth management platform client. As part of this amendment, we made up-front payments totaling £60.0 million to the client during 2017 which have been classified within Other assets on the Consolidated Balance Sheet. These payments are expected to be recovered over the term of the revised contractual arrangement.

The following table summarizes the unaudited pro forma results of operations for the years ended December 31, 2017 and 2016 as if the BFDS and IFDS U.K. acquisitions had occurred on January 1, 2016 (in millions, except per share amounts):

	Year Ended December 31,	
	2017	2016
Total revenues	$ 2,366.3	$ 2,327.0
Net income attributable to DST Systems, Inc.	273.0	386.3
Diluted earnings per share	4.40	5.79

The pro forma financial information adjusts the actual combined results for items that are recurring in nature and directly attributable to the acquisitions of the remaining interests in BFDS and IFDS U.K., including intangible asset amortization and fair value adjustments for property, plant and equipment, deferred revenue and other transaction related items. The year ended December 31, 2017 pro forma information was reduced by the net gains resulting from the transaction of $188.6 million. The unaudited pro forma amounts have been prepared based on estimates and assumptions, which we believe are reasonable, and are not indicative of what actual consolidated results of operations might have been if the acquisitions had been effective at the beginning of 2016, nor is it reflective of our expected actual results of operations for any future period.

We incurred approximately $5.1 million of pretax costs from 2015 through the year ended December 31, 2017 in connection with our acquisitions of the remaining interests in BFDS and IFDS U.K., which are included in Costs and expenses in our Consolidated Statement of Income.

Acquisition of Kaufman Rossin Fund Services LLC

On February 24, 2016, we acquired all of the membership interests of Kaufman Rossin Fund Services LLC ("KRFS"), for $94.7 million in cash. DST financed the acquisition through cash-on-hand and available lines of credit. KRFS is an independent, full-service provider of specialized hedge fund administration services to the global financial community. KRFS' hedge fund services include accounting and valuation, back-office outsourcing, investor services, treasury services, and customized reporting. We expect the acquisition to provide us with additional opportunities within the alternative investment marketplace and expand our asset administration service offerings.

The factors described above, combined with the synergies expected from combining our operations with the acquired entity and the resulting expansion of the service offerings available to our clients, are the basis for the acquisition price paid resulting in $61.0 million of goodwill recorded, all of which is expected to be deductible for tax purposes. KRFS is included within the Domestic Financial Services segment. The transaction was accounted for using the acquisition method of accounting, and as such, assets acquired, liabilities assumed, and consideration transferred were recorded at their estimated fair values on the acquisition date.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following table summarizes the aggregate acquisition-date fair value of the consideration transferred for the acquisition of KRFS and the amounts recognized as of the acquisition date for the assets acquired and liabilities assumed (in millions):

Consideration		
Cash paid	$	94.7
Recognized amounts of identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	$	1.0
Accounts receivable		2.9
Other current assets		0.1
Investments		0.5
Properties (1)		6.8
Intangible assets		23.4
Goodwill		61.0
Total assets		95.7
Deferred revenue		0.6
Other current liabilities		0.4
Total liabilities		1.0
Net assets acquired	$	94.7

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(1) Includes $6.5 million of acquired software with a weighted-average useful life of 6 years.

The following table summarizes the intangible assets acquired and estimated weighted-average useful lives as of the acquisition date (in millions):

		Fair Value	Weighted-Average Useful Life
Client relationships	$	22.5	10 years
Other		0.9	3 years
	$	23.4	

The operating results of KRFS were combined with our operating results subsequent to the acquisition date. Approximately $20.9 million of revenues and $1.1 million of pretax income of the acquired business are included in the Consolidated Statement of Income for the year ended December 31, 2016. Pro-forma results of operations, assuming this acquisition was made at the beginning of the earliest period presented, have not been presented as the effect of this acquisition is not material to our results.

The following acquisitions during 2015 are included within the Domestic Financial Services segment:

Acquisition of kasina LLC

On January 1, 2015, we acquired all of the membership interests of kasina LLC, a strategic advisory firm to the asset management industry for $9.0 million of upfront cash consideration and up to $2.1 million of performance-related contingent consideration, based on the terms of the agreement, which were amended during 2016. The contingent consideration requires, subject to certain exceptions, future employment over the course of the performance period. The acquisition provides us with additional opportunities to provide a combination of advisory, research, technology and analytics to asset managers.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Acquisition of Red Rocks Capital LLC

On July 31, 2015, we acquired all of the membership interests of asset manager Red Rocks Capital LLC, which focuses on listed private equity and other private asset investments, for $45.0 million of upfront cash consideration and up to $20.0 million of performance-related contingent consideration. The performance-related contingent consideration is based on the achievement of certain annual revenue targets of the acquired business over an approximate four year period from the closing date and requires, subject to certain exceptions, future employment over the course of the performance period. As of December 31, 2017, the annual revenue targets for the first two performance periods and the continuing employment conditions for certain individuals were not achieved resulting in $1.0 million of remaining contingent consideration available to be earned. We expect the acquisition to provide us with additional opportunities within the alternative investment marketplace to enhance our ongoing asset management strategy.

Acquisition of Wealth Management Systems Inc.

On August 21, 2015, we acquired all of the outstanding common stock of Wealth Management Systems Inc., a provider of technology-based rollover services, for cash consideration of $65.1 million, which includes a $1.1 million adjustment agreed upon in December 2015 to settle working capital under the provisions of the purchase agreement. A post-closing settlement amount of $0.2 million was received in January 2016. Wealth Management Systems Inc. automates the migration of assets from retirement plans to investment management platforms. We expect the acquisition to provide us with additional opportunities to expand rollover service options to new and existing clients and enhance our ongoing retirement and asset management strategies.

The factors described above, combined with the synergies expected from combining our operations with each of the acquired entities and the resulting expansion of the service offerings available to our clients, are the basis for the acquisition prices paid resulting in $75.8 million of goodwill recorded, of which approximately $40.0 million is expected to be deductible for tax purposes. The transactions were accounted for using the acquisition method of accounting, with assets acquired, liabilities assumed, and consideration transferred recorded at their estimated fair values on the acquisition dates.

The following table summarizes the aggregate acquisition-date fair value of the consideration transferred for the acquisitions of kasina LLC, Red Rocks Capital LLC, and Wealth Management Systems Inc. and the amounts recognized as of the acquisition date for the assets acquired and liabilities assumed (in millions):

Consideration		
Cash paid	$	118.8
Fair value of contingent consideration		0.8
Fair value of total consideration transferred	$	119.6
Recognized amounts of identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	$	1.6
Accounts receivable		4.2
Other current assets		0.2
Properties (1)		3.3
Intangible assets		49.5
Goodwill		75.8
Total assets		134.6
Accounts payable		0.2
Accrued compensation and benefits		0.4
Deferred revenue		5.5
Other current liabilities		0.7
Deferred income tax liabilities		8.2
Total liabilities		15.0
Net assets acquired	$	119.6

(1) Includes $3.0 million of acquired software.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following table summarizes the intangible assets acquired and estimated weighted average useful lives as of the acquisition dates (in millions):

	Fair Value	Weighted Average Useful Life
Client relationships	$ 48.0	17 years
Other	1.5	7 years
	$ 49.5	

The operating results of kasina LLC, Red Rocks Capital LLC, and Wealth Management Systems Inc. were combined with our operating results subsequent to the acquisition dates. Approximately $10.4 million of revenues and $9.3 million of pretax losses of the acquired businesses are included in the Consolidated Statement of Income for the year ended December 31, 2015. Pro-forma results of operations, assuming these acquisitions were made at the beginning of the earliest period presented, have not been presented as the effect of these acquisitions are not material to our results.

Restructuring Initiatives

As a result of changes in our business environment, from time to time we will restructure one or more of our businesses to enhance operational efficiency.

During the year ended December 31, 2017, we incurred pretax restructuring charges related to employee terminations of $16.3 million within the Domestic Financial Services segment, $2.7 million in International Financial Services and $4.4 million within the Healthcare Services segment.

During the year ended December 31, 2016, we incurred pretax restructuring charges related to employee termination costs of $9.9 million and lease termination costs of $0.5 million within the Domestic Financial Services segment.

During the year ended December 31, 2015, we incurred $3.4 million of pretax charges related to employee termination costs as a result of a restructuring initiative within the Healthcare Services segment which includes the closure of an operating location at the end of the existing lease term in mid-2016.

As of December 31, 2017, 2016 and 2015, we had a remaining liability of $2.8 million, $0.6 million and $4.1 million, respectively, associated with these restructuring activities.

4. Discontinued Operations

On July 1, 2016, we completed the sale of our North American Customer Communications business for cash consideration of $410.7 million, after giving effect to a $0.7 million adjustment agreed upon in December 2016 to settle working capital and other matters under the terms of the agreement. We recorded an estimated pretax gain of $341.5 million on the sale during 2016. In 2015, we entered into a sale and leaseback of our four North American Customer Communications' production facilities which had resulted in a deferred gain. This remaining lease obligation was included in the sale of North American Customer Communications and the unamortizaed deferred gain was included within the pretax gain recorded on the sale.

In April 2016, we completed the sale of our U.K. Customer Communications' Bristol production facilities for pretax proceeds totaling approximately $16.0 million. Concurrent with this sale, we leased back approximately two-thirds of the facilities under a 12-year lease. The rent payments and associated rent expense of the Bristol production facilities are approximately $0.7 million per year over the 12-year lease term.

In February 2017, we updated our impairment analysis utilizing new information received (level 3 in the fair value hierarchy) regarding our U.K. Customer Communications business which indicated the carrying value exceeded the fair value of the business. As a result, we recorded an impairment charge of $17.0 million, which is included as a component of discontinued operations for the year ended December 31, 2016. The impairment resulted in the write-down of goodwill and long-lived assets of the business based on the estimated fair value. There was no tax benefit recognized for this impairment charge as it is not expected to be deductible for tax purposes.

On May 4, 2017, we completed the sale of our U.K. Customer Communications business for cash consideration of approximately $43.6 million, after giving effect to a $0.3 million adjustment agreed upon in October 2017 to settle working capital and other matters under the terms of the agreement. We recorded a pretax gain of $2.6 million on the sale. The remaining lease obligation related to the sale and leaseback of the Bristol production facilities was included in the sale of U.K. Customer Communications.

We have classified the results of the two businesses sold as well as the gain realized upon sale as discontinued operations in our Consolidated Statement of Income and Consolidated Statement of Cash Flows for all periods presented. Additionally, the related assets and liabilities associated with our U.K. Customer Communications discontinued operations were classified as held for sale in our Consolidated Balance Sheet at December 31, 2016.

Pursuant to the terms of the North American transaction, we have provided certain information technology and operations processing activities to the North American Customer Communications business post-transaction and we expect to continue providing limited services for the next 3 years. Additionally, we will continue to incur costs for certain print-related services provided by the disposed business for an estimated period of 3 to 5 years following the transaction. The information technology and operations processing activities we performed after the sale of the business resulted in approximately $28.1 million of continuing cash inflows from the business sold and the costs incurred for certain print-related services provided by the business sold resulted in continuing cash outflows of approximately $50.3 million for the year ended December 31, 2017.

The revenues previously eliminated in consolidation that have continued post-transaction were approximately $25.9 million, $19.3 million and $13.8 million for the years ended December 31, 2017, 2016 and 2015, respectively. The expenses previously eliminated in consolidation that have continued post-transaction were approximately $51.3 million, $34.8 million and $19.3 million for the years ended December 31, 2017, 2016 and 2015, respectively. The revenues and expenses associated with these continued activities have been classified within continuing operations for all periods presented. The offsetting costs and revenues previously recorded within Customer Communications and eliminated in consolidation have been reclassified to discontinued operations for all periods presented.

As of December 31, 2017, all assets and liabilities previously classified as held for sale in our Consolidated Balance Sheet had been sold. The following table summarizes the assets and liabilities classified as held for sale in our Consolidated Balance Sheet as of December 31, 2016 (in millions):

	December 31, 2016
Assets	
Cash and cash equivalents	$ 4.0
Accounts receivable	38.9
Unconsolidated affiliates	0.2
Properties, net	9.9
Intangible assets, net	11.2
Other assets	8.4
Total assets held for sale	$ 72.6
Liabilities	
Current portion of debt	$ 0.4
Accounts payable	13.2
Accrued compensation and benefits	3.8
Deferred revenues and gains	0.8
Long-term debt	1.7
Income taxes payable	1.0
Other liabilities	9.2
Total liabilities held for sale	$ 30.1

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following table summarizes the comparative financial results of discontinued operations which are presented as Income from discontinued operations, net of tax on our Consolidated Statement of Income (in millions):

	Year Ended December 31,		
	2017	2016	2015
Operating revenues	$ 53.4	$ 389.0	$ 608.0
Out-of-pocket reimbursements	12.8	409.0	743.1
Total revenues	66.2	798.0	1,351.1
Costs and expenses	63.8	747.6	1,247.3
Depreciation and amortization (including goodwill impairment)	—	28.9	30.9
Operating income	2.4	21.5	72.9
Interest expense	—	—	(0.3)
Equity in earnings of unconsolidated affiliates	0.2	0.3	0.4
Net gain on business disposition	2.6	341.5	—
Income before income taxes	5.2	363.3	73.0
Income taxes	0.7	115.0	24.5
Income from discontinued operations, net of tax	$ 4.5	$ 248.3	$ 48.5

5. Investments

Investments are as follows (in millions):

	Carrying Value	
	December 31, 2017	December 31, 2016
Available-for-sale securities:		
State Street Corporation	$ —	$ 169.6
Other available-for-sale securities	11.8	10.9
	11.8	180.5
Other:		
Trading securities	33.6	7.9
Seed capital investments, at fair value	12.1	61.0
Cost method, private equity and other investments	142.2	128.0
	187.9	196.9
Total investments	$ 199.7	$ 377.4

Certain information related to our available-for-sale securities is as follows (in millions):

	December 31,	
	2017	2016
Book cost basis	$ 8.6	$ 28.4
Gross unrealized gains	3.2	152.1
Market value	$ 11.8	$ 180.5

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At December 31, 2017 and 2016, our carrying value of available-for-sale investments was $11.8 million and $180.5 million, respectively, based on the closing price on the New York Stock Exchange at the respective year end. The balance as of December 31, 2016 primarily consisted of the ownership of 2.2 million shares of State Street. In 2017, we transferred approximately 2.0 million shares of State Street common stock as part of the non-taxable exchange transaction to acquire State Street's 50% interest in BFDS. Our remaining shares of State Street were transferred in a non-monetary charitable contribution recognized at market value. The majority of the $62.2 million of the deferred tax liabilities associated with the available-for-sale investments as of December 31, 2016 were derecognized during the year ended December 31, 2017 as a result of the non-taxable exchange of the State Street shares for State Street's ownership interest in BFDS.

During the years ended December 31, 2017, 2016 and 2015, we received $4.2 million, $61.2 million and $303.5 million, respectively, from the sale of investments in available-for-sale securities. Gross realized gains of $170.2 million, $6.1 million and $175.1 million and gross realized losses of $14.3 million, $3.8 million and $6.7 million, were recorded in 2017, 2016 and 2015, respectively, from the disposal of available-for-sale securities. Gross realized gains in 2017 included a net gain of $145.1 million from the exchange of State Street shares for State Street's 50% interest in BFDS and a gain of $10.4 million from the charitable contribution of our remaining shares in State Street. We recorded no losses on available-for-sale securities related to other-than-temporary investments impairments for the year ended December 31, 2017. We recorded losses on available-for-sale securities of $0.2 million and $4.8 million related to other-than-temporary investment impairments for the years ended December 31, 2016 and 2015, respectively. These gains and losses are included as a component of Other income, net in the Consolidated Statement of Income. We had no securities in an unrealized loss position as of December 31, 2017. The fair value and gross unrealized losses of securities in a continuous loss position at December 31, 2016 were not significant.

We consolidate the investments of open-end funds in which we own a controlling interest as a result of our seed capital investments. At December 31, 2016, we had a controlling interest in seed capital investments of $53.6 million which is comprised primarily of equity securities as well as $8.4 million of cash collateral deposited with a broker for securities sold short. In March 2017, we reduced our ownership interest in a substantial portion of our seed capital investments, resulting in the deconsolidation of the respective fund. We held non-controlling interests in certain seed capital investments of $12.1 million and $7.4 million at December 31, 2017 and 2016, respectively.

We are a limited partner in various private equity funds. Our involvement in the financing operations of the private equity fund investments is generally limited to our investments in the entities. At December 31, 2017 and 2016, our carrying value of these private equity fund investments was approximately $91.3 million and $111.2 million, respectively. At December 31, 2017, we had future capital commitments related to these private equity fund investments of approximately $3.0 million. Additionally, we have other investments with a carrying value of $50.9 million and $16.8 million at December 31, 2017 and 2016, respectively. We account for private equity funds and other investments primarily under the cost method as we do not have a controlling interest or the ability to exercise significant influence over these companies and these investments do not have readily determinable fair values, except for certain other investments which are measured using net asset value as a practical expedient for fair value. At December 31, 2017 and 2016, we held approximately $7.6 million and $11.5 million, respectively, of pooled funds measured using net asset value within our other investments.

We record lower of cost or market valuation adjustments on cost method and other investments when impairment conditions, such as adverse market conditions or poor performance of the underlying investments, are present. During the years ended December 31, 2017 and 2015, we recorded $4.5 million and $0.2 million, respectively, of impairments on cost method investments. During the year ended December 31, 2016, we recorded no impairments on cost method investments.

Our investments in private equity funds meet the definition of a variable interest entity ("VIE"); however, the private equity fund investments were not consolidated as we do not have the power to direct the entities' most significant economic activities. The maximum risk of loss related to our private equity fund investments is limited to the carrying value of our investments in the entities plus any future capital commitments. At December 31, 2017 and 2016, our maximum risk of loss associated with these VIE's, which is comprised of our investment and required future capital commitments, was $94.3 million and $115.0 million, respectively.

6. Unconsolidated Affiliates

Unconsolidated affiliates are as follows (in millions):

		Carrying Value	
	Ownership Percentage (1)	December 31, 2017	December 31, 2016
Unconsolidated affiliates:			
International Financial Data Services U.K.	—	$ —	$ 133.3
Boston Financial Data Services, Inc.	—	—	91.2
International Financial Data Services L.P.	50%	45.7	73.2
Other unconsolidated affiliates		48.3	33.5
Total		$ 94.0	$ 331.2

(1) DST's ownership percentage in IFDS U.K. and BFDS was 50% prior to the respective acquisitions in March 2017, at which time the businesses became wholly-owned subsidiaries.

In March 2017, we acquired State Street's 50% ownership interests in BFDS and IFDS U.K., which resulted in control and consolidation of the entities. Our investment balances in these joint ventures were eliminated through the acquisition method of accounting on the date of acquisition, which resulted in a gain of $56.0 million related to BFDS and a loss of $12.2 million related to IFDS U.K, which are included in Other income, net in the Consolidated Statement of Income.

Immediately prior to our acquisitions of the remaining interests in IFDS U.K. and BFDS, IFDS L.P. made cash and asset distributions to both DST and State Street, which resulted in realized gains on the step-up of certain investments and real estate assets. Our proportionate share of the realized gains was $10.2 million and is included in Equity in earnings of unconsolidated affiliates in the Consolidated Statement of Income. Through such distributions, we acquired an investment in a privately-held company and 100% of the equity interest in IFDS Realty, LLC, which holds the real estate assets used in BFDS' operations.

Our investments in other unconsolidated affiliates are primarily comprised of various joint ventures which own and lease real estate to our operating businesses as well as other third parties. One of these investments is a 50% ownership of Pershing Road Development Company, LLC, a limited special purpose real estate joint venture which leases approximately 1.1 million square feet of office space to the U.S. government. This investment has a zero carrying value at December 31, 2017 and 2016 as a result of losses incurred on an interest rate swap which is held by the joint venture. We received a $0.8 million cash distribution from Pershing Road Development Company, LLC for each of the years ended December 31, 2017, 2016, and 2015.

In December 2017, we received a distribution of real estate and the related debt from Broadway Square Partners, LLP ("Broadway Square Partners"), a 50% owned real estate joint venture included within other unconsolidated affiliates. Broadway Square Partners recognized a gain of $46.0 million on the step-up to fair value of the distributed real estate and debt, of which $23.0 million is included in our equity in earnings of unconsolidated affiliates. We recorded $19.2 million of real estate and $4.4 million of debt with a corresponding $14.8 million net reduction to our investment in Broadway Square Partners based on the assessed fair values on the date of distribution.

Equity in earnings of unconsolidated affiliates, is as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
International Financial Data Services U.K. (1)	$ 1.0	$ 10.0	$ 22.5
Boston Financial Data Services, Inc. (1)	3.6	8.3	5.3
International Financial Data Services L.P.	18.3	2.2	7.4
Other unconsolidated affiliates	31.6	6.7	10.2
Total	$ 54.5	$ 27.2	$ 45.4

(1) Equity in earnings related to BFDS and IFDS U.K. represent earnings prior to our acquisition of the remaining interests of these entities in March 2017, at which time the businesses became wholly-owned subsidiaries.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Certain condensed financial information of our unconsolidated affiliates is presented below (in millions):

	Year Ended December 31,		
Income Statement Data: (1)	**2017**	**2016**	**2015**
Revenues	$ 590.1	$ 1,248.6	$ 1,225.7
Costs and expenses	477.1	1,192.4	1,132.7
Net income	113.0	56.2	93.0

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(1) Income Statement data for the year ended December 31, 2017 includes BFDS and IFDS U.K. activity for the period prior to our acquisition of the remaining interests of these entities in March 2017, at which time the businesses became wholly-owned subsidiaries.

	December 31,	
Balance Sheet Data: (1)	**2017**	**2016**
Current assets	$ 156.2	$ 570.2
Noncurrent assets	358.6	823.8
Current liabilities	98.7	423.0
Noncurrent liabilities	286.3	396.6
Partners’ and stockholders’ equity	129.8	574.4

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(1) Balance Sheet data as of December 31, 2017 excludes BFDS and IFDS U.K.

The following tables summarize related party transactions and balances outstanding with our related parties, primarily comprised of transactions with our unconsolidated affiliates (in millions):

	Year Ended December 31,		
	2017	**2016**	**2015**
Operating revenues from related parties	$ 55.4	$ 138.5	$ 134.9
Amounts paid to related parties (1)	42.7	36.8	27.3
Distributions received from related parties	18.6	3.5	15.3

	December 31,	
	2017	**2016**
Outstanding advances/loans to related parties	$ 6.1	$ 31.4
Trade accounts receivable from related parties	6.7	19.7
Total amounts receivable from related parties	$ 12.8	$ 51.1
Amounts payable to related parties	$ 0.6	$ 3.4

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(1) Excludes amounts paid to our unconsolidated joint ventures related to loans, advancements, and other capital investments. In addition, this excludes amounts paid on the BFDS installment loan which had an outstanding balance of $1.5 million at December 31, 2015 and was fully repaid in 2016.

Operating revenues from related parties were primarily generated from services provided to BFDS for the use of our proprietary software and software development services provided to IFDS U.K., which have been eliminated from consolidated operating revenues subsequent to the date of acquisition. Payments to our related parties primarily included payments for rent and other facility and maintenance costs pursuant to the properties we lease from our unconsolidated real estate joint ventures and staffing services. Distributions received from related parties were primarily related to distributions from our real estate joint ventures.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

During 2016, we and State Street each provided subordinate loans of approximately $28.0 million to IFDS U.K. In February 2017, DST provided an additional subordinate loan of approximately $12.5 million to IFDS U.K. In connection with the acquisitions, DST effectively settled all of IFDS U.K.'s outstanding note payables, including those owed to State Street, which were considered part of the total cash paid to acquire State Street's interests in IFDS U.K.

In December 2017, we made an additional $1.2 million investment in Broadway Square Partners prior to the real estate distribution discussed above.

7. Fair Value Measurements

Authoritative accounting guidance on fair value measurements establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

As of December 31, 2017 and 2016, we held certain investment assets and liabilities that are required to be measured at fair value on a recurring basis. These investments include money market funds, available-for-sale equity securities, trading securities, seed capital investments and securities sold short whereby fair value is determined using quoted prices in active markets. Accordingly, the fair value measurements of these investments have been classified as Level 1 in the tables below. Fair value for deferred compensation liabilities that are credited with deemed gains or losses of the underlying hypothetical investments, primarily equity securities, has been classified as Level 1 in the tables below. In addition, we have foreign currency derivative instruments that are required to be reported at fair value. Fair value for the derivative instruments was determined using inputs from quoted prices for similar assets and liabilities in active markets that are directly or indirectly observable. Accordingly, our derivative instruments have been classified as Level 2 in the tables below.

The following tables present assets and liabilities measured at fair value on a recurring basis (in millions):

		Fair Value Measurements at Reporting Date Using		
	December 31, 2017	Quoted prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds (1)	$ 180.0	$ 180.0	$ —	$ —
Equity securities (2)	45.4	45.4	—	—
Seed capital investments (2)	12.1	12.1	—	—
Deferred compensation liabilities (3)	(33.6)	(33.6)	—	—
Derivative instruments (3)	(0.1)	—	(0.1)	—
Total	$ 203.8	$ 203.9	$ (0.1)	$ —

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

		Fair Value Measurements at Reporting Date Using		
	December 31, 2016	Quoted prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds (1)	$ 437.0	$ 437.0	$ —	$ —
Equity securities (2)	188.4	188.4	—	—
Seed capital investments (2)	61.0	61.0	—	—
Deferred compensation liabilities (3)	(7.9)	(7.9)	—	—
Securities sold short (3)	(8.2)	(8.2)	—	—
Derivative instruments (3)	(0.4)	—	(0.4)	—
Total	$ 669.9	$ 670.3	$ (0.4)	$ —

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(1) Included in Cash and cash equivalents, Funds held on behalf of clients, and Other current assets on our Consolidated Balance Sheet.

(2) Included in Investments on our Consolidated Balance Sheet.

(3) Included in Other current assets and Other liabilities on our Consolidated Balance Sheet.

At December 31, 2017 and 2016, we held approximately $7.6 million and $11.5 million, respectively, of investments in pooled funds, which are measured using net asset value as a practical expedient for fair value and therefore excluded from the table above. The investments in pooled funds are included within the $142.2 million and $128.0 million of cost method and other investments at December 31, 2017 and 2016, respectively, disclosed within Note 5, "Investments."

8. Property and Equipment

Property and equipment and related accumulated depreciation are as follows (in millions):

	December 31,	
	2017	2016
Land	$ 52.9	$ 34.2
Buildings	198.0	160.3
Technology equipment	248.4	213.0
Software	591.4	508.2
Furniture, fixtures and other equipment	151.6	122.1
Leasehold improvements	91.6	76.4
Construction-in-progress	12.1	18.3
	1,346.0	1,132.5
Less accumulated depreciation and amortization	996.2	896.8
Properties, net	$ 349.8	$ 235.7

At December 31, 2016, there was approximately $2.5 million of assets under capital lease, net of accumulated depreciation of $2.2 million, included in the above table. We had minimal assets under capital lease as of December 31, 2017.

Software assets are comprised of the following (in millions):

	December 31, 2017		December 31, 2016	
	Carrying Amount	Accumulated Amortization	Carrying Amount	Accumulated Amortization

Internally developed software	$ 324.0	$ 287.9	$ 296.4	$ 266.0
Purchased software	183.8	159.5	155.3	143.0
Software from business acquisitions	83.6	52.8	56.5	44.5
Total	$ 591.4	$ 500.2	$ 508.2	$ 453.5

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During the years ended December 31, 2017, 2016 and 2015, we capitalized software costs of $24.1 million, $21.5 million and $23.3 million, respectively. Construction-in-progress as of December 31, 2017 and 2016 includes internally developed software costs of $11.5 million and $14.9 million, respectively, which have not yet been put into service.

Depreciation expense for the years ended December 31, 2017, 2016 and 2015, was $99.8 million, $78.2 million and $77.6 million, respectively.

In December 2014, we entered into a transaction under which Industrial Revenue Bonds ("IRBs") were issued by a municipality to finance the purchase and/or construction of certain real and personal property. Pursuant to the terms of the IRBs, we transferred title of certain fixed assets to the municipality. Tax benefits associated with the IRBs include a provision for a 10-year property tax abatement and sales tax exemption on the property financed with the proceeds of the IRBs. The municipality holds legal title to the bond financed assets and leases them to us subject to an option to purchase for nominal consideration, which we may exercise at any time. We are the bondholder as well as the lessee of the property purchased with the IRBs proceeds. We record the property on our Consolidated Balance Sheet as all risks and benefits remain with us, along with a capital lease obligation to repay the proceeds of the IRBs. Moreover, as holder of the bonds, we have the right to offset the amounts due under the leases with the amounts due to us from the bonds. Accordingly, no net debt associated with the IRBs is reflected in our Consolidated Balance Sheet. Upon maturity or redemption of the bonds, which is within our sole control, title to the leased property reverts back to us. At December 31, 2017 and 2016, we held IRBs with an aggregate principal amount of $103.9 million and $87.6 million, respectively.

9. Intangible Assets and Goodwill

Intangible Assets

The following table summarizes intangible assets (in millions):

	December 31, 2017		December 31, 2016	
	Carrying Amount	Accumulated Amortization	Carrying Amount	Accumulated Amortization
Amortizable intangible assets				
Client relationships	$ 373.3	$ 97.3	$ 203.6	$ 71.0
Other	28.3	21.2	28.5	18.5
Total	$ 401.6	$ 118.5	$ 232.1	$ 89.5

Amortization expense of intangible assets for the years ended December 31, 2017, 2016 and 2015 was $28.2 million, $16.6 million and $12.5 million, respectively. Annual amortization for intangible assets recorded as of December 31, 2017 is estimated to be (in millions):

2018	$ 32.3
2019	31.2
2020	28.8
2021	28.4
2022	27.3
Thereafter	135.1
Total	$ 283.1

Goodwill

The following tables summarize the changes in the carrying amount of goodwill for the years ended December 31, 2017 and 2016, by segment (in millions):

	December 31, 2016	Acquisitions	Impairments	Other (1)	December 31, 2017
Domestic Financial Services	$ 345.8	$ 68.7	$ —	$ 0.9	$ 415.4
International Financial Services	15.6	196.7	—	16.4	228.7
Healthcare Services	155.0	—	—	—	155.0
Total	$ 516.4	$ 265.4	$ —	$ 17.3	$ 799.1

	December 31, 2015	Acquisitions	Impairments	Other (1)	December 31, 2016
Domestic Financial Services	$ 286.5	$ 61.0	$ —	$ (1.7)	$ 345.8
International Financial Services	16.8	—	—	(1.2)	15.6
Healthcare Services	155.0	—	—	—	155.0
Total	$ 458.3	$ 61.0	$ —	$ (2.9)	$ 516.4

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(1) Other changes primarily consists of the impacts of foreign currency translation

We test goodwill for impairment on an annual basis as of October 1 and at other times if a significant change in circumstances indicates it is more likely than not that the fair value of these assets has been reduced. The valuation of goodwill requires assumptions and estimates of many critical factors, including revenue and market growth, operating cash flows, market multiples and discount rates. Our 2017 annual goodwill impairment test determined that the estimated fair value of each of our reporting units substantially exceeds the carrying value of the reporting units.

10. Debt

The Company is obligated under notes and other indebtedness as follows (in millions):

	December 31, 2017	December 31, 2016
Accounts receivable securitization program	$ 14.9	$ 103.2
Revolving credit facilities	—	75.0
Senior notes	575.0	330.0
Other indebtedness, net of unamortized debt issuance costs	30.9	—
	620.8	508.2
Less current portion of debt	83.7	208.5
Long-term debt	$ 537.1	$ 299.7

Accounts receivable securitization program

We securitize certain of our domestic accounts receivable through an accounts receivable securitization program with a third-party bank. The maximum amount that can be outstanding under this program is $150.0 million. In November 2017, we renewed and modified the accounts receivable securitization program resulting in an extended maturity date of November 14, 2020 and the addition of the BFDS receivables to the program.

Under the terms of the accounts receivable securitization program, (a) we periodically acquire accounts receivable originated by certain of our domestic subsidiaries, including, but not limited to, DST Health Solutions, DST Technologies, BFDS, and DST Pharmacy Solutions (the "Subsidiary Originators"), (b) we transfer receivables originated by us and receivables acquired from the Subsidiary Originators, on a periodic basis, to a wholly-owned bankruptcy remote special purpose subsidiary of DST (the "SPE"), and (c) the SPE then sells undivided interests in the receivables to the bank. We retain servicing responsibility over the receivables. The program contains customary restrictive covenants as well as customary events of default.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

We have continuing involvement with the transferred assets because we maintain servicing responsibilities for the accounts receivable assets included in the accounts receivable securitization program. Accounts receivable assets transferred from us to our wholly-owned, bankruptcy remote special purpose subsidiary contain restrictions because they are not available to satisfy the creditors of any other person, including DST or any of our subsidiaries or affiliates. Further, neither we nor the SPE guarantees collectability of the receivables or the creditworthiness of obligors. The SPE retains an interest in the receivables in excess of the amount transferred to the conduit, and such receivables continue to be recognized on the Consolidated Balance Sheet. The carrying value of the retained interest approximates its estimated fair value at the balance sheet date. We believe increases in the level of assumed interest rates and/or credit losses compared to assumptions in effect at the balance sheet date by 10% or 20% would not materially affect the fair value of the retained interest at the reporting date.

The outstanding amount under the program was $14.9 million and $103.2 million at December 31, 2017 and 2016, respectively. During the years ended December 31, 2017, 2016 and 2015 total proceeds from the accounts receivable securitization program were approximately $555.9 million, $895.5 million and $1,037.7 million, respectively, and total repayments were approximately $644.2 million, $792.3 million and $1,157.7 million, respectively, which comprise the net cash flow in the financing section of the Consolidated Statement of Cash Flows.

Aggregate transfers of undivided interests in the receivables from the SPE to the bank were $1,171.2 million and $1,459.9 million for the years ended December 31, 2017 and 2016, respectively. The impact on net income stemming from these transfers was not material. Costs associated with the accounts receivable securitization program are included in interest expense in the Consolidated Statement of Income. The program costs applicable to the outstanding amount of undivided interests in the receivables are generally based on LIBOR plus an applicable margin.

Revolving credit facilities

On October 1, 2014, we entered into a syndicated credit facility ("Credit Facility"). The Credit Facility provides for a revolving unsecured line in an aggregate principal amount of up to $850.0 million. The interest rates applicable to loans under the Credit Facility are generally based on Eurodollar, Federal Funds or prime rates plus applicable margins as defined in the agreement. The Credit Facility contains grid schedules that adjust borrowing costs up or down based upon our consolidated leverage ratio. The grid schedules may result in fluctuations in borrowing costs ranging from 1.00% to 1.70% over Eurodollar and 0.00% to 0.70% over base rate, as defined. Additionally, we pay an annual facility fee of 0.125% to 0.30%. Among other provisions, the Credit Facility requires certain leverage and interest coverage ratios to be maintained. If any event of default occurs and is continuing, all amounts payable under the credit agreement may be declared immediately due and payable. The Credit Facility also contains customary restrictive covenants and cross-default provisions. The maturity date for the Credit Facility is October 1, 2019. At December 31, 2017, there were no borrowings under the Credit Facility. Amounts borrowed on the Credit Facility were $75.0 million at December 31, 2016.

We also have an unsecured revolving line of credit to support our subsidiaries' operations that provides total borrowings of up to $10.0 million. Borrowings on this line of credit are available at the bank's Prime rate and mature during 2018. At December 31, 2017 and 2016, there were no borrowings under this line of credit.

During the years ended December 31, 2017, 2016 and 2015, total proceeds from our revolving credit facilities were approximately $1,194.1 million, $977.1 million and $1,053.6 million, respectively, and total repayments were approximately $1,269.1 million, $1,128.2 million and $871.8 million respectively, which comprise the net cash flows presented within the financing section of the Consolidated Statement of Cash Flows.

Senior notes

During 2010, we issued $370.0 million of aggregate principal of privately placed senior notes (collectively, the "2010 Senior Notes") pursuant to a note purchase agreement dated August 9, 2010. The 2010 Senior Notes were comprised of $40.0 million of 4.19% Series A Senior Notes due August 9, 2015, $105.0 million of 4.86% Series B Senior Notes due August 9, 2017, $65.0 million of 5.06% Series C Senior Notes due August 9, 2018 and $160.0 million of 5.42% Series D Senior Notes due August 9, 2020. We repaid the Series A Senior Notes and Series B Senior Notes at maturity during 2015 and 2017, respectively.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

During 2017, we agreed to issue $415.0 million of privately placed senior notes (collectively, the "2017 Senior Notes") pursuant to a note purchase agreement dated November 14, 2017. The 2017 Senior Notes are comprised of $35.0 million of 3.55% Series A Senior Notes due January 9, 2023, $105.0 million of 3.82% Series B Senior Notes due January 9, 2025, $65.0 million of 4.02% Series C Senior Notes due August 6, 2025, $105.0 million of 4.04% Series D Senior Notes due January 9, 2028, $50.0 million of 4.14% Series E Senior Notes due January 9, 2030, and $55.0 million of 4.29% Series F Senior Notes due January 9, 2033. The 2017 Senior Notes were issued in November 2017, with the exception of the Series C Senior Notes which are scheduled to be issued on August 6, 2018. The November 2017 proceeds were primarily used to pay down our revolving credit facility.

Interest on our 2010 Senior Notes is payable semi-annually in February and August of each year. Interest on our outstanding 2017 Senior Notes is payable semi-annually in January and July of each year, beginning in July 2018. We may prepay the senior notes at any time, in an amount not less than 10% of the aggregate principal amount of such notes then outstanding, at a price equal to 100% of the principal amount being prepaid, plus accrued and unpaid interest and a "make-whole" prepayment premium.

Pursuant to terms of our senior note agreements, any Company subsidiary required to become a party to or otherwise guarantee the syndicated line of credit facility or other indebtedness in excess of $100.0 million, or in the case of the 2017 Senior Notes, certain other indebtedness in excess of $150.0 million, must also guarantee our obligations under the senior notes. The senior note agreements contain customary restrictive covenants, as well as certain customary events of default, including cross-default provisions. Among other provisions, the agreements limit our ability to incur or create liens, sell assets, issue priority indebtedness and change lines of business. The agreements also require certain leverage and interest coverage ratios to be maintained. We were in compliance with all debt covenants as of December 31, 2017.

Other indebtedness

In connection with the acquisition of the remaining interests in IFDS U.K. during 2017, we assumed a mortgage with a principal amount of £23.0 million which matures in October 2020 ("U.K. mortgage"). The outstanding amount under the mortgage was $28.4 million at December 31, 2017 with a fixed interest rate of 3.1%. Principal payments of £1.0 million are payable semi-annually in April and October of each year and accrued interest is payable quarterly, with the outstanding balance due at maturity.

Other indebtedness as of December 31, 2017 also included a $4.4 million mortgage acquired through a distribution of real estate and the related debt from Broadway Square Partners in December 2017 and $0.6 million of capital leases, offset by $2.5 million of unamortized debt issuance costs.

Future principal payments of indebtedness at December 31, 2017 are as follows (in millions):

2018	$	83.7
2019		3.6
2020		183.7
2021		0.7
2022		0.8
Thereafter		350.8
Total	$	623.3

The weighted average interest rates on our short-term borrowings were 2.72% and 2.36% for the years ended December 31, 2017 and 2016, respectively. Based upon the borrowing rates currently available to us for indebtedness with similar terms and average maturities, the carrying value of long-term debt, with the exception of the senior notes and U.K. mortgage, is considered to approximate fair value at December 31, 2017 and 2016. The estimated fair values of the senior notes and U.K. mortgage were derived principally from quoted prices (level 2 in the fair value hierarchy).

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The carrying and estimated fair values of our fixed rate debt were as follows (in millions):

	December 31,			
	2017		2016	
	Carrying Value	Estimated Fair Value	Carrying Value	Estimated Fair Value
2010 Senior notes—Series B	$ —	$ —	$ 105.0	$ 106.7
2010 Senior notes—Series C	65.0	65.7	65.0	67.5
2010 Senior notes—Series D	160.0	167.4	160.0	172.1
2017 Senior notes—Series A	35.0	34.6	—	—
2017 Senior notes—Series B	105.0	104.0	—	—
2017 Senior notes—Series D	105.0	104.5	—	—
2017 Senior notes—Series E	50.0	49.6	—	—
2017 Senior notes—Series F	55.0	54.1	—	—
U.K. mortgage	28.4	28.8	—	—
U.S. mortgage	4.4	4.4	—	—
Total	$ 607.8	$ 613.1	$ 330.0	$ 346.3

11. Hedging Transactions and Derivative Financial Instruments

We are directly and indirectly affected by changes in certain market conditions. When determined appropriate, we use derivative instruments as a risk management tool to mitigate the potential impact of certain market risks. The primary market risks managed by us through the use of derivative instruments are foreign currency exchange rate risk and interest rate risk. We may use various types of derivative instruments including, but not limited to, forward contracts, option contracts and swaps. We do not enter into derivative arrangements for speculative purposes.

We determine the fair values of our derivatives based on quoted market prices that are directly or indirectly observable as further described within Note 7, "Fair Value Measurements." The fair value of our derivative instruments is reflected on a gross, rather than net, basis and is not significant to the consolidated financial statements as of December 31, 2017 or 2016.

Cash flow hedging strategy

We use cash flow hedges to minimize the variability in cash flows of assets or liabilities or forecasted transactions caused by fluctuations in foreign currency exchange rates or interest rates. The changes in the fair values of derivatives designated as cash flow hedges are recorded in Accumulated Other Comprehensive Income ("AOCI") and are reclassified into the line item in the Consolidated Statement of Income in which the hedged items are recorded in the same period the hedged items affect earnings. The changes in fair values of hedges that are determined to be ineffective are immediately reclassified from AOCI into earnings. The length of time for which we hedge our exposure to future cash flows is typically one year.

We have entered into a foreign currency cash flow hedging program to reduce the risk that our net cash outflows from intercompany purchases of services from our international subsidiaries could be adversely affected by fluctuations in foreign currency exchange rates. We entered into forward foreign currency contracts (Thai baht and India rupee) to hedge certain portions of forecasted cash flows denominated in foreign currencies. The total notional values of derivatives that were designated and qualified for our foreign currency cash flow hedging program were $40.7 million and $14.3 million as of December 31, 2017 and 2016, respectively.

We monitor the mix of short-term debt and long-term debt regularly. From time to time, we manage our risk to interest rate fluctuations through the use of derivative financial instruments. We did not enter into interest rate swap agreements during the years ended December 31, 2017 and 2016.

The pretax impact that changes in the fair values of derivatives designated as cash flow hedges had on AOCI and earnings was not significant during the years ended December 31, 2017, 2016, and 2015. There were no gains or losses recognized into income as a result of hedge ineffectiveness during the years ended December 31, 2017, 2016 or 2015. As of December 31, 2017, we estimate that amounts to be reclassified into earnings during the next 12 months are $0.2 million.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Economic (nondesignated) hedging strategy

In addition to derivative instruments that are designated and qualify for hedge accounting, we also use certain derivatives as economic hedges of foreign currency exposure. Although these derivatives were not designated for hedge accounting, they are effective economic hedges. The changes in fair values of economic hedges are immediately recognized into earnings.

We use foreign currency economic hedges to offset the earnings impact that fluctuations in foreign currency exchange rates have on certain intercompany loans and other payables denominated in nonfunctional currencies, primarily the British pound and Australian dollar. The foreign currency economic hedging program consists of rolling, monthly forward foreign currency contracts which generally settle on the last day of each month. As a result, there are minimal unrealized gains or losses at the end of the period related to these contracts. The total notional values of derivatives related to our foreign currency economic hedges were $60.4 million and $91.6 million as of December 31, 2017 and 2016, respectively.

12. Income Taxes

On December 22, 2017, the United States enacted tax reform legislation commonly known as the Tax Cuts and Jobs Act (the "Tax Act"), resulting in significant modifications to existing U.S. tax law, including but not limited to, (1) lowering the corporate federal income tax rate from 35% to 21% effective January 1, 2018; (2) eliminating the domestic production activity deduction; (3) implementing a territorial tax system; and (4) imposing a one-time repatriation tax on deemed repatriated earnings of foreign subsidiaries.

Deferred tax assets and liabilities are determined based on the differences between the financial statement carrying amounts and tax bases of assets and liabilities as measured by the enacted tax rates that are expected to be in effect when these differences reverse. Deferred tax expense (benefit) is generally the result of changes in the assets or liabilities for deferred taxes. As a result of the reduction in the U.S. corporate income tax rate from 35% to 21% under the Tax Act, we revalued our ending net deferred tax liabilities at December 31, 2017 and recognized a provisional $22.1 million tax benefit in the Consolidated Statement of Income for the year ended December 31, 2017.

The Tax Act provides for a one-time deemed mandatory repatriation of post-1986 undistributed foreign subsidiary earnings and profits through the year ended December 31, 2017 ("Transition Tax"). We have estimated a provisional Transition Tax of $8.4 million, recorded to income tax expense in the Consolidated Statement of Income for the year ended December 31, 2017. The Transition Tax is payable over eight years and thus $7.3 million of the Transition Tax is reported as noncurrent on the Consolidated Balance Sheet.

The Tax Act provides for a new requirement, beginning in 2018, that certain income earned by controlled foreign corporations in excess of an allowable return on foreign subsidiary's tangible assets is subject to U.S. income tax (the global intangible low-taxed income or "GILTI" provision). Also beginning in 2018, the Tax Act provides for a new base erosion and anti-abuse tax provision ("BEAT") which eliminates the deduction of certain base-erosion payments made to related foreign corporations and imposes a minimum tax if greater than regular tax. We do not expect the GILTI or BEAT provisions to have a material impact to our financial statements and therefore, have not provided any tax impacts in our consolidated financial statements for the year ended December 31, 2017.

The SEC staff issued Staff Accounting Bulletin 118 ("SAB 118") which provides additional clarification regarding situations where the Company does not have the necessary information available, prepared, or analyzed in reasonable detail to complete the accounting for certain income tax effects of the Tax Act for the reporting period in which the Tax Act was enacted. We have recognized the provisional tax impacts, based on reasonable estimates, related to the Transition Tax and the revaluation of deferred tax assets and liabilities and have included these amounts in our consolidated financial statements for the year ended December 31, 2017. The ultimate impact may differ from these provisional amounts, possibly materially, due to among other things, additional analysis, changes in interpretations and assumptions we have made, additional regulatory guidance that may be issued, and actions we may take as a result of the Tax Act. We intend to complete our accounting under the Tax Act within the measurement period set forth in SAB 118.

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DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The following summarizes pretax income from continuing operations (in millions):

	Year Ended December 31,		
	2017	2016	2015
U.S.	$ 451.8	$ 248.2	$ 451.9
International	80.1	31.0	6.9
Total	$ 531.9	$ 279.2	$ 458.8

Provision for income taxes (benefits) from continuing operations consists of the following components (in millions):

	Year Ended December 31,		
	2017	2016	2015
Current			
Federal	$ 93.7	$ 57.7	$ 147.4
State and local	4.0	11.4	10.2
International	13.7	15.0	7.1
Total current	111.4	84.1	164.7
Deferred			
Federal	(34.2)	19.9	(13.5)
State and local	2.4	(1.9)	0.5
International	4.7	(1.0)	(2.5)
Total deferred	(27.1)	17.0	(15.5)
Total provision for income taxes	$ 84.3	$ 101.1	$ 149.2

Following are the reconciliations of our effective income tax rates and the U.S. federal income tax statutory rate (in millions):

	Year Ended December 31,		
	2017	2016	2015
Provision for income taxes using the statutory rate in effect	$ 186.2	$ 97.7	$ 160.6
Tax effect of:			
State and local income taxes, net	4.5	5.9	4.3
International income taxes, net	(9.5)	2.5	(1.0)
Earnings of U.S. unconsolidated affiliates	(1.0)	(2.3)	(1.5)
Valuation allowance (reversal), net	(1.3)	(0.9)	1.2
Tax credits	(1.0)	(5.0)	(7.7)
Uncertain tax positions (reversal), net	(2.8)	1.7	(7.9)
Dividend received deduction	(0.1)	(0.8)	(1.2)
Domestic production activities deduction	(2.5)	(1.7)	(0.1)
Repatriation	1.0	1.0	1.9
Tax Cuts and Jobs Act impact	(13.7)	—	—
Tax impact of transactions	(71.4)	—	—
Other	(4.1)	3.0	0.6
Total provision for income taxes	$ 84.3	$ 101.1	$ 149.2
Effective tax rate	15.8%	36.2%	32.5%
Statutory federal tax rate	35.0%	35.0%	35.0%

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

The federal and state deferred tax assets (liabilities) recorded on the Consolidated Balance Sheet are as follows (in millions):

	December 31, 2017	December 31, 2016
Liabilities:		
Deferred cancellation of debt income	$ (11.7)	$ (36.4)
Investments in available-for-sale securities	(0.6)	(62.2)
Unconsolidated affiliates and investments	(19.7)	(27.9)
Accumulated depreciation and amortization	(62.8)	(65.3)
Prepaid expenses	—	(5.5)
Other	(3.5)	—
Total deferred tax liabilities	(98.3)	(197.3)
Assets:		
Deferred compensation and other employee benefits	24.4	23.2
Net operating loss	14.9	8.5
Accrued liabilities	16.2	26.9
Prepaid expenses	4.4	—
Other	—	1.4
Total deferred tax assets	59.9	60.0
Valuation allowance	(7.1)	(6.0)
Net deferred tax liability	$ (45.5)	$ (143.3)

We have approximately $4.1 million of federal net operating losses as of December 31, 2017 as a result of prior year business combinations. These net operating losses begin to expire in 2034 and are available to reduce future income taxes. Since these net operating losses were generated by an entity prior to its acquisition by DST, our utilization is subject to certain limitations imposed by the Internal Revenue Code. We do not anticipate that such limitations will prohibit the utilization of the federal net operating loss carryforwards prior to their expiration. We have approximately $48.4 million of state net operating losses as of December 31, 2017. These net operating losses begin to expire in 2023.

We have approximately $53.9 million of net operating loss carryforwards in foreign jurisdictions as of December 31, 2017. The carryforwards of $23.4 million in the U.K. do not expire but their utilization may be limited to offset only income with certain characteristics. The carryforwards of $13.1 million and $13.0 million in Ireland and Australia, respectively, do not expire. The carryforwards of $4.4 million in Canada begin to expire in 2032.

A valuation allowance is recorded against deferred tax assets if, based on the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. In evaluating the realizability of certain international net deferred tax assets, we also anticipate that limitations may result in the benefit of these amounts not being realized and have established corresponding valuation allowances as of December 31, 2017 and 2016 of $6.9 million and $5.7 million, respectively. In evaluating certain state net operating losses, we anticipate that limitations may result in the benefit of these amounts not being realized and have established a corresponding valuation allowance as of December 31, 2017 and 2016 of $0.2 million and $0.3 million, respectively.

We provide deferred taxes for unremitted earnings of U.S. unconsolidated affiliates net of the 80% dividends received deduction provided for under current tax law. In connection with the acquisition of the remaining interest in BFDS during March 2017, the corresponding deferred tax balance related to unremitted earnings of U.S. unconsolidated affiliates was reduced and no balance remains as of December 31, 2017. Deferred taxes provided on unremitted earnings through December 31, 2016 were $6.5 million.

We record U.S. tax on the undistributed earnings of foreign subsidiaries unless the subsidiaries' earnings are considered indefinitely reinvested outside the U.S. Distributions in 2017, 2016, and 2015 resulted in incremental taxes of $1.0 million, $1.0 million and $1.9 million, respectively. We recorded approximately $2.3 million and $2.6 million of related income tax liability, net of credits, on unremitted earnings in 2017 and 2016, respectively.

We intend to indefinitely reinvest the earnings in the businesses of our other foreign subsidiaries. As of December 31, 2017, accumulated undistributed earnings considered indefinitely reinvested were $186.2 million. The Tax Act generally eliminates U.S. federal income taxes on dividends from foreign subsidiaries after December 31, 2017. As a result, the accumulated

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

undistributed earnings would only be subject to other taxes, such as withholding taxes and local taxes, on distribution of such earnings. Due to the uncertainty of the manner in which the undistributed earnings would be brought back to the U.S. and the withholding and local tax laws in effect at that time, it is not practicable for us to determine the income tax we would incur, if any, if such earnings were distributed.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits is as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Balance at beginning of year	$ 57.6	$ 60.3	$ 69.8
Additions based on tax positions related to the current year	3.0	3.5	9.0
Additions for tax positions of prior years	8.0	2.7	2.2
Reductions for tax positions of prior years	(5.3)	(7.7)	(19.5)
Settlements	(0.2)	(1.2)	(0.4)
Statute expirations	(10.7)	—	(0.8)
Balance at end of year	$ 52.4	$ 57.6	$ 60.3

Included in the net unrecognized tax benefit at December 31, 2017, 2016 and 2015 were $43.6 million, $40.9 million and $42.0 million, respectively, of tax positions which, if recognized, would affect the effective tax rate. We recognize interest and penalties accrued related to unrecognized tax benefits in income taxes, which is consistent with the recognition of these items in prior reporting periods. The liability for interest and penalties associated with unrecognized tax benefits increased $2.7 million during the year ended December 31, 2017 to $13.1 million. The liability for interest and penalties decreased $1.1 million during the year ended December 31, 2016.

Although it is difficult to predict when all uncertain tax positions will reverse due to the unknown timing of the completion of examination periods, it is possible that aggregate income tax amounts of approximately $5.0 million to $7.0 million may reverse during 2017.

We file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. An IRS examination for the tax year ended December 31, 2010 was completed in September 2015. Federal tax years 2012 through 2017 are subject to examination while various years from 2007 through 2017 are under or are subject to various state, local, and foreign income tax examinations by taxing authorities. We do not believe that the outcome of any examination will have a material impact on our financial statements.

During 2015, the IRS completed its examination of the previously filed federal income tax refund claims for Domestic Manufacturing Deductions, research and experimentation credits and capital losses for the period 2010. As a result, during 2015 we recognized income tax benefits of $11.9 million, resulting from the reversal of previously reserved tax positions related to these matters as well as other remeasurements during the period.

An IRS examination for the tax year ended December 31, 2014 began during 2017. An IRS examination of BFDS for the tax year ended December 31, 2015 (when BFDS was an unconsolidated affiliate) began during 2017.

13. Equity

On May 9, 2017, our Board of Directors declared a two-for-one stock split of DST's outstanding common stock effected in the form of a stock dividend, which was paid on June 8, 2017 to shareholders of record at the close of business on May 26, 2017. In connection with the stock split, 16.5 million treasury shares were used to settle a portion of the distribution. The distribution of treasury shares during the year ended December 31, 2017 reduced Additional paid in capital by $40.5 million, Retained earnings by $1,297.2 million and Treasury stock by $1,337.9 million. All share and per share data, excluding treasury shares, have been retroactively adjusted for all periods presented to reflect the stock split as if the stock split had occurred at the beginning of the earliest period presented.

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Earnings per share

The computation of basic and diluted earnings per share is as follows (in millions, except per share amounts):

	Year Ended December 31,		
	2017	2016	2015
Income from continuing operations attributable to DST Systems, Inc.	$ 447.0	$ 179.0	$ 309.7
Income from discontinued operations, net of tax	4.5	248.3	48.5
Net income attributable to DST Systems, Inc.	$ 451.5	$ 427.3	$ 358.2
Weighted average common shares outstanding	61.4	66.0	72.0
Incremental shares from restricted stock units and stock options	0.7	0.6	0.9
Weighted average diluted shares outstanding	62.1	66.6	72.9
Basic earnings per share			
Continuing operations attributable to DST Systems, Inc.	$ 7.28	$ 2.71	$ 4.30
Discontinued operations	0.07	3.76	0.67
Basic earnings per share	$ 7.35	$ 6.47	$ 4.97
Diluted earnings per share			
Continuing operations attributable to DST Systems, Inc.	$ 7.20	$ 2.68	$ 4.25
Discontinued operations	0.07	3.73	0.67
Diluted earnings per share	$ 7.27	$ 6.41	$ 4.92

We had approximately 59.3 million and 64.0 million shares outstanding at December 31, 2017 and 2016, respectively. There were no shares from options to purchase common stock excluded from the diluted earnings per share calculation because they were anti-dilutive for the years ended December 31, 2017 and 2016.

We have authorized 10.0 million shares of preferred stock, of which no shares are currently issued or outstanding.

Other comprehensive income (loss)

AOCI balances, net of tax, consist of the following (in millions):

	Available-for-Sale Securities	Cash Flow Hedges	Defined Benefit Pension	Foreign Currency Translation	Accumulated Other Comprehensive Income
Balance, December 31, 2015	$ 84.0	$ (0.1)	$ —	$ (42.0)	$ 41.9
Net current period other comprehensive income (loss)	10.1	—	—	(35.4)	(25.3)
Balance, December 31, 2016	94.1	(0.1)	—	(77.4)	16.6
Net current period other comprehensive income (loss)	(93.2)	0.2	4.1	73.7	(15.2)
Balance, December 31, 2017	$ 0.9	$ 0.1	$ 4.1	$ (3.7)	$ 1.4

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DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Additions to and reclassifications out of AOCI (in millions):

	Year Ended December 31,					
	2017		2016		2015	
	Pretax	Net of Tax	Pretax	Net of Tax	Pretax	Net of Tax
Available-for-sale securities:						
Unrealized gains (losses) on available-for-sale securities	$ 7.0	$ 4.5	$ 18.1	$ 11.4	$ (35.6)	$ (21.8)
Reclassification of (gains) losses into net earnings on available-for-sale securities (1)	(155.9)	(97.7)	(2.1)	(1.3)	(163.5)	(101.4)
Net change in available-for-sale securities	(148.9)	(93.2)	16.0	10.1	(199.1)	(123.2)
Cash flow hedges:						
Unrealized gains (losses) on cash flow hedges	(0.2)	(0.1)	0.1	—	0.4	0.4
Reclassification of losses (gains) into net earnings on foreign currency cash flow hedges (2)	0.6	0.3	—	—	(0.5)	(0.3)
Reclassification of losses (gains) into net earnings on interest rate cash flow hedges (3)	—	—	—	—	0.2	0.1
Net change in cash flow hedges	0.4	0.2	0.1	—	0.1	0.2
Defined benefit pension:						
Unrealized net gains (losses) on defined benefit pension plan	5.2	4.1	—	—	—	—
Net change in defined benefit pension	5.2	4.1	—	—	—	—
Foreign currency translation (4):						
Current period translation adjustments	36.0	36.0	(34.9)	(34.9)	(22.0)	(22.0)
Reclassification into net earnings upon liquidation of foreign entities (5)	(3.3)	(3.3)	(0.5)	(0.5)	—	—
Reclassification into net earnings upon step-up acquisition of foreign entities (6)	41.0	41.0	—	—	—	—
Net change in foreign currency translation	73.7	73.7	(35.4)	(35.4)	(22.0)	(22.0)
Total other comprehensive loss	$ (69.6)	$ (15.2)	$ (19.3)	$ (25.3)	$ (221.0)	$ (145.0)

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(1) Realized (gains)/losses on available-for-sale securities are recognized in Other income, net in the Consolidated Statement of Income. See Note 5, “Investments,” for additional information.

(2) Reclassification to net earnings of derivatives qualifying as effective foreign currency cash flow hedges are recognized in Costs and expenses in the Consolidated Statement of Income.

(3) Reclassification to net earnings of derivatives qualifying as effective interest rate cash flow hedges are recognized in Interest expense in the Consolidated Statement of Income.

(4) Cumulative translation adjustments are inclusive of amounts derived from assets and liabilities held for sale.

(5) Reclassification to net earnings upon disposition of net assets classified as held for sale are recognized in Income from discontinued operations, net of tax in the Consolidated Statement of Income. See Note 4, “Discontinued Operations,” for additional information.

(6) Reclassification to net earnings upon step-acquisition of previously-held equity interests in foreign entities are recognized in Other income, net in the Consolidated Statement of Income. See Note 3, “Significant Business Transactions,” for additional information.

One of our unconsolidated affiliates has an interest rate swap liability with a fair market value of $25.5 million, $33.1 million and $44.7 million at December 31, 2017, 2016 and 2015, respectively. The unconsolidated affiliate used inputs from quoted prices for similar assets and liabilities in active markets that are directly or indirectly observable relating to the measurement of the interest rate swap. Our 50% proportionate share of this interest rate swap liability was $12.8 million, $16.5 million and $22.4 million at December 31, 2017, 2016 and 2015, respectively. We record in investments and AOCI our proportionate share of this liability in an amount not to exceed the carrying value of our investment in this unconsolidated affiliate. Because the carrying value of this unconsolidated affiliate investment balance was zero at December 31, 2017, 2016, and 2015, no interest rate swap liability or change in AOCI was recorded for these periods.

Stock repurchases and retirements

As of December 31, 2016, we had $150.0 million of capacity remaining under our share repurchase plan authorized in 2016. On May 9, 2017, our Board of Directors authorized a new $300.0 million share repurchase plan, which allows, but does not require, the repurchase of common stock in open market and private transactions. We repurchased the equivalent of 5.0 million shares of our common stock on a post stock split basis for $300.0 million during the year ended December 31, 2017, which left approximately $150.0 million remaining under our share repurchase plan authorized in 2017. The 2017 share repurchase plan does not have an expiration date, however we are currently precluded from executing additional stock repurchases pursuant to the Merger Agreement with SS&C, as further described in Note 1, "Description of Business." Under previous share repurchase plans, we expended $300.0 million for approximately 5.4 million shares on a post stock split basis and $400.0 million for approximately 7.2 million shares on a post stock split basis during the years ended December 31, 2016 and 2015, respectively.

Shares received in exchange for tax withholding obligations and payment of the exercise price arising from the exercise of options to purchase our stock or from the vesting of equity awards are included in common stock repurchased in the Consolidated Statement of Cash Flows. The amounts of such share withholdings and exchanges were $10.6 million, $15.8 million and $5.3 million during the years ended December 31, 2017, 2016 and 2015, respectively. In addition, in connection with the non-cash acquisition of the remaining interest in BFDS, DST acquired $3.7 million of DST common stock that was held by BFDS.

We had 5.1 million and 18.0 million shares of common stock held in treasury at December 31, 2017 and 2016, respectively.

Dividends

In 2017, 2016 and 2015, we paid cash dividends per common share of $0.72, $0.66 and $0.60, respectively. The total dividends paid for the years ended December 31, 2017, 2016 and 2015 were $44.7 million, $44.7 million and $44.5 million, respectively. The cash paid for dividends in 2017, 2016 and 2015 was $43.7 million, $43.4 million, and $43.1 million, respectively. The remaining amount of the dividends represent dividend equivalent shares of restricted stock units ("RSUs") in lieu of the cash dividend. We are currently precluded from declaring dividends pursuant to the Merger Agreement with SS&C, as further described in Note 1, "Description of Business."

Share-based compensation

The DST Systems, Inc. 2015 Equity and Incentive Plan (the "Employee Plan") became effective on May 12, 2015. The Employee Plan amends, restates, and renames the DST Systems, Inc. 2005 Equity Incentive Plan in order to, among other things, combine (for all future grants) the DST Systems, Inc. 2005 Non-Employee Directors' Award Plan (the "Directors' Plan") with the Employee Plan. The term of the Employee Plan, subject to the right of the Board of Directors to amend or terminate the Employee Plan at any time, is from May 12, 2015 until the earlier of May 11, 2025 or the date on which all shares subject to the Employee Plan have been delivered and the restrictions on all awards granted under the plan have lapsed, according to the Employee Plan's provisions. All awards granted pursuant to the Directors' Plan before May 9, 2015 remain subject to the terms and conditions of the Directors' Plan. We have outstanding share awards (primarily in the form of stock options and non-vested restricted stock awards) under each of the plans. The Employee Plan has been approved by our Board of Directors and shareholders.

The number of shares of common stock reserved for delivery under the Employee Plan, subject to certain limitations and adjustments, is the sum of (a) 5.2 million shares, on a post stock-split basis, plus (b) any shares required to satisfy substitute awards, as defined by the Employee Plan. If any shares subject to an award granted after May 12, 2015 are forfeited or such awards terminate or lapse without the delivery of such shares, those shares shall become available for grant under the Employee Plan. As of December 31, 2017, approximately 3.5 million shares were available under the Employee Plan. The Employee Plan provides for the availability of shares of our common stock for the grant of awards to employees, consultants and non-employee directors, its consolidated subsidiaries, and its unconsolidated affiliates and joint ventures. Awards under the Employee Plan may take the form of shares, dividend equivalents, options, stock appreciation rights, performance units, restricted stock, restricted stock units, annual incentive awards, service awards and substitute awards (each as defined in the plan).

Stock Options

Options under the Employee Plan vest and generally become fully exercisable over three years of continued employment, depending upon the grant type. Options generally have a 10-year contractual term. The fair value of each option grant is estimated on the date of grant using a Black-Scholes option pricing model. There were no stock options granted or canceled during 2017, 2016 or 2015. All outstanding options were fully vested at December 31, 2017 and 2016. The total aggregate intrinsic values of stock options exercised for all plans during the years ended December 31, 2017, 2016 and 2015 were $3.3 million, $5.8 million and $15.4 million, respectively.

A summary of stock option activity is presented in the table below (shares in millions):

Options	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2016	0.7	$ 22.71		
Exercised	(0.1)	22.72		$ 3.3
Outstanding at December 31, 2017	0.6	22.71	2.8	23.4
Exercisable at December 31, 2017	0.6	$ 22.71	2.8	$ 23.4

Non-vested Restricted Stock Unit Awards

Non-vested restricted stock awards, consisting of RSUs and performance-based stock units ("PSUs"), are valued based on the value of DST's common stock at the date of grant. RSUs contain service features and convert to DST shares on a one to one basis upon vesting. RSUs do not confer full stockholder rights such as voting rights and cash dividends, but provide for additional dividend equivalent RSU awards in lieu of cash dividends.

PSUs contain service and performance features in which the number of restricted shares to be awarded depends on the attainment of defined company-wide performance goals. PSUs are granted at a target number of shares and generally vest at the end of a 3-year requisite service and performance period. The number of shares ultimately earned will range from zero to 200% of the target award based on actual attainment.

Non-vested shares of restricted stock awards may be forfeited upon termination of employment from DST depending on the circumstances of the termination, or become forfeited upon failure to achieve the required performance condition, if applicable. Forfeitures are recognized as they occur rather than using an estimated forfeiture rate.

A summary of non-vested restricted stock award activity is presented in the table below (units in millions):

Non-vested Restricted Stock Unit Awards	RSUs	Weighted Average Grant Date Fair Value	Weighted Average Conversion Ratio	PSUs	Weighted Average Grant Date Fair Value	Weighted Average Conversion Ratio
Non-vested at December 31, 2016	0.5	$ 52.79	1.0	0.7	$ 51.11	0.6
Granted	0.3	59.27		0.3	58.90	
Vested	(0.3)	52.39		(0.2)	46.54	
Forfeited	—	56.45		(0.3)	54.13	
Non-vested at December 31, 2017	0.5	$ 56.76	1.0	0.5	$ 54.79	1.6

Forfeitures during the year ended December 31, 2017 include all remaining PSUs granted in 2015 as the performance criteria was not achieved as of December 31, 2017.

The weighted-average grant-date fair value of non-vested restricted stock awards units granted during the years ended December 31, 2017, 2016 and 2015 was $59.10, $53.75, and $54.42. The fair value of restricted stock which vested during the years ended December 31, 2017, 2016 and 2015 was $22.6 million, $30.2 million and $9.6 million, respectively.

At December 31, 2017, we had $22.7 million of total unrecognized compensation expense (included in Additional paid-in capital on the Consolidated Balance Sheet) related to share-based compensation arrangements. Based on awards currently outstanding, we estimate that compensation expense attributable to the restricted stock grants will be approximately $15.7 million for 2018, $6.0 million for 2019, and $1.0 million for 2020.

The Consolidated Statement of Income for the years ended December 31, 2017, 2016 and 2015 reflects share-based compensation expense of $44.2 million, $16.3 million and $27.9 million, respectively, within Costs and expenses and Discontinued operations. The total tax benefit recognized in earnings from share-based compensation arrangements for the years ended December 31, 2017, 2016 and 2015, were approximately $17.2 million, $6.4 million and $10.9 million, respectively. Excess tax benefits of $3.0 million were classified as operating cash inflows during the year ended December 31,

2017. Excess tax benefits of $4.7 million and $5.6 million were classified as financing cash inflows during the years ended December 31, 2016 and 2015, respectively. Cash proceeds from options exercised for the years ended December 31, 2017, 2016 and 2015 were $2.8 million, $5.3 million and $11.8 million, respectively, and were classified as financing cash inflows. We generally issue shares out of treasury to satisfy stock option exercises.

Stock purchase plan

The 2000 DST Systems, Inc. Employee Stock Purchase Plan ("ESPP"), which provided employees the right to purchase DST shares at a discount, was suspended effective January 1, 2006.

Redeemable non-controlling interest

As a result of our seed capital investment during 2015, there is a non-controlling investor group which owned approximately 47% of a consolidated open-end fund as of December 31, 2016. The amount included on the Consolidated Balance Sheet at December 31, 2016 associated with the redeemable non-controlling interest was $21.3 million. In March 2017, we reduced our ownership interest in a substantial portion of our seed capital investments, resulting in the deconsolidation of the respective fund. The net income attributable to the non-controlling interest was $0.6 million during the year ended December 31, 2017 and the net loss attributable to the non-controlling interest was $0.9 million and $0.1 million during the years ended December 31, 2016 and 2015, respectively.

14. Benefit Plans

We sponsor defined contribution plans that cover domestic and non-domestic employees following the completion of an eligibility period. Employer contribution expenses from continuing operations under these plans totaled $46.0 million, $35.0 million and $33.9 million during the years ended December 31, 2017, 2016 and 2015, respectively. Additionally, through the acquisition of IFDS U.K., we now sponsor a defined benefit pension plan which has a net benefit asset as of December 31, 2017 of $0.9 million.

We have active and non-active non-qualified deferred compensation plans for senior management, certain highly compensated employees and directors. Certain of the active plans permit existing participants to defer a portion of their compensation until termination of their employment, at which time payment of amounts deferred is made in a lump sum or annual installments. Deferred amounts earn interest at a rate determined by the Board of Directors or are credited with deemed gains or losses of the underlying hypothetical investments. Amounts deferred under these plans were approximately $39.9 million and $12.7 million at December 31, 2017 and 2016, respectively. Changes in the liability are recorded as adjustments to compensation expense. The underlying investments, which are classified as trading securities, are recorded at fair market value with changes recorded as adjustments to Other income, net.

15. Supplemental Cash Flow Information

Supplemental disclosure of cash flow information is shown in the following table (in millions):

	Year Ended December 31,		
	2017	2016	2015
Cash payments:			
Interest paid during the year	$ 26.3	$ 22.9	$ 24.3
Income taxes paid during the year	115.3	164.5	217.4
Non cash investing and financing activities:			
Changes in accrued capital expenditures	1.6	2.0	4.0
Charitable contribution of marketable securities	13.6	2.0	—
Deposits with broker for securities sold short	6.9	8.4	10.8
Securities sold short	5.3	8.2	10.7

16. Commitments and Contingencies

The following table sets forth our contractual cash obligations for our continuing operations including debt obligations, minimum rentals for the non-cancelable term of all operating leases and obligations under software license and other agreements (in millions):

	Debt	Operating Leases	Software License Agreements	Other	Total
2018	$ 83.7	$ 23.8	$ 34.9	$ 18.9	$ 161.3
2019	3.6	19.1	33.6	12.1	68.4
2020	183.7	16.4	30.0	3.7	233.8
2021	0.7	14.7	28.9	2.4	46.7
2022	0.8	12.5	7.6	2.1	23.0
Thereafter	350.8	17.5	—	—	368.3
Total	$ 623.3	$ 104.0	$ 135.0	$ 39.2	$ 901.5

Debt includes the accounts receivable securitization program, 2010 Senior Notes, 2017 Senior Notes, revolving credit facilities and other indebtedness as described in Note 10, "Debt." We also have letters of credit of $5.3 million and $5.9 million outstanding for December 31, 2017 and 2016, respectively. Letters of credit are provided by our debt facility.

We have future obligations under certain operating leases. The operating leases, which include facilities, data processing and other equipment, have remaining lease terms ranging from 1 to 10 years excluding options to extend the leases for various lengths of time. Certain leases have clauses that call for the annual rents to be increased during the term of the lease. Such lease payments are expensed on a straight-line basis. We also lease certain facilities from unconsolidated real estate affiliates.

The following rental costs were incurred (in millions):

	Year Ended December 31,		
	2017	2016	2015
Rent expense	$ 28.6	$ 22.2	$ 23.6
Occupancy expenses included in above amounts that were charged by unconsolidated real estate affiliates	6.0	5.9	6.8

Obligations under software license agreements generally relate to purchase obligations under maintenance agreements that support the software license.

We have entered into agreements with certain officers whereby upon defined circumstances constituting a change in control of the Company, certain benefit entitlements are automatically funded and such officers are entitled to specific cash payments upon termination of employment. Additionally, we have adopted the DST Systems, Inc. Executive Severance Plan which provides certain benefits to participants in the event of a qualifying termination under the plan.

Other contractual commitments

In the normal course of business, to facilitate transactions of services and products and other business assets, we have agreed to indemnify certain parties with respect to certain matters. We have agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, data and confidentiality obligations, or out of intellectual property infringement or other claims made by third parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. At December 31, 2017, except for certain immaterial items, there were no liabilities for guarantees or indemnifications as it is not possible to determine either the maximum potential amount under these indemnification agreements or the timing of any such payments due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made under these agreements have not had a material impact on our consolidated financial position, results of operations or cash flows.

Legal Proceedings

A putative class action suit was filed against the Company, the Compensation Committee of our Board of Directors, the Advisory Committee of our 401(k) Profit Sharing Plan (the “Plan”) and certain of our present and/or former officers and directors, alleging breach of fiduciary duties and other violations of the Employee Retirement Income Security Act. On

September 1, 2017, a complaint was filed purportedly on behalf of the Plan in the Southern District of New York, captioned *Ferguson, et al v. Ruane Cunniff & Goldfarb Inc, et al.*, naming as defendants the Company, the Compensation Committee of our Board of Directors, the Advisory Committee of the Plan and certain of our present and/or former officers and directors. We intend to defend this case vigorously, and, because it is still in its preliminary stages, we have not yet determined what effect this lawsuit will have, if any, on our financial position or results of operations.

In connection with an investigation of the Plan and the activities of its fiduciaries, the U.S. Department of Labor through its Employee Benefits Security Administration issued a letter dated February 23, 2018 stating that, based on facts gathered, it appeared that certain fiduciaries of the Plan may have breached their fiduciary obligations and violated certain provisions of the Employee Retirement Income Security Act in connection with the administration of the Plan. The letter stated that if the fiduciaries fail to take corrective action, the matter may be referred to the Office of the Solicitor of Labor for possible legal action. The letter further stated that if the fiduciaries take proper corrective action based on a settlement agreement with the Department of Labor, it will not bring a lawsuit with regard to these issues, and close its investigation without further action. We have not yet determined what effect this letter will have, if any, on our financial position or results of operations.

On February 20, 2018, a putative class action complaint was filed against DST and the members of our board of directors in the United States District Court for the District of Delaware under the caption *Scott v. DST Systems, Inc., et al*. The complaint alleges that the preliminary proxy statement issued in connection with the Merger omitted material information in violation of Sections 14(a) and 20(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Specifically, the complaint alleges that the preliminary proxy statement does not disclose the line items used to calculate certain measures that do not comply with Generally Accepted Accounting Principles ("non-GAAP") or a reconciliation of such non-GAAP measures to our most comparable GAAP measures, and also does not disclose actual projected values of unlevered free cash flow ("UFCF") or the values of the line items utilized to calculate UFCF, rendering the preliminary proxy statement false and misleading. The complaint seeks an order (1) declaring that the action is properly maintainable as a class action and certifying the plaintiff as class representative and his counsel as class counsel; (2) enjoining us from proceeding with the shareholder vote on the Merger or consummating the Merger, unless and until we issue additional disclosures; (3) awarding damages; (4) awarding costs and disbursements of this action, including reasonable attorneys' and expert fees and expenses; and (5) granting such other and further relief as the Court may deem just and proper. We believe the lawsuit is without merit and intend to defend vigorously against these allegations, and, because it is still in its preliminary stages, we have not yet determined what effect this lawsuit will have, if any, on our financial position or results of operations.

On February 21, 2018, a putative class action complaint was filed against DST and the members of our board of directors in the United States District Court for the Western District of Missouri under the caption *Pratt v. DST Systems, Inc., et al*. The complaint alleges that the preliminary proxy statement issued in connection with the Merger omitted material information in violation of Sections 14(a) and 20(a) of the Exchange Act. Specifically, the complaint alleges that the preliminary proxy statement does not disclose the line items used to calculate certain non-GAAP measures or a reconciliation of such non-GAAP measures to our most comparable GAAP measures; does not disclose actual projected values of unlevered free cash flow ("UFCF"), the values of the line items utilized to calculate UFCF, the terminal values for DST, or the inputs for the perpetuity growth rates and discount rates; does not disclose the multiples and metrics for the Publicly Traded Companies Analyses; and does not disclose the multiples and metrics for the Selected Precedent Transactions Analyses, rendering the preliminary proxy statement false and misleading. The complaint seeks an order (1) declaring that the action is properly maintainable as a class action and certifying the plaintiff as class representative and his counsel as class counsel; (2) enjoining us from proceeding with the shareholder vote on the Merger or consummating the Merger, unless and until we issue additional disclosures; (3) directing us to disseminate a materially complete and accurate proxy statement; (4) awarding damages; (5) awarding costs and disbursements of this action, including reasonable attorneys' and expert fees and expenses; (6) declaring that we violated Sections 14(a) and/or 20(a) of the Exchange Act, as well as Rule 14a-9; and (7) granting such other and further relief as the Court may deem just and proper. We believe the lawsuit is without merit and intend to defend vigorously against these allegations, and, because it is still in its preliminary stages, we have not yet determined what effect this lawsuit will have, if any, on our financial position or results of operations.

On February 27, 2018, a complaint was filed against DST and the members of its board of directors in the United States District Court for the District of Delaware under the caption *Williams v. DST Systems, Inc., et al.*, (D. Del.). The complaint alleges that the preliminary proxy statement issued in connection with the Merger omitted material information in violation of Sections 14(a) and 20(a) of the Exchange Act. Specifically, the complaint alleges that the preliminary proxy statement does not disclose DST's unlevered free cash flows, the individual metrics that the financial advisor calculated for the Selected Publicly Traded Companies Analysis and Selected Precedent Transactions Analysis, and, with respect to the Discounted Cash Flow Analysis, the inputs and assumptions used in calculating the selection of the discount rates and terminal multiple range. The complaint seeks an order (1) declaring that the "Registration Statement" is materially misleading and contains omissions of fact in violation of

Section 14(a); (2) enjoining DST from proceeding with the shareholder vote on the Merger or consummating the Merger, unless and until DST issues additional disclosures; (3) awarding damages; (4) awarding costs, including reasonable attorneys' and expert fees and expenses; and (5) granting such other and further relief as the Court may deem just and proper. The defendants believe the lawsuit is without merit and intend to defend vigorously against these allegations, and, because it is still in its preliminary stages, we have not yet determined what effect this lawsuit will have, if any, on our financial position or results of operations.

We are involved in various other legal proceedings arising in the normal course of our business. At this time, we do not believe any material losses under these claims to be probable. While the ultimate outcome of these legal proceedings cannot be predicted with certainty, it is the opinion of management, after consultation with legal counsel, that the final outcome in such proceedings, in the aggregate, would not have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

17. Segment and Geographic Information

Our operating business units offer sophisticated information processing and software services and products. As discussed in Note 1, "Description of Business," we established a new reportable segment structure during first quarter 2017. We now present our businesses as three operating segments, Domestic Financial Services, International Financial Services and Healthcare Services. Prior periods have been adjusted to be consistent with the current presentation.

Domestic Financial Services

Our Domestic Financial Services segment provides investor, investment, advisor/intermediary and asset distribution products and services to clients within the U.S. to support direct and intermediary sales of mutual funds, alternative investments, securities brokerage accounts and retirement plans on a remote processing or business process outsourcing basis utilizing our proprietary software applications. This includes transaction processing, account opening and maintenance, reconciliation of trades, positions and cash, corporate actions, regulatory reporting and compliance functions and tax reporting.

International Financial Services

Our International Financial Services segment provides investor and policyholder administration and technology products and services to mutual fund managers, insurers, and platform providers within the U.K., Canada, Ireland and Luxembourg on a remote processing or business process outsourcing basis. In Australia and the U.K., we also provide solutions related to participant accounting and recordkeeping for clients in the wealth management and retirement savings industries/markets.

Healthcare Services

Our Healthcare Services segment uses our proprietary software applications to provide healthcare organizations with pharmacy, healthcare administration, and health outcomes optimization solutions to satisfy their information processing, quality of care, cost management and payment integrity needs. Our healthcare solutions include claims adjudication, benefit management, care management, business intelligence and other ancillary services.

We evaluate the performance of our segments based on income before interest expense, income taxes, and non-controlling interest. Intersegment revenues are reflected at rates prescribed by us and may not be reflective of market rates.

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DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

Summarized financial information concerning our segments is shown in the following tables (in millions):

	Year Ended December 31, 2017				
	Domestic Financial Services	International Financial Services	Healthcare Services	Elimination Adjustments	Consolidated Total
Operating revenues	$ 1,130.3	$ 537.9	$ 418.5	$ —	$ 2,086.7
Intersegment operating revenues	56.9	0.5	—	(57.4)	—
Out-of-pocket reimbursements	111.8	12.2	7.5	—	131.5
Total revenues	1,299.0	550.6	426.0	(57.4)	2,218.2
Costs and expenses	1,072.2	449.3	340.9	(57.4)	1,805.0
Depreciation and amortization	86.8	30.7	10.5	—	128.0
Operating income	140.0	70.6	74.6	—	285.2
Other income (loss), net	234.2	(15.5)	0.3	—	219.0
Equity in earnings of unconsolidated affiliates	34.7	19.3	0.5	—	54.5
Earnings from continuing operations before interest, income taxes and non-controlling interest	$ 408.9	$ 74.4	$ 75.4	$ —	$ 558.7

	Year Ended December 31, 2016				
	Domestic Financial Services	International Financial Services	Healthcare Services	Elimination Adjustments	Consolidated Total
Operating revenues	$ 937.7	$ 110.5	$ 426.2	$ —	$ 1,474.4
Intersegment operating revenues	58.1	0.4	—	(58.5)	—
Out-of-pocket reimbursements	73.0	1.2	8.5	(0.4)	82.3
Total revenues	1,068.8	112.1	434.7	(58.9)	1,556.7
Costs and expenses	829.0	98.2	345.1	(58.9)	1,213.4
Depreciation and amortization	77.3	3.1	15.6	—	96.0
Operating income	162.5	10.8	74.0	—	247.3
Other income, net	13.9	8.7	0.1	—	22.7
Gain on sale of business	—	5.5	—	—	5.5
Equity in earnings of unconsolidated affiliates	14.3	12.4	0.5	—	27.2
Earnings from continuing operations before interest, income taxes and non-controlling interest	$ 190.7	$ 37.4	$ 74.6	$ —	$ 302.7

	Year Ended December 31, 2015				
	Domestic Financial Services	International Financial Services	Healthcare Services	Elimination Adjustments	Consolidated Total
Operating revenues	$ 936.8	$ 91.8	$ 376.4	$ —	$ 1,405.0
Intersegment operating revenues	46.3	1.6	—	(47.9)	—
Out-of-pocket reimbursements	60.7	1.7	8.2	(1.6)	69.0
Total revenues	1,043.8	95.1	384.6	(49.5)	1,474.0
Costs and expenses	792.3	86.1	321.3	(49.5)	1,150.2
Depreciation and amortization	67.7	4.8	18.6	—	91.1
Operating income	183.8	4.2	44.7	—	232.7
Other income (loss), net	207.2	(2.6)	(0.1)	—	204.5
Equity in earnings of unconsolidated affiliates	23.8	21.3	0.3	—	45.4
Earnings from continuing operations before interest, income taxes and non-controlling interest	$ 414.8	$ 22.9	$ 44.9	$ —	$ 482.6

Earnings from continuing operations before interest, income taxes and non-controlling interest in the segment reporting information above less interest expense of $26.8 million, $23.5 million and $23.8 million for the years ended December 31,

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

2017, 2016 and 2015, respectively, are equal to income from continuing operations before income taxes and non-controlling interest on a consolidated basis for the corresponding year.

Information concerning the revenues of principal geographic areas is as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Revenues:[1]			
U.S.	$ 1,641.1	$ 1,417.2	$ 1,350.6
International			
U.K.	504.6	78.1	65.6
Canada	19.4	19.3	21.7
Australia	28.4	25.4	20.5
Others	24.7	16.7	15.6
Total international	577.1	139.5	123.4
Total revenues	$ 2,218.2	$ 1,556.7	$ 1,474.0

(1) Revenues are attributed to countries based on location of the client.

Information concerning total assets by reporting segment is as follows (in millions):

	December 31,		
	2017	2016	2015
Domestic Financial Services	$ 2,212.2	$ 2,234.9	$ 2,438.6
International Financial Services	756.1	430.0	217.6
Healthcare Services	524.5	552.2	405.3
Assets held for sale	—	72.6	295.2
Elimination Adjustments	(554.6)	(517.9)	(543.5)
Total assets	$ 2,938.2	$ 2,771.8	$ 2,813.2

Information concerning the long-lived assets (properties and other non-current assets) of principal geographic areas is as follows (in millions):

	December 31,		
	2017	2016	2015
Long-lived assets:			
U.S.	$ 318.1	$ 249.9	$ 274.7
International			
U.K.	192.8	25.9	29.1
Australia	8.6	8.0	2.6
Others	5.1	2.2	7.3
Total international	206.5	36.1	39.0
Total long-lived assets	$ 524.6	$ 286.0	$ 313.7

DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

18. Quarterly Financial Data (Unaudited)

(in millions, except per share amounts):

	Year Ended December 31, 2017					
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total	
Operating revenues	$ 379.8	$ 629.4	$ 524.8	$ 552.7	$ 2,086.7	
Out-of-pocket reimbursements	25.7	26.8	37.8	41.2	131.5	
Total revenues	405.5	656.2	562.6	593.9	2,218.2	
Costs and expenses	326.4	525.2	472.1	481.3	1,805.0	
Depreciation and amortization	23.2	34.8	34.7	35.3	128.0	
Operating income	55.9	96.2	55.8	77.3	285.2	
Interest expense	(5.9)	(6.9)	(6.9)	(7.1)	(26.8)	
Other income, net	193.0	15.5	8.7	1.8	219.0	
Equity in earnings of unconsolidated affiliates	19.2	3.9	4.2	27.2	54.5	
Income from continuing operations before income taxes and non-controlling interest	262.2	108.7	61.8	99.2	531.9	
Income taxes	18.1	35.2	13.0	18.0	84.3	
Income from continuing operations before non-controlling interest	244.1	73.5	48.8	81.2	447.6	
Income (loss) from discontinued operations, net of tax	2.9	1.9	(0.3)	—	4.5	
Net income	247.0	75.4	48.5	81.2	452.1	
Net (income) loss attributable to non-controlling interest	(0.6)	—	—	—	(0.6)	
Net income attributable to DST Systems, Inc.	$ 246.4	$ 75.4	$ 48.5	$ 81.2	$ 451.5	
Weighted average common shares outstanding	63.1	61.9	60.7	59.9	61.4	
Weighted average diluted shares outstanding	63.9	62.5	61.6	60.6	62.1	
Basic earnings per share:						
Continuing operations attributable to DST Systems, Inc.	$ 3.86	$ 1.19	$ 0.81	$ 1.36	$ 7.28	(1)
Discontinued operations	0.05	0.03	(0.01)	—	0.07	(1)
Basic earnings per share	$ 3.91	$ 1.22	$ 0.80	$ 1.36	$ 7.35	(1)
Diluted earnings per share:						
Continuing operations attributable to DST Systems, Inc.	$ 3.81	$ 1.18	$ 0.79	$ 1.34	$ 7.20	(1)
Discontinued operations	0.04	0.03	—	—	0.07	(1)
Diluted earnings per share	$ 3.85	$ 1.21	$ 0.79	$ 1.34	$ 7.27	(1)
Cash dividends per share of common stock	$ 0.18	$ 0.18	$ 0.18	$ 0.18	$ 0.72	

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(1) Earnings per share are computed independently for each of the quarters presented. Accordingly, the accumulation of quarterly earnings per share may not equal the total computed for the year.

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DST Systems, Inc.

Notes to Consolidated Financial Statements (continued)

	Year Ended December 31, 2016					
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total	
Operating revenues	$ 361.3	$ 373.9	$ 365.5	$ 373.7	$ 1,474.4	
Out-of-pocket reimbursements	19.4	16.6	21.2	25.1	82.3	
Total revenues	380.7	390.5	386.7	398.8	1,556.7	
Costs and expenses	306.9	320.4	289.6	296.5	1,213.4	
Depreciation and amortization	22.1	24.2	22.8	26.9	96.0	
Operating income	51.7	45.9	74.3	75.4	247.3	
Interest expense	(6.1)	(6.5)	(5.4)	(5.5)	(23.5)	
Gain on sale of business	—	—	—	5.5	5.5	
Other income, net	6.3	7.0	6.7	2.7	22.7	
Equity in earnings of unconsolidated affiliates	6.7	10.2	7.0	3.3	27.2	
Income from continuing operations before income taxes and non-controlling interest	58.6	56.6	82.6	81.4	279.2	
Income taxes	20.1	22.1	31.6	27.3	101.1	
Income from continuing operations before non-controlling interest	38.5	34.5	51.0	54.1	178.1	
Income (loss) from discontinued operations, net of tax	18.5	18.7	222.8	(11.7)	248.3	
Net income	57.0	53.2	273.8	42.4	426.4	
Net (income) loss attributable to non-controlling interest	1.1	(0.2)	(0.5)	0.5	0.9	
Net income attributable to DST Systems, Inc.	$ 58.1	$ 53.0	$ 273.3	$ 42.9	$ 427.3	
Weighted average common shares outstanding	67.6	66.6	65.4	64.2	66.0	
Weighted average diluted shares outstanding	68.5	67.2	66.1	65.0	66.6	
Basic earnings per share:						
Continuing operations attributable to DST Systems, Inc.	$ 0.59	$ 0.52	$ 0.77	$ 0.85	$ 2.71	(1)
Discontinued operations	0.27	0.28	3.41	(0.18)	3.76	(1)
Basic earnings per share	$ 0.86	$ 0.80	$ 4.18	$ 0.67	$ 6.47	(1)
Diluted earnings per share:						
Continuing operations attributable to DST Systems, Inc.	$ 0.59	$ 0.51	$ 0.76	$ 0.84	$ 2.68	(1)
Discontinued operations	0.26	0.28	3.37	(0.18)	3.73	(1)
Diluted earnings per share	$ 0.85	$ 0.79	$ 4.13	$ 0.66	$ 6.41	(1)
Cash dividends per share of common stock	$ 0.16	$ 0.17	$ 0.17	$ 0.16	$ 0.66	

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(1) Earnings per share are computed independently for each of the quarters presented. Accordingly, the accumulation of quarterly earnings per share may not equal the total computed for the year.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures and Changes in Internal Control Over Financial Reporting

As of the end of the fiscal year for which this Annual Report on Form 10-K is filed, the Company's Chief Executive Officer and Chief Financial Officer evaluated the effectiveness of the Company's disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures (i) are effective for recording, processing, summarizing and reporting, within the time periods specified in the Securities and Exchange Commission's rules and forms, the information required to be disclosed by the Company in reports that it files or submits under the Securities Exchange Act of 1934 (the "Exchange Act"), and (ii) include controls and procedures designed to ensure that information required to be disclosed by the Company in such reports is accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. There has been no change in the Company's internal control over financial reporting that occurred during the last fiscal quarter of the fiscal year for which this Annual Report on Form 10-K is filed that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. Management has excluded BFDS and IFDS U.K. from our assessment of disclosure controls and procedures that are subsumed by internal control over financial reporting as of December 31, 2017 because the entities were acquired by the Company in a purchase business combination during 2017. BFDS is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment of internal control over financial reporting represent 15% and 13%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017. IFDS U.K. is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment of internal control over financial reporting represent 25% and 22%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017.

Report of Management on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, the Company conducted an evaluation of the effectiveness of our internal control over financial reporting based on the 2013 framework in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control—Integrated Framework*, management concluded that our internal control over financial reporting was effective as of December 31, 2017. Management has excluded BFDS and IFDS U.K. from our assessment of internal control over financial reporting as of December 31, 2017 because the entities were acquired by the Company in a purchase business combination during 2017. BFDS is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment of internal control over financial reporting represent 15% and 13%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017. IFDS U.K. is a wholly-owned subsidiary whose total assets and total revenues excluded from management's assessment of internal control over financial reporting represent 25% and 22%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2017 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Item 9B. Other Information

Hooley and Young Separation Agreements.

On February 26, 2018, we entered into a separation agreement with each of Stephen Hooley, our Chief Executive Officer, and Randall Young, our General Counsel (the "executive separation agreements"), pursuant to which, upon the Effective Time of the Merger, each of Messrs. Hooley and Young's employment with us will be terminated for "good reason" pursuant to the employment agreement with Mr. Hooley dated June 30, 2009 and the employment agreement with Mr. Young dated December 31, 2008, respectively (collectively, the "executive employment agreements").

In satisfaction of all obligations of DST under the executive employment agreements, Messrs. Hooley and Young will receive the cash severance and benefits as described in their respective executive employment agreement on the closing date. In addition, in lieu of conversion of any of Messrs. Hooley and Young's outstanding RSUs and PSUs into SS&C equity awards, such awards shall be converted into cash (based upon a cash price of $84.00 per share) and paid in a cash lump sum on the closing date, provided, that to the extent that any such cash award constitutes nonqualified deferred compensation under Section 409A, the cash payment will be paid subject to any six month delay required by Section 409A.

The above description of the executive separation agreements does not purport to be complete and is qualified in its entirety by the full text of the separation agreements set forth in Exhibits 10.34 and 10.35 to the Form 10-K.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Name	Age	Director Since
Joseph C. Antonellis	63	2015
Jerome H. Bailey	65	2015
Lynn Dorsey Bleil	54	2014
Lowell L. Bryan	72	2012
Gary D. Forsee	67	2015
Charles E. Haldeman, Jr.	69	2014
Stephen C. Hooley	54	2012
Samuel G. Liss	61	2012

Board of Directors

Joseph C. Antonellis. Mr. Antonellis served in a variety of positions of increasing responsibility at State Street from November 1991 through July 2015. Since March 2010, he served as Vice Chairman and head of all Europe and Asia/Pacific Global Services and Global Markets businesses. In 2006, he was appointed Vice Chairman with additional responsibility as head of Investor Services in North America and Global Investment Manager Outsourcing Services. Prior to this, in 2003, he was named head of Information Technology and Global Securities Services. Before joining State Street, Mr. Antonellis held a number of positions with Bank of Boston over a 15-year period, including Mutual Fund Custody division head and deputy corporate auditor. Until October 2015, he served as a director of Princeton Financial Systems Inc., a State Street company. Mr. Antonellis brings to our Board extensive leadership experience as well as global financial services and technological expertise gained from his tenure at State Street.

Jerome H. Bailey. Most recently, Mr. Bailey served as CFO of the Institutional Clients Group at Citigroup Inc., from August 2011 until his retirement in October 2014. Previously, he was CFO and Chief Information Officer of Equiniti Ltd., a United Kingdom-based provider of administrative, processing, and payment solutions. He has also served as Chief Operating Officer and CFO of NYMEX (New York Mercantile Exchange), and as CFO of Marsh, Inc., an insurance brokerage and risk management firm. Mr. Bailey also served as Executive Vice President and CFO at Dow Jones, and as CFO at Salomon Inc. and Salomon Brothers. While at Marsh and Dow Jones, along with managing the financial functions, he had responsibility for the technology and operations, process change, and strategic development. He also served as Managing Director and Controller of Morgan Stanley and as a Partner at PricewaterhouseCoopers LLP. Mr. Bailey has more than 35 years of experience in financial services, operations, and accounting. In addition, his financial knowledge, management experience, and accounting background make him a valuable asset to the Board and Audit Committee.

Lynn Dorsey Bleil. Ms. Bleil was the leader of McKinsey & Company's West Coast Healthcare Practice, and a leader of McKinsey’s worldwide Healthcare Practice. She retired in November 2013 as a Senior Partner (i.e., Director) in the Southern California Office of McKinsey. During her 25+ years with McKinsey, she worked exclusively within the healthcare sector, advising senior management and boards of leading companies on corporate and business unit strategy, mergers and acquisitions/ integration, marketing & sales, public policy, and organization - across all segments of the healthcare value chain. She also serves on the boards of Stericycle, Inc. and Sonova Holdings AG. In addition to public company board service in the healthcare field, Ms. Bleil is a trustee of Intermountain's Park City Medical Center Governing Board. Ms. Bleil is a valuable asset to our Board. Her significant expertise in the healthcare industry helps advance our strategic business plan.

Lowell L. Bryan. Lead Independent Director. Mr. Bryan is a former Senior Adviser at McKinsey & Company, a global company in the business of management consulting to companies in numerous industries. He retired in mid-January 2012 from his 27 year role as a Senior Partner (i.e., Director) at McKinsey, where he was a co-founder of the company’s financial institutions and strategy practices. Upon retirement from his 36 years of full-time service at McKinsey, he founded L L Bryan Advisory, LLC, which advises management and boards on corporate strategy and organizational issues. Mr. Bryan brings an independent perspective to our Board as a result of his knowledge of the operation of the global capital markets and the global economy, as well as strategic, organizational, and operations issues faced by our financial and healthcare clients. He is the author of several books on banking, capital markets, strategy, and organizational topics. He has advised the boards of directors and top management of dozens of financial institutions, healthcare, and industrial clients primarily on issues of strategy and organization. His knowledge and vast experience contribute to his effectiveness as our Lead Independent Director.

Gary D. Forsee. Mr. Forsee was President of the University of Missouri System, a state university system, from December 2007 through January 2011. From 2005 through 2007, he served as Chief Executive Officer of Sprint Nextel Corporation, a telecommunications company. From 2003 to 2005, he was Chairman of the Board and Chief Executive Officer at Sprint Corporation, prior to its merger with Nextel Communications. Prior to that time, Mr. Forsee served as Vice Chairman and Chief Operations Officer at the Bell South Corporation, as President of Bell South International, and as Chief Executive Officer of Global One Communications in Brussels, Belgium, a joint venture of France Telecom, Deutsche TeleKom, and Sprint. He began his career in 1972 with Southwestern Bell Telephone Company. Mr. Forsee serves on the boards of Great Plains Energy Incorporated and Ingersoll-Rand Public Limited Partnership. Mr. Forsee brings to our Board his background as a chief executive of large, technologically complex enterprises. He brings his experience in strategic development and overseeing compensation programs.

Charles E. Haldeman, Jr. From July 2009 through May 2012, Mr. Haldeman was Chief Executive Officer and Director of Federal Home Loan Mortgage Corporation ("Freddie Mac"), a government-sponsored enterprise that provides mortgage liquidity to the housing market. From 2003 through mid-2009, he held key leadership positions at Putnam Investment Management, LLC, including CEO and President through June 2008 as well as Chairman of the Board in his final year. Mr. Haldeman has held several executive positions in the asset management industry, including as Chairman and CEO of Delaware Investments and as President and Chief Operating Officer of United Asset Management Corporation. Mr. Haldeman is a Chartered Financial Analyst with a Juris Doctorate and M.B.A. from Harvard. He also serves on the boards of S&P Global Inc. and JBG Smith Properties. He previously served on the board of KCG Holdings, Inc. Mr. Haldeman is an effective addition to our Board with his extensive financial services, capital markets, asset management, finance, and financial regulation knowledge gained through more than 40 years of financial services experience. Through his mutual fund leadership experience, he has insight into the strategic challenges faced by our financial services clients.

Stephen C. Hooley. Chairman of the Board, Chief Executive Officer and President. Mr. Hooley became our Chief Executive Officer and President in September 2012, after joining the Company in July 2009 as our President and Chief Operating Officer. He became Chairman of the Board in July 2014. He was the President and Chief Executive Officer of BFDS from mid-2004 until joining DST. He served from 2009 through April 2013 as non-executive Chairman of BFDS. From 2007 through March 2013, he served as Chief Executive Officer of IFDS L.P. Mr. Hooley's deep financial services industry experience; his extensive knowledge of DST and the interrelationship of our domestic and international diversified business ventures; and his well-established relationships with our customers, associates, and partners are valuable assets to the Board as it works to enhance value for stockholders. Mr. Hooley has developed a productive relationship with the Board, collaborating on DST's most important strategic issues.

Samuel G. Liss. Mr. Liss has been the managing principal since July 2010 of WhiteGate Partners LLC, an advisory firm focused on the financial and business services sectors. He has also served since April 2014 as an Adjunct Professor of Finance at New York University Stern School of Business and since September as an Adjunct Professor at Columbia Law School. From April 2004 through June 2010, Mr. Liss was Executive Vice President, Travelers Companies, Inc., a provider of property and casualty insurance, and continues to serve as an advisor. He was responsible for corporate strategy, divestitures and acquisitions, and had direct management responsibility for one of Travelers' three operating divisions - Financial, Professional, and International Insurance. From February 2003 through March 2004, Mr. Liss was Executive Vice President of The St. Paul Companies. From 1994 through 2001, he served as Managing Director of Financial Institutions Banking Group and Managing Director of Equity Research at Credit Suisse First Boston, Inc. He began his career at Salomon Brothers. He also serves on the board of Verisk Analytics, Inc. Mr. Liss' strong background in financial services, management, and capital markets plus other public and private board experience contribute to his service on our Board and effectiveness as the Chair of our Nominating Committee.

Executive officers of the registrant (other than Mr. Hooley, whose information is provided above)

The following list presents certain information with respect to each of our executive officers.

Jonathan J. Boehm, age 57, is our Executive Vice President and Head of Healthcare Businesses. He re-joined the Company in 1997 after prior service in the early 1980s. Prior to becoming an Executive Vice President managing our Healthcare businesses in 2009, he served as Group Vice President - Mutual Funds Full Service. He is responsible for our Healthcare Services segment, including DST HealthCare Holdings, Inc. and its subsidiaries DST Health Solutions and DST Pharmacy Solutions.

Edmund J. Burke, age 57, is our Executive Vice President and President of ALPS. ALPS includes the Corporation's investment management and asset servicing businesses. ALPS Holdings, Inc. became a wholly-owned subsidiary of the Company during 2011. Mr. Burke joined ALPS in 1991 and has served as President since 2000. As part of his responsibilities for the ALPS group of companies, Mr. Burke is President and Trustee of Clough Global Long/Short Fund, Clough Global Allocation Fund, Clough Global Equity Fund and Clough Global Opportunities Fund, Trustee of Liberty All-Star Equity Fund, Director of Liberty All-Star Growth Fund, Inc., and President and Trustee of Financial Investors Trust. Each of these funds operates as a registered investment company pursuant to the Investment Company Act of 1940.

Gregg Wm. Givens, age 57, is our Senior Vice President, Chief Financial Officer and Treasurer. He assumed the roles of Chief Financial Officer and Treasurer in January of 2014. He joined the Company in 1996 as an officer and served as Vice President and Chief Accounting Officer from 1999 through 2013.

Vercie L. Lark, age 55, is our Executive Vice President and Head of our Financial Services businesses. He joined the Company as Vice President and Chief Information Officer in June 2010 and assumed his current title in April 2016. Mr. Lark previously served since July 2009 as Vice President and Chief Information Officer of CenturyLink, Inc., a provider of voice, broadband and video services. He had served since 2008 as the Chief Information Officer of Embarq Corporation, which was acquired in 2009 by CenturyLink.

Maria Mann, age 55, is Senior Vice President and Chief Information Officer. She joined the Company in April 2016. From 2011 through April 2016, she served as Chief Technology Officer at a division of JP Morgan Chase and Co., a multinational banking and financial services holding company. She is responsible for our global information technology infrastructure and architecture functions, global information privacy and security, and global information technology sourcing as well as risk and corporate applications.

William Slattery, age 62, is Chief Executive Officer of DSTi Holdings Limited and Chairman of DST Financial Services Europe, Ltd. He joined the Company in January 2017. Prior to joining DST, Mr. Slattery was Head of the Investment Servicing business for State Street Europe and held various executive positions at State Street since 2003. Before joining State Street, Mr. Slattery was Managing Director and Head of Global Risk Management at Deutsche Asset Management and Member of the Group Risk Board of Deutsche Bank AG. His earlier career included 23 years at the Central Bank of Ireland, including senior leadership roles with responsibility for Ireland's International Financial Services Centre and as Deputy Head of Banking Supervision. Mr. Slattery, who has over 20 years in the financial services industry, was a former Chairman of Financial Services Ireland and was a member of the Public Expenditure Review Group, established by the Irish government in 2007.

Mary E. Sweetman, age 54, is Senior Vice President and Chief Human Resources Officer. She joined the Company in June 2013 as a Vice President and assumed her current title in March 2014. Prior to joining the Company, she had served since 2007 as Senior Vice President, Human Resources for Furniture Brands International, a home furnishings designer and manufacturer that, following her departure from that company, filed for bankruptcy in September 2013.

Randall D. Young, age 61, became Senior Vice President, General Counsel and Secretary in mid-2013. Since 2002, he had served as Vice President, General Counsel and Secretary. He joined the Company as a Vice President in 1994.

Code of ethics

We have adopted the Code of Business Conduct, which applies to all of our directors, officers and employees. The Code of Business Conduct is publicly available on our website at www.dstsystems.com. If we make any amendment to our Code of Business Conduct, other than a technical, administrative or non-substantive amendment, or if we grant any waiver, including any implicit waiver, from a provision of the Code of Business Conduct that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, we will disclose the nature of the amendment or waiver on our website at the same location. Also, we may elect to disclose the amendment or waiver in a current report on Form 8-K filed with the SEC.

Audit Committee disclosure

Our independent audit committee is responsible for:

- appointing, approving the services and overseeing the work of, and receiving reports directly from the independent registered public accounting firm
- reviewing audited financial statements and various other public disclosures
- assisting the Board in overseeing material financial risk exposures
- assisting the Board in overseeing our internal audit function and legal and regulatory compliance, as well as the integrity of our financial statements and certain internal controls

Mr. Bailey chairs the Audit Committee. Other members include: Messrs. Antonellis, Bryan, Forsee, Haldeman, Liss and Ms. Bleil. Our Board has determined that Messrs. Antonellis, Bailey, Bryan, Forsee, Haldeman, and Liss are each an "audit committee financial expert." Each member of the Audit Committee is "financially literate" as defined by NYSE rules. Each member of the Audit Committee is "independent" as defined by applicable law and NYSE Listing Standards. No Committee member serves on more than two other public company audit committees.

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Section 16(A) beneficial ownership reporting compliance

The securities regulations require our non-employee directors, certain of our officers, and each person who owns more than 10% of DST stock to file ownership reports with the Securities and Exchange Commission. Based on our review of the reports, and our officers' and directors' written representations to us, we believe all required reports were timely filed during the relevant period, except as follows: DST filed a late Form 4 on behalf of William Slattery, because of an administrative oversight.

Item 11. Executive Compensation

On January 11, 2018, we entered into a Merger Agreement wherein SS&C will acquire DST. Under the terms of the agreement, SS&C will purchase DST in an all-cash transaction for $84.00 per share plus the assumption of debt, equating to an enterprise value of approximately $5.4 billion. The transaction is subject to DST stockholder approval, clearances by the relevant regulatory authorities and other customary closing conditions. See Item 8, Financial Statements and Supplementary Data - Note 1, "Description of the Business" for more information regarding this transaction. The effects of the Merger on the Company's equity awards and other executive compensation plans and agreements are described in greater detail in the definitive proxy statement filed by the Company with the SEC on February 27, 2018 in connection with the Merger, and any description of such effects of the Merger Agreement in this Form 10-K are qualified in their entirety by the definitive transaction documents, including the Merger Agreement set forth in Exhibit 2.8 to this Form 10-K as the same may be amended from time to time, and the associated definitive proxy statement filed with the SEC.

Compensation Discussion and Analysis

The purpose of this Compensation Discussion and Analysis ("CD&A") is to provide information about DST's compensation policies for our NEOs. Our NEOs for 2017 are:

Name	Title
Stephen C. Hooley	Chairman of the Board, Chief Executive Officer, and President
Gregg Wm. Givens	Senior Vice President, Chief Financial Officer, and Treasurer
Jonathan J. Boehm	Executive Vice President and Head of Healthcare Businesses
Edmund J. Burke	Executive Vice President and President of ALPS
Vercie L. Lark	Executive Vice President and Head of Domestic Financial Services

The discussion below relates to DST's compensation policies prior to the Company's entry into the Merger Agreement with SS&C in January 2018. The entry into the Merger Agreement did not affect the Compensation Committee's compensation policies with respect to 2017 compensation. All references to the "Committee" in this CD&A refer to the Compensation Committee of our Board of Directors.

Executive pay philosophy

The Company's business strategy for creating growth has been to leverage the capabilities of its employees to execute its growth strategy while remaining committed to maintaining a strong financial position with appropriate flexibility and liquidity. Our compensation philosophy has supported this strategy by stressing the importance of pay for corporate and individual performance in meeting strategic and business goals for growth, value creation and financial strength, while maintaining flexibility to meet the changing employee, business and market conditions. Our executive compensation program is designed to attract and retain a talented team of executives who are expected to provide leadership for the Company's success in a challenging business environment. The Company has accomplished this by motivating executives with an appropriate mix of compensation elements described below.

Objectives of our Executive Compensation Program

We have used the following principles to determine our Executive Compensation Program:

- ***Attract, Retain, and Motivate High-Performing Executives:*** Our executive base salaries and target incentive compensation opportunities are designed to be market competitive so that we can attract, retain, and motivate individuals who will drive superior business performance.
- ***Pay-for-Performance:*** We seek to build and support a performance-driven culture by incorporating an at-risk component into a significant portion of each executive's pay. The at-risk component varies based on individual responsibility levels as well as organizational and, as applicable, business unit performance results.

- ***Align with Stockholder Interests:*** The majority of NEO compensation is tied to organizational performance and is, therefore, at risk. We have historically incorporated into our program two performance based compensation vehicles that align executive compensation with creation of stockholder value.
    - ***Annual Short-Term Cash Incentive:*** This annual opportunity rewards performance as measured by achievement against pre-set annual financial goals.
    - ***Long-Term Equity Incentive:*** Our equity grants have aligned executive and stockholder interests in long-term stock appreciation.
- ***Integrate with Our Corporate Values:*** Our compensation is designed to motivate and inspire behavior that fosters a high-performance culture while upholding our corporate governance standards and avoiding unreasonable risk.

Since talent is critical to our long-term success, we seek to pay executives at levels that are competitive with other employers with whom we compete for talent. Our goal has been to target executive compensation, on average, to be at the median of this market, with the opportunity to earn above-market compensation for superior performance within any given year or performance period. Our program incorporates several features that seek to drive business performance over both the short- and long-term. A higher percentage of total compensation is at-risk for the most senior levels in order to reflect the additional responsibilities associated with these positions.

Components of 2017 Compensation

Type	Objectives	Key Features
Base Salaries	Fixed compensation component. Help attract and retain high-caliber executive talent.	The Committee targets NEO base salaries at the median of the industry peer group benchmark data, but also takes into account each NEO's responsibilities, leadership, tenure, and retention risk. Base salaries for the NEOs are reviewed annually for potential adjustments.
Annual Cash Incentives	An at-risk, performance based compensation component. Align the interests of executives and stockholders by providing compensation based on the achievement of pre-determined annual financial goals.	For 2017, for each of our NEOs other than Mr. Burke, 60% of annual incentive performance was based on Adjusted EPS performance, with the remaining 40% tied to Adjusted Operating Revenue. Threshold, target, and maximum goals were established in early 2017, with payout opportunities ranging from 0% to 150% of target for each of our NEOs other than Mr. Burke. Mr. Burke participated in a separate ALPS annual cash incentive plan (discussed below), which was designed to reward achievement based upon ALPS and Company financial performance.
Long-Term Equity Incentives	Align NEO and stockholder interests through the appreciation of stock price over the long-term.	The Company uses a combination of at-risk Performance Stock Units ("PSUs") and time-vesting Restricted Stock Units ("Time-Based RSUs") to provide NEOs with a performance and retention incentive opportunity. In keeping with our pay for performance philosophy, we apportioned the aggregate grant date fair value of long-term incentives to each NEO so that two-thirds is in the form of PSUs and one-third is in the form of Time-Based RSUs. PSUs vest based on performance against a pre-determined three-year cumulative Adjusted EBITDA goal. Threshold, target, and maximum goals were established in early 2017 for the 2017-2019 performance period, with payout opportunities ranging from 0% to 200% of target for PSUs granted in 2017. Time-Based RSUs vest annually in equal one-third increments.
Benefits & Perquisites	Deliver limited benefits and perquisites to executives.	Because we provide limited perquisites, we do not believe that they are material to our overall compensation program. We do not provide gross-ups for NEO perquisites.

Pay-for-Performance

Our philosophy has been to link pay to performance so that the interests of our executives and stockholders are aligned.

A significant portion of our NEOs' total compensation reflects both upside and downside risk. The portion of the compensation of the CEO and other NEOs that is considered at-risk, (*i.e.*, tied to Company performance over the short- and/or long-term) has historically exceeded the fixed portion. We have historically provided that a greater percentage of the CEO's compensation is at-risk than the other NEOs. We have set goals based on growth objectives, our mix of businesses, projections, and competitive outlooks.

We believe the additional emphasis on at-risk compensation for the CEO (when compared to the other NEOs) reflects his additional responsibility and overall contribution to Company performance. 65% of our CEO's compensation and 61% of our other NEO's compensation is considered at-risk.

Risk Taking

Our compensation program is designed to put pay at-risk for performance while at the same time discouraging unnecessary risk-taking. The Committee evaluates the potential for unacceptable risk-taking when designing the compensation program. We believe that the design of our executive compensation program does not encourage excessive risk-taking or incent our NEOs to take actions that may conflict with our risk-based decision making. Material risk in our compensation design is mitigated in several ways:

- Earnings goals and award opportunities in our annual cash incentive program are at levels intended to be challenging without the need to take inappropriate risks;
- Our long-term incentives consist of Time-Based RSUs that vest over a multi-year period and PSUs that are earned at the end of a three-year period, both of which provide upside potential and downside risk;
- Our use of RSUs versus stock options mitigates the likelihood of risk-taking because RSUs, unlike stock options, retain some value even in a down market;
- Payouts under our long-term incentive plans were capped at 150% of target for grants prior to 2016, and for grants made after 2016 have been capped at 200% of target;
- Payouts under our annual incentive plan have been capped at 150% of target, other than Mr. Burke who participated in the ALPS annual cash incentive plan;
- Adjusted EBITDA has been used as a performance metric in our long-term PSUs while award opportunities under our annual cash incentive program are based on adjusted earnings per share ("EPS") and adjusted operating revenue, thereby minimizing the opportunity to manipulate results; and
- We have adopted a clawback policy.

In addition, we have policies in place that prohibit our NEOs from pledging or hedging shares of Company securities owned by them.

Named Executive Officer Compensation Practices

The processes and procedures for determining executive officer compensation are written and were approved by the Committee. The Committee is responsible for and has the authority under its charter to determine the components of executive officer compensation.

In support of its pay-for-performance philosophy, the Committee has tied a significant portion of executive officer compensation to the creation of stockholder value over the long term, structured executive officer compensation so that a significant portion of total compensation is at-risk rather than fixed, and used balanced performance goals that incent both short-term and long-term business results.

The Committee reviews executive officer compensation annually. For each review, the Committee may consider, and decide the weight it will give to, among other things, any combination of the following:

- market competitive data;
- individual responsibilities;
- individual results against established goals;
- Company or business unit performance and objectives and other Company financial and strategic information;
- tax and accounting impact of proposed compensation;
- retention;
- internal pay equity among the executives; and
- effects of a potential severance, change in control or other transaction.

The Committee has historically utilized the services of an independent compensation consultant. As described below, the independent compensation consultant has provided various data, analyses, and advice to the Committee on executive compensation matters. In addition, the Committee may request our Chief Executive Officer or Chief Human Resources Officer recommend compensation package components. Such officers communicate executive hiring and retention concerns to the Committee. The Committee may ask the Chief Executive Officer, Chief Human Resources Officer, Chief Financial Officer or General Counsel to provide the Committee with:

- market analysis data;
- proposed benefit plan terms and conditions;

- financial, accounting, and tax information;
- legal requirements for benefit plan and award structures;
- valuation information regarding outstanding awards and undistributed account balances and other historical Company compensation data; and
- Company performance data and individual performance evaluations.

The Committee develops the criteria for evaluating Chief Executive Officer performance and annually reviews his performance against such criteria. The Chief Executive Officer periodically discusses with the Committee his view of the performance of the other executive officers.

The 2015 Equity and Incentive Plan permits the Committee to delegate certain administrative matters, and the Committee has made administrative delegations to the Chief Executive Officer, Chief Human Resources Officer, and Chief Financial Officer.

The Committee and the Board rely on the Chief Human Resources Officer to implement compensation decisions and adopt appropriate compensation policies, procedures, and internal controls.

2017 Compensation Details

Annual base salaries

The following table shows the base salaries of each NEO and summarizes their 2017 base salary increases. Increases shown below were based on considerations including: the relative position of the individual to the market competitive benchmarks, individual performance, and retention considerations.

	2016 Base Salary	2017 Base Salary	% Increase
Stephen C. Hooley	$825,000	$850,000	3.03%
Gregg Wm. Givens	$460,000	$475,000	3.26%
Jonathan J. Boehm	$490,000	$490,000	0%
Edmund J. Burke	$400,000	$415,000	3.75%
Vercie L. Lark	$460,000	$460,000	0%

Annual cash incentives

The following table summarizes the 2017 annual cash incentive opportunity levels for the CEO and other NEOs as a percentage of base salary (other than Mr. Burke who participated in the ALPS annual cash incentive plan discussed below).

	2017 Target Bonus (% of Base Salary)
CEO	150%
Other NEOs	100%

The following table summarizes the 2017 annual incentive payout 'curve' as a percentage of target goal achievement and states the corresponding weighted financial goals.

	Weighting	Threshold 50%	Target 100%	Maximum 150%
Adjusted EPS Goals (1)	60%	$2.72	$2.90	$3.09
Adjusted Operating Revenue Goals (2)	40%	$1,827mm	$1,922mm	$2,002mm

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(1) Adjusted EPS is defined as diluted EPS for the reporting period as reflected in the audited financial statements, adjusted for the effect of certain predetermined adjustments, as described below.

(2) Adjusted Operating Revenue is defined as consolidated operating revenue for the reporting period as reflected in the audited financial statements, adjusted for certain predetermined adjustments, as described below.

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For the 2017 performance year, the annual incentive goal result was as follows:

	Actual Performance	Performance as a % of Target	Weighting	Weighted Payout
Adjusted EPS Goals (1)	$3.75	150%	60%	90%
Adjusted Operating Revenue Goals (2)	$2.014 billion	150%	40%	60%
Total				**150%**

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(1) The following pre-determined adjustments affected the level of achievement relating to EPS Goals: effect of repurchased shares, sale or impairment of non-operating assets, expense recognized related to restructuring charges for non-GAAP results, the impact of strategic transactions, including results of operations and related transactional costs, the impact of changes in GAAP, and an additional adjustment for loss of a client.

(2) The following pre-determined adjustments affected the level of achievement relating to Operating Revenue Goals: the impact of strategic transactions and an additional adjustment for loss of a client.

The following table summarizes the annual cash incentives awarded for the 2017 performance period for our NEOs (other than Mr. Burke who participated in the ALPS annual cash incentive plan discussed below):

	2017 Target Bonus	Actual Performance Level	Actual Bonus Total
Stephen C. Hooley	$1,275,000	150%	$1,912,500
Gregg Wm. Givens	$475,000	150%	$712,500
Jonathan J. Boehm	$490,000	150%	$735,000
Vercie L. Lark	$460,000	150%	$690,000

Mr. Burke serves as President of ALPS and, therefore, participated in the ALPS annual cash incentive plan. The ALPS annual cash incentive plan is an at-risk performance-based program designed to reward achievement based upon ALPS and DST financial performance. The size of the annual ALPS bonus pool is determined based upon several financial measures, and participants are granted the right to receive a specified percentage of the pool. For 2017, the incentive bonus pool initially equaled 17.5% of ALPS pre-bonus Adjusted EBITDA, subject to three adjustments: (i) 20% of the pool amount was subject to increase or decrease based upon achievement of the Adjusted EPS Goals under the 2017 DST cash incentive plan (disclosed above), (ii) the amount of the bonus pool was reduced by the increase in matching payments under the 401(k) plan to ALPS employees due to an increase in the percentage of contributions matched in 2017, and (iii) the bonus pool was subject to increase based upon achieving 30% year-over-year ALPS pre-bonus Adjusted EBITDA growth, which was not achieved for 2017. Mr. Burke's annual incentive for 2017 equaled 10% of the adjusted bonus pool, by agreement established at date of hire. For 2017, Mr. Burke's annual cash incentive award under the plan was $894,795, which reflects his percentage of the bonus pool as increased based upon achievement of the maximum Adjusted EPS Goals for DST.

Long-term equity incentives - PSUs and Time-Based RSUs

DST is committed to pay-for-performance and ensuring the alignment of our executives' and our stockholders' interests. Equity awards have historically been made at the first regularly scheduled Committee meeting of the year. Any subsequent awards for onboarding, promotions, or special rewards are generally made at regularly scheduled Committee meetings.

Performance stock units

Two-thirds of 2017 equity awards were in the form of PSUs and are subject to the following terms, including a challenging performance metric that prevents awards from vesting if Adjusted EBITDA targets are not met:

- Vesting of PSUs is based on performance against pre-determined cumulative Adjusted EBITDA goals at the end of a three year performance period.
- If the threshold goal is not achieved, no vesting occurs, no shares are issued, and all PSUs are forfeited.
- If the threshold goal is achieved, the number of shares to be issued is 50% for awards granted before 2016, and 25% for awards granted in 2016 and in subsequent years, of the target number of units, and the remaining PSUs are forfeited.
- If the target goal is achieved, the number of shares to be issued equals the target number of units granted.
- If the maximum goal is achieved, the number of shares to be issued equals 150% for awards granted before 2016 and 200% for awards granted in 2016 and in subsequent years, of the target number of units granted.
- Linear interpolation is used to determine the number of shares to be issued between goal levels (so that, for instance, there could be 54%, or 123%, of the target number vesting).

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Time-based restricted stock units

One-third of the 2017 equity awards were granted to our NEOs in the form of Time-Based RSUs that vest annually in one-third increments.

Grants awarded in 2017

This table shows the aggregate grant date fair value of the 2017 long-term incentive grants and the allocation of the awards between PSUs and Time-Based RSUs for each NEO.

	Aggregate Grant Date Fair Value [(1)]	Aggregate Annual Units (#)	Time-Based RSUs (#)	PSUs (at Target Number Granted) (#)
Stephen C. Hooley	$4,556,770	77,018	25,416	51,602
Gregg Wm. Givens	$1,012,550	17,114	5,648	11,466
Jonathan J. Boehm	$1,215,131	20,538	6,778	13,760
Edmund Burke	$759,442	12,836	4,236	8,600
Vercie L. Lark	$1,113,840	18,826	6,212	12,614

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(1) The grant date fair value shown for each individual was calculated by dividing by the average of the highest and lowest reported sale price of DST stock on February 24, 2017, which was $59.165.

Vesting of 2015-2017 PSUs

The following table summarizes the vesting as a percentage of the target number of units for all NEOs as well as the corresponding financial goals for the 2015-2017 performance cycle:

	Threshold	Target	Maximum
2015-2017 PSU Vesting as a Percentage of Target	50%	100%	150%

Range of Performance Targets

Performance Share Plan	Metric [(1)]	Threshold	Target	Maximum	Payout Range	Actual Adjusted EBITDA	Payout
2015-2017	Adjusted EBITDA	$1.630B	$1.790B	$1.950B	0-150%	$1.533B	0%

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(1) EBITDA is defined as cumulative earnings before interest, taxes, depreciation, and amortization, as reflected in the audited financial statements for the three year performance period ended December 31, 2017. EBITDA as defined for the equity grants excludes the cost of equity compensation.

Adjusted EBITDA for purposes of the 2015-2017 plan reflects pre-determined adjustments that are to be made to the level of EBITDA goal achievement. These adjustments include: the sale or impairment of non-operating assets (investment or real estate); the sale of a subsidiary to a third party; and the acquisition of the remaining interests in a joint venture.

As shown above, the threshold performance level was not obtained for the 2015-2017 performance cycle and, therefore, the awards were forfeited for this performance period.

Peer group

Benchmarking data is gathered and presented to the Committee by its independent compensation consultant, Deloitte Consulting LLP ("Deloitte"). Deloitte supplements peer group data with published survey data from general industry and computer and data processing companies of a similar financial size. The Committee has developed an industry peer group of similarly-sized companies in the data processing and software services industries in order to assess competitive market compensation levels for the NEOs. The following fifteen companies comprised the industry peer group used to benchmark compensation awarded for 2017:

Alliance Data Systems Corporation	Broadridge Financial Solutions, Inc.
Convergys Corporation	Corelogic, Inc.
CSG Systems International, Inc.	Euronet Worldwide, Inc.
Fidelity National Information Services, Inc.	Fiserv, Inc.
Global Payments Inc.	NCR Corporation
Jack Henry & Associates, Inc.	Teletech Holdings Inc.
MoneyGram International, Inc.	Verifone Systems, Inc.
Total System Services, Inc.	

The 2017 peer group was the same peer group used for 2016, except that Heartland Payment Systems, Inc. was removed from the 2017 peer group as it was acquired in 2016.

Role of the compensation consultant and management

Deloitte provided various data, analyses, and advice to the Committee on executive compensation matters during 2017. Deloitte reports directly to the Committee and attends Committee meetings as requested. In 2017, such services included benchmarking executive compensation, providing competitive information on incentive plan practices, reviewing the 2017 Compensation Discussion and Analysis, and reviewing peer group compensation practices.

The Committee welcomes the CEO's input as it designs NEO compensation programs and sets the compensation of the other NEOs. However, the CEO is not present during discussions at Committee meetings or between the Committee and Deloitte regarding his compensation.

The Committee alone makes decisions about the amounts and forms of NEO compensation, and its decisions may reflect factors and considerations other than information and advice from the CEO, Deloitte, and members of management.

Flexibility in determining compensation

The Committee considers market benchmark compensation data for individual positions, considers additional information from management when setting pay levels, and has also considered:

- the responsibilities of each individual NEO position;
- internal equity among the executives;
- the compensation levels we believe are necessary to incent and retain individual NEOs; and
- the performance of individual NEOs, including, but not limited to, the ability to meet business challenges strategically, plan long-range, achieve short-term and long-term financial results, lead and develop a team for which the officer is responsible, prudently steward our business and operational resources, and promote legal and ethical compliance.

The Committee does not follow precise formulas when determining NEO compensation levels. Rather, it considers whether the various components of our compensation programs justify the cost to the Company and provide value to our stockholders.

Benefits and perquisites

Severance Benefits	NEOs without an employment agreement (Messrs. Givens, Boehm, Burke, and Lark) participate in our Executive Severance Plan, which provides severance benefits for terminations of employment by DST for reasons other than cause, death or disability (as those are defined in the Executive Severance Plan). DST's obligation to provide payments and benefits under the Executive Severance Plan is conditioned upon the executive providing and not revoking a release of claims and complying with the applicable non-competition, non-solicitation, and non-disclosure covenants. Mr. Hooley is party to an employment agreement with the Company that provides for severance benefits that are different than those contained in the Executive Severance Plan. For additional detail on the Executive Severance Plan and the severance benefits payable under Mr. Hooley's employment agreements, see "Termination Payments and Potential Termination Payments."
Perquisites	We provide NEOs with a modest level of perquisites to promote convenience in the performance of duties for the Company. In 2017, we allowed Mr. Hooley limited personal use of aircraft in which we own fractional interests. Generally when his family accompanies him on such flights there is no incremental cost. The Committee monitors personal use through receipt of reports from our CFO at least four times per year. NEOs may also receive estate planning services, tax return services, excess liability insurance, long-term disability insurance and paid parking. We reimburse spouse or guest travel to and from, and family entertainment at, off-site planning meetings at which NEOs and their spouses or guests interact with each other and with members of the Board and their spouses or guests. We do not gross-up NEO perquisites for tax liabilities.
Accelerated Award Vesting Benefits	We allow full or partial accelerated vesting of equity awards upon death, disability, retirement and in other limited termination of employment circumstances as described under "Termination Payments and Potential Termination Payments." These benefits aid NEOs in the event of health crises, aid their families in the event of their deaths, help NEOs plan for retirement, and balance the Board's flexibility in making management changes or effecting transactions which could result in an NEOs involuntary termination of employment.
Insurance Benefits	NEOs participate in group health, vision, and dental insurance plans on the same basis as other employees. We offer NEOs the opportunity to apply for individual variable life insurance policies in lieu of participation in our employee group life policy. The policies are portable and allow NEOs to accrue cash value. We provide NEOs with a long-term disability policy on the same basis as other employees. Some NEOs also have an individual long-term disability policy that is portable. This is a closed class of individuals and is a benefit no longer offered to new NEOs. We also provide a closed class of NEOs with coverage under a group excess liability insurance policy. These benefits aid NEOs in the event of a personal liability lawsuit to preserve assets such as auto and home.

Double trigger change in control protections

Our award agreements provide generally for full vesting of unvested deferred cash and equity awards upon a "double trigger" (*i.e*., a change in control followed by a qualifying termination of employment). We believe these protections promote stability during a change in control by encouraging our executives to cooperate with and achieve a change in control approved by the Board without being distracted by the possibility of termination or demotion following the transaction. All NEOs are entitled to severance benefits for certain terminations within a limited period of time following a change in control, either as a result of their employment agreement (Mr. Hooley) or their participation in the Executive Severance Plan (Messrs. Givens, Boehm, Burke and Lark), as further described under "Termination Payments and Potential Termination Payments." Consummation of the Merger pursuant to the Merger Agreement entered into with SS&C would result in a change of control for purposes of the Executive Severance Plan, Mr. Hooley's employment agreement and award agreements with our NEOs.

Say-on-Pay

At the 2017 Annual Meeting, the percentage of the votes cast in favor of the Say-on-Pay proposal was 94.87%, indicating stockholder confidence in our pay-for-performance philosophy. The Committee considered the strong support of our stockholders in evaluating the design of the executive compensation program and making subsequent compensation determinations.

Clawback policy

To mitigate the risk that incentives would be based on erroneous financial results, executive officers that receive incentive compensation, including our NEOs, are subject to our clawback policy. The policy mandates Company recoupment of various award amounts in the event of certain accounting restatements. Such a restatement would trigger the return (or clawback) of incentive compensation for 2017 performance resulting from the Company's material noncompliance with financial reporting requirements under the securities laws. The amount to be returned would equal the portion of a covered annual and/or long-term incentive award in excess of what would have been paid if the results as stated in the restated financials had applied to the award determination. If a clawback is triggered, NEOs would be required to return the value of their covered awards, or a portion thereof, regardless of whether their individual conduct contributed to the financial restatement. The policy also allows the Compensation Committee, in its discretion, to clawback incentive compensation in the event of either a significant ethics policy violation or of non-compliance with a restrictive covenant such as a non-disclosure, non-competition, or non-solicitation obligation, or an obligation to protect and take other actions with respect to Company intellectual property.

Tax deductibility/Section 162(m)

The annual and long-term incentive plans are both governed by our 2015 Equity and Incentive Plan. We obtained approval of the Plan by our stockholders, in order to facilitate the potential deductibility of performance-based compensation under Section 162(m) of the Internal Revenue Code. Our primary focus has been applying our executive compensation philosophy in order to attract, retain, and incent our NEOs, and we have reserved the right to determine whether to utilize the performance-based compensation exemption in Section 162(m) in making compensation determinations.

To facilitate the potential deductibility under the performance-based compensation exemption, the Committee has historically determined NEO participation in the annual short-term cash incentive program, made PSU grants to NEOs, and set performance goals for NEO awards within the first ninety days of a performance year. It has also determined prior to the end of a performance year whether to make adjustments to performance goals or award payouts if a non-recurring or unexpected event occurs during a performance period.

The Tax Act enacted in December 2017 made a number of changes to Section 162(m), including eliminating the performance-based compensation exemption effective for taxable years beginning after December 31, 2017, except with respect to compensation that qualifies for transition relief applicable to certain arrangements in place as of November 2, 2017. Because of the uncertainties associated with the application and interpretation of Section 162(m) and the regulations issued thereunder, including the uncertain scope of the transition relief under the Tax Act, it is uncertain whether compensation intended to satisfy the requirements for deductibility under Section 162(m) will in fact be deductible.

Chief Executive Officer matters

Employment agreement

Mr. Hooley's legacy employment agreement, governed by the laws of Missouri, was entered into June 30, 2009 and does not provide for employment through a set date. Prior to approving the agreement, we reviewed leading market and industry practice regarding appropriate and common provisions for executives in senior leadership positions. The agreement entitles him to a base salary of at least $550,000 and provides that he is to receive an incentive program opportunity as determined by the Compensation Committee.

Under the employment agreement, during the three years after a change in control, which we refer to as the Three-year Period, if Mr. Hooley's employment is terminated by DST without cause or if he resigns for good reason, then Mr. Hooley is entitled to receive the following amounts:

- Benefits: The employment agreement contemplates continued employment during the Three-Year Period and continued participation in DST's benefit plans, which we refer to as the Specified Benefits, on the basis of Mr. Hooley's participation on the date of the change in control; or, in the alternative, other plans which are at least equivalent to those in effect on the change in control.

- Termination following Change in Control: Under his employment agreement, after a change in control, if Mr. Hooley's employment is terminated by DST without cause or if the executive resigns for Good Reason (as defined below), then Mr. Hooley is entitled to receive a lump sum payment (payable within five days following the termination date) equal to the salary he would have received for the remainder of the Three-Year Period (but in no event less than one year) and continued benefits for such length of time; provided that: (a) if any plan pursuant to which Specified Benefits are provided immediately prior to termination would not permit continued participation, then DST will pay a lump sum equal (within five days following the termination date) to the amount of Specified Benefits that Mr. Hooley would have received if he was fully vested and a continuing participant in such plan until the end of the severance period; (b) if Mr. Hooley obtains new employment following termination, then after any waiting period applicable to participation in any plan of the new employer, he will continue to be entitled to receive benefits only to the extent such benefits would exceed those available under comparable plans of the new employer; and (c) Mr. Hooley is entitled a lump sum equal to the aggregate amount of the annual incentives he would have received if target goals had been met for each year of the Three-Year Period (prorated for the final performance year if the Three-Year Period ends partially through a performance year).

- Certain 280G Gross-ups: Mr. Hooley's employment agreement provides for payment of a gross-up relating to the parachute payment tax imposed by Section 4999 of the Internal Revenue Code. For Mr. Hooley, the parachute payment is generally subject to a scaleback equal to the largest amount that can be paid without triggering the parachute tax. If the payment is scaled back, there would be no parachute tax and no gross-up payment. However, if Mr. Hooley would retain, after tax, more than 120% of the amount he would retain if the potential parachute payments were scaled back, the cap does not apply and he is entitled to a gross-up payment, not to exceed five times the parachute tax.

- Separation Agreement: Mr. Hooley has entered into a separation agreement, pursuant to which, upon the Effective Time of the Merger, Mr. Hooley's employment with DST will be terminated for "good reason" (pursuant to his employment agreement as described above). In satisfaction of all obligations of DST under his employment agreement (as described above), Mr. Hooley will receive the cash severance and benefits described above on the closing date. In addition, in lieu of conversion of any of Mr. Hooley's outstanding RSUs and PSUs into SS&C equity awards in the Merger (as described in "Treatment of Equity Awards and Long-Term Cash Awards Under Merger Agreement") such awards shall be converted into cash (based upon a cash price of $84.00 per share) and paid in a cash lump sum on the closing date, provided, that to the extent that any such cash award constitutes nonqualified deferred compensation under Section 409A, the cash payment will be paid subject to any six month delay required by Section 409A.

The employment agreement and the separation agreement are further addressed in "Termination Payments and Potential Termination Payments."

Stock ownership guidelines

To further align CEO and stockholder interests, we have guidelines that the CEO must maintain stock ownership of at least six times his base salary. Mr. Hooley has reached the ownership threshold.

Merger Agreement and 2018 Compensation

As a result of the Merger Agreement entered into with SS&C, DST's compensation policies for our NEOs have been adjusted with respect to compensation awarded or paid for 2018. These adjustments have been made so that 2018 compensation will comply with the Merger Agreement and will achieve the relevant objectives of our compensation program prior to consummation of the Merger as determined by the Committee. The Merger Agreement with SS&C prohibits, among other things, base salary increases for our NEOs. See "Treatment of Equity Awards and Long-Term Cash Awards Under Merger Agreement" for information regarding the treatment of equity awards in the Merger.

Employee Compensation Risk

The Committee determines whether employee compensation policies and practices create risks that are reasonably likely to have a material adverse effect on the Company. The Committee obtains information from the Chief Human Resources Officer regarding corporate, business unit, domestic, international, incentive, equity, sales commission, and other programs and considers controls such as benchmarking, setting goals and award limits, and receiving assistance from independent compensation consultants. In December 2017, the Committee determined that our employee compensation practices and policies do not create risks that are reasonably likely to have a material adverse effect on the Company.

Compensation Committee Report

We reviewed and discussed with management the "Compensation Discussion and Analysis" section of this Form 10-K. Based on such review and discussion, we recommended to the Board that this Form 10-K include the "Compensation Discussion and Analysis."

THE COMPENSATION COMMITTEE
Gary D. Forsee, Chair
Joseph C. Antonellis
Jerome H. Bailey
Lynn Dorsey Bleil
Lowell L. Bryan
Charles E. Haldeman, Jr.
Samuel G. Liss

The information contained in the Compensation Committee Report shall not be deemed to be "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate it by reference in such filing.

Summary Compensation Table for 2017

Name and Principal Position	Year	Salary	Stock Awards (1)	Non-Equity Incentive Plan Compensation(2)	All Other Compensation(3)	Total
Stephen C. Hooley Chairman of the Board, CEO, and President	2017	$850,000	$4,556,770	$1,912,500	$133,220	$7,452,490
	2016	$825,000	$4,119,599	$1,569,220	$147,556	$6,661,375
	2015	$825,000	$3,849,993	$1,442,561	$249,973	$6,367,527
Gregg Wm. Givens Senior Vice President, CFO, and Treasurer	2017	$475,000	$1,012,550	$712,500	$34,790	$2,234,840
	2016	$460,000	$1,000,096	$575,521	$120,642	$2,156,259
	2015	$433,000	$799,975	$538,251	$39,210	$1,810,436
Jonathan J. Boehm Executive Vice President and Head of Healthcare Businesses	2017	$490,000	$1,215,131	$764,821	$41,754	$2,511,706
	2016	$490,000	$1,100,084	$601,263	$177,686	$2,369,033
	2015	$480,000	$1,050,028	$553,379	$41,684	$2,125,091
Edmund Burke Executive Vice President and President of ALPS	2017	$415,000	$759,442	$894,795	$21,855	$2,091,092
Vercie L. Lark Executive Vice President and Head of Financial Services	2017	$460,000	$1,113,840	$690,000	$29,000	$2,292,840
	2016	$460,000	$949,932	$577,159	$39,481	$2,026,572

(1) The amounts in the Stock Awards column reflect the aggregate grant date fair value for each respective fiscal year related to both Time-Based RSUs and PSUs granted in 2017, 2016, and 2015. All fair values were computed in accordance with the applicable Accounting Standards Codification (ASC) Stock Compensation topic. Assumptions used in the calculation of these amounts are described in the Consolidated Financial Statements in Item 8, Financial Statements and Supplementary Data. Amounts reported include the value of PSUs based on the probable outcome of performance conditions at 100% on the grant date.

If PSUs had been valued at maximum level of performance, the aggregate grant date fair value for all 2017 awards would have been $7,609,802 for Mr. Hooley; $1,690,936 for Mr. Givens; $2,029,241 for Mr. Boehm; $1,268,261 for Mr. Burke; and $1,860,148 for Mr. Lark. The Time-Based RSU and PSU vesting terms and conditions are described under "Compensation Discussion and Analysis - 2017 Compensation Details - Long Term Equity Incentives - PSUs and Time-Based RSUs" and "Termination Payments and Potential Termination Payments."

(2) Shows the sum of the annual incentive award for 2017 and aggregate earnings during 2017 on deferred cash balances of annual incentive awards for performance years prior to 2014. The deferred cash vesting terms and conditions are described under "Termination Payments and Potential Termination Payments" and are subject to earnings and losses based on hypothetical investment choices as explained following the Nonqualified Deferred Compensation Table. We no longer defer any portion of the annual incentive award.

(3) All Other Compensation includes amounts for various types of compensation, denominated in dollars, as shown below.

All Other Compensation	Stephen C. Hooley	Gregg Wm. Givens	Jonathan J. Boehm	Vercie L. Lark	Edmund Burke
Matching Contribution to 401(k)- 2017 plan year	$16,200	$16,200	$16,200	$16,200	$15,333
Life Insurance Premiums	$6,552	$7,670	$9,470	$6,636	____
Perquisites and Personal Benefits(1)	$110,468	$10,920	$16,084	___	____

(1) The perquisites and personal benefits in the last row of the above table are comprised of the following:

All Other Compensation	Stephen C. Hooley	Gregg Wm. Givens	Jonathan J. Boehm	Vercie L. Lark	Edmund Burke
Personal Use of Aircraft in which the Company has a Fractional Interest*	X	—	—	—	—
Excess Liability Insurance Premiums	X	X	X	X	—
Long-Term Disability Premiums	X	X	X	—	—
Non-Business Events at Off-site Planning Meetings	X	X	X	X	X
Tax Return Preparation Services	X	X	—	—	—
Paid Parking	X	X	X	X	X

* Mr. Hooley was allowed personal use of the aircraft, as explained in "Compensation Discussion and Analysis." The amount shown for his perquisites includes the incremental cost of aircraft personal use during 2017 of $89,425 (calculated based on the hourly charge for the flight, the fuel charge for the flight, and the ground transportation charge). We did not include in the incremental cost any portion of our monthly aircraft management fee, which we would have paid regardless of the personal use, or depreciation on the plane, which does not vary based on use. Mr. Hooley incurred taxable income as a result of the use, which was not grossed-up for taxes.

The NEOs also participated in 2017 in a program in which the Company, through a donor-advised fund at a community charitable foundation, will match contributions by the NEOs to qualified not-for-profit organizations in an amount equal to two times the contribution, with a $30,000 maximum for the Chief Executive Officer under the director match program and a $20,000 maximum for the other NEOs. Contributions were made on behalf of all associates who chose to participate, and we do not believe the contribution directly or indirectly benefited the NEO personally. Matching amounts from the foundation were: $30,000 for Mr. Hooley; $20,000 for Mr. Givens; $20,000 for Mr. Boehm; and $16,384 for Mr. Lark.

Non-Qualified Deferred Compensation

Deferral activity and balances

The following table provides information regarding NEOs' non-qualified deferred compensation accounts. We describe the various forms of non-qualified deferral programs following the table:

Annual Incentive Program Deferred Cash

Named Executive Officer	Aggregate Earnings in 2017 (1)	Aggregate Withdrawals/Distributions in 2017 (2)	Aggregate Balance at December 31, 2017 (3)
Stephen C. Hooley	—	—	—
Gregg Wm. Givens	—	—	—
Jonathan J. Boehm	$29,821	—	$190,073
Edmund Burke	—	—	—
Vercie L. Lark	—	—	—

(1) Shows for each NEO the aggregate earnings during 2017. Participants may direct the investment of their deferral accounts into one or more funds chosen by the administrator. The deferral account is credited with investment returns based on the funds selected.

(2) Shows the distribution during 2017 of an annual incentive deferred cash award for performance years prior to 2014.

(3) All amounts shown were vested as of December 31, 2017. Mr. Boehm elected to receive his account balance for the 2013 performance year in a lump sum upon retirement rather than on the vesting date.

Non-qualified deferral programs.

Arrangements for Incentive and Equity Awards.

For performance years prior to 2014, we mandated deferral of a portion of each year's annual incentive award. Earnings and losses are credited or debited at least annually. Prior to 2014, NEOs could, by making an election by June 30 of the performance year, extend the future payout of vested deferred cash awards. The elected periods could either be a number of years or until separation from service. Beginning with awards for 2014 compensation, we discontinued deferral elections.

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Currently, Mr. Boehm is the only NEO who made a deferral election. Upon retirement, he will receive his balance in a lump sum.

Grants of Plan Based Equity Awards For 2017

The following table and notes show annual incentive opportunity levels that existed at the beginning of 2017 for, and equity grants during 2017 to, each of the NEOs:

		Estimated Possible Payouts Under Non-Equity Incentive Plan Awards [(1)] ($)			Estimated Possible Payouts Under Equity Incentive Plan Awards [(2)(4)] (#)				
Named Executive Officer	**Grant Date**	**Threshold ($)**	**Target ($)**	**Maximum ($)**	**Threshold (#)**	**Target (#)**	**Maximum (#)**	**All Other Stock Awards; No. of Shares of Stock [(3)(4)] (#)**	**Grant Date Fair Value of Stock Awards ($)**
Stephen C. Hooley									
Annual Incentive	02/24/17	$637,500	$1,275,000	$1,912,500	—	—	—	—	—
PSUs	02/24/17	—	—	—	12,901	51,602	103,204	—	$3,053,032
Time-Based RSUs	02/24/17	—	—	—	—	—	—	25,416	$1,503,738
Gregg Wm. Givens									
Annual Incentive	02/24/17	$237,500	$475,000	$712,500	—	—	—	—	—
PSUs	02/24/17	—	—	—	2,867	11,466	22,932	—	$678,386
Time-Based RSUs	02/24/17	—	—	—	—	—	—	5,648	$334,164
Jonathan J. Boehm									
Annual Incentive	02/24/17	$245,000	$490,000	$735,000	—	—	—	—	—
PSUs	02/24/17	—	—	—	3,440	13,760	27,520	—	$814,110
Time-Based RSUs	02/24/17	—	—	—	—	—	—	6,778	$401,020
Edmund Burke									
Annual Incentive	02/24/17	—	$894,795	—	—	—	—	—	—
PSUs	02/24/17	—	—	—	2,150	8,600	17,200	—	$508,819
Time-Based RSUs	02/24/17	—	—	—	—	—	—	4,236	$250,623
Vercie L. Lark									
Annual Incentive	02/24/17	$230,000	$460,000	$690,000	—	—	—	—	—
PSUs	02/24/17	—	—	—	3,154	12,614	25,228	—	$746,307
Time-Based RSUs	02/24/17	—	—	—	—	—	—	6,212	$367,533

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(1) The range of annual incentive awards that could have been earned for 2017 performance depended on the level of achievement of performance goals. The amounts shown represent percentages of base salary that were each NEOs threshold, target, and maximum opportunity levels, except that amounts shown for Mr. Burke, for whom no threshold or maximum performance levels were applicable, is the actual amount earned, as further described in "Compensation Discussion and Analysis - Annual Cash Incentive."

Goal achievement for 2017 has already been determined. The NEOs actual earned annual incentive awards for 2017 are shown in "Compensation Discussion and Analysis-Annual Cash Incentive."

(2) The target number is the number of PSUs granted in 2017. They have the potential to vest at a percentage of target based on the achievement of target, threshold, and maximum Adjusted EBITDA goals, as further described under "Compensation Discussion and Analysis-Long-Term Equity Incentives-PSUs and Time-Based RSUs."

(3) Shows the Time-Based RSUs granted in 2017. They vest annually in one-third increments.

(4) The allocation of the aggregate grant date fair value between the number of Time-Based RSUs and the number of PSUs (at the target grant level) is explained in "Compensation Discussion and Analysis-Long-Term Equity Incentives-PSUs and Time-Based RSUs-Performance Stock Units." Vesting terms and conditions for these awards are described under "Termination Payments and Potential Termination Payments." When the Company pays a dividend, equivalents accrue on unvested PSUs and Time-Based RSUs in the form of additional unvested units. During 2017, additional units received as dividend equivalents were as follows:

	Additional Dividend Equivalent Units Granted During 2017	
Named Executive Officer	**PSUs***	**Time-Based RSUs**
Stephen C. Hooley	2,038	699
Gregg Wm. Givens	454	170
Jonathan J. Boehm	523	197
Edmund Burke	340	118
Vercie L. Lark	453	160

____

* The dividend equivalents for PSUs are shown at target level of performance, if performance is achieved after the three-year performance period.

Option Exercises And Stock Vested In 2017

	Option Awards		Stock Awards*	
Named Executive Officer	**Number of Shares Acquired on Exercise (#)**	**Value Realized on Exercise ($) (1)**	**Number of Shares Acquired on Vesting (#)**	**Value Realized on Vesting ($) (1)**
Stephen C. Hooley	20,000	$814,046	72,658	$4,275,923
Gregg Wm. Givens	—	—	17,037	$991,568
Jonathan J. Boehm	—	—	19,532	$1,149,458
Edmund J. Burke	—	—	10,822	$636,875
Vercie L. Lark	—	—	15,534	$914,848

____

* These columns show the gross number of units vesting, including dividend equivalents. Shares were withheld from this gross amount for satisfaction of tax withholding obligations.

(1) The "value realized" on exercise of an award is calculated based on the difference between the per share closing market price for our common stock and the exercise price on the date of exercise multiplied by the number of options exercised, and the "value realized" on vesting of an award is calculated based on the per share closing market price for our common stock on the vesting date of the award multiplied by the number of shares vested.

Outstanding Equity Awards At Fiscal Year-End

(December 31, 2017)

	Option Awards (1)			Stock Awards (2)			
Named Executive Officer	**Number of Securities Underlying Unexercised Options Exercisable (#)**	**Option Exercise Price ($)**	**Option Expiration Date**	**Number of Shares or Units of Stock that Have Not Vested (#)**	**Market Value of Shares or Units of Stock That Have Not Vested(3) ($)**	**Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)**	**Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (3) ($)**
Stephen C. Hooley	80,000	$21.9125	12/14/19	8,074	$501,153	—	—
	77,280	$23.7550	12/01/21	17,364	$1,077,784	65,636	$4,074,027
	—	—	—	25,730	$1,597,061	104,480	$6,485,074
Gregg Wm. Givens	8,098	$23.7550	12/01/21	1,679	$104,216	—	—
	—	—	—	4,216	$261,687	15,933	$988,961
	—	—	—	5,718	$354,916	23,216	$1,441,017
Jonathan J. Boehm	14,174	$23.7550	12/01/21	2,841	$176,341	—	—
	—	—	—	4,638	$287,881	17,525	$1,087,777
	—	—	—	6,862	$425,924	27,860	$1,729,270
Edmund Burke	—	—	—	1,259	$78,146	—	—
	—	—	—	3,163	$196,328	11,950	$741,737
	—	—	—	4,288	$266,156	17,412	$1,080,763
Vercie L. Lark	45,400	$19.5350	06/18/20	1,574	$97,698	—	—
	—	—	—	3,583	$222,397	13,542	$840,552
	—	—	—	6,289	$390,358	25,540	$1,585,268
	—	—	—	372	$23,090	1,403	$87,084

____

(1) Shows vested non-qualified stock options.

(2) Shows unvested Time-Based RSUs and PSUs, including dividend equivalents through December 31, 2017. Each row pertains to a different grant, as follows:

Row	**Type of Award**		
First	PSU/Time-Based RSU	2/23/2015	All NEOs
Second	PSU/Time-Based RSU	2/26/2016	All NEOs
Third	PSU/Time-Based RSU	2/24/2017	All NEOs
Fourth	PSU/Time-Based RSU	5/10/2016	Vercie L. Lark

The Time-Based RSUs granted in 2015, 2016, and 2017 vest annually in one-third increments. The unvested Time-Based RSUs are subject to forfeiture for termination of employment prior to vesting except for the special vesting events described under "Termination Payments and Potential Termination Payments."

For a further discussion of our PSUs, see "Compensation Discussion and Analysis - Long-Term Equity Incentives - PSUs and Time-Based RSUs."

(3) Based on a December 31, 2017 closing price of $62.07.

Termination Payments and Potential Termination Payments

On January 11, 2018, we entered into a Merger Agreement wherein SS&C will acquire DST. Under the terms of the agreement, SS&C will purchase DST in an all-cash transaction for $84.00 per share plus the assumption of debt, equating to an enterprise value of approximately $5.4 billion. The transaction is subject to DST stockholder approval, clearances by the relevant regulatory authorities and other customary closing conditions. See Item 8, Financial Statements and Supplementary Data - Note 1, "Description of the Business" for more information regarding this transaction. The effects of the Merger on the Company's executive compensation plans and agreements are described in the definitive proxy statement filed by the

Company with the SEC on February 27, 2018 in connection with the Merger.

The Compensation Committee has incorporated accelerated vesting terms and conditions into its awards for certain termination of employment events. In the following table, we show the vesting and payout valuations for hypothetical terminations of employment as if they had occurred at December 31, 2017. Shown in the table are termination events* *other than* the following:

- a voluntary termination of employment that is not a "retirement"
- a termination for "cause"

  * each event as defined in the applicable award agreement or plan

These two types of terminations would not have caused accelerated award vesting or separation benefits. Following the table, we give details regarding the valuations as well as the reasons for termination benefits.

At December 31, 2017- Hypothetical Event and Award or Other Benefit to be Valued	**Stephen C. Hooley**	**Gregg Wm. Givens**	**Jonathan J. Boehm**	**Edmund J. Burke**	**Vercie L. Lark**
Death or Disability [A]					
Time-Based RSUs	$ 1,578,937	$ 365,903	$ 464,222	$ 274,474	$ 343,185
PSUs	4,074,027	988,961	1,087,777	741,737	927,636
Total	**$ 5,652,964**	**$ 1,354,864**	**$ 1,551,999**	**$ 1,016,211**	**$ 1,270,821**

At December 31, 2017- Hypothetical Event and Award or Other Benefit to be Valued	**Stephen C. Hooley**	**Gregg Wm. Givens**	**Jonathan J. Boehm**	**Edmund J. Burke**	**Vercie L. Lark**
Retirement [B]					
Time-Based RSUs	N/A	$ 365,903	$ 464,222	$ 274,474	N/A
PSUs	N/A	988,961	1,087,777	741,737	N/A
Total	**N/A**	**$ 1,354,864**	**$ 1,551,999**	**$ 1,016,211**	**N/A**

At December 31, 2017- Hypothetical Event and Award or Other Benefit to be Valued	**Stephen C. Hooley**	**Gregg Wm. Givens**	**Jonathan J. Boehm**	**Edmund J. Burke**	**Vercie L. Lark**
Termination without cause in connection with a reduction in force [C,F,G,I]					
Time-Based RSUs	$ 1,578,937	$ 365,903	$ 464,222	$ 274,474	$ 343,185
PSUs	4,074,027	988,961	1,087,777	741,737	927,636
Severance Base Salary	1,700,000	475,000	490,000	415,000	460,000
Severance Incentive Award	N/A	475,000	490,000	762,581	460,000
Health and Life Insurance Premiums	99,125	21,550	23,133	21,550	23,133
Premium Gross-Up	92,051	N/A	N/A	N/A	N/A
Outplacement Benefits	N/A	25,000	25,000	25,000	25,000
Total	**$ 7,544,140**	**$ 2,351,414**	**$ 2,580,132**	**$ 2,240,342**	**$ 2,238,954**

At December 31, 2017- Hypothetical Event and Award or Other Benefit to be Valued	**Stephen C. Hooley**	**Gregg Wm. Givens**	**Jonathan J. Boehm**	**Edmund J. Burke**	**Vercie L. Lark**
Termination without cause in connection with a business unit divestiture [D,F,G,I]					
Time-Based RSUs	$ 1,578,937	$ 365,903	$ 464,222	$ 274,474	$ 343,185
PSUs	4,074,027	988,961	1,087,777	741,737	927,636
Severance Base Salary	1,700,000	475,000	490,000	415,000	460,000
Severance Incentive Award	N/A	475,000	490,000	762,581	460,000
Health and Life Insurance Premiums	99,125	21,550	23,133	21,550	23,133
Premium Gross-Up	92,051	N/A	N/A	N/A	N/A
Outplacement Benefits	N/A	25,000	25,000	25,000	25,000
Total	**$ 7,544,140**	**$ 2,351,414**	**$ 2,580,132**	**$ 2,240,342**	**$ 2,238,954**

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At December 31, 2017- Hypothetical Event and Award or Other Benefit to be Valued	**Stephen C. Hooley**	**Gregg Wm. Givens**	**Jonathan J. Boehm**	**Edmund J. Burke**	**Vercie L. Lark**
Change in control followed by termination without cause or resignation for good reason [E,H,J]					
Time-Based RSUs	$ 3,175,998	$ 720,819	$ 890,146	$ 540,630	$ 733,543
PSUs	9,583,111	2,152,774	2,456,048	1,614,627	2,135,953
Severance Base Salary	2,550,000	950,000	980,000	830,000	920,000
Severance Incentive Award	3,825,000	950,000	980,000	1,525,162	920,000
Health and Life Insurance Premiums	100,087	43,100	46,265	43,100	46,265
401(k) Profit Sharing Contributions	48,600	N/A	N/A	N/A	N/A
Income or Excise Tax Gross-Up	—	N/A	N/A	N/A	N/A
Change of Control Benefit Reduction	N/A	N/A	N/A	(158,959)	(391,603)
Outplacement Benefits	N/A	25,000	25,000	25,000	25,000
Total	**$ 19,282,796**	**$ 4,841,693**	**$ 5,377,459**	**$ 4,419,560**	**$ 4,389,158**

At December 31, 2017- Hypothetical Event and Award or Other Benefit to be Valued	**Stephen C. Hooley**	**Gregg Wm. Givens**	**Jonathan J. Boehm**	**Edmund J. Burke**	**Vercie L. Lark**
Other termination without cause [F,G,I]					
Severance Base Salary	$ 1,700,000	$ 475,000	$ 490,000	$ 415,000	$ 460,000
Severance Incentive Award	N/A	475,000	490,000	762,581	460,000
Health and Life Insurance Premiums	99,125	21,550	23,133	21,550	23,133
Premium Gross-Up	92,051	N/A	N/A	N/A	N/A
Outplacement Benefits	N/A	25,000	25,000	25,000	25,000
Total	**$ 1,891,176**	**$ 996,550**	**$ 1,028,133**	**$ 1,224,131**	**$ 968,133**

Notes Regarding Effect of Various Events:

A. *Death or Disability:*

Time-Based RSUs granted in 2015 and 2016 would have accelerated. The performance period for the PSUs granted in 2015 expired on December 31, 2017. These shares will vest on the regularly scheduled vesting date at certification of goal achievement by the Compensation Committee of the Board of Directors. PSUs granted in 2016 would vest on the regularly scheduled vesting date at certification of goal achievement by the Compensation Committee of the Board of Directors. No equity granted in 2017 would have vested because a one-year holding period would not have been satisfied.

No benefits would have been paid under employment agreements or the Executive Severance Plan (“ESP”).

Prorated annual incentive awards for the year of the death or disability are to be paid at a target level of performance (which by year-end was already earned by the NEOs and therefore is not shown in the table).

B. *Retirement:*

Messrs. Givens, Boehm, and Burke were retirement-eligible at year-end for purposes of the Time-Based RSUs. The unvested portion of the 2015 and 2016 Time-Based RSUs would have vested at the time of the event. The performance period for the PSUs granted in 2015 expired on December 31, 2017. Vesting of PSUs granted in 2016 would occur in 2019, based on actual goal achievement for 2016-2018, which has been projected (actual results may differ). No equity granted in 2017 would have vested because a one-year holding period would not have been satisfied.

No benefits would have been paid under employment agreements or the ESP.

Prorated annual incentive awards for the year of the retirement are to be paid to retiring executives at the actual level of performance (which by year-end was already earned by Messrs. Givens, Boehm, and Burke and therefore is not shown in the table).

C. *Reduction in Force:*

The unvested portion of the 2015 and 2016 Time-Based RSUs would have vested at the time of the event. The performance period for the PSUs granted in 2015 expired on December 31, 2017. Vesting of PSUs granted in 2016 would occur in 2019, based on actual goal achievement for 2016-2018, which has been projected (actual results may differ). No equity granted in 2017 would have vested because a one-year holding period would not have been satisfied.

Employment agreement benefits to Mr. Hooley would have been paid as described in note (F).

ESP benefits would have been paid to Messrs. Givens, Boehm, Burke, and Lark as described in note (I).

D. *Business Unit Divestiture:*

The unvested portion of the 2015 and 2016 Time-Based RSUs would have vested at the time of the event. The performance period for the PSUs granted in 2015 expired on December 31, 2017. Vesting of PSUs granted in 2016 would occur in 2019, based on actual goal achievement for 2016-2018, which has been projected (actual results may differ). No equity granted in 2017 would have vested because a one-year holding period would not have been satisfied.

Employment agreement benefits to Mr. Hooley would have been paid as described in note (F).

Under certain circumstances, ESP benefits would have been paid to Messrs. Givens, Boehm, Burke, and Lark as described in note (I).

E. *Change in Control Followed within a Limited Period by a Termination without Cause or Resignation for Good Reason:*

Vesting of Time-Based RSUs would have accelerated. The performance period for the PSUs granted in 2015 expired on December 31, 2017. Vesting of PSUs granted in 2016 and 2017 as if the target performance level had been achieved.

Employment agreement benefits to Mr. Hooley would have been paid as described in note (H).

ESP benefits would have been paid to Messrs. Givens, Boehm, Burke, and Lark as described in note (J).

Pursuant to the ESP, Cause is defined as termination of employment as a result of: (i) dishonesty involving the Company; (ii) gross negligence or willful misconduct; (iii) the willful failure to diligently follow reasonable instructions of the Board or any officer to whom the Eligible Executive reports concerning performance of the Eligible Executive's duties for the Company or the operations or business of the Company; (iv) fraud or criminal activity which, in either case, is alleged to have resulted in gain or personal enrichment of the Eligible Executive at the expense of the Company, or which is reasonably expected to have an adverse effect on the business, reputation or financial situation of the Company; or (v) embezzlement or material misappropriation by the Eligible Executive.

Resignation for Good Reason, defined as Constructive Termination in the ESP, is a voluntary termination of employment as a result of (i) a material diminution in authority, duties or responsibilities, or a change in the supervisory reporting relationship within the Company that materially and negatively alters the Eligible Executive's ability to perform his or her duties and responsibilities; (ii) a change, caused by the Company, in geographic location of greater than fifty (50) miles of the location at which the Eligible Executive primarily performs services for the Company; or (iii) a material reduction in the Eligible Executive's Base Compensation, exclusive of any across the board reduction similarly affecting all or substantially all similarly-situated employees.

F. *Employment Agreement Separation Provisions:*

Mr. Hooley's employment agreement provides for separation benefits (base salary, life/health premium reimbursements) based on a 24-month period for Mr. Hooley. Mr. Hooley is also entitled to a prorated annual incentive award for the year of termination at the actual level of performance (which by year-end was already earned and therefore not shown in the table as an additional benefit).

For purposes of this table, we calculated health insurance premiums using current COBRA continuation rates and life insurance premiums using current rates.

The agreement entitles Mr. Hooley to premium gross-ups as described in note (G).

G. *Employment Agreement Health and Life Insurance Premium Gross-Ups:*

The estimate for Mr. Hooley is based on our monthly cost of health, disability, and life insurance premiums as explained in note (F). To determine the aggregate value of the insurance coverage continuation, we multiplied the monthly health, disability, and life insurance premiums by the number of months of taxable insurance coverage continuation to which the executive is entitled under his employment agreement. We then calculated the additional tax gross-up payment we would have been obligated to make in order to put the executive in an after-tax position as if he had never received the taxable insurance coverage continuation.

H. *Employment Agreement Change in Control Separation Provisions; Parachute Taxes:*

Under Mr. Hooley's employment agreement, the following benefits are provided upon a termination without cause or resignation for good reason that occurs within the three-year period following the change in control, which we refer to as the Three-Year Period. For purposes of this table, December 31, 2017 is treated as both the date of termination and the change in control. The agreement provides for:

- Benefits: The employment agreement contemplates continued employment during the Three-Year Period and continued participation in DST's benefit plans, which we refer to as the Specified Benefits, on the basis of Mr. Hooley's participation on the date of the change in control; or, in the alternative, other plans which are at least equivalent to those in effect on the change in control.

- Termination following Change in Control: Under his employment agreement, after a change in control, if Mr. Hooley's employment is terminated by DST without cause or if the executive resigns for Good Reason (as defined below), then Mr. Hooley is entitled to receive a lump sum payment (payable within five days following the termination date) equal to the salary he would have received for the remainder of the Three-Year Period (but in no event less than one year) and continued benefits for such length of time; provided that: (a) if any plan pursuant to which Specified Benefits are provided immediately prior to termination would not permit continued participation, then DST will pay a lump sum equal (within five days following the termination date) to the amount of Specified Benefits that Mr. Hooley would have received if he was fully vested and a continuing participant in such plan until the end of the severance period; (b) if Mr. Hooley obtains new employment following termination, then after any waiting period applicable to participation in any plan of the new employer, he will continue to be entitled to receive benefits only to the extent such benefits would exceed those available under comparable plans of the new employer; and (c) Mr. Hooley is entitled a lump sum equal to the aggregate amount of the annual incentives he would have received if target goals had been met for each year of the Three-Year Period (prorated for the final performance year if the Three-Year Period ends partially through a performance year).

- Certain 280G Gross-ups: Mr. Hooley's employment agreement provides for a payment of a gross-up relating to the parachute payment tax imposed by Section 4999 of the Internal Revenue Code. For Mr. Hooley, the parachute payment is generally subject to a scaleback equal to the largest amount that can be paid without triggering the parachute tax. If the payment is scaled back, there would be no parachute tax and no gross-up payment. However, if Mr. Hooley would retain, after tax, more than 120% of the amount he would retain if the potential parachute payments were scaled back, the cap does not apply and he is entitled to a gross-up payment, not to exceed five times the parachute tax.

- Good Reason: "Good Reason" will exist if Mr. Hooley resigns after a change in control and following: (i) a material reduction in duties or in level of work responsibility or conditions; (ii) a material reduction in base salary; (iii) the material relocation of the executive offices of DST or its successor to a location outside the metropolitan area of Kansas City, Missouri or requiring Mr. Hooley to be based anywhere other than DST's executive office, except for required business travel to an extent substantially consistent with his obligations immediately prior to the change in control date; or (iv) a material breach by DST in providing the Specified Benefits during the Three-Year Period, except for removal of benefits that are immaterial or reduction in benefits by 10% or less in the aggregate. To terminate with good reason following a change in control, (i) Mr. Hooley must provide written notice to the secretary of DST within ninety (90) days after the initial occurrence of a good reason event describing in detail the event and stating that Mr. Hooley's employment will terminate upon a specified date in such notice (which may be no earlier than 30 days and no later than 90 days after the date such notice is provided), and (ii) DST does not remedy the event prior to the specified termination date in such notice.

- Restrictive Covenants: Mr. Hooley is bound under his employment agreement by restrictive covenants against competition and against solicitation of employees, customers and vendors during his employment and for a minimum of three years following termination of his employment (and also including any period following termination of employment during which any unvested equity continues to vest), as well as a standard confidentiality provision.

Mr. Hooley has entered into a separation agreement, pursuant to which, upon the Effective Time of the Merger, Mr. Hooley's employment with DST will be terminated for "good reason" (pursuant to his employment agreement as described above). In satisfaction of all obligations of DST under his employment agreement (as described above), Mr. Hooley will receive the cash severance and benefits described above on the closing date. In addition, in lieu of conversion of any of Mr. Hooley's outstanding RSUs and PSUs into SS&C equity awards, such awards shall be converted into cash (based upon a cash price of $84.00 per share) and paid in a cash lump sum on the closing date, provided, that to the extent that any such cash award constitutes nonqualified deferred compensation under Section 409A, the cash payment will be paid subject to any six month delay required by Section 409A. The above description of Mr. Hooley's separation agreement does not purport to be complete and is qualified in its entirety by the full text of the separation agreement set forth in Exhibit 10.34 to this Form 10-K. The effects of the Separation Agreement are not reflected in the table above.

I. Executive Severance Plan Separation Provisions:

Messrs. Givens, Boehm, Burke, and Lark participate in our ESP and receive benefits for qualifying terminations of employment, which are terminations for reasons other than death, disability, or by the Company for cause. Upon a qualifying termination, the NEOs will receive the following ESP benefits:

- The amount of his annual base salary;
- Health plan continuation premiums for 12 months (calculated for purposes of the table using the current COBRA continuation rates);
- A severance incentive award equal to the annual incentive award at a target level of performance, as well as a prorated annual incentive award at the actual level of performance (which by year-end was already earned by the NEOs and therefore not shown in the table as an additional benefit); and Mr. Burke’s Severance Incentive Award is based on his two-year average bonus; and
- Reimbursement for outplacement consulting fees of up to $25,000.

J. Executive Severance Plan Change in Control Separation Provisions:

The ESP also provides benefits for a qualifying termination of employment during a two-year protection period that begins on the earlier of a potential change in control or actual change in control, each as addressed in the plan. The qualifying terminations include terminations for reasons other than death, disability, or by the Company for cause, as well as terminations by the NEOs for good reason. For purposes of this table, December 31, 2017 is treated as the date of both the qualifying termination and the change in control. Upon a qualifying termination, the NEO will receive:

- Twice the amount of his annual base salary;
- Health plan continuation premiums for 24 months (calculated for purposes of the table using the current COBRA continuation rates);
- A severance incentive award equal to twice the annual incentive award at a target level of performance, plus an additional annual incentive award at a target level of performance (which by year-end was already earned by the NEOs and therefore not shown in the table as an additional benefit); and
- Reimbursement for outplacement consulting fees of up to $25,000.

  The ESP contains a “best-net cutback” provision such that if the payment of any of these amounts would subject the Company and the executive to the excise tax gross-up provisions of Section 280G of the Internal Revenue Code, the payments would be reduced to an amount below the threshold at which such penalty tax provisions apply if such a reduction (and the avoidance of such penalty taxes) would be more favorable to the executive on an after-tax basis. Messrs. Burke and Lark’s estimated payments would be reduced so that he would not be subject to an excise tax.

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Valuation Methods for the Table

Type of Incentive or Equity Award	Valuation Method
Time-Based RSUs	The Time-Based RSUs valued in the table are described under "Compensation Discussion and Analysis." The amount shown for Time-Based RSUs is the number of units that would vest multiplied by the December 31, 2017 closing price of $62.07 ("Closing Price") and includes dividend equivalents through 2017.
PSUs	The PSUs valued in the table have a three-year performance period and are further described under "Compensation Discussion and Analysis." For purposes of this section, we used the actual goal achievement of the PSUs granted in 2015 (with a 2015-2017 performance period) of 0% and estimated PSUs granted in 2016 (with a 2016-2018 performance period) to be 124% of the target goal level, using the accounting assumptions described in the Consolidated Financial Statements in this Form 10-K. The amount shown for PSUs is the number of units that would vest based on the estimated achievement, multiplied by the Closing Price. We have included in our calculations the PSUs granted as dividend equivalents through 2017. Actual goal achievement for PSUs may differ.

Treatment of Equity Awards and Long-Term Cash Awards Under Merger Agreement

On January 11, 2018, we entered into a Merger Agreement wherein SS&C will acquire DST. Under the terms of the agreement, SS&C will purchase DST in an all-cash transaction for $84.00 per share plus the assumption of debt, equating to an enterprise value of approximately $5.4 billion. The transaction is subject to DST stockholder approval, clearances by the relevant regulatory authorities and other customary closing conditions. See Item 8, Financial Statements and Supplementary Data - Note 1, "Description of Business" for more information regarding this transaction. The effects of the Merger on the Company's equity awards and other executive compensation plans and agreements are described in greater detail in the definitive proxy statement filed by the Company with the SEC on February 27, 2018 in connection with the Merger, and any description of such effects of the Merger Agreement in this Form 10-K are qualified in their entirety by the definitive transaction documents, including the Merger Agreement set forth in Exhibit 2.8 to this Form 10-K as the same may be amended from time to time, and the associated definitive proxy statement to be filed with the SEC.

Treatment of Options

Upon completion of the Merger, each option with respect to shares of DST common stock, that is outstanding, vested and unexercised as of immediately prior to the closing will be cancelled and the holder will be entitled to receive a cash payment payable as soon as reasonably practicable following the closing (but in any event no later than three (3) business days after the closing) equal to the product (x) the excess, if any, of the merger consideration as defined in the Merger Agreement (without interest) ("Merger Consideration") over the exercise price per share of DST common stock of such vested option, multiplied by (y) the number of shares of DST common stock subject to such vested option less applicable withholding taxes. Each vested option with an exercise price equal to or greater than the Merger Consideration will be cancelled immediately prior to the effective time of the Merger without payment of any consideration.

Upon completion of the Merger, each unvested Option that is outstanding as of immediately prior to the closing will be converted automatically into an option to purchase the number of shares of SS&C common stock ("Rollover Option"), equal to the product obtained by multiplying (x) the total number of shares of DST common stock subject to such unvested option immediately prior to the closing by (y) the Equity Award Exchange Ratio, which is the quotient obtained by dividing (a) the Merger Consideration by (b) the average, rounded to the nearest one ten thousandth, of the closing-sale prices of SS&C common stock on Nasdaq as reported by The Wall Street Journal for the ten full trading days ending on (and including) the trading day preceding the closing, rounded to the nearest one ten thousandth, with any fractional shares rounded down to the next lower whole number of shares. Each Rollover Option will have an exercise price per share of SS&C common stock (rounded up to the nearest whole cent) equal to (1) the per share exercise price for the shares of DST common stock subject to such unvested Option divided by (2) the Equity Award Exchange Ratio. Each Rollover Option will otherwise be subject to the same terms and conditions applicable to the unvested Option under the applicable DST stock plan and award agreement.

Treatment of Performance Stock Units

Upon completion of the Merger, each vested performance stock unit that is outstanding immediately prior to the closing will be cancelled and the holder will be entitled to receive a cash payment payable as soon as practicable following the closing (but in any event no later than three (3) business days after the closing) equal to the product (x) the Merger Consideration and (y) the number of shares of DST common stock that would be delivered in respect of such vested performance stock unit based on actual performance through to the effective date of the Merger, subject to any required tax withholding); provided, that to the extent that any such vested performance stock unit constitutes nonqualified deferred compensation under Section 409A of the Internal Revenue Code, which we refer to as Section 409A, the cash payment will be paid in accordance with the applicable award's terms and at the earliest time permitted under the terms of the award that will not result in the application of a tax or penalty under Section 409A.

Upon completion of the Merger, each unvested performance stock unit that is outstanding immediately prior to the closing will be converted automatically into a restricted stock unit with respect to a number of shares of SS&C common stock ("Rollover PSU"), equal to the product obtained by multiplying (x) the number of shares of DST common stock that would be delivered in respect of such unvested performance stock unit based on actual projected performance through to the effective date of the Merger (equal to 124% of target for performance stock units granted in 2016, and 200% of target for performance stock units granted in 2017) by (y) the Equity Award Exchange Ratio, with any fractional shares rounded down to the next lower whole number of shares. Each Rollover PSU will otherwise be subject to the same terms and conditions applicable to the unvested performance stock unit under the applicable DST stock plan and award agreement, including time-vesting requirements, but excluding any performance-vesting requirements.

Treatment of Restricted Stock Units

Upon completion of the Merger, each vested restricted stock unit outstanding immediately prior to the closing will be canceled and the holder will be entitled to receive a cash payment payable as soon as practicable following the closing (but in any event no later than three (3) business days after the closing) equal to the product (x) the Merger Consideration and (y) the number of shares of DST common stock subject to the vested restricted stock unit (subject to any required tax withholding); provided, that to the extent that any such vested restricted stock unit constitutes nonqualified deferred compensation under Section 409A, the cash payment will be paid in accordance with the applicable award's terms and at the earliest time permitted under the terms of the award that will not result in the application of a tax or penalty under Section 409A.

Upon completion of the Merger, each unvested restricted stock unit that is outstanding immediately prior to the closing (including restricted stock units that will comprise the annual equity awards to be granted by DST in February 2018) will be converted automatically into a restricted stock unit with respect to a number of shares of SS&C common stock ("Rollover RSU"), equal to the product obtained by multiplying (x) the total number of shares of DST common stock subject to the unvested restricted stock unit immediately prior to the closing by (y) the Equity Award Exchange Ratio, with any fractional shares rounded down to the next lower whole number of shares. Each Rollover RSU will otherwise be subject to the same terms and conditions applicable to the unvested restricted stock unit under the applicable DST stock plan and award agreement.

Treatment of Cash Awards

Each vested long-term cash award that is outstanding as of immediately prior to the closing will be canceled at the closing and the holder thereof shall be entitled to receive a cash payment payable as soon as practicable following the closing (but in any event no later than three (3) business days after the closing) in the amount set forth in the applicable notice of grant and award agreement; provided, that to the extent that any such vested long-term cash award constitutes nonqualified deferred compensation under Section 409A, the cash payment will be paid in accordance with the applicable award's terms and at the earliest time permitted under the terms of the award that will not result in the application of a tax or penalty under Section 409A. Each unvested long-term cash award that is outstanding as of immediately prior to the closing will remain outstanding and subject to the same terms and conditions as in effect immediately prior to the closing.

REASONS FOR TERMINATION OF EMPLOYMENT PROTECTIONS

The Compensation Committee believes these limited termination of employment protections:

- promote NEO retention by generally protecting NEOs against forfeiture of awards for termination of employment outside of their control;
- further each NEO's commitment to the Company by accelerating the vesting date of certain awards and accounts if the NEO terminates employment after eligibility for retirement; and
- provide stability in the event of a possible change in control.

In consideration of these protections, NEOs accept award agreements in which they commit not to solicit Company employees and clients for one year after termination of employment.

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PAY RATIO DISCLOSURE

Pursuant to a mandate of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the SEC adopted a rule requiring annual disclosure of the ratio of the total annual compensation of the Company's Chief Executive Officer to the median employee's annual total compensation. Set forth below for 2017 is a comparison of (i) the median of the annual total compensation of all employees of the Company and its consolidated subsidiaries (except the Chief Executive Officer of the Company) and (ii) the annual total compensation of the Chief Executive Officer. The median of the annual total compensation and the pay ratio described below are reasonable estimates calculated by the Company in a manner consistent with Item 402(u) of Regulation S-K.

We estimate that the median of the annual total compensation of all employees of the Company and its consolidated subsidiaries (except our Chief Executive Officer), as adjusted to include the Company provided benefit contribution, was approximately $77,550 for 2017. The annual total compensation of Stephen C. Hooley, our Chief Executive Officer, as reported in the Summary Compensation Table included in this Item 11, was $7,452,490 for 2017, and we added the Company provided benefits contribution, available to all employees generally, to Mr. Hooleys compensation for a total of $7,471,342. The Company provided benefit contribution comprises a large percentage of our employee compensation package and has therefore been included in this Pay Ratio comparison for both our median employee and Mr. Hooley. Given that this is a broad-based benefit for employees, this value is generally not included as part of the Summary Compensation Table disclosure.

Based on this information, we estimate that the ratio of the annual total compensation of our Chief Executive Officer to the median of the annual total compensation of all employees was 96 to 1 for 2017.

To identify the median of the annual total compensation of all our employees, as well as to determine the annual total compensation of our median employee and our Chief Executive Officer, we used the following methodology and made the following material assumptions, adjustments, and estimates:

1. We determined that, as of October 1, 2017, the employee population of the Company and its consolidated subsidiaries consisted of approximately 14,400 individuals, with approximately 7,700 U.S. employees and approximately 6,700 non-U.S. employees.

2. We adjusted the employee population used for purposes of determining the median employee to approximately 7,900 individuals as permitted by the SEC rules, as follows:

   a. We excluded all of the employees on such date in the following countries, constituting in the aggregate less than 5% of the total number of employees, as follows: (i) approximately 244 employees in Australia, (ii) approximately 13 employees in Canada, (iii) approximately 1 employee in China, (iv) approximately 12 employees in Hong Kong and (v) approximately 2 employees in South Africa.

   b. We excluded all of the employees of BFDS and IFDS U.K. who became employees of the Company and its consolidated subsidiaries as a result of the acquisition of the remaining interests in those entities in 2017, as follows: (i) approximately 2,000 employees of BFDS, and (ii) approximately 4,200 employees of IFDS U.K.

3. To identify the "median employee" from the adjusted employee population, we compared the amount of salary and wages of such employees for the full twelve months of 2017. We "annualized" the compensation of employees hired during the measurement period and active employees who left the Company after October 1 to reflect compensation for the entire measurement period.

4. We did not make any cost-of-living adjustments in identifying the "median employee." We only utilized the corporate foreign currency exchange rates to convert all international compensation data to the U.S. dollar for purposes of comparison.

5. Once we identified our median employee, we included the elements of such employee's compensation for 2017 determined in accordance with the requirements of Item 402(c)(2)(x) of Regulation S-K, together with the Company provided benefit contribution value. With respect to the annual total compensation of our Chief Executive Officer, we added the Company provided benefit contribution value to the amount reported in the "Total" column of our 2017 Summary Compensation Table included in this Item 11, which was calculated in accordance with the same requirements of Item 402(c)(2)(x) of Regulation S-K.

Non-Employee Director Compensation Practices

The Committee reviews non-employee director compensation annually. This review includes an analysis by Deloitte of peer company director compensation and other public company director compensation practices and trends. After such review, the Committee recommends components of non-employee director compensation to the Board. The Board is responsible for and has the authority to determine the components of non-employee director compensation.

Compensable Event/Position	2017 Compensation	2018 Compensation (after May 8, 2018)
Annual Cash Retainer	$90,000	$100,000
Retainer for Lead Independent Director	$30,000	unchanged
Committee Chairperson Retainer	$20,000 Audit	$30,000 Audit
	$15,000 Compensation	$20,000 Compensation
	$15,000 Nominating	$20,000 Nominating
Board Meeting Fee	No per meeting fee (1)	unchanged
Committee Meeting Fee	No per meeting fee (1)	unchanged
Annual Equity Award	$140,000 (fair market value of DST stock) (2)	$155,000 (fair market value of DST stock) (2)

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(1) Board and Committee meeting fees were eliminated (unless the number of Board or Committee meetings exceeds seven in a one-year measurement period, in which case a per-meeting fee of $2,000 would be paid for "excess meeting" fees).

(2) Grants of DST stock were made pursuant to the 2015 Equity and Incentive Plan and were paid as soon as practicable following the date of the annual meeting to continuing directors. The number of shares was based on the fair market value (as determined under rules of the Compensation Committee) on the date of grant.

Directors Deferred Fee Plan - Deferred DST Shares Only

In 2015, the Board adopted a voluntary Directors' Deferred Fee Plan (the "Directors' Deferred Fee Plan") that permits electing directors to receive deferred shares of DST common stock in lieu of: (i) cash directors' fees and (ii) stock directors' fees. The payment of the deferred shares received under the Directors' Deferred Fee Plan are deferred for tax purposes until a director's service from the Board ends. Before any deferred shares are delivered to a participating director, the director does not have any right to vote any of his or her deferred shares nor to receive any cash dividends on the deferred shares to the extent dividends are payable on shares of DST common stock. If and when DST pays a cash dividend on its shares, additional deferred shares are credited to a participating director's account. The additional shares credited have a value equal to the dividends that otherwise would have been payable to a plan account if the hypothetical shares then credited were actual shares of DST common stock. All credited whole deferred shares will be settled in actual shares of DST common stock and such shares will be issued to a director upon the director's termination from Board service. Any fractional deferred share will be rounded up to a whole share. Most directors were initially eligible to participate in the Directors' Deferred Fee Plan as of May 2015, and the plan applies only to eligible director compensation earned after that date.

Other Perquisites

We purchase term life insurance for non-employee directors. The directors name the policy beneficiaries. We provide spousal travel to and from occasional off-site planning meetings and reimburse family entertainment at such meetings. If we do not incur an incremental cost for an additional passenger, the spouse or significant other of a director may accompany the director for travel associated with meetings of the Board or its committees by traveling on aircraft in which we have an interest.

2017 Non-Employee Director Compensation

	Fees Earned or Paid in Cash	Stock Awards (1)	All Other Compensation (2)	Total
Joseph C. Antonellis (3)	$6,000	$230,000	$65	$236,065
Jerome H. Bailey (3)	$114,000	$140,000	$65	$254,065
Lynn Dorsey Bleil (3)	$2,000	$234,000	$65	$236,065
Lowell L. Bryan (3)	$126,000	$140,000	$65	$266,065
Gary D. Forsee (3)	$2,000	$249,000	$65	$251,065
Charles E. Haldeman, Jr. (3)	$2,000	$234,000	$65	$236,065
Samuel G. Liss (3)	$111,000	$140,000	$42	$251,042

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(1) All non-employee directors with continuing service after the 2017 Annual Meeting received shares of DST stock as of the date of the 2017 Annual Meeting. The number of shares granted was determined by using $62.50 (post split number), the average of the highest and lowest reported sale price of DST stock on May 9, 2017, the date of the 2017 Annual Meeting. The amount reflected in the column reflects the aggregate grant date fair value of this grant. Messrs. Antonellis, Forsee, and Haldeman and Ms. Bleil deferred their shares under the Directors' Deferred Fee Plan and elected to receive any compensation that would be paid in cash in stock. Messrs. Antonellis, Bailey, Bryan, Forsee, and Haldeman and Ms. Bleil received cash compensation for additional meeting fees.

(2) For all directors, amounts include term life insurance premiums.

(3) Deferred shares of DST stock credited to non-employee directors at December 31, 2017 include: (i) Mr. Antonellis: 3,715; (ii) Mr. Bailey: 0; (iii) Ms. Bleil: 7,672; (iv) Mr. Bryan: 0; (v) Mr. Forsee:12,606; (vi) Mr. Haldeman: 11,815; and (vii) Mr. Liss: 0.

Directors may participate in our charitable match program. Under the program, the Company, through a donor-advised fund at a community charitable foundation, will match contributions by the director to qualified not-for-profit organizations in an annual amount equal to three times the contribution but not to exceed $30,000. Matching amounts from the foundation were: $30,000 for Mr. Antonellis, $30,000 for Ms.Bleil, $30,000 for Mr. Bryan, $30,000 for Mr. Forsee, $30,000 for Mr. Haldeman, and $30,000 for Mr. Liss. We have not included matching amounts in compensation as we do not believe the contribution directly or indirectly affects the director personally.

Under the Board's Education Policy, directors may receive reimbursement for participation in director education programs and activities as they deem appropriate to stay abreast of developments in corporate governance, Board duties, and other topics relevant to their service on the Board and their respective Board committees. Reimbursement is limited as provided in the policy and requires approval of the Lead Independent Director.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table provides information as of December 31, 2017 about DST stock that may be issued under the 2005 Equity Incentive Plan and 2015 Equity and Incentive Plan upon the exercise of options, warrants and rights, as well as other year-end information about our equity compensation plans.

Equity Compensation Plan Information

	A	B	C
Plan Category	Number of securities to be issued upon exercise of options, warrants and rights outstanding as of December 31, 2017(#)	Weighted average exercise price of outstanding options, warrants and rights shown in column A ($)	Number of securities remaining available for issuance as of December 31, 2017 under equity compensation plans (excluding securities reflected in column A)(#)
Equity compensation plans approved by stockholders	2,169,893 (1) (4)	$8.13	3,483,316 (2)
DST Systems, Inc. 2000 Employee Stock Purchase Plan ("ESPP")	None	None	589,844 (3)
Equity compensation plans not approved by stockholders	None	None	None

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(1) This column includes securities that have been granted and may be issued at a future date in connection with stock option grants, restricted stock units, and performance stock units (assuming the maximum number of PSUs will be earned for units granted in 2016 and 2017) under the 2005 Equity Incentive Plan and the Employee Plan. 677,517 shares were granted prior to May 2015 under the 2005 Equity Incentive Plan and 1,492,376 shares were granted under the 2015 Equity and Incentive Plan, which was adopted and effective May 12, 2015. PSUs have been included at the maximum performance attainment of 2.0 shares per unit, however we currently expect a weighted average conversion ratio of 1.6 for PSUs outstanding as of December 31, 2017. The calculation of the weighted average exercise price of outstanding options, warrants and rights includes PSUs at the target conversion rate of 1.0 when awards were granted.

Column A does not include:

- Service awards of 15,160 shares of DST stock that were earned under the Employee Plan in recognition of years of service (five shares for five years of employment, ten shares for ten years, and so forth in five year increments) during the year ended December 31, 2017. The average grant date fair value of those shares granted as service awards during 2017 was $63.52.

(2) These are the shares available for issuance in connection with the granting of annual incentive awards, stock options, stock appreciation rights, restricted stock, stock awards, restricted stock units, performance stock units, deferred stock, dividend equivalents, service awards, substitute awards, or any other right, interest or option relating to shares of DST stock granted pursuant to the Employee Plan.

(3) The ESPP was suspended beginning with plan year 2006 and no shares have been issued for the 2006 through 2017 plan years. The suspension will continue until otherwise determined by the Committee. The number shown is the number available for issuance should the Committee lift the suspension.

(4) The Merger Agreement with SS&C provides that each unvested PSU that is outstanding will be converted automatically into a restricted stock unit with respect to a number of shares of SS&C common stock, equal to the product obtained by multiplying (x) the number of shares of DST common stock that would be delivered in respect of such unvested performance stock unit based on actual projected performance through to the effective date of the Merger (equal to 124% of target for performance stock units granted in 2016, and 200% of target for performance stock units granted in 2017) by (y) the Equity Award Exchange Ratio (as defined in the Merger Agreement), with any fractional shares rounded down to the next lower whole number of shares. For a further discussion of the treatment of PSUs see "Termination payments and potential termination payments- Treatment of Equity Awards and Long-Term Cash Awards Under Merger Agreement" in Item 10.

As of February 21, 2018, we had 59,319,166 shares of DST common stock outstanding. The following table shows share ownership as of such date based upon available information.

Name and Address	Shares of our Common Stock [1] (#)	Percent of Class[1]
BlackRock, Inc. [2]	5,107,149	8.61%
The Vanguard Group [3]	5,242,165	8.84%
Joseph C. Antonellis [4] Director	7,055	*
Jerome H. Bailey [4] Director	6,992	*
Lynn Dorsey Bleil [4] Director	15,988	*
Lowell L. Bryan [4] Director	49,154	*
Gary D. Forsee [4] Director	12,606	*
Charles E. Haldeman, Jr. [4] Director	33,191	*
Stephen C. Hooley [4] Chairman, CEO, President, and Director	286,904	*
Samuel G. Liss [4] Director	18,492	*
Jonathan J. Boehm [4] Executive Vice President and Head of Healthcare Businesses	89,730	*
Edmund J. Burke [4] Executive Vice President and President of ALPS	32,119	
Gregg Wm. Givens [4] Senior Vice President, Chief Financial Officer, and Treasurer	63,059	*
Vercie L. Lark [4] Executive Vice President and Head of Financial Services	101,607	*
Current Executive Officers and Directors as a Group (16 Persons)	793,907	1.33%

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* Less than 1% of the aggregate as of February 21, 2018 of DST stock and the Beneficially Owned Equity Awards described in note (1).

(1) The percentage for each person or group is based on the number of shares outstanding as of February 21, 2018 and includes shares for which beneficial ownership is disclaimed, as described in the notes to this table. Except as otherwise stated in these notes, the holders have sole power to vote or direct the vote and dispose or direct the disposition of the shares.

(2) A Schedule 13G/A was filed on January 29, 2018 by BlackRock, Inc. 55 East 52nd Street, New York, NY 10022. BlackRock is a parent holding company with the following subsidiaries that are also beneficial owners: BlackRock Life Limited; BlackRock Advisors, LLC; BlackRock (Netherlands) B.V.; BlackRock Institutional Trust Company, National Association; BlackRock Asset Management Ireland Limited; BlackRock Financial Management, Inc.; BlackRock Asset Management Schweiz AG; BlackRock Investment Management, LLC; FutureAdvisor, Inc.; BlackRock Investment Management (UK) Limited; BlackRock Asset Management Canada Limited; BlackRock Investment Management (Australia) Limited; BlackRock Advisors (UK) Limited; BlackRock Fund Advisors; BlackRock Asset Management North Asia Limited; and BlackRock Fund Managers Ltd. This Schedule 13G/A reports that Blackrock has sole voting power with respect to 4,828,400 shares and sole dispositive power with respect to 5,107,149 shares.

(3) A Schedule 13G/A was filed on February 9, 2018 by The Vanguard Group ("Vanguard"), 100 Vanguard Blvd., Malvern, PA 19355. Vanguard is a parent holding company with the following subsidiaries that are also beneficial owners: Vanguard Fiduciary Trust Company and Vanguard Investments

Australia, Ltd. The Schedule 13G/A reports that Vanguard has (i) sole voting power with respect to 32,230 shares of common stock, (ii) shared voting power with respect to 7,568 shares of common stock (iii) sole dispositive power with respect to 5,206,165 shares of common stock, and (iv) shared dispositive power with respect to 36,000 shares of common stock.

(4) The total number of shares shown consists of the following:

	Directly Held Shares (#)	Miscellaneous Indirect Holdings [a] (#)	Other Beneficially Owned Equity Awards [b] (#)
Joseph C. Antonellis	3,340	—	3,715
Jerome H. Bailey	6,992	—	—
Lynn Dorsey Bleil	8,316	—	7,672
Lowell L. Bryan	49,154	—	—
Gary D. Forsee	—	—	12,606
Charles E. Haldeman, Jr.	21,376	—	11,815
Stephen C. Hooley	129,624	—	157,280
Samuel G. Liss	18,492	—	—
Jonathan J. Boehm	75,556	—	21,653
Edmund J. Burke	32,119	—	4,422
Gregg Wm. Givens	54,961	—	13,993
Vercie L. Lark	56,207	—	45,400
Current Executive Officers and Directors as a Group (16 Persons)	491,953	41,194	282,662

(a) The indirectly held shares are held in individual retirement accounts, trusts, through spouses or otherwise.

(b) Includes exercisable options, time-based restricted stock units that a retirement-eligible person would acquire if they terminated employment, and deferred shares earned by directors under the Directors' Deferred Fee Plan, which we refer to, collectively, as "Beneficially Owned Equity Awards." Includes time-based restricted stock units that a retirement-eligible person would acquire if such person was terminated employment.

The consummation of the transactions contemplated under the Merger Agreement with SS&C dated January 11, 2018 would result in a change of control of the Company. The transaction is subject to DST stockholder approval, clearances by the relevant regulatory authorities and other customary closing conditions. See Item 8, Financial Statements and Supplementary Data - Note 1, "Description of Business" for more information regarding this transaction.

Item 13. Certain Relationships and Related Transactions, and Director Independence

CEO Relationship. On July 31, 2012, our Board elected Stephen C. Hooley as a director. Mr. Hooley became Chief Executive Officer and President of the Company on September 13, 2012, and was appointed Chairman on July 29, 2014. He had served as the Company's President and Chief Operating Officer since mid-2009. Mr. Hooley served from 2004 through mid-2009 as President and Chief Executive Officer of BFDS, DST's former joint venture with State Street. He served from mid-2009 through April 2013 as non-executive Chairman of BFDS. He served as a member of the board of BFDS until March 27, 2017. Mr. Hooley served in various executive officer and board positions between 2006 and 2013 with IFDS, L.P., a joint venture with State Street, and IFDS U.K., a former joint venture with State Street.

Mr. Hooley's brother, Joseph L. Hooley, is the Chief Executive Officer of State Street. The Boston Financial joint venture was entered into between DST and State Street in 1974 predating the brothers' relationship with any of State Street, BFDS, or DST.

Unconsolidated Affiliates. For 2017, the Company had equity in earnings of unconsolidated affiliates, net of income taxes provided by the unconsolidated affiliates, of $18.3 million from IFDS, L.P.

For the period in 2017 prior to completion of the transactions described below, the Company had equity in earnings of unconsolidated affiliates, net of income taxes provided by the unconsolidated affiliates, of $1.0 million from IFDS U.K. During the same period, we had consolidated operating revenues of $13.1 million from IFDS U.K. and its subsidiaries.

For the period in 2017 prior to completion of the transactions described below, the Company had equity in earnings of unconsolidated affiliates, net of income taxes provided by the unconsolidated affiliates, of $3.6 million from BFDS. BFDS used our mutual fund shareowner accounting and recordkeeping system and services as a remote services client. Certain of our subsidiaries provided other services and license software to Boston Financial and its subsidiaries. During the same period, we had consolidated operating revenues of $23.7 million from BFDS and its subsidiaries.

2017 Transactions. On March 27, 2017, the Company and/or certain of its subsidiaries entered into a series of definitive agreements pursuant to which, among other things, BFDS and IFDS would become wholly-owned indirect subsidiaries of DST.

On March 27, 2017, DST entered into a definitive agreement (the "BFDS Reorganization Agreement"), pursuant to which, among other things, State Street will contribute all of its interest in IFDS Realty, LLC, a Massachusetts limited liability company, and shares of stock in Vestmark, Inc., a Delaware corporation ("Vestmark"), to BFDS, in exchange for shares of BFDS (the "Reorganization"). The Reorganization transaction closed on March 30, 2017.

On March 27, 2017, West Side Investment Management, Inc., a Nevada corporation and wholly-owned subsidiary of DST ("West Side") entered into a definitive agreement (the "Exchange Agreement") pursuant to which West Side, following the Reorganization, acquired, in a non-taxable transaction for U.S. federal income tax purposes, State Street's interest in BFDS in exchange for 2,041,187 shares of State Street common stock owned by West Side valued at $157.6 million (the "Exchange"), based on the closing share price for State Street common stock as of March 24, 2017. Upon the closing of this transaction, BFDS became a wholly-owned subsidiary of DST (directly and through DST's ownership interest in West Side).

On March 27, 2017, DST entered into a definitive agreement (the "IFDS UK Purchase Agreement") pursuant to which, among other things, DST indirectly purchased (i) all of the issued and outstanding stock of IFDS Percana Group Limited, a company organized under the laws of Ireland ("Percana") indirectly held by International Financial Data Services Limited Partnership, a Massachusetts limited partnership ("IFDS LP"), which is jointly owned by DST and State Street, (ii) State Street's 50% interest in IFDS UK (the "SST- IFDS UK Interest"), from State Street and (iii) all of the membership interests of IFDS Realty UK, LLC, a Delaware limited liability company, directly held by IFDS LP, for a combined $175.0 million in cash. Prior to the sale of State Street's SST-IFDS UK Interest, DST owned a 50% interest in, and State Street owned a 50% interest in, IFDS UK. Percana, IFDS UK, and IFDS Realty UK, LLC became wholly-owned subsidiaries (directly and indirectly) of DST following the closing of the transactions contemplated by the IFDS UK Purchase Agreement.

On March 27, 2017, DST entered into a definitive agreement (the "Joint Marketing Agreement") pursuant to which State Street Bank and Trust Company, a Massachusetts trust company ("SSB"), and a subsidiary of State Street, may refer to BFDS certain opportunities to provide transfer agency services, and DST may refer to SSB certain opportunities to provide custody, mutual fund accounting and fund administration services. In addition, subject to certain exceptions, neither DST nor its affiliates will (1) provide transfer agency services in the U.S. bundled with any custody, mutual fund accounting and fund administration services provided by certain third parties; or (2) permit DST's TA2000 system to be used by those third parties to provide transfer agency services. The term of the Joint Marketing Agreement is five years.

On March 27, 2017, DST also entered into a certain termination agreement (the "Termination Agreement") and other ancillary agreements. The Termination Agreement terminates the following material definitive agreements:

- Amended and Restated Joint Venture Agreement, by and between DST and State Street, dated as of October 31, 2006, as amended, pursuant to which DST and State Street jointly governed BFDS. Such termination will be effective as of, and automatically upon, the closing of the Reorganization;

- Share Transfer Restriction and Option Agreement, by and between DST and State Street, dated as of December 23, 1992, relating to restrictions on the transfer of shares of International Financial Data Services Limited prior to 1995 and a mutual right of first refusal on transfers of such shares after 1995. Such termination will be effective as of March 27, 2017; and

- Agreement, by and among State Street (f/k/a State Street Boston Corporation), DST Systems International B.V., a Netherlands corporation, and International Financial Data Services Limited (*f/k/a*. Clarke & Tilley Limited), dated December 23, 1992, pursuant to which DST and State Street jointly governed International Financial Data Services Limited. Such termination will be effective as of March 27, 2017.

No penalties for early termination were incurred by the termination of any of the above agreements.

In connection with the acquisition by the Company of the remaining interests in BFDS, Joseph L. Hooley experienced a "Separation From Service" from BFDS which entitled him to receive a lump sum distribution of approximately $2,930,000 from his retirement account balance in the BFDS 2005 Deferred Compensation Plan, which was paid to him within 90 days after completion of the acquisition.

Related Person Transaction Procedures. Written policies and procedures (the "Procedures") adopted by the Nominating Committee address its review of transactions of $120,000 or more in which the Company participates and a "related person" has a direct or indirect material interest. A "related person" is a director, executive officer, 5% or more stockholder, or immediate family member of any such person.

The Procedures obligate our directors and executive officers to notify our general counsel if they become aware of a transaction that is subject to the Procedures.

For each potential or actual transaction that is or would be a related party transaction, the Nominating Committee considers, where applicable:

- whether the transaction is in the best interest of the stockholders;
- the significance of the transaction to the Company;
- the requirements of the Code of Business Conduct;
- the materiality of the transaction and whether the transaction is significantly likely to impair any judgments an executive officer or director would make on our behalf;
- the impact on a non-employee director's independence;
- the effect on Compensation Committee independence;
- availability of other sources for comparable products or services; and
- the terms available to or from unrelated third-parties.

The Procedures prohibit interested Nominating Committee members from reviewing, considering, or approving a related party transaction. If the Nominating Committee does not approve or ratify a transaction, it discusses with management a strategy for terminating the transaction, modifying the structure of the transaction, or not approving the transaction.

As appropriate, the Nominating Committee may review an approved related person transaction on a periodic basis throughout the duration of the transaction to ensure that the transaction remains in the best interest of the Company. In addition, the Nominating Committee may request that the full Board consider the approval or ratification of related person transactions if it deems it advisable.

The Nominating Committee has approved or ratified the transactions referenced above.

Independence. Our Board has determined that seven of our eight directors are "independent" as defined by applicable law, NYSE Listing Standards, and our Corporate Governance Guidelines. Based on such standards, Mr. Hooley is not an independent director because he is an executive officer of the Company. Each of our committees is comprised solely of independent directors.

Item 14. Principal Accountant Fees and Services

Engagement. PricewaterhouseCoopers LLP ("PWC") served as our independent registered public accounting firm as of and for the year ended December 31, 2017. PWC performed professional services in connection with the audit of our consolidated financial statements and internal control over financial reporting and the review of reports we filed with the Securities and Exchange Commission. It also reviewed control procedures of our transaction processing services and provided us certain other accounting, auditing, and tax services.

PWC's fees for services related to 2017 and 2016 were as follows:

Type of Fees	2017	2016
Audit Fees	$ 5,023,453	$ 4,415,460
Audit-Related Fees [(1)(2)]	$ 3,893,623	$ 2,553,770
Tax Fees [(1)(3)]	$ 2,543,548	$ 3,587,114

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(1) The Audit Committee has determined that the provision of these services is compatible with maintaining the independence of PWC[(1)].

(2) $3,655,914 of the 2017 amount and $2,497,200 of the 2016 amount was for attestation services relating to SSAE 16 reports and other control reviews; $58,590 of the 2017 and $19,000 of the 2016 amount was for financial statement audits of employee benefit plans; and $179,119 of the 2017 and $37,570 of the 2016 amount was for projects related to agreed upon procedures, due diligence, and other services.

(3) $1,135,322 of the 2017 amount and $1,223,652 of the 2016 amount was for U.S. federal, state and local tax, and international compliance; and $1,408,226 of the 2017 amount and $2,363,462 of the 2016 amount was for other tax services.

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Engagement Procedures. Audit Committee procedures prohibit the Committee from engaging an independent registered public accounting firm to perform any service it may not perform under the securities laws. The Audit Committee must pre-approve the independent registered public accounting firm's annual audit of our consolidated financial statements. The procedures require the Committee or its Chairperson to pre-approve or reject any other audit or non-audit services the independent registered public accounting firm is to perform. The Committee has directed that its Chairperson, with the assistance of our Chief Financial Officer, present and describe at regularly scheduled Audit Committee meetings all pre-approved services. The Committee has required management to present services for pre-approval within a specified period in advance of the date the services are to commence. The Committee regularly examines whether the fees for audit services exceed estimates. Securities regulations waive pre-approval requirements for certain non-audit services if their aggregate amount does not exceed specified amounts we pay to the independent registered public accounting firm. The procedures require the Committee or its Chairperson to approve, prior to completion of the audit, any services subject to this waiver. The Committee has not applied the waiver to a non-audit service. The Audit Committee pre-approved all services PWC rendered to us and our subsidiaries for 2017.

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PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) List of documents filed as part of this report

(1) Consolidated Financial Statements

The consolidated financial statements and related notes, together with the report of PricewaterhouseCoopers LLP, appear in Part II, Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

The consolidated financial statements consist of the following:

1. Consolidated Balance Sheet as of December 31, 2017 and 2016;
2. Consolidated Statement of Income for the three years ended December 31, 2017;
3. Consolidated Statement of Comprehensive Income for the three years ended December 31, 2017;
4. Consolidated Statement of Changes in Stockholders' Equity for the three years ended December 31, 2017;
5. Consolidated Statement of Cash Flows for the three years ended December 31, 2017; and
6. Notes to Consolidated Financial Statements.

(2) Consolidated Financial Statement Schedules

All schedules have been omitted because they are not applicable, are insignificant or the required information is shown in the consolidated financial statements or notes thereto.

(3) List of Exhibits

The exhibits filed as part of this report are listed in the Exhibit Index.

DST Systems, Inc.
Form 10-K Annual Report
for the Period Ended
December 31, 2017
Exhibit Index

			Incorporated by Reference			
Exhibit no.	**Exhibit Description**	**Form**	**SEC File No.**	**Exhibit**	**Filing Date**	**Filed/Furnished Herewith**
(2) Plan of acquisition, reorganization, arrangement, liquidation or succession						
2.1	Agreement of Limited Partnership for International Financial Data Services Limited Partnership, effective as of January 31, 2001, by and among the Company, State Street Corporation, and entities related to the Company and State Street Corporation	10-K	1-14036	2.1	2/28/2011	
2.2	Agreement, dated as of December 23, 1992, by and among State Street Boston Corporation, DST Systems International B.V., and Clarke & Tilley Limited (currently, International Financial Data Services Limited) Portions of this agreement have been redacted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended	10-K	1-14036	2.2	2/28/2011	
2.3	Share Transfer Restriction and Option Agreement, dated as of December 23, 1992, by and among the Company, State Street Boston Corporation, and Clarke & Tilley Limited (currently, International Financial Data Services Limited)	10-K	1-14036	2.3	2/28/2011	
2.4	Merger Agreement, dated as of July 19, 2011, by and among the Company, Kettle Holdings, Inc., ALPS Holdings, Inc. and LM ALPS SR LLC, on behalf of the Company Stockholders and Participating Optionholders	8-K	1-14036	2.1	7/21/2011	
2.5	Purchase Agreement, dated as of June 14, 2016, by and among the Company and certain of its affiliates and Broadridge Financial Solutions, Inc. and certain of its affiliates	8-K	1-14036	2.1	6/14/2016	
2.6	Amendment to Agreement of Limited Partnership of International Financial Data Services Limited Partnership, dated March 26, 2013, by and among the Company, State Street Corporation, and entities related to the Company and State Street Corporation	10-Q	1-14036	2.1	11/3/2017	
2.7	Amendment to Agreement of Limited Partnership of International Financial Data Services Limited Partnership, dated September 30, 2017, by and among the Company, State Street Corporation, and entities related to the Company and State Street Corporation	10-Q	1-14036	2.2	11/3/2017	
2.8	Agreement and Plan of Merger, dated as of January 11, 2018, by and among the Company, SS&C Technologies Holdings, Inc. and Diamond Merger Sub, Inc.	8-K	1-14036	2.1	1/11/2018	
(3) Articles of Incorporation and Bylaws						
3.1	Restated Certificate of Incorporation, dated May 12, 2015	8-K	1-14036	3.3	5/14/2015	

Exhibit no.	Exhibit Description	Form	Incorporated by Reference SEC File No.	Exhibit	Filing Date	Filed/Furnished Herewith
3.2	Amended and Restated Bylaws, dated February 26, 2016	8-K	1-14036	3.1	2/29/2016	
(4) Instruments defining the rights of security holders, including indentures						
4.1	Paragraphs fourth, fifth, sixth, seventh, tenth, eleventh, and twelfth of Exhibit 3.1		1-14036			
4.2	Article I, Sections 1, 2, 3, 4 and 11 of Article II, Article V, Article VIII, Article IX, and Article X of Exhibit 3.2		1-14036			
4.3.1	Note Purchase Agreement, dated August 9, 2010, by and among the Company and the Purchasers named therein, and the forms of the Series A Notes, Series B Notes, Series C Notes and Series D Notes	8-K	1-14036	4.1	8/11/2010	
4.3.2	Consent under Note Purchase Agreement, dated April 17, 2014, by and among the Company and the Purchasers named therein	8-K	1-14036	10.2	4/23/2014	
4.3.3	First Amendment to Note Purchase Agreement, dated November 14, 2017, by and among the Company and the Purchasers named therein	8-K	1-14036	10.1	11/14/2017	
4.3.4	Second Amendment to Note Purchase Agreement, dated November 14, 2017, by and among the Company and the Purchasers named therein	8-K	1-14036	10.2	11/14/2017	
4.4	Master Note Purchase Agreement, dated as of November 14, 2017, by and among the Company and the purchasers named therein, including the forms of the Tranche A Notes, Tranche B Notes, Tranche C Notes, Tranche D Notes, Tranche E Notes, Tranche F Notes, Tranche G Notes and Tranche H Notes	8-K	1-14036	4.1	11/14/2017	

The Company agrees to furnish to the Commission a copy of any long-term debt agreements that do not exceed 10 percent of the total assets of the Company upon request.

Exhibit no.	Exhibit Description	Form	SEC File No.	Exhibit	Filing Date	Filed/Furnished Herewith
(10) Material Contracts						
10.1	Amended and Restated Joint Venture Agreement, effective October 31, 2006, between State Street Corporation and the Company. Portions of this agreement have been redacted pursuant to a granted request for confidential treatment filed with the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended	10-Q	1-14036	10.1	11/9/2006	
10.2.1	Credit Agreement, dated as of October 1, 2014, among the Company, Bank of America N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, and other lenders ("Syndicated Agreement")	8-K	1-14036	10.1	10/2/2014	
10.2.2	First Amendment to the Syndicated Agreement, dated June 5, 2015	10-Q	1-14036	10.4	8/4/2015	
10.2.3	Second Amendment to the Syndicated Agreement, dated as of November 14, 2017	8-K	1-14036	10.3	11/14/2017	
10.3	Agreement, by and among the Company and the Argyros	8-K	1-14036	99.2	1/23/2013	

Group, dated January 22, 2013

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			Incorporated by Reference			
Exhibit no.	**Exhibit Description**	**Form**	**SEC File No.**	**Exhibit**	**Filing Date**	**Filed/Furnished Herewith**
10.4	Agreement, by and among the Company and the Argyros Group, dated March 23, 2014	8-K	1-14036	99.2	3/24/2014	
10.5	Stock Repurchase and Offering Agreement, between the Company and the Argyros Group, dated May 5, 2014	8-K	1-14036	99.1	5/5/2014	
10.6	Governance and Standstill Agreement, between the Company and the Argyros Group, dated May 5, 2014	8-K	1-14036	99.2	5/5/2014	
10.7	Registration Rights Agreement, between the Company and the Argyros Group, dated May 5, 2014	8-K	1-14036	99.3	5/5/2014	
10.8.1	Amended and Restated Receivables Purchase Agreement, dated May 15, 2014, among Fountain City Finance, the Company, certain Subsidiary Originators and Wells Fargo Bank, National Association ("A&R Receivables Purchase Agreement")	8-K	1-14036	10.1	5/21/2014	
10.8.2	Amendment No. 1 to A&R Receivables Purchase Agreement, dated May 14, 2015	8-K	1-14036	10.1	5/15/2015	
10.8.3	Amendment No. 2 to A&R Receivables Purchase Agreement, dated May 31, 2016	10-Q	1-14036	10.1	11/3/2017	
10.8.4	Amendment No. 3 to A&R Receivables Purchase Agreement, dated October 28, 2016	10-Q	1-14036	10.2	11/3/2017	
10.8.5	Amendment No. 4 to A&R Receivables Purchase Agreement, dated November 14, 2017	8-K	1-14036	10.4	11/14/2017	
10.9.1	Originator Purchase Agreement, dated as of May 21, 2009, among the Company and certain of its subsidiaries ("Originator Purchase Agreement")	8-K	1-14036	10.2	5/21/2014	
10.9.2	First Amendment and Joinder Agreement to Originator Purchase Agreement, dated as of May 19, 2011	8-K	1-14036	10.3	5/21/2014	
10.9.3	Second Amendment to Originator Purchase Agreement, dated as of May 17, 2012	8-K	1-14036	10.4	5/21/2014	
10.9.4	Third Amendment and Joinder Agreement to Originator Purchase Agreement, dated as of May 16, 2013	8-K	1-14036	10.5	5/21/2014	
10.9.5	Amendment to Originator Purchase Agreement, dated as of November 26, 2014	10-K	1-14036	10.2	2/26/2015	
10.9.6	Fourth Amendment and Joinder Agreement to Originator Purchase Agreement, dated as of May 31, 2016	10-Q	1-14036	10.3	11/3/2017	
10.9.7	Fifth Amendment and Joinder Agreement to Originator Purchase Agreement, dated as of November 14, 2017	8-K	1-14036	10.5	11/14/2017	

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Exhibit no.	Exhibit Description	Form	Incorporated by Reference SEC File No.	Exhibit	Filing Date	Filed/Furnished Herewith
10.10.1	Purchase and Contribution Agreement, dated as of May 21, 2009, between the Company and Fountain City Finance, LLC ("Purchase and Contribution Agreement")	8-K	1-14036	10.6	5/21/2014	
10.10.2	Amendment No.1 to Purchase and Contribution Agreement, dated as of May 31, 2016	10-Q	1-14036	10.4	11/3/2017	
10.11	First Omnibus Amendment to Transfer Documents, dated as of February 28, 2010, among Fountain City Finance, LLC, Enterprise Funding Company LLC, Bank of America, National Association, and the Company and certain of its subsidiaries	8-K	1-14036	10.7	5/21/2014	
10.12	Receivable Sale Agreement, dated as of November 26, 2014, by and among Wells Fargo Bank, National Association, Fountain City Finance, LLC, the Company and DST Global Solutions North America Ltd.	10-K	1-14036	10.3	2/26/2015	
10.13	Receivables Sales Agreement, dated May 14, 2016, among Wells Fargo Bank, National Association, Fountain City Finance, LLC and the Company and certain subsidiaries of the Company	8-K	1-14036	10.1	7/7/2016	
10.14	BFDS Reorganization Agreement, dated March 27, 2017, by and among the Company, State Street, BFDS and IFDS LP	8-K	1-14036	10.1	3/27/2017	
10.15	Exchange Agreement, dated March 27, 2017, by and among West Side, State Street, and BFDS	8-K	1-14036	10.2	3/27/2017	
10.16	IFDS Purchase Agreement, dated March 27, 2017, by and among the Company, DSTi Holdings Limited, DST Realty, Inc., IFDS LP, International Financial Data Services (Ireland) Limited, and State Street	8-K	1-14036	10.3	3/27/2017	
10.17	Joint Marketing Agreement, dated March 27, 2017, by and among State Street Bank and Trust Company, BFDS, and the Company	8-K	1-14036	10.4	3/27/2017	
10.18	Termination Agreement, dated March 27, 2017, by and among the Company, State Street, State Street Bank and Trust Company, and BFDS	8-K	1-14036	10.5	3/27/2017	
Executive Compensation Plans or Arrangements						
10.19	Employment Agreement between the Company and Stephen C. Hooley, dated as of June 30, 2009	8-K	1-14036	10.1	7/2/2009	
10.20	Employment Agreement between the Company and Randall D. Young, dated December 31, 2008	10-K	1-14036	10.1	2/26/2015	
10.21	2018 Restricted Stock Unit Agreement					*
10.22	Restricted Stock Unit Agreement between the Company and William Slattery					*

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Exhibit no.	Exhibit Description	Form	Incorporated by Reference: SEC File No.	Exhibit	Filing Date	Filed/Furnished Herewith
10.22.1	Employment Offer, between DSTi Holdings Limited and William Slattery, dated December 23, 2016	10-K	1-14036	10.17.1	2/28/2017	
10.22.2	Terms and Conditions of Employment, between DSTi Holdings Limited and William Slattery, dated December 23, 2016	10-K	1-14036	10.17.2	2/28/2017	
10.23	Form of Indemnification Agreement for Executive Officers and Directors	8-K	1-14036	99.4	5/5/2014	
10.24	Executive Severance Plan	10-K	1-14036	10.2	2/27/2014	
10.25	DST Systems, Inc. 2015 Equity and Incentive Plan, adopted effective May 12, 2015	8-K	1-14036	10.1	5/14/2015	
10.26	DST Systems, Inc. Directors' Deferred Fee Plan, adopted effective May 12, 2015	10-Q	1-14036	10.2	8/4/2015	
10.27	Form of Deferred Cash Award for performance year 2013	10-K	1-14036	10.4	2/27/2014	
10.28	Form of Restricted Stock Unit Agreement (time vesting)	10-K	1-14036	10.2	2/29/2012	
10.29	Form of Restricted Stock Unit Agreement (time vesting) for Time-Based RSU awards after 2013	10-K	1-14036	10.5	2/27/2014	
10.30	Form of Restricted Stock Unit Agreement (time vesting) for RSU awards after 2014	10-Q	1-14036	10.2	5/5/2015	
10.31	Form of Performance Stock Unit Agreement for PSU awards after 2013	10-K	1-14036	10.6	2/27/2014	
10.32	Form of Performance Stock Unit Agreement for PSU awards after 2014	10-Q	1-14036	10.1	5/5/2015	
10.33	Form of Performance Stock Unit Agreement for PSU awards after 2016	8-K	1-14036	10.1	2/29/2016	
10.34	Separation Agreement between the Company and Stephen C. Hooley, dated as of February 26, 2018					*
10.35	Separation Agreement between the Company and Randall D. Young, dated as of February 26, 2018					*
(12) Statement re: Computation of Ratios						
12	Computation of Ratio of Earnings to Fixed Charges					*
(21) Subsidiaries of the Company						
21	Subsidiaries of the Registrant					*
(23) Consents of experts and counsel						
23	Consent of PwC					*
(31) and (32) Officer Certifications						

31.1	Certification of Chief Executive Officer Pursuant to Securities Exchange Act of 1934 Rule 13a-14(a)	*
31.2	Certification of Chief Financial Officer Pursuant to Securities Exchange Act of 1934 Rule 13a-14(a)	*
32.0	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes Oxley Act of 2002	*

(101) Formatted in XBRL (Extensible Business Reporting Language)

The following financial information from DST's Annual Report on Form 10-K for the period ended December 31, 2017, filed with the SEC on February 28, 2018, formatted in Extensible Business Reporting Language ("XBRL"): (i) the Consolidated Statement of Income for the years ended December 31, 2017, 2016 and 2015, (ii) the Consolidated Balance Sheet at December 31, 2017 and 2016, (iii) the Consolidated Statement of Other Comprehensive Income for the years ended December 31, 2017, 2016 and 2015, (iv) the Consolidated Statement of Changes in Stockholders' Equity for the years ended December 31, 2017, 2016 and 2015, (v) the Consolidated Statement of Cash Flows for the years ended December 31, 2017, 2016 and 2015, and (vi) Notes to Consolidated Financial Statements.

Note: The exhibits set forth above include agreements to which the Company is a party or has a beneficial interest. The agreements have been filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other actual information about the Company or its business or operations. In particular, the assertions embodied in any representations, warranties, and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties, and covenants in the agreements may have been used for the purpose of allocating risk between parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof.

Item 16. Form 10-K Summary

None.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DST SYSTEMS, INC.

By: /s/ STEPHEN C. HOOLEY

Stephen C. Hooley
Chairman, Chief Executive Officer, and President

Dated: February 28, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Company and in the capacities indicated on February 28, 2018.

/s/ JOSEPH C. ANTONELLIS Joseph C. Antonellis Director	/s/ CHARLES E. HALDEMAN, JR. Charles E. Haldeman, Jr. Director
/s/ JEROME H. BAILEY Jerome H. Bailey Director	Samuel G. Liss Director
/s/ LYNN DORSEY BLEIL Lynn Dorsey Bleil Director	/s/ STEPHEN C. HOOLEY Stephen C. Hooley Chairman, Chief Executive Officer, and President (Principal Executive Officer)
/s/ LOWELL L. BRYAN Lowell L. Bryan Director	/s/ GREGG WM. GIVENS Gregg Wm. Givens Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)
/s/ GARY D. FORSEE Gary D. Forsee Director	/s/ DOUGLAS W. FLEMING Douglas W. Fleming Vice President, Chief Accounting Officer (Principal Accounting Officer)

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Section 2: EX-10.21 (EXHIBIT 10.21)

Exhibit 10.21

(Effective 2/18)

RESTRICTED STOCK UNIT AGREEMENT

DST SYSTEMS, INC. 2015 EQUITY AND INCENTIVE PLAN

(Form of 2018 Annual Grant)

THIS AGREEMENT is made and entered into as of the "Grant Date" (see Paragraph 1(a)), by and between DST SYSTEMS, INC. ("Company") and recipient ("Employee") of an Award under the DST Systems, Inc. 2015 Equity and Incentive Plan, as amended and interpreted from time to time (the "Plan").

WHEREAS, Awards under the Plan are administered by the Compensation Committee of Company's Board of Directors or other committee designated by the Board (the "Committee") or Company officer to which the Committee delegates authority as provided in the Plan;

WHEREAS, the Committee wishes to grant to Employee rights ("Restricted Stock Units" or "RSUs") to receive shares of Company common stock ("Shares") on or after the time the RSUs "Vest," which occurs with respect to all or a portion of the RSUs on the "Vesting Dates" referenced in Paragraph 1(a) subject to the other terms and provisions of this Agreement generally including without limitation requirements for continued "Employment" (as defined in Paragraph 3(h)) and the risk of forfeiture as provided for in Paragraph 3(c); and

WHEREAS, participants in the Company's Executive Severance Plan and executive officers of the Company with active employment agreements providing protection in the event of a Company change in control have been designated by the Committee as "Executive Group Employees" to whom special "Change in Control" (as defined in Paragraph 6(a)) Vesting terms and conditions apply as provided in Paragraph 3(b)(ii).

The parties agree as follows:

1. GRANT OF RSU.

a. RSU Grant. The Grant Date, the number of RSUs granted in this Award, and the Vesting Dates are shown in the online or other grant communication to which this Agreement is attached. Vesting of each RSU as provided in Section 3 entitles Employee to the issuance of one Share, subject to the other terms and conditions of the Plan and this Agreement. In order for the grant to be effective, Employee must timely confirm acceptance of the terms and conditions of this Agreement pursuant to the instructions in the communication.

b. Administration. Company's Committee may adopt Administrative Procedures for RSUs, and the Company's Committee and (to the extent provided in the Administrative Procedures) the Chief Human Resource Officer may maintain rules for Awards issued under the Plan. As amended from time to time, such procedures and rules (collectively, the "Rules") shall apply to all actions taken with respect to this Agreement. The Committee or its delegate may

Exhibit 10.21

take any action deemed necessary or appropriate to administer this Agreement and the issuance of Shares attributable to Vested RSUs in accordance and consistent with Internal Revenue Code ("Code") Section 409A and regulations and guidance issued thereunder ("409A").

2. RESTRICTIONS.

a. Non-Transferability. Except as may be permitted under the Plan with respect to transfers to a Permitted Transferee, the RSUs are not transferable during the "Original Delay Period" (as defined in Paragraph 3(f)), by sale, assignment, disposition, gift, exchange, pledge, hypothecation, or otherwise, other than as provided in Paragraph 3(i) upon Employee's death. Any attempted disposition of the RSUs, or the levy of any execution, attachment or similar process upon the RSUs prior to issuance of the Shares, shall be null and void and without effect.

b. No Privilege of Stock Ownership; Dividend Equivalents. Holding RSUs does not give Employee the rights of a shareholder (including without limitation the right to vote or receive dividends or other distributions) with respect to any Shares that Company may issue under the terms and conditions of this Agreement before the date such Shares are issued pursuant to this Agreement. Notwithstanding the foregoing, if Company declares a dividend on Shares, then a "Dividend Equivalent" (as defined in the Plan) in the form of additional RSUs ("Dividend Equivalent RSUs") will be credited and paid on the RSUs (including Dividend Equivalent RSUs) as follows:

(i) The number of additional Dividend Equivalent RSUs credited (which may include fractional RSUs) shall be the quotient obtained by dividing the aggregate cash amount that would have been paid as a dividend on the Shares underlying all RSUs (including any Dividend Equivalent RSUs) then credited to Employee in this Award (whether or not such RSUs have Vested) by the Fair Market Value of a Share on the date such dividend payment is made to Company shareholders.

(ii) All rights to any Dividend Equivalent RSUs shall be subject to the restrictions on transferability described in Paragraph 2(a) and shall become null and void upon forfeiture of the RSUs under Paragraph 3(c). Dividend Equivalent RSUs shall be subject to the same risk of forfeiture and the same Vesting terms and conditions as the original RSUs. Any Shares relating to Vested Dividend Equivalent RSUs credited to Employee pursuant to this Agreement shall be issued at the same time as the Shares relating to the original underlying RSUs ("Issuance Date"); provided, however, if Company declares a dividend for which the dividend record date is prior to the Issuance Date, but for which the dividend payment date is on or after the Issuance Date (a "Straddle Dividend"), the Shares relating to such Dividend Equivalent RSUs shall be issued within ten (10) business days of such Straddle Dividend payment date, rather than on the Issuance Date.

3. VESTING, FORFEITURE, AND SHARE ISSUANCE.

a. Vesting Date(s). The RSUs shall become Vested on the Vesting Date(s) as shown in the online or other grant communication to which this Agreement is attached.

b. Other Vesting.

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(i) *Effect of Death, Disability, Business Unit Divestiture, Retirement or Reduction in Force on Vesting*

(A) If Employee's death or a "Retirement" (as defined in Paragraph 3(h)) occurs on or after the first anniversary of the Grant Date (in other words, after the "One-Year Holding Period"), then all of the unvested RSUs then held by Employee shall Vest.

(B) If Employee's "Disability" (as defined in the Rules), or a "Business Unit Divestiture" (or "BUD") or a "Termination Without Cause" (each as defined in Paragraph 3(h)) (each of the foregoing events, or Employee's death or Retirement, an "Event") occurs after the One-Year Holding Period, then a number of RSUs shall Vest equal to the excess of (x) the total number of RSUs granted in this Award, multiplied by a fraction, the numerator of which is the number of days between the Grant Date and the date of the Event, and the denominator of which is total number of days between the Grant Date and the final Vesting Date, over (y) the number of RSUs already Vested as of the date of the Event.

(C) If the applicable Event occurs prior to the first anniversary of the Grant Date (in other words during the One-Year Holding Period), then all of the RSUs that have not yet Vested shall be forfeited as of the date of the Event.

(ii) *Effect of Change in Control on Vesting.* Notwithstanding any other provision of this Agreement, but subject to Section 6 of this Agreement and Section 13 of the Plan, upon death, Disability, Termination Without Cause, BUD or Retirement, in each case that follows a Change in Control, or (A) for an Executive Group Employee, upon a "Resignation for Good Reason" (as defined in Paragraph 3(h)) or (B) for an Employee other than an Executive Group Employee, upon a "Resignation due to Constructive Termination" (as defined in Paragraph 3(h)), in each case, that follows a Change in Control, the One-Year Holding Period shall lapse (to the extent not previously satisfied) and all RSUs then held by Employee shall Vest.

c. <u>Forfeiture</u>. Forfeiture of RSUs shall occur under the circumstances set forth below. Upon any such forfeiture, under no circumstance will Company be obligated to make any payment to Employee, and no Shares shall be issued, as a result of such forfeited RSUs. Shares previously issued under this Agreement may also be forfeited and transferred to Company as provided in the Company's Compensation Recoupment Policy (as further described in Paragraph 7(b)).

(i) Subject to the other provisions of this Section 3, all non-Vested RSUs shall be forfeited if Employee ceases Employment during the Original Delay Period (even if a portion of the RSUs have Vested).

(ii) Notwithstanding any other provision of this Agreement, Termination With Cause (as defined in Paragraph 3 (h)) shall result in forfeiture of the RSUs and all Shares issued pursuant thereto. Employee acknowledges and agrees that forfeiture as a result of Termination with Cause or the Compensation Recoupment Policy can occur during any Original Delay Period, prior or subsequent to any RSU Vesting or Share issuance and whether or not Employee is eligible for a Retirement.

d. Share Issuance.

(i) Except as otherwise provided herein, upon the Vesting of a specific number of RSUs as provided in Paragraphs 3(a) and (b), Company shall issue a corresponding number of Shares to Employee as soon as administratively practical after the Vesting Date; provided that tax withholding obligations have been satisfied as provided in Section 4. The preceding sentence notwithstanding:

(A) if the Vesting event is Retirement, Termination Without Cause, BUD, Resignation for Good Reason (for Executive Group Employees), or Constructive Termination (for Employees other than Executive Group Employees), no issuance of Shares is to occur with respect to such Vesting event unless it is also a 409A Separation;

(B) if the Vesting event is Retirement, Termination Without Cause, BUD, Resignation for Good Reason (for Executive Group Employees), or Constructive Termination (for Employees other than Executive Group Employees), but such Vesting event is not a 409A Separation, issuance of Shares shall not occur until Employee's 409A Separation;

(C) if the Vesting event is a Change in Control and the RSUs are subject to 409A, no issuance of Shares is to occur unless that Change in Control is also a 409A Change in Control; and

(D) if the Vesting event is a Change in Control but such Change in Control is not a 409A Change in Control, no issuance of Shares is to occur until the first to occur of Employee's 409A Separation or a 409A Change in Control.

(ii) Company will not issue Shares upon a Vesting Date to the extent that the issuance of Shares is subject to a "409A Issuance Delay" (as defined in Paragraph 3(g)). Employee acknowledges and agrees that Company will not issue any Shares pursuant to this Agreement any earlier than the first business day after the Vesting Date nor any later than ninety days after such Vesting Date. If a 409A Issuance Delay applies, Company shall issue the Shares as soon as administratively practical (but no earlier than one business day and no later than ninety days) after expiration of such 409A Issuance Delay period. Company's transfer agent may issue Shares in certificate or book entry form as determined by Company's Corporate Secretary.

(iii) Upon issuance of the Shares, Employee shall have all rights of a shareholder with respect thereto including the right to vote and receive all dividends or other distributions made or paid with respect to the Shares. The number of Shares issuable in any circumstance shall be reduced by the number of Shares withheld for taxes as provided in Section 4.

(iv) Except as otherwise expressly provided in this Agreement, at any time a fractional Share would otherwise be issued pursuant to this Agreement, such fraction shall be rounded up or down to the nearest whole Share in accordance with the applicable rounding methodology set forth in the Rules or other applicable rules or procedures.

e. Limited Accelerated Issuance of Shares for FICA Related Taxes. Paragraph 4(b) governs the limited accelerated payment of Shares underlying RSUs for the satisfaction of "FICA Related Taxes" (as defined in Paragraph 4(b)) if those should occur for any reason prior to the Vesting Date.

f. Original Delay Period. The period from the Grant Date to a Vesting Date is the "Original Delay Period."

g. Section 409A Issuance Delays. To the extent that an RSU is or becomes subject to 409A and Employee is a "specified employee" under Company's Specified Employee Identification Procedures, then, notwithstanding any other provision of this Agreement or the Rules and for the avoidance of negative tax consequences to Employee, any issuance of Shares or cash pursuant to this Agreement on account of Employee's 409A Separation shall be delayed until the first day after six-months following such 409A Separation, as required for the avoidance of penalties and/or excise taxes under 409A ("409A Issuance Delay").

h. Definitions. For purposes of this Agreement, the following terms have the meanings set forth below:

(i) A "*409A Change in Control*" is a Change in Control that also qualifies as a change in control under 409A(a)(2)(A)(v).

(ii) A "*409A Separation*" is Employee's separation from service with Company as determined under 409A(a)(2)(A)(i). A 409A Separation may occur on account of any separation from service including separation due to death, disability, resignation, or termination of employment by Company with or without Cause.

(iii) A "*Business Unit Divestiture*" or "*BUD*" is Employee's termination of Employment in connection with the consummation of a merger, reorganization, consolidation, or sale of assets or stock, or any other similar transaction that the Committee determines is a business unit divestiture event, that involves a Subsidiary (as defined in Subparagraph 3(h)(v)(B)), joint venture, division or other business unit, and that results in a group of employees of such business unit being employed by an acquiring company and no longer having employment with Company.

(iv) "*Cause*" means a violation of Section 5 or any noncompete agreement to which Employee is subject; an act of dishonesty, willful misconduct, intentional or conscious abandonment or neglect of duty; criminal activity, fraud or embezzlement; or non-compliance with any Company ethics policy that is significant in terms of the type of violation, Employee's service, a business objective, or the Company's reputation.

(v) "*Employment*" means Employee is regularly and continuously employed, for more than fifty percent (50%) of the number of hours designated for base salary purposes as full-time employment, by:

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(A) Company;

(B) any corporation in an unbroken chain of corporations beginning with Company or in an unbroken chain of corporations ending with Company if, on the Grant Date, each corporation other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain or any entity in which Company has a direct or indirect equity interest of at least fifty percent (50%) ("Subsidiary");

(C) any individual or entity that directly or through one or more intermediaries controls or is controlled by or under common control with Company ("Affiliate"); or

(D) any entity in which Company directly or indirectly owns stock possessing such minimum percentage (at least twenty percent (20%)) of the total combined voting power of all classes of stock or owns such minimum percentage (at least twenty percent 20%)) of the capital interests or profit interests as the Committee from time to time determines for purposes of this Subparagraph 3 (h)(v) (also an "Affiliate").

Employee is not deemed to have terminated Employment through, and the RSUs shall not be forfeited solely as a result of, any change in Employee's duties or position or Employee's temporary leave of absence approved by Company.

(vi) A "*Resignation for Constructive Termination*" means an Employee's (other than an Executive Group Employee) resignation for constructive termination (as defined below) subsequent to the date of a Change in Control during the three-year period following such date if: (x) such Employee provides written notice to the Company Secretary within ninety (90) days after the initial occurrence of a constructive termination describing in detail the event and stating that Employee's employment will terminate upon a specified date in such notice (the "Termination Date"), which date is not earlier than thirty (30) days after the date such notice is provided to Company (the "Notice Delivery Date") and not later than ninety (90) days after the Notice Delivery Date, and (y) Company does not remedy the event prior to the Termination Date. In no event shall there be a Resignation for Constructive Termination unless such resignation also constitutes a 409A Separation. For purposes of this Agreement, an Employee other than an Executive Group Employee shall have "constructive termination" if there occurs without such Employee's consent:

(A) a change, caused by the Employer (as defined in Paragraph 5(g)), in geographic location of greater than fifty (50) miles of the location at which Employee primarily performs services for the Company or Employer; or

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(B) a material reduction in Employee's annual base salary, exclusive of any across-the-board reduction similarly affecting all or substantially all similarly-situated employees.

(vii) A "*Resignation for Good Reason*" means an Executive Group Employee's resignation for good reason (as defined below) subsequent to the date of a Change in Control during the three-year period following such date if: (x) such Employee provides written notice to the Company Secretary within ninety (90) days after the initial occurrence of a good reason event describing in detail the event and stating that Employee's employment will terminate upon the Termination Date as specified in such notice, which date is not earlier than thirty (30) days after the Notice Delivery Date and not later than ninety (90) days after the Notice Delivery Date, and (y) Company does not remedy the event prior to the Termination Date. In no event shall there be a Resignation for Good Reason unless such resignation also constitutes a 409A Separation. For purposes of this Agreement, an Executive Group Employee shall have "good reason" if there occurs without such Employee's consent:

(A) a material diminution in Employee's authority, duties or responsibilities, or a change in Employee's supervisory reporting relationship within the Employer (as defined in Paragraph 5(g)) that materially and negatively alters Employee's ability to perform his or her duties and responsibilities (other than pursuant to a transfer or promotion to a position of equal or enhanced responsibility or authority);

(B) a change, caused by the Employer (as defined in Paragraph 5(g)), in geographic location of greater than fifty (50) miles of the location at which Employee primarily performs services for the Company or Employer;

(C) a reduction of more than 10% in Employee's annual target total direct compensation (the aggregate of Employee's annual base salary, annual incentive valued at the target level, and long-term incentives annualized if grants are not occurring annually and valued at the target level with respect to performance vesting components), exclusive of any across-the-board reduction similarly affecting all or substantially all similarly-situated employees; or

(D) any material breach by Employer (as defined in Paragraph 5(g)) of an employment agreement between Employer or its successor and Employee; provided, however, that Employee shall not have "good reason" on account of any alleged breach of an employment agreement based on a material reduction in employee benefits as of a Change in Control that is immaterial or where benefits to Employee from participation in such employee benefit plans are not reduced by more than ten percent (10%) in the aggregate.

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(viii) A "*Retirement*" means, notwithstanding the definition of "Retirement" under the Plan, a termination of Employee's Employment (either by Employee voluntarily or by Company as a Termination Without Cause) that is at age 55 or older with no less than 10 years of service (or age 60 or older with no less than 5 years of service).

(ix) A "*Termination With Cause*" means Company's termination of Employee's Employment that is for Cause.

(x) A "*Termination Without Cause*" means Company's termination of Employee's Employment that is not for Cause.

i. Payments to Third Party. Upon death of Employee followed by a valid written request for payment, the Shares shall be issued as soon as administratively practical to Employee's beneficiary named in a written beneficiary designation filed with Company's Corporate Secretary on a form for the Plan or, if there is no such designated beneficiary, to Employee's executor or administrator or other personal representative acceptable to the Corporate Secretary. Any request to pay any person or persons other than Employee shall be accompanied by such documentation as Company may reasonably require, including without limitation, evidence satisfactory to Company of the authority of such person or persons to receive the payment.

4. TAXES.

a. Tax Withholding; Valuation. Employee understands and agrees that, at the time any tax withholding obligation arises in connection with (i) a Share issuance, (ii) Retirement-eligibility, or (iii) an RSU Vesting, Company may withhold, in Shares if Company requires or a valid election applies under this Section 4 or in cash from payroll or other amounts Company owes or will owe Employee, any applicable withholding, payroll and other required tax amounts due upon Vesting, issuance of Shares, Retirement-eligibility, or any other applicable event. Tax Withholding may be made by any means permitted under the Plan, as approved by the Committee, and as permitted under the law. The valuation of the RSUs, and any Shares that Company may issue attributable to Vested RSUs, for tax and other purposes shall be as set forth in the Rules and in applicable laws and regulations ("Valuation Rules"). In the absence of the satisfaction of tax obligations, Company may refuse to issue the Shares.

b. Acceleration of Share Issuance to Cover Employment Tax Liabilities. Employee understands and agrees that certain tax withholding amounts may be due prior to an issuance of Shares. For instance, withholding amounts for the Federal Insurance Contributions Act tax imposed under Code Sections 3101, 3121(a) or 3121(v)(2) ("FICA Tax") may be due upon Employee meeting Retirement-eligibility requirements during an Original Delay Period subsequent to a Change in Control. If Shares are issued on an accelerated basis to satisfy the FICA Tax as provided in this Paragraph, then Employee may have income tax at source on wages imposed under Code Section 3401 or the corresponding withholding provisions of applicable state, local, or foreign tax laws (together with the FICA Tax, the "FICA Related Taxes"). When and in the manner permitted by the Committee or its delegate in their sole discretion and unless otherwise prohibited by law, Company may satisfy (or may allow Employee to elect to satisfy) the FICA Related Taxes through the accelerated issuance of Shares (including the accelerated issuance of Shares for which a Vesting Date may not have yet occurred but for which the underlying RSU is no longer subject to substantial risk of forfeiture). In no event, however, may the value (determined under the Valuation Rules) of the total accelerated Share issuance exceed the aggregate amount of the FICA Related Taxes.

c. Satisfaction in Share Retention. Subject to the requirements of the Committee or its delegate in their sole discretion and unless otherwise prohibited by law, Company may require Employee to satisfy, or may allow Employee (or his or her guardian, legal representative or successor) to irrevocably elect in writing on a Company designated form to satisfy any income tax withholding obligation in connection with the RSUs through the retention of whole Shares which would otherwise have been issued, which Shares shall not belong to Employee upon such retention.

d. Remedies. If withholding is not effected by Company for any reason at the time of the taxation event, then Employee agrees to pay Company any withholding amounts due within the deadline imposed by Company. If, within the deadline imposed by Company, Employee has not paid any withholding amounts due or, subject to compliance with Treasury Regulations § 1.409A-3 (j)(4), has not elected, if allowed by the Committee or its delegate in their sole discretion, whether to have Shares retained for taxes or to pay cash for the tax withholding, then Company may, at its sole discretion (a) retain whole Shares which would otherwise have been issued (including without limitation withdrawal of Shares that had previously been placed into Employee's book entry account), (b) deduct such amounts in cash from payroll or other amounts Company owes or will owe Employee, or (c) effect some combination of Share retention and cash deduction (collectively, "Remedies for Amounts Owed").

5. VIOLATION OF NON-SOLICITATION, NONUSE AND NONDISCLOSURE PROVISIONS. Employee acknowledges that Employee's agreement to this Section 5 is a key consideration for the grant of the RSUs. Employee hereby agrees with Company as follows:

a. Non-Solicitation of Employees, Customers and Prospective Customers. Employee agrees that during the twelve (12) month period subsequent to termination of employment with "Employer" (as defined in Paragraph 5(g)), Employee will not solicit any employee of Employer or of any "Applicable Company Entity" (as defined in Paragraph 5(g)) to leave such employment to become employed by a competitor of Employer or of any Applicable Company Entity. Employee further agrees that, during the twelve (12) month period subsequent to termination of employment with Employer, Employee will not solicit or contact any person, business or entity which was a "Customer" or "Prospective Customer" (each as defined in Paragraph 5(g)) for purposes of selling goods or services of the type sold or rendered by Employer or any Applicable Company Entity.

b. Ownership of Confidential Information, and Inventions and Works. All "Confidential Information," "Inventions" and "Works" (each as defined in Paragraph 5(g)) and documents and other materials containing Confidential Information, Inventions and Works are the exclusive property of Employer. Employee shall make full and prompt disclosure to Employer of all Inventions. Employee assigns and agrees to assign to Employer all of Employee's right, title and interest in Inventions. Employee acknowledges and agrees that all Works are "works made for hire" under the United States copyright laws and that all ownership rights vest exclusively in Employer from the time each Work is created. Should a court of competent jurisdiction hold that a Work is not a "work made for hire," Employee agrees to assign

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and hereby assigns to Employer all of Employee's right, title and interest in the Work. In the event any Invention or Work may be construed to be non-assignable, Employee hereby grants to Employer a perpetual, royalty-free, non-exclusive license to make, use, sell, have made, and/or sublicense such non-assignable Invention or Work. Employee agrees to assist Employer to obtain and vest its title to all Inventions and Works, including any patent or copyright applications or patents or copyrights in any country, by executing all necessary or desirable documents, including applications for patent or copyright and assignments thereof, during and after employment, without charge to Employer, at the request and expense of Employer.

c. Recordkeeping and Return of Confidential Information, Inventions and Works. Employee agrees to maintain regular records of all Inventions and Works developed or written while employed with Employer. Employee agrees to comply with any procedures disseminated by Employer with respect to such recordkeeping. Employee agrees to provide such records to Employer periodically and/or upon request by Employer. Employee agrees to return to Employer all Confidential Information, Inventions and Works in any tangible form, and copies thereof in the custody or possession of Employee, and all originals and copies of analyses, compilations, studies or documents pertaining to any Confidential Information, Inventions and Works, in whatever form or medium, upon a request by Employer, or upon termination of employment.

d. Nonuse and Nondisclosure. Employee shall not, either during or after Employee's employment by Employer, disclose any Confidential Information, Inventions or Works to any other person or entity outside of his employment, or use any Confidential Information, Inventions or Works for any purpose without the prior written approval of an officer of Employer, except to the extent required to discharge Employee's duties assigned by Employer.

e. Subsequent Employer Notice. During the term of Employee's employment with Employer and for the longer of one year thereafter, or any period in which the non-solicitation obligation set forth herein applies (the "Identification Period"), Employee agrees to identify to potential subsequent employer(s), partner(s) or business associate(s) Employee's obligations under this Agreement prior to committing to a position with the employer(s), partner(s), or business associate(s). Employee agrees that Employer may, at its discretion, provide a copy of Section 5 of this Agreement to any of Employee's subsequent employer(s), partner(s), or business associate(s), and may notify any or all of them of Employee's obligations under this Agreement. During the Identification Period, Employee shall give written notice to Employer's Human Resources Department identifying any subsequent employer(s), partner(s), or business associate(s) of Employee.

f. Limitations and Remedies.

(i) Limitations. Notwithstanding any other provision in this Agreement to the contrary, nothing in this Agreement prohibits Employee from (a) reporting possible violations of federal or state law or regulation to any government agency or entity, including the EEOC, DOL, Department of Justice, Securities and Exchange Commission, Department of Defense, Congress, and any agency Inspector General ("Governmental Agencies"), (b) communicating with any Government Agencies or otherwise participating in any investigation or proceedings that may be conducted by any Governmental Agency, including providing documents or other information, without notice to the Company, or (c) making other disclosures that are protected under the whistleblower provisions of applicable law. Employee shall not be held criminally or

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civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney, and is made solely for the purpose of reporting or investigating a suspected violation of law or (ii) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

(ii) Remedies. Employee agrees that the provisions of Section 5 hereof are necessary for protection of the business of Company and that violation of such provisions is cause for termination of employment and would cause irreparable injury to Company not adequately remediable in damages. Employee agrees that any breach of its obligations under Section 5 shall, in addition to any other relief to which Company may be entitled, including without limitation relief under the Company's Compensation Recoupment Policy described in Section 7, entitle Company to temporary, preliminary and final injunctive relief against further breach of such obligations, along with attorneys' fees and other costs incurred by Company in connection with such action. Employee agrees to the waiver of any requirement for the posting of any bond as a condition to such equitable relief. For any non-equitable relief to which the Company is entitled, Company may apply all or any of the Remedies for Amounts Owed, as described in Paragraph 4(d).

g. Section 5 Definitions. For purposes of Section 5, the following terms have the meanings set forth below:

(i) "Applicable Company Entity" means Company, a Subsidiary (as defined in Paragraph 3(h)), or Affiliate (as defined in Paragraph 3(h) and also as defined in Paragraph 5(g)(iv)) with which Employee worked or was involved during the course of his employment with Employer or about which Employee gained Confidential Information during the course of Employee's employment with Employer.

(ii) "Confidential Information" means non-public information about Company, its Subsidiaries and Affiliates, including without limitation:

(A) inventions not disclosed to the public by Company, its Subsidiary or Affiliate, products, designs, prototypes, data, models, file formats, interface protocols, documentation, formulas, improvements, discoveries, methods, computer hardware, firmware and software, source code, object code, programming sequences, algorithms, flow charts, test results, program formats and other works of authorship relating to or used in the current or prospective business or operations of Company, Subsidiaries and Affiliates, all of which is Confidential Information, whether or not patentable or made on Employer premises or during normal working hours; and

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(B) business strategies, trade secrets, pending contracts, unannounced services and products, financial projections, customer lists, information about real estate Company, its Subsidiary or Affiliate is interested in acquiring, and non-public information about others obtained as a consequence of employment by Employer, including without limitation information about customers and their services and products, the account holders or shareholders of customers of Company, Subsidiaries and Affiliates, and associates, suppliers or competitors of Company, Subsidiaries and Affiliates.

(iii) "Customer" means any person, business or entity that has done business with Employer or any Applicable Company Entity at any time during the twelve (12) month period prior to the date of termination of Employee's employment.

(iv) "Employer" means any Company-related entity that has employed Employee, whether it be Company, its Subsidiary (as defined in Paragraph 3(h)), or Affiliate (as defined in Paragraph 3(h) and also for purposes of this Section 5 including any entity in which Company has a direct or indirect equity interest of at least twenty-five percent (25%)).

(v) "Inventions" means all discoveries, improvements, and inventions relating to or used in the current or prospective business or operations of Company, Subsidiaries and Affiliates, whether or not patentable, which are created, made, conceived or reduced to practice by Employee or under Employee's direction or jointly with others during Employee's employment by Employer, whether or not during normal working hours or on the premises of Employer.

(vi) "Prospective Customer" means any person, business or entity to whom or to which Employer or any Applicable Company Entity has made, at any time during the twelve (12) month period prior to the date of termination of Employee's employment, a proposal to do business.

(vii) "Works" mean all original works fixed in a tangible medium of expression by Employee or under Employee's direction or jointly with others during Employee's employment by Employer, whether or not during normal working hours or on the premises of Employer, and related to or used in the current or prospective business or operations of Employer.

h. Survival. Except as limited in time in Paragraph 5(a), Employee's obligations in this Section 5 shall survive and continue beyond the RSU Vesting or forfeiture dates, the Original Delay Period, any issuance or transfer of Shares, and any termination or expiration of the Agreement for any reason.

i. Competing Obligations. Employee may have entered or may enter into an agreement that contains an obligation protective of any Company-related entity that is similar to, but more or less restrictive than, an obligation set forth in this Section 5 ("Competing Obligation"). By executing this Agreement, Employee agrees that if any Competing Obligation applies, he shall be bound by the obligation (whether in this Agreement or in a separate agreement) that is the most protective to the Company-related entity.

j. Enforceability. If the final judgment of a court or arbitrator with competent jurisdiction declares that any term or provision of this Section 5 is invalid or unenforceable, Employee agrees that the court or arbitrator making the determination of invalidity or unenforceability will have the power to reduce the scope, duration, or geographic area of the applicable term or provision, to delete specific words or phrases, or to replace any invalid or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and that the terms and provisions of this Section 5 will be enforceable as so modified. Employee further agrees that if any part of this Section 5 is held by a court or arbitrator with competent jurisdiction to be invalid, illegal or incapable of being enforced in whole or in part by reason of any rule of law or public policy, and cannot be modified in accordance with this paragraph, such part shall be deemed to be severed from the remainder of this Section 5 for the purpose only of the particular legal proceedings in question, and all other covenants and provisions of this Agreement shall in every other respect continue in full force and effect, and no covenant or provision shall be deemed dependent upon any other covenant or provision.

6. CHANGE IN CONTROL.

a. Definition of Change in Control. For purposes of this Agreement, a "Change in Control" shall have the same meaning as the definition of such term in the Plan, as amended and interpreted from time to time, as of the date of the event that may cause a Change in Control. Notwithstanding anything to the contrary, the consummation of the transactions contemplated by the agreement and plan of merger, dated as of January 11, 2018, by and among the Company, SS&C Technology Holdings, Inc. and Diamond Merger Sub, Inc., shall constitute a Change in Control for the purposes of this Agreement.

Notwithstanding the occurrence of a Change in Control under the applicable definition, a Change in Control shall not occur with respect to Employee if, in advance of such event, Employee agrees with Company in writing that such event shall not constitute a Change in Control; provided, however, in no event shall Employee's agreement under this paragraph affect a payment subject to 409A from being made where such payment event is a 409A Change in Control.

b. Committee Action in Connection with Change in Control. The Committee (as constituted before such Change in Control) has the authority to take the actions set forth in Section 13 of the Plan. For instance, by way of example and not limitation, the Committee (as constituted before such Change in Control) may determine in its sole discretion that Company, or any successor company in the applicable merger or sale agreement, may pay cash to Employee in an amount equal to the amount (as determined by the Committee) that could have been attained by Employee had the Award been currently payable, in lieu of issuing Shares that would otherwise be issued in connection with Vesting on or after the Change in Control.

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7. GENERAL.

a. <u>No Employment Contract</u>. Except to the extent the terms of any separate written employment contract between Employee and Company may expressly provide otherwise, Company shall be under no obligation to continue Employee's employment with Company for any period of specific duration and may terminate such employment at any time, as a Termination With Cause or as a Termination Without Cause.

b. <u>Recoupment Policy</u>. This Award and any resulting delivery of Shares is subject to set-off, recoupment, or other recovery pursuant to the Company's Compensation Recoupment Policy adopted by the Committee effective December 15, 2014 and as amended from time to time (the "Policy"). By accepting this Award, Employee expressly agrees that the Policy applies to this and any previous Awards Employee has received, and Employee consents to any permissive or mandated "Clawback Actions" (as defined in the Policy) as applied to any such Awards.

c. <u>Compliance With Certain Laws and Regulations</u>. If the Committee determines that the consent or approval of any governmental regulatory body or that any action with respect to the RSUs is necessary or desirable in connection with the granting of the RSUs or the issuance of Shares, Employee shall supply Company with such representations and information as Company may request and shall otherwise cooperate with Company in obtaining any such approval or taking such action.

d. <u>Construction and No Waiver</u>. Notwithstanding any provision of this Agreement, the granting of the RSUs and the issuance of the Shares are subject to the provisions of the Plan and any procedures or Rules promulgated thereunder by the Committee or its delegate. The failure of Company in any instance to exercise any of its rights granted under this Agreement, the Plan or the Rules shall not constitute a waiver of any other rights that may arise under this Agreement.

e. <u>Notices</u>. Any notice required to be given or delivered to Company under the terms of this Agreement shall be in writing and addressed to Company in care of its Corporate Secretary at its corporate offices, and such notice shall be deemed given only upon actual receipt by Company. Any notice required to be given or delivered to Employee shall be in writing and addressed to Employee at the address on file with Company's Human Resources Department or such other address specified in a written notice given by Employee to Company, and all such notices shall be deemed to have been given or delivered upon personal delivery or upon deposit in the U.S. mail, postage prepaid and properly addressed to the party to be notified.

f. <u>Governing Law</u>. This Agreement shall be governed by and construed in accordance with the laws of Delaware without reference to its principles of conflicts of law.

g. <u>Entire Agreement</u>. Subject to Paragraph 5(i), this Agreement contains the entire agreement between the parties with respect to the subject matter hereof, and supersedes all prior agreements or understandings between the parties relating thereto.

h. <u>Amendment.</u> This Agreement may be amended only in a manner approved by Company evidencing both parties' agreement to the amendment. This Agreement may also be amended, without prior notice to Employee and without Employee's consent, (i) prior to any Change in Control by the Committee if the Committee in good faith determines that the amendment does not materially adversely affect any of Employee's rights under this Agreement or (ii) at any time if the Committee deems it necessary or appropriate to ensure that the RSUs either remain exempt from, or compliant with, Internal Revenue Code Section 409A.

i. Acknowledgement. The RSU grant and this Agreement are subject to the terms and conditions of the Plan, the Rules, and any other rules or procedures adopted by the Committee or its delegate. The Plan is incorporated in this Agreement by reference and all capitalized terms used in this Agreement have the meaning set forth in the Plan, unless this Agreement specifies a different meaning. Employee agrees to accept as binding, conclusive and final all decisions and interpretations by the Committee of the Plan, this Agreement, the Rules, and other applicable rules or procedures regarding any issues arising thereunder, including without limitation all decisions and interpretations related to 409A and regulations and guidance issued thereunder.

By accepting the terms and conditions of this Agreement, Employee accepts the RSUs and acknowledges that the RSUs are subject to all the terms and provisions of the Plan (including without limitation the powers of the Committee to make determinations and adjustments as provided in Sections 3, 4.2, 5, 14.1 and 15.1 of the Plan), this Agreement, the Rules, and other applicable rules or procedures.

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Section 3: EX-10.22 (EXHIBIT 10.22)

Exhibit 10.22

(Effective 2/18)

RESTRICTED STOCK UNIT AGREEMENT
FOR
WILLIAM SLATTERY

DST SYSTEMS, INC. 2015 EQUITY AND INCENTIVE PLAN

(2018 Annual Grant)

THIS AGREEMENT is made and entered into as of the "Grant Date" (see Paragraph 1(a)), by and between DST SYSTEMS, INC. ("Company") and recipient ("Employee") of an Award under the DST Systems, Inc. 2015 Equity and Incentive Plan, as amended and interpreted from time to time (the "Plan").

WHEREAS, Awards under the Plan are administered by the Compensation Committee of Company’s Board of Directors or other committee designated by the Board (the "Committee") or Company officer to which the Committee delegates authority as provided in the Plan;

WHEREAS, the Committee wishes to grant to Employee rights ("Restricted Stock Units" or "RSUs") to receive shares of Company common stock ("Shares") on or after the time the RSUs "Vest," which occurs with respect to all or a portion of the RSUs on the "Vesting Dates" referenced in Paragraph 1(a) subject to the other terms and provisions of this Agreement generally including without limitation requirements for continued "Employment" (as defined in Paragraph 3(h)) and the risk of forfeiture as provided for in Paragraph 3(c); and

WHEREAS, participants in the Company's Executive Severance Plan and executive officers of the Company with active employment agreements providing protection in the event of a Company change in control have been designated by the Committee as "Executive Group Employees" to whom special "Change in Control" (as defined in Paragraph 6(a)) Vesting terms and conditions apply as provided in Paragraph 3(b)(ii).

The parties agree as follows:

1. GRANT OF RSU.

a. RSU Grant. The Grant Date, the number of RSUs granted in this Award, and the Vesting Dates are shown in the online or other grant communication to which this Agreement is attached. Vesting of each RSU as provided in Section 3 entitles Employee to the issuance of one Share, subject to the other terms and conditions of the Plan and this Agreement. In order for the grant to be effective, Employee must timely confirm acceptance of the terms and conditions of this Agreement pursuant to the instructions in the communication.

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b. Administration. Company's Committee may adopt Administrative Procedures for RSUs, and the Company's Committee and (to the extent provided in the Administrative Procedures) the Chief Human Resource Officer may maintain rules for Awards issued under the Plan. As amended from time to time, such procedures and rules (collectively, the "Rules") shall apply to all actions taken with respect to this Agreement. The Committee or its delegate may take any action deemed necessary or appropriate to administer this Agreement and the issuance of Shares attributable to Vested RSUs in accordance and consistent with Internal Revenue Code ("Code") Section 409A and regulations and guidance issued thereunder ("409A").

2. RESTRICTIONS.

a. Non-Transferability. Except as may be permitted under the Plan with respect to transfers to a Permitted Transferee, the RSUs are not transferable during the "Original Delay Period" (as defined in Paragraph 3(f)), by sale, assignment, disposition, gift, exchange, pledge, hypothecation, or otherwise, other than as provided in Paragraph 3(i) upon Employee's death. Any attempted disposition of the RSUs, or the levy of any execution, attachment or similar process upon the RSUs prior to issuance of the Shares, shall be null and void and without effect.

b. No Privilege of Stock Ownership; Dividend Equivalents. Holding RSUs does not give Employee the rights of a shareholder (including without limitation the right to vote or receive dividends or other distributions) with respect to any Shares that Company may issue under the terms and conditions of this Agreement before the date such Shares are issued pursuant to this Agreement. Notwithstanding the foregoing, if Company declares a dividend on Shares, then a "Dividend Equivalent" (as defined in the Plan) in the form of additional RSUs ("Dividend Equivalent RSUs") will be credited and paid on the RSUs (including Dividend Equivalent RSUs) as follows:

(i) The number of additional Dividend Equivalent RSUs credited (which may include fractional RSUs) shall be the quotient obtained by dividing the aggregate cash amount that would have been paid as a dividend on the Shares underlying all RSUs (including any Dividend Equivalent RSUs) then credited to Employee in this Award (whether or not such RSUs have Vested) by the Fair Market Value of a Share on the date such dividend payment is made to Company shareholders.

(ii) All rights to any Dividend Equivalent RSUs shall be subject to the restrictions on transferability described in Paragraph 2(a) and shall become null and void upon forfeiture of the RSUs under Paragraph 3(c). Dividend Equivalent RSUs shall be subject to the same risk of forfeiture and the same Vesting terms and conditions as the original RSUs. Any Shares relating to Vested Dividend Equivalent RSUs credited to Employee pursuant to this Agreement shall be issued at the same time as the Shares relating to the original underlying RSUs ("Issuance Date"); provided, however, if Company declares a dividend for which the dividend record date is prior to the Issuance Date, but for which the dividend payment date is on or after the Issuance Date (a "Straddle Dividend"), the Shares relating to such Dividend Equivalent RSUs shall be issued within ten (10) business days of such Straddle Dividend payment date, rather than on the Issuance Date.

3. VESTING, FORFEITURE, AND SHARE ISSUANCE.

a. Vesting Date(s). The RSUs shall become Vested on the Vesting Date(s) as shown in the online or other grant communication to which this Agreement is attached.

b. Other Vesting.

(i)*Effect of Death, Disability, Business Unit Divestiture, Retirement or Reduction in Force on Vesting*

(A)If Employee's death or a "Retirement" (as defined in Paragraph 3(h)) occurs on or after the first anniversary of the Grant Date (in other words, after the "One-Year Holding Period"), then the portion of RSUs that have not Vested shall Vest.

(B)If Employee's "Disability" (as defined in the Rules), or a "Business Unit Divestiture" (or "BUD") or a "Termination Without Cause" (each as defined in Paragraph 3(h)) (each of the foregoing events, or Employee's death or Retirement, an "Event") occurs after the One-Year Holding Period, then a number of RSUs shall Vest equal to the excess of (x) the total number of RSUs granted in this Award, multiplied by a fraction, the numerator of which is the number of days between the Grant Date and the date of the Event, and the denominator of which is total number of days between the Grant Date and the final Vesting Date, over (y) the number of RSUs already Vested as of the date of the Event.

(C)If the applicable Event occurs prior to the first anniversary of the Grant Date (in other words during the One-Year Holding Period), then all of the RSUs that have not yet Vested shall be forfeited as of the date of the Event.

(ii) *Effect of Change in Control on Vesting*. Notwithstanding any other provision of this Agreement, but subject to Section 6 of this Agreement and Section 13 of the Plan, upon death, Disability, Termination Without Cause, BUD or Retirement, in each case that follows a Change in Control, or (A) for an Executive Group Employee, upon a "Resignation for Good Reason" (as defined in Paragraph 3(h)) or (B) for an Employee other than an Executive Group Employee, upon a "Resignation due to Constructive Termination" (as defined in Paragraph 3(h)), in each case, that follows a Change in Control, the One-Year Holding Period shall lapse (to the extent not previously satisfied) and all RSUs then held by Employee shall Vest.

c. Forfeiture. Forfeiture of RSUs shall occur under the circumstances set forth below. Upon any such forfeiture, under no circumstance will Company be obligated to make any payment to Employee, and no Shares shall be issued, as a result of such forfeited RSUs. Shares previously issued under this Agreement may also be forfeited and transferred to Company as provided in the Company's Compensation Recoupment Policy (as further described in Paragraph 7(b)).

(i) Subject to the other provisions of this Section 3, all non-Vested RSUs shall be forfeited if Employee ceases Employment during the Original Delay Period (even if a portion of the RSUs have Vested).

(ii) Notwithstanding any other provision of this Agreement, Termination With Cause (as defined in Paragraph 3(h)) shall result in forfeiture of the RSUs and all Shares issued pursuant thereto. Employee acknowledges and agrees that forfeiture as a result of Termination with Cause or the Compensation Recoupment Policy can occur during any Original Delay Period, prior or subsequent to any RSU Vesting or Share issuance and whether or not Employee is eligible for a Retirement.

d. Share Issuance.

(i) Except as otherwise provided herein, upon the Vesting of a specific number of RSUs as provided in Paragraphs 3(a) and (b), Company shall issue a corresponding number of Shares to Employee as soon as administratively practical after the Vesting Date; provided that tax withholding obligations have been satisfied as provided in Section 4. The preceding sentence notwithstanding:

(A)if the Vesting event is Retirement, Termination Without Cause, BUD, Resignation for Good Reason (for Executive Group Employees), or Constructive Termination (for Employees other than Executive Group Employees) and Employee is a US citizen or a Green Card Holder, no issuance of Shares is to occur with respect to such Vesting event unless it is also a 409A Separation;

(B)if the Vesting event is Retirement, Termination Without Cause, BUD, Resignation for Good Reason (for Executive Group Employees), or Constructive Termination (for Employees other than Executive Group Employees) and Employee is a US citizen or a Green Card Holder, but such Vesting event is not a 409A Separation, issuance of Shares shall not occur until Employee's 409A Separation;

(C)if the Vesting event is a Change in Control and the RSUs are subject to 409A, no issuance of Shares is to occur unless that Change in Control is also a 409A Change in Control; and

(D)if the Vesting event is a Change in Control and Employee is a US citizen or a Green Card Holder, but such Change in Control is not a 409A Change in Control, no issuance of Shares is to occur until the first to occur of Employee's 409A Separation or a 409A Change in Control.

(ii) Company will not issue Shares upon a Vesting Date to the extent that the issuance of Shares is subject to a "409A Issuance Delay" (as defined in Paragraph 3(g)). Employee acknowledges and agrees that Company will not issue any Shares pursuant to

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this Agreement any earlier than the first business day after the Vesting Date nor any later than ninety days after such Vesting Date. If a 409A Issuance Delay applies, Company shall issue the Shares as soon as administratively practical (but no earlier than one business day and no later than ninety days) after expiration of such 409A Issuance Delay period. Company's transfer agent may issue Shares in certificate or book entry form as determined by Company's Corporate Secretary.

(iii) Upon issuance of the Shares, Employee shall have all rights of a shareholder with respect thereto including the right to vote and receive all dividends or other distributions made or paid with respect to the Shares. The number of Shares issuable in any circumstance shall be reduced by the number of Shares withheld for taxes as provided in Section 4.

(iv) Except as otherwise expressly provided in this Agreement, at any time a fractional Share would otherwise be issued pursuant to this Agreement, such fraction shall be rounded up or down to the nearest whole Share in accordance with the applicable rounding methodology set forth in the Rules or other applicable rules or procedures.

e. Limited Accelerated Issuance of Shares for FICA Related Taxes. Paragraph 4(b) governs the limited accelerated payment of Shares underlying RSUs for the satisfaction of "FICA Related Taxes" (as defined in Paragraph 4(b)) if those should occur for any reason prior to the Vesting Date.

f. Original Delay Period. The period from the Grant Date to a Vesting Date is the "Original Delay Period."

g. Section 409A Issuance Delays. To the extent that an RSU is or becomes subject to 409A and Employee is a "specified employee" under Company's Specified Employee Identification Procedures, then, notwithstanding any other provision of this Agreement or the Rules and for the avoidance of negative tax consequences to Employee, any issuance of Shares or cash pursuant to this Agreement on account of Employee's 409A Separation shall be delayed until the first day after six-months following such 409A Separation, as required for the avoidance of penalties and/or excise taxes under 409A ("409A Issuance Delay").

h. Definitions. For purposes of this Agreement, the following terms have the meanings set forth below:

(i) A "*409A Change in Control*" is a Change in Control that also qualifies as a change in control under 409A(a)(2)(A)(v).

(ii) A "*409A Separation*" is Employee's separation from service with Company as determined under 409A(a)(2)(A)(i). A 409A Separation may occur on account of any separation from service including separation due to death, disability, resignation, or termination of employment by Company with or without Cause.

(iii) A "*Business Unit Divestiture*" or "*BUD*" is Employee's termination of Employment in connection with the consummation of a merger, reorganization,

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consolidation, or sale of assets or stock, or any other similar transaction that the Committee determines is a business unit divestiture event, that involves a Subsidiary (as defined in Subparagraph 3(h)(v)(B)), joint venture, division or other business unit, and that results in a group of employees of such business unit being employed by an acquiring company and no longer having employment with Company.

(iv) "*Cause*" means a violation of Section 5 or any noncompete agreement to which Employee is subject; an act of dishonesty, willful misconduct, intentional or conscious abandonment or neglect of duty; criminal activity, fraud or embezzlement; or non-compliance with any Company ethics policy that is significant in terms of the type of violation, Employee's service, a business objective, or the Company's reputation.

(v) "*Employment*" means Employee is regularly and continuously employed, for more than fifty percent (50%) of the number of hours designated for base salary purposes as full-time employment, by:

(A)Company;

(B)any corporation in an unbroken chain of corporations beginning with Company or in an unbroken chain of corporations ending with Company if, on the Grant Date, each corporation other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain or any entity in which Company has a direct or indirect equity interest of at least fifty percent (50%) ("Subsidiary");

(C)any individual or entity that directly or through one or more intermediaries controls or is controlled by or under common control with Company ("Affiliate"); or

(D)any entity in which Company directly or indirectly owns stock possessing such minimum percentage (at least twenty percent (20%)) of the total combined voting power of all classes of stock or owns such minimum percentage (at least twenty percent 20%)) of the capital interests or profit interests as the Committee from time to time determines for purposes of this Subparagraph 3(h)(v) (also an "Affiliate").

Employee is not deemed to have terminated Employment through, and the RSUs shall not be forfeited solely as a result of, any change in Employee's duties or position or Employee's temporary leave of absence approved by Company.

(vi) A "*Resignation for Constructive Termination*" means an Employee's (other than an Executive Group Employee) resignation for constructive termination (as defined below) subsequent to the date of a Change in Control during the three-year period following

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such date if: (x) such Employee provides written notice to the Company Secretary within ninety (90) days after the initial occurrence of a constructive termination describing in detail the event and stating that Employee's employment will terminate upon a specified date in such notice (the "Termination Date"), which date is not earlier than thirty (30) days after the date such notice is provided to Company (the "Notice Delivery Date") and not later than ninety (90) days after the Notice Delivery Date, and (y) Company does not remedy the event prior to the Termination Date. In no event shall there be a Resignation for Constructive Termination unless such resignation also constitutes a 409A Separation. For purposes of this Agreement, an Employee other than an Executive Group Employee shall have "constructive termination" if there occurs without such Employee's consent:

(A) a change, caused by the Employer (as defined in Paragraph 5(g)), in geographic location of greater than fifty (50) miles of the location at which Employee primarily performs services for the Company or Employer; or

(B) a material reduction in Employee's annual base salary, exclusive of any across-the-board reduction similarly affecting all or substantially all similarly-situated employees.

(vii) A "*Resignation for Good Reason*" means an Executive Group Employee's resignation for good reason (as defined below) subsequent to the date of a Change in Control during the three-year period following such date if: (x) such Employee provides written notice to the Company Secretary within ninety (90) days after the initial occurrence of a good reason event describing in detail the event and stating that Employee's employment will terminate upon the Termination Date as specified in such notice, which date is not earlier than thirty (30) days after the Notice Delivery Date and not later than ninety (90) days after the Notice Delivery Date, and (y) Company does not remedy the event prior to the Termination Date. In no event shall there be a Resignation for Good Reason unless such resignation also constitutes a 409A Separation. For purposes of this Agreement, an Executive Group Employee shall have "good reason" if there occurs without such Employee's consent:

(A)a material diminution in Employee's authority, duties or responsibilities, or a change in Employee's supervisory reporting relationship within the Employer (as defined in Paragraph 5(g)) that materially and negatively alters Employee's ability to perform his or her duties and responsibilities (other than pursuant to a transfer or promotion to a position of equal or enhanced responsibility or authority);

(B)a change, caused by the Employer (as defined in Paragraph 5(g)), in geographic location of greater than fifty (50) miles of the location at which Employee primarily performs services for the Company or Employer;

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(C)a reduction of more than 10% in Employee's annual target total direct compensation (the aggregate of Employee's annual base salary, annual incentive valued at the target level, and long-term incentives annualized if grants are not occurring annually and valued at the target level with respect to performance vesting components), exclusive of any across-the-board reduction similarly affecting all or substantially all similarly-situated employees; or

(D)any material breach by Employer (as defined in Paragraph 5(g)) of an employment agreement between Employer or its successor and Employee; provided, however, that Employee shall not have "good reason" on account of any alleged breach of an employment agreement based on a material reduction in employee benefits as of a Change in Control that is immaterial or where benefits to Employee from participation in such employee benefit plans are not reduced by more than ten percent (10%) in the aggregate.

(viii) A "*Retirement*" means, notwithstanding the definition of "Retirement" under the Plan, any termination of Employee's Employment (either by Employee voluntarily or by Company as a Termination Without Cause) that is on or after the first anniversary of the Grant Date.

(ix) A "*Termination With Cause*" means Company's termination of Employee's Employment that is for Cause.

(x) A "*Termination Without Cause*" means Company's termination of Employee's Employment that is not for Cause.

i. Payments to Third Party. Upon death of Employee followed by a valid written request for payment, the Shares shall be issued as soon as administratively practical to Employee's beneficiary named in a written beneficiary designation filed with Company's Corporate Secretary on a form for the Plan or, if there is no such designated beneficiary, to Employee's executor or administrator or other personal representative acceptable to the Corporate Secretary. Any request to pay any person or persons other than Employee shall be accompanied by such documentation as Company may reasonably require, including without limitation, evidence satisfactory to Company of the authority of such person or persons to receive the payment.

4. TAXES.

a. Tax Withholding; Valuation. Employee understands and agrees that, at the time any tax withholding obligation arises in connection with (i) a Share issuance, (ii) Retirement-eligibility, or (iii) an RSU Vesting, Company or Employer may withhold, in Shares if Company requires or a valid election applies under this Section 4 or in cash from payroll or other amounts Company or Employer owes or will owe Employee, or collect from Employee by immediate payment in cleared funds, any applicable withholding, payroll and other required tax amounts due upon Vesting, issuance of Shares, Retirement-eligibility, or any other applicable event. Tax Withholding may be made by any means permitted under the Plan, as approved by the Committee, and as permitted

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under the law. The valuation of the RSUs, and any Shares that Company may issue attributable to Vested RSUs, for tax and other purposes shall be as set forth in the Rules and in applicable laws and regulations ("Valuation Rules"). In the absence of the satisfaction of tax obligations, Company may refuse to issue the Shares.

b. Acceleration of Share Issuance to Cover Employment Tax Liabilities. Employee understands and agrees that certain tax withholding amounts may be due prior to an issuance of Shares. For instance, withholding amounts for the Federal Insurance Contributions Act tax imposed under Code Sections 3101, 3121(a) or 3121(v)(2) ("FICA Tax") may be due upon Employee meeting Retirement-eligibility requirements during an Original Delay Period subsequent to a Change in Control. If Shares are issued on an accelerated basis to satisfy the FICA Tax as provided in this Paragraph, then Employee may have income tax at source on wages imposed under Code Section 3401 or the corresponding withholding provisions of applicable state, local, or foreign tax laws (together with the FICA Tax, the "FICA Related Taxes"). When and in the manner permitted by the Committee or its delegate in their sole discretion and unless otherwise prohibited by law, Company may satisfy (or may allow Employee to elect to satisfy) the FICA Related Taxes through the accelerated issuance of Shares (including the accelerated issuance of Shares for which a Vesting Date may not have yet occurred but for which the underlying RSU is no longer subject to substantial risk of forfeiture). In no event, however, may the value (determined under the Valuation Rules) of the total accelerated Share issuance exceed the aggregate amount of the FICA Related Taxes.

c. Satisfaction in Share Retention. Subject to the requirements of the Committee or its delegate in their sole discretion and unless otherwise prohibited by law, Company may require Employee to satisfy, or may allow Employee (or his or her guardian, legal representative or successor) to irrevocably elect in writing on a Company designated form to satisfy any income tax withholding obligation in connection with the RSUs through the retention of whole Shares which would otherwise have been issued, which Shares shall not belong to Employee upon such retention.

d. Remedies. If withholding is not effected by Company or Employer for any reason at the time of the taxation event, then Employee agrees to pay Company any withholding amounts due within the deadline imposed by Company. If, within the deadline imposed by Company, Employee has not paid any withholding amounts due or, subject to compliance with Treasury Regulations § 1.409A-3(j)(4), has not elected, if allowed by the Committee or its delegate in their sole discretion, whether to have Shares retained for taxes or to pay cash for the tax withholding, then Company may, at its sole discretion (a) retain whole Shares which would otherwise have been issued (including without limitation withdrawal of Shares that had previously been placed into Employee's book entry account), (b) deduct such amounts in cash from payroll or other amounts Company owes or will owe Employee, or (c) effect some combination of Share retention and cash deduction (collectively, "Remedies for Amounts Owed").

5. VIOLATION OF NON-SOLICITATION, NONUSE AND NONDISCLOSURE PROVISIONS. Employee acknowledges that Employee's agreement to this Section 5 is a key consideration for the grant of the RSUs. Employee hereby agrees with Company as follows:

a. Non-Solicitation of Employees, Customers and Prospective Customers. Employee agrees that during the twelve (12) month period subsequent to termination of employment with

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"Employer" (as defined in Paragraph 5(g)), Employee will not solicit any employee of Employer or of any "Applicable Company Entity" (as defined in Paragraph 5(g)) to leave such employment to become employed by a competitor of Employer or of any Applicable Company Entity. Employee further agrees that, during the twelve (12) month period subsequent to termination of employment with Employer, Employee will not solicit or contact any person, business or entity which was a "Customer" or "Prospective Customer" (each as defined in Paragraph 5(g)) for purposes of selling goods or services of the type sold or rendered by Employer or any Applicable Company Entity.

b. Ownership of Confidential Information, and Inventions and Works. All "Confidential Information," "Inventions" and "Works" (each as defined in Paragraph 5(g)) and documents and other materials containing Confidential Information, Inventions and Works are the exclusive property of Employer. Employee shall make full and prompt disclosure to Employer of all Inventions. Employee assigns and agrees to assign to Employer all of Employee's right, title and interest in Inventions. Employee acknowledges and agrees that all Works are "works made for hire" under the United States copyright laws and that all ownership rights vest exclusively in Employer from the time each Work is created. Should a court of competent jurisdiction hold that a Work is not a "work made for hire," Employee agrees to assign and hereby assigns to Employer all of Employee's right, title and interest in the Work. In the event any Invention or Work may be construed to be non-assignable, Employee hereby grants to Employer a perpetual, royalty-free, non-exclusive license to make, use, sell, have made, and/or sublicense such non-assignable Invention or Work. Employee agrees to assist Employer to obtain and vest its title to all Inventions and Works, including any patent or copyright applications or patents or copyrights in any country, by executing all necessary or desirable documents, including applications for patent or copyright and assignments thereof, during and after employment, without charge to Employer, at the request and expense of Employer.

c. Recordkeeping and Return of Confidential Information, Inventions and Works. Employee agrees to maintain regular records of all Inventions and Works developed or written while employed with Employer. Employee agrees to comply with any procedures disseminated by Employer with respect to such recordkeeping. Employee agrees to provide such records to Employer periodically and/or upon request by Employer. Employee agrees to return to Employer all Confidential Information, Inventions and Works in any tangible form, and copies thereof in the custody or possession of Employee, and all originals and copies of analyses, compilations, studies or documents pertaining to any Confidential Information, Inventions and Works, in whatever form or medium, upon a request by Employer, or upon termination of employment.

d. Nonuse and Nondisclosure. Employee shall not, either during or after Employee's employment by Employer, disclose any Confidential Information, Inventions or Works to any other person or entity outside of his employment, or use any Confidential Information, Inventions or Works for any purpose without the prior written approval of an officer of Employer, except to the extent required to discharge Employee's duties assigned by Employer.

e. Subsequent Employer Notice. During the term of Employee's employment with Employer and for the longer of one year thereafter, or any period in which the non-solicitation obligation set forth herein applies (the "Identification Period"), Employee agrees to identify to potential subsequent employer(s), partner(s) or business associate(s) Employee's obligations under

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this Agreement prior to committing to a position with the employer(s), partner(s), or business associate(s). Employee agrees that Employer may, at its discretion, provide a copy of Section 5 of this Agreement to any of Employee's subsequent employer(s), partner(s), or business associate(s), and may notify any or all of them of Employee's obligations under this Agreement. During the Identification Period, Employee shall give written notice to Employer's Human Resources Department identifying any subsequent employer(s), partner(s), or business associate(s) of Employee.

f. Limitations and Remedies.

(i) Limitations. Notwithstanding any other provision in this Agreement to the contrary, nothing in this Agreement prohibits Employee from (a) reporting possible violations of federal or state law or regulation to any government agency or entity, including the EEOC, DOL, Department of Justice, Securities and Exchange Commission, Department of Defense, Congress, and any agency Inspector General ("Governmental Agencies"), (b) communicating with any Government Agencies or otherwise participating in any investigation or proceedings that may be conducted by any Governmental Agency, including providing documents or other information, without notice to the Company, or (c) making other disclosures that are protected under the whistleblower provisions of applicable law. Employee shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney, and is made solely for the purpose of reporting or investigating a suspected violation of law or (ii) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

(ii) Remedies. Employee agrees that the provisions of Section 5 hereof are necessary for protection of the business of Company and that violation of such provisions is cause for termination of employment and would cause irreparable injury to Company not adequately remediable in damages. Employee agrees that any breach of its obligations under Section 5 shall, in addition to any other relief to which Company may be entitled, including without limitation relief under the Company's Compensation Recoupment Policy described in Section 7, entitle Company to temporary, preliminary and final injunctive relief against further breach of such obligations, along with attorneys' fees and other costs incurred by Company in connection with such action. Employee agrees to the waiver of any requirement for the posting of any bond as a condition to such equitable relief. For any non-equitable relief to which the Company is entitled, Company may apply all or any of the Remedies for Amounts Owed, as described in Paragraph 4(d).

g. Section 5 Definitions. For purposes of Section 5, the following terms have the meanings set forth below:

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(i) "Applicable Company Entity" means Company, a Subsidiary (as defined in Paragraph 3(h)), or Affiliate (as defined in Paragraph 3(h) and also as defined in Paragraph 5(g)(iv)) with which Employee worked or was involved during the course of his employment with Employer or about which Employee gained Confidential Information during the course of Employee's employment with Employer.

(ii) "Confidential Information" means non-public information about Company, its Subsidiaries and Affiliates, including without limitation:

(A) inventions not disclosed to the public by Company, its Subsidiary or Affiliate, products, designs, prototypes, data, models, file formats, interface protocols, documentation, formulas, improvements, discoveries, methods, computer hardware, firmware and software, source code, object code, programming sequences, algorithms, flow charts, test results, program formats and other works of authorship relating to or used in the current or prospective business or operations of Company, Subsidiaries and Affiliates, all of which is Confidential Information, whether or not patentable or made on Employer premises or during normal working hours; and

(B) business strategies, trade secrets, pending contracts, unannounced services and products, financial projections, customer lists, information about real estate Company, its Subsidiary or Affiliate is interested in acquiring, and non-public information about others obtained as a consequence of employment by Employer, including without limitation information about customers and their services and products, the account holders or shareholders of customers of Company, Subsidiaries and Affiliates, and associates, suppliers or competitors of Company, Subsidiaries and Affiliates.

(iii) "Customer" means any person, business or entity that has done business with Employer or any Applicable Company Entity at any time during the twelve (12) month period prior to the date of termination of Employee's employment.

(iv) "Employer" means any Company-related entity that has employed Employee, whether it be Company, its Subsidiary (as defined in Paragraph 3(h)), or Affiliate (as defined in Paragraph 3(h) and also for purposes of this Section 5 including any entity in which Company has a direct or indirect equity interest of at least twenty-five percent (25%)).

(v) "Inventions" means all discoveries, improvements, and inventions relating to or used in the current or prospective business or operations of Company, Subsidiaries and Affiliates, whether or not patentable, which are created, made, conceived or reduced to practice by Employee or under Employee's direction or jointly with others during Employee's employment by Employer, whether or not during normal working hours or on the premises of Employer.

(vi) "Prospective Customer" means any person, business or entity to whom or to which Employer or any Applicable Company Entity has made, at any time during the twelve (12) month period prior to the date of termination of Employee's employment, a proposal to do business.

(vii) "Works" mean all original works fixed in a tangible medium of expression by Employee or under Employee's direction or jointly with others during Employee's employment by Employer, whether or not during normal working hours or on the premises of Employer, and related to or used in the current or prospective business or operations of Employer.

h. Survival. Except as limited in time in Paragraph 5(a), Employee's obligations in this Section 5 shall survive and continue beyond the RSU Vesting or forfeiture dates, the Original Delay Period, any issuance or transfer of Shares, and any termination or expiration of the Agreement for any reason.

i. Competing Obligations. Employee may have entered or may enter into an agreement that contains an obligation protective of any Company-related entity that is similar to, but more or less restrictive than, an obligation set forth in this Section 5 ("Competing Obligation"). By executing this Agreement, Employee agrees that if any Competing Obligation applies, he shall be bound by the obligation (whether in this Agreement or in a separate agreement) that is the most protective to the Company-related entity.

j. Enforceability. If the final judgment of a court or arbitrator with competent jurisdiction declares that any term or provision of this Section 5 is invalid or unenforceable, Employee agrees that the court or arbitrator making the determination of invalidity or unenforceability will have the power to reduce the scope, duration, or geographic area of the applicable term or provision, to delete specific words or phrases, or to replace any invalid or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and that the terms and provisions of this Section 5 will be enforceable as so modified. Employee further agrees that if any part of this Section 5 is held by a court or arbitrator with competent jurisdiction to be invalid, illegal or incapable of being enforced in whole or in part by reason of any rule of law or public policy, and cannot be modified in accordance with this paragraph, such part shall be deemed to be severed from the remainder of this Section 5 for the purpose only of the particular legal proceedings in question, and all other covenants and provisions of this Agreement shall in every other respect continue in full force and effect, and no covenant or provision shall be deemed dependent upon any other covenant or provision.

6. CHANGE IN CONTROL.

a. Definition of Change in Control. For purposes of this Agreement, a "Change in Control" shall have the same meaning as the definition of such term in the Plan, as amended and interpreted from time to time, as of the date of the event that may cause a Change in Control. Notwithstanding anything to the contrary, the consummation of the transactions contemplated by the agreement and plan of merger, dated as of January 11, 2018, by and among the Company, SS&C

Technology Holdings, Inc. and Diamond Merger Sub, Inc., shall constitute a Change in Control for the purposes of this Agreement.

Notwithstanding the occurrence of a Change in Control under the applicable definition, a Change in Control shall not occur with respect to Employee if, in advance of such event, Employee agrees with Company in writing that such event shall not constitute a Change in Control; provided, however, in no event shall Employee's agreement under this paragraph affect a payment subject to 409A from being made where such payment event is a 409A Change in Control.

b. Committee Action in Connection with Change in Control. The Committee (as constituted before such Change in Control) has the authority to take the actions set forth in Section 13 of the Plan. For instance, by way of example and not limitation, the Committee (as constituted before such Change in Control) may determine in its sole discretion that Company, or any successor company in the applicable merger or sale agreement, may pay cash to Employee in an amount equal to the amount (as determined by the Committee) that could have been attained by Employee had the Award been currently payable, in lieu of issuing Shares that would otherwise be issued in connection with Vesting on or after the Change in Control.

7. GENERAL.

a. No Employment Contract. Except to the extent the terms of any separate written employment contract between Employee and Company may expressly provide otherwise, Company shall be under no obligation to continue Employee's employment with Company for any period of specific duration and may terminate such employment at any time, as a Termination With Cause or as a Termination Without Cause. Employee hereby agrees that he shall have no rights against Company to compensation or damages in consequence of any loss or diminution in value of the Award under the Plan, including without limitation as a result of termination of his employment with Company for any reason whatsoever and whether or not in breach of contract. In the event that Employee is considered by a court of competent jurisdiction to have acquired any such rights, he shall be deemed to have waived them irrevocably by signing this Agreement.

b. Employee also agrees that:

i. the Plan is established voluntarily by Company, is discretionary in nature and may be modified, suspended or terminated by Company at any time, as provided in the Plan and this Agreement;

ii. participation in the Plan is voluntary and occasional and does not create any contractual or other right to future participation in the Plan, or benefits in lieu of participation in the Plan, even if participation is or has been offered repeatedly;

iii. participation in the Plan is an extraordinary item which is outside the scope of Employee's employment contract, if any;

iv. Awards granter under the Plan are not part of Employee's normal or expected compensation or salary for any purposes, including, but not limited to, calculating any severance, resignation, termination, redundancy, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments; and

v. in entering into this Agreement he does not rely on, and shall have no remedies in respect of, any statement, representation, assurance or warranty (whether made innocently or negligently) that is not set out in this Agreement.

c. Recoupment Policy. This Award and any resulting delivery of Shares is subject to set-off, recoupment, or other recovery pursuant to the Company's Compensation Recoupment Policy adopted by the Committee effective December 15, 2014 and as amended from time to time (the "Policy"). By accepting this Award, Employee expressly agrees that the Policy applies to this and any previous Awards Employee has received, and Employee consents to any permissive or mandated "Clawback Actions" (as defined in the Policy) as applied to any such Awards.

d. Compliance With Certain Laws and Regulations. If the Committee determines that the consent or approval of any governmental regulatory body or that any action with respect to the RSUs is necessary or desirable in connection with the granting of the RSUs or the issuance of Shares, Employee shall supply Company with such representations and information as Company may request and shall otherwise cooperate with Company in obtaining any such approval or taking such action.

e. Construction and No Waiver. Notwithstanding any provision of this Agreement, the granting of the RSUs and the issuance of the Shares are subject to the provisions of the Plan and any procedures or Rules promulgated thereunder by the Committee or its delegate. The failure of Company in any instance to exercise any of its rights granted under this Agreement, the Plan or the Rules shall not constitute a waiver of any other rights that may arise under this Agreement.

f. Notices. Any notice required to be given or delivered to Company under the terms of this Agreement shall be in writing and addressed to Company in care of its Corporate Secretary at its corporate offices, and such notice shall be deemed given only upon actual receipt by Company. Any notice required to be given or delivered to Employee shall be in writing and addressed to Employee at the address on file with Company's Human Resources Department or such other address specified in a written notice given by Employee to Company, and all such notices shall be deemed to have been given or delivered upon personal delivery or upon deposit in the U.S. mail, postage prepaid and properly addressed to the party to be notified.

g. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of Delaware without reference to its principles of conflicts of law.

h. Entire Agreement. Subject to Paragraph 5(i), this Agreement contains the entire agreement between the parties with respect to the subject matter hereof, and supersedes all prior agreements or understandings between the parties relating thereto.

i. Amendment. This Agreement may be amended only in a manner approved by Company evidencing both parties' agreement to the amendment. This Agreement may also be

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amended, without prior notice to Employee and without Employee's consent, (i) prior to any Change in Control by the Committee if the Committee in good faith determines that the amendment does not materially adversely affect any of Employee's rights under this Agreement or (ii) at any time if the Committee deems it necessary or appropriate to ensure that the RSUs either remain exempt from, or compliant with, Internal Revenue Code Section 409A.

j. Employee hereby consents to the collection, use and transfer of personal data as described in this paragraph. Employee understands that Company holds certain personal information about him, including his name, home address and telephone number, date of birth, national insurance/social security number, salary, nationality, job title, details of all awards ("Data"). Employee further understands that Company shall transfer Data as necessary for the purposes of the Plan and may further transfer Data to any third parties assisting Company in relation to the Plan. Employee understands that recipients of Data may be located in the United States of America, the European Economic Area or elsewhere. Employee authorises recipients (including Company) to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing participation in the Plan.

k. Acknowledgement. The RSU grant and this Agreement are subject to the terms and conditions of the Plan, the Rules, and any other rules or procedures adopted by the Committee or its delegate. The Plan is incorporated in this Agreement by reference and all capitalized terms used in this Agreement have the meaning set forth in the Plan, unless this Agreement specifies a different meaning. Employee agrees to accept as binding, conclusive and final all decisions and interpretations by the Committee of the Plan, this Agreement, the Rules, and other applicable rules or procedures regarding any issues arising thereunder, including without limitation all decisions and interpretations related to 409A and regulations and guidance issued thereunder.

By accepting the terms and conditions of this Agreement, Employee accepts the RSUs and acknowledges that the RSUs are subject to all the terms and provisions of the Plan (including without limitation the powers of the Committee to make determinations and adjustments as provided in Sections 3, 4.2, 5, 14.1 and 15.1 of the Plan), this Agreement, the Rules, and other applicable rules or procedures.

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Section 4: EX-10.34 (EXHIBIT 10.34)

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Execution Copy

February 26, 2018

Stephen C. Hooley
c/o DST Systems, Inc.
333 W. 11th Street
Kansas City, MO 64105

Dear Stephen:

This letter agreement (this "Agreement") is intended to set forth our mutual understanding and agreement regarding your termination of employment and your right to receive severance amounts under your employment agreement with DST Systems, Inc. ("DST"), dated as of June 30, 2009 (the "Employment Agreement") and equity award acceleration of your outstanding equity awards in connection with the closing of the transactions contemplated by the Agreement and Plan of Merger (as it may be amended from time to time), dated as of January 11, 2018 (the "Merger Agreement") by and among DST, SS&C Technologies Holdings, Inc. ("SS&C") and Diamond Merger Sub Inc. (the "Closing"). From the date hereof through the date of the Closing (the "Closing Date"), you agree to continue to faithfully perform your duties under the Employment Agreement to the best of your ability and shall devote substantially all of your working time and efforts to the business and affairs of DST and its affiliates. You shall continue to comply with any restrictive covenant obligations to DST and its affiliates by which you are bound (including, without limitation, under Sections 5 and 8 of the Employment Agreement).

1. Good Reason. DST and SS&C hereby agree that on the Closing Date your employment with DST shall terminate by mutual agreement immediately upon the Closing for "good reason" under Section 7(e) of your Employment Agreement without any requirement for you to provide written notice or any right of DST or SS&C to remedy the event constituting good reason. You shall also resign by mutual agreement as a member of the Board of Directors of DST (and from any other positions with DST, and as a director and/or officer of any DST affiliate), effective immediately upon the Closing. You agree to execute and deliver any additional notices or other documents reasonably necessary to implement such resignations. In addition, you agree that on and after the Closing Date, you shall not represent yourself as being an employee, officer, director, agent or representative of DST or SS&C or their respective affiliates for any purpose.

2. Payment Obligations Upon Termination.

(a) Base Salary. Immediately prior to the Closing, DST shall pay you a lump sum cash amount equal to your accrued and unpaid base salary through the Closing Date, plus a pro rata annual incentive for 2018 in respect of the period through the Closing Date (which such amount shall be determined pursuant to Section 6.09(f) of the Merger Agreement).

(b) Severance Payment. Immediately prior to the Closing, in satisfaction of its severance obligations under the Employment Agreement, DST shall provide you with a lump sum cash severance payment equal to three times your base salary as in effect on the date hereof and 2018 annual incentive bonus at Target level in the amount of $6,375,000.

(c) Continued Benefits/Perquisites. Following the Closing, DST and SS&C shall provide you with the Specified Benefits (consisting of life, disability and health insurance premiums and estimated 401(k) plan profit sharing contributions) as provided in Section 7(e) of the Employment Agreement, as set forth in the "Golden Parachutes Compensation" table in the Definitive Proxy Statement for the transactions contemplated by the Merger Agreement. For the avoidance of doubt, such Specified Benefits shall not include the value of any annual equity awards, and you hereby waive any claim to additional severance payments based upon anticipated future equity awards or your prior equity awards.

(d) Outstanding Equity Awards. All of your outstanding unvested DST equity awards, consisting of RSUs and PSUs, shall fully vest (at the levels specified in the Merger Agreement for PSUs) immediately upon Closing. In lieu of delivery of stock or a conversion of any of your outstanding unvested DST equity awards into SS&C equity awards, the DST Compensation Committee shall authorize, and SS&C agrees, that your outstanding DST equity awards shall be converted into an aggregate cash amount of $20,959,899 (based upon a cash price of $84.00 per share) immediately prior to Closing and, to the extent compliant with Section 409A of the Internal Revenue Code of 1986 and the regulations promulgated thereunder ("Section 409A"), paid to you in a cash lump sum on the Closing Date. In the event that the payment of all or a portion of such cash amount on the Closing Date would not be compliant with Section 409A, then such portion of the cash amount shall be paid out to you (or your estate, in the event of your death) upon the 6th month and one day anniversary of the Closing Date (or as soon as practicable following your death, if earlier). Both DST and SS&C respectfully acknowledge and agree that, as of the date hereof, each such party is not aware of any fact, event or circumstance that would give rise to a claim against the amount payable to you under this paragraph 2 (d) such that SS&C would have a right of offset against, or other right of non-payment with respect to, such amount following the Closing.

(e) Unreimbursed Business Expenses. Any unreimbursed business expenses incurred by you through the Closing shall be payable to you in accordance with DST's expense reimbursement policy in effect at the time of Closing.

(f) Other Accrued Benefits. Any other earned and vested amounts, entitlement or benefits (including 401(k), accrued but unused PTO, 2018 Perquisite Plan benefits (pro-rated through the Closing Date), health insurance claims incurred prior to Closing, and the ability to elect continued health coverage under COBRA, and conversion of group insurance policies to personal policies), to the extent not otherwise described herein, shall be provided to you in accordance with the terms of the applicable plans and arrangements of DST. You shall continue to be covered under any applicable DST indemnification agreements or policies and under any applicable directors' and officers' insurance policies pursuant to the terms of such agreements or policies and the Merger Agreement.

3. General Provisions.

(a) Modification or Waiver; Entire Agreement. No provision of this Agreement may be modified or waived except in a document signed by you, DST and SS&C. Failure to insist upon strict compliance with any term of this Agreement shall not be considered a waiver of any such term or any other term of this Agreement. This Agreement supersedes all prior agreements, promises, covenants, arrangements, communications, representations and warranties between you and DST, whether written or oral, with respect to the subject matter hereof; provided, that, except as provided herein, prior to Closing the provisions of your Employment Agreement shall continue in effect, and, provided, further, that Sections 5, 6, 7(g) (other than the last sentence of Section 7(g)(ii)), 7(h), 7(i), and 8 through 16 of your Employment Agreement shall continue in effect pursuant to their terms. It is hereby agreed that the trust referenced in the last sentence of Section 7(g)(ii) of the Employment Agreement shall not be funded by DST or its affiliates on or after the date hereof.

(b) Governing Law. The validity, construction and interpretation of this Agreement and the rights and duties of you and the Company hereunder shall be governed by the laws of the State of Missouri without regard to principles of conflicts of law. THE PARTIES HERETO AGREE THAT JURISDICTION AND VENUE IN ANY ACTION BROUGHT BY ANY PARTY PURSUANT TO THIS AGREEMENT (OTHER THAN THE RIGHT TO SEEK INJUNCTIVE RELIEF PURSUANT TO SECTION 8(C) OF THE EMPLOYMENT AGREEMENT) SHALL PROPERLY (AND EXCLUSIVELY) BE RESOLVED BY BINDING ARBITRATION IN ACCORDANCE WITH THE DST ARBITRATION PROGRAM AGREEMENT BETWEEN DST AND YOU, DATED JULY 1, 2016.

(c) Termination of Agreement. In the event of the termination of the Merger Agreement or the failure of the Closing to otherwise occur, this Agreement shall be immediately void and of no further force or effect.

(d) Notices. All notices and other communications hereunder shall be in writing and shall be given by hand delivery to the other party or by registered or certified mail, return receipt requested, postage prepaid, addressed as follows:

If to you:

Stephen C. Hooley

Last address on records of DST

If to DST:

DST Systems, Inc.
333 W. 11th Street
Kansas City, MO 64105
Attention: Board of Directors

If to SS&C:

SS&C Technologies Holdings, Inc.
80 Lamberton Road
Windsor, Connecticut 06095
Attention: Joseph J. Frank

or to such other address as either party shall have furnished to the other in writing in accordance herewith. Notice and communications shall be effective when actually received by the addressee.

(e) Assignment; Successors. This Agreement shall be binding upon and shall inure to your benefit, the benefit of your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees, legatees and assigns and, as described in Section 3(i), the Company and its successors.

(f) Headings. The headings in this Agreement are inserted for convenience of reference only and shall not be a part of or control or affect the meaning of any provision of this Agreement.

(g) Section 409A. The provisions of Section 16 of your Employment Agreement shall apply to any severance payments hereunder and the applicable Section 409A provisions of any equity award agreements shall apply to your outstanding equity awards.

(h) Withholding. All payments made to you or on your behalf under this Agreement shall be reduced by any amount that is required to be withheld under applicable law in advance payment of your federal, state and local or foreign income, wage and employment tax liability.

(i) Successors to Company. This Agreement may and shall be assigned or transferred to, and shall be binding upon and shall inure to the benefit of, any successor of DST or SS&C, and any successor shall be substituted for DST or SS&C under the terms of this Agreement. As used in this Agreement, the term "successor" means any person, firm, corporation or business entity which at any time, whether by merger, purchase or otherwise, acquires all or substantially all of the assets of the business of DST or SS&C, as applicable.

(j) No Other Compensation or Benefits. Except as otherwise specifically provided herein or as required by COBRA or other applicable law, you shall not be entitled to any compensation or benefits or to participate in any past, present or future employee benefit programs or arrangements of DST or SS&C (and their respective affiliates) on or after the Closing Date.

(k) Employee Protections. You have the right under federal law to certain protections for cooperating with or reporting legal violations to the Securities and Exchange Commission (the "SEC") and/or its Office of the Whistleblower, as well as certain other governmental entities and self-regulatory organizations. As such, nothing in this Agreement or otherwise prohibits or limits you from disclosing this Agreement to, or from cooperating with or reporting violations to or initiating communications with, the SEC or any other such governmental entity or self-regulatory organization, and you may do so without notifying DST or SS&C. Neither DST nor SS&C may retaliate against you for any of these activities, and nothing in this Agreement or otherwise requires you to waive any monetary award or other payment that you might become entitled to from the SEC or any other governmental entity or self-regulatory organization. Moreover, nothing in this Agreement or otherwise prohibits you from notifying DST or SS&C that you are going to make a report or disclosure to law enforcement. Notwithstanding anything to the contrary in this Agreement or otherwise, as provided for in the Defend Trade Secrets Act of 2016 (18 U.S.C. § 1833(b)), you shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Without limiting the foregoing, if you file a lawsuit for retaliation by DST or SS&C for reporting a suspected violation of law, you may disclose the trade secret to your attorney and use the trade secret information in the court proceeding, if you (x) file any document containing the trade secret under seal, and (y) do not disclose the trade secret, except pursuant to court order.

(l) Execution in Counterparts. This Agreement may be executed in counterparts (including by facsimile or by PDF), and by the parties hereto in separate counterparts, each of which shall be deemed to be an original, and all of which taken together shall constitute one and the same agreement (and all signatures need not appear on any one counterpart), and this Agreement shall become effective when one or more counterparts has been signed and delivered by each of the parties hereto.

[Remainder of page intentionally left blank.]

If the foregoing accurately reflects our agreement, please sign and return to us the enclosed duplicate copy of this letter.

DST Systems, Inc.

/s/ Gary D. Forsee
Name: Gary D. Forsee
Title: Authorized Person

Date: February 26, 2018

Accepted and Agreed:

/s/ Stephen C. Hooley
Stephen C. Hooley

Date: February 26, 2018

SS&C Technologies Holdings, Inc.

/s/ Rahul Kanwar
Name: Rahul Kanwar
Title: Executive Vice President

Date: February 26, 2018

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Section 5: EX-10.35 (EXHIBIT 10.35)

Exhibit 10.35

Execution Copy

February 26, 2018

Randall D. Young
c/o DST Systems, Inc.
333 W. 11th Street
Kansas City, MO 64105

Dear Randall:

This letter agreement (this "Agreement") is intended to set forth our mutual understanding and agreement regarding your termination of employment and your right to receive severance amounts under your employment agreement with DST Systems, Inc. ("DST"), dated as of December 31, 2008 (the "Employment Agreement") and equity award acceleration of your outstanding equity awards in connection with the closing of the transactions contemplated by the Agreement and Plan of Merger (as it may be amended from time to time), dated as of January 11, 2018 (the "Merger Agreement") by and among DST, SS&C Technologies Holdings, Inc. ("SS&C") and Diamond Merger Sub Inc. (the "Closing"). From the date hereof through the date of the Closing (the "Closing Date"), you agree to continue to faithfully perform your duties under the Employment Agreement to the best of your ability and shall devote substantially all of your working time and efforts to the business and affairs of DST and its affiliates. You shall continue to comply with any restrictive covenant obligations to DST and its affiliates by which you are bound (including, without limitation, under Section 5 of the Employment Agreement).

1. Good Reason. DST and SS&C hereby agree that on the Closing Date your employment with DST shall terminate by mutual agreement immediately upon the Closing for "good reason" under Section 7(e) of your Employment Agreement without any requirement for you to provide written notice or any right of DST or SS&C to remedy the event constituting good reason. You shall also resign by mutual agreement from any other positions with DST, and as a director and/or officer of any DST affiliate, effective immediately upon the Closing. You agree to execute and deliver any additional notices or other documents reasonably necessary to implement such resignations. In addition, you agree that on and after the Closing Date, you shall not represent yourself as being an employee, officer, director, agent or representative of DST or SS&C or their respective affiliates for any purpose.

2. Payment Obligations Upon Termination.

(a) Base Salary. Immediately prior to the Closing, DST shall pay you a lump sum cash amount equal to your accrued and unpaid base salary through the Closing Date, plus a pro rata annual incentive for 2018 in respect of the period through the Closing Date (which such amount shall be determined pursuant to Section 6.09(f) of the Merger Agreement).

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(b) Severance Payment. Immediately prior to the Closing, in satisfaction of its severance obligations under the Employment Agreement, DST shall provide you with a lump sum cash severance payment equal to three times your base salary as in effect on the date hereof and 2018 annual incentive bonus at Target level in the amount of $2,790,000.

(c) Continued Benefits/Perquisites. Following the Closing, DST and SS&C shall provide you with the Specified Benefits (consisting of life, disability and health insurance premiums and estimated 401(k) plan profit sharing contributions) as provided in Section 7(e) of the Employment Agreement, as set forth in the "Golden Parachutes Compensation" table in the Definitive Proxy Statement for the transactions contemplated by the Merger Agreement. For the avoidance of doubt, such Specified Benefits shall not include the value of any annual equity awards, and you hereby waive any claim to additional severance payments based upon anticipated future equity awards or your prior equity awards.

(d) Outstanding Equity Awards. All of your outstanding unvested DST equity awards, consisting of RSUs and PSUs, shall fully vest (at the levels specified in the Merger Agreement for PSUs) immediately upon Closing. In lieu of delivery of stock or a conversion of any of your outstanding unvested DST equity awards into SS&C equity awards, the DST Compensation Committee shall authorize, and SS&C agrees, that your outstanding DST equity awards shall be converted into an aggregate cash amount of $3,710,901 (based upon a cash price of $84.00 per share) immediately prior to Closing and, to the extent compliant with Section 409A of the Internal Revenue Code of 1986 and the regulations promulgated thereunder ("Section 409A"), paid to you in a cash lump sum on the Closing Date. In the event that the payment of all or a portion of such cash amount on the Closing Date would not be compliant with Section 409A, then such portion of the cash amount shall be paid out to you (or your estate, in the event of your death) upon the 6th month and one day anniversary of the Closing Date (or as soon as practicable following your death, if earlier). Both DST and SS&C respectfully acknowledge and agree that, as of the date hereof, each such party is not aware of any fact, event or circumstance that would give rise to a claim against the amount payable to you under this paragraph 2 (d) such that SS&C would have a right of offset against, or other right of non-payment with respect to, such amount following the Closing.

(e) Unreimbursed Business Expenses. Any unreimbursed business expenses incurred by you through the Closing shall be payable to you in accordance with DST's expense reimbursement policy in effect at the time of Closing.

(f) Other Accrued Benefits. Any other earned and vested amounts, entitlement or benefits (including 401(k), accrued but unused PTO, 2018 Perquisite Plan benefits (pro-rated through the Closing Date), health insurance claims incurred prior to Closing, and the ability to elect continued health coverage under COBRA, and conversion of group insurance policies to personal policies), to the extent not otherwise described herein, shall be provided to you in accordance with the terms of the applicable

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plans and arrangements of DST. You shall continue to be covered under any applicable DST indemnification agreements or policies and under any applicable directors’ and officers’ insurance policies pursuant to the terms of such agreements or policies and the Merger Agreement.

3. General Provisions.

(a) Modification or Waiver; Entire Agreement. No provision of this Agreement may be modified or waived except in a document signed by you, DST and SS&C. Failure to insist upon strict compliance with any term of this Agreement shall not be considered a waiver of any such term or any other term of this Agreement. This Agreement supersedes all prior agreements, promises, covenants, arrangements, communications, representations and warranties between you and DST, whether written or oral, with respect to the subject matter hereof; provided, that, except as provided herein, prior to Closing the provisions of your Employment Agreement shall continue in effect, and, provided, further, that Sections 5, 6, 7(g), 7(h) (other than the last sentence of Section 7(h)(ii)), 7(i), and 8 through 14 of your Employment Agreement shall continue in effect pursuant to their terms. It is hereby agreed that the trust referenced in the last sentence of Section 7(h)(ii) of the Employment Agreement shall not be funded by DST or its affiliates on or after the date hereof.

(b) Governing Law. The validity, construction and interpretation of this Agreement and the rights and duties of you and the Company hereunder shall be governed by the laws of the State of Missouri without regard to principles of conflicts of law. THE PARTIES HERETO AGREE THAT JURISDICTION AND VENUE IN ANY ACTION BROUGHT BY ANY PARTY PURSUANT TO THIS AGREEMENT (OTHER THAN THE RIGHT TO SEEK INJUNCTIVE RELIEF TO ENFORCE ANY RESTRICTIVE COVENANT OBLIGATIONS TO DST AND ITS AFFILIATES BY WHICH YOU ARE BOUND) SHALL PROPERLY (AND EXCLUSIVELY) BE RESOLVED BY BINDING ARBITRATION IN ACCORDANCE WITH THE DST ARBITRATION PROGRAM AGREEMENT BETWEEN DST AND YOU, DATED JULY 1, 2016.

(c) Termination of Agreement. In the event of the termination of the Merger Agreement or the failure of the Closing to otherwise occur, this Agreement shall be immediately void and of no further force or effect.

(d) Notices. All notices and other communications hereunder shall be in writing and shall be given by hand delivery to the other party or by registered or certified mail, return receipt requested, postage prepaid, addressed as follows:

If to you:

Randall D. Young

Last address on records of DST

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If to DST:

DST Systems, Inc.
333 W. 11th Street
Kansas City, MO 64105
Attention: Board of Directors

If to SS&C:

SS&C Technologies Holdings, Inc.
80 Lamberton Road
Windsor, Connecticut 06095
Attention: Joseph J. Frank

or to such other address as either party shall have furnished to the other in writing in accordance herewith. Notice and communications shall be effective when actually received by the addressee.

(e) Assignment; Successors. This Agreement shall be binding upon and shall inure to your benefit, the benefit of your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees, legatees and assigns and, as described in Section 3(i), the Company and its successors.

(f) Headings. The headings in this Agreement are inserted for convenience of reference only and shall not be a part of or control or affect the meaning of any provision of this Agreement.

(g) Section 409A. The provisions of Section 16 of your Employment Agreement shall apply to any severance payments hereunder and the applicable Section 409A provisions of any equity award agreements shall apply to your outstanding equity awards.

(h) Withholding. All payments made to you or on your behalf under this Agreement shall be reduced by any amount that is required to be withheld under applicable law in advance payment of your federal, state and local or foreign income, wage and employment tax liability.

(i) Successors to Company. This Agreement may and shall be assigned or transferred to, and shall be binding upon and shall inure to the benefit of, any successor of DST or SS&C, and any successor shall be substituted for DST or SS&C under the terms of this Agreement. As used in this Agreement, the term "successor" means any person, firm, corporation or business entity which at any time, whether by merger, purchase or otherwise, acquires all or substantially all of the assets of the business of DST or SS&C, as applicable.

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(j) No Other Compensation or Benefits. Except as otherwise specifically provided herein or as required by COBRA or other applicable law, you shall not be entitled to any compensation or benefits or to participate in any past, present or future employee benefit programs or arrangements of DST or SS&C (and their respective affiliates) on or after the Closing Date.

(k) Employee Protections. You have the right under federal law to certain protections for cooperating with or reporting legal violations to the Securities and Exchange Commission (the "SEC") and/or its Office of the Whistleblower, as well as certain other governmental entities and self-regulatory organizations. As such, nothing in this Agreement or otherwise prohibits or limits you from disclosing this Agreement to, or from cooperating with or reporting violations to or initiating communications with, the SEC or any other such governmental entity or self-regulatory organization, and you may do so without notifying DST or SS&C. Neither DST nor SS&C may retaliate against you for any of these activities, and nothing in this Agreement or otherwise requires you to waive any monetary award or other payment that you might become entitled to from the SEC or any other governmental entity or self-regulatory organization. Moreover, nothing in this Agreement or otherwise prohibits you from notifying DST or SS&C that you are going to make a report or disclosure to law enforcement. Notwithstanding anything to the contrary in this Agreement or otherwise, as provided for in the Defend Trade Secrets Act of 2016 (18 U.S.C. § 1833(b)), you shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Without limiting the foregoing, if you file a lawsuit for retaliation by DST or SS&C for reporting a suspected violation of law, you may disclose the trade secret to your attorney and use the trade secret information in the court proceeding, if you (x) file any document containing the trade secret under seal, and (y) do not disclose the trade secret, except pursuant to court order.

(l) Execution in Counterparts. This Agreement may be executed in counterparts (including by facsimile or by PDF), and by the parties hereto in separate counterparts, each of which shall be deemed to be an original, and all of which taken together shall constitute one and the same agreement (and all signatures need not appear on any one counterpart), and this Agreement shall become effective when one or more counterparts has been signed and delivered by each of the parties hereto.

[Remainder of page intentionally left blank.]

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If the foregoing accurately reflects our agreement, please sign and return to us the enclosed duplicate copy of this letter.

DST Systems, Inc.

/s/ Gary D. Forsee
Name: Gary D. Forsee
Title: Authorized Person

Date: February 26, 2018

Accepted and Agreed:

/s/ Randall D. Young
Randall D. Young

Date: February 26, 2018

SS&C Technologies Holdings, Inc.

/s/ Rahul Kanwar
Name: Rahul Kanwar
Title: Executive Vice President

Date: February 26, 2018

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Section 6: EX-12 (EXHIBIT 12)

Exhibit 12

DST Systems, Inc.
Computation of Ratio of Earnings to Fixed Charges
(dollars in millions)

	2017	2016	2015	2014	2013
Pretax income from continuing operations before adjustment for non-controlling interest and income or loss from equity investees	$ 477.4	$ 252.0	$ 413.4	$ 710.0	$ 480.5
Add:					
Fixed Charges	36.4	30.9	31.7	35.2	42.2
Amortization of capitalized interest	—	—	—	0.1	0.1
Distributed earnings of equity investees	—	0.4	3.5	1.8	129.4

Subtract:					
Capitalized interest	—	—	—	—	—
Pretax loss attributable to non-controlling interest	0.9	(1.4)	(0.1)	—	—
Pretax income as adjusted	$ 512.9	$ 284.7	$ 448.7	$ 747.1	$ 652.2
Fixed charges:					
Interest expense	$ 26.8	$ 23.5	$ 23.8	$ 26.3	$ 34.2
Interest capitalized	—	—	—	—	—
	26.8	23.5	23.8	26.3	34.2
Portion of rents representative of an appropriate interest factor	9.6	7.4	7.9	8.9	8.0
Total fixed charges	$ 36.4	$ 30.9	$ 31.7	$ 35.2	$ 42.2
Ratio of earnings to fixed charges	14.1	9.2	14.2	21.2	15.5

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Section 7: EX-21 (EXHIBIT 21)

Exhibit 21

SUBSIDIARIES

Name of Entity	State of Incorporation/Jurisdiction	Doing Business As
ALPS Holdings, Inc.	Delaware	
DST HealthCare Holdings, Inc.	Delaware	
DSTI Luxembourg Sarl	Luxembourg	
West Side Investment Management, Inc.	Nevada	

Note: Significant subsidiaries as calculated under Rule 1-02(w) of Regulation S-X, listed in alphabetical order.

ALPS Holdings, Inc. represents the consolidation of eight U.S. subsidiaries and is engaged in the Domestic Financial Services segment.

DST HealthCare Holdings, Inc. represents the consolidation of two U.S. and two international subsidiaries and is engaged in the Healthcare Services Segment.

DSTI Luxembourg Sarl represents the consolidation of 21 international subsidiaries, primarily engaged in the Company's International Financial Services segment.

West Side Investment Management, Inc. manages a portion of the Company's passive investment portfolio and is engaged in the Domestic Financial Services segment.

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Section 8: EX-23 (EXHIBIT 23)

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3ASR (No. 333-217795) and Form S-8 (Nos. 333-04197, 333-69377, 333-36726, 333-88288, 333-89699, 333-89703, 333-111940, 333-125364, 333-125365 and 333-204104) of DST Systems, Inc. of our report dated February 28, 2018 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Kansas City, MO
February 28, 2018

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Section 9: EX-31.1 (EXHIBIT 31.1)

EXHIBIT 31.1

CERTIFICATIONS

I, Stephen C. Hooley, certify that:

1. I have reviewed this annual report on Form 10-K of DST Systems, Inc. (the “registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2018

By: /s/ Stephen C. Hooley
Stephen C. Hooley
Chief Executive Officer

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Section 10: EX-31.2 (EXHIBIT 31.2)

Exhibit 31.2

CERTIFICATIONS

I, Gregg Wm. Givens, certify that:

1. I have reviewed this annual report on Form 10-K of DST Systems, Inc. (the “registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2018

By: /s/ Gregg Wm. Givens
Gregg Wm. Givens
Chief Financial Officer

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Section 11: EX-32.0 (EXHIBIT 32.0)

Exhibit 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of DST Systems, Inc. (the "Company") on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, Stephen C. Hooley, Chief Executive Officer of the Company and Gregg Wm. Givens, Chief Financial Officer of the Company, individually certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his individual knowledge: (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Stephen C. Hooley
Stephen C. Hooley
Chief Executive Officer
February 28, 2018

/s/ Gregg Wm. Givens
Gregg Wm. Givens
Chief Financial Officer
February 28, 2018

A signed original of this written statement required by Section 906 has been provided to DST Systems, Inc. and will be retained by DST Systems, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

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SS&C Technologies Holdings, Inc.

2018 Annual Report on 10-K

My Fellow Shareholders,

First, thank you for your continued support and loyalty. Many of our shareholders have invested since day one, March 31, 2010, with our initial public offering of split adjusted $7.50. Now, as of March 2019, we have hit an all-time high of $64.36, and a market cap over $15 billion. SS&C experienced unparalleled transformation in 2018, allocating over $8 billion in capital to acquire DST Systems, Eze Software, and Intralinks. 2018 GAAP revenues grew 104.1 percent to $3,421.1 million, and consolidated EBITDA grew 157.8 percent to $1,804.4 million. This represents over 34.0 percent compound annual growth rate of both revenue and consolidated EBTIDA since our IPO.

Some 2018 Highlights include:

- In January of 2018, we announced the acquisition of DST Systems, and closed on April 16, 2018 for $5.4 billion. DST, a 50 year old company focused in the mutual fund, retirement and health care industries, based in Kansas City, MO, had 14,400 employees and 1,600 contractors. We have made great strides reorganizing DST and streamlining the expense base and have targeted $300 million in cost synergies by 2021.

- Acquired Eze Software on October 1, 2018 for $1.45 billion. Eze brings us a top tier OMS/EMS trading system that has significant cross-sell potential in our hedge fund and long only client base.

- Acquired Intralinks on November 15, 2018 for $1.5 billion. Intralinks' virtual data rooms, designed for mergers and acquisitions, alternative investments, and capital markets communities are best-in-class.

- Generated over $640 million in cash from operating activities for the twelve months ended December 31, 2018. Our high cash flow characteristic gives us confidence in our ability to pay down debt quickly, and to increase shareholder returns.

- Raised the quarterly dividend by 25.0 percent to $0.10 per share.

The financial success SS&C had in 2018 was compounded by the innovation in our technology organization. Most notably, SS&C launched Singularity, our first smart investment operations and accounting system. Built with disruptive technologies including Artificial Intelligence, Machine Learning, Robotic Process Automation, intelligent workflow optimization and advanced predictive analytics, Singularity will drive significant cost savings and continuous operational efficiency. Singularity has the opportunity to change the way investment organizations operate – and we are excited.

We have set ambitious 2019 goals. Foremost is to strengthen our global position in financial services and healthcare administration. The hard work and dedication from our 22,000 employees will drive this success. Client focus, innovation, and aggressive sales will be priorities in 2019. We recognize the contributions of our devoted clients, employees, and shareholders who have been with us since 2010. We look forward to working with them as we continue to build on our successes.

Sincerely,

William C. Stone
Chairman and Chief Executive Officer
SS&C Technologies Holdings, Inc.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

Commission file number: 001-34675

SS&C TECHNOLOGIES HOLDINGS, INC.
(Exact name of Registrant as Specified in Its Charter)

Delaware	**71-0987913**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

80 Lamberton Road
Windsor, CT 06095
(Address of Principal Executive Offices, Including Zip Code)
860-298-4500
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.01 par value per share	**The Nasdaq Global Select Market**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☒		Accelerated filer	☐
Non-accelerated filer	☐	(Do not check if a smaller reporting company)	Smaller reporting company	☐
			Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of June 30, 2018, the aggregate market value of the registrant's common stock held by non-affiliates was $10,769,794,898 based on the closing sale price per share of the registrant's common stock on The Nasdaq Global Select Market on such date.

There were 251,626,214 shares of the registrant's common stock outstanding as of February 22, 2019.

DOCUMENTS INCORPORATED BY REFERENCE:

Part III of this annual report on Form 10-K incorporates by reference certain information from the registrant's definitive proxy statement for the 2019 annual meeting of stockholders, which the registrant intends to file pursuant to Regulation 14A with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year end of December 31, 2018. With the exception of the sections of the definitive proxy statement specifically incorporated herein by reference, the definitive proxy statement is not deemed to be filed as part of this annual report on Form 10-K.

SS&C TECHNOLOGIES HOLDINGS, INC.
ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018
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Explanatory Note

On June 24, 2016, SS&C Technologies Holdings, Inc. completed a two-for-one stock split, effected in the form of a stock dividend. All share and per share amounts (other than for our Class A non-voting common stock which, as described herein, had been converted to shares of our common stock prior to the two-for-one stock split) have been retroactively restated for all periods presented to reflect the stock split.

FORWARD-LOOKING INFORMATION

Certain statements contained in this annual report constitute forward-looking statements for purposes of the safe harbor provisions under the Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements concerning plans, objectives, goals, strategies, expectations, intentions, projections, developments, future events, performance, underlying assumptions, and other statements that are other than statements of historical facts. Without limiting the foregoing, the words "believes", "anticipates", "plans", "expects", "estimates", "projects", "forecasts", "may", "assume", "intend", "will", "continue", "opportunity", "predict", "potential", "future", "guarantee", "likely", "target", "indicate", "would", "could" and "should" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements are accompanied by such words. Such statements reflect management's best judgment based on factors currently known but are subject to risks and uncertainties, which could cause actual results to differ materially from those anticipated. Such risks and uncertainties include, but are not limited to, the state of the economy and the financial services industry and other industries in which our clients operate, our ability to realize anticipated benefits from its acquisitions, including Intralinks, Inc., Eze Software and DST Systems, Inc., the effect of customer consolidation on demand for our products and services, the increasing focus of our business on the hedge fund industry, the variability of revenue as a result of activity in the securities markets, the ability to retain and attract clients, fluctuations in customer demand for our products and services, the intensity of competition with respect to our products and services, the exposure to litigation and other claims, terrorist activities and other catastrophic events, disruptions, attacks or failures affecting our software-enabled services, risks associated with our foreign operations, privacy concerns relating to the collection and storage of personal information, evolving regulations and increased scrutiny from regulators, our ability to protect intellectual property assets and litigation regarding intellectual property rights, delays in product development, investment decisions concerning cash balances, regulatory and tax risks, risks associated with our joint ventures, changes in accounting standards, risks related to our substantial indebtedness, and the market price of our stock prevailing from time to time. The factors discussed under "Item 1A. Risk Factors", among others, could cause actual results to differ materially from those indicated by forward-looking statements made herein and presented elsewhere by management from time to time. You should not place undue reliance on any such forward-looking statements. Forward-looking statements speak only as of the date on which they are made and, except to the extent required by applicable securities laws, we undertake no obligation to update or revise any forward-looking statements.

The following are some of our registered trademarks and/or service marks in the U.S. and/or in other countries: ADVENT, ADVENT CORPORATE ACTIONS, ADVENT CUSTODIAL DATA, ADVENT ONDEMAND, ADVENT PORTFOLIO EXCHANGE, BLUEDOOR, ADVENT REVENUE CENTER, ADVISORWARE, ALL-STAR FUNDS, ALPS, AWD, AXYS, BENEFIX, BLACK DIAMOND, CAREANALYZER, CARESTEPP, DBC, DEAL MACROS, DEAL WORKSHEETS, DST, DSTHS, DST HEALTH SOLUTIONS, DST PHARMACY SOLUTIONS, DST SYSTEMS, EXETER, EZE, EZE CASTLE, EZE ECLIPSE, FAN, FAN MAIL, FIXLINK, FUNDRUNNER, GENEVA, GLOBEOP, GLOBEOP HEDGE FUND INDEX, GOREC, GORISK, HiTRUST, INFOSTEPP, INTRALINKS, LIBERTY ALL-STAR FUNDS, MARGINMAN, MAXIMIS, MOXY, PACER, PAGES, PAS, PORTIA, PORTPRO, PRO-JECT, POWERSTEPP, REALTICK, RECON, ROLLOVER CENTRAL, RXFOCUS, SKYLINE, SYNCOVA, SYLVAN, TA2000, TAMALE, TAMALE RMS, TRAC, TRADETHRU, TRADEWARE, VISION, WALLETSHARE, and ZOOLOGIC. SS&C Technologies Holdings, Inc. and/or its subsidiaries in the U.S. and/or in other countries have trademark or service mark rights to certain other names and marks other than those referred to in this annual report.

SS&C Technologies Holdings, Inc., or "SS&C Holdings," is our top-level holding company. SS&C Technologies, Inc., or "SS&C," is our primary operating company and a wholly-owned subsidiary of SS&C Technologies Holdings, Inc. "We," "us," "our" and the "Company" mean SS&C Technologies Holdings, Inc. and its consolidated subsidiaries, including SS&C.

Unless context otherwise requires, references to our "common stock" includes both shares of our common stock and shares of our Class A non-voting common stock, all outstanding shares of which were converted into shares of our common stock in 2016.

PART I

ITEM 1. *BUSINESS*

Overview

SS&C is a global provider of software and software-enabled services to thousands of clients, principally within the institutional asset and wealth management, alternative investment management, healthcare, brokerage, retirement, financial advisory and financial institutions vertical markets. In addition, our clients include commercial lenders, private equity real estate investment trusts ("REITs"), corporate treasury groups, insurance companies, pension funds, municipal finance groups and real estate property managers.

We are a leading provider of mission-critical, sophisticated software-enabled services that allow financial services providers to automate complex business processes. Our portfolio of software products and rapidly deployable software-enabled services allows our clients to automate and integrate front-office functions such as trading and modeling, middle-office functions such as portfolio management and reporting, and back-office functions such as accounting, transfer agency, compliance, regulatory services, performance measurement, reconciliation, reporting, processing and clearing. Our solutions enable our clients to focus on core operations, better monitor and manage investment performance and risk, improve operating efficiency and reduce operating costs. We provide our solutions globally to thousands of clients, principally within the institutional asset and wealth management, alternative investment management, brokerage, retirement, financial advisory and financial institutions vertical markets. Our clients include commercial lenders, real estate investment trusts ("REITs"), corporate treasury groups, insurance companies, pension funds, municipal finance groups and real estate property managers.

In addition, we provide solutions to the healthcare industry including pharmacy, healthcare administration and health outcomes optimization solutions to satisfy their information processing, quality of care, cost management and payment integrity needs. Our healthcare solutions include claims adjudication, benefit management, care management, and business intelligence services.

We provide the global financial services industry and healthcare industry with a broad range of software-enabled services, which consist of software-enabled outsourcing services and subscription-based on-demand cloud solutions that are managed and hosted at our facilities, and specialized software products, which are deployed at our clients' facilities. Our software-enabled services, which combine the strengths of our proprietary software with our domain expertise, enable our clients to contract with us to provide many of their mission-critical and complex business processes. For example, we utilize our software to deliver comprehensive fund administration services to alternative and traditional asset managers, including fund manager services, transfer agency services, funds-of-funds services, tax processing and accounting. We offer clients the flexibility to choose from multiple software delivery options, including on-premise applications and hosted, multi-tenant or dedicated applications. Additionally, we provide clients with targeted, blended solutions based on a combination of software and software-enabled services. We believe that our software-enabled services provide superior client support and an attractive alternative to clients that do not wish to install, manage and maintain complicated financial software.

Our business model is characterized by substantial contractually recurring revenues and significant cash flow. We generate revenues primarily through our high-value software-enabled services. Our software-enabled services are generally provided under contracts with initial terms of one to five years that require monthly or quarterly payments and are subject to automatic annual renewal at the end of the initial term unless terminated by either party. We also generate revenues by licensing our software to clients through either perpetual or term licenses and by selling maintenance services. Maintenance services are generally provided under annually renewable contracts. Our pricing typically scales as a function of our clients' assets under management, the complexity of asset classes managed, the volume of transactions, and the level of service the client requires.

Our contractually recurring revenue model helps us minimize fluctuations in revenues and cash flows and enhances our ability to manage costs. Our contractually recurring revenues, which include our software-enabled services and maintenance and term licenses revenues, represented 97% of total revenues in the year ended December 31, 2018. We have experienced average revenue retention rates in each of the last five years of greater than 90% on our software-enabled services and maintenance and term licenses contracts for our core enterprise products. We believe that the high value-added nature of our products and services has enabled us to maintain our high revenue retention rates.

We generated revenues of $3,421.1 million for the year ended December 31, 2018 as compared to revenues of $1,675.3 million for the year ended December 31, 2017. In 2018, we generated 75% of our revenues from clients in North America and 25% from clients outside North America. Our revenues are highly diversified, with our largest client in 2018 accounting for less than 5% of our revenues. Additional financial information, including geographic information, is available in our Consolidated Financial Statements and Note 11 to our Consolidated Financial Statements.

Our Industry

We serve a number of vertical markets within the financial services and healthcare industries. Clients include alternative investment funds, investment management firms, individual and government sponsored health plans, healthcare providers, institutional and retail asset managers, insurance companies, registered investment advisors ("RIAs"), wealth managers, banks and brokerage firms. We believe that financial services and healthcare providers will increasingly turn to IT solutions, provided by an independent vendor, as a result of economic challenges and heightened regulatory requirements. Financial services firms are in a search for more risk-averse business strategies, simplified regulatory compliance, and full service solutions provided by a single vendor. As a result, we believe the financial services industry will continue to invest in IT and outsourcing solutions.

Market Trends

The demand for our products and services comes from a number of distinct sources: new formation in asset and wealth management, and health industries, new business lines and combinations of business lines at existing clients, replacement of legacy in-house operations and competitor systems and expansion of our existing client relationships. Underlying these demand drivers are several industry trends, including:

- *Diversification of Business Lines and Product Proliferation.* As investment managers look to grow through diversified offerings (alternatives, real estate, and private equity) in global markets, they need their technology investments and servicing partners to be long-lived and deliver a return on their investment for different types of businesses models. Our scalable solutions empower client growth while diversifying their product offering.
- *Regulatory changes.* Our clients must comply with rules, regulations, directives, and standards from governmental and self-regulating organizations. Our clients rely on us to navigate new requirements and facilitate compliance in today's dynamic and evolving regulatory environment. We are uniquely positioned in our ability to interpret regulations and impact to clients and to implement technology solutions. We expect regulatory changes to increase the complexity of compliance and the demand for our products and services and motivate clients to develop systems infrastructure and research management processes to comply with regulatory requirements.
- *Technological paradigm shift.* Evaluating the implications of new technologies is a challenge for our clients. By combining institutional grade quality with cutting edge technology, SS&C helps apply the right solutions to help grow our client's business more efficiently. Many of our clients are faced with internal digital transformation projects or external threats from emerging tech disrupter competition. As a result, clients are investing in new technology to help expand profit margins and offer new products. New technology incorporating artificial intelligence ("AI"), including machine learning and Robotic Process Automation ("RPA") are gaining traction in the financial technology industry. We believe that these next generation tools will increase efficiency, reduce errors, and enable complex financial record keeping without human intervention. Overall, we continue to see increasing migration to the cloud to achieve operational scalability and lower fixed costs.
- *Increased demands for transparency, efficiency, and risk management.* Firms continue to focus on operational risk, resulting from discoveries of fraud and mismanagement during the 2008-2009 U.S. financial crisis and concerns regarding transparency and counterparty exposure. This continued focus has led investment management firms to strive to provide investment data accurately, institutionalize investment operations, and automate their investment process. On the wealth management and advisory sides of our business, we have seen further evolution of the relationship between the end client and a firm, with investors demanding transparency and a customized client experience. We expect that wealth managers will need to become familiar with their clients' preferences for account access and communication and cater to them. Finally, both institutional and individual investors, faced with increasingly competitive low-fee and automated options, are pushing investment managers for greater efficiencies and lower fees.
- *Aging population and more sophisticated healthcare solutions.* An aging population, with an average of 10,000 individuals turning 65 years of age per day in the United States in 2018; increased regulatory oversight and changing business models, as seen in value-based payment constructs; the prevalence of data and demand for data security; utilization of data and analytics to drive outcomes; a continued drive towards outsourcing as a way to manage costs and better position for growth – all are contributing to an evolving landscape.

Competitive Strengths

The following are our core strengths that we believe enable us to differentiate ourselves in the markets we serve:

Enhanced capability through software ownership.

We use our proprietary software products and infrastructure to provide our software-enabled services, strengthening our overall operating margins and providing a competitive advantage. Because we primarily use our own proprietary software in the execution of our software-enabled services and generally own and control our products' source code, we can quickly identify and deploy product improvements and respond to client feedback, enhancing the competitiveness of our software and software-enabled service offerings. This continuous feedback process provides us with a significant advantage over many of our competitors, specifically those software competitors that do not provide a comparable model and therefore do not have the same level of hands-on experience with their products.

Global industry leader with strong market position focused on software and software-enabled services for the financial and healthcare industries.

We are a global business providing a broad portfolio of software products and software-enabled services and have over 190 offices worldwide. As of December 31, 2018, we had over 20,000 development, service and support professionals with significant expertise across the industries that we serve and a deep working knowledge of our clients' businesses. We provide highly flexible, scalable and cost-effective solutions that enable our clients to track complex securities, better employ sophisticated investment strategies, scale efficiently and meet evolving regulatory requirements. We believe our product and service offerings position us as a leader within the specific verticals of the financial services software and services market in which we compete. Our products and services allow our clients to automate and integrate their front-office, middle-office and back-office functions, thus enabling straight-through processing that increases productivity and reduces costs.

Trusted provider to our highly diversified and growing client base.

By providing mission-critical, reliable software products and services for over 30 years, we have become a trusted provider to the financial services industry. We have developed a large and growing installed base within multiple segments of the financial services industry. Our clients include some of the largest and most well-recognized firms in the financial services industry. We believe that our high-quality products and superior services have led to long-term client relationships, some of which date from our earliest days of operations. Our strong client relationships, coupled with the fact that many of our current clients use our products for a relatively small portion of their total funds and investment vehicles under management, provide us with a significant opportunity to sell additional solutions to our existing clients and drive future revenue growth at lower cost.

Largest Alternative Fund administration services fund administrator and mutual fund transfer agent

The third-party service providers that participate in the alternative investment market include fund managers, auditors, fund administrators, attorneys, custodians and prime brokers. Each provider performs a valuable function with the intention of providing transparency of the fund's assets and the valuation of those assets. Conflicts of interest may arise when the above parties attempt to provide more than one of these services. The industry is increasingly recognizing these conflicts and, as a result, seeking independent fund administrators such as SS&C.

SS&C is currently the largest fund administrator for alternative investment managers, including hedge funds, private equity, real assets, and fund of funds. As the largest third party mutual fund transfer agent we offer the advantage of significant leverage from a scale and investment perspective. Our highly tenured staff of industry experts allow us to deliver consistent service excellence to the asset management customers we service. The fact we are operating our own proprietary software to deliver these services allows us to ensure all aspects of our offering are optimized to deliver cost effective, accurate solutions.

As a publically traded company, our clients and prospects have access to our 10-Qs and 10-Ks filed with the SEC, giving them transparency into our overall financial strength.

Experienced management team with strong integrating and operating track record.

Our senior management team has a track record of operational excellence and an average of more than 20 years of experience in the software and financial services and healthcare industries, and a proven ability to acquire and integrate complementary businesses, as demonstrated by the 53 businesses we have acquired since 1995. By leveraging our domain expertise and knowledge, we have developed, and continue to improve, our mission-critical software products and services to enable our clients to overcome the complexities inherent in their businesses. All of our senior executives are compensated based upon our financial success.

Business Strategies

Our strategy is to continue to deliver compelling solutions and value propositions to our customers in the software and software-enabled services market. The following are key elements to our strategy for achieving this objective:

Build upon and extend our leadership position in software and software-enabled services in the financial services and healthcare industries.

Since our founding in 1986, we have focused on building substantial financial services domain expertise through close working relationships with our clients. We have developed a deep knowledge base that enables us to respond to our clients' most complex financial, accounting, actuarial, tax and regulatory needs. We intend to maintain and enhance our technological leadership by using our domain expertise to build valuable new software-enabled services and solutions, continuing to invest in internal development and opportunistically acquiring products and services that address the highly specialized needs of the financial services industry.

Our internal product development team works closely with marketing, sales, and client service personnel to ensure that product evolution reflects developments in the marketplace and trends in client requirements. In addition, we intend to continue to develop our products in a cost-effective manner by leveraging common components across product families. We believe that we enjoy a competitive advantage because we can address the investment and healthcare management needs of high-end clients by providing industry-tested products and services, including cloud-based services and related mobility platforms that meet global market demands and enable our clients to automate and integrate functions for improved productivity, compliance, reduced manual intervention, and bottom-line savings.

SS&C's products are sold to a diverse group of clients from niche players in the financial services and healthcare industries to the largest institutions in the world. Furthermore, we believe our client base represents a fraction of the total number of financial services providers globally. We believe there is opportunity to grow our client base over time as our products become more widely adopted. We believe we also have an opportunity to capitalize on the increasing adoption of outsourcing mission-critical operations by financial services providers as they continue to replace inadequate legacy solutions and custom in-house solutions that are inflexible and costly to maintain. Our software-enabled services revenues increased from $956.8 million for the year ended December 31, 2016 to $2,798.9 million for the year ended December 31, 2018.

Capitalize on longer-term secular growth trends in financial services and healthcare industries.

With our global footprint and best-in-class product offerings, we aim to capture a significant share of the IT spend of alternative asset, institutional and retail asset managers, wealth managers, and healthcare industries through leveraging the deeply embedded service offering we provide and outdistancing the competition. We expect regulatory changes to increase the complexity of compliance and the demand for our products and services, as well as motivate clients to develop infrastructure and research management processes to mitigate regulatory exposure. We plan to benefit from the growing software spend in the increasingly complex and more highly regulated financial services and healthcare landscape.

Continue to capitalize on acquisitions of complementary businesses and technologies.

We intend to continue to employ a highly disciplined and focused acquisition strategy to broaden and enhance our product and service offerings, expand our intellectual property portfolio, add new clients and supplement our internal development efforts. We believe our acquisitions have been an extension of our research and development effort that has enabled us to purchase proven products and remove the uncertainties associated with software development projects. We will seek to opportunistically acquire, at reasonable valuations, businesses, products and technologies in our existing or complementary vertical markets that will enable us to better satisfy our clients' rigorous and evolving needs. We have a proven ability to integrate complementary businesses as demonstrated by the 53 businesses we have acquired since 1995. Our experienced senior management team leads a rigorous evaluation of our targets to ensure that they satisfy our product or service needs and will successfully integrate with our business while meeting our targeted financial goals. As a result, our acquisitions have contributed marketable products or services that have added to our revenues. Through the broad reach of our direct sales force and our large installed client base, we believe we can market these acquired products and services to a large number of prospective clients. Additionally, we have been able to improve the operational performance and profitability of our acquired businesses, creating significant value for our stockholders.

Strengthen our international presence.

We believe that there is a significant market opportunity to provide software and services to financial services providers outside North America. In the year ended December 31, 2018, we generated 25% of our revenues from clients outside North America. We are building our international operations in order to increase our sales outside North America. We plan to continue to expand our international market presence by leveraging our existing software products and software-enabled services. We also plan to leverage our growing presence in the Asia Pacific region as a result of recent acquisitions. Over the last three years, revenue from the Asia Pacific region has increased 61.8% to $145.8 million. We believe this region presents a compelling growth opportunity.

Increase profitability through margin expansion.

We expect to drive increased margins through delivering innovative end-to-end solutions that provide significant value to customers and warrant premium pricing. We have significant scale with best-in-class solutions and software-enabled services across the delivery spectrum, which we believe, combined with a diversified service offering and client base, drives stable revenues and increased operating leverage. Our operating flexibility allows us to scale our costs based on client demands.

Our Acquisitions

As mentioned above, we intend to continue to employ a highly disciplined and focused acquisition strategy. Our past acquisitions have enabled us to expand our product and service offerings into new markets or client bases within the financial services industry. The addition of new products and services has also enabled us to market other products and services to acquired client bases. We believe our acquisitions have been an extension of our research and development effort and have enabled us to add to our product and service offerings without incurring the uncertainties sometimes associated with software development projects.

Since 1995, we have acquired 53 businesses within our industry. These acquisitions have contributed marketable products and services, which have added to our revenues and earnings. We have generally been able to improve the operating performance and profitability of our acquired businesses. We seek to reduce the costs of the acquired businesses by consolidating sales and marketing efforts and by eliminating redundant administrative tasks and research and development expenses. In many cases, we have also been able to increase revenues generated by acquired products and services by leveraging our existing products and services, larger sales capabilities and client base.

We generally seek to acquire companies that satisfy our financial metrics, including expected return on investment. Through our acquisitions, we seek companies that:

- provide complementary products or services in the financial services industries;
- possess proven technology and an established client base that will provide a source of ongoing revenue and to whom we may be able to sell existing products and services;
- expand our intellectual property portfolio to complement our business;
- address a highly specialized problem or a market niche in the financial services and healthcare industries;
- expand our global reach into strategic geographic markets; and
- have solutions that lend themselves to being delivered as software-enabled services.

We believe, based on our experience, that there are numerous solution providers addressing highly particularized financial services needs or providing specialized services that would meet our disciplined acquisition criteria.

Acquisitions are discussed further in *Liquidity and Capital Resources* and in Note 7 to our Consolidated Financial Statements. The following table provides a list of the most substantial acquisitions we have made since 2010 (in millions):

Acquisition Date	Acquired Business	Contract Purchase Price		Acquired Capabilities, Products and Services
December 2010.....	TimeShareWare	$	30.5	Added shared ownership property management platform to real estate offering
May 2012.............	Thomson Reuters' PORTIA Business	$	170.0	Added portfolio management software and outsourcing services for institutional managers
June 2012.............	GlobeOp Financial Services S.A.	$	834.4	Expanded fund administration services in hedge fund and other asset management sectors
November 2014	DST Global Solutions	$	95.0	Added investment management software and services
July 2015..............	Advent Software, Inc.	$	2,600.0	Expanded global investment management software and services
September 2015	Varden Technologies	$	25.0	Added cloud-based client and advisor communication solutions for investment firms
November 2015	Primatics Financial	$	116.0	Added cloud-based integrated risk, compliance and finance solution for the banking industry
March 2016..........	Citigroup's Alternative Investor Service	$	425.0	Expanded fund administration services in hedge fund and private equity sectors
December 2016.....	Wells Fargo's Global Funds Service	$	75.1	Expanded fund administration services in hedge fund and private equity sectors
December 2016.....	Conifer Financial Services, LLC	$	88.5	Expanded fund administration services in hedge fund and other asset management sectors
October 2017	CommonWealth Fund Services Ltd.	$	16.4	Expanded fund administration services in hedge fund and private equity sectors
April 2018............	DST Systems, Inc.	$	5,400.0	Provided additional scale and breadth across institutional and retail asset management, alternatives, wealth management, and healthcare sectors
June 2018.............	CACEIS North America	$	20.0	Expanded fund administration services in hedge fund and private equity sectors
October 2018	Eze Software Group, LLC	$	1,450.0	Strengthened SS&C's front to back office technology
November 2018	Intralinks Holdings, Inc.	$	1,500.0	Increased key account footprint and adds cloud-based virtual data rooms and secure collaboration solutions for SS&C's banking and alternative clients

Products and Services

Our products and services allow professionals in the financial services and healthcare industries to automate complex business processes and are instrumental in helping our clients manage significant information processing requirements. Our solutions enable our clients to focus on core operations, better monitor and manage business performance and risk, improve operating efficiency and reduce operating costs. Our portfolio of products and software-enabled services allows our clients to automate and integrate front-office functions such as trading and modeling, middle-office functions such as portfolio management and reporting, and back-office functions such as accounting, performance measurement, reconciliation, reporting, processing and clearing, and compliance and tax reporting. Our healthcare solutions include claims adjudication, benefit management, care management, and business intelligence solutions.

Software-enabled Services

- ***SS&C GlobeOp*** – Named "Best Global Hedge Fund Administrator" of 2018 by Hedgeweek, SS&C GlobeOp serves a worldwide clientele of hedge funds, private equity funds, fund of funds, real asset funds, managed accounts, family office and undertakings for collective investments in transferable securities ("UCITS"), with more than $1.6 trillion in assets under administration. SS&C provides a full suite of comprehensive capabilities, including but not limited to: global regulatory compliance reporting, tax reporting, risk reporting, net asset value ("NAV") calculations, valuation services, daily reconciliation of cash and security balances, full investor and transfer agency services, and automated support of post-trade activities. Under SS&C GlobeOp, SS&C Direct provides similar middle and back office outsourcing services and application hosting to institutional asset managers, insurance companies and real estate investment trusts.

- ***DST Financial Services*** – Utilizing proprietary software applications (including TA 2000, TRAC systems, FAST platform, Bluedoor and Percana), we offer our clients information processing solutions to support direct and intermediary sales of mutual funds, alternative investments, retirement plans and participant accounting and recordkeeping for wealth management. This includes transaction processing; account opening and maintenance; reconciliation of trades, positions and cash; corporate actions; regulatory reporting and compliance functions; and tax reporting. We also support full reporting to investors for confirmations, statements and tax forms, web access, and electronic delivery of documents. We also offer similar investor and policyholder administration and technology services in Canada, Ireland and Luxembourg through our joint venture IFDS L.P. utilizing its iFAST platform.

- ***Black Diamond Wealth Platform*** – Black Diamond offers independent advisors, wealth managers, independent broker dealers (“IBDs”), and aggregators an innovative and dynamic portfolio management and reporting solution delivered through an easy-to-use, feature-rich web-based application. As a cloud-based product offering, advisors can access Black Diamond's customizable portfolio management and reporting online from anywhere, anytime without the need to maintain costly technology infrastructures. Black Diamond also provides outsourced daily reconciliation and data management services so firms can focus their efforts on servicing clients and growing their business rather than managing complex back office functions.

- ***Advent Outsourcing Services*** – Advent Outsourcing services provides a full spectrum of tailored options to our clients’ specific needs, from cloud-delivered technology to co-sourcing specific workflows to full outsourcing of operational processes including data management services such as full account aggregation, daily portfolio reconciliation, corporate actions processing and reference data management. Advent OnDemand is the pre-configured SaaS delivery of one of Advent's asset management solutions hosted by Advent without managed outsourced operational processes.

- ***Advent Data Solutions*** – Advent Data Solutions consists of a variety of data offerings provided to clients in an automated manner and format needed. These solutions include:

    - **Advent Custodial Data** which provides account level information from a firm’s custodian(s) through a single, secure connection to a data network managed by Advent. Using Advent Custodial Data, firms can reconcile positions, transactions and cash activity on an exceptions-only basis, or firms can post data directly into their portfolio accounting system.
    - **Advent Corporate Actions** which delivers reports on all corporate actions that affect a clients’ portfolios and provides staff with reliable transaction instructions.
    - **Advent Portfolio Data** which extends the delivery of account level data for reconciliation and other workflows from global custodians and counterparties.
    - **Advent Market Data** which is a single, cloud-based platform with connectivity to several leading global market data sources, allowing clients to acquire critical data for managing portfolios.

- ***ALPS Asset Management Services*** – ALPS is a comprehensive suite of asset servicing, distribution solutions and asset management for open-end mutual funds, closed-end funds, exchange-traded funds and alternative investment funds. Focusing on the needs of small- to medium-sized funds that require a broad set of customizable services, we provide compliance, creative services, medallion distribution, fund administration, fund accounting, legal, tax administration, transfer agency and asset management services. Our distribution services range from consulting to active wholesaling and marketing, including closed-end funds initial public offering launch platform services. We also offer products designed to assist clients in meeting the expanding needs associated with distributing U.S. investment products through financial intermediaries. We serve as the asset manager to proprietary open-end mutual funds, closed-end funds and exchange-traded funds through active management and through the utilization of sub-advisors and index providers. Additionally, we offer data analytics and consulting services in the U.S. to help our clients gain actionable insights into the needs and preferences of their customers.

- ***Virtual Data Rooms (Intralinks)*** – Intralinks Virtual Data Rooms (“VDR’s”), are designed for the mergers and acquisitions (M&A), alternative investments, and capital markets communities. The Intralinks VDR is a rich SaaS application providing a secure, customizable environment for deal makers to exchange sensitive documents and information. Within M&A the VDR is primarily used for sharing content during due diligence. For alternative investments, VDR’s are used to facilitate fundraising and fund reporting. Customers working in debt capital markets use VDR’s for managing the lifecycle of financing deals.

- ***Healthcare Services***

  - ***Pharmacy Solutions*** – We use our proprietary software applications, supporting technology and enhanced clinical expertise to provide pharmacy health management solutions supporting commercial, Medicaid and Medicare Part D plans. These services include pharmacy claims administration, pharmacy network solutions, government programs administration, formulary and rebate management, trend control and quality compliance programs, member services, and discount drug card programs.

  - ***Healthcare Administration*** – We use our proprietary software applications to provide medical claim administration services and health plan compliance and revenue integrity services for payers and providers in the domestic healthcare industry. Healthcare administration services are offered on a software license, remote and business process outsourcing ("BPO") basis. Our solutions, combined with our health outcomes optimization solutions described below, are offered as stand-alone component solutions to complement health plans, existing operations or systems, or as an integrated core administration package of solutions.

  - ***Health Outcomes Optimization*** – We provide health outcomes optimization solutions through the use of our integrated care management and population health analytics applications and professional services for health plans and providers in the domestic healthcare industry. Our Integrated Care Management solution is a real-time, intuitive, workflow-driven solution suite that assists clients to improve member outcomes and manage costs. In addition to our proprietary systems, we are the exclusive distributor of Johns Hopkins' Adjusted Clinical Groups ("ACG"), a patient classification system developed by Johns Hopkins University. The ACG System is a software tool that provides health plans the ability to easily identify their at-risk population and stratify them into the optimal care management program.

Software license, maintenance and related

- ***Portfolio Accounting Software*** – We provide comprehensive, integrated software solutions that help our clients streamline operations and accelerate global accounting processes. Our portfolio accounting solutions provide seamless front-to-back office integration, with the flexibility to meet the unique accounting needs of our customers and virtually unlimited scalability to accommodate growth. Our fund accounting solutions meet the challenges of high-volume, global fund managers with support for complex, multi-asset class and multi-currency strategies. We also have solutions catered to insurance accounting and commercial, consumer, and residential loan accounting.

  - *Geneva* – Geneva is a global portfolio management platform designed to meet the real-time needs of global asset managers, hedge funds, prime brokers, fund administrators, private equity firms and family offices worldwide. Geneva integrates all phases of the investment management process – portfolio management, reconciliation and light trade capture and risk capabilities. Its "main memory" database offers more accurate and flexible reporting, and eliminates batch processing and time-consuming error corrections. Geneva enables firms to grow into new markets, deliver greater operational efficiencies, enhance investor service, process high trade volumes across multiple securities, improve compliance and security, and lower operating costs and risks.

  - *Advent Portfolio Exchange* – Advent Portfolio Exchange ("APX") is a comprehensive portfolio management solution for asset managers and wealth managers worldwide, which integrates the front-office functions of prospecting, marketing, customer relationship management and internal business management with the back office operations of portfolio accounting, performance measurement and reporting. It allows firms to manage both high-net-worth and institutional clients through a comprehensive range of capabilities, including customized reporting, automated report packaging, and performance analytics. APX can be deployed locally as well as hosted in the cloud.

  - *Axys* – Axys is a turnkey portfolio management and reporting system for small to mid-size investment management organizations. Axys provides investment professionals with broad portfolio accounting functionality on a variety of investment instruments, including equities, fixed income, mutual funds and cash. By using Axys, clients have a timely decision support tool with immediate access to portfolio holdings, asset allocation, realized and unrealized gains and losses, actual and projected income and other data including performance measurement and flexible reporting.

  - *Global Wealth Platform ("GWP")* – GWP is our comprehensive, cloud-based solution that enables wealth managers to manage the entire investment process on a single platform, leveraging a single database. GWP bridges the front-, middle-, and back-offices and ensures consistency of data across all phases of the investment process. This solution simplifies the management of complex investment strategies with support of all asset classes and multicurrency capabilities in one system, and the automation and integration eliminates offline workarounds and manual processes.

- *HiPortfolio* – HiPortfolio is an investment accounting and asset servicing solution for third party administrators, asset managers, and insurance firms in over 35 countries. With broad instrument coverage and multi-currency capabilities, HiPortfolio allows our clients to manage the full transaction lifecycle, from trade capture, investment accounting and fund administration, through cash management, reconciliation, corporate actions processing, unit pricing and taxation, to performance measurement and attribution.

- *PORTIA* – PORTIA is a comprehensive, middle-to-back office investment operations platform that encompasses portfolio accounting, fund accounting, performance measurement and attribution, reconciliation and client reporting for your global assets. Firms of all types around the world rely on PORTIA to track day-to-day portfolio activity, with visibility across all transactions and positions. Its modular design and open architecture allow for a high level of customization and easy integration with other systems. With flexible deployment operations, PORTIA can be installed on-premise, hosted in the cloud or fully outsourced to reduce your IT footprint and overhead.

- *CAMRA* – CAMRA is a portfolio accounting solution tailored to the needs of insurance investment operations. Its multi-currency, multi-instrument portfolio accounting supports complex securities, sophisticated investment strategies, multi-currency investment management, multiple-bases accounting, and global tax and regulatory processing requirements such as generally accepted accounting percentages ("GAAP") and Schedule D.

- ***Portfolio Management Software***

  - *SS&C Singularity* – Our first smart investment operations and accounting system – a cloud-based solution designed to support the operating model of financial institutions. Empowered by embedded disruptive technologies including artificial intelligence, machine learning, robotic process automation, intelligent workflow optimization, and advanced predictive analytics, Singularity can drive significant cost savings and continuous operational improvements for our clients.

  - *Performance and Performance Attribution (Sylvan, Insight)* – SS&C's performance measurement, attribution and composite management platforms that streamline the calculation and reporting of performance while enabling our clients to analyze the sources of return. It supports multiple attribution methodologies, customized benchmarking and composite management. We provide full support for industry-mandated GIPS performance reporting standards.

  - *Reporting (Vision FI)* – SS&C Vision FI (Financial Insights) is a comprehensive, end-to-end solution for designing, producing and distributing client communications. It enables financial organizations to create high-quality reports in a matter of minutes. The system enables our customers to deliver information to clients through their preferred channels, whether that's print, email or online through a customizable portal.

  - *Reconciliation (Recon)* – SS&C's Recon is a highly scalable reconciliation and exception management system that gives our customers more control over the accounting lifecycle, including account, cash and position reconciliations. With data translation, and rules-based matching and superior investigative tools, Recon streamlines operational efficiency delivering full visibility into cash, holdings, transactions, trial balances and security masters.

- ***Trading Software***

  - *Order Management (Moxy, Eze OMS)* – SS&C's trade order management systems provide centralized platforms for making and managing trade order decisions quickly and confidently. The platforms have built-in connectivity between asset managers and multiple brokers, counterparties, custodians, and trading venues, and give our clients control and visibility across the entire trading process, from asset allocation through settlement.

  - *Execution Management (Eze EMS)* – SS&C's multi-broker execution management system is a high-speed cloud-based platform that provides traders with centralized access to aggregated liquidity for trade execution, critical trading data and insight for making fast and informed decisions, and the tools necessary to dynamically manage positions, portfolios, and trading risk across global equity, futures, and options markets.

- ***Digital Process Automation***

  - *AWD* – AWD is our digital process automation product suite, encompassing intelligent automation, business process management, content management, case management, outbound communications and a low code development platform. AWD is deployed globally in many industries, including asset management, life insurance, variable annuities, healthcare, property and casualty insurance, banking and wealth management. The AWD value proposition combines the core software with our global professional services organization and secure private cloud application hosting.

- ***Banking and Lending Solutions***

  - *EVOLV* – EVOLV is a comprehensive, cloud-based, end-to-end accounting solution for financial institutions that integrates and automates all risk and finance processes relating to a loan portfolio, from data capture to back-end reporting and analytics. It streamlines loan accounting, increases efficiency, assures data integrity, and strengthens compliance.

  - *Precision LM* – Precision LM is a single database application that provides comprehensive commercial loan management from initial request to final disposition. Precision LM manages all aspects of our clients' loan process – pre-qualifying loan requests, processing applications, commitment processing, loan disposition, servicing and accounting.

- ***Research, Analytics, and Training***

  - *Tamale RMS* – Tamale RMS is a purpose-built research management solution, enabling investment analysts and portfolio managers to organize an escalating volume of research data and apply it more effectively in due diligence. It is a centralized repository for capturing, organizing, and sharing every piece of research received or created.

  - *Research, Analytics and Consulting* - SS&C's Research, Analytics and Consulting (RAC) group helps leading companies in the financial services industry manage data, gain insight, and ignite change in their business. Through effective use of advanced analytics, research, and distribution intelligence technologies, SS&C RAC enables business to better understand, predict, and optimize key business factors impacting their asset growth and profitability.

  - *Learning Institute* – The SS&C Learning Institute is an education, training and research organization dedicated to the enrichment of investment management professionals and those seeking careers in financial services. Our digital library, instructor-led classes and blended programs are used by many of the world's leading wealth management firms, investment banks, insurance companies, hedge funds, commercial banks and other asset management companies. In addition, the SS&C Learning Institute offers customized learning paths to enhance the business and finance programs of colleges and universities.

Professional services

We offer a range of professional services to assist clients. Professional services consist of consulting and implementation services, including the initial installation of systems, conversion of historical data and ongoing training and support. Our in-house consulting teams work closely with the client to ensure the smooth transition and operation of our systems. Our consulting teams have a broad range of experience in the financial services industry and include certified public accountants, chartered financial analysts, mathematicians and IT professionals from the asset management, real estate, investment, insurance, hedge fund, municipal finance, banking, and healthcare industries. We believe our commitment to professional services facilitates the adoption of our software products across our target markets. For the year ended December 31, 2018, revenues from professional services represented 2% of total revenues.

Product support

We believe a close and active service and support relationship is important to enhancing client satisfaction and furnishes an important source of information regarding evolving client issues. We provide our larger clients with a dedicated client support team whose primary responsibility is to answer questions and provide solutions to address ongoing needs. Direct telephone support is provided during extended business hours, and additional hours are available during peak periods. We distribute content-rich, periodic blogs and thought leadership targeted at clients and prospects in each of our vertical and geographic markets. We supplement our service and support activities with comprehensive training. Training options include regularly hosted classroom and online instruction, *SS&C Learning Institute*, and online client seminars, or "webinars," that address current, often technical, issues in the financial services industry.

We periodically make maintenance releases of licensed software available to our clients, as well as regulatory updates (generally during the fourth quarter, on a when and if available basis), to meet industry reporting obligations and other processing requirements.

Clients

Our global financial services and healthcare clients require a full range of information management and analysis on a timely and flexible basis. Our financial services clients include multinational banks, retail banks and credit unions, hedge funds, private equity funds, funds of funds and family offices, institutional and retail asset managers, insurance companies and pension funds, municipal finance groups, brokers/dealers, financial exchanges, commercial lenders, real estate lenders and property managers. Our healthcare clients include health insurance companies, health plans, and benefits administrators. Our clients include many of the largest and most well-recognized firms in the financial services and healthcare industries. During the year ended December 31, 2018, our top 10 clients represented approximately 16% of total revenues, with no single client accounting for more than 5% of total revenues.

Sales and Marketing

We believe a direct sales organization is essential to the successful implementation of our business strategy, given the complexity and importance of the operations and information managed by our products, the extensive regulatory and reporting requirements of each industry, and the unique dynamics of each vertical market. Our dedicated direct sales and support personnel are located in various sales offices worldwide and routinely undergo product and sales training. We also use telemarketing to support sales of our real estate property management products and work through alliance partners that sell our software-enabled services to their correspondent banking clients.

Our marketing personnel have extensive experience in marketing to the financial services and healthcare industries and are responsible for identifying market trends, evaluating and developing marketing opportunities, generating client leads and providing sales support. Our marketing activities focus on cost-effective means of reaching current and potential clients, including:

- Providing content-rich, periodic blogs and thought leadership targeted at clients and prospects in each of our vertical and geographic markets;
- publishing and distributing thought leadership white papers or articles to appropriate press outlets;
- hosting regular product-focused webinars;
- attending seminars and symposiums;
- participating in trade shows, hosted events, and speaking engagements; and
- delivering e-marketing campaigns.

This strategy achieves lower marketing costs, more direct contacts with actual and potential clients, increased marketing leads, distribution of more up-to-date marketing information and an improved ability to measure marketing initiatives.

The marketing department also supports the sales force with appropriate and relevant materials, including brochures and fact sheets, for use during the sales process.

Product Development and Engineering

We believe we must introduce new products and offer product innovation on a regular basis to maintain our competitive advantage. To meet these goals, we use multidisciplinary teams of highly trained personnel and leverage this expertise across all product lines. We have invested heavily in developing a comprehensive product analysis process to ensure a high degree of product functionality and quality. Maintaining and improving the integrity, quality and functionality of existing products is the responsibility of individual product managers. Product engineering management efforts focus on enterprise-wide strategies, implementing best-practice technology regimens, maximizing resources and mapping out an integration plan for our entire umbrella of products as well as third-party products. For the years ended December 31, 2018, 2017 and 2016, our research and development expenses were $318.2 million, $153.3 million and $152.7 million, respectively. In addition, we have made significant investments in intellectual property through our acquisitions.

Our research and development engineers work closely with our marketing and support personnel to ensure that product evolution reflects developments in the marketplace and trends in client requirements. We have generally issued a major release of our core products during the second or third quarter of each fiscal year, which includes both functional and technical enhancements. We also provide an annual release typically in the fourth quarter to reflect evolving regulatory changes in time to meet clients' year-end reporting requirements.

Competition

The market for the software and services we provide is competitive, rapidly evolving and highly sensitive to new product introductions and marketing efforts by industry participants, although high conversion costs can create barriers to adoption of new products or technologies. The market is fragmented and served by both large-scale firms with broad offerings as well as firms that target only local markets or specific types of clients. We also face competition from information systems developed and serviced internally by the IT departments of large financial services and healthcare firms. We believe that we generally compete effectively as to the factors identified for each market below, although some of our existing competitors and potential competitors have substantially greater financial, technical, distribution and marketing resources than we have and may offer products with different functions or features that are more attractive to potential customers than our offerings.

Alternative Investments: In our alternative investments market, we compete with multiple vendors that may be categorized into two groups, the first consists of independent specialized administration providers, which are generally smaller than us, and the second includes prime brokerage and other financial services firms offering fund administration services. Major competitors in this market include CITCO Group and State Street. The key competitive factors in marketing software and services to the alternative investment industry are the need for independent fund administration, features and adaptability of the software, level and quality of customer support, level of software development expertise and total cost of ownership. Our strengths in this market are our expertise, our independence, our transparency, our ability to deliver functionality by multiple methods and our technology, including the ownership of our own software.

Asset Management: In our asset management market, we compete with a variety of other vendors depending on client characteristics such as size, type, location, computing environment and functionality requirements. Competitors in this market range from larger providers of integrated portfolio management systems and outsourcing services, such as BNY Mellon Financial to smaller providers of specialized applications and technologies such as StatPro, Empower, and others. We also compete with internal processing and IT departments of our clients and prospective clients. The key competitive factors in marketing asset management solutions are the reliability, accuracy, timeliness and reporting of processed information to internal and external customers, features and adaptability of the software, level and quality of customer support, level of software development expertise and return on investment. Our strengths in this market are our technology, our ability to deliver functionality by multiple delivery methods and our ability to provide cost-effective solutions for clients.

Healthcare: In our healthcare markets, our competition focuses on pharmacy and medical claims processing, benefit management, care management, business process outsourcing, business intelligence, and analytics. We compete with other third-party providers such as United Health/OptumRx and Magellan, and companies that perform their services in-house with licensed or internally developed systems and processes. We believe that we compete effectively in the market due to our ongoing investment in our products and the development of new products to meet the evolving business requirements of our clients. Our competitors' healthcare administration and health outcomes optimization solutions are primarily based on complete replacement of a payer's core system. We believe that a component application approach shifts the focus away from core application replacement to one in which clients have more alternatives for modernization of the business operation. With a component approach, health payer clients can still choose core application replacement if warranted, or adopt component applications that address only those areas of the business that offer the most opportunity for improvement for the client, resulting in protection of the client's current IT investment and less disruption to its business operation.

Insurance and Pension Funds: In our insurance and pension funds market, we compete with a variety of vendors depending on client characteristics such as size, type, location, computing environment and functionality requirements. Competitors in this market range from large providers of portfolio management systems, such as State Street (Princeton Financial Systems) and FIS, to smaller providers of specialized applications and services.

We also compete with outsourcers, as well as the internal processing and information technology departments of our clients and prospective clients. The key competitive factors in marketing insurance and pension plan systems are the accuracy, timeliness and reporting of processed information provided to internal and external clients, features and adaptability of the software, level and quality of customer support, economies of scale and return on investment. Our strengths in this market are our years of experience, our top-tier clients, our ability to provide solutions by multiple delivery methods, our cost-effective and customizable solutions and our expertise.

Financial Advisor: We define the advisory market as independent and regional broker-dealers, wealth managers, trust companies, advisory firms, and registered investment advisers. We compete with a variety of vendors, which are generally smaller firms focused solely on the advisory market. Our competitors include Envestnet, Orion, Addepar, SEI’s wealth management platform, and custodians such as Charles Schwab, Fidelity, and Raymond James. Our strengths in this market are our premier platforms with flexible and on-demand delivery models, and complementary products and services.

Real Estate Property Management: In our real estate property management market, we compete with numerous software vendors consisting of smaller specialized real estate property management solution providers and larger property management software vendors with more dedicated resources than our real estate property management business, such as Yardi Systems. The key competitive factors in marketing property management and timeshare systems are the features and adaptability of the software, level of quality and customer support, degree of responsiveness and overall net cost. Our strengths in this market are the quality of our software and our reputation with our clients.

Financial Institutions: In our financial institutions market, there are multiple software and services vendors that are either smaller providers of specialized applications and technologies or larger providers of enterprise systems, such as FIS and Misys. We also compete with outsourcers as well as the internal processing and IT departments of our clients and prospective clients. The key competitive factors in marketing financial institution software and services include accuracy and timeliness of processed information provided to clients, features and adaptability of the software, level and quality of customer support, level of software development expertise, total cost of ownership and return on investment. Our strengths in this market include our flexible technology platform and our ability to provide integrated solutions for our clients.

Commercial Lending: In our commercial lending market, we compete with a variety of other vendors depending on client characteristics such as size, type, location and functional requirements. Competitors in this market range from large competitors whose principal businesses are not in the loan management business, such as PNC Financial Services (Midland Loan Services) and McCracken Financial Solutions Corporation, to smaller providers of specialized applications and technologies. The key competitive factors in marketing commercial lending solutions are the accuracy, timeliness and reporting of processed information provided to customers, level of software development expertise, level and quality of customer support and features and adaptability of the software. Our strength in this market is our ability to provide both broadly diversified and customizable solutions to our clients.

Financial Markets: In our financial markets, our competition falls into two categories — the internal development organizations within financial enterprises and specialized financial vendors. The key competitive factors in marketing financial markets technology solutions are a proven track record of delivering high quality solutions, level of responsiveness and overall net cost. Our strengths in this market are a successful track record of delivering solutions and our reputation with our clients.

Proprietary Rights

We rely on a combination of trade secret, copyright, trademark and patent law, nondisclosure agreements and technical measures to protect our proprietary technology. We have registered trademarks for many of our products and will continue to evaluate the registration of additional trademarks as appropriate. We generally enter into confidentiality and/or license agreements with our employees, distributors, clients and potential clients. We seek to protect our software, documentation and other written materials under trade secret and copyright laws, which afford limited protection. These efforts may be insufficient to prevent third-parties from asserting intellectual property rights in our technology. Furthermore, it may be possible for unauthorized third-parties to copy portions of our products or to reverse engineer or otherwise obtain and use proprietary information, and third-parties may assert ownership rights in our proprietary technology. For additional risks relating to our proprietary technology, please see “Risk Factors — Risks “Relating to Our Business”. If we are unable to protect our proprietary technology and other confidential information, our success and our ability to compete will be subject to various risks, such as third-party infringement claims, unauthorized use of our technology, disclosure of our proprietary information or inability to license technology from third-parties.

Rapid technological change characterizes the software development industry. We believe factors such as the technological and creative skills of our personnel, new product developments, frequent product enhancements, name recognition and reliable service and support are more important to establishing and maintaining a leadership position than legal protections of our technology.

Employees

As of December 31, 2018, we had over 22,600 full-time employees, consisting of approximately:

- 2,800 employees in research and development;
- 17,100 employees in consulting and services;
- 1,000 employees in sales and marketing;
- 300 employees in client support; and
- 1,400 employees in finance and administration.

As of December 31, 2018, approximately 11,500 of our employees were in our international operations. No employee is covered by any collective bargaining agreement. We believe that we have good relations with our employees.

Additional Information

We were incorporated in Delaware in July 2005, as the successor to a corporation originally formed in Connecticut in March 1986. Our principal executive offices are located at 80 Lamberton Road, Windsor, Connecticut 06095, and the telephone number of our principal executive offices is (860) 298-4500.

Our website address is www.ssctech.com. We make available, free of charge, on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, Proxy Statements for the annual stockholder meetings and amendments thereto that we have filed or furnished with the SEC, as soon as reasonably practicable after we electronically file them with the SEC. The same information is available in print to any stockholder who submits a written request to our Investor Relations department. We are not, however, including the information contained on our website, or information that may be accessed through links on our website, as part of, or incorporating such information by reference into, this annual report on Form 10-K. The SEC maintains an internet site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

ITEM 1A. *RISK FACTORS*

You should carefully consider the following risk factors, in addition to other information included in this annual report on Form 10-K and the other reports we submit to the SEC. If any of the following risks occur, it could materially affect our business, operating results, cash flows and financial condition and possibly lead to a decline in our stock price. The risks and uncertainties described below are those that we have identified as material, but are not the only risks and uncertainties facing us. Our business is also subject to general risks and uncertainties that affect many other companies. Additional risks and uncertainties not currently known to us or that we currently believe are not material may also impair our business, operating results, cash flows and financial condition.

Risks Relating to Our Business

Our business is greatly affected by changes in the state of the general economy and the financial markets, and uncertainty in the general economy, the financial services industry or other industries in which our clients operate could disproportionately affect the demand for our products and services.

We derive our revenues from the delivery of products and services to clients primarily in the financial services and healthcare industries. Demand for our products and services among companies in those industries could decline for many reasons. If demand for our products or services decreases or if any of the industries we serve decline, our business and our operating results could be adversely affected.

In 2008-09, the global economy experienced a significant recession, severe disruptions in the credit markets, increased uncertainty about economic, political, global trade and market conditions, and periods of heightened volatility in a variety of financial and other markets, including commodity prices and currency rates, all of which had experienced a material and adverse effect at that time on those markets and on client activity levels. While the U.S. economy recovered from the recession, the recovery may not be sustainable for any specific period of time, and the economy could slip back into recession. Our clients include a range of organizations in the financial services industry whose success is linked to the health of the economy generally and of the financial markets specifically. Unfavorable or uncertain economic conditions, economic instability or economic downturns could: (i) cause our clients or prospective clients to cancel, reduce or delay planned expenditures for our products and services; (ii) impair our clients' ability to pay for products they have purchased; or (iii) cause our clients to process fewer transactions through our software-enabled services, renegotiate their contracts with us, move their IT solutions in-house, switch to lower-priced solutions offered by our competitors or exit the industry. Fluctuations in the value of assets under our clients' management could also adversely affect our revenues because pricing in many of our agreements is adjusted based on assets under management. We cannot predict the occurrence, timing or duration of any economic downturn, generally, or in the markets in which our businesses operate. Turbulence in the U.S. and international markets, renewed concern about the strength and sustainability of a recovery and prolonged declines in business consumer spending could materially adversely affect our business, results of operations and financial condition, and the liquidity and financial condition of our clients.

In addition, any other events that adversely affect our clients' businesses, rates of growth or numbers of clients they serve could decrease demand for our products and services and the number of transactions we process. Events that could adversely affect our clients' businesses include decreased demand for our clients' products and services, adverse conditions in our clients' markets or adverse economic conditions generally. We may be unsuccessful in predicting the needs of changing industries and whether potential clients will accept our products or services. We also may invest in technology or infrastructure for specific clients and not realize additional revenue from such investments. If trends or events do not occur as we expect, our business could be negatively impacted.

We may not achieve the anticipated benefits from our acquisitions and may face difficulties in integrating our acquisitions.

We have acquired and intend in the future to acquire companies, products or technologies that we believe could complement or expand our business, augment our market coverage, enhance our technical capabilities or otherwise offer growth opportunities. For example, in 2018 we consummated our acquisitions of DST, CACEIS, Eze and Intralinks. However, acquisitions could subject us to contingent or unknown liabilities, and we may have to incur debt or severance liabilities or write off investments, infrastructure costs or other assets. Our success is also dependent on our ability to complete the integration of the operations of acquired businesses in an efficient and effective manner, which may be difficult to accomplish in the rapidly changing financial services software and services industry. We may not realize the benefits we anticipate from acquisitions, such as lower costs, increased revenues, synergies and growth opportunities, or we may realize such benefits more slowly than anticipated, due to our inability to:

- combine operations, facilities and differing firm cultures;
- maintain employee morale or retain the clients or employees of acquired entities;
- generate market demand for new products and services;
- coordinate geographically dispersed operations and successfully adapt to the complexities of international operations, including compliance with laws, rules and regulations in multiple jurisdictions;
- integrate the technical teams of acquired companies within our organization; or
- incorporate acquired technologies, products and services into our current and future product and service lines.

The process of integrating the operations of acquired companies could disrupt our ongoing operations, divert management from day-to-day responsibilities, increase our expenses and harm our business, results of operations and financial condition. Acquisitions may also place a significant strain on our administrative, operational, financial and other resources. In addition, certain of our acquisitions have generated disputes with stockholders or management of acquired companies or other claimants that have required the expenditure of our resources to address or have led to litigation; any such disputes may reduce the value we hope to realize from our acquisitions, either by increasing our costs of the acquisition, reducing our opportunities to realize revenues from the acquisition or imposing litigation costs or adverse judgments on us. Acquisitions may also expose us to litigation from our stockholders arising out of the acquisition, which, even if unsuccessful, could be costly to defend and serve as a distraction to management.

Consolidations or failures among our clients or within their respective industries could adversely affect us by causing a decline in demand for our products and services.

If banks and financial services firms fail or consolidate, there could be a decline in demand for our products and services. Failures, mergers and consolidations of banks and financial institutions reduce the number of our clients and potential clients, which could adversely affect our revenues even if these events do not reduce the aggregate activities of the consolidated entities. Further, if our clients fail and/or merge with or are acquired by other entities that are not our clients, or that use fewer of our products and services, they may discontinue or reduce their use of our products and services. It is also possible that the larger financial institutions resulting from mergers or consolidations would have greater leverage in negotiating terms with us. In addition, these larger financial institutions could decide to perform in-house some or all of the services that we currently provide or could provide or to consolidate their processing on a non-SS&C system. The resulting decline in demand for our products and services over time could have a material adverse effect on our business, results of operations and financial condition.

***Our revenues may decrease due to declines in the levels of participation and activity in the securities markets*.**

We generate significant revenues from the transaction processing fees we earn for our products and services. These revenue sources are substantially dependent on the levels of participation and activity in the securities markets. The number of unique securities positions held by investors through our clients and our clients' customer trading volumes reflect the levels of participation and activity in the markets, which are impacted by market prices and the liquidity of the securities markets, among other factors. We could be negatively impacted by the volatile markets as certain of our fees are tied to the asset bases of our clients. The occurrence of significant market volatility or decreased levels of participation would likely result in reduced revenues and decreased profitability from our business operations. Additionally, we may be exposed to operational or other risks in connection with any systematic failures in the markets, or the default due to market-related failures of one or more counterparties with whom we transact.

Our business has become increasingly focused on the hedge fund industry, and we are subject to the variations and fluctuations of that industry.

Certain of our acquisitions have resulted in a higher percentage of our clients being hedge funds or funds of hedge funds. We derive significant revenues from asset management, administration and distribution contracts with such clients. Under these contracts, the fees paid to us are based on a variety of factors, including the market value of assets under management, assets under administration and number of transactions processed. Assets under management, assets under administration or the number of transactions processed may decline for various reasons, causing results to vary. Factors that could decrease assets under management and assets under administration (and therefore revenues) include declines in the market value of the assets in the funds (and accounts as applicable) managed, administered and distributed, redemptions and other withdrawals from, or shifts among, the funds (and accounts as applicable) managed, administered and distributed, as well as market conditions generally.

These clients and our business relating to them are affected by trends, developments and risks associated with the global hedge fund industry. In addition, the market environment for hedge funds involves risk and has suffered significant turmoil, including as a result of substantial changes in global economies, political uncertainty, stock market declines, a trend toward passive and algorithmic investment strategies and various regulatory initiatives. Even in the absence of such factors, the global hedge fund industry is subject to fluctuations in assets under management that are impossible to predict or anticipate. These risks and trends could significantly and adversely affect some or all of our hedge fund clients, which could adversely affect our business, results of operations and financial condition. In addition, market forces have negatively impacted liquidity for many of the financial instruments in which hedge fund client's trade, which, in turn, could negatively impact our ability to access independent pricing sources for valuing those instruments.

If we are unable to retain and attract clients, our revenues and net income would remain stagnant or decline.

If we are unable to keep existing clients satisfied, sell additional products and services to existing clients or attract new clients, then our revenues and net income would remain stagnant or decline. A variety of factors could affect our ability to successfully retain and attract clients, including:

- the level of demand for our products and services;
- the difficulty of potential customers to change software service providers;
- the level of client spending for IT;
- the level of competition from internal client solutions and from other vendors;
- the quality of our client service and the performance of our products;
- our ability to update our products and services and develop new products and services needed by clients;
- our ability to understand the organization and processes of our clients; and
- our ability to integrate and manage acquired businesses.

An increase in subaccounting services performed by brokerage firms has and will continue to adversely impact our revenues.

We service open-end and closed-end funds registered under the Investment Company Act of 1940, including mutual funds, exchange-traded funds, interval funds and exchange-listed closed-end funds, as well as private funds, collective investment trusts and other accounts under shareowner recordkeeping arrangements which we refer to as registered accounts. These arrangements are distinguished from broker subaccounts, which are serviced under contract with a broker/dealer. Our clients may adopt the broker subaccount structure. We offer subaccounting services to brokerage firms that perform shareowner subaccounting. As the recordkeeping functions in connection with subaccounting are more limited than traditional shareowner accounting, the fees charged are generally lower on a per unit basis. Brokerage firms that obtain agreements from our clients to use a broker subaccount structure cause accounts currently on our traditional recordkeeping system to convert to our subaccounting system, or to the subaccounting systems of other service providers, which generally results in lower revenues. While subaccounting conversions have generally been limited to our non tax-advantaged mutual fund accounts, such conversions have begun to extend to the tax-advantaged accounts (such as retirement and Section 529 accounts) we service, which could adversely affect our business and operating results.

We face significant competition with respect to our products and services, which may result in price reductions, reduced gross margins or loss of market share.

In the financial and healthcare markets we serve, we compete based on a variety of factors, including investment performance, the range of products or services offered, brand recognition, business reputation, financial strength, stability and continuity of client and other intermediary relationships, quality of service, and level of fees charged for products and services. The market for financial and healthcare services software and services is competitive, rapidly evolving and highly sensitive to new product and service introductions, technology innovations and marketing efforts by industry participants. The markets we serve are also highly fragmented and served by numerous firms that target only local markets or specific client types. We also face competition from information systems developed and serviced internally by the IT departments of financial services firms. Some of our current and potential competitors may have significantly greater financial, technical, distribution and marketing resources, generate higher revenues and have greater name recognition. Our current or potential competitors may develop products comparable or superior to those developed by us, or adapt more quickly to new technologies, evolving industry trends or changing client or regulatory requirements. It is also possible that our competitors may enter into alliances with each other or other third-parties, and through such alliances, acquire increased market share. Increased competition may result in price reductions, reduced gross margins and loss of market share. Accordingly, our failure to successfully compete in any of our material businesses could have a material adverse effect on results of operations. Competition could also affect the revenue mix of products or services we provide, resulting in decreased revenues in lines of business with higher profit margins, and our business may not grow as expected and may decline.

Our role as a fund administrator has in the past, and may in the future, expose us to claims and litigation from clients, their investors, regulators or other third-parties.

As a service provider, we have been, and may in the future be, subject to claims and lawsuits from investors, regulators, liquidators, other third-parties and our clients, some of which pursue high-risk investment strategies and all of which are subject to substantial market risk, in the event that the underlying fund suffers investment losses, incurs instances of fraud, becomes insolvent, files for bankruptcy or otherwise becomes defunct. Even if we are not ultimately found to be liable, defending such claims or lawsuits could be time-consuming, divert management resources, harm our reputation and cause us to incur significant expenses. These claims or lawsuits could have an adverse effect on our business, results of operations and financial condition.

Our software-enabled services may be subject to disruptions, attacks or failures that could adversely affect our reputation and our business.

Our software-enabled services maintain and process confidential data and process trades and perform other back-office functions, including wiring funds, on behalf of our clients, some of which is critical to their business operations. For example, our trading systems maintain account and trading information for our clients and their customers. In addition, following our acquisition of Intralinks, our platforms now house sensitive, confidential client information. Our internal technology infrastructure on which our software-enabled services depend may be subject to disruptions or may otherwise fail to operate properly or become disabled or damaged as a result of a number of factors, including events that are wholly or partially beyond our control and that could adversely affect our ability to process transactions, provide services or otherwise appropriately conduct our business activities. Such events include IT attacks or failures, threats to physical security, sudden increases in transaction volumes, electrical or telecommunications outages, damaging weather or other acts of nature, or employee or contractor error or malfeasance. In particular, cybersecurity threats have become prevalent in our industry as well as for many firms that process information. Cybersecurity threats are evolving and our security measures, and those of our service providers, may not detect or prevent all attempts to hack our systems, denial-of-service attacks, viruses, malicious software, attempts to gain unauthorized access to data, phishing attacks, social engineering, security breaches or employee or contractor malfeasance and other electronic security breaches that may jeopardize the security of information stored in or transmitted by our sites, networks and systems or that we or our third-party service providers otherwise maintain. Such cyber security incidents could lead to disruptions in our systems, the unauthorized release or destruction of our or our clients' or other parties' confidential or otherwise protected information and corruption of data. We and our service providers may not have the resources or technical sophistication to anticipate or prevent all types of attacks, and techniques used to obtain unauthorized access to or sabotage systems change frequently and may not be known until launched against us or our third-party service providers. In the last few years there have been many successful advanced cyber-attacks that have damaged several prominent companies in spite of strong information security measures, and we expect that the risks associated with cyber-attacks and the costs of preventing such attacks will continue to increase in the future. We and our clients are regularly the target of attempted cyber-attacks and we must continuously monitor and develop our systems to protect our technology infrastructure and data from misappropriation or corruption. Although we expend significant resources and oversight efforts in an attempt to ensure that we maintain appropriate safeguards with respect to cyber-attacks, there is no guarantee that our systems and procedures are adequate to protect against all security breaches. If our software-enabled services are disrupted or fail for any reason, or if our systems or facilities are infiltrated or damaged by unauthorized persons, we and our clients could experience data loss, including confidential and personal information, financial loss, harm to their reputation and significant business interruption. If that happens, we may be exposed to significant liability, our reputation may be harmed, our clients may be dissatisfied and we may lose business. Although we maintain privacy, data breach and network security liability insurance, we cannot be certain that our coverage will be adequate or cover liabilities actually incurred, or that insurance will continue to be available to us on economically reasonable terms, or at all. Given the unpredictability of the timing, nature and scope of such failures or disruptions, we could potentially experience significant costs and exposures, including production downtimes, operational delays, other detrimental impacts on our operations or ability to provide services to our customers, the compromising of confidential or otherwise protected information, misappropriation, destruction or corruption of data, security breaches, other manipulation or improper use of our systems or networks, financial losses from remedial actions, loss of business, potential liability, regulatory inquiries, enforcements, actions and fines and/or damage to our reputation, any of which could have a material adverse effect on our business, results of operations and financial condition.

Because our platform could be used to collect and store personal information of our customers' employees or customers, privacy concerns could result in additional cost and liability to us or inhibit use of our platform.

Personal privacy has become a significant issue in the U.S. and in many other countries where we offer our solutions or may offer them in the future. The regulatory framework for privacy issues worldwide is currently evolving, is not uniform and is likely to remain uncertain for the foreseeable future. Many federal, state and foreign government bodies and agencies have adopted or are considering adopting laws and regulations regarding the collection, use, disclosure, control, security and deletion of personal information. In the U.S., these include, without limitation, laws and regulations promulgated by states, as well as rules and regulations promulgated under the authority of the Federal Trade Commission ("FTC") and federal financial regulatory bodies. Additionally, California recently enacted legislation, the California Consumer Privacy Act of 2018, that will afford consumers expanded privacy protections when it goes into effect on January 1, 2020. Legislators have stated that they intend to propose amendments to this legislation, and it remains unclear what, if any, modification will be made to this legislation or how it will be interpreted. The effects of this legislation potentially are far-reaching, however, and may require us to modify our data processing practices and policies and to incur costs to comply. Internationally, most of the jurisdictions in which we operate have established their own data security and privacy legal frameworks, many of which are broader in scope, more restrictive and impose greater obligations on us and our customers. For instance, the European Union's ("E.U.") General Data Protection Regulation ("GDPR") became effective in May 2018 and imposes strict requirements related to processing the personal data of E.U. individuals and provides for robust regulatory enforcement and sanctions for non-compliance. EU data protection authorities will have the power to impose administrative fines for violations of the GDPR of up to a maximum of €20 million or 4% of the noncompliant company's annual global turnover for the preceding financial year, whichever is higher, and violations of the GDPR may also lead to damages claims by data controllers and data subjects. Such penalties are in addition to any civil litigation claims by data controllers, data processors, customers and data subjects. The GDPR is likely to increase our obligations, including by mandating documentation requirements and granting certain rights to individuals to inquire into how we collect, use, disclose, retain and process information about them. Although we are continuing to take steps to comply with applicable portions of the GDPR, the scope of many of the GDPR's requirements remains unclear and regulatory guidance on several topics is still forthcoming. Therefore, we cannot assure you that such steps will be sufficient. On June 23, 2016, the U.K. held a referendum in which voters approved an exit from the E.U, commonly referred to as "Brexit," and it is unclear how Brexit will affect the applicability of the GDPR with respect to U.K. individuals.

In addition to government regulation, privacy advocacy and industry groups may propose new and different self-regulatory standards that either legally or contractually apply to us. As a result of uncertainty regarding the interpretation and application of privacy and data protection-related laws, regulations, and self-regulatory requirements, it is possible that these laws, regulations, and requirements may be interpreted and applied in a manner that is inconsistent with our existing data handling practices or the technological features of our solutions. If so, in addition to the possibility of fines, lawsuits and other claims, each of which may be material, we could be required to fundamentally change our business activities and practices or modify our solutions, which could have an adverse effect on our business. Any inability to adequately address privacy or data protection-related concerns, even if unfounded, or comply with applicable privacy or data protection-related laws, regulations and policies, could result in additional cost and liability to us, damage our reputation, inhibit sales and harm our business. Furthermore, the costs of compliance with, and other burdens imposed by, the laws, regulations, standards and policies that are applicable to the businesses of our customers may limit the use and adoption of, and reduce the overall demand for, our solutions. Also, privacy concerns, whether valid or not valid, may inhibit market adoption of our solutions, particularly in foreign countries.

We expect that our operating results, including our profit margins and profitability, may fluctuate over time.

Historically, our revenues, profit margins and other operating results have fluctuated from period to period and over time primarily due to the timing, size and nature of our license and service transactions. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" for further discussion on fluctuations in revenues, profit margins and other operating results. Additional factors that may lead to such fluctuation include:

- the costs, timing of the introduction and the market acceptance of new products, product enhancements or services by us or our competitors;
- the lengthy and often unpredictable sales cycles of large client engagements;
- the amount and timing of our operating costs and other expenses;
- the financial health of our clients;
- changes in the volume of assets under our clients' management;
- cancellations of maintenance and/or software-enabled services arrangements by our clients;
- changes in local, national and international regulatory requirements;
- acquisitions during the relevant period;
- implementation of our licensing contracts and software-enabled services arrangements;
- changes in economic and financial market conditions; and
- changes in the types of products and services we provide.

Additional tax expense or additional tax exposures could affect our future profitability.

We are subject to income taxes in the U.S. and various international jurisdictions. Changes in tax laws and regulations, as well as changes in related interpretations and other tax guidance could materially impact our tax receivables and liabilities and our deferred tax assets and deferred tax liabilities. On December 22, 2017, U.S. federal tax legislation, commonly referred to as the Tax Cuts and Jobs Act ("Tax Act"), was signed into law, significantly reforming the U.S. Internal Revenue Code. The Tax Act, among other things, reduces the U.S. federal statutory corporate tax rate, imposed a one-time transition tax on previously undistributed foreign earnings, limits the deductibility on executive compensation, imposes a tax on Global Intangible Low-Taxed Income ("GILTI") and modifies or repeals many business deductions and credits. During 2018, the U.S. Department of Treasury and Internal Revenue Service issued several complex proposed and final regulations, and related guidance, regarding provisions of the Tax Act. However, several aspects of the legislation remain unclear and subject to interpretation. Further guidance, technical corrections and regulations are expected to be issued, which could lessen or increase certain impacts of the legislation. Furthermore, states continue to issue guidance and enact legislation in response to the Tax Act, all of which could have a material impact on our income tax expense, assets and liabilities. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional information.

Additionally, in the ordinary course of business we are subject to examinations by various authorities, including tax authorities. In addition to ongoing investigations, there could be additional investigations launched in the future by governmental authorities in various jurisdictions, and existing investigations could be expanded. The global and diverse nature of our operations means that these risks will continue to exist and additional investigations, proceedings and contingencies will arise from time to time. Our business, results of operations and financial condition may be affected by the outcome of investigations, proceedings and other contingencies that cannot be predicted with certainty.

If third-party service providers on which we rely, or other third-parties with which we do business or which facilitate our business activities, suffer disruptions to their IT systems, our business could be harmed.

In providing our software-enabled services to our customers, we depend upon IT infrastructure that is primarily managed by our firm, but we also depend on third-party service providers to provide some of the IT infrastructure on which we rely. Although we seek to ensure that appropriate security and other standards are maintained by these third-parties, these third-parties are also subject to the risks discussed in the preceding risk factor, and there is no guarantee that they will maintain systems and procedures sufficient to protect against system failures and security breaches, including as a result of cyber-attacks.

In addition, the third-parties with which we do business or which facilitate our business activities, including financial intermediaries, are susceptible to the risks described in the preceding risk factor (including regarding the third-parties with which they are similarly interconnected), and our or their business operations and activities may therefore be adversely affected, perhaps materially, by failures, terminations, errors or malfeasance by, or attacks or constraints on, one or more financial, technology or infrastructure institutions or intermediaries with whom they are interconnected or conduct business.

Catastrophic events may adversely affect our business.

A war, terrorist attack, natural disaster, pandemic or other catastrophe may adversely affect our business. A catastrophic event could have a direct negative impact on us or an indirect impact on us by, for example, affecting our clients, the financial markets or the overall economy and reducing our ability to provide, our clients' ability to use, and the demand for, our products and services. The potential for a direct effect on our business operations is due primarily to our significant investment in infrastructure. Although we maintain redundant facilities and have contingency plans in place to protect against both man-made and natural threats, it is impossible to fully anticipate and protect against all potential catastrophes. A computer virus, physical or cyber security breach, criminal act, military action, power or communication failure, flood, severe storm or the like could lead to service interruptions and data losses for clients, disruptions to our operations, or damage to important facilities. In addition, such an event may cause clients to cancel their agreements with us for our products or services. Any of these events could adversely affect our business, results of operation and financial condition.

We have substantial operations and a significant number of employees in India and we are therefore subject to regulatory, economic and political uncertainties in India.

As of December 31, 2018, we had approximately 4,400 employees located in India. The economy of India may differ favorably or unfavorably from the U.S. economy and our business may be adversely affected by the general economic conditions and economic and fiscal policy in India, including changes in exchange rates and controls, interest rates and taxation policies. In particular, in recent years, India's government has adopted policies that are designed to promote foreign investment, including significant tax incentives, relaxation of regulatory restrictions, liberalized import and export duties and preferential rules on foreign investment and repatriations. These policies may not continue. In addition, we are subject to risks relating to social stability, political, economic or diplomatic developments affecting India in the future.

India faces major challenges in the years ahead sustaining the economic growth that it has experienced over the past several years. These challenges include the need for substantial infrastructure development and improving access to healthcare and education. Our ability to recruit, train and retain qualified employees and develop and operate our facilities in India could be adversely affected if India does not successfully meet these challenges, in which case we may need to relocate those facilities and that could have a material adverse effect on our business, financial condition and results of operations.

We are dependent on our senior management and their continued performance and productivity.

We are dependent on the continued efforts of the members of our senior management. The loss of any of the members of our senior management may cause a significant disruption in our business, jeopardize existing customer relationships, impair our compliance efforts as a public company, and have a material adverse effect on our business objectives. We do not maintain key man life insurance policies for any senior officer or manager.

If we cannot attract, train and retain qualified employees, we may not be able to provide adequate technical expertise and customer service to our clients.

We believe that our success is due in part to our ability to attract, train and retain highly skilled employees. Competition for qualified personnel in the software and hedge fund industries is intense, and we have, at times, found it difficult to attract and retain skilled personnel for our operations. Our failure to attract and retain a sufficient number of highly skilled employees could prevent us from developing and servicing our products at the same levels as our competitors; therefore, we may lose potential clients and suffer a decline in revenues.

If we are unable to protect our proprietary technology and other confidential information, our success and our ability to compete will be subject to various risks, such as third-party infringement claims, unauthorized use of our technology, disclosure of our proprietary information or inability to license technology from third-parties.

Our success and ability to compete depends in part upon our ability to protect our proprietary technology and other confidential information. We rely on a combination of patent, trade secret, copyright and trademark law, and nondisclosure agreements, license agreements and technical measures to protect our proprietary technology and other confidential information. We have registered trademarks for some of our products and will continue to evaluate the registration of additional trademarks as appropriate. We generally enter into confidentiality agreements with our employees, distributors, clients and potential clients. However, these efforts may be insufficient to prevent those parties or others from infringing, misappropriating, violating or asserting rights in our intellectual property, confidential information or other technology and our proprietary technology and confidential information may be subject to embezzlement, theft, or other similar illegal behavior by our employees or third-parties. In addition, our employees, distributors, clients and potential clients may breach our confidentiality agreements and we may not have adequate remedies for any such breach. Furthermore, unauthorized third-parties may seek to copy portions of our products or to reverse engineer or otherwise obtain and use our proprietary information. If a third-party were to gain unauthorized access to or independently develop the confidential or proprietary information we possess, we could suffer a loss of revenues, we could experience an adverse impact on our competitive position, and our relationships with our clients and our reputation could be materially adversely effected. Existing patent and copyright laws afford only limited protection. Third-parties may develop substantially equivalent or superseding proprietary technology or may offer equivalent products in competition with our products in a manner that does not infringe, misappropriate or otherwise violate our intellectual property or other proprietary rights, thereby substantially reducing the value of our proprietary rights. A number of third-parties hold patents and other intellectual property rights with application in the financial services field. Consequently, we are subject to the risk that such third-parties will claim that our products infringe, misappropriate or otherwise violate their intellectual property rights, including their patent rights. Such claims, regardless of merit, could result in expensive and time-consuming litigation, divert the attention of our personnel, and impair our intellectual property rights. Moreover, as a result of such claims, we may be required to redesign our products or services in a manner that is not infringing, misappropriating or otherwise violating such third-party's intellectual property rights, which may not be technically or commercially feasible. We may also be required to obtain a license to such intellectual property rights, which may not be available on commercially reasonable terms or at all. Any of the foregoing could have a material adverse effect on our business, results of operation, and financial condition.

We incorporate open source software into a limited number of our software products. We monitor our use of open source software in an effort to avoid subjecting our products to unfavorable conditions or conditions we do not intend. Some open source licenses require that source code subject to the license be disclosed to third-parties, grant such third-parties the right to modify and redistribute that source code and a requirement that the source code for any software derived from it be disclosed. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source licenses, be required to release the source code of our proprietary software to the public. Although we believe that we have complied with our obligations under the applicable licenses for open source software that we use, there is little or no legal precedent governing the interpretation of many of the terms of certain of these licenses. As a result, the potential impact of these terms is uncertain and may result in unanticipated obligations or restrictions regarding those of our products, technologies or solutions affected.

We have acquired and may acquire important technology rights through our acquisitions and have often incorporated and may incorporate features of these technologies across many of our products and services. As a result, we are subject to the above risks and the additional risk that the seller of the technology rights may not have appropriately protected the intellectual property rights we acquired. Indemnification and other rights under applicable acquisition documents are limited in term and scope and therefore provide us with only limited protection.

In addition, we rely on third-party software in providing some of our products and services. If we lose our licenses to use such software or if such licenses are found to infringe, misappropriate or otherwise violate upon the rights of others, we will need to seek alternative means of obtaining the licensed software to continue to provide our products or services, which may not be feasible on a technical or commercial basis. Our inability to replace such software, or to replace such software in a timely manner, could significantly disrupt our business and our ability to deliver products and services to our clients, and adversely affect our business, results of operation and financial condition.

We could become subject to litigation regarding our or a third-party's intellectual property rights or other confidential or proprietary information, which could seriously harm our business and require us to incur significant costs.

In recent years, there has been a high incidence of litigation in the U.S. involving patents and other intellectual property rights. We are from time to time a party to litigation to enforce our intellectual property rights or to protect our confidential or proprietary information, or as a result of an allegation that we infringe, misappropriate or otherwise violate a third-party's intellectual property rights, including patents, trademarks, trade secrets and copyrights. From time to time, we have received notices claiming our technology may infringe, misappropriate or otherwise violate third-party intellectual property rights or otherwise threatening to assert intellectual property rights. These claims and any resulting lawsuit, if successful, could subject us to significant liability for damages and our intellectual property rights being reduced, narrowed or held unenforceable or invalid. These lawsuits, regardless of their success, could be time-consuming and expensive to resolve, adversely affect our revenues, profitability and prospects, and divert management time and attention. If we are found to infringe, misappropriate or otherwise violate a third-party's intellectual property rights, we may be required to pay the third-party substantial monetary damages and to cease the activities covered by such intellectual property rights, unless we obtain a license to such intellectual property rights, which may not be available on commercially reasonable terms or at all. In addition, these claims and threats could also cause us to undertake to re-engineer our products or services which may not be technically or commercially feasible. Any of the foregoing could have a material adverse effect on our business, results of operation and financial condition.

We may be unable to adapt to rapidly changing technology and evolving industry standards and regulatory requirements.

Rapidly changing technology, evolving industry standards and regulatory requirements and new product and service introductions characterize the market for our products and services. Our future success will depend in part upon our ability to enhance our existing products and services and to develop and introduce new products and services to keep pace with such changes and developments and to meet changing client needs. The process of developing our software products is complex and is expected to become increasingly complex and expensive in the future due to the introduction of new platforms, operating systems and technologies. Current areas of significant technological change include mobility, cloud-based computing and the processing and analyzing of large amounts of data. Our ability to keep up with technology and business and regulatory changes is subject to a number of risks, including that:

- we may find it difficult or costly to update our services and software and to develop new products and services quickly enough to meet our clients' needs;
- we may find it difficult or costly to make some features of our software work effectively and securely over the Internet or with new or changed operating systems;
- we may find it difficult or costly to update our software and services to keep pace with business, evolving industry standards, regulatory requirements and other developments in the industries in which our clients operate; and
- we may be exposed to liability for security breaches that allow unauthorized persons to gain access to confidential information stored on our computers or transmitted over our network.

Our failure to enhance our existing products and services and to develop and introduce new products and services to promptly address the needs of our clients and a changing marketplace could adversely affect our business, results of operations and financial condition.

Undetected software design defects, errors or failures, or employee errors, may result in defects, delays, loss of our clients' data, litigation against us and harm to our reputation and business.

Our software products are highly complex and sophisticated and could contain design defects or software errors that are difficult to detect and correct. Errors or bugs in our software may affect the ability of our products to work with other hardware or software products, delay the development or release of new products or new versions of products, result in the loss of client data, damage our reputation, affect market acceptance of our products or result in the rejection of our products by the market, cause loss of revenues, divert development resources, increase product liability and warranty claims, and increase service and support costs. We cannot be certain that, despite testing by us and our clients, errors will not be found in new products or new versions of products. Moreover, our clients engage in complex trading activities and this complexity increases the likelihood that our employees may make errors. Employee errors, poor employee performance or misconduct may be difficult to detect and deter. These product defects or errors in the product operations, or employee errors, poor performance or misconduct, could cause damages to our clients for which they may assert claims or lawsuits against us. The cost of defending such a lawsuit, regardless of its merit, could be substantial and could divert management's attention and result in reputational harm. In addition, if our business liability insurance coverage proves inadequate with respect to a claim or future coverage is unavailable on acceptable terms or at all, we may be liable for payment of substantial damages. Any or all of these potential consequences could have an adverse impact on our business, results of operations and financial condition.

Our businesses expose us to risks of claims and losses that could be significant and damage our reputation and business prospects.

Our proprietary applications and related consulting and other services include the processing or clearing of financial and healthcare transactions for our clients and their customers and the design of benefit plans and compliance programs. The dollar amount of transactions processed or cleared is vastly in excess than the revenues we derive from providing these services. In the event we make transaction processing or operational errors, or mismanage any process, we could be exposed to claims for any resulting processing delays, disclosure of protected information, miscalculations, mishandling of pass-through disbursements or other processes, and failure to follow a client's instructions or meet specifications. Additionally, we may be subject to claims or liability resulting from a failure of third parties (including regulatory authorities) to recognize the limitations of our role as our clients' agent or consultant, and we may be subject to claims or liability resulting from fraud committed by third parties. We may be exposed to the risk of counterparty breaches or failure to perform. We may be subject to claims, including class actions, for reimbursements, losses or damages arising from any transaction processing or operational error, or from process mismanagement. Because of the sensitive nature of the financial and healthcare transactions we process, our liability and any alleged damages may significantly exceed the fees we receive for performing the service at issue. Litigation could include class action claims based upon, among other theories, various regulatory requirements and consumer protection and privacy laws that class action plaintiffs may attempt to use to assert private rights of action. Any of these claims and related settlements or judgments could affect our operating results, damage our reputation, decrease demand for our products and services, or cause us to make costly operating changes.

Investment decisions with respect to cash balances, market returns or losses on investments, and limits on insurance applicable to cash balances held in bank and brokerage accounts, including those held by us and as agent on behalf of our clients, could expose us to losses of such cash balances and adversely affect revenues attributable to cash balance deposit investments.

As part of our transaction processing and other services, we maintain and manage large bank and investment accounts containing client funds, which we hold as agent, as well as operational funds. Our revenues include investment earnings related to client fund cash balances. Our choices in selecting investments, or market conditions that affect the rate of return on or the availability of investments, could have an adverse effect on the level of such revenues. The amounts held in our operational and client deposit accounts could exceed the limits of government insurance programs of organizations such as the Federal Deposit Insurance Corporation and the Securities Investors Protection Corporation, exposing us to the risk of loss. Any substantial loss would have a material adverse impact on our business, results of operations and our financial condition.

Our business is subject to evolving regulations and increased scrutiny from regulators.

Our business is subject to evolving and increasing U.S. and foreign regulation, including privacy, licensing, processing, recordkeeping, investment adviser, broker/dealer, retirement, data protection, reporting and related regulations. New products and services we plan to offer may also be subject to regulation, either directly or as a downstream provider to customers or clients. Such regulations cover all aspects of our business including, but not limited to, sales and trading methods, trade practices among broker/dealers, use and safekeeping of clients' funds and securities, use of client and employee data, capital structure of securities firms, net capital, anti-money laundering efforts, healthcare, recordkeeping and the conduct of directors, officers and employees. Any violation of applicable regulations could expose us or those businesses to civil or criminal liability, significant fines or sanctions, damage our reputation, the revocation of licenses, censures, or a temporary suspension or permanent bar from conducting business, which could adversely affect our business, results of operations and our financial condition.

Our clients are subject to extensive regulation, including investment adviser, broker/dealer and privacy regulations applicable to products and services we provide to the financial services industry and insurance, privacy and other regulations applicable to services we provide to the healthcare industry. As a result, our relationships with our clients may subject us to increased scrutiny from a number of regulators, including the Federal Financial Institutions Examination Council (and its constituent members, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency and the Consumer Financial Protection Bureau), the Bermuda Monetary Authority, British Virgin Islands Financial Services Commission, Centrale Bank van Curacao en Sint Maarten, Commodity Futures Trading Commission, FTC, Cayman Islands Monetary Authority, Commission de Surveillance du Secteur Financier, Financial Industry Regulatory Authority, Financial Conduct Authority, Central Bank of Ireland, National Futures Association, Ontario Securities Commission, SEC, Securities Commission of the Bahamas, U.S. Treasury Department and other government entities that regulate the financial services, hedge fund and hedge fund services industry in the U.S., the United Kingdom ("U.K.") and the other jurisdictions in which we operate. As a result of the changes in the global economy and the turmoil in global financial markets in recent years, the risk of additional government regulation has increased. In addition, the final outcome of negotiations between the U.K. and the E.U. relating to Brexit remains uncertain. As a result, the impact of the U.K.'s exit on the U.K. regulatory regime is unknown, but it is possible that we will become subject to more onerous regulations in the U.K. as a result. Moreover, our healthcare business is subject to evolving and increasing federal and state regulation. Such federal regulation is developed, interpreted or enforced by regulators including, the Centers for Medicare and Medicaid Services, the U.S. Dept. of Health and Human Services, the Office for Civil Rights and the Office of the Inspector General. Typically a state's department of insurance regulates much of our healthcare business; however, each state's statutes dictate such authority. Any of these regulations may limit or curtail our activities, including activities that might be profitable, and changes to existing regulations, or the interpretations thereof, may affect our ability to continue to offer our existing products and services, or to offer products and services we may wish to offer in the future.

The European Union's AIFMD and the U.S. Dodd-Frank Act, among other initiatives, pose significant changes to the regulatory environment in which we and our clients operate. The impact of these regulatory changes remains uncertain. If we fail to comply with any applicable laws, rules or regulations, we may be subject to censure, fines or other sanctions, including revocation of our licenses and/or registrations with various regulatory agencies, criminal penalties and civil lawsuits.

The U.S. Foreign Corrupt Practices Act ("FCPA") and anti-bribery laws in other jurisdictions, including the U.K. Bribery Act ("Bribery Act"), generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business or other commercial advantage. The FCPA also imposes accounting standards and requirements on publicly traded U.S. corporations and their foreign affiliates which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments, and to prevent the establishment of "off books" slush funds from which such improper payments can be made. We and our clients operate in a number of jurisdictions that may pose a risk of potential FCPA or Bribery Act violations.

Changes in, and any violation by our clients of, applicable laws and regulations (whether related to the products and services we provide or otherwise) could diminish their business or financial condition and thus their demand for our products and services or could increase our cost of continuing to provide our products and services to such industries. Demand could also decrease if we do not continue to offer products and services that help our clients comply with regulations. For example, our accounts in the healthcare industry are impacted by the Patient Protection and Affordable Care Act of 2010 (the "Affordable Care Act"), including the Health Insurance Marketplace. Changes to the Affordable Care Act have been enacted by Congress in response to the current administration's stated agenda.

In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our internal operations might be subject or the manner in which existing laws might be administered or interpreted. While our policies mandate compliance with these laws, there can be no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws. A failure to comply with these laws, rules or regulations, or allegations of such noncompliance, could adversely affect our business, reputation, results of operations and financial condition.

A substantial portion of our revenues are derived, and a substantial portion of our operations are conducted, outside the U.S.

For the years ended December 31, 2018, 2017 and 2016 international revenues accounted for 28%, 27% and 27%, respectively, of our total revenues. We sell certain of our products primarily outside the U.S. In addition, Brexit and international trade tensions have created political and economic uncertainty and instability in global financial and foreign currency markets. The current uncertainty over the final outcome of the negotiations between the U.K. and the E.U., with respect to the terms of Brexit, may adversely affect our operations and financial results, as we generated approximately $503.9 million and $115.8 million in revenues from the U.K. in the years ended December 31, 2018 and 2017, respectively. Our international business is also subject to a variety of other risks, including:

- potential changes in a specific country's or region's political or economic climate;
- the need to comply with a variety of local regulations and laws, U.S. export controls, the FCPA and the Bribery Act;
- potential expropriation of assets by foreign governments;
- difficulty repatriating any international profits;
- fluctuations in foreign currency exchange rates;
- application of discriminatory fiscal policies;
- potential changes in tax laws and the interpretation of such laws; and
- potential difficulty enforcing third-party contractual obligations and intellectual property rights.

Such factors could adversely affect our business, results of operations and financial condition.

We are exposed to fluctuations in currency exchange rates that could negatively impact our operating results and financial condition.

Because a significant portion of our business is conducted outside the U.S. and significant revenues are generated outside the U.S., we face exposure to adverse movements in foreign currency exchange rates. Fluctuations in currencies relative to currencies in which our earnings are generated also make it more difficult to perform period-to-period comparisons of our reported results of operations. Because our Consolidated Financial Statements are reported in U.S. dollars, translation of sales or earnings generated in other currencies into U.S. dollars can result in a significant increase or decrease in the reported amount of those sales or earnings. In addition, we incur currency transaction risk whenever we enter into either a purchase or a sales transaction using a currency other than the local currency of the transacting entity. Given the volatility of exchange rates, we cannot be assured we will be able to effectively manage our currency translation or transaction risk, and significant changes in the value of foreign currencies relative to the U.S. dollar could adversely affect our financial statements. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" for further discussion on the foreign currency translation impact on operating results and financial condition.

We do not currently engage in material hedging activities. Changes in economic or political conditions globally and in any of the countries in which we operate could result in exchange rate movements, new currency or exchange controls or other restrictions being imposed on our operations.

Our investments in funds and our joint ventures could decline in value.

From time to time we add new investment strategies to our investment product offerings by providing the initial cash investments as "seed capital." The seed capital investments may decline in value. A significant decline in their value could have a material adverse effect on our financial condition or operating results. We are a limited partner in various private equity funds and have future capital commitments related to certain private equity fund investments. These investments are illiquid. Generally, private equity fund securities are non-transferable or are subject to long holding periods, and withdrawals from the private equity firm partnerships are typically not permitted. Even when transfer restrictions do not apply, there is generally no public market for the securities. Therefore, we may not be able to sell the securities at a time when we desire to do so. We may not always be able to sell those investments at the same or higher prices than we paid for them. We also participate in joint ventures with other companies. These joint venture investments could require further capital contributions.

Changes or modifications in financial accounting standards may have a material adverse impact on our reported results of operations or financial condition.

A change or modification in accounting policies can have a significant effect on our reported results and may even affect our reporting of transactions completed before the change is effective, including the impact of the adoption and implementation of the accounting standard update on revenue recognition issued in May 2014 by the Financial Accounting Standards Board. Under the new standard, we recognize term license revenues upfront at time of delivery rather than ratably over the related contract period. Additionally, under the new standard, we capitalize and amortize certain direct costs, such as commissions, over the expected customer life rather than expensing them as incurred. While the adoption of the new standard does not change the cash flows received from our contracts with customers, its adoption could have a material adverse effect on our financial position or results of operations. See Note 2 to our Consolidated Financial Statements for additional information. New pronouncements and varying interpretations of existing pronouncements have occurred with frequency and may occur in the future. Changes to existing rules, or changes to the interpretations of existing rules, could lead to changes in our accounting practices, and such changes could materially adversely affect our reported financial results or the way we conduct our business.

We do not control certain businesses in which we have significant ownership.

We invest in joint ventures and other unconsolidated affiliates as part of our business strategy, and part of our net income is derived from our pro rata share of the earnings of those businesses. Despite owning significant equity interests in those companies and having directors on their boards, we do not control their operations, strategies or financial decisions. The other owners may have economic, business or legal interests or goals that are inconsistent with our goals or the goals of the businesses we co-own. Our pro rata share of any losses due to unfavorable performance of those companies could negatively impact our financial results.

Some of our joint venture investments are subject to buy-sell agreements, which could, among other things, restrict us from selling our interests even if we were to determine it would be prudent to do so.

We own interests in unconsolidated entities and various real estate joint ventures. Our interests in such unconsolidated entities are subject to buy/sell arrangements, which could restrict our ability to sell our interests even if we were to determine it would be prudent to do so. These arrangements could also allow us to purchase the other owners' interests to prevent someone else from acquiring them and we cannot control the timing of occasions to do so. The businesses or other owners may encourage us to increase our investment in or make contributions to the businesses at an inopportune time.

In addition, some of the agreements governing our joint venture arrangements include buy/sell provisions that provide a party to the arrangement with the option to purchase the other party's interests upon such other party's change of control at a purchase price that may be less than fair market value. For instance, under the partnership agreement of IFDS L.P., in the event of a change of control of the Company, the other partner would have the option to purchase our interests in IFDS L.P. at a price equal to book value, unless another purchase provision in the partnership agreement was triggered prior to the change of control. Book value may be substantially less than fair market value at the time of any sale of our interests upon a change of control.

A material weakness in our internal controls could have a material adverse effect on us.

Effective internal controls are necessary for us to provide reasonable assurance with respect to our financial reports and to effectively prevent fraud. If we cannot do so, our reputation and operating results could be harmed. A material weakness in our internal control over financial reporting could adversely impact our ability to provide timely and accurate financial information. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. In addition, controls can be circumvented by individual acts of some persons, by collusion of two or more people, or by management override of the controls. Over time, controls may become inadequate because changes in conditions or deterioration in the degree of compliance with policies or procedures may occur. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. If we are unable to report financial information timely and accurately or to maintain effective disclosure controls and procedures, our stock price could be negatively impacted and we could be subject to, among other things, regulatory or enforcement actions by the SEC, which could have a material adverse effect on our business, results of operations and financial condition.

Risks Relating to Our Indebtedness

Our substantial indebtedness could adversely affect our financial health and operations.

We currently have a substantial amount of indebtedness. As of December 31, 2018, we had total indebtedness of $8,347.3 million and an additional $242.4 million available for revolving borrowings under our Credit Agreement. This indebtedness could have adverse consequences. For example, it may:

- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund acquisitions, working capital, capital expenditures, research and development efforts and other general corporate purposes;
- increase our vulnerability to and limit our flexibility in planning for, or reacting to, change in our business and the industry in which we operate;
- restrict our ability to make certain distributions with respect to our capital stock due to restricted payment and other financial covenants in our credit facilities and other financing agreements;
- expose us to the risk of increased interest rates as borrowings under our senior credit facility are subject to variable rates of interest;
- place us at a competitive disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds.

In addition, the agreement governing our senior credit facility contains financial and other restrictive covenants that limit our ability to engage in activities that may be in our long-term best interests, and any additional indebtedness may incur may also contain restrictive covenants. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debts.

To service our indebtedness, we require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control.

We estimate that our current levels of indebtedness as of December 31, 2018 will result in annual interest payments of approximately $401.0 million. Our ability to make payments on and to refinance our indebtedness and to fund planned capital expenditures will depend on our ability to generate cash in the future. This, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

If our business fails to generate sufficient cash flow from operations and future borrowings are not available to us, we may not be able to pay our indebtedness or fund our other liquidity needs. We may need to refinance all or a portion of our indebtedness on or before maturity. We may not be able to refinance any of our indebtedness on commercially reasonable terms or at all. If we cannot service our indebtedness, we may have to take actions such as selling assets, seeking additional equity or reducing or delaying capital expenditures, strategic acquisitions, investments and joint ventures. We may not be able to effect such actions, if necessary, on commercially reasonable terms or at all.

Restrictive covenants in the agreements governing our indebtedness may restrict our ability to pursue our business strategies.

The Credit Agreement limits our ability, among other things, to:

- incur additional indebtedness;
- make certain investments;
- sell assets, including capital stock of certain subsidiaries;
- declare or pay dividends, repurchase or redeem stock or make other distributions to stockholders;
- consolidate, merge, liquidate or dissolve;

- enter into transactions with our affiliates; and
- incur liens.

In addition, the Credit Agreement also requires us, in certain instances, to maintain compliance with specified leverage ratios. Our ability to comply with these provisions may be affected by events beyond our control, and these provisions could limit our ability to plan for or react to market conditions, meet capital needs or otherwise conduct our business activities and plans.

Our inability to comply with any of these provisions could result in a default under one or more of the agreements governing our indebtedness. If such a default occurs under one such agreement, the creditors under another debt agreement may elect to declare all borrowings outstanding, together with accrued interest and other fees, to be immediately due and payable. In addition, the lenders under our Credit Agreement would have the right to terminate any commitments they have to provide further borrowings.

If we are unable to repay outstanding borrowings when due, the lenders under our Credit Agreement also have the right to proceed against the collateral, including substantially all of our domestic assets and the assets of our domestic subsidiaries, granted to them to secure the indebtedness under that facility. If the indebtedness under our Credit Agreement were to be accelerated, we cannot assure you that our assets would be sufficient to repay in full that indebtedness and our other indebtedness.

Changes in the method of determining London Interbank Offered Rate ("LIBOR"), or the replacement of LIBOR with an alternative reference rate, may adversely affect interest expense related to our outstanding debt.

Changes in the method of determining London Interbank Offered Rate ("LIBOR"), or the replacement of LIBOR with an alternative reference rate, may adversely affect interest expense related to outstanding debt. At December 31, 2018, we had total debt of $8,347.3 million, including $8,319.1 million of variable interest rate debt and which may bear interest rates in relation to LIBOR, depending on our selection of repayment options. On July 27, 2017, the Financial Conduct Authority in the United Kingdom announced that it would phase out LIBOR as a benchmark by the end of 2021. It is unclear whether new methods of calculating LIBOR will be established such that it continues to exist after 2021. If LIBOR ceases to exist, we may need to renegotiate our Credit Agreement and may not be able to do so with terms that are favorable to us. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Contractual Obligations – Senior Secured Credit Facilities" for additional information. The overall financial market may be disrupted as a result of the phase-out or replacement of LIBOR. Disruption in the financial market or the inability to renegotiate our Credit Agreement with favorable terms could have a material adverse effect on our business, results of operations and financial condition.

Risks Relating to Ownership of Our Common Stock

If equity research analysts do not publish or cease publishing research or reports about our business or if they issue unfavorable commentary or downgrade our common stock, the price and trading volume of our common stock could decline.

The trading market for our common stock is influenced by the research and reports that equity research analysts publish about us and our business. We do not control these analysts. The price of our stock or trading volume in our stock could decline if one or more equity analysts downgrade our stock or if those analysts issue other unfavorable commentary or cease publishing regular reports about us or our business.

The market price of our common stock may be volatile, which could result in substantial losses for investors in our common stock.

Shares of our common stock were sold in our initial public offering at a price of $7.50 per share on March 31, 2010, and through December 31, 2018, our common stock has traded as high as $60.97 and as low as $6.64. An active, liquid and orderly market for our common stock may not be sustained, which could depress the trading price of our common stock. In addition, the market price of our common stock may fluctuate significantly. Some of the factors that may cause the market price of our common stock to fluctuate include:

- fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in estimates of our financial results or recommendations by securities analysts;
- failure of any of our products to achieve or maintain market acceptance;
- changes in market valuations of similar companies;
- success of competitive products;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- announcements by us or our competitors of significant products, contracts, acquisitions or strategic alliances;

- regulatory developments in any of our markets;
- litigation involving our Company, our general industry or both;
- additions or departures of key personnel;
- investors' general perception of us; and
- changes in general economic, industry and market conditions.

In addition, if the market for technology stocks, financial services stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition or results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to class action lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

William C. Stone, our Chairman of the Board and Chief Executive Officer, exerts significant control over our Company.

As of February 22, 2019, William C. Stone, our Chairman of the Board and Chief Executive Officer, beneficially owned approximately 13.4% of the outstanding shares of our common stock. We are party to a stockholders' agreement with Mr. Stone, pursuant to which Mr. Stone has the right to nominate two members of our board of directors, one of which will be Mr. Stone for so long as he is our Chief Executive Officer. As a result, Mr. Stone has significant influence over our policy and affairs and matters requiring stockholder approval.

SS&C Holdings is a holding company with no operations or assets of its own and its ability to pay dividends is limited or otherwise restricted.

As of December 31, 2018, SS&C Holdings has no direct operations and no significant assets other than the stock of SS&C and Advent Software, Inc. The ability of SS&C Holdings to pay dividends is limited by its status as a holding company and by the terms of the agreement governing our indebtedness. See "Risk factors - Risks relating to our indebtedness - Restrictive covenants in the agreements governing our indebtedness may restrict our ability to pursue our business strategies." Moreover, none of the subsidiaries of SS&C Holdings is obligated to make funds available to SS&C Holdings for the payment of dividends or otherwise. In addition, Delaware law imposes requirements that may restrict the ability of our subsidiaries, including SS&C, to pay dividends to SS&C Holdings. These limitations could reduce our attractiveness to investors.

Our management has broad discretion in the use of our existing cash resources and may not use such funds effectively.

Our management has broad discretion in the application of our cash resources. Accordingly, our stockholders will have to rely upon the judgment of our management with respect to our existing cash resources, with only limited information concerning management's specific intentions. Our management may spend our cash resources in ways that our stockholders may not desire or that may not yield a favorable return. The failure by our management to apply these funds effectively could harm our business.

Provisions in our certificate of incorporation and bylaws might discourage, delay or prevent a change of control of our Company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation and bylaws and Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- limitations on the removal of directors;
- a classified board of directors so that not all members of our board are elected at one time;
- advance notice requirements for stockholder proposals and nominations;
- the inability of stockholders to call special meetings;
- the ability of our board of directors to make, alter or repeal our bylaws;
- the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could be used to institute a rights plan, or a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our board of directors; and
- a prohibition on stockholders from acting by written consent.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our Company, thereby reducing the likelihood that our stockholders could receive a premium for their shares of common stock in an acquisition.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 2. *PROPERTIES*

We lease our corporate offices, which consist of approximately 93,500 square feet of office space located at 80 Lamberton Road, Windsor, CT 06095. In 2013, we extended the lease term through October 2022. We utilize facilities and offices in approximately 100 other locations in the United States and have offices in North America, South America, Europe, Asia, Australia and Africa. We lease approximately 60% of our office space as compared to owning 40% of our office space. We believe that our facilities are in good condition and generally suitable to meet our needs for the foreseeable future; however, we will continue to seek additional space as needed to satisfy our growth.

ITEM 3. *LEGAL PROCEEDINGS*

From time to time, we are subject to legal proceedings and claims. Certain legal proceedings in which we are involved are discussed in Note 16 to the Consolidated Financial Statements, which is included elsewhere in this annual report on Form 10-K and incorporated by reference herein. In the opinion of our management, we are not involved in any litigation or proceedings that would have a material adverse effect on us or our business.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

ITEM 5. *MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Our common stock trades on The Nasdaq Global Select Market under the symbol "SSNC". On February 22, 2019, the closing price reported on The Nasdaq Global Select Market of our common stock was $59.88 per share. As of February 22, 2019, we had approximately 76,000 holders of record of our common stock.

There is no established public trading market for shares of our Class A non-voting common stock, and as of and since December 31, 2016 there were no shares of our Class A non-voting common stock outstanding. On March 30, 2016, William C. Stone converted 2.7 million shares of Class A non-voting stock into 2.7 million shares of our common stock, or 5.4 million shares of common stock on a post-split basis. Each share of Class A non-voting common stock converted automatically into one share of our common stock upon the expiration of the applicable waiting period under the HSR Act.

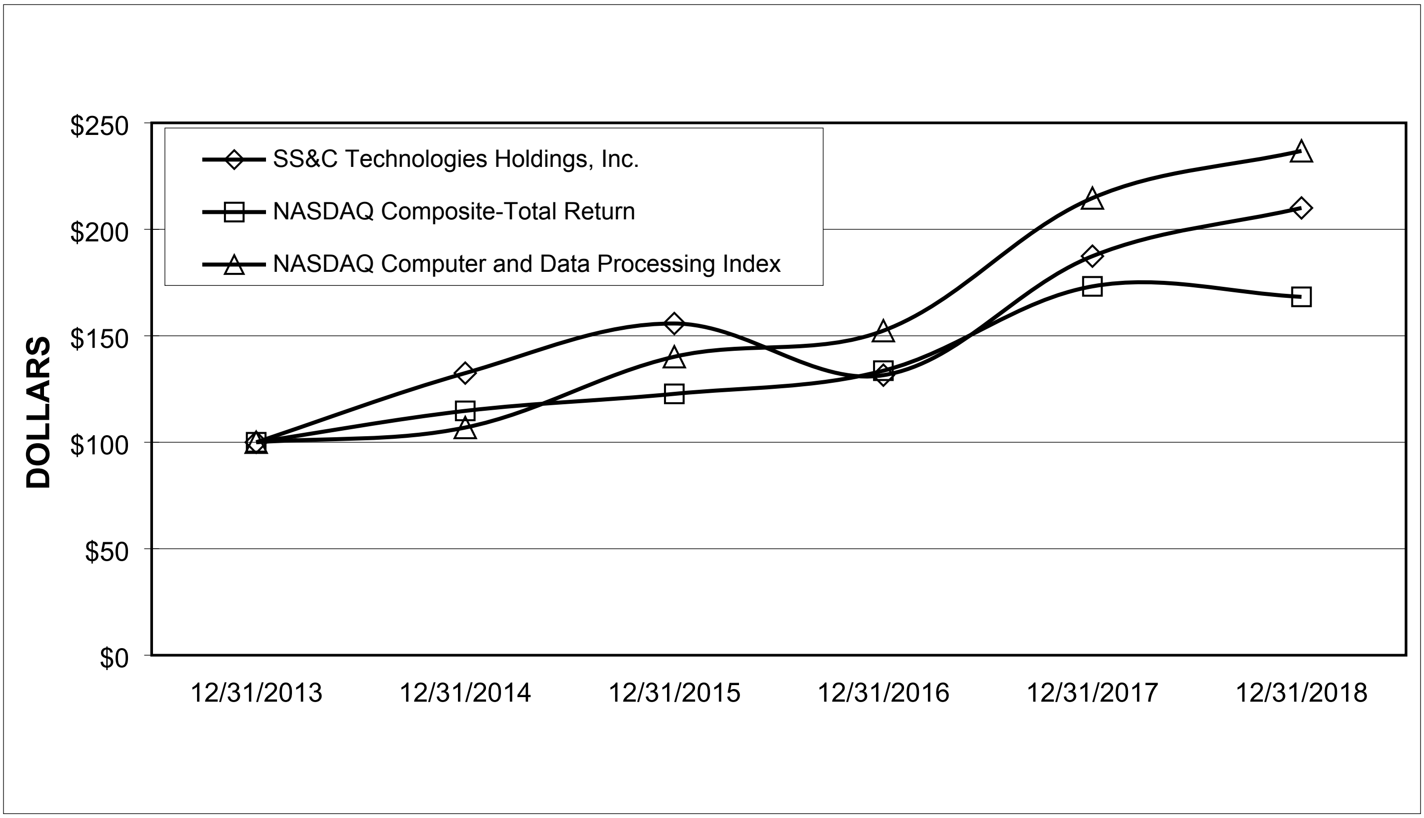
Our equity plan information required by this item is incorporated by reference to the information in Part III, Item 12 of this annual report on Form 10-K.

Performance graph

This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of SS&C Technologies Holdings, Inc. under the Exchange Act.

The following graph shows a comparison from December 31, 2013 through December 31, 2018 of cumulative total return for our common stock, the Nasdaq Composite Index and the Nasdaq Computer and Data Processing Index. Such returns are based on historical results and are not intended to suggest future performance. Data for the Nasdaq Composite Index and the Nasdaq Computer and Data Processing Index assume reinvestment of dividends.

COMPARISON OF CUMULATIVE TOTAL RETURN*
Among SS&C Technologies Holdings, Inc., the Nasdaq Composite Index
And the Nasdaq Computer and Data Processing Index



* $100 invested in stock on 12/31/2013. Return calculations of indices assume the reinvestment of dividends.

	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
SS&C Technologies Holdings, Inc.	100	132	156	132	187	210
Nasdaq Composite - Total Returns	100	115	123	134	173	168
Nasdaq Computer & Data Processing Index................	100	107	140	152	215	237

ITEM 6. *SELECTED FINANCIAL DATA*

The five-year selected financial data set forth below should be read in conjunction with our Consolidated Financial Statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this annual report on Form 10-K.

	For the Year Ended December 31,				
	2018 (5)	2017 (4)	2016 (3)	2015 (2)	2014 (1)
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME DATA	($ in millions, except per share data)				
Revenues	$ 3,421.1	$ 1,675.3	$ 1,481.4	$ 1,000.3	$ 767.9
Operating income	429.1	396.9	288.6	164.7	200.4
Other income (expense), net	8.2	(4.5)	3.4	3.9	2.8
Net income	103.2	328.9	131.0	42.9	131.1
Earnings per share - Basic	$ 0.44	$ 1.60	$ 0.65	$ 0.24	$ 0.79
Earnings per share - Diluted	$ 0.42	$ 1.55	$ 0.64	$ 0.22	$ 0.75
Weighted average shares outstanding - Basic	232.5	204.9	200.3	182.2	166.6
Weighted average shares outstanding - Diluted	243.7	211.6	205.8	190.9	174.7
Cash dividends declared and paid per common share (6)	$ 0.30	$ 0.265	$ 0.25	$ 0.25	$ 0.0625

	As of December 31,				
	2018 (5)	2017 (4)	2016 (3)	2015 (2)	2014 (1)
CONSOLIDATED BALANCE SHEET DATA	($ in millions)				
Total assets	$ 16,107.5	$ 5,539.5	$ 5,707.0	$ 5,802.2	$ 2,266.2
Total long-term debt, including current portion	8,256.0	2,045.2	2,501.1	2,751.4	619.7
Stockholders' equity	4,580.0	2,686.4	2,258.6	2,105.4	1,346.7

(1) On November 30, 2014, we acquired all of the outstanding stock of DST Global Solutions Ltd. and the assets and business of DST Global Solutions LLC, together DSTGS, subsidiaries of DST Systems, Inc.

(2) On July 8, 2015, we acquired all of the outstanding stock of Advent. On September 1, 2015, we acquired the assets and business of Varden Technologies. On November 16, 2015, we acquired all of the outstanding stock of Primatics Financial.

(3) On March 11, 2016, we acquired the assets and business associated with Citigroup AIS. On October 20, 2016, we acquired all of the outstanding stock of Salentica. On December 1, 2016, we acquired the assets and business associated with GFS. On December 15, 2016, we acquired all of the outstanding stock of Conifer.

(4) On October 13, 2017, we acquired all of the outstanding stock of CommonWealth. On October 31, 2017, we acquired all of the outstanding stock of Modestspark. See Note 7 to our Consolidated Financial Statements.

(5) On April 16, 2018, we acquired all of the outstanding stock of DST. On June 1, 2018, we acquired the assets and business associated with CACEIS. On October 1, 2018, we acquired all of the outstanding stock of Eze. On November 16, 2018, we acquired all of the outstanding stock of Intralinks. See Note 7 to our Consolidated Financial Statements.

(6) On June 24, 2016, SS&C Technologies Holdings, Inc. completed a two-for-one stock split, effected in the form of a stock dividend. All share and per share amounts have been retroactively restated for all periods presented to reflect the stock split.

ITEM 7. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

Overview

Business. We are a leading provider of mission-critical, sophisticated software-enabled services that allow financial services providers to automate complex business processes. Our portfolio of software products and rapidly deployable software-enabled services allows our clients to automate and integrate front-office functions such as trading and modeling, middle-office functions such as portfolio management and reporting, and back-office functions such as accounting, transfer agency, compliance, regulatory services, performance measurement, reconciliation, reporting, processing and clearing. We provide our solutions globally to thousands of clients, principally within the institutional asset and wealth management, alternative investment management, brokerage, retirement, financial advisory and financial institutions vertical markets. In addition, we provide solutions to the healthcare industry including pharmacy, healthcare administration and health outcomes optimization solutions to satisfy their information processing, quality of care, cost management and payment integrity needs. Our healthcare solutions include claims adjudication, benefit management, care management, and business intelligence services.

Acquisitions. To supplement our growth, we evaluate and execute acquisitions that provide complementary products or services, add proven technology and an established client base and expand our intellectual property portfolio or address a highly specialized problem or a market niche. Since the beginning of 2016, we have spent approximately $8.7 billion to acquire eight businesses in the financial services and healthcare industries, using a combination of cash on hand, equity and debt financing (as discussed in Notes 7, 9 and 10 to our Consolidated Financial Statements).

The following table lists the significant businesses we have acquired since January 1, 2016:

Acquired Business	Acquisition Date	Acquired Capabilities, Products and Services
Intralinks Holdings, Inc.	November 2018	Increased key account footprint and adds cloud-based virtual data rooms and secure collaboration solutions for SS&C's banking and alternative clients
Eze Software	October 2018	Strengthened SS&C's front to back office technology
CACEIS North America	June 2018	Expanded fund administration services in hedge fund and private equity sectors
DST Systems, Inc.	April 2018	Provided additional scale and breadth across institutional and retail asset management, alternatives, wealth management, and healthcare sectors
CommonWealth Fund Services Ltd.	October 2017	Expanded fund administration services in hedge fund and private equity sectors
Conifer Financial Services, LLC.	December 2016	Expanded fund administration services in hedge fund and other asset management sectors
Wells Fargo's Global Funds Service	December 2016	Expanded fund administration services in hedge fund and private equity sectors
Citigroup's Alternative Investor Service	March 2016	Expanded fund administration services in hedge fund and private equity sectors

The discussion in this Part II, Item 7 of this Annual Report on Form 10-K includes the operations of the business listed in the table above for the respective time periods each was owned by SS&C.

Revenues. As we have expanded our business, we have focused on increasing our software-enabled services. Since 2016, we have seen increased demand in the financial services industry for these services from existing and new customers. We have taken a number of steps to support that demand, such as automating our software-enabled services delivery methods, expanded our service offerings and providing our employees with sales incentives. We have also acquired businesses that offer software-enabled services or have a large base of term license or maintenance clients. Our software-enabled services revenues increased from $956.8 million and 65% of total revenues in 2016 to $2,798.9 million and 82% of revenues in 2018. We believe that our high level of these contractually recurring revenues provides us with the ability to better manage our costs and capital investments. To support the growth in our software-enabled services revenues and maintain our level of customer service, we have added personnel, expanded our facilities and invested in information technology. These investments and automation improvements in our software-enabled services have served to improve gross margins.

Liquidity. In connection with the acquisition of DST in the second quarter of 2018, we entered into a new credit agreement ("Credit Agreement"), which is described in *Contractual Obligations*, to fund a large portion of the purchase price, refinance amounts outstanding including our previously issued Senior Notes and our prior credit facility ("Prior Facility") and refinance all of DST's existing indebtedness. We also raised cash through the sale and issuance of approximately 30.3 million shares of our common stock for total net proceeds of $1.4 billion. In the third quarter of 2018, we funded our acquisition of Eze with a combination of cash on-hand and $875.0 million in incremental term loan debt. In the fourth quarter of 2018, we funded our acquisition of Intralinks with a combination of $1.0 billion in incremental term loan debt and the issuance of 9.9 million shares of our common stock.

We generated $640.1 million in cash from operating activities in 2018, compared to $471.8 million and $418.4 million in 2017 and 2016, respectively. In 2018, we used our operating cash flow, $8.7 billion in proceeds received from debt financing, $1.4 billion in proceeds from the sale of our common stock, $84.9 million in proceeds from the exercise of stock options and existing cash to acquire DST, CACEIS, Eze and Intralinks, repay $3.1 billion of debt, pay $70.9 million in dividends and invest in capital expenditures in our business.

Results of Operations

Revenues

We derive our revenues from two sources: software-enabled services revenues and license, maintenance and related revenues. As a general matter, fluctuations in our software-enabled services revenues are attributable to the number of new software-enabled services clients as well as total assets under management in our clients' portfolios and the number of outsourced transactions provided to our existing clients. Software-enabled services revenues also fluctuate as a result of reimbursements received for "out-of-pocket" expenses, such as postage and telecommunications charges, which are recorded as revenues on an accrual basis. Because these additional revenues are offset by the reimbursable expenses incurred, there is no impact on gross profit, operating income and net income, however the reimbursements billed and expenses incurred can lead to fluctuations in revenues, cost of revenues and gross margin percentage each period. License, maintenance and related revenues consist primarily of term and perpetual license fees, maintenance fees and professional services. Maintenance revenues vary based on customer retention and on the annual increases in fees, which are generally tied to the consumer price index. License and professional services revenues tend to fluctuate based on the number of new licensing clients, the timing and terms of contract renewals and demand for consulting services.

The following table sets forth the percentage of our total revenues represented by each of the following sources of revenues for the periods indicated:

	Year Ended December 31,		
	2018	2017	2016
Software-enabled services	81.8%	66.5%	64.6%
License, maintenance and related	18.2%	33.5%	35.4%
Total revenues	100.0%	100.0%	100.0%

The following table sets forth revenues (dollars in millions) and percent change in revenues for the periods indicated:

	Year Ended December 31,			Percent Change from Prior Period	
	2018	2017	2016	2018	2017
Software-enabled services	$ 2,798.9	$ 1,114.0	$ 956.8	151.2%	16.4%
License, maintenance and related	622.2	561.3	524.6	10.8%	7.0%
Total revenues	$ 3,421.1	$ 1,675.3	$ 1,481.4	104.2%	13.1%

Fiscal 2018 versus Fiscal 2017. Our revenues increased $1,745.8 million, primarily due to revenues related to our acquisitions of Intralinks and Eze in the fourth quarter of 2018, CACEIS and DST in the second quarter of 2018 and CommonWealth Fund Services in the fourth quarter of 2017, which contributed $1,709.9 million in revenues. Additionally, revenues increased due to increased demand for our software-enabled services and the favorable impact from foreign currency translation, which added $1.2 million. Software-enabled services revenues increased $1,684.9 million or 151.2%, primarily due to the acquisitions, which added revenues of $1,629.6 million, as well as from a continued increase in demand for our fund administration services and services for advisory and wealth managers. The favorable impact from foreign currency translation was $1.6 million. License, maintenance and related revenues increased $60.9 million, or 10.8%, primarily due to the acquisitions, which added revenues of $80.3 million. The unfavorable impact from foreign currency translation was $0.4 million and the remaining decrease in license, maintenance and related revenues was primarily due to a decline in professional services revenues and the impact on term licenses as a result of the adoption of a new revenue recognition standard, ASC 606, on January 1, 2018.

Fiscal 2017 versus Fiscal 2016. Our revenues increased $193.9 million, primarily due to revenues related to our acquisitions of CommonWealth Fund Services in the fourth quarter of 2017, GFS and Conifer in the fourth quarter of 2016 and Citigroup AIS in the first quarter of 2016, which contributed $117.7 million in revenues, net of a reduction of $2.7 million in revenues related to the loss of sales to these businesses. The increase in revenues also reflects a reduction of $19.0 million related to fund administration service clients that were acquired through the Citigroup AIS acquisition who had indicated they were terminating their contracts prior to the acquisition closing. The final purchase price of the Citigroup AIS business acquisition included an adjustment for these terminated clients. The remaining increases in revenues were primarily due to an increase in term license revenues and a continued increase in demand for our fund administration services. These increases were also impacted favorably from foreign currency translation by $1.1 million. Software-enabled services revenues increased $157.2 million, primarily due to the acquisitions, which added revenues of $114.4 million, as well as from an increase in software-enabled services revenues within our fund administration business. These increases were also impacted favorably from foreign currency translation by $0.5 million. License, maintenance and related revenues increased $36.7 million, primarily due to an increase in revenues for advisory and wealth managers, as well as an increase resulting from the large prior period impact of the fair value adjustment of acquired deferred revenue and by our acquisitions, which contributed $3.3 million. These increases were also impacted favorably from foreign currency translation by $0.6 million. License, maintenance and related revenues were partially offset by declines in revenues for institutional and investment management customers.

Cost of Revenues

Cost of software-enabled services revenues consists primarily of costs related to personnel utilized in servicing our software-enabled services and amortization of intangible assets. Cost of license, maintenance and other related revenues consists primarily of the costs related to personnel utilized in servicing our maintenance contracts and to provide implementation, conversion and training services to our software licensees, as well as system integration and custom programming consulting services and amortization of intangible assets.

The following tables set forth each of the following cost of revenues as a percentage of their respective revenue source for the periods indicated:

	Year Ended December 31,		
	2018	2017	2016
Cost of software-enabled services	62.6%	56.4%	56.9%
Cost of license, maintenance and related	47.9%	46.0%	48.8%
Total cost of revenues	60.0%	52.9%	54.0%
Gross margin percentage	40.0%	47.1%	46.0%

The following table sets forth cost of revenues (dollars in millions) and percent change in cost of revenues for the periods indicated:

	Year Ended December 31,			Percent Change from Prior Period	
	2018	2017	2016	2018	2017
Cost of software-enabled services	$ 1,753.0	$ 628.1	$ 544.4	179.1%	15.4%
Cost of license, maintenance and related	298.1	258.3	256.1	15.4%	0.9%
Total cost of revenues	$ 2,051.1	$ 886.4	$ 800.5	131.4%	10.7%

Fiscal 2018 versus Fiscal 2017. Our total cost of revenues increased $1,164.7 million, or 131.4%, primarily due to our acquisitions, which contributed $1,136.7 million to the increase. Included in these costs are severance charges of $38.8 million in 2018 related to the elimination of redundant positions within the acquired businesses. The unfavorable impact from foreign currency translation added $0.7 million in costs. Cost of software-enabled services revenues increased $1,124.9 million, or 179.1%, primarily due to our acquisitions, which added $1,088.6 million in costs, as well as increased costs to support the growth in software-enabled services revenues. The unfavorable impact from foreign currency translation added $0.2 million in costs. Costs of license, maintenance and related revenues increased $39.8 million or 15.4%, primarily due to our acquisitions, which added $48.0 million in costs, partially offset by decreases in personnel-related costs and independent contractors. The unfavorable impact from foreign currency translation added $0.5 million in costs.

Fiscal 2017 versus Fiscal 2016. Our total cost of revenues increased $85.9 million, primarily due to our acquisitions, which included CommonWealth, GFS, Conifer and Citigroup AIS, which added costs of $87.4 million for the twelve months ended December 31, 2017. This increase was partially offset by a decrease of $1.2 million in costs of revenues, primarily related to cost synergies from acquisitions as well as by the favorable impact from foreign currency translation of $0.3 million. Cost of software-enabled services revenues increased $83.7 million, primarily due to the acquisitions, which added costs of $85.3 million. Cost of license, maintenance and related revenues increased $2.2 million, primarily due the acquisitions.

Operating Expenses

Selling and marketing expenses consist primarily of the personnel costs associated with the selling and marketing of our products, including salaries, commissions and travel and entertainment. Such expenses also include amortization of intangible assets, the cost of branch sales offices, trade shows and marketing and promotional materials. Research and development expenses consist primarily of personnel costs attributable to the enhancement of existing products and the development of new software products. General and administrative expenses consist primarily of personnel costs related to management, accounting and finance, information management, human resources and administration and associated overhead costs, as well as fees for professional services. Transaction expenses consist of certain costs associated with our acquisition of DST, including costs to enter into our Credit Agreement, investment banker advisory fees, legal and other professional fees.

The following table sets forth operating expenses as a percentage of our total revenues for the periods indicated:

	Year Ended December 31,		
	2018	2017	2016
Selling and marketing	6.1%	7.1%	7.9%
Research and development	9.3%	9.2%	10.3%
General and administrative	9.2%	7.1%	8.3%
Transaction expenses	2.9%	0.0%	—
Total operating expenses	27.5%	23.4%	26.5%

The following table sets forth operating expenses (dollars in millions) and percent change in operating expenses for the periods indicated:

	Year Ended December 31,			Percent Change from Prior Period	
	2018	2017	2016	2018	2017
Selling and marketing	$ 211.0	$ 118.5	$ 117.1	78.1%	1.2%
Research and development	318.2	153.3	152.7	107.6%	0.4%
General and administrative	313.9	119.6	122.5	162.5%	(2.4)%
Transaction expenses	97.8	0.6	—	16200.0%	—
Total operating expenses	$ 940.9	$ 392.0	$ 392.3	140.0%	(0.1)%

Fiscal 2018 versus 2017. The increase in total operating expenses in 2018 was primarily due to our acquisitions, which added expenses of $522.6 million. Included in these costs are severance charges of $23.8 million in 2018, related to the elimination of redundant positions within the acquired businesses. The impact from foreign currency translation increased costs by $0.5 million in 2018. Total operating expenses in 2018 also increased due to higher personnel-related costs, higher non-income based taxes, higher professional fees and increased stock-based compensation expense partially offset by lower software maintenance costs, legal settlements paid and lower rent and occupancy costs.

Fiscal 2017 versus 2016. The decrease in total operating expenses in 2017 of $0.3 million was primarily due to a decrease in organic total operating expenses of $15.7 million as well as the favorable impact from foreign currency translation of $0.8 million, which resulted from the strength of the U.S. dollar relative to the British pound. These decreases were partially offset by increased operating expenses related to our acquisitions of CommonWealth, GFS, Conifer and Citigroup AIS, which added expenses of $16.2 million. The decrease in organic operating expenses was primarily due to lower stock-based compensation, independent contractor costs and market data costs, partially offset by higher professional fees and legal settlement fees.

Transaction Expenses

Fiscal 2018 versus 2017. Transaction expenses of $97.8 million consist of certain costs associated with the acquisition of DST, including those related to our Credit Agreement, investment banker advisory fees, legal and other professional fees. The DST acquisition is further discussed in the Notes to our Consolidated Financial Statements and in "Liquidity and Capital Resources".

Comparison of Fiscal 2018, 2017 and 2016 for Interest, Taxes and Other

Interest income. We had interest income of $9.1 million in 2018 compared to $1.2 million in 2017 and $1.5 million in 2016. The increase in interest income in 2018 primarily resulted from higher average cash balances relative to the prior year. The decreases in interest income in 2017 primarily resulted from lower average cash balances relative to the prior year.

Interest expense. We had interest expense of $280.1 million in 2018 compared to $108.6 million in 2017 and $129.9 million in 2016. The increase in interest expense in 2018 was primarily due to increased borrowings in connection with our acquisitions of DST, Eze and Intralinks and, to a lesser extent, higher average interest rates. These increases were partially offset by the impact of repayments of the Prior Credit Agreement. The decrease in interest expense in 2017 was primarily due to a lower average debt balance and a lower average interest rate, as a result of the amendment of our senior secured credit facility in March 2017. These facilities are discussed further in "Liquidity and Capital Resources".

Other income (expense), net. Other income (expense), net for 2018 consisted primarily of dividend income and foreign currency transaction gains partially offset by unrealized losses on our investments. Other income (expense), net for 2017 and 2016 consisted primarily of foreign currency transaction losses and gains, respectively.

Equity in earnings of unconsolidated affiliates, net. We had equity in earnings of unconsolidated affiliates, net of $2.1 million for 2018. This is primarily related to our proportionate share of IFDS L.P.'s net income, offset by amortization of basis differences.

Loss on extinguishment of debt, net. We recorded a $43.3 million loss on extinguishment of debt in 2018 related to the amendment and restatement of our credit agreement. The loss on extinguishment of debt includes the write-off of a portion of the unamortized capitalized financing fees and unamortized original issue discount related to the Prior Credit Agreement and Senior Notes for amounts accounted for as a debt extinguishment and a make-whole premium paid in connection with the redemption of the Senior Notes. We recorded a $2.3 million loss on extinguishment of debt in 2017 in connection with the amendment of our senior secured credit facility. The loss on extinguishment of debt includes the write-off of a portion of the unamortized capitalized financing fees related to the senior secured credit facility for amounts accounted for as a debt extinguishment, as well as the new financing fees related to the senior secured credit facility for amounts accounted for as a debt modification.

Provision (benefit) for income taxes. The following table sets forth the provision (benefit) for income taxes (dollars in millions) and effective tax rates for the periods indicated:

	Year Ended December 31,			Percent Change from Prior Period	
	2018	**2017**	**2016**	**2018**	**2017**
Provision (benefit) for income taxes	$ 21.9	$ (46.2)	$ 32.6	(147.4)%	(241.7)%
Effective tax rate	17.5%	(16.3)%	19.9%		

Our 2018, 2017 and 2016 effective tax rates differ from the statutory rate primarily due to the effect of our foreign operations and permanent book to tax differences, and in 2017 and 2018, the effect of the Tax Act. The increase in the effective tax rate from 2017 to 2018 is due primarily to the unfavorable impact of certain provisions in the Tax Act as well as the absence of the net favorable impact of the Tax Act in 2017. These increases were partially offset by the relative favorable impact of excess tax benefits from stock-based awards compared to the prior year and the favorable impact of a revaluation on existing state deferred tax liabilities due to acquisitions. The decrease in the effective tax rate from 2016 to 2017 was primarily due to the overall favorable net impact of the Tax Act and the favorable impact of excess tax benefits from stock-based awards. In 2017, we recorded a provisional tax benefit for the impact of the Tax Act of $88.0 million. We made reasonable estimates to determine the impact of the Tax Act in 2017 and completed our accounting of the Tax Act in the fourth quarter of 2018. We did not make any material adjustments as a result of completing our accounting related to the Tax Act. See Notes 2 and 15 to the Consolidated Financial Statements for additional information. The favorable impact of excess tax benefits from stock-based awards in 2017 and 2018 is due to the prospective adoption of ASU 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. We had $1,347.8

million and $347.8 million of deferred tax liabilities and $150.9 million and $66.6 million of deferred tax assets at December 31, 2018 and 2017, respectively.

Our effective tax rate includes the effect of operations outside the U.S., which historically have been taxed at rates lower than the U.S. statutory rate. While we have income from multiple foreign sources, the majority of our non-U.S. operations are in India and the U.K., where the statutory rates were 30.5% and 19.0%, respectively, in 2018, 34.6% and 19.3%, respectively, in 2017, and 34.6% and 20.0%, respectively, in 2016. A future proportionate change in the composition of income before income taxes from foreign and domestic tax jurisdictions could impact our periodic effective tax rate.

Liquidity and Capital Resources

Our principal cash requirements are to finance the costs of our operations pending the billing and collection of client receivables, to fund payments with respect to our indebtedness, to invest in research and development, to acquire complementary businesses or assets and to pay dividends on our common stock. We expect our cash on hand, cash flows from operations, and cash available under our Credit Agreement to provide sufficient liquidity to fund our current obligations, projected working capital requirements and capital spending for at least the next twelve months.

In April 2018, we purchased all of the outstanding stock of DST for approximately $5.1 billion, plus the costs of effecting the transaction. We funded the acquisition and refinanced our existing debt with $7.4 billion of debt financing (of which approximately $524.5 million was rolled over from our Prior Credit Agreement) and a portion of the net proceeds from the issuance and sale of approximately $1.4 billion of our common stock. We funded our acquisition of Eze in October 2018 with a combination of cash on-hand and $875.0 million in incremental term loan debt. We funded our acquisition of Intralinks in November 2018 with a combination of $1.0 billion in incremental term loan debt and 9.9 million shares of our common stock.

In 2018, we paid quarterly cash dividends totaling $70.9 million.

Our cash, cash equivalents and restricted cash and cash equivalents, including amounts held on behalf of clients, at December 31, 2018 were $1,113.3 million, an increase of $1,048.6 million from $64.7 million at December 31, 2017. The increase in cash was primarily due to the inclusion of cash and cash equivalents associated with funds held on behalf of clients of $940.2 million. See Notes 7, 9 and 10 to our Consolidated Financial Statements for further discussion of acquisitions, debt and equity, respectively.

Client funds obligations represent our contractual obligations within the DST business to remit funds to satisfy client pharmacy claim obligations and are recorded on the Consolidated Balance Sheet when incurred, generally after a claim has been processed by us. In addition, client funds obligations include transfer agency client balances invested overnight. Our contractual obligations to remit funds to satisfy client obligations are primarily sourced by funds held on behalf of clients. We had $1,014.7 million of client funds obligations at December 31, 2018.

Cash flows from operating, investing and financing activities, as reflected in our Consolidated Statements of Cash Flows, are summarized in the following table (in millions):

	Year Ended December 31,			
	2018	2017	2016	Change from Prior Year
Net cash, cash equivalents and restricted cash provided by (used in):				
Operating activities	$ 640.1	$ 471.8	$ 418.4	$ 168.3
Investing activities	(7,102.6)	(63.3)	(496.0)	(7,039.3)
Financing activities	7,517.0	(468.0)	(236.1)	7,985.0
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(5.9)	4.5	(3.6)	(10.4)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 1,048.6	$ (55.0)	$ (317.3)	$ 1,103.6

Operating activities: Cash provided by operating activities primarily resulted from net income of $103.2 million adjusted for non-cash items of $572.0 million, slightly offset by changes in our working capital accounts (excluding the effect of acquisitions) totaling $35.1 million. The changes in our working capital accounts were driven by decreases in accounts payable and accrued expenses, increases in contract assets and changes in income taxes prepaid and payable, partially offset by decreases in accounts receivable and prepaid expenses and other assets and increase in deferred revenue. Cash provided by operating activities was negatively affected by approximately $244.0 million of costs related to the DST acquisition, including transaction, severance and other such items. The decrease in accounts payable was primarily due to the timing of payments. The decrease in accounts receivable was primarily due to an overall decrease in days' sales outstanding, excluding the effect of acquisitions, as well as an improvement in the average days' sales outstanding associated with businesses acquired in 2018 since the date of those acquisitions. The decrease in prepaid expenses and other assets was primarily due to the timing of payments, particularly as a result of the mid-month acquisition of DST. The increase in contract asset and deferred revenue was primarily due to the adoption of ASC 606.

Investing activities: We used net cash of $7,102.6 million primarily related to cash paid for business acquisitions (net of cash acquired) of $7,066.7 million, $55.5 million in capitalized software development costs, $33.6 million in capital expenditures and $16.4 million in investments in securities, partially offset by proceeds from sales and maturities of investments of $52.9 million, proceeds from the sale of property and equipment of $9.7 million and receipts from the collection of loans made of $7.0 million.

Financing activities: Cash provided by financing activities of $7,517.0 million primarily resulted from $8,744.0 million received from debt borrowings, net of original issue discount, net proceeds of $1,399.1 million from common stock issuance, net increase in client funds obligations of $604.8 million and $84.9 million in cash received from stock option exercises. These proceeds were partially offset by repayments of debt totaling $3,141.0 million, the payment of $86.4 million in fees related to debt extinguishment and refinancing activities, $70.9 million in quarterly dividends paid and $17.5 million in withholding taxes paid related to equity award net share settlements.

Fiscal 2017 versus 2016

Our cash and cash equivalents and restricted cash and cash equivalents at December 31, 2017 were $64.7 million, a decrease of $55.0 million from $119.7 million at December 31, 2016. The decrease in cash was primarily due to repayments of debt, payment of dividends, capital expenditures and cash paid for acquisitions. These decreases were partially offset by cash provided by operations, proceeds from stock option exercises and proceeds received from our borrowings.

Operating activities: Cash provided by operating activities primarily resulted from net income of $328.9 million adjusted for non-cash items of $142.8 million and changes in our working capital accounts (excluding the effect of acquisitions). The changes in our working capital accounts were driven by increases in accounts receivable and prepaid expenses and other assets as well as decreases in accrued expenses and deferred revenue. These changes were partially offset by an increase in accounts payable and a change in income taxes prepaid and payable. The decrease in deferred revenue was primarily due to an increase in the number of new license contracts and contract renewals that qualified for up-front revenue recognition as well as the decline in deferred revenue associated with the completion of professional services installations of our software. The decrease in accrued expenses was primarily due to lower accrued interest on our outstanding debt as well as lower compensation accruals. The increase in accounts payable was primarily due to the timing of payments.

Investing activities: We used net cash primarily related to $35.5 million in capital expenditures, $17.4 million cash paid for acquisitions and $10.4 million in capitalized software.

Financing activities: We used net cash primarily related to $512.5 million of repayments of debt, $54.4 million in quarterly dividends and $4.8 million in withholding taxes paid related to equity award net share settlements. These payments were partially offset by $60.2 million cash received from stock option exercises and $45.0 million received from debt borrowings.

We have made a permanent reinvestment determination in certain non-U.S. operations that have historically generated positive operating cash flows. At December 31, 2018, we held approximately $93.0 million in cash and cash equivalents at non-U.S. subsidiaries where we had made such a determination and in turn no provision for income taxes had been made. At December 31, 2018, we held approximately $78.7 million in cash that was available to our foreign borrowers under our senior secured credit facility and will be used to facilitate debt servicing of those entities.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2018 that require us to make future cash payments (in millions):

	Payments Due by Period				
Contractual Obligations and Other Commitments	**Total**	**Less than 1 Year**	**1-3 Years**	**3-5 Years**	**More than 5 Years**
Short-term and long-term debt	$ 8,347.3	$ 87.4	$ 191.3	$ 658.0	$ 7,410.6
Interest payments (1)	2,392.9	401.8	791.7	738.3	461.1
Operating lease obligations (2)	550.9	83.8	147.7	115.1	204.3
Tax payable (3)	24.3	—	—	2.1	22.2
Purchase obligations (4)	198.0	101.8	83.5	12.7	—
Total contractual obligations	$ 11,513.4	$ 674.8	$ 1,214.2	$ 1,526.2	$ 8,098.2

(1) Reflects interest payments on our Credit Agreement at an assumed interest rate of one-month LIBOR of 2.52% plus 2.25% for U.S. dollar loans on our Term B-1, B-3, B-4 and B-5 facilities.

(2) We are obligated under noncancelable operating leases for office space and office equipment. The lease for the corporate facility in Windsor, Connecticut expires in 2022. We sublease office space under noncancelable leases. For the years ended December 31, 2018, 2017 and 2016, we received rental income under these leases of $5.4 million, $5.4 million and $1.3 million, respectively. The effect of the rental income to be received in the future has not been included in the table above.

(3) Represents our obligation under the Tax Act to pay the deemed repatriation tax on certain non-US earnings over eight years. Refer to Note 15 to the Consolidated Financial Statements for additional information.

(4) Purchase obligations include the minimum amounts committed under contracts for goods and services.

As of December 31, 2018, our liability for uncertain tax positions and related interest and penalties payable was $118.5 million and $25.2 million, respectively. We are unable to reasonably estimate the timing of such liability and interest payments in individual years beyond 12 months due to uncertainties in the timing of the effective settlement of tax positions. As a result, these amounts are not included in the above contractual obligations table.

Senior Secured Credit Facilities

On April 16, 2018, in connection with our acquisition of DST, we entered into an amended and restated credit agreement with SS&C Technologies, Inc. ("SS&C"), SS&C European Holdings SARL, an indirect wholly-owned subsidiary of SS&C ("SS&C SARL") and SS&C Technologies Holdings Europe SARL, an indirect wholly-owned subsidiary of SS&C ("SS&C Tech SARL") as the borrowers ("Credit Agreement").

The Credit Agreement includes four tranches of term loans (together the "Initial Term Loans"): (i) a $518.6 million term B-1 facility which matures on July 8, 2022 for SS&C ("Term B-1 Loan"); (ii) a $5.9 million term B-2 facility which matures on July 8, 2022 for SS&C SARL ("Term B-2 Loan"); (iii) a new $5.046 billion term B-3 facility, which matures on April 16, 2025 for SS&C (the "Term B-3 Loan"); and (iv) a new $1.8 billion term B-4 facility, which matures on April 16, 2025 for SS&C SARL (the "Term B-4 Loan"). In addition, the Credit Agreement has a revolving credit facility with a five-year term available for borrowings by SS&C with $250 million in available commitments ("Revolving Credit Facility"), of which $242.4 million was available as of December 31, 2018. The Revolving Credit Facility also contains a $25 million letter of credit sub-facility, of which $7.6 million was utilized as of December 31, 2018.

The majority of the initial proceeds from the Initial Term Loans was used to fund the acquisition of DST, repay certain amounts outstanding under our then-existing credit agreement ("Prior Credit Agreement"), repay all of the outstanding principal amount of our 5.875% Senior Notes due 2023 ("Senior Notes") and repay acquired debt associated with DST.

The refinancing of the Prior Credit Agreement was evaluated in accordance with FASB Accounting Standards Codification 470-50, *Debt-Modifications and Extinguishments*, for modification and extinguishment accounting. We accounted for the refinancing as a debt modification with respect to amounts that remained obligations of the same lender in the syndicate with minor changes in cash flows and as a debt extinguishment with respect to amounts that were obligations of lenders that exited the syndicate or remained in the syndicate but experienced a change in cash flows of greater than 10%. See Note 9 to our Consolidated Financial Statements for further discussion of debt.

On October 1, 2018, in connection with our acquisition of Eze, we entered into an amendment (the "Commitment Increase Amendment") to the Credit Agreement. Pursuant to the Commitment Increase Amendment, a new $875.0 million senior secured term B-5 facility ("Term B-5 Loan", and together with the Initial Term Loans, the "Term Loans") was made available to us, the proceeds of which were used to finance, in part, the Eze acquisition.

On November 16, 2018, in connection with our acquisition of Intralinks, we entered into an amendment (the "Incremental Term Loan Amendment") to the Credit Agreement. Pursuant to the Incremental Term Loan Amendment, an additional $1.0 billion senior secured term B-5 facility ("Term B-5 Loan", and together with the Initial Term Loans, the "Term Loans") was made available to us, the proceeds of which were used to finance, in part, the Intralinks acquisition.

The Term Loans and Revolving Credit Facility bear interest, at the election of the borrowers, at the base rate (as defined in the Credit Agreement) or LIBOR, plus the applicable interest rate margin for the credit facility. Amounts drawn on the Revolving Credit Facility initially bear interest at either LIBOR plus 2.25% or at the base rate plus 1.25%, and is subject to a step-down at any time our consolidated net secured leverage ratio is less than 4.75 times, to 2.0% in the case of the LIBOR margin and 1.0% in the case of the base rate margin. The Term B-1 Loan and Term B-2 Loan bear interest at either LIBOR plus 2.25% or at the base rate plus 1.25%. The Term B-3 Loan, Term B-4 Loan and Term B-5 Loan initially bear interest at either LIBOR plus 2.50% or at the base rate plus 1.50%, and are subject to a step-down at any time our consolidated net secured leverage ratio is less than 4.75 times, to 2.25% in the case of the LIBOR margin and 1.25% in the case of the base rate margin.

As of December 31, 2018, there was $514.5 million in principal amount outstanding under the Term B-1 Loan, $4,309.6 million in principal amount outstanding under the Term B-3 Loan, $1,634.7 million in principal amount outstanding under the Term B-4 Loan and $1,860.3 million in principal amount outstanding under the Term B-5 Loan. There was no principal amount outstanding under the Term B-2 Loan.

SS&C and SS&C SARL are required to make scheduled quarterly payments of approximately 0.25% of the remaining principal amount of the Term B-1 Loan with the balance due and payable on July 8, 2022. SS&C and SS&C SARL are required to make scheduled quarterly payments of 0.25% of the original principal amount of the Term B-3 Loan, Term B-4 Loan and Term B-5 Loan, with the balance due and payable on April 16, 2025. No amortization is required under the Revolving Credit Facility.

SS&C's and SS&C SARL's obligations under the Term Loans are guaranteed by (i) our existing and future U.S. wholly-owned restricted subsidiaries, in the case of the Term B-1 Loan, Term B-3 Loan, Term B-5 Loan and the Revolving Credit Facility and (ii) our existing and future wholly-owned restricted subsidiaries, in the case of the Term B-4 Loan.

The obligations of the U.S. loan parties under the Credit Agreement are secured by substantially all of the assets of such persons (subject to customary exceptions and limitations), including a pledge of all of the capital stock of substantially all of the U.S. wholly-owned restricted subsidiaries of such persons (with customary exceptions and limitations) and 65% of the capital stock of certain foreign restricted subsidiaries of such persons (with customary exceptions and limitations). All obligations of the non-U.S. loan parties under the Credit Agreement are secured by substantially all of our and the other guarantors' assets (subject to customary exceptions and limitations), including a pledge of all of the capital stock of substantially all of our wholly-owned restricted subsidiaries (with customary exceptions and limitations).

The Credit Agreement includes negative covenants that, among other things and subject to certain thresholds and exceptions, limit our ability and the ability of our restricted subsidiaries to incur debt or liens, make investments (including in the form of loans and acquisitions), merge, liquidate or dissolve, sell property and assets, including capital stock of our subsidiaries, pay dividends on our capital stock or redeem, repurchase or retire our capital stock, alter the business we conduct, amend, prepay, redeem or purchase subordinated debt, or engage in transactions with our affiliates. The Credit Agreement also contains customary representations and warranties, affirmative covenants and events of default, subject to customary thresholds and exceptions. In addition, the Credit Agreement contains a financial covenant for the benefit of the Revolving Credit Facility requiring us to maintain a minimum consolidated net secured leverage ratio. In addition, under the Credit Agreement, certain defaults under agreements governing other material indebtedness could result in an event of default under the Credit Agreement, in which case the lenders could elect to accelerate payments under the Credit Agreement and terminate any commitments they have to provide future borrowings.

Senior Notes

On April 16, 2018, we redeemed all of the outstanding principal amount of our Senior Notes utilizing a portion of the proceeds from the Initial Term Loans described above. The redemption of the Senior Notes required the payment of a "make whole" premium calculated pursuant to the indenture governing the Senior Notes. See Loss on extinguishment of debt within Note 9 to our

Consolidated Financial Statements for further discussion. In addition, on May 1, 2018, we redeemed senior notes of DST that were acquired as a part of the acquisition of DST utilizing a portion of the proceeds of the Initial Term Loans described above. The redemption of DST's senior notes totaled $600.4 million, which included a "make whole" premium.

Other Indebtedness

In connection with the acquisition of DST, we assumed a mortgage with a principal amount of £21.0 million, which matures in October 2020 ("U.K. Mortgage") and a $4.1 million mortgage on property in the U.S. The outstanding amount under the U.K. Mortgage was $24.2 million at December 31, 2018 with a fixed interest rate of 3.1%. Principal payments of £1.0 million are payable semi-annually in April and October of each year and accrued interest payable quarterly, with the outstanding balance due at maturity.

Covenant Compliance

Under the Revolving Credit Facility portion of the Credit Agreement, we are required to satisfy and maintain a specified financial ratio at the end of each fiscal quarter if the sum of (i) outstanding amount of all loans under the Revolving Credit Facility and (ii) all non-cash collateralized letters of credit issued under the Revolving Credit Facility in excess of $20 million is equal to or greater than 30% of the total commitments under the Revolving Credit Facility. Our financial ratio became effective with the period ended September 30, 2018. Our ability to meet this financial ratio can be affected by events beyond our control, and we cannot assure you that we will meet this ratio. Any breach of this covenant could result in an event of default under the Credit Agreement. Upon the occurrence of any event of default under the Credit Agreement, the lenders could elect to declare all amounts outstanding under the Credit Agreement to be immediately due and payable and terminate all commitments to extend further credit. Any default and subsequent acceleration of payments under the Credit Agreement would have a material adverse effect on our results of operations, financial position and cash flows. Additionally, under the Credit Agreement, our ability to engage in activities such as incurring additional indebtedness, making investments and paying dividends is also tied to baskets and ratios based on Consolidated EBITDA.

Consolidated EBITDA is a non-GAAP financial measure used in key financial covenants contained in the Credit Agreement, which is the material facility supporting our capital structure and providing liquidity to our business. Consolidated EBITDA is defined as earnings before interest, taxes, depreciation and amortization ("EBITDA"), further adjusted to exclude unusual items and other adjustments permitted in calculating covenant compliance under the Credit Agreement. We believe that the inclusion of supplementary adjustments to EBITDA applied in presenting Consolidated EBITDA is appropriate to provide additional information to investors to demonstrate compliance with the specified financial ratio and other financial condition tests contained in the Credit Agreement.

Management uses Consolidated EBITDA to gauge the costs of our capital structure on a day-to-day basis when full financial statements are unavailable. Management further believes that providing this information allows our investors greater transparency and a better understanding of our ability to meet our debt service obligations and make capital expenditures.

Consolidated EBITDA does not represent net income or cash flow from operations as those terms are defined by generally accepted accounting principles, or GAAP, and does not necessarily indicate whether cash flows will be sufficient to fund cash needs. Further, the Credit Agreement requires that Consolidated EBITDA be calculated for the most recent four fiscal quarters. As a result, the measure can be disproportionately affected by a particularly strong or weak quarter. Further, it may not be comparable to the measure for any subsequent four-quarter period or any complete fiscal year.

Consolidated EBITDA is not a recognized measurement under GAAP and investors should not consider Consolidated EBITDA as a substitute for measures of our financial performance and liquidity as determined in accordance with GAAP, such as net (loss) income, operating (loss) income or net cash provided by operating activities. Because other companies may calculate Consolidated EBITDA differently than we do, Consolidated EBITDA may not be comparable to similarly titled measures reported by other companies. Consolidated EBITDA has other limitations as an analytical tool, when compared to the use of net income, which is the most directly comparable GAAP financial measure, including:

- Consolidated EBITDA does not reflect the significant interest expense we incur as a result of our debt leverage;
- Consolidated EBITDA does not reflect the provision (benefit) of income tax expense in our various jurisdictions;
- Consolidated EBITDA does not reflect any attribution of costs to our operations related to our investments and capital expenditures through depreciation and amortization charges;
- Consolidated EBITDA does not reflect the cost of compensation we provide to our employees in the form of stock-based awards;

- Consolidated EBITDA does not reflect the equity in earnings of unconsolidated affiliates; and
- Consolidated EBITDA excludes expenses and income that are permitted to be excluded per the terms of our Credit Agreement, but which others may believe are normal expenses for the operation of a business.

The following is a reconciliation of net income to Consolidated EBITDA as defined in our Credit Agreement.

	Year Ended December 31,		
(in millions)	2018	2017	2016
Net income	$ 103.2	$ 328.9	$ 131.0
Interest expense, net	271.0	107.4	128.4
Provision (benefit) for income taxes	21.9	(46.2)	32.6
Depreciation and amortization	518.5	237.2	228.7
EBITDA	914.6	627.3	520.7
Stock-based compensation	96.9	41.5	50.6
Capital-based taxes	—	0.3	1.5
Acquired EBITDA and cost savings (1)	523.5	4.5	9.1
Non-cash portion of straight-line rent expense	—	4.4	2.2
Loss on extinguishment of debt, net	43.3	2.3	—
Equity in earnings of unconsolidated affiliates, net	(2.1)	—	—
Purchase accounting adjustments (2)	17.8	4.4	31.6
ASC 606 adoption impact	40.2	—	—
Other (3)	170.5	15.3	5.9
Consolidated EBITDA, as defined	$ 1,804.7	$ 700.0	$ 621.6

(1) Acquired EBITDA reflects the EBITDA impact of significant businesses that were acquired during the period as if the acquisition occurred at the beginning of the period, as well as cost savings enacted in connection with acquisitions.
(2) Purchase accounting adjustments include (a) an adjustment to increase revenues by the amount that would have been recognized if deferred revenue were not adjusted to fair value at the date of acquisitions and (b) an adjustment to increase personnel and commissions expense by the amount that would have been recognized if prepaid commissions and deferred personnel costs were not adjusted to fair value at the date of the acquisitions.
(3) Other includes expenses and income that are permitted to be excluded per the terms of our Credit Agreement from Consolidated EBITDA, a financial measure used in calculating our covenant compliance. These include expenses and income related to currency transactions, investment gains and losses, facilities and workforce restructuring, legal settlements and business combinations.

Our covenant requirement for net senior secured leverage ratio and the actual ratio for the year ended December 31, 2018 are as follows:

	Covenant Requirement	Actual Ratio
Maximum consolidated net secured leverage to Consolidated EBITDA ratio[1]	7.25x	4.54x

(1) Calculated as the ratio of consolidated net secured funded indebtedness, net of cash and cash equivalents, to Consolidated EBITDA, as defined by the Credit Agreement, for the period of four consecutive fiscal quarters ended on the measurement date. Consolidated net secured funded indebtedness is comprised of indebtedness for borrowed money, letters of credit, deferred purchase price obligations and capital lease obligations, all of which is secured by liens on our property.

Critical Accounting Policies

A number of our accounting policies require the application of significant judgment by our management, and such judgments are reflected in the amounts reported in our Consolidated Financial Statements. In applying these policies, our management uses its judgment to determine the appropriate assumptions to be used in the determination of estimates. Those estimates are based on our historical experience, terms of existing contracts, management's observation of trends in the industry, information provided by our clients and information available from other outside sources, as appropriate. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, goodwill and other intangible assets and other contingent liabilities. Actual results may differ significantly from the estimates contained in our Consolidated Financial Statements. Information about recently adopted accounting pronouncements and accounting pronouncements not yet effective is included in Note 2 to our Consolidated Financial Statements. We believe that the following are our critical accounting policies.

Accounting for investments

We have five significant types of investments: 1) investments in unconsolidated affiliates; 2) partnership interests in private equity funds; 3) investments in marketable equity securities related to our deferred compensation agreements; 4) non-marketable equity securities; and 5) seed capital investments.

The equity method of accounting is used for investments in entities, partnerships and similar interests (including investments in private equity funds for which we are a limited partner and hold a greater than 5% partnership interest in the fund) in which we have significant influence but do not control. Under the equity method, we recognize income or losses from our pro-rata share of these unconsolidated affiliates' net income or loss, which changes the carrying value of the investment of the unconsolidated affiliate.

Our investments in unconsolidated affiliates, which were recorded at fair value through the allocation of the purchase price for the acquisition of DST, are accounted for under the equity method of accounting. The carrying value of our investments in unconsolidated affiliates exceeds the proportionate share of net assets of the unconsolidated affiliates, resulting in basis differences. We recognize our proportionate share of the results of the unconsolidated affiliates and amortization expense related to basis differences in non-operating income.

Our partnership interests in private equity funds, marketable equity securities, and seed capital investments, other than those accounted for under the equity method of accounting or those that result in consolidation of the investee, are recorded at fair value, with changes in the fair value recognized in earnings. Our marketable equity securities and seed capital investments have readily determinable fair values in the market. We use net asset value as a practical expedient for the fair value of partnership interests in private equity funds that are not accounted for under the equity method of accounting.

Investments in non-marketable equity securities that do not have readily determinable fair values and do not qualify for the practical expedient to measure the investment using a net asset value per share are recorded using the measurement alternative in ASU 2016-01. These investments are recorded at cost, less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same issuer. At each reporting period, we assesses if these investments continue to qualify for this measurement alternative. Impairment is recorded when there is evidence that the expected fair value of the investment has declined to below the recorded cost. Future adverse changes in market conditions or poor operating results of underlying investments could result in losses or an inability to recover the carrying value of the investments that may not be reflected in an investment's current carrying value, thereby possibly requiring an impairment charge in the future, which could have a material effect on our financial position.

Long-lived Assets, Intangible Assets and Goodwill

We must test goodwill annually for impairment (and in interim periods if certain events occur indicating that the carrying value of goodwill or indefinite-lived intangible assets may be impaired) by comparing fair value of a reporting unit to its carrying value. Judgement is required in the determination of goodwill reporting units. During the year ended December 31, 2018, our reporting unit structure changed as a result of acquisitions which we completed during the year. As of December 31, 2018, we had two reporting units, one which includes the DST business, and one which includes the rest of our operations. To the extent that we do not achieve our revenue or operating cash flow plans or other measures of fair value decline, including external valuation assumptions, our current goodwill carrying value could be impaired. In 2017, we adopted Accounting Standards Update ("ASU") 2017-04, *Goodwill and Other (Topic 350) – Simplifying the Test for Goodwill Impairment*, for our annual goodwill impairment test. The new guidance removed the second step of the goodwill impairment test requiring a hypothetical purchase price allocation. The first step of the impairment analysis indicated that the fair values significantly exceeded the carrying values at December 31, 2018.

We assess the impairment of identifiable intangibles, long-lived assets and goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include the following:

- significant underperformance relative to historical or projected future operating results;
- significant changes in the manner of our use of the acquired assets or the strategy for our overall business; and
- significant negative industry or economic trends.

When we determine that the carrying value of intangibles and long-lived assets may not be recoverable based upon the existence of one or more of the above indicators of potential impairment, we assess whether an impairment has occurred based on whether net book value of the assets exceeds related projected undiscounted cash flows from these assets. We consider a number of factors, including past operating results, budgets, economic projections, market trends and product development cycles in estimating future cash flows. Differing estimates and assumptions as to any of the factors described above could result in a materially different impairment charge, if any, and thus materially different results of operations.

Software Capitalization

Significant management judgement is required in determining what projects and costs associated with software development will be capitalized and in assigning estimated economic lives to the completed projects. Management specifically evaluates software development projects and analyzes the percentage of completion as compared to the initial plan and subsequent forecasts, milestones achieved and the commitments to continue funding the projects. Significant changes in any of these items may result in discontinuing capitalization of development costs, as well as immediately expensing previously capitalized costs. We review, on a quarterly basis, our capitalized software for possible impairment.

Acquisition Accounting

In connection with our acquisitions, we allocate the purchase price to the assets and liabilities we acquire, such as net tangible assets, completed technology, customer relationships, other identifiable intangible assets, deferred revenue and goodwill. We applied significant judgments and estimates in determining the fair market value of the assets acquired and their useful lives. For example, we have determined the fair value of existing client contracts based on the discounted estimated net future cash flows from such client contracts existing at the date of acquisition and the fair value of the completed technology based on the cost savings method or the relief-from-royalties method on estimated future revenues of such completed technology and assumed obsolescence factors. While actual results during the years ended December 31, 2018, 2017 and 2016 were consistent with our estimated cash flows and we did not incur any impairment charges during those years, different estimates and assumptions in valuing acquired assets could yield materially different results.

Revenue Recognition

Our revenues consist of software-enabled services and license, maintenance and related revenues.

Software-enabled services revenues, which are based on a monthly fee or are transaction-based, are recognized as the services are performed. Software-enabled services are generally provided under contracts with initial terms of one to five years that require monthly or quarterly payments, and are subject to automatic annual renewal at the end of the initial term unless terminated by either party.

We recognize software-enabled services revenues on a monthly basis as the arrangement is a single performance obligation or a stand-ready performance obligation, which in either case is comprised of a series of distinct services that are substantially the same and have the same pattern of transfer to the customer (i.e. distinct days or months of service). We apply a measure of progress (typically time-based) to any fixed consideration and allocate variable consideration to the distinct periods of service based on usage or summarization of account information. These variable payments relate specifically to our efforts to perform the services in the period in which the fee applies. This variability is solely attributed to and resolved as a result of the transfer of these services; these fees are independent of the transfer of past or future goods or services. These fees meet the allocation objective of ASC 606 because they represent the amount of consideration we are entitled to for these services. Revenue is generally recognized over the period the services are provided, which results in revenue recognition that corresponds with the value to the client of the services transferred to date relative to the remaining services promised.

We generate revenues in the form of software license fees and related maintenance and services fees. License fees include perpetual license fees and term license fees that differ mainly in the duration over which the customer benefits from the software. Maintenance and services primarily consist of fees for maintenance services (including support and unspecified upgrades and enhancements when and if they are available) and, in some cases, professional services which focus on both deployment and training our customers to fully leverage the use of our products.

Software license revenues are recognized at the point of time when the software license has been delivered. Term license fees are typically due in annual installments at the beginning of each annual period and we record a contract asset for amounts recognized as revenue in excess of amounts billed. We recognize revenues from maintenance ratably over the term of the underlying maintenance contract term because we transfer control evenly by providing a stand-ready service. The term of the maintenance contract is usually one year. Revenues from professional services consist mostly of services provided on a time and materials basis.

In contracts with multiple performance obligations, we account for individual performance obligations separately if they are distinct. We allocate the transaction price to each performance obligation based on our relative standalone selling price out of total consideration of the contract. Standalone selling price is determined utilizing observable prices to the extent available. If the standalone selling price for a performance obligation is not directly observable, we estimate it maximizing the use of observable inputs. For maintenance and support, we determine the standalone selling price based on the price at which we separately sell a renewal contract and the economic relationship between licenses and maintenance. We primarily determine the standalone selling price for sales of licenses using the residual approach. For professional services, we determine the standalone selling prices based on the price at which we separately sell those services.

We occasionally enter into license agreements requiring significant customization of our software that are not material to our results of operations. We account for the license and professional service fees under these agreements as a single performance obligation, recognized over time using an input method during the development of the license. This method requires estimates to be made for costs to complete the agreement utilizing an estimate of development man-hours remaining. Revenue is recognized each period based on the hours incurred to date compared to the total hours expected to complete the project. Due to uncertainties inherent in the estimation process, it is at least reasonably possible that completion costs will be revised. Such revisions are recognized in the period in which the revisions are determined. Provisions for estimated losses on uncompleted contracts are determined on a contract-by-contract basis, and are made in the period in which such losses are first estimated or determined.

Depreciation of Fixed Assets

For personal property, we generally prefer to own rather than lease the property when practicable. We believe this approach provides us with better flexibility for disposing or redeploying the asset as it nears the completion of its economic life. Management judgement is required in assigning economic lives to fixed assets. Management specifically analyzes fixed asset additions, remaining net book values and gain/loss upon disposition of fixed assets to determine the appropriateness of assigned economic lives. Significant changes in any of these items may result in changes in the economic life assigned and the resulting depreciation expense.

Stock-based Compensation

Using the fair value recognition provisions of relevant accounting literature, stock-based compensation cost is measured at the grant date based on the value of the award and is recognized as expense over the appropriate service period. Determining the fair value of stock-based awards requires considerable judgment, including estimating the expected term of stock options and the expected volatility of our stock price. A deferred income tax asset is recorded over the vesting period as stock compensation expense is recorded for non-qualified stock options. The realizability of the deferred tax asset is ultimately based on the actual value of the stock-based award upon exercise. If the actual value is lower than the fair value determined on the date of grant, then there would be an income tax expense for the portion of the deferred tax asset that is not realizable.

Income Taxes

The carrying value of our deferred tax assets assumes that we will be able to generate sufficient future taxable income in certain tax jurisdictions, based on estimates and assumptions. If these estimates and related assumptions change in the future, we may be required to record additional valuation allowances against our deferred tax assets resulting in additional income tax expense in our Consolidated Statements of Comprehensive Income (Loss). On a quarterly basis, we evaluate whether deferred tax assets are realizable and assess whether there is a need for additional valuation allowances. The carrying value of our deferred tax assets and liabilities is recorded based on the statutory rates that we expect our deferred tax assets and liabilities to reverse into income. We estimate the state rate at which our deferred tax assets and liabilities will reverse based on estimates of state income apportionment for future years. Each of these estimates requires significant judgment on the part of our management. In addition, we evaluate the need to provide additional tax provisions for adjustments proposed by taxing authorities.

As of December 31, 2018, we had $118.5 million in liabilities associated with unrecognized tax benefits. All of the unrecognized tax benefits, if recognized, would decrease our effective tax rate and increase our net income. Additionally, we recognize accrued interest and penalties relating to unrecognized tax benefits as a component of the income tax provision.

Recently Adopted Accounting Pronouncements

In August 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-15, *Classification of Certain Cash Receipts and Cash Payments*. ASU 2016-15 addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows under ASC Topic 230, Statement of Cash Flow, and other Topics. ASU 2016-15 is effective for our first quarter of fiscal 2018 and the guidance requires application using a retrospective method. The impact of our adoption of ASU 2016-15 to our Consolidated Financial Statements was to reflect the presentation of debt prepayment or debt extinguishment costs as cash outflows from financing activities within our Consolidated Statement of Cash Flows. We adopted ASU 2016-15 as of January 1, 2018, which resulted in presenting fees paid for debt extinguishment as a financing activity within the Consolidated Statement of Cash Flows for all periods shown.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. ASU 2016-01 requires equity investments, except those accounted for under the equity method of accounting, that have readily determinable fair values to be measured at fair value with any changes in fair value recognized in net income. Equity securities that do not have readily determinable fair values may be measured at estimated fair value or cost less impairment, if any, adjusted for subsequent observable price changes, with changes in the carrying value recognized in net income. A qualitative assessment for impairment is required for equity investments without readily determinable fair values. The updated guidance also eliminates the requirement to disclose the method and significant assumptions used to estimate the fair value of financial instruments measured at amortized cost on the balance sheet. We adopted ASU 2016-01 as of January 1, 2018, which did not have a material impact on our financial position, results of operations or cash flows.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (ASC 606)*. ASC 606 supersedes the revenue recognition requirements in ASC 605 and 985 and requires entities to recognize revenue when control of the promised goods or services is transferred to customers at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted ASC 606 as of January 1, 2018 using the modified retrospective transition method. See Note 11 for further details.

Item 7A. ***QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK***

We do not use derivative financial instruments for trading or speculative purposes. We have invested our available cash in short-term, highly liquid financial instruments, having initial maturities of three months or less. When necessary, we have borrowed to fund acquisitions.

Interest rate risk

We derive service revenues from investment earnings related to cash balances maintained in bank accounts on which we are the agent for clients. The balances maintained in the bank accounts will fluctuate. For 2018, there were average daily cash balances of approximately $2.2 billion maintained in such accounts. We estimate that a 1% change in interest rates would equal approximately $9.2 million of net income on an annual basis. The effect of changes in interest rates attributable to earnings derived from cash balances we hold for clients is partially offset by changes in interest rates on our variable debt.

At December 31, 2018, we had total debt of $8,347.3 million, including $8,319.1 million of variable interest rate debt. As of December 31, 2018, a 1% change in LIBOR would result in a change in interest expense of approximately $83.2 million per year.

Equity price risk

We have exposure to equity price risk as a result of our investments in equity securities. Equity price risk results from changes in the level or volatility of equity prices which affect the value of equity securities or instruments that derive their value from such securities or indexes. The fair value of our investments that are subject to equity price risk as of December 31, 2018 was approximately $121.7 million. The impact of a 10% change in fair value of these investments would have been approximately $9.1

million to net income. Changes in equity values of our investments could have a material effect on our results of operations and our financial position.

Foreign currency exchange rate risk

During 2018, approximately 28% of our revenues were from clients located outside the United States. A portion of the revenues from clients located outside the U.S. is denominated in foreign currencies, primarily the British pound. While revenues and expenses of our foreign operations are primarily denominated in their respective local currencies, some subsidiaries do enter into certain transactions in currencies that are different from their local currency. These transactions consist primarily of cross-currency intercompany balances and trade receivables and payables. As a result of these transactions, we have exposure to changes in foreign currency exchange rates that result in foreign currency transaction gains and losses, which we report in other income (expense). These outstanding amounts were not material for the year ended December 31, 2018. The amount of these balances can fluctuate in the future as we bill customers and buy products or services in currencies other than our functional currency, which could increase our exposure to foreign currency exchange rates. We continue to monitor our exposure to foreign exchange rates as a result of our acquisitions and changes in our operations. We do not enter into any market risk sensitive instruments for trading purposes.

The foregoing risk management discussion and the effect thereof are forward-looking statements. Actual results in the future may differ materially from these projected results due to actual developments in global financial markets. The analytical methods used by us to assess and minimize risk discussed above should not be considered projections of future events or losses.

Item 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

Financial statement schedules are not submitted because they are not applicable, not required or the information is included in our Consolidated Financial Statements.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of SS&C Technologies Holdings, Inc.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of SS&C Technologies Holdings, Inc. and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of comprehensive (loss) income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for revenues from contracts with customers in 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the Report of Management on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in the Report of Management on Internal Control over Financial Reporting, management has excluded DST Systems Inc., Eze Software, and Intralinks Holdings, Inc. from its assessment of internal control over financial reporting as of December 31, 2018 because they were acquired by the Company in purchase business combinations during 2018. We have also excluded DST Systems Inc., Eze Software, and Intralinks Holdings, Inc. from our audit of internal control over financial reporting. DST Systems Inc., Eze Software, and Intralinks Holdings, Inc. are wholly-owned subsidiaries whose total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting collectively represent approximately 17% and 50%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2018. DST Systems Inc. represents 16% and 47% of the related consolidated financial statement amounts, respectively.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Hartford, Connecticut
March 1, 2019

We have served as the Company’s auditor since 1995.

SS&C TECHNOLOGIES HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions, except per share data)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 166.7	$ 64.1
Funds receivable and funds held on behalf of clients	1,014.7	—
Accounts receivable, net of allowance for doubtful accounts of $9.4 and $6.7, respectively (Note 3)	681.7	243.9
Contract asset	18.5	—
Prepaid expenses and other current assets	154.5	38.7
Prepaid income taxes	5.6	12.1
Restricted cash and cash equivalents	6.4	0.6
Total current assets	2,048.1	359.4
Property, plant and equipment, net (Note 4)	553.2	101.0
Investments (Note 5)	190.5	—
Unconsolidated affiliates (Note 6)	239.3	—
Deferred income taxes	4.8	2.3
Contract asset	31.5	—
Goodwill (Note 8)	7,858.0	3,707.8
Intangible and other assets, net of accumulated amortization of $1,360.2 and $954.0, respectively (Note 8)	5,182.1	1,369.0
Total assets	$ 16,107.5	$ 5,539.5
LIABILITIES AND STOCKHOLDERS’ EQUITY		
Current liabilities:		
Current portion of long-term debt (Note 9)	$ 87.5	$ 37.9
Client funds obligations	1,014.7	—
Accounts payable	41.4	27.1
Income taxes payable	11.1	6.0
Accrued employee compensation and benefits	322.0	96.0
Interest payable	0.2	16.4
Other accrued expenses	199.2	55.6
Deferred revenue	245.7	204.6
Total current liabilities	1,921.8	443.6
Long-term debt, net of current portion (Note 9)	8,168.5	2,007.3
Other long-term liabilities	235.5	118.7
Deferred income taxes	1,201.7	283.5
Total liabilities	11,527.5	2,853.1
Commitments and contingencies (Note 16)		
Stockholders’ equity (Note 10):		
Preferred stock, $0.01 par value per share, 5.0 million shares authorized; no shares issued	—	—
Class A non-voting common stock, $0.01 par value per share, 5.0 million shares authorized; no shares issued	—	—
Common stock, $0.01 par value per share, 400.0 million shares authorized; 252.4 million shares and 208.1 million shares issued, respectively, and 250.8 million shares and 206.5 million shares outstanding, respectively	2.5	2.1
Additional paid-in capital	4,091.4	2,018.1
Accumulated other comprehensive loss	(343.0)	(82.7)
Retained earnings	847.1	766.9
	4,598.0	2,704.4
Less: cost of common stock in treasury, 1.6 million shares	(18.0)	(18.0)
Total stockholders’ equity	4,580.0	2,686.4
Total liabilities and stockholders’ equity	$ 16,107.5	$ 5,539.5

The accompanying notes are an integral part of these Consolidated Financial Statements.

SS&C TECHNOLOGIES HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(in millions, except per share data)

	Year Ended December 31,		
	2018	2017	2016
Revenues:			
Software-enabled services	$ 2,798.9	$ 1,114.0	$ 956.8
License, maintenance and related	622.2	561.3	524.6
Total revenues	3,421.1	1,675.3	1,481.4
Cost of revenues:			
Software-enabled services	1,753.0	628.1	544.4
License, maintenance and related	298.1	258.3	256.1
Total cost of revenues	2,051.1	886.4	800.5
Gross profit	1,370.0	788.9	680.9
Operating expenses:			
Selling and marketing	211.0	118.5	117.1
Research and development	318.2	153.3	152.7
General and administrative	313.9	119.6	122.5
Transaction expenses	97.8	0.6	—
Total operating expenses	940.9	392.0	392.3
Operating income	429.1	396.9	288.6
Interest income	9.1	1.2	1.5
Interest expense	(280.1)	(108.6)	(129.9)
Other income (expense), net	8.2	(4.5)	3.4
Equity in earnings of unconsolidated affiliates, net	2.1	—	—
Loss on extinguishment of debt, net	(43.3)	(2.3)	—
Income before income taxes	125.1	282.7	163.6
Provision (benefit) for income taxes (Note 15)	21.9	(46.2)	32.6
Net income	$ 103.2	$ 328.9	$ 131.0
Basic earnings per share	$ 0.44	$ 1.60	$ 0.65
Diluted earnings per share	$ 0.42	$ 1.55	$ 0.64
Basic weighted average number of common shares outstanding	232.5	204.9	200.3
Diluted weighted average number of common and common equivalent shares outstanding	243.7	211.6	205.8
Cash dividends declared and paid per common share	$ 0.30	$ 0.265	$ 0.25
Net income	$ 103.2	$ 328.9	$ 131.0
Other comprehensive (loss) income, net of tax:			
Foreign currency exchange translation adjustment	(260.3)	56.4	(55.9)
Total comprehensive (loss) income, net of tax	(260.3)	56.4	(55.9)
Comprehensive (loss) income	$ (157.1)	$ 385.3	$ 75.1

The accompanying notes are an integral part of these Consolidated Financial Statements.

SS&C TECHNOLOGIES HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year Ended December 31, 2018	2017	2016
Cash flow from operating activities:			
Net income	$ 103.2	$ 328.9	$ 131.0
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	518.5	237.2	228.7
Equity in earnings of unconsolidated affiliates, net	(2.1)	—	—
Cash distributions received from unconsolidated affiliates	4.2	—	—
Stock-based compensation expense	96.9	41.5	50.5
Income tax benefit related to exercise of stock options	—	—	(46.2)
Net unrealized gains on investments	(0.9)	—	—
Amortization and write-offs of loan origination costs and original issue discounts	13.6	10.5	10.7
Loss on extinguishment of debt, net	43.3	2.3	—
Loss on sale or disposition of property and equipment	0.3	0.9	0.1
Deferred income taxes	(105.8)	(152.0)	(47.8)
Provision for doubtful accounts	4.0	2.4	3.5
Changes in operating assets and liabilities, excluding effects from acquisitions:			
Accounts receivable	50.4	(1.8)	(10.9)
Prepaid expenses and other assets	31.9	(7.3)	(2.8)
Contract assets	(22.3)	—	—
Accounts payable	(91.0)	13.8	(1.3)
Accrued expenses	(2.9)	(14.8)	20.7
Income taxes prepaid and payable	(17.4)	45.6	65.1
Deferred revenue	16.2	(35.4)	17.1
Net cash provided by operating activities	640.1	471.8	418.4
Cash flow from investing activities:			
Additions to property and equipment	(33.6)	(35.5)	(27.9)
Proceeds from sale of property and equipment	9.7	—	—
Cash paid for business acquisitions, net of cash acquired	(7,066.7)	(17.4)	(457.5)
Additions to capitalized software	(55.5)	(10.4)	(9.6)
Investments in securities	(16.4)	—	(1.0)
Receipts from collections of loans made	7.0	—	—
Proceeds from sales / maturities of investments	52.9	—	—
Net cash used in investing activities	(7,102.6)	(63.3)	(496.0)
Cash flow from financing activities:			
Cash received from debt borrowings, net of original issue discount	8,744.0	45.0	120.0
Repayments of debt and acquired debt	(3,141.0)	(512.5)	(383.5)
Net increase in client funds obligations	604.8	—	—
Proceeds from exercise of stock options	84.9	60.2	39.2
Withholding taxes paid related to equity award net share settlement	(17.5)	(4.8)	(7.4)
Income tax benefit related to exercise of stock options	—	—	46.2
Fees paid for debt extinguishment and refinancing activities	(86.4)	(1.5)	(0.5)
Proceeds from common stock issuance, net	1,399.1	—	—
Dividends paid on common stock	(70.9)	(54.4)	(50.1)
Net cash provided by (used in) financing activities	7,517.0	(468.0)	(236.1)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(5.9)	4.5	(3.6)
Net increase (decrease) in cash, cash equivalents and restricted cash	1,048.6	(55.0)	(317.3)
Cash, cash equivalents and restricted cash, beginning of period	64.7	119.7	437.0
Cash, cash equivalents and restricted cash and cash equivalents, end of period	$ 1,113.3	$ 64.7	$ 119.7
Reconciliation of cash, cash equivalents and restricted cash and cash equivalents:			
Cash and cash equivalents	$ 166.7	$ 64.1	$ 117.6
Restricted cash and cash equivalents	6.4	0.6	2.1
Funds receivable and funds held on behalf of clients	940.2	—	—
	$ 1,113.3	$ 64.7	$ 119.7
Supplemental disclosure of cash paid for:			
Interest	$ 249.8	$ 102.7	$ 126.7
Income taxes, net of refunds	$ 143.4	$ 67.6	$ 8.8
Supplemental disclosure of non-cash investing activities:			
Property and equipment acquired through tenant improvement allowances	$ 0.7	$ 10.3	$ 2.8

The accompanying notes are an integral part of these Consolidated Financial Statements.

SS&C TECHNOLOGIES HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016
(in millions, except per share data)

	Class A Common Stock		Common Stock						
	Number of Issued Shares	Amount	Number of Issued Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Treasury Stock	Total Stockholders' Equity
Balance, at December 31, 2015	2.7	$ —	193.1	$ 1.9	$ 1,793.2	$ 411.5	$ (83.2)	$ (18.0)	$ 2,105.4
Net income	—	—	—	—	—	131.0	—	—	131.0
Foreign exchange translation adjustment	—	—	—	—	—	—	(55.9)	—	(55.9)
Stock-based compensation expense	—	—	—	—	50.2	—	—	—	50.2
Exercise of options, net of withholding taxes	—	—	6.1	0.1	31.7	—	—	—	31.8
Conversion of Class A common stock	(2.7)	—	5.4	0.1	—	—	—	—	0.1
Income tax benefit related to exercise of stock options	—	—	—	—	46.2	—	—	—	46.2
Cash dividends declared - $0.25 per share (Note 10)	—	—	—	—	—	(50.1)	—	—	(50.1)
Balance, at December 31, 2016	—	$ —	204.6	$ 2.1	$ 1,921.3	$ 492.4	$ (139.1)	$ (18.0)	$ 2,258.7
Net income	—	—	—	—	—	328.9	—	—	328.9
Foreign exchange translation adjustment	—	—	—	—	—	—	56.4	—	56.4
Stock-based compensation expense	—	—	—	—	41.4	—	—	—	41.4
Exercise of options, net of withholding taxes	—	—	3.5	—	55.4	—	—	—	55.4
Cash dividends declared - $0.265 per share (Note 10)	—	—	—	—	—	(54.4)	—	—	(54.4)
Balance, at December 31, 2017	—	$ —	208.1	$ 2.1	$ 2,018.1	$ 766.9	$ (82.7)	$ (18.0)	$ 2,686.4
Net income	—	—	—	—	—	103.2	—	—	103.2
Foreign exchange translation adjustment	—	—	—	—	—	—	(260.3)	—	(260.3)
Stock-based compensation expense	—	—	—	—	91.1	—	—	—	91.1
Exercise of options, net of withholding taxes	—	—	4.1	—	67.4	—	—	—	67.4
Non-cash purchase price consideration (Note 7)	—	—	—	—	48.1	—	—	—	48.1
Cumulative effect of accounting change (Note 11)	—	—	—	—	—	47.9	—	—	47.9
Issuance of common stock	—	—	40.2	0.4	1,866.7	—	—	—	1,867.1
Cash dividends declared - $0.30 per share (Note 10)	—	—	—	—	—	(70.9)	—	—	(70.9)
Balance, at December 31, 2018	—	$ —	252.4	$ 2.5	$ 4,091.4	$ 847.1	$ (343.0)	$ (18.0)	$ 4,580.0

The accompanying notes are an integral part of these Consolidated Financial Statements.

SS&C Technologies Holdings, Inc., or "Holdings", is our top-level holding company. SS&C Technologies, Inc., or "SS&C," is our primary operating company and a wholly-owned subsidiary of SS&C Technologies Holdings, Inc. "We," "us," "our," and the "Company" means SS&C Technologies Holdings, Inc. and its consolidated subsidiaries, including SS&C.

Note 1—Organization

We provide software products and software-enabled services to the financial services and healthcare industries, primarily in North America. We also have operations in Europe, Asia, Australia, South America and Africa. Our portfolio of products and software-enabled services allows our financial services clients to automate and integrate front-office functions such as trading and modeling, middle-office functions such as portfolio management and reporting, and back-office functions such as accounting, performance measurement, reconciliation, reporting, processing and clearing. Our products and software-enabled services in the healthcare industry support claims adjudication benefit management, care management, and business intelligence services. We provide our products and related services in the following vertical markets within the financial services and healthcare industries:

1. Institutional asset and wealth management;
2. Alternative investment management;
3. Healthcare;
4. Brokerage;
5. Retirement;
6. Financial advisory; and
7. Financial institutions.

Note 2—Summary of Significant Accounting Policies

Use of Estimates

The preparation of the Consolidated Financial Statements in conformity with generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Estimates are used for, but not limited to, collectability of accounts receivable, valuation of non-marketable securities, costs to complete certain contracts, valuation of acquired assets and liabilities, valuation of stock options, income tax accruals and the value of deferred tax assets and liabilities. Estimates are also used to determine the remaining economic lives and carrying value of fixed assets, goodwill and intangible assets. Actual results could differ from those estimates.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of us and our subsidiaries. All significant accounts, transactions and profits between the consolidated companies have been eliminated in consolidation. We consolidate any entity in which we have a controlling financial interest. Under the voting interest model, generally the investor that has voting control (usually more than 50% of an entity's voting interests) consolidates the entity. Under the variable interest entity ("VIE") model, the party that has the power to direct the entity's most significant economic activities and the ability to participate in the entity's economics consolidates the entity. An entity is considered a VIE if it possesses one of the following characteristics: 1) the entity is thinly capitalized; 2) residual equity holders do not control the entity; 3) equity holders are shielded from economic losses; 4) equity holders do not participate fully in an entity's residual economics; and 5) the entity was established with non-substantive voting interests. Our investments in private equity funds meet the definition of a VIE; however, the private equity fund investments are not consolidated as we do not have the power to direct the entities' most significant economic activities.

We are the lessee in a series of operating leases covering a large portion of our Kansas City, Missouri-based leased office facilities. The lessors are generally joint ventures (in which we have 50% ownership) that have been established specifically to purchase, finance and engage in leasing activities with the joint venture partners and unrelated third parties. Our analysis of our real estate joint ventures for all periods presented indicate that none qualified as a VIE and, accordingly, they have not been consolidated.

Unconsolidated investments in entities over which we do not have control but have the ability to exercise influence over operating and financial policies, if any, are accounted for under the equity method of accounting. Earnings and losses from such investments are recorded on a pre-tax basis, if any.

Revenue Recognition

We account for the recognition of our revenue in accordance with the relevant accounting literature, primarily Accounting Standards Update 2014-09, *Revenue from Contracts with Customers (ASC 606).* Our sources of revenue are described below.

Software-enabled Services Revenue

We primarily offer software-enabled outsourcing services in which we utilize our own software to offer comprehensive fund administration services for alternative investment managers, including fund manager services, transfer agency services, funds-of-funds services, tax processing and accounting. We also use our own software applications to provide healthcare organizations a variety of medical and pharmacy benefit solutions to satisfy their information processing, quality of care, cost management concerns and payment integrity programs. Our healthcare solutions include claims adjudication, benefit management, care management, business intelligence and other ancillary services. We also offer subscription-based on-demand software applications that are managed and hosted at our facilities. The software-enabled services arrangements provide an alternative for clients who do not wish to install, run and maintain complicated financial software. Under these arrangements, the client does not have the right to take possession of the software, rather, we agree to provide access to our applications, remote use of our equipment to process transactions, access to client's data stored on our equipment, and connectivity between our environment and the client's computing systems.

Software-enabled services are generally provided under contracts with initial terms of one to five years that require monthly or quarterly payments, and are subject to automatic annual renewal at the end of the initial term unless terminated by either party.

In software-enabled services arrangements, the arrangement is a single performance obligation or a stand-ready performance obligation, which in either case is comprised of a series of distinct services that are substantially the same and have the same pattern of transfer to the customer (i.e. distinct days or months of service). We apply a measure of progress (typically time-based) to any fixed consideration and allocate variable consideration to the distinct periods of service based on usage or summarization of account information. These variable payments relate specifically to our efforts to perform the services in the period in which the fee applies. This variability is solely attributed to and resolved as a result of the transfer of these services; these fees are independent of the transfer of past or future goods or services. These fees meet the allocation objective of ASC 606 because they represent the amount of consideration we are entitled to for these services. Revenue is generally recognized over the period the services are provided, which results in revenue recognition that corresponds with the value to the client of the services transferred to date relative to the remaining services promised.

For our software-enabled services contracts which are cancelable with 90 days' notice or meet the allocation objective for series performance obligations under ASC 606, we have not disclosed the transaction price for the remaining performance obligations as of the end of each reporting period or when we expect to recognize this revenue.

License, Maintenance and Related Revenue Agreements

We generate revenues in the form of software license fees and related maintenance and services fees. License fees include perpetual license fees and term license fees that differ mainly in the duration over which the customer benefits from the software. Maintenance and services primarily consist of fees for maintenance services (including support and unspecified upgrades and enhancements when and if they are available) and, in some cases, professional services which focus on both deployment and training our customers to fully leverage the use of our products.

Under ASC 606, we identify a contract with a customer, we identify the performance obligations in the contract, we determine the transaction price, we allocate the transaction price to each performance obligation in the contract and recognize revenues when (or as) we satisfy a performance obligation.

Software license performance obligations are functional intellectual property that are distinct as the user can benefit from the software on its own as defined under ASC 606. Software license revenues are recognized at the point of time when the software license has been delivered. Term license fees are typically due in annual installments at the beginning of each annual period and we record a contract asset for amounts recognized as revenue in excess of amounts billed.

We recognize revenues from maintenance ratably over the term of the underlying maintenance contract term because we transfer control evenly by providing a stand-ready service. The term of the maintenance contract is usually one year. Renewals of maintenance contracts create new performance obligations that are satisfied over the term with the revenues recognized ratably over the term.

Revenues from professional services consist mostly of services provided on a time and materials basis. The performance obligations are satisfied, and revenues are recognized, over time as the services are provided.

In contracts with multiple performance obligations, we account for individual performance obligations separately if they are distinct. We allocate the transaction price to each performance obligation based on our relative standalone selling price out of total consideration of the contract. Standalone selling price is determined utilizing observable prices to the extent available. If the standalone selling price for a performance obligation is not directly observable, we estimate it maximizing the use of observable inputs. For maintenance and support, we determine the standalone selling price based on the price at which we separately sell a renewal contract and the economic relationship between licenses and maintenance. We primarily determine the standalone selling price for sales of licenses using the residual approach. For professional services, we determine the standalone selling prices based on the price at which we separately sell those services.

We occasionally enter into license agreements requiring significant customization of our software that are not material to our results of operations. We account for the license and professional service fees under these agreements as a single performance obligation, recognized over time using an input method during the development of the license. This method requires estimates to be made for costs to complete the agreement utilizing an estimate of development man-hours remaining. Revenue is recognized each period based on the hours incurred to date compared to the total hours expected to complete the project. Due to uncertainties inherent in the estimation process, it is at least reasonably possible that completion costs will be revised. Such revisions are recognized in the period in which the revisions are determined. Provisions for estimated losses on uncompleted contracts are determined on a contract-by-contract basis, and are made in the period in which such losses are first estimated or determined.

We do not account for significant financing components if the period between when we transfer the promised product or service to the client and when the client pays for that product or service will be one year or less. We record revenue net of any taxes assessed by governmental authorities.

Accounts Receivable, net is primarily comprised of billed and unbilled receivables for which we have an unconditional right to consideration, net of an allowance for doubtful accounts.

Pre-adoption of ASC 606

We adopted ASC 606 using the modified retrospective method and as such, comparative results for the years ended December 31, 2017 and 2016 were not retrospectively adjusted. For the years ended December 31, 2017 and 2016, we recognized revenue under ASC 605 and ASC 985. Specifically, the software-enabled services revenues were recognized on a monthly basis as the services were provided, when persuasive evidence of an arrangement existed, the price was fixed or determinable and collectability was reasonably assured. Maintenance revenues were recognized ratably over the term of the maintenance agreement. Term license arrangements, many of which included bundled maintenance services, did not have vendor-specific objective evidence for the maintenance element and therefore the total term license fee was recognized ratably over the contractual term of the arrangement. We also recognized perpetual license revenues generally upon delivery of each of the related products and receipt of a signed contract, provided that collection was probable and all other revenue recognition criteria was met. Professional services revenues were generally recognized over the period during which the services were performed.

Costs of Revenues

Costs of revenues include all costs, including depreciation and amortization, incurred to produce revenues. Incremental costs of obtaining a contract (e.g., sales commissions) are capitalized and amortized on a basis consistent with the pattern of transfer of goods or services to the customer to which the asset relates over the expected customer relationship period if we expect to recover those costs. Prior to the adoption of ASC 606, we previously expensed these costs over the length of the initial contract excluding any renewals. The expected customer relationship period is determined based on average historical customer relationship periods, including expected renewals. Expected renewal periods are only included in the expected customer relationship period if commission amounts paid upon renewal are not commensurate with amounts paid on the initial contract. Incremental costs of obtaining a contract include only those costs we incur to obtain a contract that we would not have incurred if the contract had not been obtained. We have determined that certain commissions programs meet the requirements to be capitalized. Certain sales commissions associated with multi-year contracts are subject to an employee service requirement. As an action other than each party approving the contract is required to trigger payment of these sales commissions, they are not considered incremental costs to obtain a contract and are expensed as incurred. These costs are included in selling and marketing and general and administrative expenses. We expense sales commissions as incurred when the amortization period would have been one year or less.

Research and Development

Research and development costs associated with computer software are charged to expense as incurred. Capitalization of internally developed computer software costs in the case of software to be sold begins upon the establishment of technological feasibility based on a working model. Capitalization of internally developed computer software costs in the case of internal use software begins when management authorizes and commits funding to a project and the preliminary design stage has been completed.

Our policy is to amortize these costs upon a product's general release to the client. Amortization of capitalized software costs is calculated by the greater of (a) the ratio that current gross revenues for a product bear to the total of current and anticipated future gross revenues for that product or (b) the straight-line method over the remaining estimated economic life of the product, including the period being reported on, typically two to five years. It is reasonably possible that those estimates of anticipated future gross revenues, the remaining estimated economic life of the product, or both could be reduced significantly due to competitive pressures.

Stock-based Compensation

Using the fair value recognition provisions of relevant accounting literature, stock-based compensation cost is measured at the grant date based on the estimated fair value of the award and is recognized as expense over the appropriate service period. Determining the fair value of stock-based awards requires considerable judgment, including estimating the expected term of stock options and the expected volatility of our stock price. Differences between actual results and these estimates could have a material effect on our financial results. Forfeitures are accounted for as they occur. A deferred income tax asset is recorded over the vesting period as stock compensation expense is recorded for non-qualified option awards. The realizability of the deferred tax asset is ultimately based on the actual value of the stock-based award upon exercise. If the actual value is lower than the fair value determined on the date of grant, then there would be an income tax expense for the portion of the deferred tax asset that is not realizable.

Transaction Expenses

Transaction expenses are those costs that are directly related to our acquisition of DST Systems, Inc. ("DST"), as described in Note 7, "Acquisitions." Transaction expenses consist primarily of certain costs associated with the amendment and restatement of our Credit Agreement, as described in Note 9, "Debt", investment banker advisory fees, legal fees and other fees.

Income Taxes

We account for income taxes in accordance with the relevant accounting literature. An asset and liability approach is used to recognize deferred tax assets and liabilities for the future tax consequences of items that are recognized in our financial statements and tax returns in different years. A valuation allowance is established against net deferred tax assets if, based on the weight of available evidence, it is more likely than not that some or all of the net deferred tax assets will not be realized.

We account for uncertain tax positions using a two-step approach. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50% likely of being realized upon ultimate settlement. We consider many factors when evaluating and estimating its tax positions and tax benefits, which may require periodic adjustments and which may not accurately forecast actual outcomes.

The Tax Act added a new minimum tax on global intangible low-taxed income ("GILTI"), for which we have elected to factor such amounts into our measurement of deferred taxes under U.S. GAAP. We recorded a deferred tax liability related to GILTI of $27.4 million and $6.7 million at December 31, 2018 and December 31, 2017, respectively. On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118, *Income Tax Accounting Implications of the Tax Cuts and Jobs Act* ("SAB 118"), which allowed us to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. During the fourth quarter of 2018, we completed our accounting on the impact of the Tax Act. We did not record any material adjustments as part of the completion of our accounting of the Tax Act. We will continue to monitor future guidance, regulations and legislation regarding the Tax Act at both the federal and state level, and account for any changes accordingly. See Note 15, "Income Taxes" for additional information.

Cash and Cash Equivalents

We consider all highly liquid marketable securities with original maturities of three months or less at the date of acquisition to be cash equivalents.

Funds receivable and funds held on behalf of clients

We hold client funds on behalf of transfer agency clients and pharmacy processing clients in connection with providing our data processing services. End-of-day available client bank balances for full service mutual fund transfer agency clients are invested overnight in credit quality money market funds. Invested balances are returned to the full service mutual fund transfer agency clients' accounts the following business day. Funds received from clients for the payment of pharmacy claims incurred by its members are invested in credit quality money market funds and certificates of deposit until the claims are paid. Client funding receivables represent amounts due to us for pharmacy claims paid in advance of receiving client funding and for pharmacy claims processed for which client funding requests have not been made.

Funds held on behalf of clients in the form of cash, cash equivalents and certificates of deposit with a maturity of less than twelve months are included in Funds receivable and funds held on behalf of clients in the Consolidated Balance Sheet. Funds held on behalf of clients in the form of certificates of deposit with a maturity of greater than twelve months are classified as Investments in the Consolidated Balance Sheet. All funds held on behalf of clients represent assets that are restricted for use.

We have included funds held on behalf of clients that meet the definition of restricted cash and restricted cash equivalents in the beginning and end of period balances in the Consolidated Statements of Cash Flows. Cash inflows and outflows related to investment of funds held on behalf of clients are reported on a gross basis as "Investments in securities" and "Proceeds from sales / maturities of investments" in the investing section of the Consolidated Statements of Cash Flows.

Client funds obligations

Client funds obligations represent funds owed to full service mutual fund transfer agency clients for cash balances invested overnight, and our contractual obligations to satisfy client pharmacy claim obligations that are recorded on the balance sheet when incurred, generally after we have processed a claim on behalf of its pharmacy clients.

Restricted Cash

Restricted cash primarily includes monies held by a bank as security for letters of credit issued due to lease requirements for office space. The letters of credit are expected to be renewed within the next twelve months, and as such, the restricted cash is classified as a current asset on the Consolidated Balance Sheets.

Investments and unconsolidated affiliates

We hold various investments, including investments in marketable securities, non-marketable securities, and partnership interests in private equity funds, joint ventures and other similar entities.

The equity method of accounting is used for investments in entities, partnerships and similar interests (including investments in private equity funds where we are a limited partner and hold a greater than 5% partnership interest in the fund) in which we have significant influence but do not control. Under the equity method, we recognize income or losses from our pro-rata share of these unconsolidated affiliates' net income or loss, which changes the carrying value of the investment of the unconsolidated affiliate.

We measure equity investments in marketable securities, seed capital investments and other investments, other than those accounted for under the equity method of accounting or those that result in consolidation of the investee, at fair value, with changes in the fair value recognized in earnings. We use net asset value as a practical expedient for the fair value of partnership interests in private equity funds that are not accounted for under the equity method of accounting.

Investments in non-marketable equity securities that do not have readily determinable fair values and do not qualify for the practical expedient to measure the investment using a net asset value per share are recorded using the measurement alternative in ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. These investments are recorded at cost, less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same issuer. At each reporting period, we assess if these investments continue to qualify for this measurement alternative. Impairment is recorded when there is evidence that the expected fair value of the investment has declined to below the recorded cost.

We have certain investments in unconsolidated affiliates accounted for under the equity method of accounting in which our carrying value exceeds the proportionate share of net assets of the unconsolidated affiliate. The total investment in unconsolidated affiliates, including basis differences, is included in Unconsolidated affiliates on the Consolidated Balance Sheet. We record our proportionate share of the results of the unconsolidated affiliates and amortization expense related to basis differences in Equity in earnings of unconsolidated affiliates, net on the Consolidated Statement of Comprehensive (Loss) Income.

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation of property, plant and equipment is calculated using a combination of straight-line and accelerated methods over the estimated useful lives of the assets as follows:

Description	Useful Life
Land	—
Buildings and improvements	40 years
Equipment and software	3-5 years
Furniture and fixtures	7-10 years
Leasehold improvements	Shorter of lease term or estimated useful life

Maintenance and repairs are expensed as incurred. The costs of sold or retired assets are removed from the related asset and accumulated depreciation accounts and any gain or loss is included in the Consolidated Statements of Comprehensive (Loss) Income.

Goodwill and Intangible Assets

We test goodwill annually for impairment as of December 31st (and in interim periods if certain events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount). We have completed the required impairment tests for goodwill and have determined that no impairment existed as of December 31, 2018 or 2017. During the year ended December 31, 2018, our reporting unit structure changed as a result of acquisitions which we completed during the year. As of December 31, 2018, we had two reporting units, one which includes the DST business, and one which includes the rest of our operations. Our impairment analysis indicated that the fair value significantly exceeded the carrying value of each of our reporting units at December 31, 2018. There were no other indefinite-lived intangible assets as of December 31, 2018 or 2017.

Customer relationships, completed technology, trade names and other identifiable intangible assets are amortized over lives ranging from two to 17 years based on the ratio that cash flows for the intangible asset bear to the total of expected future cash flows for the intangible asset.

Impairment of Long-Lived Assets

We evaluate the recoverability of our long-lived assets when there is evidence that events or changes in circumstances have made recovery of the carrying value of the asset or asset group unlikely. An impairment loss would be recognized when the sum of the expected future undiscounted net cash flows is less than the carrying amount of the asset or asset group. We have identified no such impairment losses in the years ended December 31, 2018 and 2017.

Concentration of Credit Risk

Financial instruments, which potentially subject us to concentrations of credit risk, consist principally of cash, cash equivalents, marketable securities, and trade receivables. We have cash investment policies that limit investments to investment grade securities. Concentrations of credit risk, with respect to trade receivables, are limited due to the fact that our client base is highly diversified. As of December 31, 2018 and 2017, we had no significant concentrations of credit.

International Operations and Foreign Currency

The functional currency of each foreign subsidiary is generally the local currency. Accordingly, assets and liabilities of foreign subsidiaries are translated to U.S. dollars at period-end exchange rates, and capital stock accounts are translated at historical rates. Revenues and expenses are translated using the average rates during the period. The resulting translation adjustments are excluded from net earnings and accumulated as a separate component of stockholders' equity. Foreign currency transaction gains and losses are included within other income (expense) in the Consolidated Statements of Comprehensive (Loss) Income in the periods in which they occur.

Comprehensive (Loss) Income

Our comprehensive (loss) income consists of net income and foreign currency translation adjustments, which are presented in the Consolidated Statement of Comprehensive (Loss) Income, net of tax and reclassifications to earnings. The accumulated balance of other comprehensive (loss) income is reported separately from retained earnings and additional paid-in capital in the equity section of the Consolidated Balance Sheets. Total comprehensive (loss) income consists of net income and other accumulated comprehensive (loss) income disclosed in the equity section of the Consolidated Balance Sheets.

Treasury Stock

Treasury stock purchases are accounted for under the cost method and are included as a deduction from equity in the Stockholders' Equity section of the Consolidated Balance Sheets. Under the cost method, the price paid for the stock is charged to the treasury stock account.

Contingencies

Loss contingencies from legal proceedings and claims may occur from government investigations, shareholder lawsuits, contractual claims, tax and other matters. Accruals are recognized when it is probable that a liability will be incurred and the amount of loss can be reasonably estimated. Gain contingencies (including contingent proceeds related to business divestitures) are not recognized until realized. Legal fees are expensed as incurred.

Recently Adopted Accounting Pronouncements

In August 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-15, *Classification of Certain Cash Receipts and Cash Payments*. ASU 2016-15 addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows under ASC Topic 230, Statement of Cash Flow, and other Topics. ASU 2016-15 was effective for us in the first quarter of fiscal 2018 and the guidance required application using a retrospective method. The impact of our adoption of ASU 2016-15 to our Consolidated Financial Statements was to reflect the presentation of debt prepayment or debt extinguishment costs as cash outflows from financing activities within our Consolidated Statement of Cash Flows. We adopted ASU 2016-15 as of January 1, 2018, which resulted in presenting fees paid for debt extinguishment as a financing activity within the Consolidated Statement of Cash Flows for all periods shown.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. ASU 2016-01 requires equity investments, except those accounted for under the equity method of accounting, that have readily determinable fair values to be measured at fair value with any changes in fair value recognized in net income. Equity securities that do not have readily determinable fair values may be measured at estimated fair value or cost less impairment, if any, adjusted for subsequent observable price changes, with changes in the carrying value recognized in net income. A qualitative assessment for impairment is required for equity investments without readily determinable fair values. The updated guidance also eliminates the requirement to disclose the method and significant assumptions used to estimate the fair value of financial instruments measured at amortized cost on the balance sheet. We adopted ASU 2016-01 as of January 1, 2018, which did not have a material impact on our financial position, results of operations or cash flows.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (ASC 606)*. ASC 606 supersedes the revenue recognition requirements in ASC 605 and 985 and requires entities to recognize revenue when control of the promised goods or services is transferred to customers at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted ASC 606 as of January 1, 2018 using the modified retrospective transition method. See Note 11, "Revenue" for further details.

Recent Accounting Pronouncements Not Yet Effective

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. ASU 2016-02 requires lessees to recognize the following for all leases (with the exception of short-term leases) at the commencement date: (i) a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and (ii) a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. Lessor accounting is largely unchanged under the amendments of ASU 2016-02. Additional disclosures will be required to allow the user to assess the amount, timing and uncertainty of cash flows arising from leasing activities. In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842): Targeted Improvements, which provides another transition method no longer requiring application to previously reported periods. We plan to adopt ASU 2018-11 by applying the new standard on January 1, 2019 and recognizing a cumulative adjustment to the opening balance of retained earnings. A modified retrospective transition approach is required for leases existing at the time of adoption. ASU 2016-02 and ASU 2018-11 are effective for us for our first quarter of fiscal 2019. The impact of our adoption of ASU 2016-02 to our Consolidated Financial Statements will be to recognize the majority of our operating lease commitments as operating lease liabilities and right-of-use assets upon adoption, which will result in an increase in the assets and liabilities recorded on our Consolidated Balance Sheet, but will not have a material impact on our Consolidated Statement of Comprehensive (Loss) Income.

The new standard provides for a number of optional practical expedients in transition. We will elect the practical expedients, which permit us to not reassess prior conclusions about lease identification, lease classification and initial direct costs under the new standard. We do not expect to elect the "use-of hindsight" practical expedient to determine the lease term or in assessing the likelihood that a lease purchase option will be exercised. The new standard also provides practical expedients for an entity's ongoing accounting. We currently expect to elect the short-term lease recognition exemption for all leases that qualify. This means, for those leases that qualify, we will not recognize right-of-use assets or lease liabilities, and this includes not recognizing right-of-use assets or lease liabilities for existing short-term leases in transition. We also currently expect to elect the practical expedient to not separate lease and non-lease components for all leases. We are continuing to assess the impact of the ASU on our Consolidated Financial Statements, required disclosures, and changes to internal controls. Upon adoption, we expect to recognize additional right-of-use assets of approximately $400 million, with corresponding lease liabilities of the same amount based on the present value of the remaining minimum rental payments determined under current leasing standards for existing operating leases.

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments*. ASU 2016-13 requires companies to measure credit losses utilizing a methodology that reflects expected credit losses and requires a consideration of a broader range of reasonable and supportable information to inform credit loss estimates. ASU 2016-13 is effective for us for our first quarter of fiscal 2020 and earlier adoption is permitted beginning in the first quarter of fiscal 2019. Application of the ASU is through a cumulative-effect adjustment to retained earnings as of the effective date. We are currently evaluating the impact of the pending adoption of ASU 2016-13 on our Consolidated Financial Statements. This ASU is not expected to have a material impact on our financial position, results of operations or cash flows.

Note 3—Accounts Receivable, net

Accounts receivable are as follows (in millions):

	December 31, 2018	December 31, 2017
Accounts receivable	$ 516.4	$ 179.0
Unbilled accounts receivable	174.7	71.6
Allowance for doubtful accounts	(9.4)	(6.7)
Total accounts receivable, net	$ 681.7	$ 243.9

The following table represents the activity for the allowance for doubtful accounts (in millions):

	Year Ended December 31, 2018	2017	2016
Balance at beginning of period	$ 6.7	$ 5.9	$ 3.0
Charge to costs and expenses	4.0	2.4	3.5
Write-offs, net of recoveries	(1.3)	(1.8)	(0.4)
Other adjustments	0.0	0.2	(0.2)
Balance at end of period	$ 9.4	$ 6.7	$ 5.9

Management establishes the allowance for doubtful accounts based on historical bad debt experience. In addition, management analyzes client accounts, client concentrations, client creditworthiness, current economic trends and changes in the client's payment terms when evaluating the adequacy of the allowance for doubtful accounts.

Note 4—Property, plant and equipment, net

Property, plant and equipment and the related accumulated depreciation are as follows (in millions):

	December 31, 2018	December 31, 2017
Land	$ 54.8	$ 2.7
Building and improvements	309.5	59.9
Equipment, furniture, and fixtures	384.7	138.8
	749.0	201.4
Less: accumulated depreciation and amortization	(195.8)	(100.4)
Total property, plant and equipment, net	$ 553.2	$ 101.0

Depreciation expense for the years ended December 31, 2018, 2017 and 2016 was $100.1 million, $25.9 million and $23.7 million, respectively.

Note 5—Investments

Investments are as follows (in millions):

	December 31, 2018
Partnership interests in private equity funds	$ 102.1
Marketable equity securities	32.6
Non-marketable equity securities	45.0
Seed capital investments	10.3
Other investments	0.5
Total investments	$ 190.5

We had $190.5 million of investments as of December 31, 2018 as compared to no investments as of December 31, 2017. The increase in investments was the result of acquiring the net assets of DST in the second quarter of 2018.

Realized and unrealized gains and losses for our equity securities are as follows (in millions):

	Year Ended December 31, 2018
Unrealized losses on equity securities held as of the end of the period	$ (4.5)
Realized gains for equity securities sold during the period	0.9
Total losses recognized in other income, net	$ (3.6)

Fair Value Measurement

Authoritative accounting guidance on fair value measurements establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

As of December 31, 2018, we held certain investment assets and certain liabilities that are required to be measured at fair value on a recurring basis. These investments include money market funds, marketable equity securities and seed capital investments each of which determines fair value using quoted prices in active markets. Accordingly, the fair value measurements of these investments have been classified as Level 1 in the tables below. Investments for which we elected net asset value as a practical expedient for fair value and investments measured using the fair value measurement alternative are excluded from the table below. Fair value for deferred compensation liabilities that are credited with deemed gains or losses of the underlying hypothetical investments, primarily equity securities, have been classified as Level 1 in the tables below. We have foreign currency derivative instruments that are required to be reported at fair value. Fair value for the derivative instruments was determined using inputs from quoted prices for similar assets and liabilities in active markets that are directly or indirectly observable. Accordingly, the derivative instruments have been classified as Level 2 in the tables below.

The following table present assets and liabilities measured at fair value on a recurring basis (in millions):

		Fair Value Measurements at Reporting Date Using		
	December 31, 2018	Quoted prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market funds (1)	$ 558.0	$ 558.0	$ —	$ —
Marketable equity securities (2)	32.6	32.6	—	—
Seed capital investments (2)	10.3	10.3	—	—
Deferred compensation liabilities (3)	(23.3)	(23.3)	—	—
Derivative instruments (4)	(0.3)	—	(0.3)	—
Total	$ 577.3	$ 577.6	$ (0.3)	$ —

(1) Included in Cash and cash equivalents and Funds receivable and funds held on behalf of clients on the Consolidated Balance Sheet.
(2) Included in Investments on the Consolidated Balance Sheet.
(3) Included in Other long-term liabilities on the Consolidated Balance Sheet.
(4) Included in Other accrued expenses on the Consolidated Balance Sheet.

We have not become aware of any information indicative of fair value impairments or adjustments to the carrying value of our non-marketable equity securities for the year ended December 31, 2018.

We have partnership interests in various private equity funds that are not included in the table above. Our investments in private equity funds were $102.1 million at December 31, 2018, of which $95.2 million were measured using net asset value as a practical expedient for fair value and $6.9 million were accounted for under the equity method of accounting. The investments in private equity funds represent underlying investments in domestic and international markets across various industry sectors. At December 31, 2018, one of our investments in private equity funds, representing 77% of the total value of the private equity fund investments, was primarily invested in the energy sector and real estate. We have no management rights associated with our partnership interests in this fund and withdrawals from this fund are subject to general partner consent. This fund has a termination date in 2019 with an optional two-year extension at the discretion of the general partner. We expect to receive distributions from this fund upon liquidation of the underlying investments over the next several years, however the exact timing of the distributions is unknown. We have no unfunded commitments related to this fund. Future capital commitments related to our other private equity fund investments were approximately $1.9 million as of December 31, 2018.

Generally, our investments in private equity funds are non-transferable or are subject to long holding periods, and withdrawals from the private equity firm partnerships are typically not permitted. Even when transfer restrictions do not apply, there is generally no public market for the securities. Therefore, we may not be able to sell the securities at a time when we desire to do so. We may not always be able to sell those investments at the same or higher prices than we paid for them. As of December 31, 2018, we did not have plans to sell any of these investments. The maximum risk of loss related to our private equity fund investments is limited to the carrying value of our investments in the entities plus any future capital commitments, which include future commitments that we believe are unlikely to be called by the general partner.

Note 6—Unconsolidated affiliates

Investments in unconsolidated affiliates are as follows (in millions):

	Ownership Percentage	Carrying Value December 31, 2018	Excess carrying value of investment over proportionate share of net assets December 31, 2018
International Financial Data Services L.P.	50%	$ 93.1	$ 48.3
Pershing Road Development Company, LLC	50%	79.1	77.7
Broadway Square Partners, LLP	50%	53.0	33.1
Other unconsolidated affiliates		14.1	—
Total		$ 239.3	$ 159.1

Investments in unconsolidated affiliates are accounted for under the equity method of accounting. The total investment in unconsolidated affiliates, including basis differences, is included in Unconsolidated affiliates on the Consolidated Balance Sheet. We record our proportionate share of the results of the unconsolidated affiliates and amortization expense related to basis differences in Equity in earnings of unconsolidated affiliates, net on the Consolidated Statement of Comprehensive (Loss) Income.

Equity in earnings of unconsolidated affiliates are as follows (in millions):

	Year Ended December 31, 2018
International Financial Data Services L.P.	$ 2.9
Pershing Road Development Company, LLC	0.2
Broadway Square Partners, LLP	(1.5)
Other unconsolidated affiliates	0.5
Total	$ 2.1

International Financial Data Services L.P. ("IFDS L.P.") is a 50% owned joint venture with State Street Corporation with operations in Canada, Ireland and Luxembourg. Pershing Road Development Company, LLC ("PRDC LLC") is a 50% owned special-purpose entity formed to develop and lease office space to the U.S. government. Broadway Square Partners, LLP ("Broadway Square Partners") is a 50% owned real estate joint venture. The difference between the amount at which each of IFDS L.P., PRDC LLC and Broadway Square Partners, is carried, and the amount of underlying equity in net assets, will be amortized as a component of equity in earnings of unconsolidated affiliates over approximately 15 years, 28 years and 40 years, respectively.

The following tables summarize related party transactions and balances outstanding with our related parties, which is entirely comprised of transactions with our unconsolidated affiliates (in millions):

	Year Ended December 31, 2018
Operating revenues from related parties	$ 5.6
Amounts paid to related parties (1)	14.4
Distributions received from related parties	11.8

	December 31, 2018
Outstanding advances/loans to related parties	$ 6.1
Trade accounts receivable from related parties	1.2
Total amounts receivable from related parties	$ 7.3
Amounts payable to related parties	$ —

(1) Excludes amounts paid to our unconsolidated joint ventures related to loans, advancements and other capital investments.

Operating revenues from related parties were primarily generated from services provided for the use of our proprietary software and software development services. Payments to our related parties primarily included payments for rent and other facility and maintenance costs pursuant to the properties we lease from our unconsolidated real estate joint ventures. Distributions received include $4.2 million return on investment and $7.8 million return of investment, primarily related to our investments in IFDS L.P., Broadway Square Partners and PRDC LLC.

Note 7—Acquisitions

2018 Acquisitions

Intralinks Holdings Inc.

On November 16, 2018, we purchased all of the outstanding stock of Intralinks Holdings, Inc. ("Intralinks") for approximately $1.0 billion in cash, which was funded with incremental term loan debt and 9.9 million shares of our common stock, plus the costs of effecting the transaction and the assumption of certain liabilities. Intralinks provides financial technology for the global banking, deal making and capital markets communities. Intralinks enables and secures the flow of information through its virtual data room offerings, facilitating strategic initiatives such as mergers and acquisitions, capital raising and investor reporting.

The net assets and results of operations of Intralinks have been included in our Consolidated Financial Statements from November 16, 2018. The fair value of the intangible assets, consisting of customer relationships, completed technologies and trade names, was determined using the income approach. Specifically, the relief from-royalty method was utilized for the completed technology and trade name and the excess earnings method was utilized for the customer relationships. The completed technology and customer relationships are amortized each year based on the ratio that the projected cash flows for the intangible assets bear to the total of current and expected future cash flows for the intangible assets. The tradename is amortized on a straight-line basis. The completed technology is amortized over approximately seven years, customer relationships are amortized over approximately twelve years, the trade name is amortized over approximately thirteen years, in each case the estimated lives of the assets. The fair value of deferred revenue was determined using the market approach. The remainder of the purchase price was allocated to goodwill and is not tax deductible.

There are $36.3 million in revenues from Intralinks' operations included in the Consolidated Statement of Comprehensive (Loss) Income for the year ended December 31, 2018.

Eze Software

On October 1, 2018, we purchased all of the outstanding stock of Eze Software ("Eze") for approximately $1.45 billion in cash, plus the costs of effecting the transaction and the assumption of certain liabilities. We funded the acquisition with a combination of cash and $875.0 million in incremental term loan debt. Eze provides investment management solutions designed to optimize operational and investment alpha running throughout the entire investment process.

The net assets and results of operations of Eze have been included in our Consolidated Financial Statements from October 1, 2018. The fair value of the intangible assets, consisting of customer relationships, completed technologies, and trade names, was determined using the income approach. Specifically, the relief from-royalty method was utilized for the completed technology and trade name and the excess earnings method was utilized for the customer relationships. The intangible assets are amortized each year based on the ratio that the projected cash flows for the intangible assets bear to the total of current and expected future cash flows for the intangible assets. The completed technology is amortized over approximately seven years, customer relationships are amortized over approximately sixteen years, the trade name is amortized over approximately ten years, in each case the estimated lives of the assets. The remainder of the purchase price was allocated to goodwill and a portion is tax deductible.

There are $69.9 million in revenues from Eze's operations included in the Consolidated Statement of Comprehensive (Loss) Income for the year ended December 31, 2018.

CACEIS North America

On June 1, 2018, we purchased all of the outstanding stock of CACEIS North America ("CACEIS") for approximately $20.0 million in cash, plus the costs of effecting the transaction and the assumption of certain liabilities. CACEIS provides fund administration services and support for complex investment strategies.

The net assets and results of operations of CACEIS have been included in our Consolidated Financial Statements from June 1, 2018. The fair value of the intangible assets, consisting of customer relationships, was determined using the income approach, specifically, the excess earnings method. The customer relationships are amortized each year based on the ratio that the projected cash flows for the intangible assets bear to the total of current and expected future cash flows for the intangible assets. The customer relationships are amortized over approximately sixteen years, which is the estimated life of the asset. The remainder of the purchase price was allocated to goodwill and is not tax deductible.

There are $6.4 million in revenues from CACEIS's operations included in the Consolidated Statement of Comprehensive (Loss) Income for the year ended December 31, 2018.

DST Systems Inc.

On April 16, 2018, we purchased all of the outstanding stock of DST Systems, Inc. ("DST") for approximately $5.1 billion in cash, plus the costs of effecting the transaction. In connection with this acquisition, we entered into the Credit Agreement pursuant to which our subsidiaries SS&C and SS&C SARL borrowed an aggregate of approximately $7.4 billion (approximately $524.5 million of which was rolled over from our existing credit facility). DST is a global provider of specialized technology, strategic advisory and business operations outsourcing to the financial services and healthcare industries.

The net assets and results of operations of DST have been included in our Consolidated Financial Statements from April 16, 2018. The fair value of the intangible assets, consisting of customer relationships, completed technologies, trade names and a non-compete agreement, was determined using the income approach. Specifically, the relief from-royalty method was utilized for the completed technology and trade name, the excess earnings method was utilized for the customer relationships and the lost profits method was utilized for the non-compete agreements. The intangible assets are amortized each year based on the ratio that the projected cash flows for the intangible assets bear to the total of current and expected future cash flows for the intangible assets. The completed technology is amortized over approximately twelve years, customer relationships are amortized over approximately fourteen years, the trade name is amortized over approximately twelve years and the non-compete agreement is amortized over approximately two years, in each case the estimated lives of the assets. The fair value of the fixed assets was determined using a combination of income, market and cost approaches, dependent on the type of fixed asset that was valued. The fair value of investments was determined based on the nature of the underlying investment. The fair value of investments in marketable equity securities and seed capital investments were determined using quoted prices in active markets for identical assets. The fair value of investment in partnership interests in private equity funds was primarily determined using the net asset value of the fund. The fair value of investments in non-marketable equity securities was determined based on recent observable transactions of similar equity securities of the investee. The fair value of the investments in unconsolidated affiliates was determined using a combination of income and market approaches. The remainder of the purchase price was allocated to goodwill and is not tax deductible.

There are $1.6 billion in revenues and $82.4 million of net income from DST's operations included in the Consolidated Statement of Comprehensive (Loss) Income for the year ended December 31, 2018.

2017 Acquisitions

CommonWealth Fund Services Ltd.

On October 13, 2017, we purchased all of the outstanding stock of CommonWealth Fund Services Ltd. ("CommonWealth") for approximately $16.4 million, plus the costs of effecting the transaction and the assumption of certain liabilities. CommonWealth provides a full range of administration services to hedge funds, private equity funds, real estate funds, fund of funds, family offices and other institutions.

The net assets and results of operations of CommonWealth have been included in our Consolidated Financial Statements from October 13, 2017. The fair value of the intangible assets, consisting of customer relationships and trade names, was determined using the income approach. Specifically, the excess earnings method was utilized for the customer relationships and the relief-from-royalty method was utilized for the trade name. The intangible assets are amortized each year based on the ratio that the projected cash flows for the intangible assets bear to the total of current and expected future cash flows for the intangible assets. The customer relationships are being amortized over approximately fifteen years and the trade name is being amortized over approximately two years, in each case the estimated lives of the assets. The remainder of the purchase price was allocated to goodwill and is not tax deductible.

The following summarizes the preliminary allocation of the purchase price for the 2018 acquisitions of Intralinks, Eze, CACEIS and DST. The assets and liabilities pending finalization include the valuation of acquired tangible and intangible assets and the evaluation of taxes. The following also summarizes the final allocation of the purchase price for the 2017 acquisition of CommonWealth (in millions):

	Intralinks	Eze	CACEIS	DST	CommonWealth
Accounts receivable	$ 58.3	$ 45.0	$ 1.5	$ 406.8	$ 0.8
Fixed assets	8.0	15.9	0.4	507.4	0.1
Other assets	31.9	8.2	0.4	386.4	0.2
Investments	—	—	—	474.0	—
Acquired client relationships and contracts	646.1	463.8	9.8	1,889.1	6.7
Completed technology	123.2	168.1	—	550.0	—
Trade names	43.1	13.0	—	139.0	0.1
Non-compete agreements	—	—	—	43.0	—
Goodwill	823.4	838.5	9.7	2,643.8	10.9
Current portion of long-term debt	—	—	—	(605.8)	—
Accounts payable	(5.9)	(3.3)	(0.1)	(98.3)	(0.1)
Accrued employee compensation and benefits	(45.6)	(17.0)	(0.3)	(174.9)	—
Deferred revenue	(35.3)	(0.9)	(0.1)	(34.2)	—
Deferred income taxes	(176.4)	(77.1)	(1.3)	(760.4)	(1.8)
Long-term debt	—	—	—	(29.4)	—
Client funds obligations	—	—	—	(376.2)	—
Other liabilities assumed	(18.8)	(5.0)	(0.3)	(298.5)	(0.3)
Consideration paid, net of cash acquired	$ 1,452.0	$ 1,449.2	$ 19.7	$ 4,661.8	$ 16.6

Additionally, we acquired Modestspark in October 2017 for approximately $2.8 million.

The consideration paid, net of cash acquired for DST above includes $48.1 million of non-cash consideration related to the fair value of unvested acquired equity awards with a pre-acquisition service period. This amount is excluded from “Cash paid for business acquisitions, net of cash acquired” for 2018 on the Company’s Consolidated Statement of Cash Flows. Cash acquired for DST includes $347.0 million of restricted cash and cash equivalents classified as funds held on behalf of clients.

The Company recorded severance expense related to reductions in headcount in connection with the integration efforts associated with the acquisitions of DST, Eze and Intralinks. The majority of the positions eliminated in the reduction in force were effective in June 2018 for DST. The reduction was completed in December 2018. The amount of severance expense recognized in the Company’s Consolidated Statement of Comprehensive (Loss) Income for 2018 was as follows (in millions):

Consolidated Statements of Comprehensive (Loss) Income Classification	For the Year Ended December 31, 2018
Cost of software-enabled services	$ 38.3
Cost of license, maintenance and other related	0.5
Total cost of revenues	38.8
Selling and marketing	3.5
Research and development	12.7
General and administrative	7.6
Total operating expenses	23.8
Total severance expense	$ 62.6

The fair value of acquired accounts receivable balances approximates the contractual amounts due from acquired customers, except for approximately $7.9 million, $7.5 million and $6.1 million of contractual amounts that are not expected to be collected as of the acquisition date and that were also reserved by the companies we acquired – Intralinks, Eze and DST, respectively.

The goodwill associated with each of the transactions above is a result of expected synergies from combining the operations of businesses acquired with us and intangible assets that do not qualify for separate recognition, such as an assembled workforce.

The following unaudited pro forma condensed consolidated results of operations are provided for illustrative purposes only and assume that the acquisitions of Intralinks, Eze, CACEIS and DST occurred on January 1, 2017 and CommonWealth and Modestspark occurred on January 1, 2016, after giving effect to certain adjustments, including amortization of intangibles, interest, transaction costs and tax effects. This unaudited pro forma information (in millions, except per share data) should not be relied upon as being indicative of the historical results that would have been obtained if the acquisitions had actually occurred on that date, nor of the results that may be obtained in the future.

	Year Ended December 31, 2018	Year Ended December 31, 2017
Revenues	$ 4,624.7	$ 4,501.6
Net income	$ 103.1	$ 120.8
Basic EPS	$ 0.44	$ 0.59
Diluted EPS	$ 0.42	$ 0.57
Basic weighted average number of common shares outstanding	232.5	204.9
Diluted weighted average number of common and common equivalent shares outstanding	243.7	211.6

Note 8—Goodwill and intangible assets

The following table summarizes changes in goodwill (in millions):

Balance at December 31, 2016	$ 3,652.7
2017 acquisitions	13.3
Adjustments to prior acquisitions	(0.6)
Effect of foreign currency translation	42.4
Balance at December 31, 2017	$ 3,707.8
2018 acquisitions	4,315.4
Adjustments to prior acquisitions	0.2
Effect of foreign currency translation	(165.4)
Balance at December 31, 2018	$ 7,858.0

A summary of the components of intangible assets is as follows (in millions):

	December 31, 2018	December 31, 2017
Customer relationships	$ 4,618.4	$ 1,665.8
Completed technology	1,379.6	550.9
Trade names	255.6	61.1
Other	45.7	2.8
Total intangible assets	6,299.3	2,280.6
Less: accumulated amortization	(1,338.0)	(938.8)
Total intangible assets, net	$ 4,961.3	$ 1,341.8

Total estimated amortization expense, related to intangible assets, for each of the next five years and thereafter, as of December 31, 2018, is expected to approximate (in millions):

Year Ending December 31,	
2019	$ 632.8
2020	571.3
2021	510.2
2022	476.9
2023	442.9
Thereafter	2,327.2
Total	$ 4,961.3

Amortization expense associated with customer relationships, completed technology and other amortizable intangible assets was $410.7 million, $205.9 million and $201.5 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Net capitalized software costs of $42.6 million and $12.1 million are included in the December 31, 2018 and 2017 Consolidated Balance Sheets, respectively, under "Intangible and other assets".

Amortization expense related to capitalized software development costs was $7.7 million, $5.4 million, and $3.5 million for each of the years ended December 31, 2018, 2017, and 2016, respectively.

Note 9—Debt

At December 31, 2018 and 2017, debt consisted of the following (in millions):

	December 31,	
	2018	2017
Senior secured credit facilities, weighted-average interest rate of 4.77% and 3.75%, respectively	$ 8,319.1	$ 1,492.2
5.875% senior notes due 2023	—	600.0
Other indebtedness	28.2	—
Unamortized original issue discount and debt issuance costs	(91.3)	(47.0)
	8,256.0	2,045.2
Less current portion of long-term debt	87.5	37.9
Long-term debt	$ 8,168.5	$ 2,007.3

Senior Secured Credit Facilities

On April 16, 2018, in connection with our acquisition of DST Systems, Inc. ("DST"), we entered into an amended and restated credit agreement with SS&C Technologies, Inc. ("SS&C"), SS&C European Holdings SARL, an indirect wholly-owned subsidiary of SS&C ("SS&C SARL") and SS&C Technologies Holdings Europe SARL, an indirect wholly-owned subsidiary of SS&C ("SS&C Tech SARL") as the borrowers ("Credit Agreement").

The Credit Agreement includes four tranches of term loans (together the "Initial Term Loans"): (i) a $518.6 million term B-1 facility which matures on July 8, 2022 for SS&C ("Term B-1 Loan"); (ii) a $5.9 million term B-2 facility which matures on July 8, 2022 for SS&C SARL ("Term B-2 Loan") (iii) a new $5.046 billion term B-3 facility, which matures on April 16, 2025 for SS&C ("Term B-3 Loan"); and (iv) a new $1.8 billion term B-4 facility, which matures on April 16, 2025 for SS&C SARL ("Term B-4 Loan"). In addition, the Credit Agreement has a revolving credit facility with a five-year term available for borrowings by SS&C with $250.0 million in available commitments ("Revolving Credit Facility"), of which $242.4 million was available as of December 31, 2018. The Revolving Credit Facility also contains a $25 million letter of credit sub-facility, of which $7.6 million was utilized as of December 31, 2018.

The majority of the initial proceeds from the Initial Term Loans was used to satisfy the consideration required to fund the acquisition of DST, repay certain amounts outstanding under our then-existing credit agreement ("Prior Credit Agreement"), repay all of the outstanding principal amount of our 5.875% Senior Notes due 2023 ("Senior Notes") and to repay acquired debt associated with DST.

The refinancing of the Prior Credit Agreement was evaluated in accordance with FASB ASC 470-50, *Debt-Modifications and Extinguishments*, for modification and extinguishment accounting. We accounted for the refinancing as a debt modification with respect to amounts that remained obligations of the same lender in the syndicate with minor changes in cash flows and as a debt extinguishment with respect to amounts that were obligations of lenders that exited the syndicate or remained in the syndicate but experienced a change in cash flows of greater than 10%. See *Loss on extinguishment of debt* section below.

On October 1, 2018, in connection with our acquisition of Eze, Holdings, we entered into an amendment (the "Commitment Increase Amendment") to the Credit Agreement. Pursuant to the Commitment Increase Amendment, a new $875.0 million senior secured term B-5 facility ("Term B-5 Loan", and together with the Initial Term Loans, the "Term Loans") was made available to us, the proceeds of which was used to finance, in part, the Eze acquisition.

On November 16, 2018, in connection with our acquisition of Intralinks, Holdings, we entered into an amendment (the "Incremental Term Loan Amendment") to the Credit Agreement. Pursuant to the Incremental Term Loan Amendment, an additional $1.0 billion senior secured term B-5 facility ("Term B-5 Loan", and together with the Initial Term Loans, the "Term Loans") was made available to us, the proceeds of which was used to finance, in part, the Intralinks acquisition.

The Term Loans and Revolving Credit Facility bear interest, at the election of the borrowers, at the base rate (as defined in the Credit Agreement) or LIBOR, plus the applicable interest rate margin for the credit facility. Amounts drawn on the Revolving Credit Facility initially bear interest at either LIBOR plus 2.25% or at the base rate plus 1.25%, and is subject to a step-down at any time our consolidated net secured leverage ratio is less than 4.75 times, to 2.00% in the case of the LIBOR margin and 1.00% in the case of the base rate margin. The Term B-1 Loan and Term B-2 Loan bear interest at either LIBOR plus 2.25% or at the base rate plus 1.25%. The Term B-3 Loan, Term B-4 Loan and Term B-5 Loan initially bear interest at either LIBOR plus 2.50% or at the base rate plus 1.50%, and are subject to a step-down at any time our consolidated net secured leverage ratio is less than 4.75 times, to 2.25% in the case of the LIBOR margin and 1.25% in the case of the base rate margin.

As of December 31, 2018, there was $514.5 million in principal amount outstanding under the Term B-1 Loan, $4,309.6 million in principal amount outstanding under the Term B-3 Loan, $1,634.7 million in principal amount outstanding under the Term B-4 Loan and $1,860.3 million in principal amount outstanding under the Term B-5 Loan. There was no principal amount outstanding under the Term B-2 Loan.

SS&C and SS&C SARL are required to make scheduled quarterly payments of approximately 0.25% of the remaining principal amount of the Term B-1 Loan with the balance due and payable on July 8, 2022. SS&C and SS&C SARL are required to make scheduled quarterly payments of 0.25% of the original principal amount of the Term B-3 Loan, Term B-4 Loan and Term B-5 Loan, with the balance due and payable on April 16, 2025. No amortization is required under the Revolving Credit Facility.

SS&C's and SS&C SARL's obligations under the Term Loans are guaranteed by (i) our existing and future U.S. wholly-owned restricted subsidiaries, in the case of the Term B-1 Loan, Term B-3 Loan, Term B-5 Loan and the Revolving Credit Facility and (ii) our existing and future wholly-owned restricted subsidiaries, in the case of the Term B-4 Loan.

The obligations of the U.S. loan parties under the Credit Agreement are secured by substantially all of the assets of such persons (subject to customary exceptions and limitations), including a pledge of all of the capital stock of substantially all of the U.S. wholly-owned restricted subsidiaries of such persons (with customary exceptions and limitations) and 65% of the capital stock of certain foreign restricted subsidiaries of such persons (with customary exceptions and limitations). All obligations of the non-U.S. loan parties under the Credit Agreement are secured by substantially all of our and the other guarantors' assets (subject to customary exceptions and limitations), including a pledge of all of the capital stock of substantially all of our wholly-owned restricted subsidiaries (with customary exceptions and limitations).

The Credit Agreement includes negative covenants that, among other things and subject to certain thresholds and exceptions, limit our ability and the ability of its restricted subsidiaries to incur debt or liens, make investments (including in the form of loans and acquisitions), merge, liquidate or dissolve, sell property and assets, including capital stock of its subsidiaries, pay dividends on its capital stock or redeem, repurchase or retire its capital stock, alter the business we conduct, amend, prepay, redeem or purchase subordinated debt, or engage in transactions with its affiliates. The Credit Agreement also contains customary representations and warranties, affirmative covenants and events of default, subject to customary thresholds and exceptions. In addition, the Credit Agreement contains a financial covenant for the benefit of the Revolving Credit Facility requiring us to maintain a minimum consolidated net secured leverage ratio. In addition, under the Credit Agreement, certain defaults under agreements governing other material indebtedness could result in an event of default under the Credit Agreement, in which case the lenders could elect to accelerate payments under the Credit Agreement and terminate any commitments they have to provide future borrowings.

Senior Notes

On April 16, 2018, we redeemed all of the outstanding principal amount of our Senior Notes utilizing a portion of the proceeds from the Initial Term Loans described above. The redemption of the Senior Notes required the payment of a "make whole" premium calculated pursuant to the indenture governing the Senior Notes. See *Loss on extinguishment of debt* section below. In addition, on May 1, 2018, we redeemed senior notes of DST that were acquired as a part of the acquisition of DST utilizing a portion of the proceeds from the Initial Term Loans described above. The redemption of DST's senior notes totaled $600.4 million, which included a "make whole" premium.

Other indebtedness

In connection with the acquisition of DST, we assumed a mortgage with a principal amount of £21.0 million, which matures in October 2020 ("U.K. Mortgage") and a $4.1 million mortgage on property in the U.S. The outstanding amount under the U.K. Mortgage was $24.2 million at December 31, 2018 with a fixed interest rate of 3.1%. Principal payments of £1.0 million are payable semi-annually in April and October of each year and accrued interest payable quarterly, with the outstanding balance due at maturity.

Debt issuance costs

In connection with the Credit Agreement, we capitalized an aggregate of $55.3 million in financing costs in 2018. Other costs incurred in connection with the Credit Agreement, which did not meet the criteria for capitalization, are included in Transaction expenses in the Consolidated Statement of Comprehensive (Loss) Income.

Loss on extinguishment of debt

We recorded a $44.4 million loss on extinguishment of debt in connection with the entry into the Credit Agreement and redemption of the Senior Notes during 2018. The loss on early extinguishment of debt includes the write-off of a portion of the unamortized capitalized financing fees and the unamortized original issue discount related to the Prior Credit Agreement for amounts accounted for as a debt extinguishment, a make-whole premium paid in connection with the redemption of the Senior Notes and the write-off of all unamortized capitalized financing fees and unamortized original issue discount related to the Senior Notes. During the fourth quarter of 2018, we purchased $45.0 million principal amount of our Term Loans in privately negotiated transactions, which resulted in a gain on extinguishment of debt totaling $1.1 million.

Fair value of debt

The carrying amounts and fair values of financial instruments are as follows (in millions):

	December 31, 2018		December 31, 2017	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial liabilities:				
Senior secured credit facilities	$ 8,319.1	$ 7,847.4	$ 1,492.2	$ 1,500.8
5.875% senior notes due 2023	—	—	600.0	631.3
Other indebtedness	28.2	28.3	—	—

The above fair values, which are Level 2 liabilities, were computed based on comparable quoted market prices. The fair values of cash, accounts receivable, net, short-term borrowings, and accounts payable approximate the carrying amounts due to the short-term maturities of these instruments.

Future maturities of debt

At December 31, 2018, annual maturities of long-term debt during the next five years and thereafter are as follows (in millions):

Year ending December 31,	
2019	$ 87.4
2020	106.5
2021	84.8
2022	578.4
2023 and thereafter	7,490.2
Total	$ 8,347.3

Note 10—Stockholders' Equity

Two-for-one Stock Split. On May 25, 2016, our Board of Directors approved a two-for-one stock split to be effected in the form of a stock dividend. The record date for the stock split was June 7, 2016 and the payment date was June 24, 2016. All share and per share amounts (other than for our Class A non-voting common stock) have been retroactively restated for all periods presented to reflect the stock split.

Conversion of Class A Common Stock. On March 30, 2016, William C. Stone converted 2.7 million shares of Class A non-voting stock into 2.7 million shares of our common stock, or 5.4 million shares of common stock on a post-split basis. Each share of Class A non-voting common stock converted automatically into one share of our common stock upon the expiration of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

Public offering. In April 2018, we completed a public offering of our common stock. The offering included 30.3 million newly issued shares of common stock sold by us (including 3.9 million shares of common stock sold pursuant to the underwriters' option to purchase additional shares) at an offering price to the public of $47.50 per share for which we received total net proceeds of approximately $1.4 billion.

Other Common Stock Issuance. In November 2018, we issued 9.9 million shares in connection with our acquisition of Intralinks.

Dividends. In 2018, we paid a quarterly cash dividend of $0.07 per share of common stock on March 15, 2018 and June 15, 2018 and $0.08 per share of common stock on September 18, 2018 and December 17, 2018 to stockholders of record as of the close of business on March 1, 2018, June 1, 2018, September 4, 2018 and December 1, 2018, respectively, totaling $70.9 million. In 2017, we paid a quarterly cash dividend of $0.0625 per share of common stock on March 15, 2017, June 15, 2017 and $0.07 per share of common stock on September 15, 2017 and December 15, 2017 to stockholders of record as of the close of business on March 1, 2017, June 1, 2017, September 1, 2017 and December 1, 2017, respectively, totaling $54.4 million.

Other comprehensive loss. Accumulated other comprehensive loss balances, net of tax consist of the following (in millions):

	Foreign Currency Translation	Accumulated Other Comprehensive Loss
Balance, December 31, 2016	$ (139.1)	$ (139.1)
Net current period other comprehensive income	56.4	56.4
Balance, December 31, 2017	$ (82.7)	$ (82.7)
Net current period other comprehensive loss	(260.3)	(260.3)
Balance, December 31, 2018	$ (343.0)	$ (343.0)

Adjustments to accumulated other comprehensive (loss) income attributable to us are as follows (in millions):

	Year Ended December 31, 2018		Year Ended December 31, 2017		Year Ended December 31, 2016	
	Pretax	Tax Effect	Pretax	Tax Effect	Pretax	Tax Effect
Cumulative translation adjustments						
Current period translation adjustments	$ (260.9)	$ 0.6	$ 56.9	$ (0.5)	$ (55.7)	$ (0.2)
Net cumulative translation adjustments	(260.9)	0.6	56.9	(0.5)	(55.7)	(0.2)
Total other comprehensive (loss) income	$ (260.9)	$ 0.6	$ 56.9	$ (0.5)	$ (55.7)	$ (0.2)

Note 11—Revenue

Adoption of ASC Topic 606, "Revenue from Contracts with Customers"

On January 1, 2018, we adopted ASC 606 using the modified retrospective method for those contracts that were not completed as of the date of adoption. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts continue to be reported in accordance with ASC 605 and 985. The most significant impact of the standard to us relates to the timing of revenue recognition for arrangements involving term licenses. Under ASC 606, we are required to recognize term license revenues upon the transfer of the license and recognize the associated maintenance revenues over the contract period, as opposed to our prior practice of recognizing both the term license and maintenance revenues ratably over the contract period. In addition, we are required to capitalize and amortize incremental costs of obtaining a contract, such as certain sales commission costs, over the expected customer relationship period if we expect to recover those costs. We previously expensed these costs over the length of the initial contract excluding any renewals.

We recorded an increase to retained earnings of $65.8 million, or $47.9 million net of tax, as of January 1, 2018 due to the cumulative impact of adopting ASC 606, with the impact primarily related to our term license revenues. The impact to revenues for the year ended December 31, 2018 related to these adjustments was a decrease of $39.9 million.

The impact of adoption of ASC 606 on our Consolidated Statement of Comprehensive (Loss) Income was as follows (in millions):

	Year Ended December 31, 2018		
	As Reported	Without adoption of ASC 606	Effect of Change
Revenues:			
License, maintenance and related	$ 622.2	$ 590.0	$ 32.2
Operating expenses:			
Selling and marketing	$ 211.0	$ 214.4	$ (3.4)

The impact of adoption of ASC 606 on our Consolidated Balance Sheet was as follows (in millions):

	As of December 31, 2018		
	As Reported	Balance without adoption of ASC 606	Effect of Change
Assets:			
Accounts receivable, net	$ 681.7	$ 686.8	$ (5.1)
Contract asset (current)	18.5	—	18.5
Prepaid expenses and other current assets	154.5	147.9	6.6
Contract asset (non-current)	31.5	—	31.5
Liabilities:			
Deferred revenue	$ 245.7	$ 295.8	$ (50.1)
Other long-term liabilities	235.5	233.3	2.2

The adoption of ASC 606 had no impact on our total cash flows from operations.

Deferred revenues primarily represents unrecognized fees billed or collected for maintenance and professional services. Deferred revenues are recognized as (or when) we perform under the contract. Deferred revenues are recorded on a net basis with contract assets at the contract level. Accordingly, as of December 31, 2018, approximately $32.4 million of deferred revenue is presented net within contract assets arising from the same contracts. The amount of revenues recognized in the period that was included in the opening deferred revenues balance was $208.7 million for the year ended December 31, 2018.

As of December 31, 2018, revenue of approximately $357.0 million is expected to be recognized from remaining performance obligations for license, maintenance and related revenues, of which $233.5 million is expected to be recognized over the next twelve months.

Revenue Disaggregation

The following table disaggregates our revenues by geography (in millions):

	Year Ended December 31,		
	2018	2017 (1)	2016 (1)
United States	$ 2,479.8	$ 1,222.4	$ 1,081.3
United Kingdom	503.9	115.8	105.3
Asia-Pacific and Japan	145.8	112.7	90.1
Europe (excluding United Kingdom), Middle East and Africa	145.4	102.1	101.3
Canada	96.3	76.4	65.7
Americas, excluding United States and Canada	49.9	45.9	37.7
Total	$ 3,421.1	$ 1,675.3	$ 1,481.4

(1) As noted above, prior period amounts have not been adjusted under the modified retrospective method.

The following table disaggregates our revenues by source (in millions):

	Year Ended December 31,		
	2018	2017 (1)	2016 (1)
Software-enabled services	$ 2,798.9	$ 1,114.0	$ 956.8
Maintenance and term licenses	508.8	463.6	414.7
Perpetual licenses	29.5	19.8	23.9
Professional services	83.9	77.9	86.0
Total	$ 3,421.1	$ 1,675.3	$ 1,481.4

(1) As noted above, prior period amounts have not been adjusted under the modified retrospective method.

Note 12—Stock-based Compensation

In February 2016, our Board of Directors adopted the Amended and Restated 2014 Stock Incentive Plan (the "Amended 2014 Plan"), which became effective in May 2016 upon stockholder approval and which amended and restated our 2014 Stock Option Plan (the "2014 Plan") (together with the Amended 2014 Plan, the "2014 Plans"). The Amended 2014 Plan was adopted with an initial share capacity of 24.0 million shares available for the grant of awards and was adopted with the intent of being our only equity plan by authorizing the issuance of full-value awards (that is, restricted stock awards ("RSAs") and restricted stock units ("RSUs")) and by expanding the class of participants to include non-employee directors. Since the adoption of the Amended 2014 Plan, we have not made any grants of equity or equity-based awards under the 2008 Stock Incentive Plan or the 2006 Equity Incentive Plan.

The 2014 Plan authorizes stock options to be granted for up to 6.0 million shares of our common stock. Under the 2014 Plan, the exercise price of stock options is set on the grant date and may not be less than the fair market value per share on such date. Generally, stock options expire ten years from the date of grant. We have granted time-based stock options under the 2014 Plan.

In April 2008, our Board of Directors adopted, and our stockholders approved, an equity-based incentive plan ("the 2008 Plan"), which authorizes equity awards to be granted for up to 21.8 million shares of our common stock, which was calculated based on an initial authorization of 2.8 million shares of our common stock and an annual increase to be added on the first day of each of our fiscal years during the term of the 2008 Plan beginning in fiscal 2009 equal to the lesser of (i) 2.8 million shares of common stock, (ii) 2% of the outstanding shares on such date or (iii) an amount determined by our Board of Directors. Under the 2008 Plan, which became effective in July 2008, the exercise price of awards is set on the grant date and may not be less than the fair market value per share on such date. Generally, awards expire ten years from the date of grant. We have granted time-based options and RSUs under the 2008 Plan.

In August 2006, our Board of Directors adopted an equity-based incentive plan ("the 2006 Plan"), which authorizes equity awards to be granted for up to 22.3 million shares of our common stock. Under the 2006 Plan, the exercise price of awards is set on the grant date and may not be less than the fair market value per share on such date. Generally, awards expire ten years from the date of grant. We have granted RSAs of our common stock and both time-based and performance-based options under the 2006 Plan.

We generally settle RSUs, RSAs, stock appreciation rights ("SARs") and stock option exercises with newly issued common shares.

Restricted stock units. During the year ended December 31, 2018, we granted 24,970 RSUs under the 2014 Plan, which vest 50% at the time of granting and continue to vest 1/36th of the remaining balance each month thereafter for 36 months. We did not grant any RSUs during the year ended December 31, 2017. At December 31, 2018 and 2017, there was approximately $0.6 million and $1.5 million, respectively, of unearned non-cash stock-based compensation related to the RSUs that we expect to recognize as expense over a remaining period of approximately 1.8 and 0.8 years, respectively.

Restricted stock awards. We did not grant any RSAs during the years ended December 31, 2018 and 2017. The RSAs vest in full upon a change in control, subject to certain conditions. At both December 31, 2018 and 2017, there was less than $0.1 million of unearned non-cash stock-based compensation related to the RSAs that we expect to recognize as expense over a weighted average remaining period of approximately 3 months and 15 months, respectively.

Time-based options and SARs. Time-based options and SARs granted under the 2006 Plan, the 2008 Plan, the 2014 Plans generally vest 25% on the first anniversary of the grant date and 1/36th of the remaining balance each month thereafter for 36 months. All outstanding time-based options and SARs vest upon a change in control, subject to certain conditions. Time-based options and SARs granted during 2018, 2017 and 2016 have a weighted-average grant date fair value of $10.38, $7.86 and $6.62 per share, respectively, based on the Black-Scholes option pricing model. Compensation expense is recorded on a straight-line basis over the requisite service period. The fair value of time-based options and SARs vested during the years ended December 31, 2018, 2017 and 2016 was approximately $50.4 million, $32.1 million and $41.4 million, respectively. At December 31, 2018 and 2017, there was approximately $165.2 million and $117.9 million, respectively, of unearned non-cash stock-based compensation related to time-based options and SARs that we expect to recognize as expense over a weighted average remaining period of approximately 3.3 and 3.1 years, respectively.

For the time-based options and SARs valued using the Black-Scholes option-pricing model, we used the following weighted-average assumptions:

	Time-Based awards 2018	2017	2016
Expected term to exercise (years)	4.0	4.0	4.0
Expected volatility	25.26%	25.61%	27.64%
Risk-free interest rate	2.67%	1.92%	1.30%
Expected dividend yield	0.70%	0.73%	0.82%

Total stock options, SARs, RSUs and RSAs. The amount of stock-based compensation expense recognized in our Consolidated Statements of Comprehensive (Loss) Income for the years ended December 31, 2018, 2017 and 2016 was as follows (in millions):

Consolidated Statements of Comprehensive (Loss) Income Classification	Year Ended December 31, 2018 Options, SARs	RSUs	RSAs	Total	Year Ended December 31, 2017 Options, SARs	RSUs	RSAs	Total	Year Ended December 31, 2016 Options, SARs	RSUs	RSAs	Total
Cost of software-enabled services	$ 25.7	$ 13.7	$ —	$ 39.4	$ 11.1	$ 0.1	$ —	$ 11.2	$ 10.1	$ 0.1	$ —	$ 10.2
Cost of license, maintenance and other related	3.9	0.8	—	4.7	3.6	0.6	—	4.2	3.5	1.5	—	5.0
Total cost of revenues	29.6	14.5	—	44.1	14.7	0.7	—	15.4	13.6	1.6	—	15.2
Selling and marketing	7.3	4.5	—	11.8	8.5	1.0	0.1	9.6	8.9	2.4	0.2	11.5
Research and development	8.0	1.0	—	9.0	6.2	1.3	—	7.5	6.0	2.3	—	8.3
General and administrative	16.1	15.9	—	32.0	8.6	0.4	—	9.0	11.3	4.2	—	15.5
Total operating expenses	31.4	21.4	—	52.8	23.3	2.7	0.1	26.1	26.2	8.9	0.2	35.3
Total stock-based compensation expense	$ 61.0	$ 35.9	$ —	$ 96.9	$ 38.0	$ 3.4	$ 0.1	$ 41.5	$ 39.8	$ 10.5	$ 0.2	$ 50.5

The associated future income tax benefit recognized was $33.7 million, $10.3 million and $18.4 million for the years ended December 31, 2018, 2017 and 2016, respectively.

For the year ended December 31, 2018, the amount of cash received from the exercise of stock options was $84.9 million, with an associated tax benefit from stock awards realized of $34.6 million. The intrinsic value of options and SARs exercised during the year ended December 31, 2018 was approximately $107.6 million. For the year ended December 31, 2017, the amount of cash received from the exercise of stock options was $60.2 million, with an associated tax benefit from stock awards realized of $25.0 million. The intrinsic value of options and SARs exercised during the year ended December 31, 2017 was approximately $71.1 million. For the year ended December 31, 2016, the amount of cash received from the exercise of stock options was $39.2 million, with an associated tax benefit from stock awards realized of $62.1 million. The intrinsic value of options and SARs exercised during the year ended December 31, 2016 was approximately $141.2 million.

In connection with our acquisition of DST in April 2018, we converted DST's unvested stock options, unvested RSUs and unvested PSUs into equity awards and rights to receive our common stock. During the year ended December 31, 2018, we recognized stock-based compensation expense of $49.3 million related to these assumed awards, of which $31.1 million related to one-time charges for the accelerated vesting of certain awards.

The following table summarizes stock option and SAR activity as of and for the years ended December 31, 2018, 2017 and 2016 (share data in millions):

	Shares	Weighted Average Exercise Price
Outstanding at December 31, 2015	30.2	$ 20.64
Granted (1)	2.4	$ 30.39
Cancelled/forfeited	(1.6)	$ 31.15
Exercised	(6.0)	$ 7.53
Outstanding at December 31, 2016	25.0	$ 24.04
Granted (2)	11.5	$ 36.63
Cancelled/forfeited	(1.4)	$ 31.59
Exercised	(3.8)	$ 19.08
Outstanding at December 31, 2017	31.3	$ 28.92
Granted (2)	13.2	$ 47.50
Equity awards assumed from DST	0.7	$ 48.85
Cancelled/forfeited	(1.4)	$ 38.56
Exercised	(4.0)	$ 24.71
Outstanding at December 31, 2018	39.8	$ 35.48

(1) Of the grants during 2016, 1.0 million were granted under the Amended 2014 Plan and 1.4 million were granted under the 2008 Plan.
(2) Granted under the Amended 2014 Plan.

The following table summarizes RSU activity as of and for the years ended December 31, 2018, 2017 and 2016 (share data in millions):

	Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2015	1.0	$ 31.01
Granted	—	$ —
Cancelled/forfeited	(0.1)	$ 31.22
Vested	(0.5)	$ 30.95
Outstanding at December 31, 2016	0.4	$ 31.06
Granted	—	$ —
Cancelled/forfeited	—	$ 31.36
Vested	(0.2)	$ 31.03
Outstanding at December 31, 2017	0.2	$ 31.04
Granted	—	$ 50.62
Equity awards assumed from DST	2.0	$ 50.71
Cancelled/forfeited	—	$ 48.71
Vested	(0.8)	$ 46.45
Outstanding at December 31, 2018	1.4	$ 50.44

The following table summarizes information about vested stock options and SARs outstanding that are currently exercisable and stock options and SARs outstanding that are expected to vest at December 31, 2018:

Outstanding, Vested Stock Options and SARs Currently Exercisable				Outstanding Stock Options and SARs Expected to Vest			
Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Term	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Term
(In millions)		(In millions)	(Years)	(In millions)		(In millions)	(Years)
17.5	$ 25.85	$ 338.0	5.90	39.8	$ 35.47	$ 419.4	7.75

Note 13—Defined Contribution Plans

We sponsor defined contribution plans that cover our domestic and non-domestic employees following the completion of an eligibility period. During the years ended December 31, 2018, 2017 and 2016, we incurred $60.8 million, $18.1 million and $14.8 million, respectively, of employer contribution expenses under these plans. Additionally, we sponsor a defined benefit pension plan in the United Kingdom, which has a net benefit asset as of December 31, 2018 of $0.8 million.

Note 14—Basic and diluted earnings per share

Earnings per share ("EPS") is calculated in accordance with the relevant standards. Basic EPS includes no dilution and is computed by dividing income available to our common stockholders by the weighted average number of common shares outstanding during the period. Diluted EPS is computed by dividing net income by the weighted average number of common and common equivalent shares outstanding during the period. Common equivalent shares consist of stock options, SARs and RSUs and RSAs using the treasury stock method. Common equivalent shares are excluded from the computation of diluted earnings per share if the effect of including such common equivalent shares is anti-dilutive because their total assumed proceeds exceed the average fair value of common stock for the period. We have two classes of common stock, each with identical participation rights to earnings and liquidation preferences, and therefore the calculation of EPS as described above is identical to the calculation under the two-class method.

The following table sets forth the computation of basic and diluted EPS (in millions, except per share amounts):

	Year Ended December 31, 2018	2017	2016
Net income	$ 103.2	$ 328.9	$ 131.0
Shares:			
Weighted average common shares outstanding — used in calculation of basic EPS	232.5	204.9	200.3
Weighted average common stock equivalents — options and restricted shares	11.2	6.7	5.5
Weighted average common and common equivalent shares outstanding — used in calculation of diluted EPS	243.7	211.6	205.8
Earnings per share - Basic	$ 0.44	$ 1.60	$ 0.65
Earnings per share - Diluted	$ 0.42	$ 1.55	$ 0.64

Weighted average stock options, SARs, RSUs and RSAs representing 5.5 million, 10.6 million and 14.1 million shares were outstanding for the years ended December 31, 2018, 2017 and 2016, respectively, but were not included in the computation of diluted EPS because the effect of including them would be anti-dilutive.

Note 15—Income Taxes

The sources of income before income taxes were as follows (in millions):

	Year Ended December 31, 2018	2017	2016
U.S.	$ (10.9)	$ 153.8	$ 68.2
Foreign	136.0	128.9	95.4
Income before income taxes	$ 125.1	$ 282.7	$ 163.6

The income tax provision (benefit) consists of the following (in millions):

	Year Ended December 31, 2018	2017	2016
Current:			
Federal	$ 66.4	$ 81.1	$ 47.6
Foreign	37.8	21.4	18.9
State	23.5	3.3	13.9
Total	127.7	105.8	80.4
Deferred:			
Federal	(75.4)	(144.7)	(38.6)
Foreign	0.2	(2.8)	(4.1)
State	(30.6)	(4.5)	(5.1)
Total	(105.8)	(152.0)	(47.8)
Total	$ 21.9	$ (46.2)	$ 32.6

The reconciliation between the expected tax expense and the actual tax provision (benefit) is computed by applying the U.S. federal corporate income tax rate of 21% (35% for years ended December 31, 2017 and 2016) to income before income taxes as follows (in millions):

	Year Ended December 31, 2018	2017	2016
Computed "expected" tax expense	$ 26.3	$ 98.9	$ 57.3
(Decrease) increase in income tax expense resulting from:			
State income taxes (net of federal income tax benefit)	(6.0)	7.5	5.6
Foreign operations	10.7	(36.2)	(33.6)
Enactment of Tax Act	—	(88.0)	—
Effects of stock based compensation	(14.6)	(13.6)	—
Effect of valuation allowance	4.6	(3.3)	2.1
Uncertain tax positions	(0.9)	(8.2)	6.5
Tax credits	(4.0)	(0.6)	(3.7)
Other	5.8	(2.7)	(1.6)
Provision (benefit) provision for income taxes	$ 21.9	$ (46.2)	$ 32.6

On December 22, 2017, the Tax Act was enacted into law, reducing the U.S. corporate income tax rate from 35% to 21%. In accordance with SAB 118, we made a provisional beneficial estimate of $88.0 million in the fourth quarter of 2017 to account for specific income tax effects of the Tax Act. Pursuant to SAB 118, we were allowed a measurement period of up to one year after the enactment date of the Tax Act to finalize the accounting of the related tax impacts. We completed our accounting of the Tax Act in the fourth quarter of 2018 and made no significant adjustments to the provisional estimates made in the prior year.

The components of deferred income taxes at December 31, 2018 and 2017 are as follows (in millions):

	2018 Deferred Tax Assets	2018 Deferred Tax Liabilities	2017 Deferred Tax Assets	2017 Deferred Tax Liabilities
Net operating loss carryforwards	54.8	—	24.2	—
Deferred compensation	47.6	—	22.4	—
Tax credit carryforwards	34.6	—	26.3	—
Accrued expenses	25.3	—	13.3	—
Other	24.8	—	0.9	—
Customer relationships	—	834.4	—	220.8
Other intangible assets	—	204.5	—	53.7
Unconsolidated investments	—	134.4	0.6	—
Acquired technology	—	66.5	—	53.3
Trade names	—	49.9	—	6.3
Property and equipment	—	43.4	—	6.3
Unremitted foreign earnings	—	9.0	—	7.2
Deferred revenue	—	5.7	—	0.2
Total	187.1	1,347.8	87.7	347.8
Valuation allowance	(36.2)	—	(21.1)	—
Total	$ 150.9	$ 1,347.8	$ 66.6	$ 347.8

At December 31, 2018 and 2017, we had accrued a deferred income tax liability for foreign withholding taxes of $9.0 million and $7.2 million, respectively, on the unremitted earnings of our major Canadian subsidiary and certain unconsolidated foreign affiliates we do not control and whose earnings cannot be considered permanently reinvested. We have not accrued any deferred income taxes for withholding, foreign local or U.S. state income taxes on the unremitted earnings of other foreign subsidiaries as those earnings are permanently reinvested.

At December 31, 2018, we have domestic federal net operating loss carryforwards of $93.3 million, which will begin to expire in 2021 and state net operating loss carryforwards of $90.6 million, which will begin to expire in 2021. At December 31, 2018, we have foreign net operating loss carryforwards of $123.7 million, of which $66.6 million can be carried forward indefinitely. The remaining $57.1 million will begin to expire in 2019.

At December 31, 2018, we have tax credit carryforwards of $34.6 million relating to domestic and foreign jurisdictions, of which $27.6 million relate to domestic tax credits that are expected to be utilized before they begin to expire in 2019, $4.5 million relate to domestic tax credits that are not expected to be utilized before they begin to expire in 2022, $1.4 million relate to foreign jurisdictions that are expected to be utilized before they begin to expire in 2025 and $1.1 million relate to foreign jurisdictions not expected to be utilized before they begin to expire in 2026. The domestic credits consist primarily of federal and state R&D credits, while the foreign credits consist primarily of minimum alternative tax credit carryforwards at our India operations.

A valuation allowance is recorded against deferred tax assets if, based on the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. We have recorded valuation allowances of $36.2 million at December 31, 2018 related primarily to certain foreign and state net operating loss carryforwards and tax credit carryforwards and $21.1 million at December 31, 2017 related to certain foreign net operating loss carryforwards and tax credit carryforwards. Of the $36.2 million valuation allowance recorded at December 31, 2018, $12.4 million relates to foreign net operating losses that do not expire. The change in the valuation allowance from 2017 to 2018 is primarily due to foreign and state net operating losses generated but not expected to be utilized as well as the acquisition of foreign net operating loss and tax credit carryforwards not expected to be utilized, due in part to the utilization of the tax attributes being limited to offset only income with certain characteristics.

The following table summarizes the activity related to our unrecognized tax benefits for the years ended December 31, 2018 and 2017 (in millions):

Balance at December 31, 2016	$	63.0
Increases related to current year tax positions		7.6
Decreases related to prior tax positions		(4.8)
Settlements		(6.0)
Lapse in statute of limitation		(2.8)
Foreign exchange translation adjustment		0.6
Balance at December 31, 2017	$	57.6
Increases related to current year tax positions		6.5
Increases related to prior tax positions		2.6
Increases related to acquired tax positions		83.3
Lapse in statute of limitation		(9.0)
Foreign exchange translation adjustment		(0.5)
Balance at December 31, 2018	$	140.5

We accrued potential penalties and interest on the unrecognized tax benefits of $2.3 million and $0.5 million during 2018 and 2017, respectively, and have recorded a total liability for potential penalties and interest, including penalties and interest related to acquired unrecognized tax benefits, of $25.2 million and $3.6 million at December 31, 2018 and 2017, respectively. Our unrecognized tax benefits decreased from 2016 to 2017 due to settlements with federal and state tax authorities, a lapse in the statute of limitations for certain domestic tax filings and decreases in prior tax positions, offset partially by an increase related to current tax positions. Our unrecognized tax benefits increased from 2017 to 2018 due to acquired uncertain tax positions, primarily consisting of domestic tax positions, and an increase in current and prior year tax positions, offset partially by a lapse in the statute of limitations for certain domestic tax filings. Our unrecognized tax benefits as of December 31, 2018 relate to domestic and foreign taxing jurisdictions and are recorded in other long-term liabilities on our Consolidated Balance Sheet at December 31, 2018.

We are subject to examination by tax authorities throughout the world, including such major jurisdictions as the U.S., United Kingdom, India, California, Massachusetts, Missouri and New York. In these major jurisdictions, we are no longer subject to examination by tax authorities prior to tax years ending 2010, 2016, 2016, 2007, 2015, 2015 and 2011, respectively. Our U.S. federal income tax returns are currently under audit or in appeals for the tax periods ended December 31, 2010 through December 31, 2015. Our India income tax returns are currently under audit for tax periods ending March 31, 2016 through March, 2017. Our California state income tax returns are currently under audit or in appeals for the tax periods ended December 31, 2007 through 2016. Our New York state income tax returns are currently under audit for the tax periods ended December 31, 2011 through 2014.

Note 16—Commitments and Contingencies

Our contractual cash obligations for our operations including future minimum lease payments for the non-cancelable term of all operating leases and committed purchase obligations, excluding future sublease income, as of December 31, 2018, are as follows (in millions):

December 31,	Operating Leases	Purchase Obligations	Total
2019	$ 83.8	$ 101.8	$185.6
2020	76.5	46.7	123.2
2021	71.2	36.8	108.0
2022	61.6	12.7	74.3
2023 and thereafter	257.8	—	257.8
Total	$ 550.9	$ 198.0	$748.9

Total rental expense was $72.0 million, $47.4 million and $33.3 million for the years ended December 31, 2018, 2017 and 2016, respectively. We sublease office space to other parties under noncancelable leases and we received rental income under these leases of $5.4 million, $5.4 million and $1.3 million for the years ended December 31, 2018, 2017 and 2016, respectively. Future minimum lease receipts under these leases as of December 31, 2018 are as follows (in millions):

2019	$ 5.2
2020	6.0
2021	4.4
2022	2.7
2023 and thereafter	2.6
Total	$ 20.9

Legal Proceedings

From time to time, we are subject to legal proceedings and claims. In our opinion, we are not involved in any litigation or proceedings that would have a material adverse effect on us or our business.

A putative class action suit was filed against DST, the Compensation Committee of DST's Board of Directors, the Advisory Committee of DST Systems, Inc. 401(k) Profit Sharing Plan (the "Plan") and certain of DST's present and/or former officers and directors, alleging breach of fiduciary duties and other violations of the Employee Retirement Income Security Act. On September 1, 2017, a complaint was filed purportedly on behalf of the Plan in the Southern District of New York, captioned Ferguson, et al v. Ruane Cunniff & Goldfarb Inc., et al., naming as defendants the DST, the Compensation Committee of DST's Board of Directors, the Advisory Committee of the Plan and certain of DST's present and/or former officers and directors. We intend to defend this case vigorously, and, because it is still in its preliminary stages, has not yet determined what effect this lawsuit will have, if any, on its financial position or results of operations.

In connection with an investigation of the Plan and the activities of its fiduciaries, the U.S. Department of Labor through its Employee Benefits Security Administration issued a letter dated February 23, 2018 stating that, based on facts gathered, it appeared that certain fiduciaries of the Plan may have breached their fiduciary obligations and violated certain provisions of the Employee Retirement Income Security Act in connection with the administration of the Plan. The letter stated that if the fiduciaries fail to take corrective action, the matter may be referred to the Office of the Solicitor of Labor for possible legal action. The letter further stated that if the fiduciaries take proper corrective action based on a settlement agreement with the Department of Labor, it will not bring a lawsuit with regard to these issues, and close its investigation without further action. We have not yet determined what effect this letter will have, if any, on its financial position or results of operations.

On September 28, 2018, a complaint was filed in the United States District Court for the Southern District of New York captioned Robert Canfield, et al. v. SS&C Technologies Holdings, Inc., et al., Case No. l 8-cv-8913, on behalf of five individual plaintiffs. The Complaint names as defendants SS&C Technologies Holdings, Inc., DST Systems, Inc., The Advisory Committee of the DST Systems, Inc. 401(k) Profit Sharing Plan, The Compensation Committee of the Board of Directors of DST Systems, Inc., and Ruane, Cuniff & Goldfarb, Inc. The underlying claim is the same as in the above-described Ferguson matter, with the exception that it is an individual action and not a putative class action.

On November 5, 2018, a complaint was filed in the United States District Court for the Southern District of New York captioned Mark Mendon and Jill Pehlman v. SS&C Technologies Holdings, Inc., et al. individually and on behalf of the DST Systems, Inc. 401(k) Profit Sharing Plan. The Complaint names as defendants SS&C Technologies Holdings, Inc., DST Systems, Inc., The Advisory Committee of the DST Systems, Inc. 401 (k) Profit Sharing Plan, The Compensation Committee of the Board of Directors of DST Systems, Inc., and Ruane, Cuniff & Goldfarb, Inc. The underlying claim is the same as in the above-described Ferguson matter, with the exception that it is an individual action and not a putative class action.

DST Systems, Inc., the Advisory Committee of the Plan, and the Compensation Committee of DST’s Board of Directors have been named in approximately 278 substantially similar individual demands for arbitration through February 22, 2019, by former and current DST employees demanding arbitration under the DST Employee Arbitration Program and Agreement. The underlying claim in each is the same as in the above-described Ferguson matter, with the exception that each is an individual claim and not a putative class action. As of February 22, 2019, the parties have jointly submitted 21 of the demands for arbitration to the American Arbitration Association. The remaining demands for arbitration have not yet been submitted.

Note 17—Segment and Geographic Information

We operate in one operating segment. Our geographic regions consist of the United States, Canada, Americas excluding the United States and Canada, Europe and Asia Pacific and Japan.

Long-lived assets as of December 31, were (in millions):

	2018	2017	2016
United States	$ 425.2	$ 97.2	$ 76.9
Europe, Middle East and Africa	108.5	4.6	4.2
Asia-Pacific and Japan	24.7	6.0	6.4
Canada	6.0	7.9	6.9
Americas, excluding United States and Canada	0.4	0.4	0.8
Total	$ 564.8	$ 116.1	$ 95.2

Note 18—Selected Quarterly Financial Data (Unaudited)

The following tables set forth selected unaudited quarterly Consolidated Statements of Comprehensive (Loss) Income data for each of the quarters indicated. The unaudited information should be read in conjunction with our Consolidated Financial Statements and related notes included elsewhere in this report. We believe that the following unaudited information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	($ in millions, except per share data)			
2018				
Revenues	$ 421.9	$ 895.8	$ 992.4	$ 1,111.0
Gross profit	192.4	292.3	412.3	473.0
Operating income (loss)	86.8	(50.7)	180.6	212.4
Net income (loss)	51.2	(63.7)	57.0	58.7
Basic earnings (loss) per share	$ 0.25	$ (0.27)	$ 0.24	$ 0.24
Diluted earnings (loss) per share	$ 0.24	$ (0.27)	$ 0.23	$ 0.23
Cash dividends declared and paid per common share	$ 0.07	$ 0.07	$ 0.08	$ 0.08

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	($ in millions, except per share data)			
2017				
Revenues	$ 407.7	$ 411.0	$ 418.2	$ 438.4
Gross profit	190.2	187.3	198.4	213.0
Operating income	89.7	89.9	103.9	113.3
Net income	48.1	51.1	64.2	165.4
Basic earnings per share	$ 0.24	$ 0.25	$ 0.31	$ 0.80
Diluted earnings per share	$ 0.23	$ 0.24	$ 0.30	$ 0.77
Cash dividends declared and paid per common share	$ 0.0625	$ 0.0625	$ 0.07	$ 0.07

Note 19—Subsequent Event

Dividend declared. On February 12, 2019, our Board of Directors declared a quarterly cash dividend of $0.10 per share of common stock payable on March 15, 2019 to stockholders of record as of the close of business on March 1, 2019.

Item 9. *CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE*

None.

Item 9A. *CONTROLS AND PROCEDURES*

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2018. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the Securities and Exchange Commission. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2018, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Report of Management on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes policies and procedures that: 1) pertain to maintaining records that in reasonable detail accurately and fairly reflect our transactions and dispositions of assets; 2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of our financial statements in accordance with generally accepted accounting principles and that receipts and expenditures are made in accordance with management and board of director authorization; and 3) provide reasonable assurance regarding the prevention or timely detection of unauthorized acquisition, use or disposition of company assets that could have a material effect on our financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2018. In April 2018, we acquired the assets of DST, in June 2018, we acquired the assets of Eze and in November 2018, we acquired the assets of Intralinks. Management has excluded DST, Eze and Intralinks from its assessment of internal control over financial reporting as of December 31, 2018 because they were acquired by us in a purchase business combination during 2018. DST, Eze and Intralinks, and their related entities are our wholly-owned subsidiaries whose total assets and total revenues represent 17% and 50%, respectively, of the Consolidated Financial Statement amounts as of and for the year ended December 31, 2018.

The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

Changes in Internal Control Over Financial Reporting

There have not been any changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended December 31, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. *OTHER INFORMATION*

None.

PART III

Item 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

Incorporated by reference from the information in the Company's proxy statement for the 2019 annual meeting of stockholders, which the Company intends to file within 120 days after the end of the fiscal year to which this annual report on Form 10-K relates.

Item 11. *EXECUTIVE COMPENSATION*

Incorporated by reference from the information in the Company's proxy statement for the 2019 annual meeting of stockholders, which the Company intends to file within 120 days after the end of the fiscal year to which this annual report on Form 10-K relates.

Item 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

Incorporated by reference from the information in the Company's proxy statement for the 2019 annual meeting of stockholders, which the Company intends to file within 120 days after the end of the fiscal year to which this annual report on Form 10-K relates.

Item 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

Incorporated by reference from the information in the Company's proxy statement for the 2019 annual meeting of stockholders, which the Company intends to file within 120 days after the end of the fiscal year to which this annual report on Form 10-K relates.

Item 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

Incorporated by reference from the information in the Company's proxy statement for the 2019 annual meeting of stockholders, which the Company intends to file within 120 days after the end of the fiscal year to which this annual report on Form 10-K relates.

PART IV

Item 15. *EXHIBITS AND FINANCIAL STATEMENT SCHEDULES*

(a) The following documents are filed as part of this Report.

(1) Financial Statements — See Index to Financial Statements in Item 8 of this Report.

(2) Financial Statement Schedules — All financial statement schedules are not submitted because they are not applicable, not required or the information is included in our Consolidated Financial Statements.

(3) Exhibits — See the Exhibit listing below.

Exhibit Number	Description of Exhibit
2.1†	Agreement and Plan of Merger, dated as of January 11, 2018, by and among DST Systems, Inc., SS&C Technologies Holdings, Inc. and Diamond Merger Sub, Inc. is incorporated herein by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed on January 11, 2018 (File No. 001-34675)
2.2†	Membership Interest Purchase Agreement dated as of September 6, 2018, by and between Impala Private Holdings I, LLC and SS&C Technologies Holdings, Inc. is incorporated herein by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on September 6, 2018 (File No. 001-34675)
3.1	Restated Certificate of Incorporation of the Registrant is incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q, filed on August 5, 2016 (File No. 001-34675)
3.2	Amended and Restated Bylaws of the Registrant are incorporated herein by reference to Exhibit 3.4 to the Form S-1, as amended (File No. 333-164043) (the "2010 Form S-1")

Exhibit Number	Description of Exhibit
10.1	Credit Agreement, dated as of July 8, 2015, by and among SS&C Technologies Holdings, Inc., SS&C Technologies, Inc., SS&C European Holdings S.a R.L, SS&C Technologies Holdings Europe S.a R.L., certain of SS&C's subsidiaries, Deutsche Bank AG New York Branch and certain Lenders and L/C Issuers party thereto is incorporated herein by reference to Exhibit 10.2 of the Registrants Current Report on Form 8-K, filed on July 8, 2015 (File No. 001-34675)
10.2	Amendment No. 1 to the Credit Agreement, dated as of March 2, 2017, by and among SS&C Technologies Holdings, Inc., SS&C Technologies, Inc., SS&C European Holdings S.a R.L, SS&C Technologies Holdings Europe S.a R.L., certain of SS&C's subsidiaries, Deutsche Bank AG New York Branch and certain Lenders and L/C Issuers party thereto is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on March 6, 2017 (File No. 001-34675)
10.3	Second Amendment to Credit Agreement, dated as of March 9, 2018, among SS&C Technologies Holdings, Inc., SS&C Technologies, Inc., SS&C European Holdings S.a R.L, SS&C Technologies Holdings Europe S.a R.L., the Company's other subsidiaries party thereto, Credit Suisse AG, Cayman Islands Branch, as administrative agent, and the lenders and L/C issuers party thereto (Exhibit A thereto is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on April 16, 2018 (File No. 001-34675))
10.4	Commitment Increase Amendment, dated as of October 1, 2018, among SS&C Technologies Holdings, Inc., certain of its subsidiaries and Credit Suisse AG, Cayman Islands Branch, as administrative agent and lender is incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on October 5, 2018 (File No. 001-34675)
10.5	Commitment Increase Amendment dated as of November 16, 2018, among SS&C Technologies Holdings, Inc., certain of its subsidiaries, Credit Suisse AG, Cayman Islands Branch, as administrative agent, and Deutsche Bank AG New York Branch, as lender
10.6	Stockholders Agreement, dated as of November 23, 2005, by and among the Registrant, Carlyle Partners IV, L.P., CP IV Coinvestment, L.P., William C. Stone and Other Executive Stockholders (as defined therein) is incorporated herein by reference to Exhibit 10.5 to SS&C Technologies, Inc's Registration Statement on Form S-4, as amended (File No. 333-135139) (the "2006 Form S-4")
10.7	Amendment No. 1, dated April 22, 2008, to the Stockholders Agreement dated as of November 23, 2005, by and among the Registrant, Carlyle Partners IV, L.P., CP IV Coinvestment, L.P. and William C. Stone is incorporated herein by reference to Exhibit 10.28 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-143719) (the "2008 Form S-1")
10.8	Amendment No. 2, dated March 2, 2010, to the Stockholders Agreement dated as of November 23, 2005, as amended by Amendment No. 1 to the Stockholders Agreement dated April 22, 2008, by and among the Registrant, Carlyle Partners IV, L.P., CP IV Coinvestment, L.P. and William C. Stone is incorporated herein by reference to Exhibit 10.1 to SS&C Technologies, Inc.'s Current Report on Form 8-K, filed on March 2, 2010 (File No. 000-28430) (the "March 2, 2010 8-K")
10.9	Amendment No. 3, dated March 10, 2011, to the Stockholders Agreement dated as of November 23, 2005, as amended by Amendment No. 1 to the Stockholders Agreement dated April 22, 2008, and Amendment No. 2 to the Stockholders Agreement dated March 2, 2010, by and among the Registrant, Carlyle Partners IV, L.P., CP IV Coinvestment, L.P. and William C. Stone is incorporated herein by reference to Exhibit 10.35 to SS&C Technologies, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2010 (File No. 000-28430)
10.10	Registration Rights Agreement, dated as of November 23, 2005, by and among the Registrant, Carlyle Partners IV, L.P., CP IV Coinvestment, L.P., William C. Stone and Other Executive Investors (as defined therein) is incorporated herein by reference to Exhibit 10.6 to the 2006 Form S-4
10.11	Registration Rights Agreement, dated November 16, 2018, by and between the Impala Private Holdings I, LLC and SS&C Technologies Holdings, Inc. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 16, 2018 (File No. 001-34675)
10.12*	Employment Agreement, dated as of March 11, 2010, by and among William C. Stone, the Registrant and SS&C Technologies, Inc. is incorporated herein by reference to Exhibit 10.27 to the 2010 Form S-1

Exhibit Number	Description of Exhibit
10.13*	First Amended and Restated Employment Agreement, dated as of March 31, 2015, between SS&C Technologies Holdings, Inc. and William C. Stone is incorporated herein by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K, filed on April 1, 2015 (File No. 001-34675)
10.14*	Employment Agreement, dated as of February 8, 2018, among SS&C Technologies Holdings, Inc, SS&C Technologies, Inc. and Joseph J. Frank is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (File No. 001-34675)
10.15*	Employment Agreement, dated as of February 8, 2018, among SS&C Technologies Holdings, Inc, SS&C Technologies, Inc. and Joseph J. Frank is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (File No. 001-34675)
10.16*	Form of Director Indemnification Agreement is incorporated herein by reference to Exhibit 10.35 to the 2010 Form S-1
10.17*	2006 Equity Incentive Plan is incorporated herein by reference to Exhibit 10.1 to SS&C Technologies, Inc.'s Current Report on Form 8-K, filed on August 15, 2006 (File No. 000-28430) (the "August 15, 2006 8-K")
10.18*	Forms of 2006 Equity Incentive Plan Amended and Restated Stock Option Grant Notice and Amended and Restated Stock Option Agreement are incorporated herein by reference to Exhibit 10.2 to the March 2, 2010 8-K
10.19*	Form of Stock Award Agreement is incorporated herein by reference to Exhibit 10.4 to the August 15, 2006 8-K
10.20*	2008 Stock Incentive Plan is incorporated herein by reference to Exhibit 10.26 to the 2008 Form S-1
10.21*	Form of 2008 Stock Incentive Plan Stock Option Grant Notice and Stock Option Agreement is incorporated herein by reference to Exhibit 10.26 to the 2010 Form S-1
10.22*	Form of Restricted Stock Award Agreement under 2006 Equity Incentive Plan is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the Quarter ended June 30, 2013 (File No. 001-34675)
10.23*	Amended and Restated 2014 Stock Incentive Plan of SS&C Technologies Holdings, Inc. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on May 26, 2016 (File No. 001-34675)
10.24*	SS&C Technologies Holdings, Inc. Executive Bonus Plan is incorporated herein by reference to Appendix B to the Company's definitive proxy statement on Schedule 14A, filed on April 16, 2014 (File No. 001-34675)
10.25*	2014 Stock Option Plan Form of Stock Option Agreement is incorporated herein by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 (File No. 001-34675)
10.26*	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2014 Stock Incentive Plan of SS&C Technologies Holdings, Inc. is incorporated herein by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (File No. 001-34675)
10.27*	Restricted Stock Unit Award Agreement, dated as of March 9, 2018, among SS&C Technologies Holdings, Inc and Joseph J. Frank is incorporated herein by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (File No. 001-34675)
21**	Subsidiaries of the Registrant
23.1**	Consent of PricewaterhouseCoopers LLP
31.1**	Certifications of the Registrant's Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2**	Certifications of the Registrant's Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32**	Certification of the Registrant's Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1351, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished and not filed for purposes of sections 11 or 12 of the Securities Act and section 18 of the Exchange Act)
101.INS**	XBRL Instance Document.
101.SCH**	XBRL Taxonomy Extension Schema Document.

Exhibit Number	Description of Exhibit
101.CAL**	XBRL Taxonomy Calculation Linkbase Document.
101.LAB**	XBRL Taxonomy Label Linkbase Document.
101.PRE**	XBRL Taxonomy Presentation Linkbase Document.
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document.
101.REF**	XBRL Taxonomy Reference Linkbase Document.

† Schedules have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K. The Registrant agrees to furnish supplementally a copy of any omitted schedule to the Securities and Exchange Commission upon its request; provided, however, that the Registrant may request confidential treatment pursuant to Rule 24b-2 of the Exchange Act for any schedule so furnished.

* Management contract or compensatory plan or arrangement filed herewith in response to Item 15(a)(3) of the Instructions to the Annual Report on Form 10-K.

** Submitted electronically herewith.

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets at December 31, 2018 and 2017, (ii) Consolidated Statements of Comprehensive (Loss) Income for the years ended December 31, 2018, 2017 and 2016, (iii) Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016, (iv) Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2018, 2017 and 2016 and (v) Notes to Consolidated Financial Statements.

Item 16. ***FORM 10-K SUMMARY***

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SS&C TECHNOLOGIES HOLDINGS, INC.

By: /s/ William C. Stone
William C. Stone
Chairman of the Board and Chief Executive Officer

Date: March 1, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ William C. Stone William C. Stone	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	March 1, 2019
/s/ Patrick J. Pedonti Patrick J. Pedonti	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 1, 2019
/s/ Normand A. Boulanger Normand A. Boulanger	Director	March 1, 2019
/s/ Smita Conjeevaram Smita Conjeevaram	Director	March 1, 2019
/s/ Michael E. Daniels Michael E. Daniels	Director	March 1, 2019
/s/ Jonathan E. Michael Jonathan E. Michael	Director	March 1, 2019
/s/ David A. Varsano David A. Varsano	Director	March 1, 2019
/s/ Michael J. Zamkow Michael J. Zamkow	Director	March 1, 2019

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Executive Officers

William C. Stone
Chairman of the Board and Chief Executive Officer

Rahul Kanwar
President and Chief Operating Officer

Normand A. Boulanger
Vice Chairman

Patrick J. Pedonti
Senior Vice President and Chief Financial Officer

Joseph J. Frank
Chief Legal Officer, Global Head of Mergers and Acquisitions

Directors

William C. Stone
Chairman of the Board and Chief Executive Officer
SS&C Technologies Holdings, Inc.

Normand A. Boulanger
Vice Chairman
SS&C Technologies Holdings, Inc.

Smita Conjeevaram
Retired, Deputy Chief Financial Officer – Credit Hedge Funds
and Chief Financial Officer – Credit Funds
Fortress Investment Group LLC

Michael E. Daniels
Retired, Senior Vice President and Group Executive
IBM Global Services

Jonathan E. Michael
Chairman and Chief Executive Officer
RLI Corp

David A. Varsano
Chairman and Chief Executive Officer
Pacific Packaging Products

Michael J. Zamkow
Retired Partner
Goldman Sachs

Annual Meeting

The Annual Meeting of Stockholders will be held on Wednesday, May 15, 2019 at 9:00 a.m. local time at:

SS&C Technologies
4 Times Square, Sixth Floor
New York, NY 10036
phone: 800-234-0556

Investor Information

For information on SS&C products and services, please call 800-234-0556. You may also obtain product information by accessing our website at www.ssctech.com.

Stock Listing Information

Symbol: SSNC on The Nasdaq Global Select Market

Auditors

PricewaterhouseCoopers LLP

Transfer Agent

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, NY 11219

SS&C Technologies Holdings, Inc.
80 Lamberton Road
Windsor, Connecticut 06095
860-298-4500 fax: 860-298-4987
www.ssctech.com
email: InvestorRelations@sscinc.com