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# ASSET/LIABILITY COMMISSION

## Semi-Annual Report

### For Period Ending December 31, 1998

John P. McCarty, Chairman
Gordon L. Mullis, Secretary

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**Kentucky Asset/Liability Commission**
**Semi-annual Report for the Period Ending December 31, 1998**
**Pursuant to KRS 56.863 (11)**

## Introduction

This is the Commission's fourth semi-annual report under KRS 56.863 (11) for the period beginning July 1, 1998 through December 31, 1998. Key themes during the first half of FY99 were:

- Substantial volatility in the fixed income market place due to turmoil abroad.
- Investment activity slows from seasonal influences, although performance has been stronger than anticipated.
- Limited debt issuance during the period.
- New money debt activity was limited to the ALCo 1998 General Fund Second Series Project Notes to fund the FY98 Surplus Expenditure Plan Projects and the ALCo 1998 Agency Fund Series.
- Refunding activity focuses on a taxable Turnpike transaction and a State Property and Buildings Commission issue, both of which are waiting for market conditions to improve.
- Looking ahead, transaction activity for the Commission will increase dramatically in FY00, as debt service becomes available for capital projects authorized in the FY98-00 budget.

## Investment Management

### Market Overview:

***Taxable:*** The dominating factor in the taxable fixed income markets during the period was the liquidity crisis that erupted during the third calendar quarter. Economic problems in Asia

worsened and spread to other geographic areas creating havoc in the market place. Many banks and other financial intermediaries limited the availability of credit through higher interest rates and fees as their loan portfolio valuations deteriorated. As currency values and interest rates gyrated, mayhem was created in the global financial markets. Many hedge funds and investment banks had taken large leveraged positions based upon “normal” relationships between the value of currencies and interest rates of various countries. When these historical relationships departed materially from their theoretical values investors were forced to either liquidate their holdings or raise additional money to fund their positions. While the long-term profits of these positions was virtually certain, the short-term displacement of the market place and the vast amount of resources that had been borrowed to initially fund these positions had to be maintained or liquidated at great cost. Once a firm begins liquidating positions, whether by choice or necessity, the selling can gather momentum as others see the value of their holdings being affected. This often creates a herd mentality, pushing prices lower which in turn generates more losses and margin calls on borrowed capital. The ensuing panic created a tremendous demand for U.S. Treasury securities as a safe haven from the turmoil. The Federal Reserve in reaction to this crisis lowered the Fed Funds rate to 4.75% to provide liquidity and a sense of stability to the market place.

Short-term fixed income investment yields rose as high as 5.50% before dropping to a low of 3.82%. The average was 4.748% for the period, virtually identical to the Federal Reserve’s target of 4.75% for Fed Funds. The benchmark 30-year Treasury Bond averaged 5.289%, with a

high of 5.77% and a low of 4.72%. The bias for interest rates is expected to be neutral as the domestic economy continues to perform at surprisingly strong levels in a low inflationary environment balanced against recession and depression abroad. Despite neutral expectations, the fixed income markets will continue to be quite unsettled as new information about the magnitude and the impact of the economic situation abroad becomes more apparent. The one caveat to this neutral forecast would be if Asia were to experience a sharp rebound, which perhaps would draw capital back to the region, detracting from the U.S. equity and fixed income markets. At this point, that scenario seems to have a low probability.

***Tax-exempt:*** Municipal bonds traded at very wide yield ratios as a result of the liquidity crisis. This is evidenced by the Bond Buyer 20 GO Index, which averaged 5.0278% for the period or approximately 95% of the benchmark 30-year Treasury Bond versus 90% the previous period. From late September through the end of the year investment grade municipal obligations, exempt from federal, state and local taxes, could be purchased at yields at or near those of a corresponding Treasury security. Given the financial strength of state and local governments in the last several years this sector of the market offered exceptional value to fixed income investors. This relationship virtually eliminated the ability for municipalities to advance refund older higher cost debt obligations because of the negative arbitrage from purchasing lower yielding Treasury Securities to fund the defeasance escrow. The only transactions executed, with a few exceptions, were new money deals.

The short-term tax-exempt market as measured by the 7-day Bond Market Association ("BMA") Municipal Swap Index ranged from 4.00% to 2.79% and averaged 3.328% or approximately

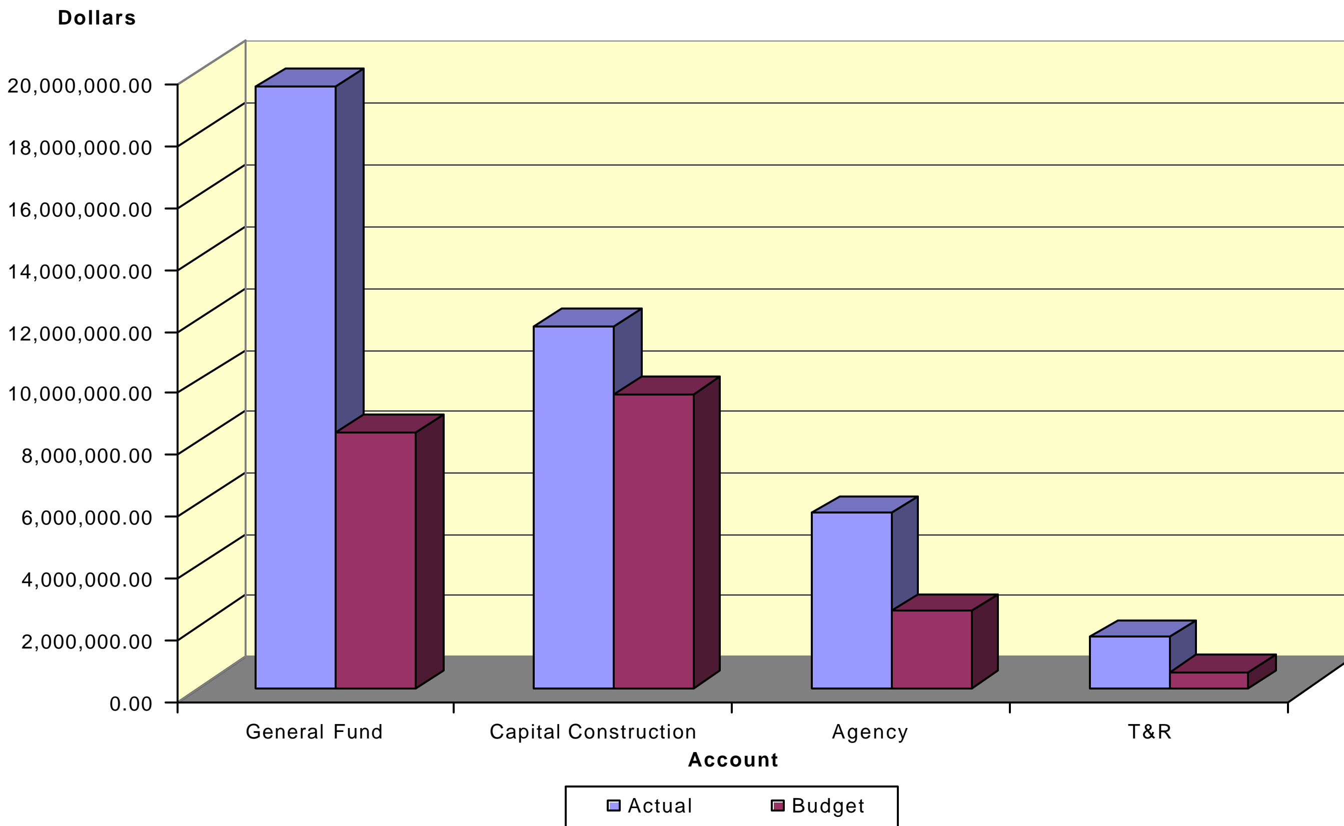
73% of the three-month U.S. Treasury Bill. While the ratio increased almost 10%, the overall yield still managed to decline by approximately 20 basis points and offered good value to issuers of debt assuming they had access to reasonably priced credit facilities. As a general rule, Commercial Paper and Variable Rate Demand Notes supported by letters of credit experienced dramatic increases in fees as a direct result of the liquidity crisis that developed during the third quarter. Short-term fixed rate notes and swap based products faired much better.

***Portfolio Management:*** The Commonwealth's investment portfolio averaged $3,216.9 million for the first half of FY99. As of December 31, 1998, the portfolio was invested in U.S. Treasury securities (19%), U.S. Agency securities (34%), Municipal securities (4%), Corporate securities (10%), U.S. Agency Mortgage Backed Securities and Collateralized Mortgage Obligations (10%), Asset Backed Securities (3%), Repurchase Agreements (19%) and Money Market Securities (1%). The portfolio had a current yield of 5.64% and duration of 1.24 years.

The total portfolio is broken down into four investment pools. The balances in the pools as of December 31, 1998 were: the Short-term Pool ($344.1 million), the Intermediate-term Pool ($2,331.8 million), the Long-term Pool ($308.8 million) and the Bond Proceeds Pool ($232.2 million). See Exhibit 1, the December 31, 1998 Monthly Investment Income Report.

Currently, the Intermediate-term pool has an interest rate swap that will be maturing in July 1999. This swap was executed to extend the duration of short-term assets associated with the Kentucky Bank Repurchase Program. This transaction has netted the Commonwealth an additional $2 million dollars in income over the life of the transaction. These assets have a long-term track record of being very stable and it is likely that a similar transaction will be executed to replace the maturing transaction.

The Commonwealth's investments earned $99.8 million or 6.45% on a total return basis through December 31, 1998. The General Fund portion of that amount was $19.5 million on an accrual basis and $18.6 million on a cash basis. Fifty percent of budgeted income for FY99 is $8.3 million. New asset classes authorized under House Bill 5 of the 1997 First Extraordinary Session of the General Assembly contributed $1.3 million of which $0.2 million accrued to the benefit of the General Fund in FY99. Mortgages added the bulk of the earnings, generating $0.8 million while corporate securities added $0.5 million. The increased duration attributable to the Long-term Investment Pool added $3.5 million in income for the Budget Reserve Trust Fund ($2.1 million) and the Road Fund ($1.4 million) during the period.



## Debt Management

### Table 1

### Kentucky Asset/Liability Commission
### Debt Summary for first six months of Fiscal 1999

| Series | Amount | Dated Date | Maturity Date | Coupon | Price | Yield |
|---|---|---|---|---|---|---|
| **1998 TRAN** | | | | | | |
| Series A | $200,000,000 | 7/01/98 | 6/25/1999 | 4.50% | 100.883 | 3.57% |
| Series B | $100,200,000 | 9/17/98 | 6/25/1999 | 4.00% | 100.504 | 3.33% |
| **1998 General Fund Project Notes*** | | | | | | |
| First Series | $95,000,000 | 2/04/98 | 6/30/2001 | 3.40% | 100.000 | 3.40% |
| Second Series | $126,300,000 | 11/05/98 | 11/01/1999 | 3.50% | 100.528 | 2.95% |
| **1998 Agency Fund Project Notes*** | | | | | | |
| UK Stadium | $25,260,000 | 9/02/98 | 6/30/2002 | 3.39% | 100.00 | 3.39% |

*Amounts outstanding represent the balances as of December 31, 1998. Yields are weighted average yields for the period.

***Tax and Revenue Anticipation Notes:***

**FY99 TRAN** – The Commission authorized this years TRAN program in an amount not to exceed $400 million. The higher authorization amount was based upon the anticipated movement of Surplus Expenditure Plan moneys from the General Fund to the Capital Construction Fund to fund authorized projects. The actual General Fund cash flow deficit occurred on September 17 and was $328 million. Deducting the excludable portion of the Budget Reserve Trust Fund, which is permitted for purposes of the tax code, the deficit was $500.9 million. The difficult part of sizing a TRAN transaction is being able to predict in

advance what the actual timing of cash flows will be. As a result, transactions are typically undersized in efforts to maximize earnings potential. The FY99 TRAN program was marketed by Salomon Smith Barney.

***The 1998 Series A Notes*** were issued on July 1, 1998 in the amount of $200,000,000. The notes were sold with a premium coupon of 4.50% to yield 3.57% and have a stated final maturity of June 25, 1999. The TRANs were rated in the highest category by Standard & Poor's (SP-1+), Moody's (MIG1) and Fitch/IBCA (F1+). The expected net benefit for FY99 is $3,611,761. The increase versus last year is attributable to improved ratios between short-term tax-exempt and taxable securities, i.e. there was a larger yield spread between taxable and tax-exempt securities at the time of sale. The IRS expenditure test for the first series was met on August 10, 1998.

***The 1998 Series B Notes*** were issued on September 17, 1998 in the amount of $100,200,000 with a coupon of 4.00% to yield 3.33%. The Notes have the same maturity and ratings as the first series. The additional Notes were sold to meet an increased cash flow demand stemming from the movement of Surplus Expenditure Plan moneys. Incremental benefit from the second series of Notes will likely be between $.6 million and as high as $1.5 million, depending upon the actual yield of the state's short-term investment pool. The expenditure test for the second series was met on September 17, 1998.

***Project Notes:***

***1998 General Fund First Series*** - The Commission issued its first series of General Fund supported Project Notes on February 4, 1998 to fund approximately $156 million in capital construction projects authorized during the FY96-98 biennium. The notes have a stated final

maturity of June 30, 2001 and are being offered by Bear, Stearns & Company in the Commercial Paper Mode. The notes are supported by a direct-pay letter of credit issued by the New York branches of Landesbank Hessen-Thuringen Girozentrale and Bayerische Vereinsbank AG, two of Germany's leading banks. The Project Notes receive a rating based upon the credit facility providers' strength and are rated Aa2/VMIG1 by Moody's and AA+/F1+ by Fitch. As of December 31, $95 million in notes were outstanding of which $80 million had been expended. From February 4, 1998 through December 31, 1998 the absolute yield decreased approximately 10 basis points from the last period, but the yield versus the tightened approximately 3 basis points. This narrowing of the spread can most likely be attributed to increased size of the program and investor familiarity. Table 2 below provides a summary of the comparative cost of capital for this series of notes.

**Table 2**

| Cost of Funds | |
|---|---|
| Weighted Average Coupon: | 3.398% |
| Remarketing Fees: | .060% |
| Credit Facility Fees: | .240% |
| Average Cost of Funds | 3.698% |

| Comparative Yield | |
|---|---|
| Weighted Average Coupon | 3.398% |
| Average BMA Index | 3.434% |
| Difference | 0.036% |

| Versus Fixed Rate Financing | |
|---|---|
| Weighted Average Coupon | 3.398% |
| Bond Buyer 20-year GO (2/5/98) | 5.110% |
| Difference | 1.715% |

These indices do not include remarketing and credit facility fees, so the comparison is made on a net yield basis.

***1998 General Fund Second Series -*** The Commission issued the second series of General Fund supported Project Notes on November 5, 1998 to fund $126,898,000 of Surplus Expenditure Plan projects authorized in the FY98-00 budget. This series of notes was issued as a one-year fixed rate note to yield 2.95%. A variety of factors came into play in selecting a fixed rate note structure over the variable rate structures employed for the First Series and the Agency Fund Series. The primary influence was the liquidity crisis discussed previously, which resulted in significantly higher credit facility fee bids. The impact of the higher fees pushed the effective yield on a variable rate deal significantly above a simple one-year fixed rate note. A contributing factor was the fact that most of the SEP projects are grant payments, which will be spent in a lump-sum and in a relatively short time frame. This permitted the Commission to fund the entire project amount up-front and take advantage of the difference between the yield on taxable investments and the tax-exempt coupon on the Notes until the proceeds are spent. Approximately $54 million had been spent at calendar year-end. These notes were marketed by Lehman Brothers.

***1998 Agency Fund Series –***The projects consist of the Agency Bond Pool ($35 million) and approximately $63.1 million in line item agency funded bond projects, including the UK stadium expansion, UK Rural Health Center, EKU Law Enforcement Training Facility, KHEAA building and the River Authority lock and dam improvements. Participants in the Agency Bond Pool (state universities) have the option of using this program to meet their financing needs and as a

result only a portion the $35 million will initially be funded through this program. It is anticipated that all of the $63.1 million line item Agency Fund projects will receive their initial funding through this program. Ultimately these projects will receive permanent financing from the State Property and Buildings Commission. The bonds issued by the State Property and Buildings Commission will be supported entirely by agency receipts. This program offers the same benefits as the General Fund program to state universities and other agencies, which previously did not have access to such a financing mechanism. The Agency Fund Project Notes are supported by a direct-pay letter of credit issued by Commerzbank AG (VMIG1/Aa3 by Moody's, SP-1+ by S&P and F-1+/AA- by Fitch) and marketed by Lehman Brothers, Inc.

The initial series of Notes, in the amount of $25,260,000, was delivered on September 2, 1998 to fund the UK stadium expansion. These notes will capitalize interest until September 1, 1999, when the project is available for use and revenues have been collected to service the obligation. On September 1, 1999 the notes will be split into two series, a tax-exempt Series A Notes and a taxable Series C Notes. The Series C Notes result from private use of portions of the facility. At December 31, 1998 the average yield on the Notes was 3.393%, plus re-marketing fees of 6 basis points and credit facility fees of 19.5 basis points the cost of funds for the period was 3.648%. The cost of funds for the Agency Fund program was 5 basis points less than the 1998 General Fund Series because of differences in the way the credit facility was structured.

Chart 1 on Page 13 shows the difference between long-term and short-term tax exempt interest rate indices on a percentage basis. Chart 2 on Page 14 compares each of the ALCO Anticipation Note programs weighted average coupons to the Bond Market Association Swap Index, which is the baseline and the difference is basis points.

**Financial Agreements**

The Commission had one financial agreement outstanding as of December 31, 1998, which was entered into on August 3, 1998 with Merrill Lynch & Co. to synthetically advance refund a portion of State Property and Buildings Commission Project 40 (Second Series) Revenue Bonds. The Commission will receive a variable rate, equal to the rate on its variable rate notes that will refund the SPBC bonds, in exchange for making a fixed rate payment beginning on November 1, 2001. This type of transaction is also known as an interest rate swap. The value of this transaction varies daily with changes in market rates of interest, as do all fixed income securities. As of January 6, 1999 that contract had a market value of ($447,137), meaning that if the Commission terminated the swap on that day the Commission would owe that amount. There is no realized gain or loss on the swap unless it is terminated prior to maturity.

In this particular transaction the Commonwealth makes fixed rate payments. If interest rates increase, our swap increases in value and vise versa; if interest rates decrease, our swap has less value (meaning the bonds could be refunded at more attractive levels). If the swap were to obtain a substantial positive market value, then it is likely that the swap would be terminated to collect the real savings in today's dollars. The Commission would then look to current refund the bonds on the call date for additional savings, if market rates were favorable. In any event, the SPBC will not pay any more than the coupon on the existing series of bonds. This effectively locks in the savings level with an opportunity to create additional savings. Alternatively, if the market value of the swap is negative, it is possible that the swap might be terminated at a loss and new bonds issued at a lower rate to offset the loss and preserve the original savings target. Factors that would influence the Commission's decision to terminate a

swap would be a dramatic increase in credit facility fees and expenses, the slope of the tax-exempt yield curve, forward delivery premiums and the ratio of tax-exempt securities to Treasuries.

**Asset/Liability Model**

**General Fund Model**

The General Fund continues to be subject to routine seasonal fluctuations consistent with historical expenditure and receipt patterns. Adjustments for the timing of the SEEK payments and the movement of Surplus Expenditure Plan moneys have impacted the balance versus previous fiscal years.

Including the Budget Reserve Trust Fund, the high balance occurred on July 1 at $727.1 million and the low on September 17 at minus $328.0 million. The General Fund ended the period with a balance of $169.3 million. The average and median balances were a negative $39.4 million and a negative $142.4 million, respectively. For purposes of calculating the available balance for the

TRAN computation, $172.9 million of the Budget Reserve Trust Fund can be excluded. Taking into account this adjustment the balances were as follows: the high was $554.2 million on July 1, the low was minus $500.9 million on September 17, the average was negative $212.3 million and the median was negative $315.3 million. The ending balance on an adjusted basis was negative $3.6 million. Since $150 million of the Budget Reserve Trust Fund is invested in the Long-term Investment Pool, the adjusted balances more accurately reflect the actual cash balance in the General Fund. Adding back the difference between the excludable portion and the amount invested in the Long-term Investment Pool, the actual ending balance would be a positive $19.3 million. Since the General Fund had a negative average cash balance for most of the period there is very little that can be done from an asset management viewpoint beyond current actions, which include the TRANs and the investment of the Budget Reserve Trust Fund moneys in the Long-term Investment Pool.

From a liability management perspective, virtually all of the debt that can be refunded on an advanced refunding and synthetic refunding basis has been accomplished. Therefore, the strategy with respect to liabilities will focus on new money issuance. For example: the Commission will look to implement an innovative strategy for permanently funding the University Research Equipment Pool, Commonwealth Virtual University and Library, and technology for the Kentucky Community and Technical College System with ALCo General Fund Project Notes in the approximate amount of $50 million. Debt service has been appropriated for seven years to match the expected useful life of the equipment. Consideration is being given to structuring these notes with serial maturities that carry a short-term call option, perhaps two or three years at par. This type of structure has been utilized quite frequently by

federal agencies over the past several years. This structure would allow the state the opportunity to lock in low interest rates today with the ability to currently refund the notes in the near future, without paying a redemption premium, in the event that interest rates decline further. Since this financing structure has not been utilized in the tax-exempt market it may take investors some time before they become comfortable with this type of structure. If successful, this concept may be applied to SPBC fixed rate bonds where the benefit could be substantial. An alternative structure in the event purchasers are not willing to buy this type of security might be to issue the notes on a fixed rate basis and swap the interest payment back to floating rate with an option to terminate the swap.

Net Interest margin will improve by the amount that General Fund investment income exceeds the budget ($10.3 million) plus the debt service achieved from any refunding activity ($.4 million) for a total YTD total of $10.7 million. New money transactions despite being in a short-term mode still add to the net interest margin base.

**Road Fund Model**

The Road Fund average daily balance for YTD FY99 was $550 million. Of that average amount, $450 million was invested in the Intermediate-term Investment Pool and $100 million in the Long-term Investment Pool. The duration of the respective pools was 1.25 years and 2.47 years as of December 31, 1998. The Road Fund earned $18.4 million on cash basis and $21.4 million on an accrual basis. The Road Fund continues to have substantial liquid assets, which are immune from the seasonal fluctuations experienced by the General Fund due to structural revenue receipt differences.

While the Road Fund's net interest margin on an absolute level isn't projected to improve by the end of the biennium, it is in a relatively stable position with an opportunity for improvement. Old non-callable and non-refundable bonds with above market coupons limit the amount of progress that can be made in this biennium. Should taxable interest rates fall an additional 50-75 basis points, it may be possible to execute a taxable refunding that will produce debt service savings, however, volatility in the Treasury market and relatively wide corporate yield spreads to Treasuries have hampered efforts to execute this transaction. As mentioned earlier in this report, the credit crunch increases the cost of financing for many borrowers and is the situation the Road Fund faces at the present time. The most promising area for improvement lies in funding new money projects authorized in the current biennium. The Commission expects to begin work on a construction financing program to fund up to $200 million in road projects late this winter and a $68 million program to fund the new Transportation Cabinet building.

**Summary**

The Commission's approach to managing the Commonwealth's interest-sensitive assets and interest-sensitive liabilities is producing the expected results in all areas:

- **Investments**: incremental returns derived from new investment asset classes are $4.8 million for FY99 and $6.9 million since inception.

- **Cash Management**: has improved dramatically with the implementation of the General Fund Tax and Revenue Anticipation Note program producing $3.4 million in FY98 and an expected minimum return of $4.2 million for FY99 based upon the 1998 Series A and B issuance. Total $7.6 million.

- **Debt Management** activities have contributed an estimated $2.5 million in value-added.

    1. Funded initial construction at a lower cost of capital than utilizing internal resources that would have earned a taxable rate of return or long-term fixed rate financing. Estimated value for the period of $1.0 million ($58.0 million avg. outstanding x rate differential (5.54% short-term pool yield -3.698% project note yield) x 11/12).

2. 1998 General Fund First Series. Maximized the amount of allowable arbitrage earnings by borrowing amounts reasonably expected to be expended, which provided an estimated value of $0.3 million ($15 million avg. advance borrowing x (6.19% bond proceeds pool yield - 3.698%) x 11/12).

3. 1998 General Fund Second Series. Maximized the amount of allowable arbitrage by borrowing the amount reasonably expected to be spent, which provided an estimated value of $.4 million. ($99 million avg. advanced borrowing x (6.19% - 3.50%) x 56/360).

4. Synthetic advanced refunding of SPBC 40 (Second Series) using a delayed start interest rate swap produced $0.8 million as of the execution date.

- **Total value added since inception, $17.0 million.**

**Exhibits**

1. December 31, 1998 Monthly Investment Income Report
2. General Fund daily cash flow for FYTD 99.
3. Appropriation debt outstanding as of December 31, 1998
4. Appropriation supported debt service.