KENTUCKY PUBLIC PENSION WORKING GROUP

INVESTMENTS

KENTUCKY PUBLIC PENSION WORKING GROUP
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A. Final report of the sub-committee

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Kentucky Public Pension Working Group
Subcommittee on Investments
Report as of 10/23
Executive Summary

Purpose:
The mission of the investments subcommittee as stated in the Executive Order is to:

- Conduct a comprehensive operational and governance review of fiduciary duties and the investments of the state-administered retirement systems;

- Examine and recommend appropriate investment benchmarks, policies, and portfolio strategies, based on investment returns and asset allocations of comparable public pension plans and systems.

Key Problem:
Kentucky Retirement Systems (KRS) and Kentucky Teachers' Retirement System (KTRS) investments have underperformed their peers over the last ten years.

Pursuant to the charge outlined in the Executive Order, the Finance Administration Cabinet contracted with Hammond Associates through an RFP as a consultant for the subcommittee on investments. Hammond Associates is an investment consulting firm located in St. Louis, Missouri, with a clientele of over 200 organizations with assets totaling approximately $57 billion. Approximately two-thirds of Hammond's clients are endowments and foundations, and the firm also advises retirement plans with assets of more than $25 billion. A number of these retirement plans are large public funds, including a state teacher's retirement plan with assets of approximately $15 billion, and a police officers' retirement fund with assets of approximately $3.5 billion.

Findings:
The critical issues determined by the subcommittee's consultant, Hammond and Associates, were:

- Investment performance of both retirement systems has significantly underperformed the actuarially assumed rate of return and that of their peers across the country, the Russell Mellon Public Plans greater than $1 billion universe. Hammond's calculation of opportunity cost from underperforming the average of their peer group was in excess of $5 billion over 10 years.

- The governance structure responsible for investment oversight is inadequate in expertise.

- The investment portfolio has insufficient diversification of asset classes.

- The use of any manager for more than 10% of assets potentially creates disruption in the management of the portfolio should that manager fail.

The investment subcommittee work group is charged with determining the best potential solutions for these problems.

Kentucky Public Pension Working Group
Subcommittee on Investments

Chair:	Todd Hollenbach	Kentucky State Treasurer
Staff Director:	F. Thomas Howard; Stephen Jones; Dwight Price	Office of Financial Management

Subcommittee Members:

Dorsey Ridley	Kentucky State Senator
Trey Grayson	Secretary of State
Richie Farmer	Commissioner of Agriculture
Gary Harbin	Kentucky Teachers Retirement System
Jon Henrikson	KEA-Retired
Paul Yancey	Kentucky Teachers’ Retirement System
Adam Tosh	Kentucky Retirement Systems
Todd Lowe, CFA	Parthenon LLC
Dianna Preece, CFA	University of Louisville
Chris Posey	Urban Development
Mona Ball	Kentucky Education Association
Leon Mooneyhan	Ohio Valley Educational Co-op

Kentucky Public Pension Working Group
Subcommittee on Investments
Summary of Meetings

The first meeting of the investment sub-committee was held on June 18. At that meeting, Senator Ridley provided an update for the members on the expectations for the 2008 Special Session of the General Assembly. Staff presented background information to the subcommittee on the two retirement systems and the nature of the unfunded liability. The subcommittee approved an RFP (Request for Proposal) for hiring an investment consultant.

At the second meeting on July 23, the two retirement systems gave presentations explaining their individual approaches for investing. Adam Tosh, CFA, who is the CIO at KRS, and Gary Harbin, CPA, who is the Executive Secretary of KTRS, provided extensive information on the process and governance of the two systems' investment operations. Also, staff gave a short presentation showing the ratio of investment earnings and benefit payments at a number of public pension funds, including KRS and KTRS. Additionally, Rich Marra and Jerry Woodham of Hammond Associates, Inc. were introduced as the subcommittee's investment consultant.

At the third meeting on August 22, Hammond Associates provided a preliminary assessment of the governance issues at the two retirement systems. Several key points arose from this presentation. First, the investment performance of both of the systems has lagged behind that of their peers. Second, this under-performance has cost the Commonwealth roughly $3.8 billion in "opportunity cost" over the previous ten years. Next, the two systems have had lower returns than their actuarially assumed discount rate for the previous ten years. Finally, it appears that much of this under-performance has been due to asset allocation decisions by the respective boards.

At the fourth meeting on September 23, Hammond provided additional assessments of the governance issues surrounding the systems. Several key points came from this presentation. First, the selection of managers has been done quite well. The under-performance is due to asset allocations. Next, they compared the structure of the two board investment committees to that of the top quartile public pension systems. Generally speaking, top performing public systems tend to have a higher concentration of investment expertise than is evident at Kentucky's two systems. Finally, Hammond went through a case study of the Virginia system as a possible model for Kentucky to emulate.

At the fifth meeting on October 14, Hammond presented their final report and offered their recommendations for improvements. The general conclusions were consistent with what was reported at the earlier meetings. Basically, the two systems are underperforming their peers due primarily to asset allocation decisions being made at the board investment committee level. The personnel and structure of these two committees can be improved. Hammond's recommendations focused on restructuring the board investment committees, reviewing manager concentrations, and reviewing some technical issues related to regulations and statutes.

At the sixth meeting on October 21, the draft final report of the committee and recommendations were submitted to the subcommittee.

Kentucky Public Pension Working Group
Subcommittee on Investments
Findings of Sub-Committee

Background:
Governor Beshear formed the Kentucky Public Pension Working Group by executive order to examine issues surrounding the Commonwealth's two defined benefit retirement systems -- the Kentucky Retirement System (KRS) and the Kentucky Teachers' Retirement System (KTRS). Within the working group there was created a subcommittee tasked with examining investment performance and governance of those two systems.

KRS administers three separate retirement funds, which have pooled assets:

1. Kentucky Employee Retirement System (KERS), which provides retirement benefits for employees of the Commonwealth,
2. County Employee Retirement System (CERS), which provides retirement benefits for employees of local government organizations within the Commonwealth, and
3. State Police Retirement System (SPRS), which provides retirement benefits for employees of the Kentucky State Police.

KTRS provides retirement benefits for teachers in the public school systems and certain public universities.

Combined, the two systems, KRS and KTRS face an unfunded actuarial accrued liability of more than $26 billion as of June 30, 2007. The breakdown is as follows:

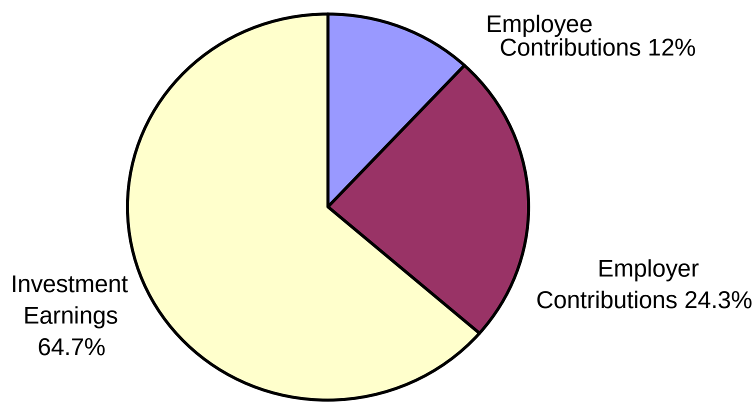
Figure 1: Breakdown of Actuarially Accrued Liability
All Dollars in Millions

	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability
KERS	$6,737	$15,751	$9,014
CERS	$8,580	$13,849	$5,268
SPRS	$464	$981	$516
Total KRS	$15,781	$30,580	$14,799
KTRS	$15,426	$27,184	$11,758
Grand Total	$31,207	$57,764	$26,557

Sources: June 30, 2007 KRS and KTRS CAFR's

The investments held by the retirement systems can provide a powerful engine for helping to alleviate the unfunded liability. Ultimately, the combination of employee and employer contributions plus investments income must, over the long run, cover benefit payments, plus the expenses of the plan. If there is a shortfall, the employers who receive money from taxpayers, are responsible for making good on the contractual benefits. The following chart shows a long term average of the breakdown of the three sources of funds for public pension plans.

Figure 2: Sources of Retirement System Income



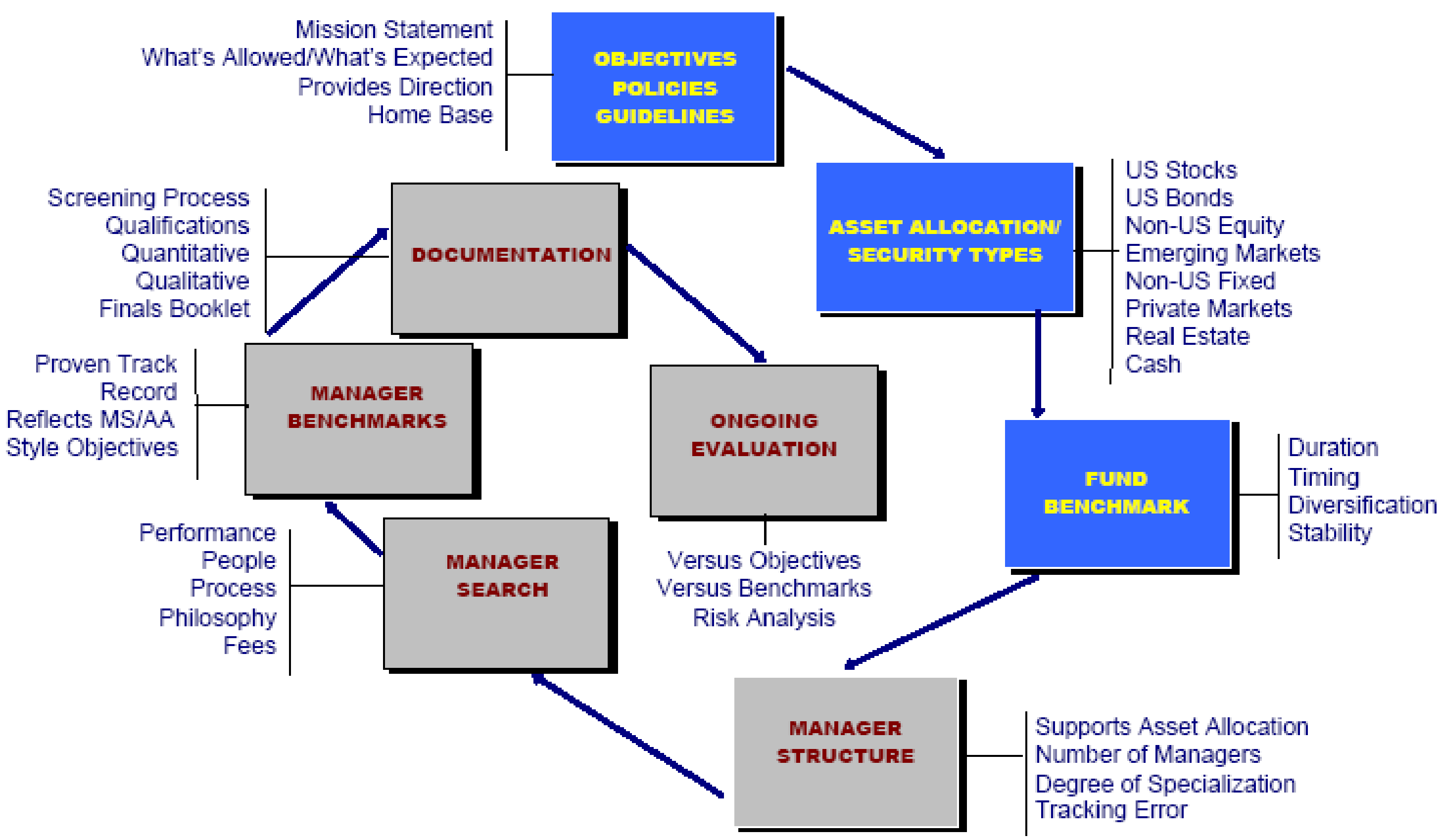
Source: GAO-07-1156 State and Local Retiree Benefits

As can be seen graphically, investment performance is extremely important to the overall health of a defined benefits retirement system.

How investment decisions are made within the systems:

The following chart, prepared by staff at Kentucky Retirement Systemd, provides a visual representation of how a public pension plan reaches investment decisions. Once objectives, policies and guidelines have been established by the board, asset allocation decisions are made within those parameters. This is a key factor in the process that has an enormous impact on the ultimate performance of the funds. These are, in fact, the most important decisions which are made at the board and board investment committee level, with input from professional staff and outside consultants, at KRS and KTRS.

Figure 3: Investment Allocation Decision Process



Given that the asset allocation decisions are the most important investment decisions, how do KRS and KTRS compare to their peers?

Figure 4: System to Peer Allocation Comparison, as Percentages

	KRS Pension	KRS Insurance	KTRS	Peers
Domestic Stocks	38.4	55.5	58.4	25.7
International Stocks	18.4	20.4	6.7	21.3
Fixed Income/Cash	36.3	18.3	32.4	12.8
Private Equity	3.5	2.9	0.0	10.4
Hedge Funds	0.0	0.0	0.0	20.5
Real Assets	3.5	2.9	2.5	8.6
Other	0.0	0.0	0.0	0.6

The data in this chart is as of June 30, 2007. The Peers are defined as institutions with over $1 billion in assets responding to the Nation Association of College and University Business Officers (NACUBO) annual survey.

While this chart shows both plans to be somewhat less diversified than their peers, both systems have been moving closer to their peers. KRS is implementing a long term plan which will, in fact, move their allocations much closer to their peers. KTRS is not as far down this track as KRS, but they are adjusting allocations and are currently undergoing a study to update their long term allocation plans.

Performance:
The lack of diversification has been reflected in the performance of the systems as shown in the following chart:

Figure 5: Investment Performance as a Percentage

	Period ended June 30, 2008			
	1 Year	3 Year	5 Year	10 Year
KRS Pension	-4.2%	6.6%	8.5%	5.6%
KRS Insurance	-7.9%	7.3%	10.1%	5.5%
KTRS	-5.8%	4.6%	6.2%	4.5%
Peer Group	-4.3%	8.4%	10.7%	6.6%

The Peer Group is defined as the Russell Mellon Public Pension Plan Greater than $1 Billion universe.

Their rankings are shown below. Note 1st quartile is the top 25% while 4th quartile is the bottom 25%

Figure 6: Quartile Investment Performance

	Period ended June 30, 2008			
	1 Year	3 Year	5 Year	10 Year
KRS Pension	2nd	3rd	4th	3rd
KRS Insurance	4th	3rd	3rd	3rd
KTRS	4th	4th	4th	4th

One of the measurements useful in understanding these rankings is "opportunity cost". Opportunity cost is the amount of money the two systems would have earned if their performance had matched the mean return of their peers. According to Hammond Associates' calculations (explained in more detail on pages 63 through 66 of their final report), and assuming compounding, the opportunity cost of the KRS Pension plan has been roughly $1.5 billion over 10 years. The compounded opportunity cost of KTRS has been roughly $3.5 billion over 10 year. In other words, if the two systems' performance had matched the median return of their peers, the Commonwealth's plans would be in better financial condition by approximately $5 billion.

Conclusions and Causes for Key Indicators for the Systems' Underperformance:
As mentioned earlier, the boards and board investment committees of the two systems are ultimately responsible for asset allocation decisions. While the subcommittee's investment consultant was unable to interview members of the two boards, they were able to review professional biographies of the members. With few exceptions, the consultant concluded that the trustees appeared to lack investment expertise. While Hammond Associates was unable to prove statistically that the board members' levels of expertise affects performance, they did draw some conclusions:

> *"The objective is to increase the probability of success in meeting long-term investment objectives. Seeking talented and investment savvy board or committee members is consistent with improving this probability."*

Long-term under-performance of an investment fund, when compared to peers, is generally attributable to one of two causes -- either asset allocation or manager performance. From page 13 of the Hammond Associates report:

> "*For the 10-year period ended June 30, 2008, manager returns for both systems have generally been above median. Asset allocation for KRS and KTRS has differed substantially from the median. Therefore, the key differences in return must be attributed to differences in asset allocation. The differences in asset allocation lie in two primary areas. First, KRS and KTRS have held a higher allocation to U.S. equity and a lower allocation to international equity than the median fund. KRS now has an allocation which is comparable to the median fund. Second, both funds have had a lower allocation to alternative assets than the median fund."*

Attached to this report is the final report of Hammond Associates, containing their recommendations, as well as appendices which include the recommendations of subcommittee members.

Kentucky Public Pension Working Group
Subcommittee on Investments
Appendix 1
Suggestions

Please note that these represent the opinions of the undersigned only, and should not be viewed as opinions of the subcommittee or the Work Group as a whole.

Suggestion 1

The system hopes to work with the Governor and the Legislature along with active and retired teachers and other constituency groups to achieve a long-term plan to fully fund retiree health care. One can fully appreciate the positive impact this provides to the efforts to invest retirement funds of teachers.

Submitted by Gary Harbin of KTRS

Suggestion 2

The system respectfully will request legislation to eliminate the requirement that investment policies be established in administrative regulation.
Though not an overriding long-term detriment to the management of the assets of active and retired teachers, this requirement provides a more restrictive short-term investment requirement than most public pension plans encounter. The process of establishing the investment policy within the "prudent person" rule currently within the statute provides the fiduciaries of the assets of active and retired teachers a more timely way to review and change investment policy when it is prudent to do so.

Submitted by Gary Harbin of KTRS

Kentucky Public Pension Working Group
Subcommittee on Investments
Appendix 1
Suggestions

Suggestion 3

1. The retirement systems should post a quarterly report within 60 days of the end of the quarter on their respective websites containing the following:
   a. Actual and target asset allocation
   b. Identify outside managers including funds managed and overall strategy
   c. Performance of total pool and by asset class
2. The retirement systems should post an annual report within 90 days of the end of the fiscal year on their respective websites which, in addition to the information from the quarterly report, provides peer group comparisons for the total fund, and details the effect the difference in target and actual asset allocation has on total performance. The peer group shall be a group of public plans with over $5 billion in assets prepared by an independent source.
3. An exemption from Commonwealth Open Records law should exist which allows the systems to shield the actual holdings of their outside managers from disclosure, but the holdings are not protected from the systems' or the Commonwealth's audit requirements.

Jointly submitted by Secretary of State Grayson and Treasurer Hollenbach

Kentucky Public Pension Working Group
Subcommittee on Investments
Appendix 1
Suggestions

Suggestion 4

The following recommendations would be implemented by administrative regulation:

1. Require that persons nominated as lay trustees have demonstrated experience as outlined below in any one or a combination of these areas
   a. An employee or principal of a trust institution, investment organization, or pension fund having acted in either a management or an investment related capacity
   b. A portfolio manager with experience in a fiduciary capacity
   c. A chartered financial analyst as promulgated by the CFA Institute
   d. A university professor having taught investment related subjects
   e. Any other professional with experience in the field of public or private finances

2. Add the investment viewpoints of two additional investment consultants to the three person investment committee. These two additional investment consultants would be selected by the Board and would have as a minimum expertise in certain areas as enumerated above. These consultants would provide advice on the strategic function of the investment committee in determining asset allocation and investment targets.

3. Add two additional trustees as ad hoc participants of the investment committee. These two additional trustees shall attend investment committee meetings in an advisory capacity with the opportunity for providing input on any investment decisions. These additional trustees would not be required to have prior investment experience. These trustees would be selected from among the active member or retiree trustees.

4. Guidelines for training of board members, including investment education would be outlined in Board policy.

   Jointly submitted by Leon Mooneyhan of OVEC, and Jon Henrikson and Mona Ball of KEA

Kentucky Public Pension Working Group
Subcommittee on Investments
Appendix 1
Suggestions

Suggestion 5

The investment groups of both pension systems (including related insurance funds) and the investment operations of the Office of Financial Management should be combined into a single unit, to be overseen by a board of citizens who would assist with investment strategy, including asset allocations. Further recommend that the Virginia model be studied as a potential method of establishing a similar system in Kentucky.

Submitted by Todd Lowe, CFA

Suggestion 6

Amend Recommendation (1a) offered by Hammond Associates, to expand the duties of the current State Investment Commission (KRS 42.500-505) to include oversight and guidance of the Pension and Health Insurance Trust Funds of KRS and KTRS. In addition to the members that currently serve on the State Investment Commission, require two additional gubernatorial appointees to the commission that meet the qualifications of investment expertise, as defined by Hammond Associates, and also have 10 or more years experience associated with the investment of long-term assets such as pension funds.

Submitted by Senator Dorsey Ridley

Kentucky Public Pension Working Group

Strategic Investment and Governance Review

Final Recommendations

October 14, 2008

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I. Executive Summary

Executive Summary

Background

- In July 2008, the Kentucky Public Pension Working Group Investment Sub-Committee hired Hammond Associates Institutional Fund Consultants, Inc. (“Hammond Associates”) to conduct an operational and governance review and recommend new investment policies, strategies and benchmarks to improve the investment performance of the Kentucky Retirement Systems (“KRS”) and the Kentucky Teachers’ Retirement System (“KTRS”). The critical issues are summarized below:
    - Investment performance of both retirement systems has been unacceptable, significantly underperforming the actuarial assumed rate of return and their peer retirement systems across the country;
    - The governance structure responsible for investment oversight is inadequate;
    - The investment portfolio has insufficient diversification of asset classes;
    - The investment manager structure has concentrated positions, increasing risk.

Recommendations

- Based upon the results of our review, this report provides specific recommendations to address the four critical issues identified above. A summary of our recommendations follows on the next page.

Executive Summary

Summary Recommendations:

- Change the charter and composition of the investment committee of both retirement systems to upgrade the investment expertise available for oversight of the investment process.
- Consider forming one investment advisory committee with oversight responsibility for both retirement systems.
- Develop a new investment policy to broadly diversify both retirement systems' assets among traditional and alternative asset classes.
- Review the investment manager structure for poor performing managers and reduce the concentrated positions to more reasonable levels.
- Eliminate or amend administrative regulations that currently add unnecessary bureaucratic processes to the effective management of the KTRS investment portfolio.
- Review the Freedom of Information Act for limitations on implementing diversified portfolios.

II. Operational Review Observations

Operational Review Observations

Background

- The legislative and executive branches of the Commonwealth of Kentucky sensed that a problem existed with KRS and KTRS. The most obvious manifestation of this problem to the legislators was that investment returns for each fund seemed low. For the 1, 3, 5 and 10-year periods ending June 30, 2008, the KRS pension fund had produced returns of -4.2%, 6.6%, 8.5% and 5.6%, respectively, compared to an actuarial assumed rate of return of 7.75%. The returns for KTRS for the same periods were -5.8%, 4.6%, 6.2% and 4.5%, respectively, compared to an actuarial assumed rate of return of 7.5%.
- Two possible explanations for this performance exist. First, it was possible that similar funds had performed as poorly and that no reasonable changes could have altered the situation. It was also possible that a good portion of the investment world had changed their approach and that KRS and KTRS had not kept up with the changes. Based upon our review, it appears the investment community has changed their approach.
- The Commonwealth of Kentucky embarked upon a project to protect the assets of its retirement systems and decided to engage an independent firm to assist with the analysis of the problems. Hammond Associates responded to the request for proposal and was subsequently hired to conduct an operational and governance review.

Operational Review Observations *(continued)*

Hammond Associates Overview

- Hammond Associates is an investment consulting firm located in St. Louis, Missouri. The firm has over 200 clients with assets of approximately $57 billion.
- Two-thirds of Hammond Associates' clients are endowments and foundations. The mission and objectives of this group of clients is comparable in many ways to public retirement plans. Foundations and endowments also have a well-deserved reputation as thought leaders in the field of investment policy.
- The firm currently advises $25 billion of retirement plan assets which is an important and growing portion of Hammond Associates' clientele. One of these clients is a police officers retirement system with assets of approximately $3.5 billion. Another is a state teachers retirement plan with assets of approximately $15 billion.
- Given the significance of the Kentucky Public Pension Plan Working Group Investment Sub-Committee assignment, Hammond Associates appointed two principal consultants who have a significant amount of experience with retirement fund issues.
    - Jerry Woodham was Chief Investment Officer for the San Diego County Pension System for the period 2001-2003. This plan had assets of $5 billion when Mr. Woodham left at the end of 2003.
    - Rich Marra was the Assistant Treasurer and Director of Pension Investments with Smurfit-Stone Container Corporation from 1990 through 2005. He was responsible for setting policy and strategy for their retirement plan assets which exceeded $4 billion.

Operational Review Observations *(continued)*

Peer Ranking

- We compared returns for both KRS and KTRS to the Russell Mellon Public Plans Greater than $1 Billion universe. For the 1, 3, 5 and 10-year periods ending June 30, 2008, KRS ranked in the 2nd, 3rd, 4th and 3rd quartile, respectively. More specifically, for the 10-year period, KRS returned 5.6% compared to the the median of 6.6% and 75th percentile of 5.0%. For the same time periods, KTRS ranked in the 4th quartile for all measured periods. The KTRS return for the 10-year period was 4.5% compared to the 6.6% median.

Risk

- While historical market return studies point out that high levels of U.S. equity market exposure benefit long-term investors, the related risks are less obvious. Significant concentrations in a single asset class poses extraordinary risk to portfolio assets. Fortunately, diversification provides investors with a strong risk management tool. From October 1, 2007 through September 30, 2008, the performance of various asset classes over the 1-year and 10-year period are highlighted below.

	1-Year	10-Year
S&P 500	-22.1%	3.1%
Russell 2000	-14.5%	7.8%
International Equity	-30.5%	5.0%
Emerging Market Equity	-33.2%	14.5%
Lehman Aggregate	3.7%	5.2%
World Bond Index	5.9%	5.4%

	1-Year	10-Year
U.S. TIPS	6.2%	7.1%
Commodities	-3.7%	10.0%
Hedge Fund of Funds	-10.2%	6.6%
Real Estate	5.5%	11.8%
Timber	15.5%	9.2%

Operational Review Observations *(continued)*

Risk (continued)

- By combining assets that move in different directions in response to market forces, more efficient portfolios can be built. At a given level of risk, properly diversified portfolios provide higher returns than less diversified portfolios. Conversely, through appropriate diversification, a given level of returns can be achieved at a lower risk. Professor Harry Markowitz, known for his pioneering work in modern portfolio theory, maintains that investment portfolio diversification provides the only “free lunch“ available for investors, since risk can be reduced without sacrificing return.
- As of June 30, 2008, KTRS had 55% of the total portfolio allocated to the U.S. equity market and 86% of the total equity portfolio allocated to the U.S. equity market. This outsized exposure of more than one half of the portfolio invested in the U.S. equity market violates sensible diversification principles. Committing more than 50% of a portfolio to a single asset class exposes the investor to the preventable risk of large losses. By establishing an investment policy with a variety of asset classes that move at different times and in different directions, investors diminish the risk that a concentrated exposure to a single market will cause material damage.
- Our asset allocation model compared the KTRS investment portfolio against the median public plan portfolio in the Russell Mellon universe. The KTRS portfolio had lower expected return and higher risk across all metrics including: higher standard deviation, a greater probability of a loss year, a higher probability of a 10% or worse loss, greater value at risk, a lower Sharpe Ratio and a lower probability of reaching the 7.5% return objective.

Opportunity Cost

- Hammond Associates calculated the cost of below median performance for KRS and KTRS for the 10-year period ended June 30, 2008. This "opportunity cost" was determined by comparing the fiscal year return with the median return for the Russell Mellon universe and applying the return to the prior year's market value. Based on this analysis, the opportunity cost for KRS Pension was $1.5 billion and KTRS was $3.5 billion for the 10 years ending June 30, 2008. If the funds had provided median returns over this period, the market value of assets would have been higher by the amount of the opportunity cost, all other variables held constant. *Note: Individual fiscal year calculations were compounded to determine the final opportunity cost. See section VI for the complete analysis.*

Possible Causes of Below Median Returns

- When returns for one member of a group of similar funds are below or above median, it is useful to examine the possible causes. These causes fall into one of two areas, either asset allocation impact or manager impact. For the 10-year period ended June 30, 2008, manager returns for both systems have generally been above median. Asset allocation for KRS and KTRS has differed substantially from the median. Therefore, the key differences in return must be attributed to differences in asset allocation. The differences in asset allocation lie in two primary areas. First, KRS and KTRS have held a higher allocation to U.S. equity and a lower allocation to international equity than the median fund. KRS now has an allocation which is comparable to the median fund. Second, both funds have had a lower allocation to alternative assets than the median fund.

Operational Review Observations *(continued)*

Value of Peer Rankings

- KTRS has indicated that they and their consultants feel that peer comparisons have, at best, limited usefulness. Hammond Associates would agree that over the short-term, peer comparisons could be less useful. During short-term periods (1-2 years), investment strategies and managers may produce returns that are not indicative of their long-term potential. However, over a longer time frame (5-10 years), if a fund ranks in the 3rd or 4th quartile of peer institutions, it seems fair to ask questions about what other funds are doing that your fund is not. There may be changes in managers or asset class valuations that could be beneficial to the fund. Since 1990, institutional investors have increased allocations to international equity and alternative assets while reducing reliance on U.S. equity and fixed income. Both KRS and KTRS do not utilize peer rankings and to varying degrees have not participated fully in this trend. KRS introduced TIPS, international equity and alternative assets to the portfolio in 2001, but still reacted more slowly than we think necessary. KTRS introduced international equity in 2006 and introduced alternative assets in 2008. KTRS has a high concentration of U.S. equity in the portfolio today.

Governance Structure

- The value of a high quality investment committee providing senior level oversight cannot be underestimated. Both the composition and the size of the investment committees at KRS and KTRS have contributed to the underperformance of both retirement systems' investments.

Operational Review Observations *(continued)*

Governance Structure (continued)

- While there is no magic bullet regarding the correct number of members for an investment committee, both KRS and KTRS appear too small. We recommend a 7-9 member committee. KRS has a 5 member committee and requires no specific investment background in order to be a member. The committee structure for KTRS requires only three members, including the Executive Secretary. It is unusual for the Executive Secretary to be a voting member. In addition to committee size, one can reasonably raise a question about the qualification requirements for committee members. Many of the funds in our survey require that some committee members have investment background and experience. The Virginia Retirement System ("VRS") goes one step further and is mentioned as a model for larger public funds. VRS requires that four of their nine board members must be investment experts. To further ensure that the proper talent is brought to bear on investment issues, VRS utilizes an Investment Advisory Committee, which supports and advises their Board of Trustees in matters of investment policy, asset allocation and manager selection. All Investment Advisory Committee members must be investment experts and are selected by the board and CIO. Finally, we compared the composition of the Boards of the systems' peers, in an attempt to determine whether funds which required that some level of investment expertise be present with board or committee members resulted in better investment decisions. Returns for the five years ending June 30, 2007 were analyzed. Funds in the top quartile for that period were compared with those in the bottom quartile. The results of this analysis were not 100% consistent with our expectations, but were suggestive that perhaps we were on the right track.

Operational Review Observations *(continued)*

Governance Structure (continued)

- We had only the fund's stated requirements to analyze and could not interview each member to determine their true level of expertise. However, in the top quartile, 5 of the 12 funds required that some level of investment talent be evidenced. In the bottom quartile, only 2 of the 12 funds had the same requirement. We cannot prove cause and effect with these results. However, common sense would indicate that this is a step in the right direction. The objective is to increase the probability of success in meeting long-term investment objectives. Seeking talented and investment savvy board or committee members is consistent with improving this probability.

Social Security

- KTRS members do not participate in Social Security. KTRS believes this is a rare situation. Our research shows that 11 of the 47 retirement systems presented in the universe on page 30 indicated that their members do not participate in Social Security. 9 of the 11 non-participating systems are education employee-specific plans. For the 3, 5 and 10-year periods ended June 30, 2007, KTRS was the worst performing plan in this subset universe. KTRS further states that opting out of Social Security creates a situation in which the fund must be managed more conservatively than if Social Security was available to members. While the need to be more cautious may be reasonable, it raises the question as to which type of risk the fund should try to minimize. We compared risk, as measured by standard deviation of returns, for both systems and found that for the 3 and 5-years ended June 30, 2008, the returns were less volatile than the Russell Mellon universe, but not materially.

Operational Review Observations *(continued)*

Social Security (continued)

- More importantly, an analysis of forecasted returns and risk comparing the target allocation for both KRS and KTRS with more diversified portfolios containing larger allocations to international equity and alternative assets reveals that both KRS and KTRS have lower projected returns and higher levels of risk. The risk metrics included standard deviation, probability of a loss year, probability of a 10% or worse loss, lowest likely one year return and the probability of achieving target returns. Both portfolios, due to an overweighting of U.S. equity vs. international equity and a lower allocation to alternative assets, will likely present a higher risk situation instead of the lower risk that KTRS prefers. *See section VII for further analysis.*

Executive Investment Committee Structure

- It has been suggested that KTRS and KRS may consider an executive investment committee structure in which one single committee would support and advise both Boards of Trustees in matters of investment policy, asset allocation and manager selection, much as VRS does. While this is one form of governance may seem attractive, it is clearly not the only option. It is entirely possible that both funds could adopt enlightened policies and function much more effectively as separate entities than they have in the past. Under assumptions regarding scarce investment talent at the board level, it is also possible that support would grow for a single board. We feel it is inappropriate for us to state a preference for one committee versus two committees, when both forms have the potential for success. This is an issue that the Working Group Sub-Committee as a whole must address.

Operational Review Observations *(continued)*

Funding Policy

- While the funding policy was outside the scope of this Working Group Sub-Committe, we noted that the funded ratio for the five funds managed by KRS ranged from 83.6% to 56.9% and the funded ratio for KTRS was 71.9% as of June 30, 2007. While active and retired teachers have a statutory fixed employer contribution rate, the General Assembly can change this through legislation at any time. The timing of contributions has no adverse impact on the performance of retirement fund assets as long as the investments are made in accordance with a sound investment policy which has been approved by the investment committee. Adverse consequences occur when contributions are not made in accordance with the investment policy.

Administrative Regulations

- The KTRS' Executive Secretary testified that his board is impaired by regulations that prohibit broad investments in various asset classes. However, those regulations have been imposed on KTRS by the KTRS board. The process of establishing an investment policy based upon the "prudent man" standard currently within statutes provides the fiduciaries of the retirement systems with the necessary guidelines to make appropriate decisions regarding investment policy.

III. Recommendations

Recommendations

Recommendation 1:

Change the charter and composition of the investment committee of both retirement systems in order to upgrade the investment expertise available for oversight of the investment process.

- The investment committee should possess the following characteristics:
  - Minimum of seven members
  - Investment expertise required (as defined on page 22)
  - Commitment to participate in continuing educational programs and conferences
- The investment committee member selection process should be established by the Working Group Investment Sub-Committee, or its designee.
- The selection process should commence immediately.

Recommendations *(continued)*

Recommendation 1A:

Form one investment advisory committee with oversight responsibility for both retirement systems (an Executive Investment Committee).

- The Executive Investment Committee should possess the following characteristics:
  - Oversight responsibilities for both retirement systems
  - Minimum of nine members
  - Investment expertise required (as defined on page 22)
  - Commitment to participate in continuing educational programs and conferences
- The investment committee member selection process should be established by the Working Group Investment Sub-Committee, or its designee.
- The selection process should commence immediately.

Recommendations *(continued)*

Definition of Investment Expertise:

Investment experience has been defined by similar plans as the following:

- An individual with at least ten years substantial experience as any one or a combination of the following that also poses no conflict of interest:
  - A portfolio manager acting in a fiduciary capacity
  - A securities analyst
  - A current or retired employee or principal of a trust institution, investment organization or endowment fund acting either in a management or an investment related capacity.
  - A chartered financial analyst in good standing as determined by the CFA Institute
  - A professor at the university level, teaching economics or investment related subjects
  - An economist
  - Any other professional engaged in the field of public or private finances

Recommendations *(continued)*

Recommendation 2:

Conduct an investment policy review.

- Asset mix should be broadly diversified among traditional and alternative asset classes.
- The critical items to be reviewed would include:
  - Time horizon
  - Risk tolerance
  - Return objective
  - Policy asset mix and related benchmarks (peer universe)
  - Rebalancing policy
  - Portfolio risk characteristics
  - Investment manager structure and related benchmarks
  - Conflict of interest policy
- The policy review should be conducted by the new investment committee, the CIO and the investment consultant.

Recommendations *(continued)*

Recommendation 3:

Reduce investment manager concentrations in the KRS and KTRS portfolio.

- Limit manager positions to 10% of the market value of the fund.
- As of June 30, 2008, KRS Pension Fund holds an outsized allocation to Pyramis Global Investors (12.7%) across 2 products.
  - KRS also internally managers an S&P 1500 indexed fund (22.8%).
- As of June 30, 2008, KTRS holds an outsized allocation to Todd Investment Advisors (25.0%) across 5 products.
  - KTRS also internally manages an S&P 500 indexed fund (20.5%).

Recommendations *(continued)*

Recommendation 4:

Conduct a formal review of the administrative regulations of KTRS.

  - Regulations which impair the ability of the investment committees to construct, implement and monitor efficient investment portfolios should be modified or amended as necessary.
  - The review should be conducted by members of the Working Group Investment Sub-Committee, or its designee, and commence immediately.
- The “prudent man” standard currently within the statutes provides the fiduciaries of the retirement systems with the necessary guidelines to make the appropriate decisions regarding investment policy.

Recommendations *(continued)*

Recommendation 5:

Conduct a formal review of the requirements under Kentucky's Freedom of Information act.

- Strict Freedom of Information Act regulations impede access to top tier private equity funds and must be addressed to implement a broadly diversified portfolio.
- All public retirement systems with alternative asset allocations face this issue.
- Regulations which impair the ability of the investment committees to construct, implement and monitor efficient investment portfolios should be modified or amended, if applicable.
- The review should be conducted by members of the Working Group Investment Sub-Committee, or its designee, and commence immediately.
- Hammond Associates recommends the Working Group Investment Sub-Committee seek legal advice for specific guidance.

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IV. Portfolio Performance

Portfolio Performance – Introduction

- Trailing period returns for both KRS and KTRS were compared to both a custom peer universe and a Russell Mellon universe.
- KRS and KTRS were compared to a custom universe of all state pension plans with asset greater than $5 billion, publicly available return data, and a fiscal year ending June 30th.
  - The universe contains 47 funds with $1.73 trillion in total assets.
  - The average size of a fund in the universe is $36.9 billion.
- The other benchmark used for comparison purposes was the Russell Mellon Public Funds Greater than $1 Billion universe.
  - The universe contains 58 funds with $944 billion in total assets.
  - The average size of a fund in the universe is $16.3 billion.
- Both KRS and KTRS have underperformed their peers over the past ten years when compared to either universe.

Public Pension Plan Return Data – Custom Peer Universe

System	Assets	Period Ending June 30, 2007 1-Year	3-Year	5-Year	10-Year
Pennsylvania Public School Employees Retirement System	$67,340,997	22.9%	16.9%	14.5%	NA
Louisiana Teachers Retirement System	16,148,730	19.7%	15.0%	14.0%	9.7%
Washington Department of Retirement Systems	69,059,082	21.3%	17.0%	14.0%	NA
South Dakota Retirement System	8,158,169	21.4%	15.9%	13.8%	10.3%
Oregon Employees Retirement System	62,891,942	18.6%	15.6%	13.4%	NA
Missouri State Employees Retirement System	8,129,174	18.7%	14.2%	13.3%	9.2%
Ohio State Teachers Retirement System	72,935,433	20.7%	15.5%	13.2%	NA
California State Teachers Retirement System	172,377,918	21.0%	15.1%	13.1%	NA
California Public Employees Retirement System	251,122,682	19.1%	14.6%	12.8%	9.1%
Idaho Public Employee Retirement System	11,257,959	20.0%	14.3%	12.8%	NA
Oklahoma Teachers Retirement System	9,651,042	18.5%	12.8%	12.8%	NA
Virginia Retirement System	56,890,203	20.4%	14.9%	12.8%	NA
Louisiana State Employees Retirement System	9,351,148	19.2%	13.7%	12.6%	NA
Illinois Teachers Retirement System	41,909,318	19.2%	13.9%	12.5%	9.1%
New York State Teachers Retirement System	104,912,949	19.3%	13.8%	12.3%	8.8%
Kansas Public Employees Retirement System	14,183,073	18.0%	14.1%	12.3%	8.8%
Arkansas Teachers Retirement System	11,636,935	19.1%	14.0%	12.1%	NA
Minnesota Teachers Retirement Association	19,938,882	18.5%	14.0%	12.0%	8.5%
Illinois State Universities Retirement System	15,985,730	18.3%	13.4%	11.9%	8.5%
Minnesota Public Employees Retirement Association	16,718,662	18.3%	13.8%	11.9%	8.3%
Minnesota State Retirement System	15,214,339	18.3%	13.8%	11.9%	NA
Indiana Public Employees Retirement Fund	17,181,295	18.2%	12.8%	11.8%	NA
Arkansas Public Employees Retirement System	5,970,244	18.1%	13.3%	11.7%	NA
Ohio School Employees Retirement System	11,546,062	18.7%	13.8%	11.7%	8.2%
New Mexico Public Employees Retirement Association	13,616,098	18.1%	13.2%	11.7%	NA
Hawaii Employees Retirement System	11,462,417	17.7%	13.3%	11.7%	NA
Indiana State Teachers Retirement Fund	8,987,744	18.2%	12.9%	11.6%	NA
Iowa Public Employees Retirement System	23,217,168	16.3%	12.9%	11.6%	9.0%
Alaska Public Employees Retirement System	7,439,387	18.9%	13.1%	11.5%	NA
Florida Retirement System	134,317,778	18.1%	12.9%	11.5%	8.5%
Delaware Public Employees Retirement System	7,413,370	15.9%	12.7%	11.5%	9.0%
Mississippi Public Employees Retirement System	21,912,350	18.9%	13.1%	11.4%	NA
Maine State Retirement System	11,023,021	16.2%	11.8%	11.4%	7.7%
Maryland State Retirement and Pension System	39,444,781	17.6%	12.4%	11.3%	7.2%
Texas Employees Retirement System	24,460,276	13.9%	11.8%	11.2%	NA
Arizona State Retirement System	28,475,997	17.8%	11.9%	11.0%	8.4%
Oklahoma Public Employees Retirement System	6,640,477	16.4%	11.6%	10.9%	NA
Illinois State Employees Retirement System	12,078,909	17.1%	12.6%	10.8%	NA
Missouri Public Schools Retirement System	31,964,843	16.6%	11.8%	10.5%	NA
Kentucky Retirement Systems	*14,228,184*	*15.3%*	*11.4%*	*10.4%*	*8.1%*
North Carolina Retirement Systems	75,953,334	14.8%	10.6%	10.3%	NA
Nevada Public Employees Retirement System	22,701,360	15.0%	11.0%	10.0%	7.9%
South Carolina Retirement Systems	28,048,780	13.4%	8.6%	8.8%	7.0%
Georgia Employees Retirement System	17,516,903	14.7%	9.5%	8.5%	NA
Georgia Teachers Retirement System	53,133,101	NA	9.5%	8.5%	NA
Kentucky Teachers Retirement System	*15,492,519*	*15.2%*	*9.3%*	*8.5%*	*7.1%*
Tennessee Consolidated Retirement System	32,365,969	13.2%	9.1%	8.3%	NA
High		22.9%	17.0%	14.5%	10.3%
Mean		17.9%	13.0%	11.7%	8.5%
Median		18.3%	13.2%	11.7%	8.5%
Low		13.2%	8.6%	8.3%	7.0%

Source: Comprehensive annual financial report published by each represented system for the period ending June 30, 2007.
Notes: Returns shown for Kentucky Retirement Systems represent only the returns for the Pension Fund. Plans are ranked according to their 5-year performance.

Public Pension Plan Return Data – Plans Not Covered by Social Security

- The table below shows return data for the systems contained in the peer universe on the previous page whose members do not participate in Social Security.
- For the 3, 5 and 10-year periods ending June 30, 2007, KTRS was the worst performing plan in this universe.

		Period Ending June 30, 2007			
System	**Assets**	**1-Year**	**3-Year**	**5-Year**	**10-Year**
Louisiana Teachers Retirement System	16,148,730	19.7%	15.0%	14.0%	9.7%
Ohio State Teachers Retirement System	72,935,433	20.7%	15.5%	13.2%	NA
California State Teachers Retirement System	172,377,918	21.0%	15.1%	13.1%	NA
Louisiana State Employees Retirement System	9,351,148	19.2%	13.7%	12.6%	NA
Illinois Teachers Retirement System	41,909,318	19.2%	13.9%	12.5%	9.1%
Illinois State Universities Retirement System	15,985,730	18.3%	13.4%	11.9%	8.5%
Ohio School Employees Retirement System	11,546,062	18.7%	13.8%	11.7%	8.2%
Maine State Retirement System	11,023,021	16.2%	11.8%	11.4%	7.7%
Missouri Public Schools Retirement System	31,964,843	16.6%	11.8%	10.5%	NA
Nevada Public Employees Retirement System	22,701,360	15.0%	11.0%	10.0%	7.9%
Kentucky Teachers Retirement System	*15,492,519*	*15.2%*	*9.3%*	*8.5%*	*7.1%*
High		21.0%	15.5%	14.0%	9.7%
Mean		18.2%	13.1%	11.8%	8.3%
Median		18.7%	13.7%	11.9%	8.2%
Low		15.0%	9.3%	8.5%	7.1%

- According to the National Education Association, of the 98 plans in which education employees participate, 22% of the plans are those in which “Few/None” of the members are covered by Social Security
- According to the same survey only 58% of the plans are categorized as having “All” members covered.

Source: Comprehensive annual financial report published by each represented system for the period ending June 30, 2007.
Note: Plans are ranked according to their 5-year performance.

Portfolio Performance – KRS Pension Fund

	Period Ending June 30, 2008			
	1-Year	3-Year	5-Year	10-Year
KRS Pension Fund	***-4.2%***	***6.6%***	***8.5%***	***5.6%***
Median Return	-4.3%	8.4%	10.7%	6.6%
Excess Return	0.1%	-1.8%	-2.2%	-1.0%
Quartile Ranking	2nd	3rd	4th	3rd

- KRS Pension Fund returns have ranged between the second and fourth quartiles of the Russell Mellon Public Pension Plan Greater than $1 Billion Universe over the last 1, 3, 5 and 10-year periods ending June 30, 2008.
- Peer performance has improved recently, ranking in the second quartile of the Russell Mellon universe over the past year.
- Over the past ten years the KRS Pension Fund has underperformed the median return for the Russell Mellon universe by 100 basis points.
- The underperformance relative to the universe median represents an opportunity cost of approximately $1.5 billion in lost returns which could have been added to the Fund's asset base.
- The KRS Pension Fund has an actuarial assumed rate of return of 7.75%.

Portfolio Performance – KRS Insurance Fund

	Period Ending June 30, 2008			
	1-Year	3-Year	5-Year	10-Year
KRS Insurance Fund	***-7.9%***	***7.3%***	***10.1%***	***5.5%***
Median Return	-4.3%	8.4%	10.7%	6.6%
Excess Return	-3.6%	-1.1%	-0.6%	-1.1%
Quartile Ranking	4^{th}	3^{rd}	3^{rd}	3^{rd}

- KRS Insurance Fund returns have been either in the third or fourth quartile of the Russell Mellon universe over the last 1, 3, 5 and 10-year periods ending June 30, 2008.
- Over the past ten years the KRS Insurance Fund has underperformed the median return for the Russell Mellon universe by 110 basis points.
- The KRS Insurance Fund has an actuarial assumed rate of return of 7.75%.

Portfolio Performance – KTRS

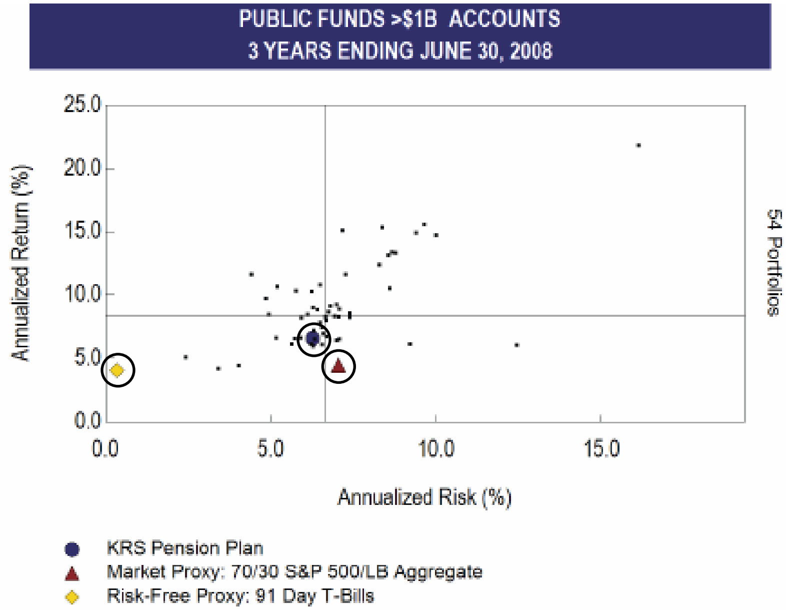
	Period Ending June 30, 2008			
	1-Year	3-Year	5-Year	10-Year
KTRS	***-5.8%***	***4.6%***	***6.2%***	***4.5%***
Median Return	-4.3%	8.4%	10.7%	6.6%
Excess Return	-1.5%	-3.8%	-4.5%	-2.1%
Quartile Ranking	4^{th}	4^{th}	4^{th}	4^{th}

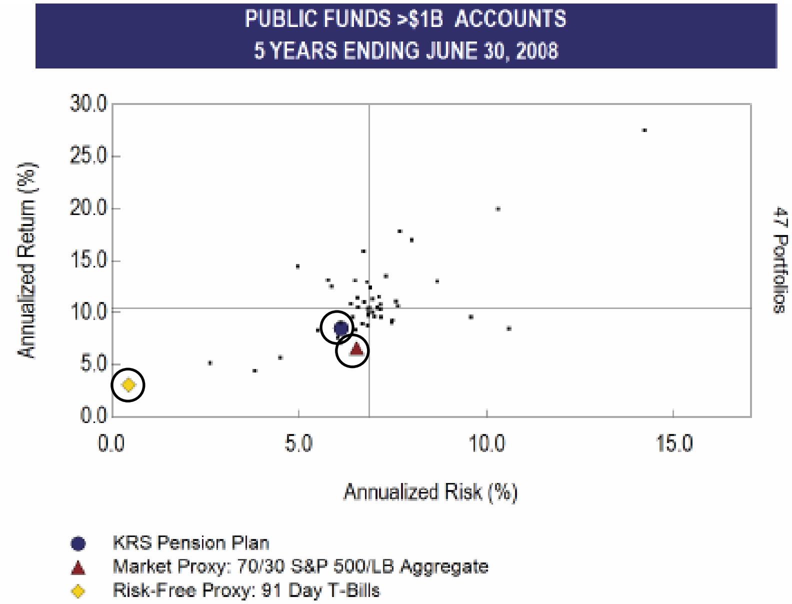
- Kentucky Teachers' Retirement Systems' returns have ranked in the fourth quartile of the Russell Mellon Public Pension Plan Greater than $1 Billion Universe over the last 1, 3, 5 and 10-year periods ending June 30, 2008.
- Over the past ten years KTRS has underperformed the median return for the Russell Mellon universe by 210 basis points.
- The underperformance relative to the universe median represents an opportunity cost of approximately $3.5 billion in lost returns which could have been added to the Fund's asset base.
- KTRS has an assumed actuarial rate of return of 7.5%.

Peer Ranking Analysis

- The key metric in performance measurement is the long-term target return.
- Pension plans cannot manage with top quartile performance as the goal. Top quartile performance is the result of good management.
- Peer rankings provide some insight as to what similar institutional investors are doing.
- Consistently low peer rankings, at a minimum, should serve as notice to review both your policy and the policies of the top performing funds (long-term).

Risk/Return Profile – KRS Pension Plan vs. Public Funds > $1b





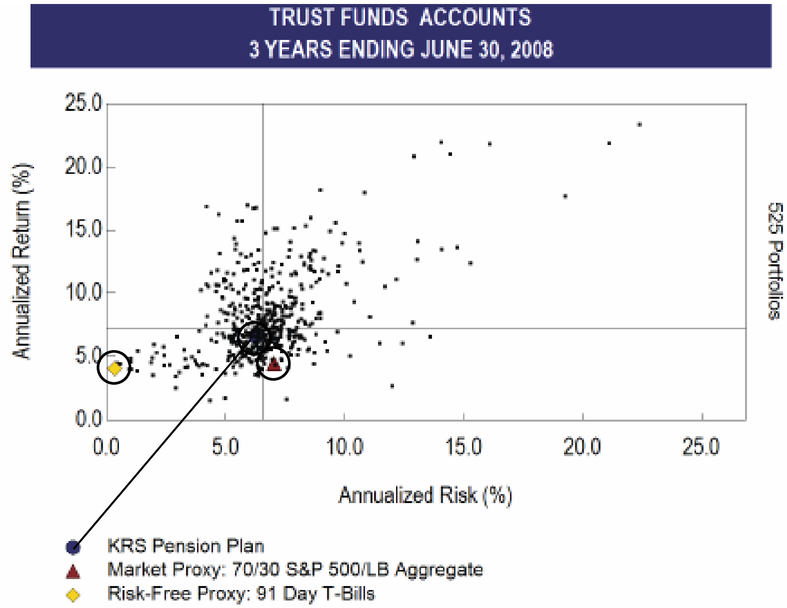
Risk vs. Return for 3 Years Ending June 30, 2008

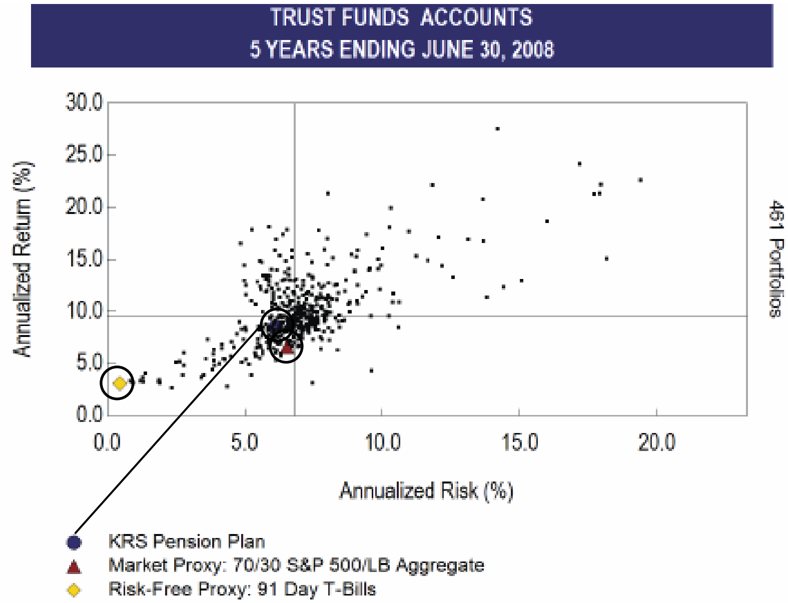
Rank within Public Funds >$1B (peer)	Annualized Return	Percentile Rank	Standard Deviation
KRS Pension Plan	6.6%	77	6.3%
70/30 S&P 500/LB Aggregate	4.5%	98	7.0%
Median for this Universe	8.4%		6.7%

Risk vs. Return for 5 Years Ending June 30, 2008

Rank within Public Funds >$1B (peer)	Annualized Return	Percentile Rank	Standard Deviation
KRS Pension Plan	8.5%	85	6.1%
70/30 S&P 500/LB Aggregate	6.6%	95	6.5%
Median for this Universe	10.4%		6.8%

Risk/Return Profile – KRS Pension Plan vs. Total Plan Universe





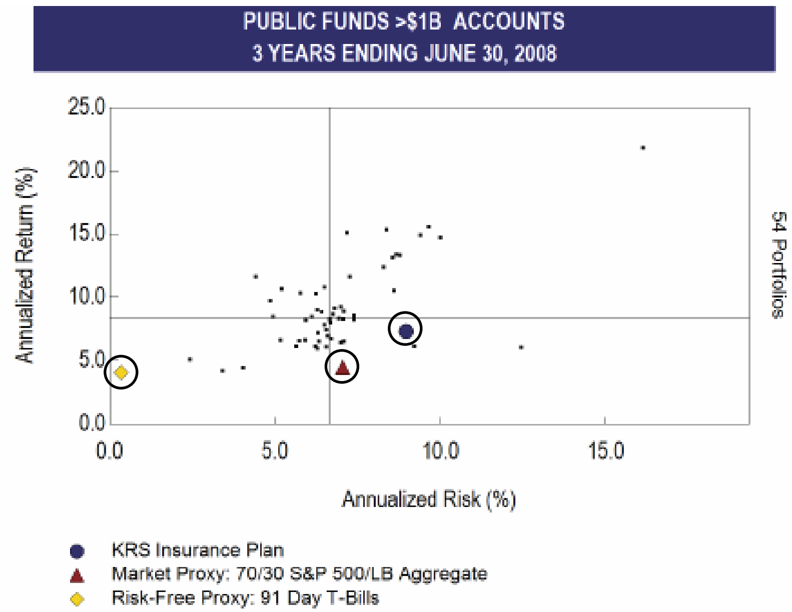
Risk vs. Return for 3 Years Ending June 30, 2008

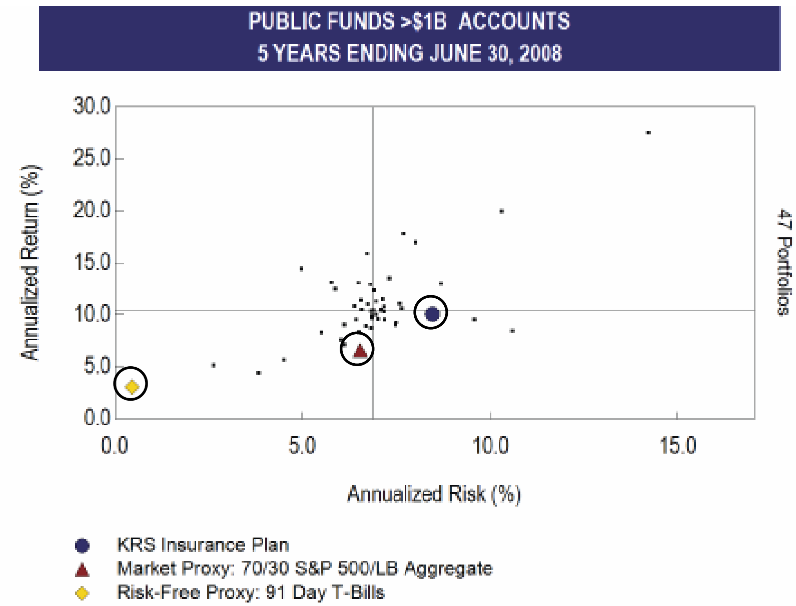
Rank within Trust Funds (peer)	Annualized Return	Percentile Rank	Standard Deviation
KRS Pension Plan	6.6%	62	6.3%
70/30 S&P 500/LB Aggregate	4.5%	93	7.0%
Median for this Universe	7.2%		6.6%

Risk vs. Return for 5 Years Ending June 30, 2008

Rank within Trust Funds (peer)	Annualized Return	Percentile Rank	Standard Deviation
KRS Pension Plan	8.5%	69	6.1%
70/30 S&P 500/LB Aggregate	6.6%	89	6.5%
Median for this Universe	9.5%		6.8%

Risk/Return Profile – KRS Insurance Plan vs. Public Funds > $1b

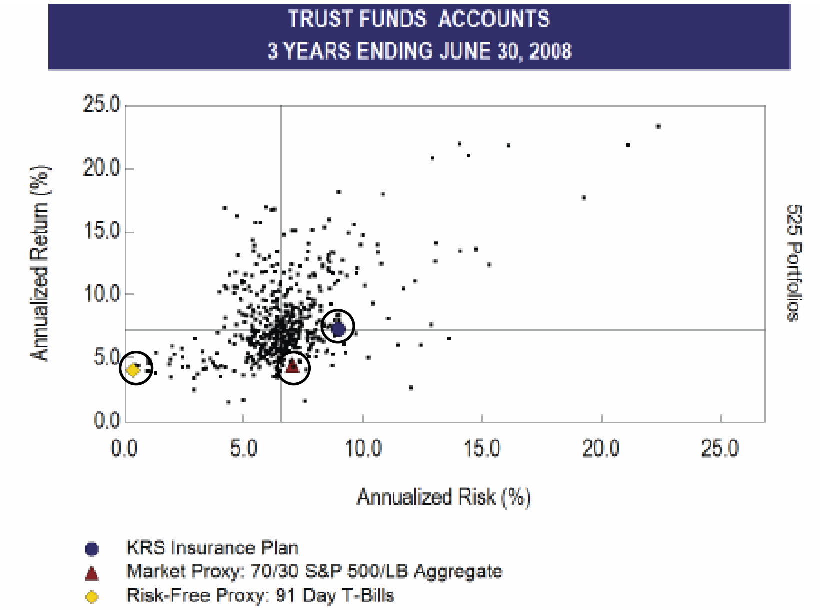


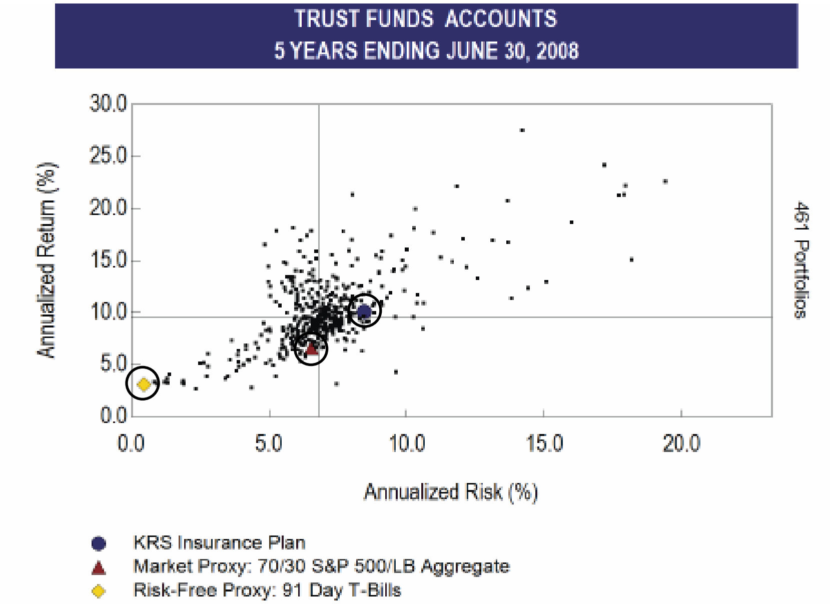


Risk vs. Return for 3 Years Ending June 30, 2008			
Rank within Public Funds >$1B (peer)	**Annualized Return**	**Percentile Rank**	**Standard Deviation**
KRS Insurance Plan	7.3%	68	9.0%
70/30 S&P 500/LB Aggregate	4.5%	98	7.0%
Median for this Universe	8.4%		6.7%

Risk vs. Return for 5 Years Ending June 30, 2008			
Rank within Public Funds >$1B (peer)	**Annualized Return**	**Percentile Rank**	**Standard Deviation**
KRS Insurance Plan	10.1%	59	8.5%
70/30 S&P 500/LB Aggregate	6.6%	95	6.5%
Median for this Universe	10.4%		6.8%

Risk/Return Profile – KRS Insurance Plan vs. Total Plan Universe





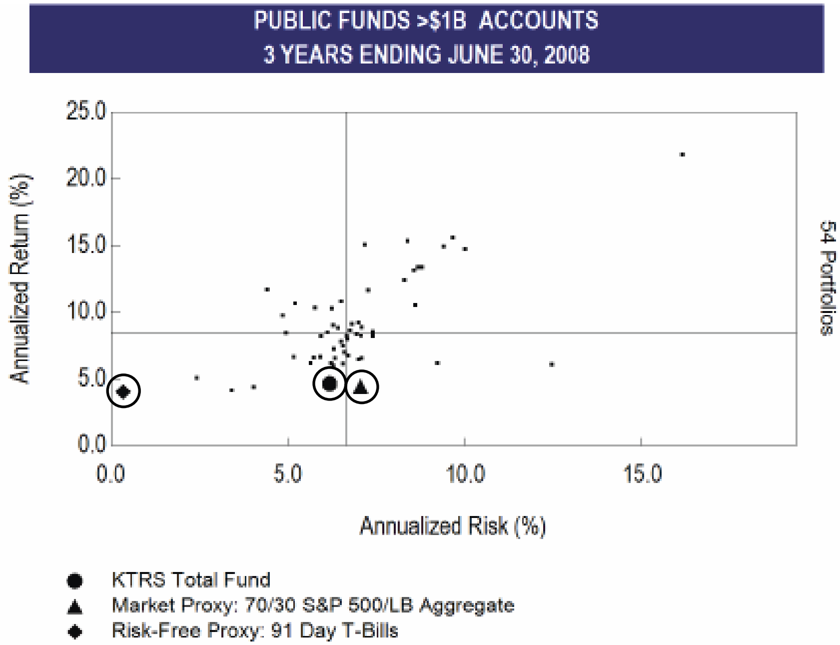
Risk vs. Return for 3 Years Ending June 30, 2008

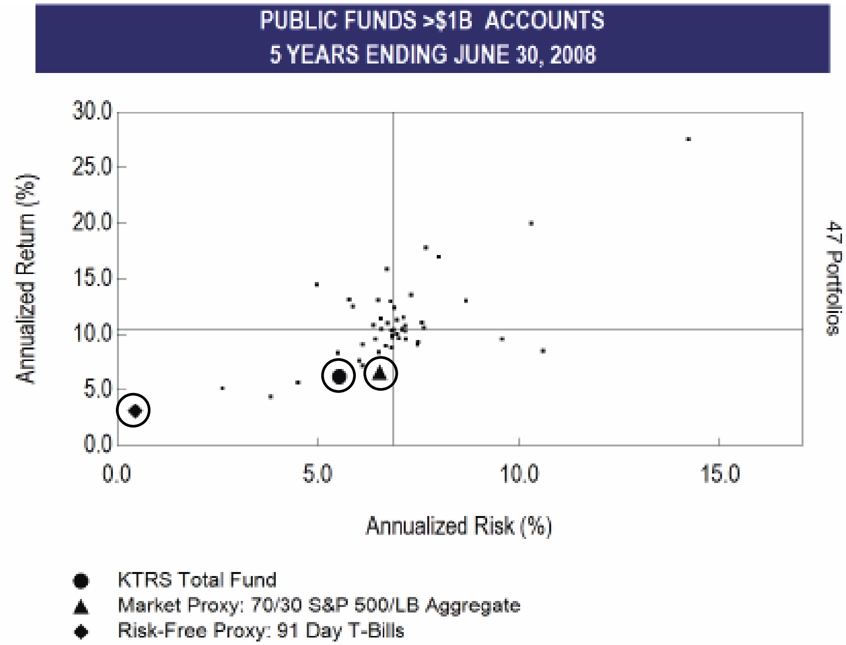
Rank within Trust Funds (peer)	Annualized Return	Percentile Rank	Standard Deviation
KRS Insurance Plan	7.3%	48	9.0%
70/30 S&P 500/LB Aggregate	4.5%	93	7.0%
Median for this Universe	7.2%		6.6%

Risk vs. Return for 5 Years Ending June 30, 2008

Rank within Trust Funds (peer)	Annualized Return	Percentile Rank	Standard Deviation
KRS Insurance Plan	10.1%	42	8.5%
70/30 S&P 500/LB Aggregate	6.6%	89	6.5%
Median for this Universe	9.5%		6.8%

Risk/Return Profile – KTRS Total Fund vs. Public Funds > $1b





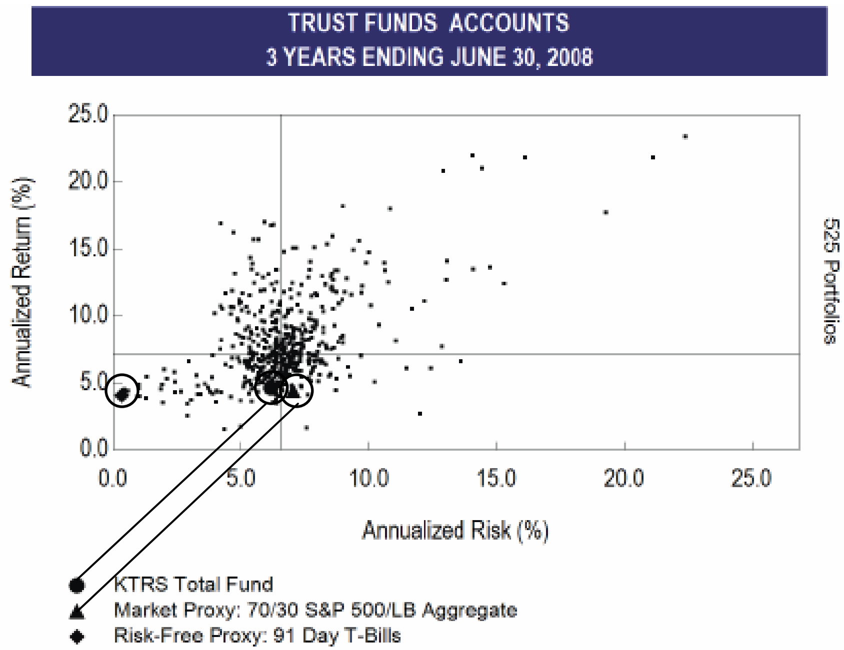
Risk vs. Return for 3 Years Ending June 30, 2008

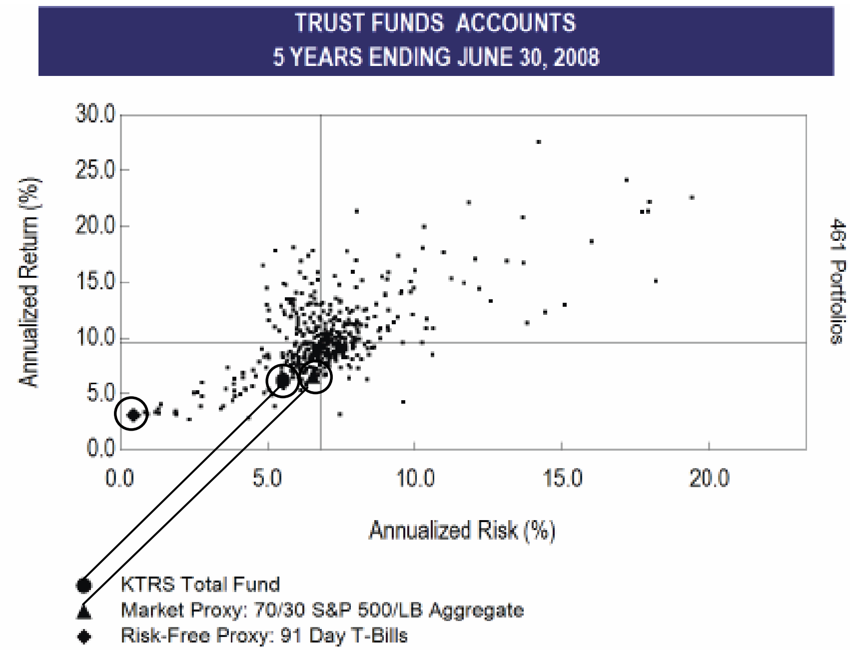
Rank within Public Funds >$1B (peer)	Annualized Return	Percentile Rank	Standard Deviation
KTRS Total Fund	4.6%	98	6.2%
Median for this Universe	8.4%		6.7%

Risk vs. Return for 5 Years Ending June 30, 2008

Rank within Public Funds >$1B (peer)	Annualized Return	Percentile Rank	Standard Deviation
KTRS Total Fund	6.2%	95	5.5%
Median for this Universe	10.4%		6.8%

Risk/Return Profile – KTRS Total Fund vs. Total Plan Universe





Risk vs. Return for 3 Years Ending June 30, 2008

Rank within Trust Funds (peer)	Annualized Return	Percentile Rank	Standard Deviation
KTRS Total Fund	4.6%	92	6.2%
Median for this Universe	7.2%		6.6%

Risk vs. Return for 5 Years Ending June 30, 2008

Rank within Trust Funds (peer)	Annualized Return	Percentile Rank	Standard Deviation
KTRS Total Fund	6.2%	91	5.5%
Median for this Universe	9.5%		6.8%

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V. Manager Performance

Manager Performance

- Manager performance has met exceeded expectations for both KRS and KTRS.
- Over the past 3, 5, and 10-year periods ending June 30, 2008, the majority of KRS and KTRS managers have ranked in the top half of their respective peer universe, with many ranking in the top quartile.
- Performance over the past year has been more varied, which is as expected due to the shorter time horizon. However, more managers have ranked in the top half of their universe versus the bottom half over the past year.
- Manager selection and performance did not contribute to the systems' underperformance and likely improved performance.
- The underperformance of KRS and KTRS can be attributed to the asset allocation of each system.

Manager Performance – KRS

KRS Pension Fund Manager Universe Comparison Summary (as of 6/30/08)

Peer Return Rankings Distribution								
	1 Year		3 Years		5 Years		10 Years	
1st Quartile Managers	1	(11%)	2	(29%)	2	(50%)	1	(100%)
2nd Quartile Managers	4	(44%)	3	(43%)	2	(50%)	0	(0%)
3rd Quartile Managers	3	(33%)	1	(14%)	0	(0%)	0	(0%)
4th Quartile Managers	1	(11%)	1	(14%)	0	(0%)	0	(0%)

KRS Insurance Fund Manager Universe Comparison Summary (as of 6/30/08)

Peer Return Rankings Distribution						
	1 Year		3 Years		5 Years	
1st Quartile Managers	1	(100%)	0	(0%)	1	(100%)
2nd Quartile Managers	0	(0%)	1	(100%)	0	(0%)
3rd Quartile Managers	0	(0%)	0	(0%)	0	(0%)
4th Quartile Managers	0	(0%)	0	(0%)	0	(0%)

- The KRS managers are ranked according to their 1, 3, 5 and 10-year returns against a peer universe of managers in the same asset class. The peer universe of managers is then divided into four quartiles.
- For the 1-year period ending June 30, 2008, 5 of 9 KRS Pension Fund managers ranked in the top half of their respective peer universes. For the 3-year period, 5 of 7 managers with sufficient data ranked in the top half. For the 5-year and 10-year period, all managers with sufficient data ranked in the top half.
- Individual manager rankings can be found on pages 47-50.

Note: Peer return rankings only include active externally managed investments.

Manager Performance – KTRS

KTRS Manager Universe Comparison Summary (as of 6/30/08)

Peer Return Rankings Distribution								
	1 Year		3 Years		5 Years		10 Years	
1st Quartile Managers	2	(15%)	2	(40%)	2	(40%)	3	(60%)
2nd Quartile Managers	5	(38%)	2	(40%)	2	(40%)	2	(40%)
3rd Quartile Managers	3	(23%)	0	(0%)	1	(20%)	0	(0%)
4th Quartile Managers	3	(23%)	1	(20%)	0	(0%)	0	(0%)

- The KTRS managers are ranked according to their 1, 3, 5 and 10-year returns against a peer universe of managers in the same asset class. The peer universe of managers is then divided into four quartiles.
- For the 3 and 5-year periods ending June 30, 2008, 4 of 5 KTRS managers ranked in the top half of their respective peer universes. For the 10-year period, all 5 managers with sufficient data ranked in the top half.
- Individual manager rankings can be found on pages 51-55.

Note: Peer return rankings only include active externally managed investments.

KRS Pension Fund – U.S. Equity Manager Performance

	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Internal S&P 1500 Index	**-12.7%**	**4.7%**	**8.0%**	**NA**	**-11.1%**	**5.3%**	**15.4%**	**5.8%**	**11.2%**	**29.6%**	**-20.5%**	**NA**	**NA**	**NA**
S&P 1500	*-12.7%*	*4.6%*	*8.2%*	*NA*	*-11.1%*	*5.5%*	*15.3%*	*5.7%*	*11.8%*	*29.6%*	*-21.3%*	*NA*	*NA*	*NA*
Peer Ranking	45th	45th	56th	NA	58th	45th	39th	57th	59th	51st	54th	NA	NA	NA
Standard Deviation Ranking	23rd	17th	17th	NA										
INVESCO Structured Core	**-10.2%**	**7.8%**	**NA**	**NA**	**-11.2%**	**5.3%**	**22.8%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
S&P 500	*-13.1%*	*4.4%*	*NA*	*NA*	*-11.9%*	*5.5%*	*15.8%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	29th	11th	NA	NA	50th	55th	2nd	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	60th	71st	NA	NA										
Northern Trust Quantitative Advisors	**-17.1%**	**3.9%**	**11.2%**	**NA**	**-9.1%**	**-2.5%**	**17.9%**	**6.7%**	**20.2%**	**50.9%**	**-15.0%**	**6.2%**	**-5.1%**	**NA**
Russell 2000	*-16.2%*	*3.8%*	*10.3%*	*NA*	*-9.4%*	*-1.6%*	*18.4%*	*4.6%*	*18.3%*	*47.3%*	*-20.5%*	*2.5%*	*-3.0%*	*NA*
Peer Ranking	48th	40th	33rd	NA	48th	59th	24th	55th	42nd	17th	42nd	51st	92nd	NA
Standard Deviation Ranking	30th	40th	57th											

KRS Pension Fund – International Equity Manager Performance

	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Barclays Global Investors	**-11.5%**	**13.0%**	**NA**	**NA**	**-9.2%**	**8.4%**	**27.9%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MSCI EAFE (net)	*-10.6%*	*12.8%*	*NA*	*NA*	*-11.0%*	*11.2%*	*26.3%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	65th	56th	NA	NA	24th	82nd	24th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	20th	23rd	NA	NA										
Boston Compann y	**-14.3%**	**9.4%**	**NA**	**NA**	**-12.4%**	**6.2%**	**23.8%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MSCI EAFE (net)	*-10.6%*	*12.8%*	*NA*	*NA*	*-11.0%*	*11.2%*	*26.3%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	84th	92nd	NA	NA	74th	91st	66th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	11th	8th	NA	NA										
Pyramis Global Investors	**-4.7%**	**14.7%**	**18.0%**	**NA**	**-8.9%**	**14.7%**	**24.3%**	**16.1%**	**20.0%**	**38.1%**	**-10.6%**	**NA**	**NA**	**NA**
MSCI EAFE (net)	*-10.6%*	*12.8%*	*16.7%*	*NA*	*-11.0%*	*11.2%*	*26.3%*	*13.5%*	*20.2%*	*38.6%*	*-15.9%*	*NA*	*NA*	*NA*
Peer Ranking	18th	29th	25th	NA	23rd	34th	59th	36th	31st	37th	17th	NA	NA	NA
Standard Deviation Ranking	67th	48th	48th	NA										
Aberdeen	**NA**	**NA**	**NA**	**NA**	**-6.9%**	**34.9%**	**36.7%**	**37.4%**	**28.0%**	**63.0%**	**6.9%**	**-4.9%**	**-18.6%**	**72.0%**
MSCI Emerging Markets Free	*NA*	*NA*	*NA*	*NA*	*-11.7%*	*39.4%*	*32.2%*	*34.0%*	*25.6%*	*55.8%*	*-6.2%*	*-2.6%*	*-30.6%*	*66.4%*
Peer Ranking	NA	NA	NA	NA	5th	66th	17th	24th	25th	31st	2nd	69th	6th	45th
Standard Deviation Ranking	NA	NA	NA	NA										
Wellington	**NA**	**NA**	**NA**	**NA**	**-10.1%**	**47.2%**	**35.2%**	**36.1%**	**27.8%**	**62.7%**	**-4.1%**	**4.2%**	**-31.1%**	**84.7%**
MSCI Emerging Markets Free	*NA*	*NA*	*NA*	*NA*	*-11.7%*	*39.4%*	*32.2%*	*34.0%*	*25.6%*	*55.8%*	*-6.2%*	*-2.6%*	*-30.6%*	*66.4%*
Peer Ranking	NA	NA	NA	NA	31st	7th	23rd	27th	27th	33rd	43rd	11th	60th	23rd
Standard Deviation Ranking	NA	NA	NA	NA										

KRS Pension Fund – Fixed Income Manager Performance

	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Lehman Brothers	**4.5%**	**3.3%**	**3.5%**	**5.6%**	**-0.6%**	**6.2%**	**4.6%**	**2.5%**	**4.6%**	**4.5%**	**10.8%**	**8.5%**	**11.8%**	**-0.8%**
Lehman Aggregate Bond Index	*7.1%*	*4.1%*	*3.9%*	*5.7%*	*1.1%*	*7.0%*	*4.3%*	*2.4%*	*4.3%*	*4.1%*	*10.3%*	*8.4%*	*11.6%*	*-0.8%*
Peer Ranking	55th	50th	35th	13th	67th	35th	27th	22nd	31st	51st	8th	29th	17th	44th
Standard Deviation Ranking	37th	53rd	59th	39th										
Baird Advisors	**3.7%**	**NA**	**NA**	**NA**	**-0.6%**	**5.6%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Lehman Aggregate Bond Index	*7.1%*	*NA*	*NA*	*NA*	*1.1%*	*7.0%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	65th	NA	NA	NA	67th	54th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	19th	NA	NA	NA										
Pyramis Global Investors	**6.1%**	**NA**	**NA**	**NA**	**0.9%**	**6.4%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Lehman Aggregate Bond Index	*7.1%*	*NA*	*NA*	*NA*	*1.1%*	*7.0%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	35th	NA	NA	NA	32nd	26th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	6th	NA	NA	NA										
Internal TIPS	**15.4%**	**5.7%**	**6.0%**	**NA**	**5.2%**	**11.5%**	**0.6%**	**2.9%**	**8.2%**	**8.7%**	**NA**	**NA**	**NA**	**NA**
Citigroup Inflation Linked Bond	*15.1%*	*5.6%*	*5.9%*	*NA*	*4.9%*	*11.6%*	*0.4%*	*2.9%*	*8.4%*	*8.3%*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	24th	21st	6th	NA	28th	14th	24th	11th	29th	14th	NA	NA	NA	NA
Standard Deviation Ranking	69th	69th	66th	NA										
Weaver Barksdale TIPS	**15.2%**	**5.7%**	**6.1%**	**NA**	**5.0%**	**11.4%**	**0.6%**	**2.9%**	**8.6%**	**8.8%**	**16.4%**	**NA**	**NA**	**NA**
Citigroup Inflation Linked Bond	*15.1%*	*5.6%*	*5.9%*	*NA*	*4.9%*	*11.6%*	*0.4%*	*2.9%*	*8.4%*	*8.3%*	*16.7%*	*NA*	*NA*	*NA*
Peer Ranking	31st	21st	6th	NA	36th	27th	24th	11th	15th	14th	29th	NA	NA	NA
Standard Deviation Ranking	76th	69th	60th	NA										

KRS Insurance Fund – Manager Performance

	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Internal S&P 1500 Index	**-13.0%**	**4.6%**	**8.2%**	**NA**	**-11.2%**	**5.0%**	**15.4%**	**6.3%**	**11.7%**	**29.6%**	**-20.9%**	**NA**	**NA**	**NA**
S&P 1500	*-12.7%*	*4.6%*	*8.2%*	*NA*	*-11.1%*	*5.5%*	*15.3%*	*5.7%*	*11.8%*	*29.6%*	*-21.3%*	*NA*	*NA*	*NA*
Peer Ranking	48th	48th	55th	NA	60th	50th	39th	51th	55th	51st	57th	NA	NA	NA
Standard Deviation Ranking	23rd	19th	26th	NA										
	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Fidelity	**-4.5%**	**14.8%**	**17.9%**	**NA**	**-9.0%**	**14.9%**	**24.2%**	**15.9%**	**19.8%**	**37.7%**	**-10.4%**	**NA**	**NA**	**NA**
MSCI EAFE (net)	*-10.6%*	*12.8%*	*16.7%*	*NA*	*-11.0%*	*11.2%*	*26.3%*	*13.5%*	*20.2%*	*38.6%*	*-15.9%*	*NA*	*NA*	*NA*
Peer Ranking	18th	29th	25th	NA	24th	33rd	60th	37th	33rd	40th	15th	NA	NA	NA
Standard Deviation Ranking	68th	48th	48th	NA										
International large-cap equity, quantitative														
Aberdeen	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MSCI Emerging Markets Free	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	NA	NA	NA	NA										
Wellington	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MSCI Emerging Markets Free	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	NA	NA	NA	NA										
	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Internal TIPS	**15.3%**	**5.7%**	**NA**	**NA**	**5.2%**	**11.5%**	**0.5%**	**3.0%**	**8.9%**	**NA**	**NA**	**NA**	**NA**	**NA**
Citigroup Inflation Linked Bond	*15.1%*	*5.6%*	*NA*	*NA*	*4.9%*	*11.6%*	*0.4%*	*2.9%*	*8.4%*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	26th	21st	NA	NA	26th	22nd	27th	11th	10th	NA	NA	NA	NA	NA
Standard Deviation Ranking	58th	56th	NA	NA										

KTRS – U.S. Equity Large-Cap Manager Performance

	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
UBS Global	**-15.9%**	**4.4%**	**9.1%**	**4.7%**	**-11.1%**	**2.1%**	**16.1%**	**10.7%**	**13.5%**	**32.0%**	**-15.5%**	**4.1%**	**7.0%**	**-7.7%**
Russell 1000 Value	*-18.8%*	*3.5%*	*8.9%*	*4.9%*	*-13.6%*	*-0.2%*	*22.2%*	*7.1%*	*16.5%*	*30.0%*	*-15.5%*	*-5.6%*	*7.0%*	*7.3%*
Peer Ranking	38th	33rd	32nd	42nd	30th	47th	78th	10th	52nd	24th	37th	19th	70th	97th
Standard Deviation Ranking	74th	57th	49th	57th										
S&P 500 Equity Index	**-13.0%**	**4.5%**	**7.7%**	**3.0%**	**-11.9%**	**5.6%**	**16.0%**	**5.0%**	**10.9%**	**28.9%**	**-21.9%**	**-12.2%**	**-8.9%**	**21.4%**
S&P 500	*-13.1%*	*4.4%*	*7.6%*	*2.9%*	*-11.9%*	*5.5%*	*15.8%*	*4.9%*	*10.9%*	*28.7%*	*-22.1%*	*-11.9%*	*-9.1%*	*21.0%*
Peer Ranking	55th	48th	47th	49th	62nd	47th	22nd	57th	43rd	34th	52nd	66th	66th	35th
Standard Deviation Ranking	38th	39th	28th	55th										
Todd Alpha	**-16.2%**	**NA**	**NA**	**NA**	**-7.5%**	**-4.2%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
S&P 500	*-13.1%*	*NA*	*NA*	*NA*	*-11.9%*	*5.5%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	87th	NA	NA	NA	12th	98th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	90th	NA	NA	NA										
Todd U.S. Equity	**-11.0%**	**5.0%**	**8.7%**	**5.5%**	**-10.4%**	**5.4%**	**17.0%**	**7.6%**	**13.3%**	**26.5%**	**-19.2%**	**-2.2%**	**-1.3%**	**14.1%**
S&P 500	*-13.1%*	*4.4%*	*7.6%*	*2.9%*	*-11.9%*	*5.5%*	*15.8%*	*4.9%*	*10.9%*	*28.7%*	*-22.1%*	*-11.9%*	*-9.1%*	*21.0%*
Peer Ranking	35th	38th	27th	18th	37th	51st	12th	28th	20th	68th	32nd	15th	36th	77th
Standard Deviation Ranking	14th	12th	8th	16th										
UBS Alpha	**-17.4%**	**NA**	**NA**	**NA**	**-12.8%**	**1.8%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Russell 1000	*-12.4%*	*NA*	*NA*	*NA*	*-11.2%*	*5.8%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	91st	NA	NA	NA	83rd	85th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	79th	NA	NA	NA										
Wellington Intersection	**-13.0%**	**NA**	**NA**	**NA**	**-11.8%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
S&P 500	*-13.1%*	*NA*	*NA*	*NA*	*-11.9%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	55th	NA	NA	NA	59th	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	99th	NA	NA	NA										
GE Asset Management	**-6.7%**	**NA**	**NA**	**NA**	**-6.5%**	**5.7%**	**10.3%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Russell 1000 Growth	*-6.0%*	*NA*	*NA*	*NA*	*-9.1%*	*11.8%*	*9.1%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	57th	NA	NA	NA	15th	87th	26th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	5th	NA	NA	NA										

KTRS – U.S. Equity Mid-Cap and Small-Cap Manager Performance

Managers	Periods Ending 6/30/08				Calendar Year Ending									
	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
S&P 400 Equity Index	**-6.2%**	**NA**	**NA**	**NA**	**-3.2%**	**9.1%**	**8.1%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
S&P 400 (Mid-Cap)	*-7.3%*	*NA*	*NA*	*NA*	*-3.9%*	*8.0%*	*10.3%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	17th	NA	NA	NA	17th	21st	90th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	56th	NA	NA	NA										
Wellington Mid	**-10.8%**	**NA**	**NA**	**NA**	**-4.0%**	**2.9%**	**11.2%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
S&P 400 (Mid-Cap)	*-7.3%*	*NA*	*NA*	*NA*	*-3.9%*	*8.0%*	*10.3%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	41st	NA	NA	NA	21st	65th	63rd	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	76th	NA	NA	NA										
S&P 600 Equity Index	**-0.6%**	**4.3%**	**NA**	**NA**	**-6.5%**	**-0.5%**	**15.1%**	**8.3%**	**23.7%**	**NA**	**NA**	**NA**	**NA**	**NA**
S&P 600 (Small-Cap)	*-0.5%*	*4.1%*	*NA*	*NA*	*-7.1%*	*-0.3%*	*15.1%*	*7.7%*	*22.6%*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	28th	37th	NA	NA	26th	37th	52nd	37th	17th	NA	NA	NA	NA	NA
Standard Deviation Ranking	19th	33rd	NA	NA										
Wellington Small	**-19.7%**	**0.6%**	**9.1%**	**8.0%**	**-6.1%**	**-9.6%**	**13.1%**	**10.2%**	**19.0%**	**38.1%**	**-16.1%**	**6.4%**	**13.5%**	**26.2%**
Russell 2000	*-16.2%*	*3.8%*	*10.3%*	*5.5%*	*-9.4%*	*-1.6%*	*18.4%*	*4.6%*	*18.3%*	*47.3%*	*-20.5%*	*2.5%*	*-3.0%*	*21.3%*
Peer Ranking	70th	87th	75th	33rd	23rd	93rd	72nd	22nd	50th	71st	51st	50th	41st	27th
Standard Deviation Ranking	67th	84th	66th	67th										

KTRS – International Manager Performance

Managers	Periods Ending 6/30/08				Calendar Year Ending									
	1 Yr	3 Yrs	5 Yrs	10 Yrs	YTD	2007	2006	2005	2004	2003	2002	2001	2000	1999
Todd International	**-8.6%**	**NA**	**NA**	**NA**	**-13.5%**	**16.3%**	**29.3%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MSCI EAFE (net)	*-10.6%*	*NA*	*NA*	*NA*	*-11.0%*	*11.2%*	*26.3%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	43rd	NA	NA	NA	87th	25th	14th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	83rd	NA	NA	NA										
UBS International	**-14.6%**	**NA**	**NA**	**NA**	**-13.0%**	**6.8%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MSCI EAFE (net)	*-10.6%*	*NA*	*NA*	*NA*	*-11.0%*	*11.2%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	84th	NA	NA	NA	81st	90th	NA	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	10th	NA	NA	NA										

KTRS – Fixed Income Manager Performance

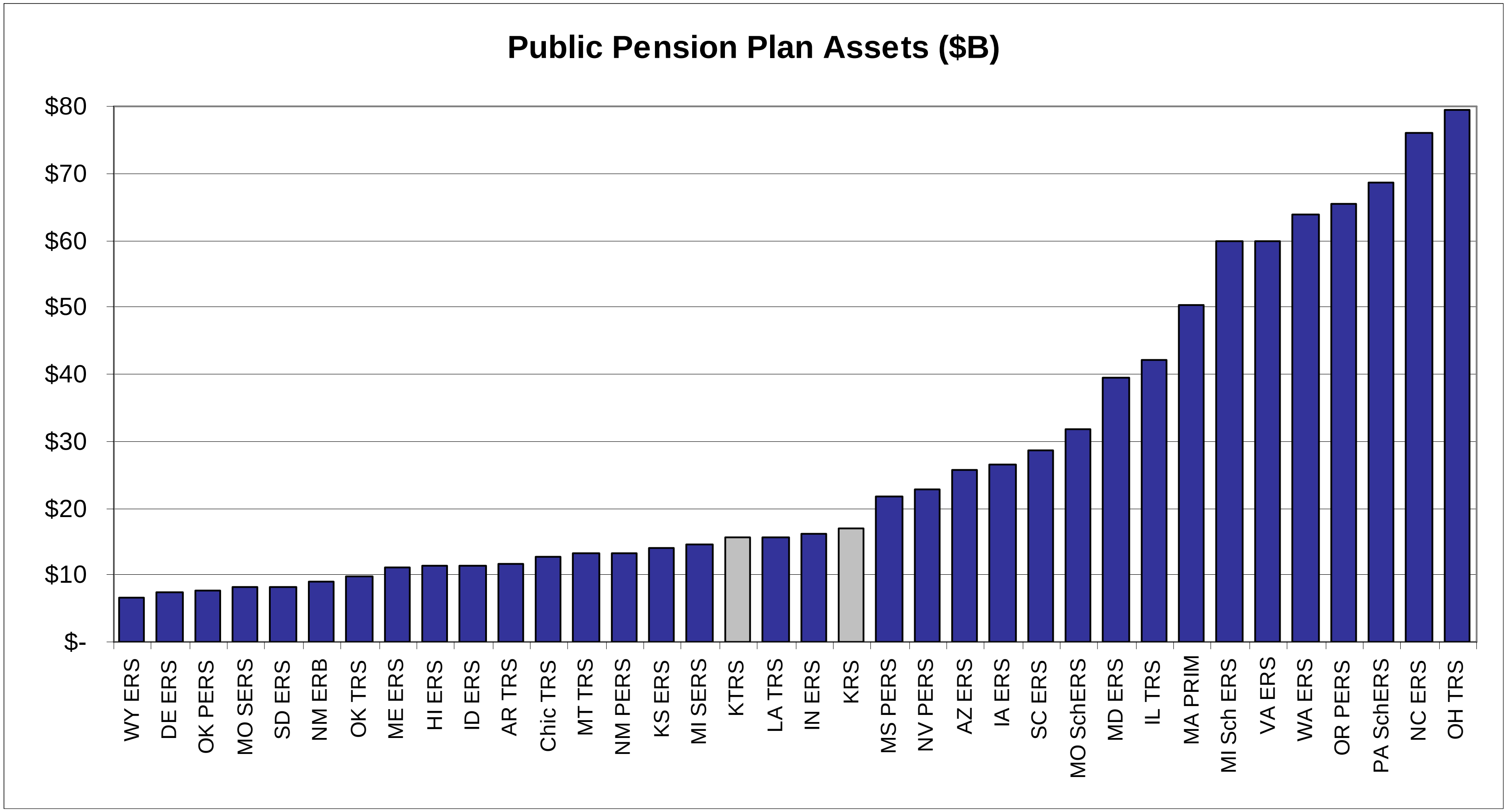
	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
Galliard	**7.2%**	**NA**	**NA**	**NA**	**1.1%**	**6.7%**	**4.1%**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Lehman Government-Credit Index	*7.2%*	*NA*	*NA*	*NA*	*1.0%*	*7.3%*	*3.8%*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Peer Ranking	25th	NA	NA	NA	35th	23rd	50th	NA	NA	NA	NA	NA	NA	NA
Standard Deviation Ranking	80th	NA	NA	NA										
In-House Broad Market	**7.8%**	**4.2%**	**3.9%**	**5.9%**	**1.6%**	**7.2%**	**4.0%**	**3.4%**	**4.3%**	**3.5%**	**12.0%**	**8.2%**	**12.6%**	**-2.4%**
Lehman Government-Credit Index	*7.2%*	*3.8%*	*3.6%*	*5.7%*	*1.0%*	*7.3%*	*3.8%*	*2.3%*	*4.2%*	*4.7%*	*11.0%*	*8.5%*	*11.8%*	*-2.2%*
Peer Ranking	14th	18th	16th	8th	15th	15th	50th	4th	34th	61st	4th	32nd	9th	79th
Standard Deviation Ranking	85th	91st	92nd	88th										
Todd Bond	**7.3%**	**4.3%**	**3.9%**	**5.6%**	**1.3%**	**7.0%**	**4.4%**	**2.8%**	**4.5%**	**4.1%**	**11.0%**	**8.2%**	**11.4%**	**-2.9%**
Lehman Government-Credit Index	*7.2%*	*3.8%*	*3.6%*	*5.7%*	*1.0%*	*7.3%*	*3.8%*	*2.3%*	*4.2%*	*4.7%*	*11.0%*	*8.5%*	*11.8%*	*-2.2%*
Peer Ranking	21st	15th	17th	11th	27th	18th	31st	10th	29th	48th	8th	30th	29th	86th
Standard Deviation Ranking	54th	77th	83rd	84th										
Todd Bond Plus	**7.1%**	**4.1%**	**3.9%**	**5.8%**	**1.1%**	**7.0%**	**4.4%**	**3.0%**	**5.0%**	**4.0%**	**11.8%**	**8.1%**	**11.6%**	**-2.0%**
Intermediate Government-Credit	*7.2%*	*3.8%*	*3.6%*	*5.7%*	*1.0%*	*7.3%*	*3.8%*	*2.3%*	*4.2%*	*4.7%*	*11.0%*	*8.5%*	*11.8%*	*-2.2%*
Peer Ranking	27th	24th	15th	8th	33rd	17th	32nd	6th	15th	50th	5th	34th	24th	72nd
Standard Deviation Ranking	59th	82nd	92nd	89th										
In-House Long Bond	**7.6%**	**3.4%**	**3.9%**	**6.0%**	**0.9%**	**7.0%**	**3.4%**	**4.0%**	**5.9%**	**4.1%**	**13.4%**	**8.0%**	**13.2%**	**-4.3%**
Lehman Long Government-Credit Index	*6.8%*	*2.2%*	*4.0%*	*6.3%*	*-0.7%*	*6.6%*	*2.7%*	*5.3%*	*8.6%*	*5.9%*	*14.8%*	*7.3%*	*16.2%*	*-7.6%*
Peer Ranking	21st	24th	56th	34th	20th	27th	65th	31st	71st	99th	13th	99th	15th	43rd
Standard Deviation Ranking	60th	61st	33rd	33rd										

KTRS – Fixed Income Manager Performance

	Periods Ending 6/30/08				Calendar Year Ending									
Managers	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**YTD**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**
In-House Intermediate Bond	**7.8%**	**4.7%**	**3.8%**	**5.7%**	**1.9%**	**7.6%**	**4.2%**	**2.3%**	**2.9%**	**3.8%**	**10.8%**	**8.3%**	**10.3%**	**0.6%**
Lehman Intermediate Government-Credit Index	*7.4%*	*4.3%*	*3.5%*	*5.5%*	*1.4%*	*7.4%*	*4.1%*	*1.6%*	*3.0%*	*4.3%*	*9.8%*	*9.0%*	*10.1%*	*0.4%*
Peer Ranking	12th	5th	19th	10th	8th	10th	39th	33rd	85th	56th	11th	29th	60th	19th
Standard Deviation Ranking	54th	20th	13th	18th										
Internal	**5.3%**	**3.9%**	**2.4%**	**6.0%**	**0.7%**	**7.3%**	**4.4%**	**0.4%**	**2.0%**	**-0.9%**	**19.7%**	**10.4%**	**13.6%**	**-2.0%**
Lehman Mortgage Backed Securities Index	*7.8%*	*4.8%*	*4.6%*	*5.8%*	*1.9%*	*6.9%*	*5.2%*	*2.6%*	*4.7%*	*3.1%*	*8.7%*	*8.2%*	*11.2%*	*1.9%*
Peer Ranking	44th	21st	88th	6th	37th	9th	35th	99th	98th	99th	1st	4th	1st	74th
Standard Deviation Ranking	9th	5th	99th	99th										
Life Retired	**9.1%**	**5.4%**	**4.5%**	**NA**	**2.0%**	**8.5%**	**4.8%**	**3.1%**	**3.3%**	**2.4%**	**5.0%**	**NA**	**NA**	**NA**
Lehman Intermediate Government Index	*9.2%*	*4.8%*	*3.6%*	*NA*	*2.2%*	*8.5%*	*3.8%*	*1.7%*	*2.3%*	*2.3%*	*9.6%*	*NA*	*NA*	*NA*
Peer Ranking	14th	2nd	2nd	NA	18th	8th	5th	6th	54th	30th	98th	NA	NA	NA
Standard Deviation Ranking	62nd	17th	2nd	NA										
Scholarship Fund	**9.3%**	**4.6%**	**3.5%**	**NA**	**2.2%**	**8.8%**	**3.4%**	**1.7%**	**3.5%**	**2.2%**	**14.0%**	**7.4%**	**NA**	**NA**
Citi 3-Month Treasury Bill	*3.3%*	*4.1%*	*3.1%*	*NA*	*1.1%*	*4.7%*	*4.8%*	*3.0%*	*1.2%*	*1.1%*	*1.7%*	*4.1%*	*NA*	*NA*
Peer Ranking	1st	2nd	7th	NA	3rd	1st	96th	43rd	7th	69th	1st	57th	NA	NA
Standard Deviation Ranking	87th	99th	99th	NA										
TSA	**7.6%**	**3.4%**	**3.9%**	**6.0%**	**0.9%**	**7.0%**	**3.4%**	**4.0%**	**5.9%**	**4.1%**	**13.4%**	**8.0%**	**13.2%**	**-4.3%**
Citi 3-Month Treasury Bill	*6.8%*	*2.2%*	*4.0%*	*6.3%*	*-0.7%*	*6.6%*	*2.7%*	*5.3%*	*8.6%*	*5.9%*	*14.8%*	*7.3%*	*16.2%*	*-7.6%*
Peer Ranking	21st	24th	56th	34th	20th	27th	65th	31st	71st	99th	13th	99th	15th	43rd
Standard Deviation Ranking	60th	61st	33rd	33rd										

Public Pension Fund – Traditional Manager Study

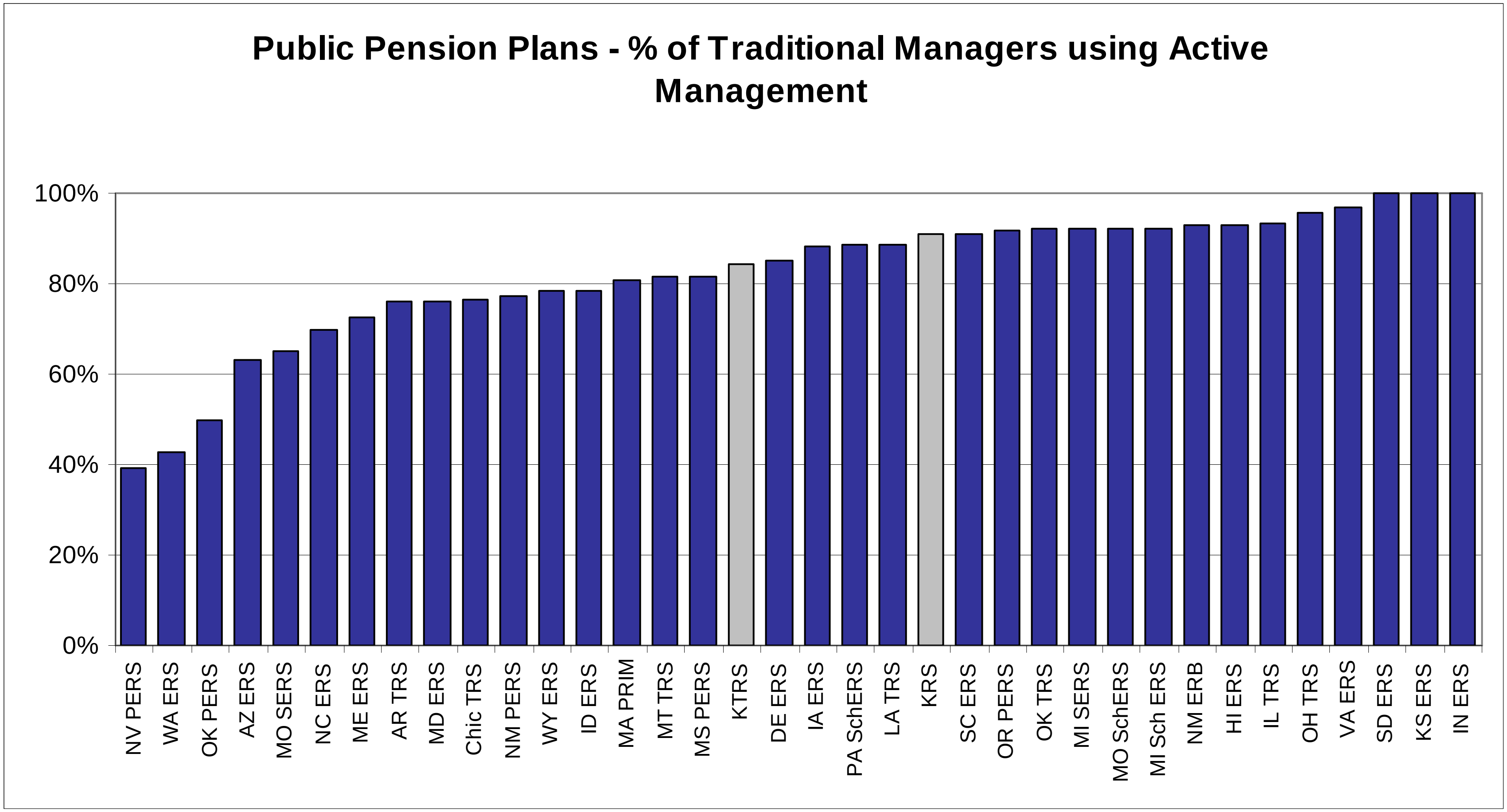
- Hammond Associates conducted a study analyzing the traditional managers of 9 teacher retirement plans, 15 state/public employee plans and 11 consolidated state plans.
- Both KRS and KTRS are near the median plan size in the study's universe.



Source: Hammond Associates internal research

Public Pension Fund – Traditional Manager Study *(continued)*

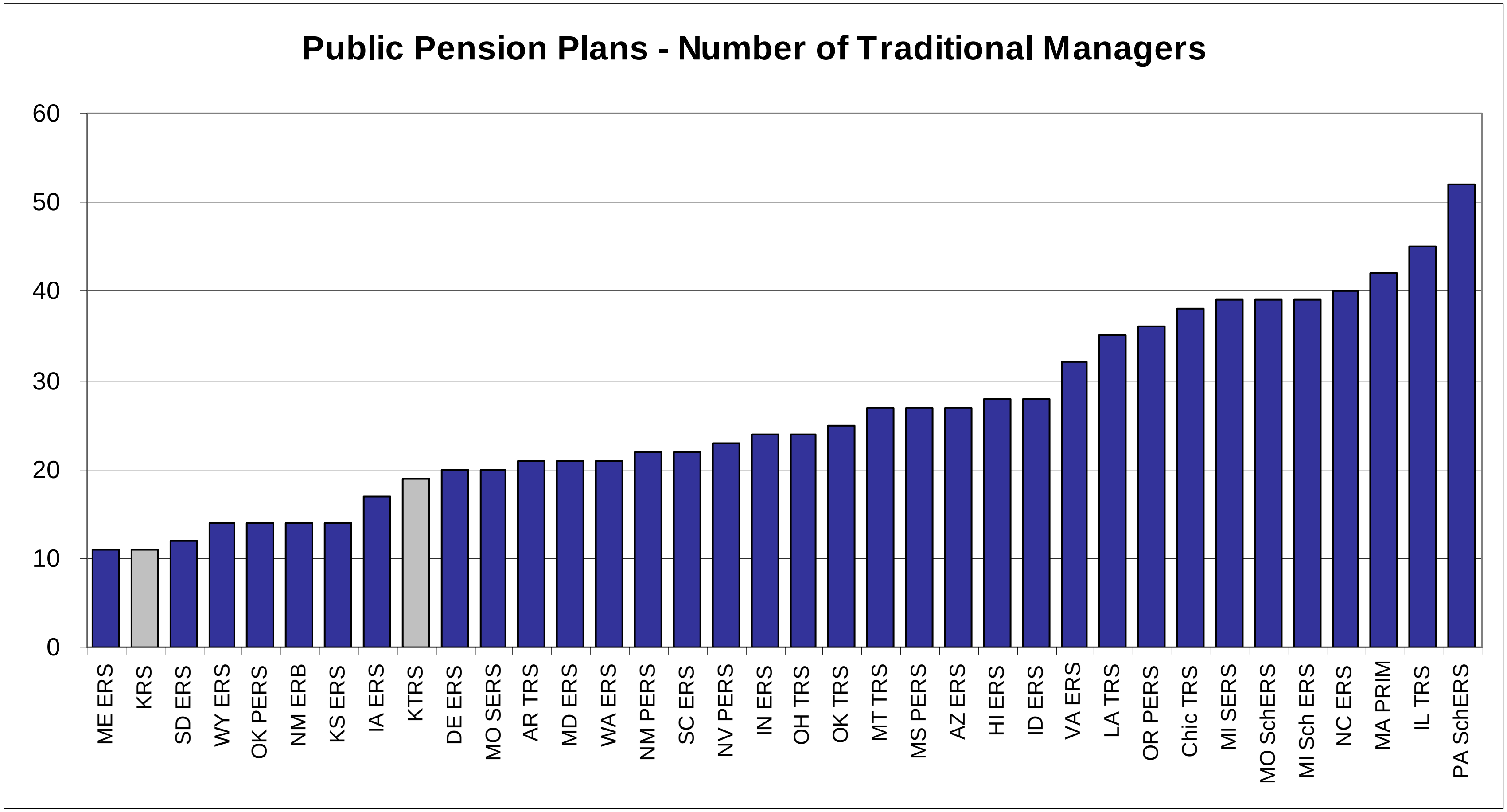
- Both KRS and KTRS are near the median for the percentage of active managers used versus passive managers.



Source: Hammond Associates internal research

Public Pension Fund – Traditional Manager Study *(continued)*

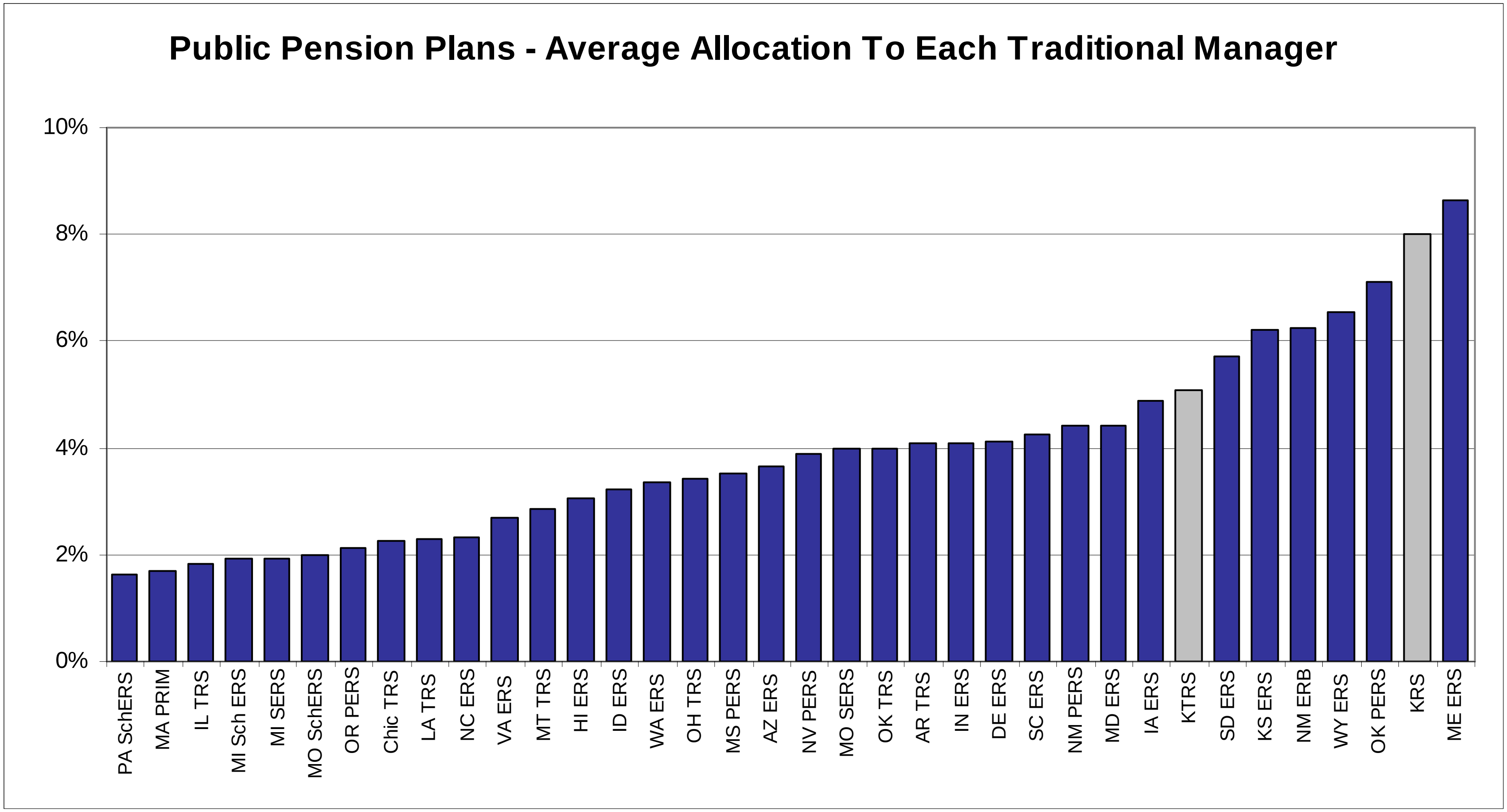
- KRS and KTRS have far fewer traditional managers than their peers.



Source: Hammond Associates internal research

Public Pension Fund – Traditional Manager Study *(continued)*

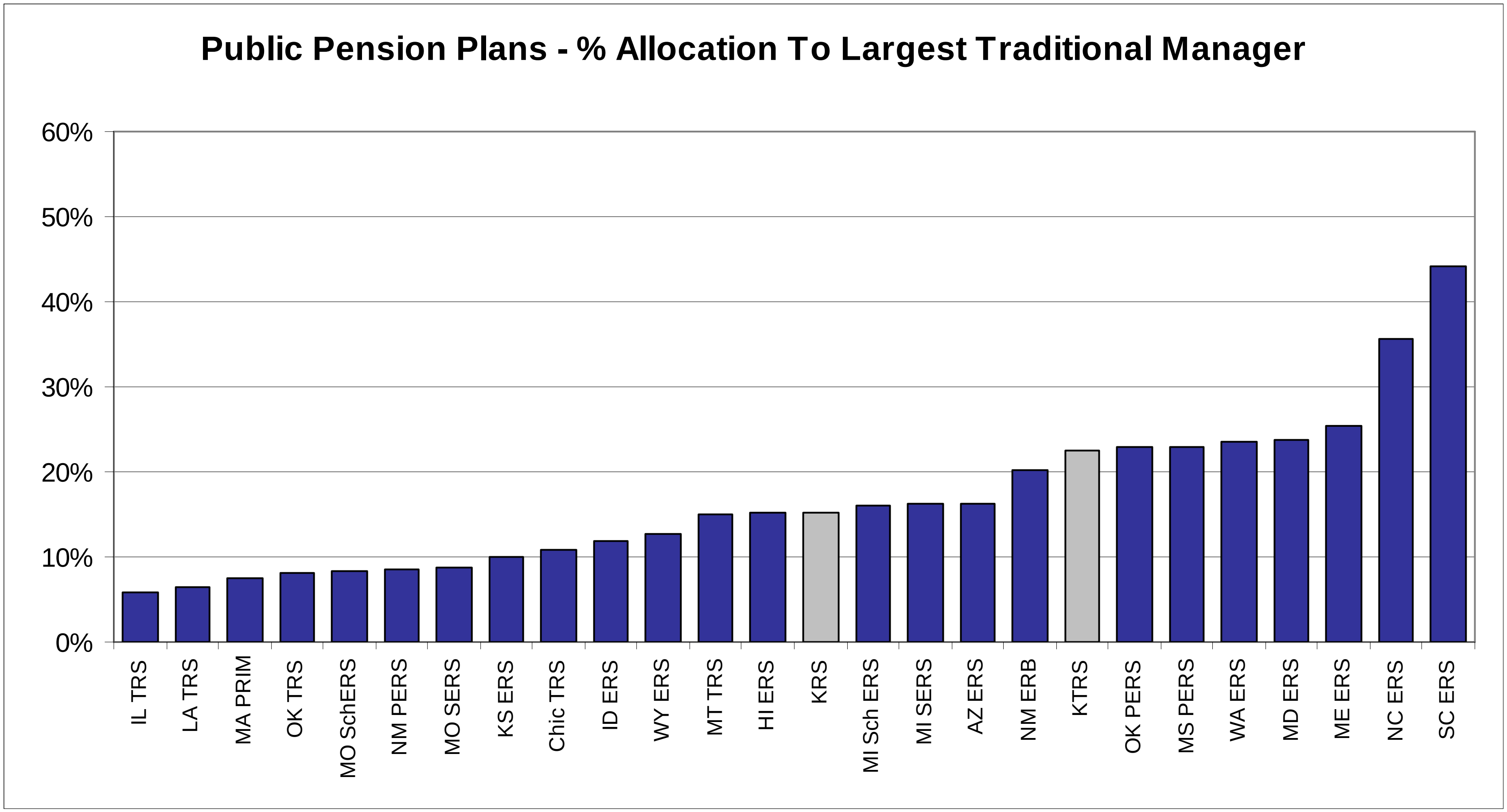
- Because KRS and KTRS have fewer traditional managers than their peers, the size of the investment with each traditional manger is much higher than the peer universe.
- The more concentrated positions give rise to additional manager specific risk.



Source: Hammond Associates internal research

Public Pension Fund – Traditional Manager Study *(continued)*

- KRS has an allocation of approximately 15% to a single manager, Pyramis Global Investors.
- KTRS internally manages slightly more than 20% of its portfolio in an S&P 500 indexed fund.



Source: Hammond Associates internal research

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VI. Opportunity Cost

Opportunity Cost

What has been left on the table?

- The actual returns for KRS and KTRS were compared to the median return of the Russell Mellon universe to determine the excess return in comparison to the benchmark.
- In most periods measured excess return was negative, indicating underperformance.
- The value of KRS Pension and KTRS was adjusted to account only for portfolio returns.
- The median fiscal year return of the Russell Mellon universe was applied to the beginning value of the fund to project fund growth.
- Assuming no compounding of the returns, the opportunity cost or lost return was as follows:
  - KRS Pension - $1.2 billion
  - KTRS - $2.6 billion
- Assuming that returns were compounded, the opportunity costs grows to the following:
  - KRS Pension $1.5 billion
  - KTRS - $3.5 billion
- The possible determinants of this lost opportunity include:
  - Asset allocation
  - Manager selection.

Opportunity Cost *(continued)*

Asset Allocation (as of June 30, 2008)

- Equity allocation
  - KRS has the same 34% allocation to U.S. equity and 20% allocation to international equity as the median Russell Mellon universe allocation.
  - KTRS has a higher allocation to U.S. equity (55% versus 35%) and a lower allocation to international equity (9% versus 20%) than its peers.
- Fixed Income
  - Both the KRS (24%) and KTRS (33%) fixed income allocation (including cash) is close to that of the peer universe (34%)
- Alternative Assets
  - Both KRS (10%) and KTRS (4%) have a lower allocation to alternative assets than the Russell Mellon universe (14%).

Manager selection

  - Manager selection and performance did not contribute to the systems' underperformance and likely improved performance.

The underperformance of KRS and KTRS can be attributed to the asset allocation of each system.

Opportunity Cost Analysis – KRS Pension

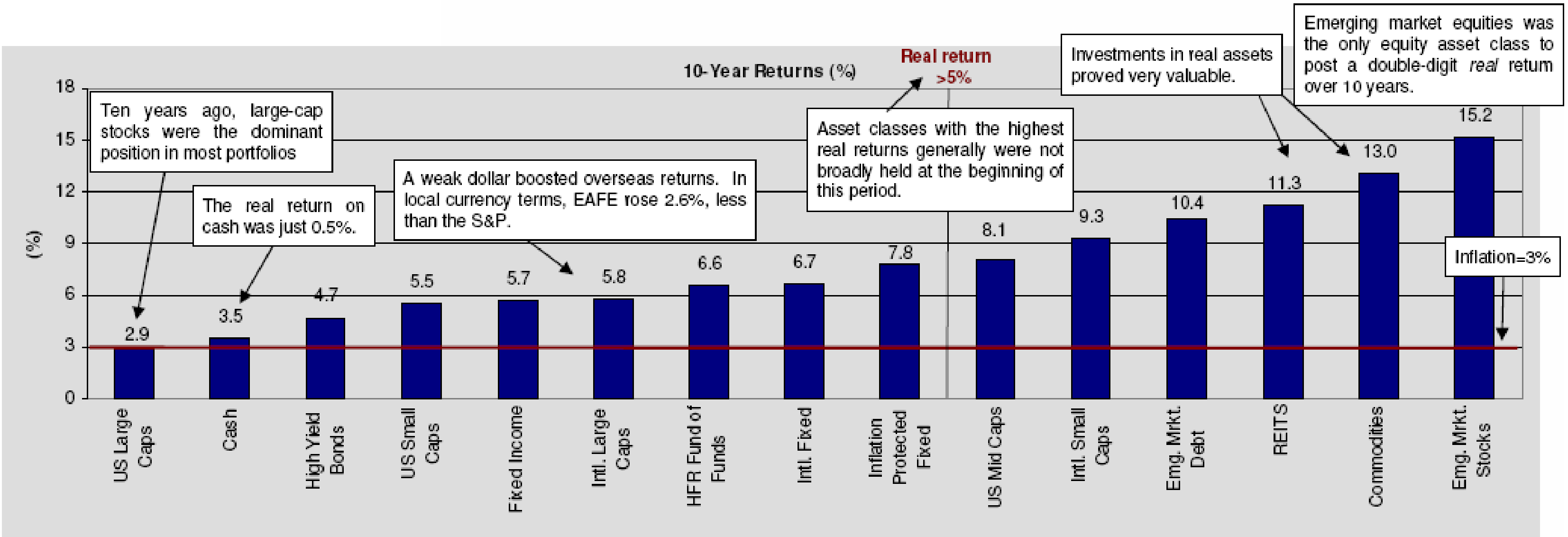
	Adjusted Market Value	Actual Return	Russell Mellon Public Funds > $1 Billion 25th	Median	75th	Projected Value w/ Median Return	Cumulative Projected Value - Adjusted Value
6/30/98	10,470.8						
6/30/99	11,965.0	14.3%	12.7%	11.2%	10.2%	11,643.5	(321.5)
6/30/00	12,731.9	6.4%	14.1%	10.8%	8.9%	12,901.0	169.1
6/30/01	12,043.1	-5.4%	-2.1%	-5.9%	-7.3%	12,139.9	96.7
6/30/02	11,525.3	-4.3%	-4.0%	-5.7%	-7.3%	11,447.9	(77.4)
6/30/03	12,019.7	4.3%	5.6%	3.8%	2.9%	11,882.9	(136.8)
6/30/04	13,652.0	13.6%	18.8%	17.5%	15.0%	13,962.4	310.4
6/30/05	14,916.2	9.3%	13.4%	11.1%	10.0%	15,512.3	596.1
6/30/06	16,360.1	9.7%	14.7%	11.9%	9.6%	17,358.2	998.2
6/30/07	18,858.2	15.3%	19.1%	17.9%	16.5%	20,465.3	1,607.1
6/30/08	18,064.3	-4.2%	-2.2%	-4.3%	-5.3%	***19,585.3***	***1,521.0***

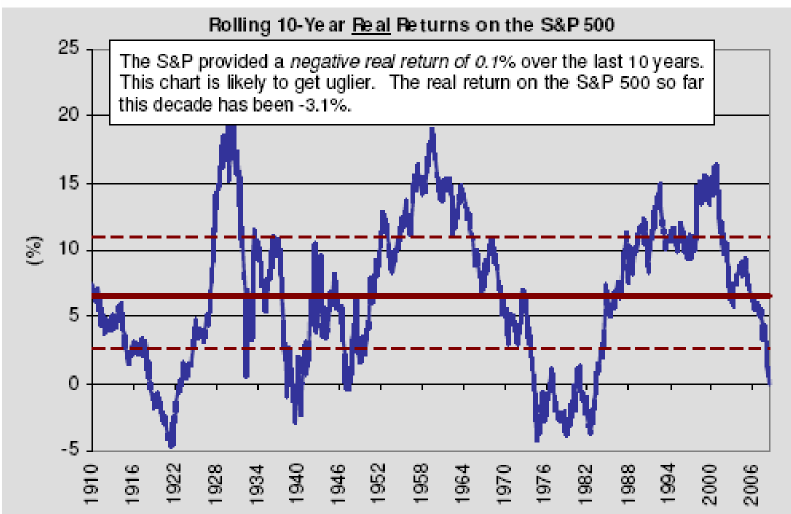
Opportunity Cost Analysis – KTRS

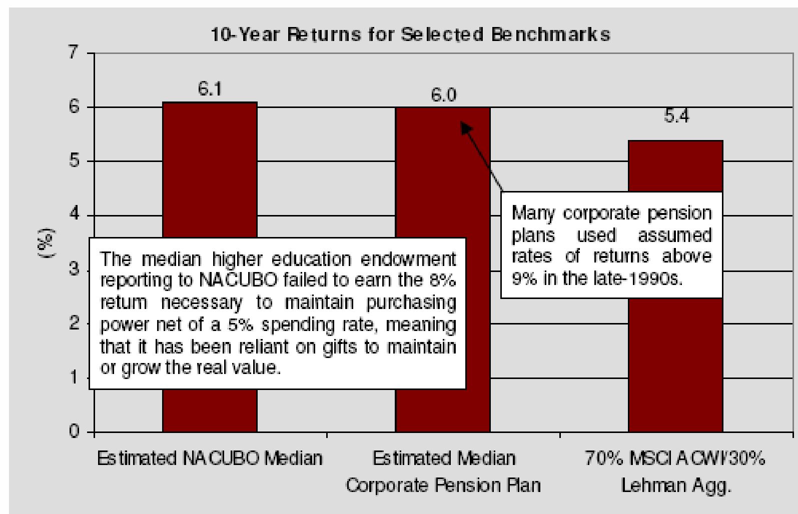
	Adjusted Market Value	Actual Return	Russell Mellon Public Funds > $1 Billion 25th	Median	75th	Projected Value w/ Median Return	Cumulative Projected Value - Actual Value
6/30/98	11,223.9						
6/30/99	12,514.7	11.5%	12.7%	11.2%	10.2%	12,481.0	(33.7)
6/30/00	12,965.2	3.6%	14.1%	10.8%	8.9%	13,829.0	863.7
6/30/01	12,874.5	-0.7%	-2.1%	-5.9%	-7.3%	13,013.1	138.6
6/30/02	12,346.6	-4.1%	-4.0%	-5.7%	-7.3%	12,271.3	(75.3)
6/30/03	12,939.2	4.8%	5.6%	3.8%	2.9%	12,737.6	(201.6)
6/30/04	14,194.3	9.7%	18.8%	17.5%	15.0%	14,966.7	772.4
6/30/05	15,258.9	7.5%	13.4%	11.1%	10.0%	16,628.0	1,369.1
6/30/06	16,098.2	5.5%	14.7%	11.9%	9.6%	18,606.7	2,508.6
6/30/07	18,545.1	15.2%	19.1%	17.9%	16.5%	21,937.3	3,392.3
6/30/08	17,469.5	-5.8%	-2.2%	-4.3%	-5.3%	***20,994.0***	***3,524.6***

VII. Asset Allocation

Ten Lean Years for Investors *(as of 6/30/08)*







Asset Allocation Strategy

- We live in a low return world. Real interest rates (~1.5%) are low and equity risk premiums are below the long-term average. **A traditional 60% stock / 40% bond portfolio is very unlikely to earn a typical 5% real return requirement to offset spending over the coming decade.**
- With current real yields below 1.5%, Treasuries are far from enough to cover most institutions' return need. Credit spreads have widened materially since bottoming June 2007. Investment-grade credit is attractive relative to Treasuries.
- Assuming US stocks continue to trade at today's elevated valuations, they are priced to provide a 4.5% real return in the future. A contraction in valuations risks pushing the real return even lower. Unlike several years ago, there are now few opportunities to add value within the U.S. market.
  - At the beginning of 2000, value was relatively cheap, but now looks overvalued relative to the broad market. At the beginning of 1999, small-caps (particularly small-value) were very attractive relative to large-caps; but they now appear overvalued.
  - Hammond Associates has historically tilted towards value and small-caps due to academic evidence on their long-term performance advantage. We do not recommend tilts towards these areas at this time. Instead, we recommend tilting towards large-cap growth stocks, with a particular focus on high quality growth stocks.
- International equities remain more attractive than US equities, but offer far less potential for outperformance than they did earlier this decade.
  - On a valuation basis international developed stocks are modestly more attractively priced than U.S. stocks.
  - The dollar was massively overvalued several years ago, and subsequently plunged. Looking forward, the dollar likely needs to fall further on a trade-weighted basis because the trade deficit remains unsustainably high. However, European currencies that dominate the MSCI EAFE index look overvalued versus the buck. The dollar is most likely to weaken against Asian currencies.
  - The valuations of emerging market stocks appear stretched. We believe they still offer the highest long-term return potential among equity asset classes, but the downside risk is increasing. In particular, we are concerned about their reliance on developed economies for economic and profit growth.
  - Hammond Associates recommends avoiding home country bias and weight US and international similar to how they appear in global markets (43% US / 57% international).

Asset Allocation Strategy *(continued)*

- The flood of money into alternative asset classes has reduced opportunities. However, with traditional asset classes still priced to provide very low returns, we believe alternative asset classes should play a significant role in a diversified portfolio.
  - Hedge funds manage well over $1 trillion in capital (and much more when leverage is considered). The reward for investing in common arbitrage opportunities, such as convertible and merger, has diminished. Many hedge funds are moving into more illiquid assets and that trend is likely to continue. While aggregate returns from hedge funds are likely to be below most investors' expectations, we are confident in the small group of managers that we work with.
  - The credit crunch and uncertain future exit valuations are risks for buyouts. We are focusing on small and mid-market funds that bring operating expertise, while avoiding larger funds that are more dependant on debt. Venture capital and distressed debt offer more promise.
  - A risk of rising capitalization rates and higher debt costs pose risk for real estate portfolios. We continue to focus on value-added partnerships. Energy remains attractive long-term investment.
- Conclusion: **Diversify**
  - There's little reason to make large bets on particular asset classes or strategies when the expected return premium is modest and there is a high potential for error.
  - Watch for new opportunities and capitalize on them.

2007 NACUBO Study – Nominal Returns

Investment Pool Nominal Returns (%) ***Years Ended June 30, 2007***				
	Average Annual Compound Returns			
	1 Year ***2007***	***3 Years*** ***2005-2007***	***5 Years*** ***2003-2007***	***10 Years*** ***1998-2007***
In Aggregate:				
Equal-Weighted Mean	17.2	12.4	11.1	8.6
Dollar-Weighted Mean	21.5	16.8	14.4	11.7
Median	17.5	12.3	11.3	8.4
By Endowment Size:				
(Equal-Weighted mean)				
Less than or equal to $25 million	14.1	9.7	8.8	6.7
$26 million to $50 million	15.9	10.7	9.8	7.3
$51 million to $100 million	16.7	11.9	10.8	7.9
$101 million to $500 million	18.0	13.1	11.5	8.5
$501 million to $1 billion	19.3	14.2	12.3	9.5
Over $1 billion	21.3	16.4	13.9	11.1
KRS Pension Fund	*15.3*	*11.4*	*10.4*	*8.1*
KRS Insurance Fund	*19.3*	*13.7*	*12.3*	*8.4*
KTRS	*15.3*	*9.3*	*8.5*	*7.1*
By Type:				
(Equal-Weighted mean)				
Public	16.8	11.9	10.8	8.2
Independent	17.5	12.7	11.3	8.8

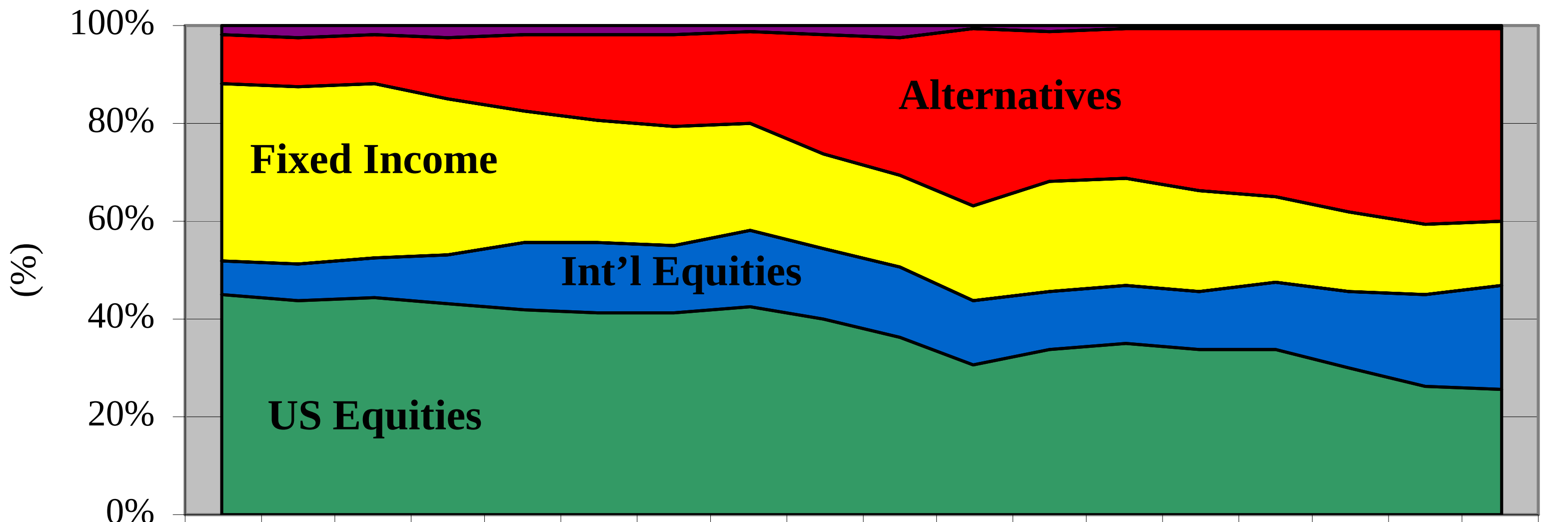
Source: NACUBO: National Association of College and University Business Officers

2007 NACUBO Study – Asset Allocation

Investment Pool Asset Allocation (%) *As of June 30, 2007*							
Responding Institutions (778)	***U.S. Stocks***	***Int'l Stocks***	***Fixed and Cash***	***Private Equity***	***Hedge Funds***	***Real Assets***	***Other***
In Aggregate:							
Equal-Weighted Mean	42.1	15.4	22.1	3.2	10.6	4.9	1.4
Dollar-Weighted Mean	26.7	20.8	14.1	9.0	18.2	10.2	1.0
By Investment Pool Size:							
(Equal-Weighted Mean)							
Less than or equal to $25 million	49.3	10.2	33.9	0.6	2.9	2.1	0.9
$26 million to $50 million	50.7	12.4	24.3	0.6	6.9	3.8	1.0
$51 million to $100 million	45.2	14.9	23.0	1.6	8.7	4.9	1.8
$101 million to $500 million	38.8	17.8	17.9	3.9	13.8	5.8	2.0
$501 million to $1 billion	30.4	20.1	15.7	7.7	17.7	7.7	0.8
Over $1 billion	25.7	21.3	12.8	10.4	20.5	8.6	0.6
KRS Pension Fund	*38.4*	*18.4*	*36.3*	*3.5*	*0.0*	*3.5*	*0.0*
KRS Insurance Fund	*55.5*	*20.4*	*18.3*	*2.9*	*0.0*	*2.9*	*0.0*
KTRS	*58.4*	*6.7*	*32.4*	*0.0*	*0.0*	*2.5*	*0.0*
By Type:							
(Equal-Weighted Mean)							
Public	42.4	14.7	26.5	2.6	8.4	4.1	1.6
Independent	42.0	15.8	19.8	3.5	11.9	5.4	1.4

Source: NACUBO: National Association of College and University Business Officers

Asset Allocation for the Largest NACUBO Reporting Institutions

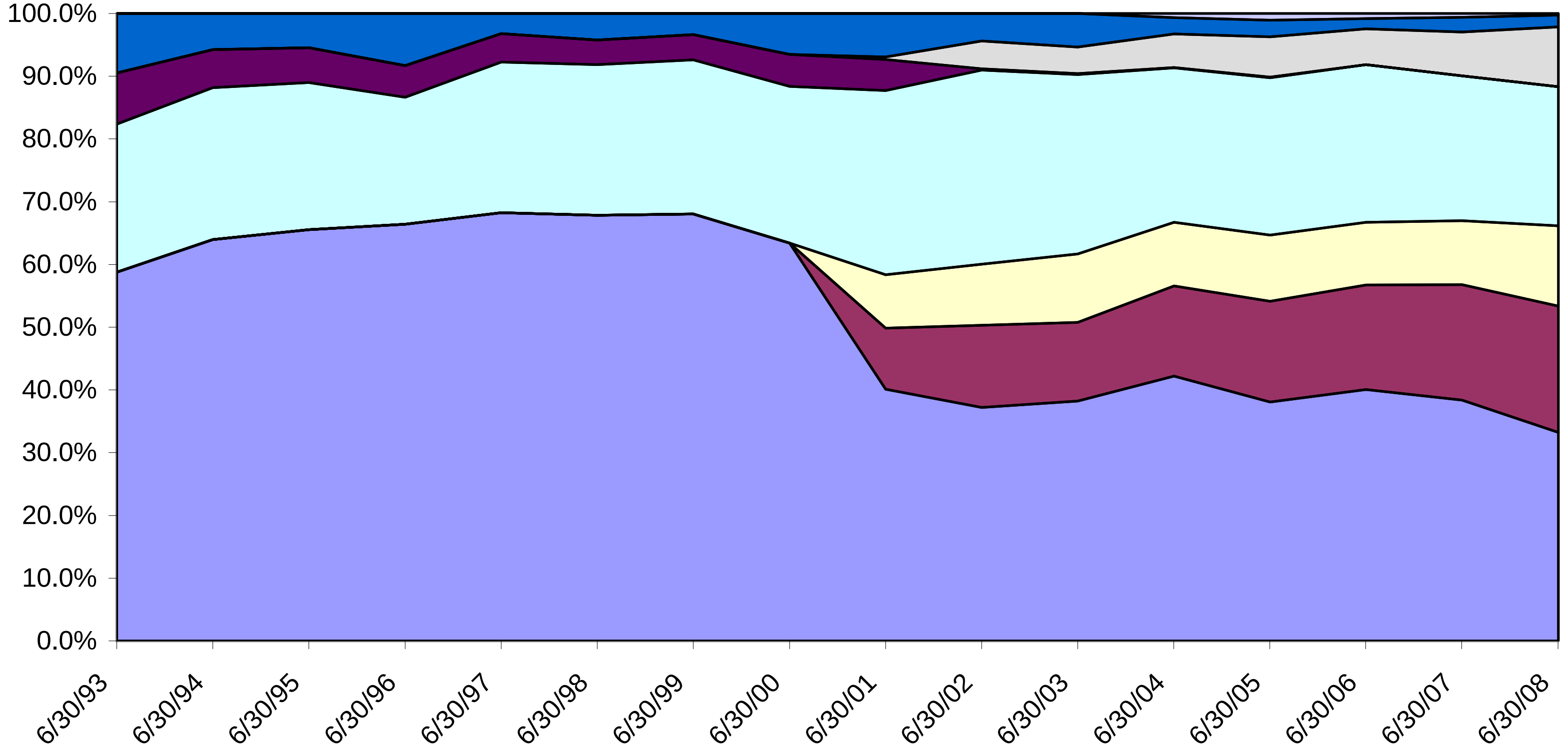


	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Other	2	2.2	1.9	2.3	1.7	1.6	1.8	1.5	2	2.3	0.6	1.1	0.5	0.7	0.7	0.4	0.5	0.6
Alternatives	10	10.2	9.7	12.6	16.1	18	19	18.5	24.4	28.2	36.4	31	30.6	33.2	34.2	37.5	40.4	39.5
Fixed Income	36.1	36.3	35.9	31.9	26.3	25	24.1	21.8	19	18.7	19.3	22.5	22.3	20.4	18	16.3	14.2	12.8
Int'l Equities	6.6	7.8	8.1	10.2	14.3	14.1	14	15.9	14.7	14.5	13.2	11.5	11.7	12.2	13.3	16	18.6	21.3
US Equities	45.3	43.5	44.4	43	41.6	41.3	41.1	42.3	39.9	36.3	30.5	34.1	34.9	33.9	34.1	29.9	26.3	25.7

<u>Notes:</u> From 1990 through 1997, largest NACUBO reporting institution category exceeded $400 million. For 1998 through 2007, the largest category exceeded $1 billion.

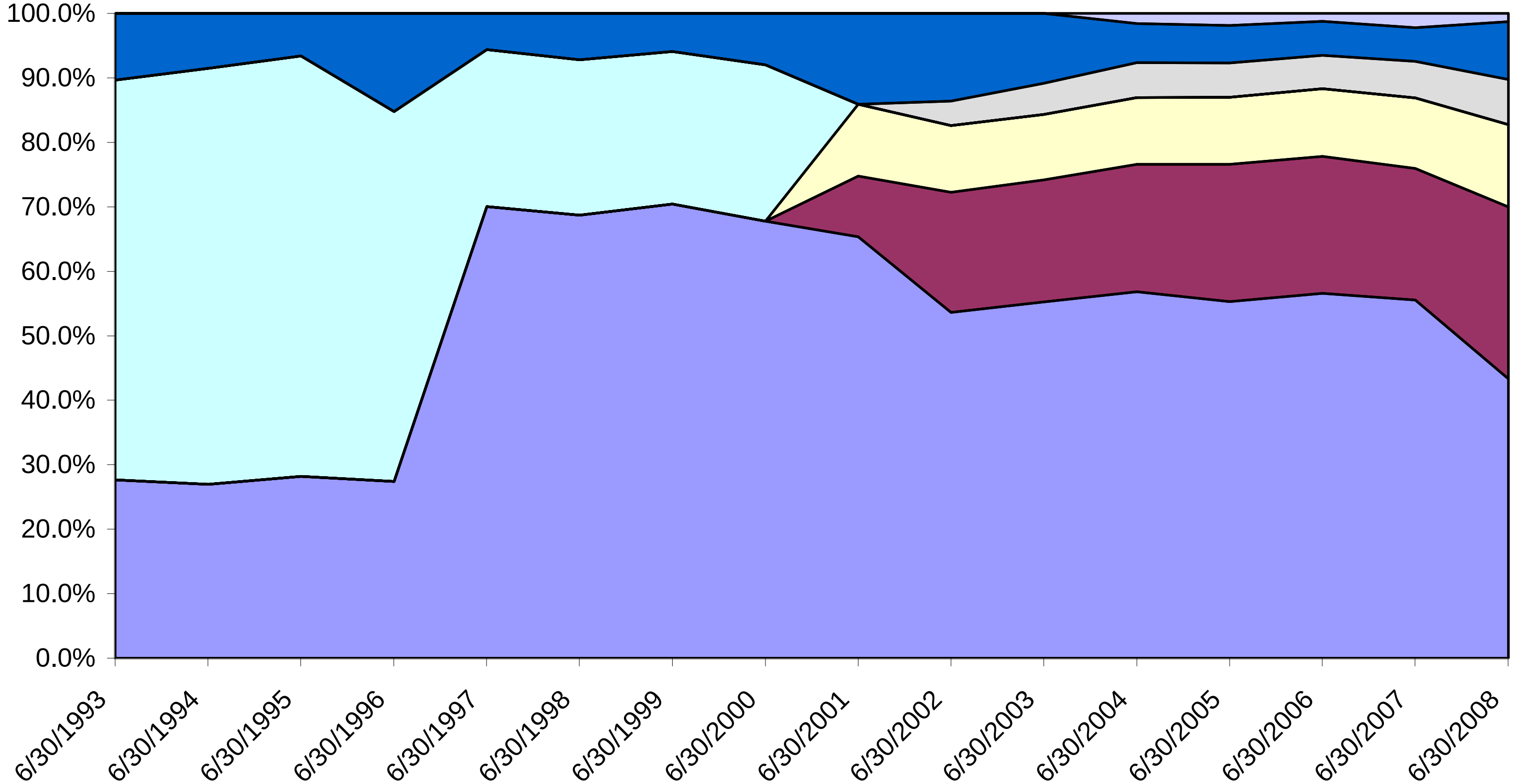
- Since 1990, the largest NACUBO reporting institutions have significantly altered their asset allocations.
- Allocations to international equities and, especially, alternative investments have increased, while allocations to U.S. equities and fixed income have trended downward.
- These trends may be the result of institutional investors seeking higher returning or less-correlated asset classes.

KRS Pension Fund Asset Allocation *(6/30/1993 – 6/30/2008)*



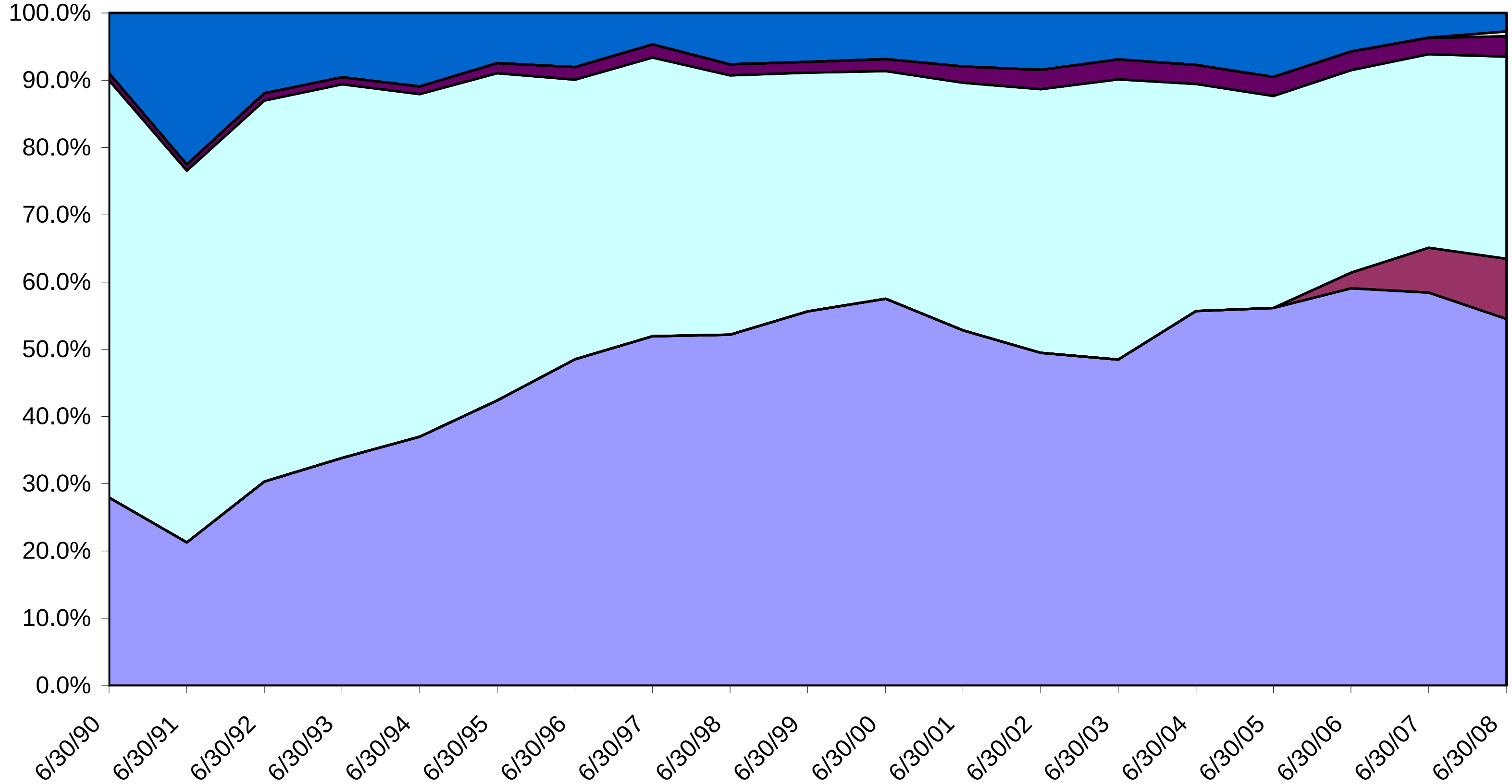
	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06	Jun-07	Jun-08
Equitization	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.1%	0.8%	0.6%	0.3%
Cash	9.5%	5.8%	5.4%	8.3%	3.2%	4.2%	3.4%	6.5%	7.0%	4.4%	5.4%	2.6%	2.6%	1.6%	2.4%	1.9%
Alternatives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	4.4%	4.2%	5.3%	6.5%	5.7%	7.0%	9.6%
Real Estate	8.1%	6.1%	5.6%	5.0%	4.5%	4.0%	4.0%	5.1%	5.0%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%
Core Fixed	23.6%	24.2%	23.5%	20.2%	24.0%	24.0%	24.6%	25.0%	29.4%	30.9%	28.6%	24.6%	25.1%	25.1%	23.1%	22.1%
TIPS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.5%	9.7%	10.9%	10.2%	10.5%	10.0%	10.2%	12.8%
Non-US Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.7%	13.1%	12.5%	14.4%	16.1%	16.6%	18.4%	20.2%
U.S. Equity	58.8%	64.0%	65.6%	66.4%	68.2%	67.9%	68.1%	63.4%	40.1%	37.2%	38.2%	42.2%	38.1%	40.1%	38.4%	33.2%

KRS Insurance Fund Asset Allocation *(6/30/1993 – 6/30/2008)*



	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06	Jun-07	Jun-08
Equitization	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	1.9%	1.2%	2.2%	1.3%
Cash	10.4%	8.5%	6.6%	15.2%	5.6%	7.2%	5.9%	8.0%	14.1%	13.6%	10.9%	6.0%	5.8%	5.3%	5.2%	9.0%
Alternatives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	4.8%	5.4%	5.3%	5.1%	5.7%	7.0%
Core Fixed	62.0%	64.5%	65.2%	57.4%	24.3%	24.1%	23.7%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TIPS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	10.4%	10.2%	10.3%	10.4%	10.5%	10.9%	12.8%
Non-US Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4%	18.6%	18.9%	19.8%	21.3%	21.2%	20.4%	26.7%
Domestic Equity	27.7%	27.0%	28.2%	27.4%	70.0%	68.7%	70.4%	67.8%	65.4%	53.6%	55.3%	56.8%	55.3%	56.6%	55.5%	43.3%

KTRS Asset Allocation *(6/30/1990 – 6/30/2008)*



	Jun-90	Jun-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01	Jun-02	Jun-03	Jun-04	Jun-05	Jun-06	Jun-07	Jun-08
Cash	9.0%	22.5%	11.9%	9.6%	10.9%	7.5%	8.0%	4.7%	7.6%	7.3%	6.8%	7.9%	8.5%	6.9%	7.7%	9.5%	5.7%	3.6%	2.7%
Alternatives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%
Real Estate	1.0%	0.9%	1.1%	1.0%	1.1%	1.5%	1.9%	2.0%	1.7%	1.6%	1.8%	2.4%	2.9%	3.0%	2.8%	2.8%	2.8%	2.5%	3.0%
Core Fixed	62.1%	55.3%	56.7%	55.6%	50.9%	48.7%	41.6%	41.4%	38.6%	35.5%	33.9%	36.8%	39.2%	41.7%	33.8%	31.5%	30.1%	28.8%	30.1%
Non-US Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	6.7%	9.0%
U.S. Equity	27.9%	21.3%	30.3%	33.8%	37.0%	42.4%	48.5%	51.9%	52.2%	55.6%	57.5%	52.8%	49.5%	48.5%	55.7%	56.2%	59.1%	58.4%	54.5%

Asset Allocations Analysis

Asset Class	*KRS Proposed L-T Target*	*KRS Actual Allocation 6/30/08*	*KTRS 2008-2009 Target*	*KTRS Act. Allocation 6/30/08*	*70% S&P/ 30% LBAG*	*NACUBO >$1B*	*Yale Policy 6/30/07*	*Harvard Policy 1/1/08*	*OFM Peer Universe Average*	*RM Public Plans > $1B*	*HA Research Portfolio*
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*K*
Growth Assets											
US All-Cap Stocks	30%					26%	11%	12%	44%	34%	
US Large Stocks		29%	45%	36%	70%						7%
US Large Growth Stocks				5%							4%
US Large Quality Stocks											4%
US Large Value Stocks				7%							
US Mid Stocks			5%	4%							
US Small Stocks		5%	3%	3%							
US Equity	*30%*	*34%*	*53%*	*55%*	*70%*	*26%*	*11%*	*12%*	*44%*	*34%*	*15%*
Intl Large Stocks	22%	20%	11%	9%		16%	6%	12%	18%	20%	16%
Intl Emerging Market Stocks	5%					5%	9%	10%			4%
Intl Equity	*27%*	*20%*	*11%*	*9%*	*0%*	*21%*	*15%*	*22%*	*18%*	*20%*	*20%*
Private Equity / Special Situations	7%	7%	2%	0%		10%	19%	11%	3%	8%	15%
Total Growth Assets	**64%**	**61%**	**66%**	**64%**	**70%**	**57%**	**45%**	**45%**	**65%**	**61%**	**50%**
Risk Reduction Assets											
Cash	1%	2%	2%	2%		2%		-5%	2%	4%	
US / Global Fixed Income	10%	22%	28%	31%	30%	11%	4%	8%	27%	30%	10%
US High Yield Fixed	5%							1%			
Intl Emg Market Debt	5%										
Hedge Funds						21%	23%	18%			20%
Total Risk Reduction Assets	**21%**	**24%**	**30%**	**33%**	**30%**	**34%**	**27%**	**22%**	**29%**	**33%**	**30%**
Inflation Protection Assets											
US Inflation Protected Fixed	5%	13%							2%		5%
Real Assets	10%	3%	4%	4%		9%	28%	33%	5%	6%	15%
Total Inflation Protection Assets	**15%**	**16%**	**4%**	**4%**	**0%**	**9%**	**28%**	**33%**	**7%**	**6%**	**20%**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Asset Allocations Analysis

Asset Class	*KRS Proposed L-T Target*	*KRS Actual Allocation 6/30/08*	*KTRS 2008-2009 Target*	*KTRS Act. Allocation 6/30/08*	*70% S&P/ 30% LBAG*	*NACUBO >$1B*	*Yale Policy 6/30/07*	*Harvard Policy 1/1/08*	*OFM Peer Universe Average*	*RM Public Plans > $1B*	*HA Research Portfolio*
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*K*
Return											
L/T Compound Expected Return	8.2%	7.5%	7.4%	7.2%	7.1%	8.7%	9.7%	9.4%	7.5%	7.8%	8.9%
10 Yr. Horizon Expected Return	7.5%	6.7%	6.6%	6.3%	6.2%	8.0%	9.0%	8.8%	6.7%	7.0%	8.5%
Risk (L/T Expectations)											
Standard Deviation (1 Yr.)	±12.3%	±10.8%	±11.9%	±11.6%	±12.9%	±11.3%	±12.0%	±11.7%	±11.5%	±11.2%	±10.9%
Probability of Loss Year	23.4%	22.9%	24.9%	24.8%	27.2%	20.6%	19.5%	19.6%	24.0%	22.8%	19.3%
Probability of 10% or Worse Loss	6.2%	4.7%	6.4%	6.1%	8.4%	4.4%	4.5%	4.4%	5.8%	5.1%	3.7%
Lowest Likely Return (1 Yr.)	-19.7%	-17.1%	-19.6%	-19.1%	-22.2%	-17.0%	-17.6%	-17.2%	-18.7%	-17.7%	-15.9%
Sharpe Ratio	0.34	0.32	0.29	0.28	0.24	0.41	0.47	0.46	0.31	0.34	0.45
Risk (10-Yr Horizon Expectations)											
Probability of Loss Year	25.3%	24.9%	27.2%	27.4%	29.5%	22.4%	21.0%	21.1%	26.3%	24.9%	20.4%
Probability of 10% or Worse Loss	7.0%	5.4%	7.4%	7.1%	9.5%	5.0%	5.0%	4.9%	6.7%	5.8%	4.0%
Lowest Likely Return (1 Yr.)	-20.5%	-17.8%	-20.4%	-19.9%	-23.1%	-17.7%	-18.2%	-17.8%	-19.5%	-18.5%	-16.3%
Sharpe Ratio	0.32	0.30	0.26	0.25	0.21	0.40	0.46	0.45	0.28	0.31	0.46
Probability of Achieving 7.5% Goal Return											
Based on L/T Compound Return	57.5%	49.5%	48.9%	45.7%	45.7%	63.0%	72.1%	69.6%	50.4%	53.1%	65.8%
Based on 10 Yr. Horizon Return (10 Yr.)	49.8%	40.4%	40.0%	35.9%	37.2%	55.3%	66.0%	63.5%	41.3%	44.7%	61.2%
Probability of Achieving 7.75% Goal Return											
Based on L/T Compound Return	54.9%	46.6%	46.2%	44.3%	43.2%	60.2%	69.8%	67.1%	47.6%	50.3%	63.1%
Based on 10 Yr. Horizon Return (10 Yr.)	47.3%	38.3%	37.5%	34.9%	34.9%	52.5%	63.5%	60.9%	38.7%	41.9%	58.3%

Long-Term Asset Class Expectations

Asset Class	Compound Expected Return	Expected Standard Deviation
Growth Assets		
US Large Stocks	7.5	17.5
US Mid Stocks	8.0	19.0
US Small Stocks	8.5	22.0
Intl Large Stocks	7.5	18.0
Intl Small Stocks	8.5	19.0
Intl Emerging Market Stocks	9.5	27.0
Private Equity	12.5	27.0
Risk Protection Assets		
US Fixed Income	5.2	5.5
Cash	4.0	0.5
Hedge Funds	8.0	7.0
Inflation Protection Assets		
US Inflation Protected Bonds	4.7	5.0
Real Assets	8.5	12.5

This represents our long-term expected return on stocks when they are priced at equilibrium. Current valuations appear to be above equilibrium.

Small-cap stocks are expected to outperform large-cap stocks by 1% and value stocks are expected to outperform broad stock allocations.

Over the long-term, we expect US stocks and international developed market stocks to provide similar returns.

We expect cash to earn 4.0% nominal (based on 2.5% inflation) over the long-term. All other asset class returns are built off the cash rate.

Inflation-protected bonds are expected to underperform a broad US fixed income allocation (as proxied by the Lehman Aggregate Bond index) because a broad fixed allocation has exposure to credit spreads.

Methodology for Determining Asset Class Expectations

Our approach to developing long-term forecasts blends realized historical results and an examination of current conditions. In developing the forecasts, we begin by averaging historical data for the longest period available to determine how much investors have been rewarded for exposure to risk factors in the past. We then use internal and external research to identify structural reasons that risk premiums in the future might be different than those experienced in the past, and adjust our forecasts accordingly. This methodology generally results in lower return forecasts, particularly for equity asset classes, than have been experienced in the past.

Note: The return expectations do not include manager alpha except for absolute return strategies. The expected return in excess of cash for absolute return strategies consists mostly of expected alpha.

10-Year Horizon Expected Returns

Asset Class	L/T Expected Return	10-Year Horizon Returns
Growth Assets		
US Large Stocks	7.5	6.5
US Large Value Stocks	8.0	5.5
US Large Growth Stocks	7.0	7.5
US Large Quality Stocks	8.0	8.0
US Mid Stocks	8.0	6.0
US Small Stocks	8.5	5.5
US Small Value Stocks	9.5	5.5
Intl Large Stocks	7.5	7.5
Intl Small Stocks	8.5	6.5
Intl Emerging Market Stocks	9.5	6.5
Private Equity	12.5	11.5
Risk Protection Assets		
Cash	4.0	3.5
Fixed Income	5.2	4.6
Hedge Funds	8.0	8.0
Inflation Protection Assets		
US Inflation Protected Bonds	4.7	3.9
Real Assets	8.5	8.5

10-Year Expectations – Rationale

- The long-term expectations represent the expected returns of asset classes at equilibrium. They are an estimate of what investors require to invest in each asset class, given the risk, in a normal interest rate environment. They are not affected by current valuations.
- Given their lofty valuations, many asset classes appear to be priced above equilibrium. In other words, their current expected return is below the equilibrium expected return. The horizon expectations are an estimate of the return over the next 10-years assuming all asset classes finish the period at equilibrium.
- Equities are priced to provide low returns in the future. At equilibrium real interest rates, we estimate that the S&P 500 should trade at a normalized P/E ratio of roughly 20. At a P/E ratio of 20, stocks would be priced to provide a risk premium to long-term TIPS bonds of 2.5%.
- If the normalized P/E ratio on the S&P 500 falls to 20 over the next 10 years, we estimate that the S&P 500 will earn a nominal return of 5.5%, versus the long-term expected return of 7.5%.

Correlation Assumptions

	US Large Stocks	US Mid Stocks	US Small Stocks	REITs	Intl Large Stocks	Intl Small Stocks	Intl Emerging Market Stocks	US Fixed Income	US Inflation Protected Fixed	US High Yield Fixed	Cash	Real Assets	Private Equity	Hedge Funds
US Large Stocks	-	0.90	0.80	0.50	0.65	0.50	0.60	0.35	0.20	0.55	(0.05)	0.35	0.70	0.35
US Mid Stocks		-	0.90	0.50	0.60	0.50	0.60	0.30	0.20	0.55	(0.05)	0.35	0.75	0.35
US Small Stocks			-	0.55	0.55	0.50	0.55	0.25	0.15	0.60	(0.10)	0.35	0.80	0.40
Intl Large Stocks					-	0.85	0.60	0.20	0.10	0.40	(0.10)	0.30	0.50	0.25
Intl Small Stocks						-	0.60	0.15	0.10	0.40	(0.10)	0.30	0.50	0.30
Intl Emerging Market Stocks							-	0.10	0.10	0.50	(0.15)	0.45	0.45	0.40
US Fixed Income								-	0.60	0.40	0.00	0.15	0.25	0.30
US Inflation Protected Fixed									-	0.30	0.10	0.35	0.15	0.20
US High Yield Fixed										-	(0.10)	0.25	0.60	0.40
Cash											-	0.00	(0.10)	0.10
Real Assets												-	0.50	0.30
Private Equity													-	0.30
Hedge Funds														-

- **Correlation coefficients** measure the degree of co-movement between two asset classes. A correlation of 1.00 indicates that both assets move in lock-step with one another, while a correlation of (1.00) suggests that the assets move in opposite directions. A correlation of 0 means that there is no relation.
- Diversified portfolios take advantage of the tendency of asset classes to behave in different ways relative to each other. Asset classes with low correlations to one another can be combined to produce portfolios with less risk than any specific asset class displays on a stand-alone basis.

Glossary of Terms

- **10-Yr Horizon Return** - The 10-year mean reversion return represents our best estimate of returns over the next 10 years. We assume that normalized P/E ratios and interest rates revert to their equilibrium levels over the next 10-years.
- **Net Average Expected Return** - The average return in the portfolio's distribution of possible portfolio returns, net of indexed management fees. In any one-year period, there is a 50% chance that the return will be below the expected return and a 50% chance that the return will be above the expected return.
- **Net Compound Expected Return** - The median return of possible multi-year portfolio returns, net of indexed management fees. For example, in a ten-year period, there is a 50% chance that the annualized return will be below the median expected return and a 50% chance that the annualized return will be above median expected return.
- **Standard Deviation** - This statistic simply quantifies the expected variability of returns around their mean. Both returns *above* and *below* the expected return are included in this risk measure. There is roughly a two out of three chance that the return in any given year will fall within the range bounded by the expected return plus or minus the standard deviation.
- **Sharpe Ratio** - The Sharpe Ratio is a measure of risk-adjusted returns. It is the amount of return obtained (above the risk-free rate) for each unit of risk incurred; therefore, higher Sharpe Ratios indicate a more favorable reward/risk tradeoff. Mathematically, it is the expected return of the portfolio less the risk-free rate divided by the standard deviation.
- **Lowest Likely Return**– Also known as the Value at Risk (VAR), VAR indicates the lowest return we would expect from the portfolio in 99 periods out of 100. In one period out of 100, we would expect the return to be worse.
- **Downside Probability** - The probability of *missing* the goal return over the period. A 20 year downside probability of 33% indicates that there is a one in three chance of missing the goal return over a twenty- year horizon.

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VIII. Pension Fund Governance

Effective Pension Fund Governance

- ***What constitutes "Best Practices in Pension Fund Governance"?***
  - Management and Oversight
  - Accountability
  - Investment Policy

- ***How does pension fund governance affect fund performance?***
  - Bad governance practices have an economic cost of 2% per annum.[1]

1- Source: "The Three Grades of Pension Fund Governance Quality, Bad, Better, Best" K. Ambactsheer

Effective Pension Fund Governance *(continued)*

- ***What prevents private and public retirement systems from achieving best practices in pension fund governance?***
  - Legal barriers
  - Organizational barriers
  - Competency barriers
  - Scale barriers

Barriers to Excellence

Rank	Barrier	Cited %
1	Poor Decision Process	98%
2	Inadequate Resources	48%
3	Lack of Focus/Clear Mission	43%
4	Conservatism	35%
4	Insufficient Skill	35%
6	Inadequate Technology	13%
7	Conflicts	8%
7	Difficult Markets	8%
9	Lack of Innovation	5%
9	Suppliers	5%

Source: "Excellence Shortfall in Pension Fund Management: Anatomy of a Problem" by K. Ambactsheer, C. Boice, D. Ezra, J. McLaughlin

Effective Pension Fund Governance *(continued)*

- Four Key Attributes:
  - Trustee Structure – Trade off between “representative” and “expertise”
  - Operating Structure – Deliver results in a cost effective manner
  - Culture – Sense of urgency/high performance team
  - Scale – Bigger is better

Effective Pension Fund Governance *(continued)*

- Strong Board of Trustees is critical to an effective governance structure
- Selection process is key
  - Motivation
  - Expertise
    - Think strategically
    - Relevant skill/experience
      - Investments
      - Risk management
      - Audit
      - Actuarial/Human Resources

Effective Pension Fund Governance *(continued)*

- KRS Governance: 9 member Board of Trustees
  - 5 elected; 3 appointed; 1 ex officio
  - Investment committee: 5 Trustees
  - Investment expertise noted in one trustee biography

- KTRS Governance: 9 member Board of Trustees
  - 7 elected; 2 ex officio
  - Investment committee: 2 trustees and Executive Secretary
  - No investment expertise noted in trustee biographies

- Institutional investment best practices
  - Investment committee members with investment expertise.
  - Supplement with education

Effective Pension Fund Governance

- What constitutes “best practices in portfolio management”?
  - Active vs. passive
  - Internal vs. external
  - Marketable securities vs. illiquid partnerships

- Creating value through implementation (compensation for risk)

- CIO, staff and external advisors skill set is critical to success

- Is the portfolio behaving as expected? (asset/liability study)
  - Recommended every 3-5 years depending upon policy changes
  - KRS – July 2006
  - KTRS – June 2002, update expected in 2008-2009

- Is the portfolio behaving as expected? (benchmarks)
  - Yes – continue monitoring process
  - No – address the issue with appropriate resources (time, talent or terminations)

IX. Board and Investment Committee Structure

Investment Committee Structure – Peer Return Rankings

System	Assets	1-Year	3-Year	5-Year	10-Year
		Period Ending June 30, 2007			
Pennsylvania Public School Employees Retirement System	$67,340,997	22.9%	16.9%	14.5%	NA
Louisiana Teachers Retirement System	16,148,730	19.7%	15.0%	14.0%	9.7%
Washington Department of Retirement Systems	69,059,082	21.3%	17.0%	14.0%	NA
South Dakota Retirement System	8,158,169	21.4%	15.9%	13.8%	10.3%
Oregon Employees Retirement System	62,891,942	18.6%	15.6%	13.4%	NA
Missouri State Employees Retirement System	8,129,174	18.7%	14.2%	13.3%	9.2%
Ohio State Teachers Retirement System	72,935,433	20.7%	15.5%	13.2%	NA
California State Teachers Retirement System	172,377,918	21.0%	15.1%	13.1%	NA
California Public Employees Retirement System	251,122,682	19.1%	14.6%	12.8%	9.1%
Virginia Retirement System	56,890,203	20.4%	14.9%	12.8%	NA
Idaho Public Employee Retirement System	11,257,959	20.0%	14.3%	12.8%	NA
Oklahoma Teachers Retirement System	9,651,042	18.5%	12.8%	12.8%	NA
Louisiana State Employees Retirement System	9,351,148	19.2%	13.7%	12.6%	NA
Illinois Teachers Retirement System	41,909,318	19.2%	13.9%	12.5%	9.1%
New York State Teachers Retirement System	104,912,949	19.3%	13.8%	12.3%	8.8%
Kansas Public Employees Retirement System	14,183,073	18.0%	14.1%	12.3%	8.8%
Arkansas Teachers Retirement System	11,636,935	19.1%	14.0%	12.1%	NA
Minnesota Teachers Retirement Association	19,938,882	18.5%	14.0%	12.0%	8.5%
Illinois State Universities Retirement System	15,985,730	18.3%	13.4%	11.9%	8.5%
Minnesota Public Employees Retirement Association	16,718,662	18.3%	13.8%	11.9%	8.3%
Minnesota State Retirement System	15,214,339	18.3%	13.8%	11.9%	NA
Indiana Public Employees Retirement Fund	17,181,295	18.2%	12.8%	11.8%	NA
Arkansas Public Employees Retirement System	5,970,244	18.1%	13.3%	11.7%	NA
Ohio School Employees Retirement System	11,546,062	18.7%	13.8%	11.7%	8.2%
New Mexico Public Employees Retirement Association	13,616,098	18.1%	13.2%	11.7%	NA
Hawaii Employees Retirement System	11,462,417	17.7%	13.3%	11.7%	NA
Indiana State Teachers Retirement Fund	8,987,744	18.2%	12.9%	11.6%	NA
Iowa Public Employees Retirement System	23,217,168	16.3%	12.9%	11.6%	9.0%
Alaska Public Employees Retirement System	7,439,387	18.9%	13.1%	11.5%	NA
Florida Retirement System	134,317,778	18.1%	12.9%	11.5%	8.5%
Delaware Public Employees Retirement System	7,413,370	15.9%	12.7%	11.5%	9.0%
Mississippi Public Employees Retirement System	21,912,350	18.9%	13.1%	11.4%	NA
Maine State Retirement System	11,023,021	16.2%	11.8%	11.4%	7.7%
Maryland State Retirement and Pension System	39,444,781	17.6%	12.4%	11.3%	7.2%
Texas Employees Retirement System	24,460,276	13.9%	11.8%	11.2%	NA
Arizona State Retirement System	28,475,997	17.8%	11.9%	11.0%	8.4%
Oklahoma Public Employees Retirement System	6,640,477	16.4%	11.6%	10.9%	NA
Illinois State Employees Retirement System	12,078,909	17.1%	12.6%	10.8%	NA
Missouri Public Schools Retirement System	31,964,843	16.6%	11.8%	10.5%	NA
Kentucky Retirement Systems	*14,228,184*	*15.3%*	*11.4%*	*10.4%*	*8.1%*
North Carolina Retirement Systems	75,953,334	14.8%	10.6%	10.3%	NA
Nevada Public Employees Retirement System	22,701,360	15.0%	11.0%	10.0%	7.9%
South Carolina Retirement Systems	28,048,780	13.4%	8.6%	8.8%	7.0%
Georgia Employees Retirement System	17,516,903	14.7%	9.5%	8.5%	NA
Georgia Teachers Retirement System	53,133,101	NA	9.5%	8.5%	NA
Kentucky Teachers Retirement System	*15,492,519*	*15.2%*	*9.3%*	*8.5%*	*7.1%*
Tennessee Consolidated Retirement System	32,365,969	13.2%	9.1%	8.3%	NA
High		22.9%	17.0%	14.5%	10.3%
Mean		17.9%	13.0%	11.7%	8.5%
Median		18.3%	13.2%	11.7%	8.5%
Low		13.2%	8.6%	8.3%	7.0%

Source: Comprehensive annual financial report published by each represented retirement system for the period ending June 30, 2007.

Note: Returns shown for Kentucky Retirement Systems represent only the returns for the Pension Fund. Plans are ranked according to their 5-year performance.

Board Structure – 1st Quartile Board Composition

- Pennsylvania Public School Employees Retirement System - 1) Secretary of education 2) State treasurer 3) Executive director of the Pennsylvania School Boards Association (PSBA) 4-5) Gubernatorial appointments 6) Annuitant 7-9) Active members 10) ESP 11) PSBA representative 12-13) Two members of the House of Representatives, one from the majority party and one from the minority party 14-15) Two senators, one from the majority party and one from the minority party

- Louisiana Teachers Retirement System - 1) State superintendent of Public Education 2) State treasurer 3) Chairman of the retirement committee of the House of Representatives 4) Chairman of the retirement committee of the Senate 5) Trustee representing school food service employees 6) Trustee representing state college and university employees 7-13) Trustee from Districts 1-7 14) Trustee representing superintendents 15-16) Retired teachers

- Washington Department of Retirement Systems - 1-2) Two active Public Employees' Retirement System (PERS) members 3) One retired PERS member 4-5) Two active Teachers' Retirement System (TRS) members 6) One retired TRS member 7-8) Two active School Employees' Retirement System (SERS) members 9) One retired SERS member *10-11) Two individuals with experience in defined contribution plan administration* 12) One Deferred Compensation Program participant

- South Dakota Retirement System - 1-2) Teacher members 3-4) State employee members 5) Participating municipality member 6) Participating county member 7) Participating classified employee member 8) Current contributing Class B member 9) Current Class B member other than a justice, judge or magistrate judge 10) County commissioner of a participating county 11) School district board member 12) Elected municipal official of a participating municipality 13) Retired member 14) Faculty or administrative member employed by the Board of Regents 15-16) Head of principal department or head of a bureau under the office of executive management *17) Individual from private or public sector*

Board Structure – 1st Quartile Board Composition

- Oregon Employees Retirement System - *1-3) Individual with experience in business management, pension management or investing that are not members of the PERS system* 4) Individual who is either an employee of the state in a management position or holds an elective office in the governing body of a participating public employer other than the state 5) Individual representing public employees
- Missouri State Employees Retirement System - 1-2) Members of the Senate appointed by the President Pro Tem of the Senate 3-4) Members of the House of Representatives appointed by the Speaker of the House 5-6) Appointed by governor 7) State Treasurer 8) Commissioner of Administration 9-10) Active members elected by the active and terminated-vested members 11) Retiree elected by the retired members
- Ohio State Teachers Retirement System - 1) Superintendent of Public Instruction or his/her designee 2) Investment designee of state treasurer *3-4) Investment experts* 5-9) Active teachers 10-11) Retirees
- California State Teachers Retirement System - 1) Superintendent of Public Instruction 2) Controller 3) Treasurer 4) Director of finance 5-6) K-12 classroom teachers 7) Community college instructor 8) School board member or community college board member 9) Retired member 10-12) Public members
- California Public Employees Retirement System - 1-2) Elected by and from all CalPERS members 3) Elected by and from all active State members 4) Elected by and from all active CalPERS school members 5) Elected by and from all active CalPERS public agency members 6) Elected by and from the retired members of CalPERS 7) Elected official of a local government 8) Official of a life insurer 9) Public representative appointed jointly by the Speaker of the Assembly and the Senate Rules Committee 10) State Treasurer 11) State Controller 12) Director of Department of Personnel Administration 13) Designee of the State Personnel Board

Board Structure – 1st Quartile Board Composition

- Virginia Retirement System - *1-4) Investment expert 5) Experienced in employee benefit plans* 6) Local government employee 7) Employee of a Virginia public institution of higher education 8) State employee 9) Public school teacher
- Idaho Public Employee Retirement System - 1-2) Active PERSI members with at least ten years of service *3-5) Idaho citizens not members of the system*
- Oklahoma Teachers Retirement System - 1) State superintendent of Public Instruction 2) Director of the state Department of Career and Technology Education, or designee 3) Director of state finance *4-7) Representatives of investment, finance, or other profession* 8) Representative of higher education 9) Member of the system of non-classified optional personnel status 10) Active teacher 11) Retired member of the system 12) Active teacher 13) Retired teacher

Board Structure – 4th Quartile Board Composition

- Arizona State Retirement System - 1) Educator 2) Employee of a political subdivision 3) Retired member 4) Employee of the state 5) At large member representing any ASRS member group *5-9) Individual with at least ten years experience as a portfolio manager acting in a fiduciary capacity, a securities analyst, an employee or principal of a trust institution, investment organization or endowment fund acting in either a management or investment related capacity, a chartered financial analyst in good standing as determined by the association for investment management and research, a professor at the university level teaching economics or investment related subjects, an economist or any other professional engaged in the field of public or private finances*

- Oklahoma Public Employees Retirement System - 1) Member of the Corporation Commission 2) Member of the Tax Commission 3) Administrator of the Office of personnel management or designee 4) State Insurance Commissioner or designee 5) Director of State Finance or designee 6-8) Appointed by governor 9) Appointed by the Supreme Court 10-11) Appointed by the Speaker of the House of Representatives 12-13) Appointed by the President Pro Tempore of the Senate

- Illinois State Employees Retirement System - 1) Director of the Governor's Office of Management and Budget 2) The Comptroller 3) Trustee not a state employee who shall be chairman 4-5) Two members of the system (one of whom shall be an annuitant over the age of 60 having 8 years of creditable service 6) Member of the system having at least 8 years of creditable service 7) Annuitant of the system who has been an annuitant for at least one full year

- Missouri Public Schools Retirement System - 1-3) PSRS members 4) PEERS member 5) Retired member of either PEERS or PSRS 6-7) Public members who must residents of school districts included in retirement system, but must not be employees of such districts, nor be state employees or state elected officials

Board Structure – 4th Quartile Board Composition

- Kentucky Retirement Systems - 1-2) KERS member 3-4) CERS member 5) SPRS member 6-8) Appointed by governor 9) Secretary of State Personnel Cabinet
- North Carolina Retirement Systems – NA
- Nevada Public Employees Retirement System - NA
- South Carolina Retirement Systems - 1) Municipal employee representative 2) County employee representative 3-5) State employee representative 6-7) Public school teacher representative 8) Higher education teacher representative
- Georgia Employees Retirement System – NA
- Georgia Teachers Retirement System - 1) State auditor 2-3) Classroom teachers, not an employee of the Board of Regents of University of Georgia (BRUGA) 4) Director of the Office of Treasury and Fiscal Services 5) School administrator, not a BRUGA employee 6) Active TRS member who is not BRUGA employee 7) Active TRS member who is a BRUGA employee 8) Individual (citizen of Georgia) 9) Retiree *10) Individual with investment experience who is not a TRS member*
- Kentucky Teachers Retirement System - 1) Chief state school officer 2) State treasurer 3-6) Teachers 7) Retired teacher 8-9) Lay trustees (non-teacher)
- Tennessee Consolidated Retirement System - 1) Chair of the Legislative Council on Pensions and Insurance (non-voting) 2) Vice-chair of the Legislative Council on Pensions and Insurance (non-voting) 3) Commissioner of Human Resources 4) Commissioner of Finance and Administration 5) Comptroller of the Treasury 6) Secretary of State 7) Administrative Director of the Courts 8) State Treasurer 9) Director of TCRS 10-12) Teacher representative 13-14) State employee representative 15) Public safety officer representative 16-18) Local government representative 19-20) Retiree representative

Board and Investment Committee Structure

- Many of the top performing plans have either boards or investment committees that require investment expertise.
- Investment experience has been defined by similar plans as the following:
- An individual with at least ten years' substantial experience as any one or a combination of the following:
  - A portfolio manager acting in a fiduciary capacity
  - A securities analyst
  - An active or retired employee or principal of a trust institution, investment organization or endowment fund acting either in a management or an investment related capacity
  - A chartered financial analyst in good standing as determined by the CFA Institute
  - A professor at the university level teaching economics or investment related subjects
  - An economist
  - Any other professional engaged in the field of public or private finances.

Virginia Retirement System Case Study

The Virginia Retirement System administers a defined benefit plan, a group life insurance plan, a deferred compensation plan and a cash match plan for Virginia's public sector employees.

Nine members serve on the VRS Board of Trustees. Their appointment is shared between the executive and legislative branches of state government. The Governor appoints five members, including the chairman. The Joint Rules Committee of the Virginia General Assembly appoints four members. The General Assembly confirms all appointments. Of the nine Board members, four must be investment experts; one must be a local government employee; one must be an employee of a Virginia public institution of higher education; one must be a state employee; and one must be a public school teacher. The public employee one must be a local government employee; one must be an employee of a Virginia public institution of higher education; one must be a state employee; and one must be a public school teacher. The public employee members may be either active or retired.

The Virginia Retirement System also utilizes an Investment Advisory Committee which supports and advises the Board of Trustees in matters of investment policy, asset allocation and manager selection. The Investment Advisory Committee members are profiled on the next page.

Virginia Retirement System Case Study

- Joe Grills - Committee Chair, Former CIO, IBM Retirement Funds
- Erwin H. Will, Jr. - Committee Vice Chair, Retired, Chief Investment Officer of VRS and Retired, President of Capitoline Investment Management
- Christopher J. Brightman - Chief Executive Officer of the University of Virginia Investment Management Company (UVIMCO)
- Patricia Gerrick - Deputy State Treasurer/State Investment Officer for the North Carolina Department of the State Treasurer
- Deborah Allen-Hewitt - President, Rutledge Research
- Donald W. Lindsey - Chief Investment Officer, The George Washington University
- Stuart A. Sachs -Retired President, Sovran Capital Management
- Rod Smyth - Chief Investment Strategist, Riverfront Investment Group
- Hance West - Managing Director, Investure

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Appendix I. Consulting Team Biographies

Consulting Team Biographies

Richard P. Marra

Rich is the Director of Corporate Retirement Plans and a Principal Consultant at Hammond Associates. He is a 1983 graduate of Boston College with a BS in Management, concentration in Accounting. Rich is a Certified Public Accountant in the state of New Jersey; status is currently retired. Prior to joining Hammond Associates, Rich was appointed Assistant Treasurer in 1990 and Director of Pension Investments in 1997 at Smurfit-Stone Container Corporation. During the 15 years as Assistant Treasurer he was responsible for managing the capital markets activity of Smurfit-Stone Container Corporation including equity issuance, public debt issuance, asset-backed security issuance, private placement debt issuance and interest rate risk management. During the 9 years as Director of Pension Investments he was a member of the Administrative Committee of the Retirement Plans at Smurfit-Stone Container Corporation, which is responsible for managing investment policy and strategy for $2.0 billion of defined benefit assets in the United States plans; $690 million of defined benefit assets in Canadian plans and $1.1 billion of defined contribution plan assets. Prior to working at Smurfit-Stone Container Corporation, Rich was employed by publisher Simon & Schuster and by the accounting firm PricewaterhouseCoopers. Rich is also a member of the Board of Directors of WestBridge Bank and Trust, located in Chesterfield, Missouri.

Jerry V. Woodham, MBA

Jerry is a Director of our Public Retirement Practice and is a Principal Consultant at Hammond Associates. He holds an MBA in Finance from Chapman University as well as a BS in Economics from the University of Missouri. Before joining Hammond Associates, he served as the Chief Investment Officer for the San Diego County Employees Retirement Association, a $5.0 billion plan with $300 million in direct alternative investments. In addition to his experience at San Diego, Jerry spent twenty years working as Chief Investment Officer for two university endowments, Washington University and St. Louis University. From 1996-2001 he served as Treasurer and Chief Investment Officer at St. Louis University where he was responsible for managing the institution's endowment and operating funds, which totaled $1 billion and included more than $200 million in direct alternative investments. From 1981-1996 he served as the Treasurer and Chief Investment Officer at Washington University. At that time endowment assets exceeded $3 billion, including nearly $500 million in direct alternative investments. In addition to his Chief Investment Officer positions, he also spent seven years (1989-1996) on the Common*f*und Alternative Equity Committee. Jerry has served as Board member and Chairman of the Board for Firstar Mutual Funds, and as President and Chairman for Mercantile Mutual Funds. He has also served as a member of the Investment and Finance Committees for the Missouri Historical Society and Mary Institute and Country Day School.

Timothy D. Westrich, CFA

Tim is an Associate Consultant at Hammond Associates. He holds a BSBA in Finance/Banking and Real Estate from the University of Missouri. Prior to joining Hammond Associates, Tim was an Analyst in the Investment Banking department at A.G. Edwards, working in the Financial Institutions and Real Estate Group. Prior to joining A.G. Edwards, Tim was an Analyst in the Public Finance department at Edward Jones. Tim has earned the Chartered Financial Analyst (CFA) designation and is a member of the CFA Institute and CFA Society of St. Louis.

Important Disclosures

Past performance is not indicative of future results. *Individual client returns may vary based on timing of recommendation and/or timing of implementation. All client portfolios may experience gain or loss. Actual client returns presented herein are net of fees, which may include the following: brokerage commissions, investment management fees, custodial fees, and advisory fees. The portfolios included in client return data represent all non-discretionary and discretionary institutional, non-taxable accounts advised during each time period. Most Hammond Associates clients are non-discretionary consulting clients to whom Hammond Associates provides recommendations regarding asset allocation and investments. Accordingly, those clients, not Hammond Associates, select their asset allocations and specific investments. The returns used herein assume reinvestment of dividends and other earnings. All returns are net of additions and withdrawals to the accounts. Returns represent the performance of current client portfolios and excludes the performance of ex-client portfolios. It excludes assets for which we do not advise or simply report performance. This data is used for informational purposes only to illustrate Hammond Associates' experience with providing advisory consulting services to institutional clients over various time periods. The Standard & Poor's 500 Index and the Lehman Aggregate Bond Index are used in this document to illustrate market conditions for the relevant time periods. Hammond Associates began recommending alternative investments (including hedge fund investments) in 2001. Not all clients included in these returns pursued the same investment strategy or employed the same asset allocation.*

Opinions included herein constitute Hammond Associates' judgment as of the date(s) indicated and are subject to change without notice. The sources of information used in this presentation are believed to be reliable. Hammond Associates has not independently verified all of the information contained herein. Any asset allocation model referenced in this presentation does not represent actual trading and may not reflect the impact that economic and market factors might have had on decision making if money was actually invested in the model. This presentation is for information purposes only and is not intended as an offer or solicitation with respect to the purchase or sale of any security or other investment vehicle. This presentation does not itself constitute either investment advice or recommendations on the part of Hammond Associates and may not adequately take into account the particular investment objectives, financial situations, or needs of the presentation's recipients. This document is intended only for the individual or authorized agents of the entity to whom it is addressed and may not be reproduced or distributed to any other person.

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October 17, 2008

Todd Hollenbach
Kentucky State Treasurer
Chair, Investment Subcommittee
Kentucky Public Pension Working Group
1050 U.S. Highway127 South, Suite 100
Frankfort, Kentucky 40601

RE: Final Recommendations by Hammond Associates
October 14, 2008

Dear Treasurer Hollenbach:

On Tuesday, October 14, 2008, Kentucky Retirement Systems (KRS) received Hammond Associates' final recommendations to the Investment Subcommittee of the Kentucky Public Pension Working Group. The following are comments regarding the final recommendations.

In general, Hammond Associates has suggested immediate implementation of its recommendations by the Kentucky Public Pension Working Group. This action would be contrary to the laws of the Commonwealth of Kentucky. Any recommendations made by the working group to change the governance structure of KRS will have to be submitted to the General Assembly for consideration and legislative action.

Hammond opines that KRS' investment performance "has been unacceptable, and significantly underperforming the actuarial assumed rate of return. . . ." This statement is unjust and misleading because it is based upon a snapshot of the investment performance on a given date rather than the historical performance of the fund. If Hammond had performed its review as of fiscal year end June 30, 2007, it would have reported that KRS exceeded its performance benchmark and actuarial assumed rate of return for the one, three, five and ten year periods. As of fiscal year end June 30, 2008, the investment performance since inception was 10.4%, which equaled the performance benchmark and exceeded the actuarial assumed rate of return.

In the overall assessment of KRS' returns on page 9 of the recommendation, Hammond used KRS' returns for fiscal year end June 30, 2008, failing to note the significant decline in the overall median returns from fiscal year end June 30, 2007 to fiscal year end June 30, 2008. (Recommendations, pp. 30, 32). The median returns for the one and ten year periods ending fiscal year end June 30, 2008 failed to meet the actuarial rate of return of 7.75%. Had "peer" systems been individually evaluated through the same period, their returns would most likely have shown similar results due to financial markets declining an average of 15% over the fiscal year ending June 30, 2008 as shown by the Dow Jones Industrial average. The only true method of determining KRS' investment performance in comparison to its "peer" groups would be to compare it to funds with like allocation of assets as of the same dates.

Regarding Recommendation 1:

Recommendation 1 is contrary to the current provisions of KRS 61.645 and KRS 61.650 and cannot be implemented immediately as recommended. The members of the Investment Committee are appointed by the Chair of the Board of Trustees of KRS from the nine (9) members of the Board of Trustees of KRS in accordance with KRS 61.650(1)(b). The selection process for members of the Board of Trustees of KRS is established in KRS 61.645(1) and cannot be changed without an amendment to KRS 61.645 by the General Assembly. The Investment Committee of the Board of Trustees of KRS currently consists of five (5) trustees, over half of the trustees of the Board of Trustees of KRS. It is unclear what benefit would come from adding two (2) members to the investment committee making the investment committee consist of over two thirds of the trustees of the Board of Trustees of KRS.

Furthermore, the General Assembly would be required to amend KRS 61.645 to provide for investment expertise as a requirement for the candidates who run for the Board of Trustees of KRS or are appointed to the Board of Trustees of KRS because, as stated previously, the members of the Investment Committee are selected from the members of the Board of Trustees of KRS. Although investment expertise is important, it is also important that the Investment Committee of the Board of Trustees of KRS consist of a dedicated group of trustees who are willing to commit to the significant fiduciary responsibility, to adopt and follow the best practices regarding governance of investments and being a fiduciary of a public pension plan, and to make the extraordinary time commitments that being a member of the Board of Trustees of KRS and a member of the Investment Committee requires.

The KRS agrees that the members of the Investment Committee of the Board of Trustees of KRS should participate in educational programs and conferences and this has been provided for by the General Assembly in KRS 61.645(18).

Regarding Recommendation 1A:

Recommendation 1A is inconsistent with the provisions of KRS 61.645 and KRS 61.650. Authority over the investments of Kentucky Employees Retirement System (KERS), County Employees Retirement System, (CERS), State Police Retirement System (SPRS), and the insurance fund is statutorily provided to the Investment Committee of the Board of Trustees of KRS in accordance with KRS 61.650. If the General Assembly chooses to create the Executive Investment Committee, it should have fiduciary responsibilities to each retirement system, KERS, CERS, SPRS, and Kentucky

Teachers' Retirement System (KTRS), in order to comply with the Internal Revenue Code (IRC). KRS' fiduciary counsel has previously recommended that any oversight committee created by the General Assembly also be fiduciaries to the each retirement system the same as the trustees serving the Boards of Trustees of KRS and KTRS.

If created by the General Assembly, the Executive Investment Committee should be charged with the same duties and responsibilities charged to the members of the Board of Trustees of KRS established in KRS 61.645, KRS 61.650, be required to comply with the Internal Revenue Code (IRC) to maintain the tax status of the various systems, and be subject to KRS 61.655, which prohibits the members of the Board of Trustees from having any conflicts of interest.

Regarding Recommendation 2:

KRS has started the process of conducting an investment policy review. KRS is planning to have an Asset Liability Study performed by its new general investment consultant, R. V. Kuhns & Associates, Inc. Furthermore, KRS is currently moving toward broader diversification both across and within asset classes, including international equity and fixed income, alternative investments, commodities, and real estate. The policy review is being conducted by the Chief Investment Officer, the KRS' Investment Committee, and the KRS' consultant, R.V. Kuhns & Associates, Inc.

Regarding Recommendation 3:

KRS has already begun diversifying its investment manager structure by hiring international equity managers and by adding NISA Investment Advisors

Regarding Recommendation 5:

KRS agrees that the Kentucky Open Records Act should be reviewed.

Sincerely,
KENTUCKY RETIREMENT SYSTEMS

Robert M. Burnside
Executive Director

C: Adam Tosh
Chief Investment Officer

KENTUCKY RETIREMENT SYSTEMS
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October 23, 2008

Mr. Todd Hollenbach
Kentucky State Treasurer
Chair, Investment Subcommittee
Kentucky Public Pension Working Group
1050 U.S. Highway 127 South, Suite 100
Frankfort, Kentucky 40601

RE: KRS Comments on the Investment Subcommittee Report

Dear Treasurer Hollenbach:

On October 17, 2008, KRS submitted its initial comments on the final recommendations of Hammond Associates, which were presented to the Investment Subcommittee on Tuesday, October 14, 2008. Various aspects of the Hammond report and the final recommendations contained therein have been incorporated into the Investment Subcommittee's draft final report. KRS is submitting the following comments on the Investment Subcommittee's draft final report as a supplement to its earlier comments.

- A critical issue Hammond includes in the report is: *"The investment portfolio has insufficient diversification of asset classes."*

  This conclusion is based on a comparison of KRS asset allocation with a peer group of institutions responding to a survey of the National Association of College and University Business Officers (NACUBO). Comparing KRS to the NACUBO peer group is not, in our view, an appropriate measure given differences between endowments/foundations and large public pension plans such as KRS. KRS believes there are other peer groups that provide a much more appropriate comparison, such as the Russell Mellon Public Pension Plan Greater than $1 billion universe. For instance, in Hammond's final presentation on page 77, they compare KRS's allocations as of 06/30/08 with the Mellon peer group (see chart below).

	KRS Actual 06/30/08	RM > $1 Billion Universe
Domestic Stocks	34%	34%
International Stocks	20%	20%
Fixed Income (Including TIPS)	35%	30%

Private Equity	7%	8%
Hedge Funds	0%	0%
Real Assets	3%	6%
Cash	2%	4%

- The general impression given in connection with the asset allocation and governance issues is that the KRS Investment Committee actually approves the asset allocation without appropriate involvement from investment experts. The KRS Investment Committee does approve the asset allocation and provide executive oversight of the investment portfolio; however, the Investment Committee's decisions are based upon the expert advice of nationally recognized investment consultants and actuaries that are hired using an extensive RFP process. KRS' current asset allocation targets are the result of a July 2006 Asset Allocation and Liability Study conducted by Strategic Investment Solutions, Inc. (SIS). The study utilized liability modeling performed by the Board's independent consulting actuary, The Segal Company. In addition, the Investment Committee annually adopts a Five-Year Investment Plan that is developed by the KRS investment staff in consultation with SIS.

KRS submits the following comments regarding the specific "Suggestions" set forth in Appendix I to the Subcommittee's final report.

Suggestion 1: Although this suggestion appears to apply only to funding of the KTRS retiree health benefit, KRS does support all recommendations and efforts designed to achieve full funding of retirement system obligations.

Suggestion 3(1): KRS has no issue with this suggestion; however, it should be implemented in light of Suggestion 3(3) concerning an Open Records exemption so that KRS is not required to post data that could compromise investment operations.

Suggestion3(2): KRS supports this recommendation; however, the peer group selected must be appropriate for comparison purposes, which means the public pension plans contained in the peer group should have a benefit structure, liability obligations, funding ratios, and demographic characteristics similar to KRS.

Suggestion 3(3): KRS agrees with this suggestion.

Suggestion 4(1)-(3): KRS agrees that additional financial/investment expertise among board and investment committee members would be desirable. A statutory requirement that one (1) or more appointed board members have demonstrated finance or investment experience would certainly help to accomplish this goal. KRS believes that the addition of either voting or nonvoting investment consultants to the board or investment committee must be accompanied by appropriate definitions of conflict of interest for board members and advisors.

Suggestion 4(4): KRS agrees with this suggestion and believes that this has been substantially accomplished by the training requirements added to KRS 61.645(18) by House Bill 1, which was enacted during the 2008 Special Legislative Session.

Suggestion 5: KRS is unable to comment on the suggestion that the investment operations of KTRS, KRS and the Office of Financial Management be combined into a single unit without knowing in much greater detail how this would be accomplished.

Suggestion 6: KRS is not opposed to appropriate oversight and investment guidance. The major concern of KRS is that any governance or oversight changes include clear definitions of lines of authority, conflicts of interests and fiduciary responsibilities of the members of an oversight or governance group.

Given the funding status of the KRS pension and insurance funds and the challenges to retirement funding on a national level, KRS believes that it is appropriate to identify the steps it has taken over the last year to diversify the portfolio and improve investment performance. KRS has just hired R.V. Khuns and Associates as its new general investment consultant through a competitive RFP process. One of the first items undertaken by Kuhns will be to perform a new asset allocation and liability study and make appropriate recommendations for changes to asset allocations for the future. KRS has already provided Kuhns with a copy of the Hammond report for consideration. KRS has hired consultants to specifically focus on real estate and alternative investments; and selected new money managers for international equity, alternative investments and fixed income. In short, KRS has replaced underperforming managers. Hammond noted in their report that selected managers are performing well, and KRS now has asset allocations similar to the peer group.

Respectfully submitted,
KENTUCKY RETIREMENT SYSTEMS

Robert M. Burnside
Executive Director

KENTUCKY TEACHERS' RETIREMENT SYSTEM

Kentucky Public Pension Working Group
Subcommittee on Investments

KTRS Response and Comments

- KTRS fundamentally disagrees with the logic of Hammond Associates' conclusion that subpar returns have resulted in an "opportunity cost." Hammond Associates calculated such an "opportunity cost" by comparing the System's return over the ten-year period ended June 30, 2008 with the median return for a Russell Mellon Public Pension Plan universe. Comparisons with a broad universe are of little relevance given the unique constraints and liability requirements of each plan. KTRS's past asset allocation, as recommended by its external investment consultant, has been appropriate given the unique circumstances and resulting risk tolerance level of the fund. As acknowledged by Hammond Associates, KTRS has had a lower risk profile than the average fund. The fund's circumstances necessitated this. Returns have met the needs of our members over the long term while minimizing risk.

- Hammond Associates' conclusions and recommendations were based on an analysis that was primarily "backward-looking." Little attention was given to KTRS's investment process and ongoing developments. The System's evolving needs and market developments over the past several years have led to a multi-year program of broadening the portfolio's diversification. This program, begun in 2005, is simply a continuation of a disciplined process and long-term focus. Better analysis of the ongoing process, rather than simply historical returns over a ten-year period, would likely have led to different conclusions. Specifically:

  1. The System is, in a disciplined fashion, increasing its exposure to international equities and alternative investments.

  2. Ennis Knupp, a nationally recognized investment consultant to statewide public pension plans, is currently conducting a best practices review of the System's investment program and asset allocation. The resulting report will be the basis of planning over the next three years.

  3. An asset/liability management study is under way, the results of which will also determine asset allocation decisions, including review of additional asset classes. This study is being conducted by the Cavanaugh Macdonald actuarial firm and investment consultants Becker, Burke and Ennis Knupp.

- KTRS believes that one investment advisory committee, with oversight responsibility for both retirement systems, would not be in the best interest of either KRS or KTRS plan participants. Such a committee has been recommended as a possibility. The plans have structural differences as well as differences in their funding level, liability stream, and cash flow needs, all of which influence appropriate investment policy. Plan managers have a fiduciary duty to manage assets in the interests of the plan's beneficiaries. The interests of both plans' members are better served, we believe, by separate investment committees that can set policy appropriate to each plan's needs. The investment committee member selection process should remain under the control of each plan's Board of Trustees.

KENTUCKY TEACHERS' RETIREMENT SYSTEM

Kentucky Public Pension Working Group

Subcommittee on Investments

Three *subject areas:*

- Background information necessary in managing investments of active and retired teachers in Kentucky.
- Actions taken since last asset-liability modeling in investing assets of active and retired teachers in Kentucky and planning for next five years.
- Recommendations to report to the Governor/Legislature.

Background information necessary in managing investments of active and retired teachers in Kentucky.

The financial markets are experiencing a crisis born of greed and recklessness. The events of the past thirteen months, and particularly the past several weeks, have highlighted the importance of risk control in managing assets. Having been through a period of unprecedented growth in complexity and innovation in the financial markets, the development of excesses was likely inevitable. These excesses, overlaid on past lax lending practices and a protracted housing downturn, have created financial havoc and serious losses for investors who failed to control risk adequately. The investment of the assets of active and retired teachers has a disciplined process of risk control and sound fundamental investing that meets the needs of our members over the long-term. This disciplined process of risk control has avoided unsound investment practices and products and has minimized the funds downside in the recent upheaval.

As correctly reported by Hammond Associates, the portfolio has had less risk, or volatility, than those of most of the other pension plans. **This was intentional.** The investment portfolio has less risk and lower volatility because:

- Teachers in Kentucky are not subject to social security and therefore have only one source of retirement income.

  When investing the retirement funds of active and retired teachers' with no social security safety net, this important fact is strongly considered when determining the amount of asset risk to take within the portfolio.
- Funding policy of the Commonwealth.
  a. Active and retired teachers have a statutorily fixed employer contribution rate—contribution rates cannot go up in down markets.
     One can visualize the greater willingness to tolerate asset risk if the employer is willing to provide the hedge against periods of lower investment returns through higher funded employer contribution rates.

  b. Retired teachers' health care is funded primarily by the Commonwealth redirecting contributions from the pension plan to fund retiree health care.

A lack of funding during a period of portfolio diversification adds more risk to the process of diversifying the portfolio. Timing risk occurs both in the sale of assets from one asset class to provide funding needed to enter another asset class. The lack of free cash flow has an impact on the timing of diversification.

These factors, particularly taken in concert, are not typical conditions encountered among public pension funds and dictate that the volatility of our funded status be controlled, which investment consultants advise necessarily implies a more conservative investment policy. **This is simply sound financial management given the importance of retirement benefits of active and retired teachers and the funding conditions outlined above.**

Actions taken since last asset-liability management study in investing assets of active and retired teachers in Kentucky and planning for next three years.

The system is in the midst of multi-year program of broadening the portfolio's diversification into international stocks and non-traditional investments, such as timberland and private equity. The ongoing efforts are part of a disciplined process and long-term focus. This focus has produced stable returns through the history of investing the assets of active and retired teachers, mindful this is the source of their retirement security.

This multi-year program started with the last asset-liability management study. The chart below outlines the changes to asset allocation as a result of that study and the iterative procedure along with strategic recommendations of the investment consultant to date.

Changes in allocation of investments over time

	6-30-00	*6-30-07*	*6-30-08*
Large Cap Stocks	55.1%	51.9%	48.1%
Mid Cap Stocks	0.0%	3.5%	4.2%
Small Cap Stocks	2.4%	3.0%	2.6%
International Stocks	0.0%	6.7%	9.1%
Fixed Income	33.9%	28.8%	30.8%
Cash	6.8%	3.6%	1.6%
Real Estate	1.8%	2.5%	3.0%
Other Alternatives	0.0%	0.0%	0.6%

The strategic ranges and targets for 2008-2009 are below:

Strategic Ranges & Targets
FY 2008-2009

	Range	Target
Large Cap Stocks	42.0 – 50.0%	45.0%
Mid Cap Stocks	3.0 - 6.0%	5.0%
Small Cap Stocks	2.0 - 4.0%	3.0%
International Stocks	8.0 – 13.0%	11.0%
Total Stocks	57.0 – 65.0%	64.0%
Fixed Income	25.0 – 32.0%	28.0%
Cash	2.0 - 4.0%	2.0%
Real Estate	3.0 - 5.0%	4.0%
Other Alternatives	0.0 - 2.0%	2.0%

Key points:

1.) International stocks have risen from zero on June 30, 2000 to 9.1% on June 30, 2008. The goal for fiscal year 2009 is 11.0%. The longer term goal is currently 15.0% of assets of active and retired teachers. We continue to believe in implementing this shift in a disciplined, gradual manner in order to make sound decisions and to limit the risk of poor timing.

2.) There is an annual commitment to private equity of $225 million with a goal of realizing a targeted level of 5% of investments, including timberland, over five years.

3.) Ennis Knupp, a nationally recognized investment consultant to statewide public pension plans, corporate pension plans, endowments, and foundations, is currently conducting a best practices review of the System's investment program and asset allocation. The resulting report will be the basis of the planning over the next three years.

4.) An asset-liability management study is under way, the results of which will influence future asset allocation decisions including review of additional asset classes. This study is being conducted by the Cavanaugh Macdonald actuarial firm and investment consultants Becker Burke and Associates and Ennis Knupp.

Per Ennis Knupp and Becker Burke and Associates, peer comparisons have, at best, limited usefulness. The goal is to ensure the ability to provide promised benefits to active and retired teachers given the unique set of circumstances surrounding both the funding policy of the Commonwealth and the additional security necessary for active and retired teachers not being part of social security. Other funds face different circumstances such as dissimilar demographics and liability streams, funding levels, and variable contribution rates that are fully funded.

Recommendations to report to the Governor/Legislature.

1. The system hopes to work with the Governor and the Legislature along with active and retired teachers and other constituency groups to achieve a long-term plan to fully fund retiree health care. One can fully appreciate the positive impact this provides to the efforts to invest retirement funds of teachers.

2. The system respectfully will request legislation to eliminate the requirement that investment policies be established in administrative regulation.

   Though not an overriding long-term detriment to-the management of the assets of active and retired teachers, this requirement provides a more restrictive short-term investment requirement than most public pension plans encounter. The process of establishing the investment policy within the "prudent person" rule currently within the statute provides the fiduciaries of the assets of active and retired teachers a more timely way to review and change investment policy when it is prudent to do so.

Chart showing primary funding for retired teachers medical insurance since 1998.

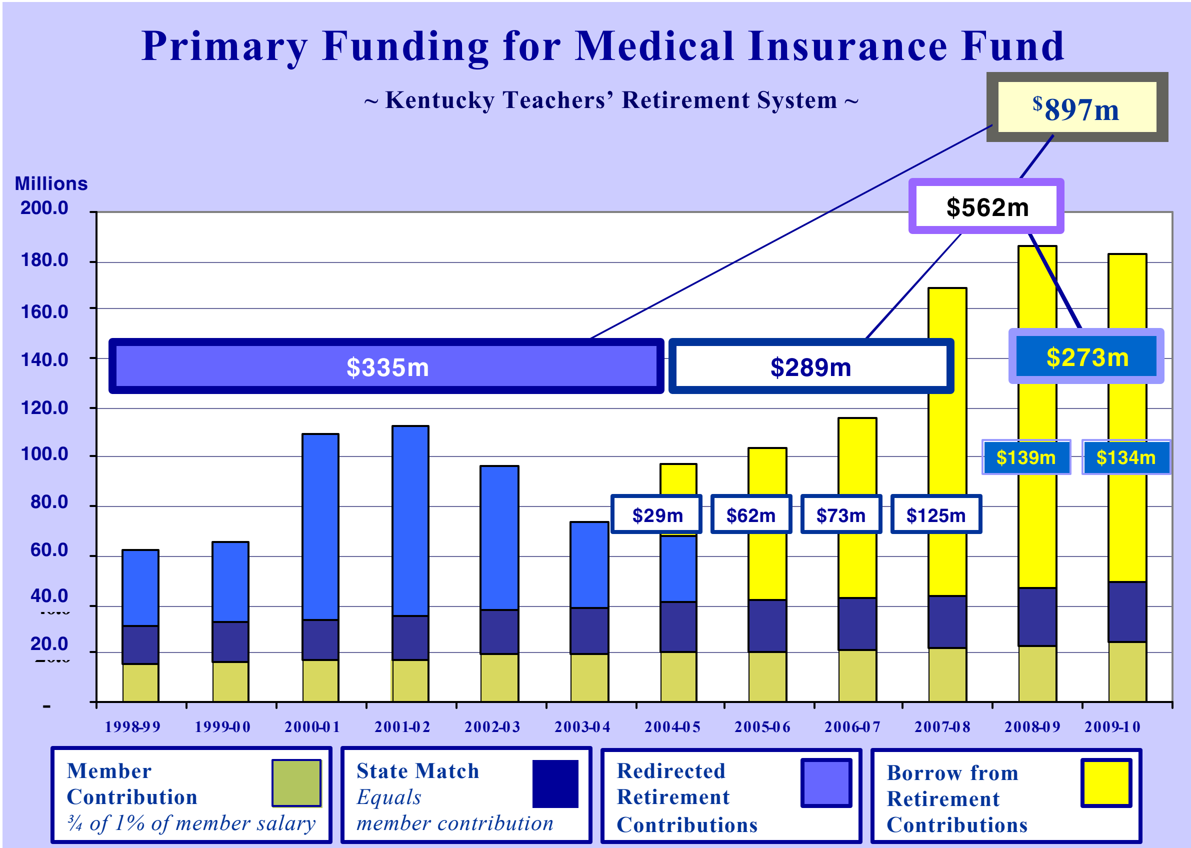
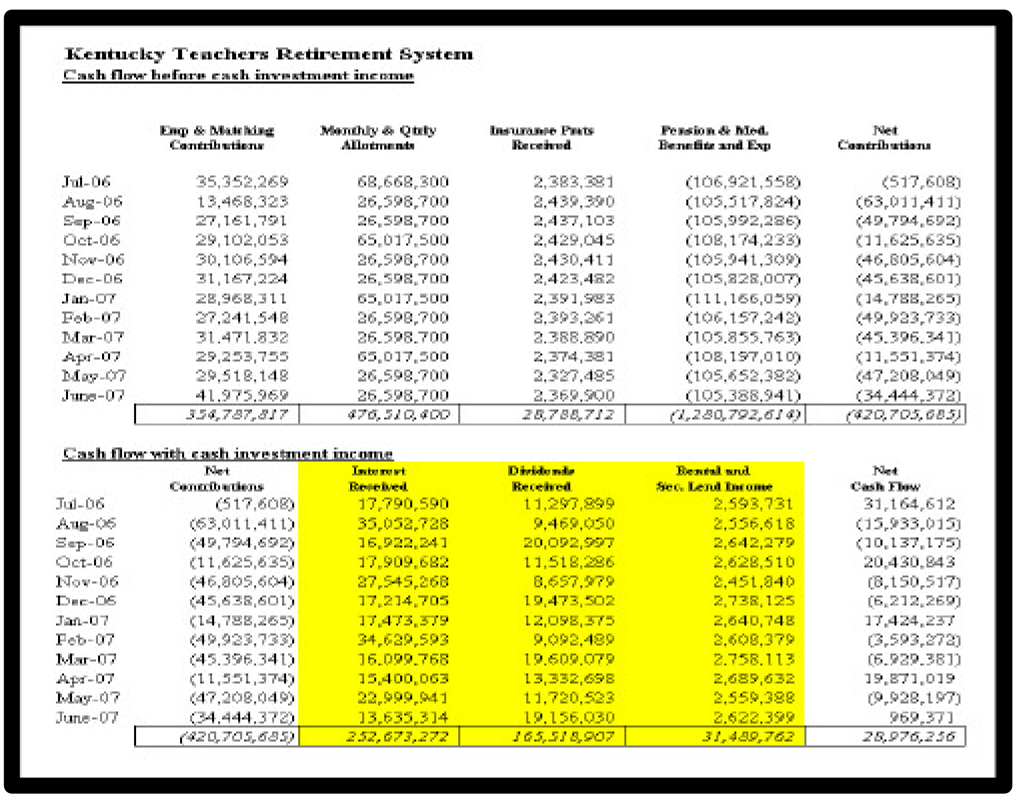


Chart of cash flow necessary to provide monthly benefits to retired teacher's.



Kentucky Teachers Retirement System

Cash flow before cash investment income

	Emp & Matching Contributions	Monthly & Qtrly Allotments	Insurance Pmts Received	Pension & Med. Benefits and Exp	Net Contributions
Jul-06	35,352,269	68,668,300	2,383,381	(106,921,558)	(517,608)
Aug-06	13,468,323	26,598,700	2,439,390	(105,517,824)	(63,011,411)
Sep-06	27,161,791	26,598,700	2,437,103	(105,992,286)	(49,794,692)
Oct-06	29,102,053	65,017,500	2,429,045	(108,174,233)	(11,625,635)
Nov-06	30,106,594	26,598,700	2,430,411	(105,941,309)	(46,805,604)
Dec-06	31,167,224	26,598,700	2,423,482	(105,828,007)	(45,638,601)
Jan-07	28,968,311	65,017,500	2,391,983	(111,166,059)	(14,788,265)
Feb-07	27,241,548	26,598,700	2,393,261	(106,157,242)	(49,923,733)
Mar-07	31,471,832	26,598,700	2,388,890	(105,855,763)	(45,396,341)
Apr-07	29,253,755	65,017,500	2,374,381	(108,197,010)	(11,551,374)
May-07	29,518,148	26,598,700	2,327,485	(105,652,382)	(47,208,049)
June-07	41,975,969	26,598,700	2,369,900	(105,388,941)	(34,444,372)
	354,787,817	*476,510,400*	*28,788,712*	*(1,280,792,614)*	*(420,705,685)*

Cash flow with cash investment income

	Net Contributions	Interest Received	Dividends Received	Rental and Sec. Lend Income	Net Cash Flow
Jul-06	(517,608)	17,790,590	11,297,899	2,593,731	31,164,612
Aug-06	(63,011,411)	35,052,728	9,469,050	2,556,618	(15,933,015)
Sep-06	(49,794,692)	16,922,241	20,092,997	2,642,279	(10,137,175)
Oct-06	(11,625,635)	17,909,682	11,518,286	2,628,510	20,430,843
Nov-06	(46,805,604)	27,545,268	8,657,979	2,451,840	(8,150,517)
Dec-06	(45,638,601)	17,214,705	19,473,502	2,738,125	(6,212,269)
Jan-07	(14,788,265)	17,473,379	12,098,375	2,640,748	17,424,237
Feb-07	(49,923,733)	34,629,593	9,092,489	2,608,379	(3,593,272)
Mar-07	(45,396,341)	16,099,768	19,609,079	2,758,113	(6,929,381)
Apr-07	(11,551,374)	15,400,063	13,332,698	2,689,632	19,871,019
May-07	(47,208,049)	22,999,941	11,720,523	2,559,388	(9,928,197)
June-07	(34,444,372)	13,635,314	19,156,030	2,622,399	969,371
	(420,705,685)	*252,673,272*	*165,518,907*	*31,489,762*	*28,976,256*

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY

GARY L. HARBIN, CPA
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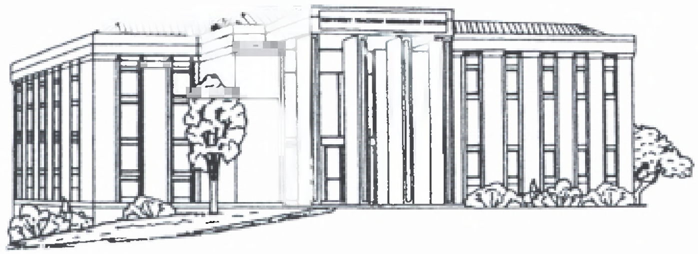

SERVING KENTUCKY TEACHERS SINCE 1940

October 22, 2008

Todd Hollenbach
Kentucky State Treasurer
Chair, Investment Subcommittee
Kentucky Public Pension Working Group
1050 US Highway 127 South, Suite 100
Frankfort, Kentucky 40601

RE: Final Recommendations
October 21, 2008

Dear Treasurer Hollenbach:

The Kentucky Public Pension Working Group has addressed an array of issues through its recent report that in some ways distorts the investment activities of the Teachers' Retirement System. First of all, Hammond Associates compares the asset allocation of KRS and KTRS with that of an endowment universe, the National Association of College and University Business Officers (NACUBO). Hammond has argued that investment policies should be similar, because endowments and defined benefit pension plans both have a perpetual time horizon. That is a simplistic view that overlooks significant complexities.

There are profound differences between pension funds and endowments that determine appropriate investment policy. The asset allocation of any institution is determined by the risk/return tolerances and cash flow requirements unique to that institution. Generally, those parameters will be radically different for endowment funds than for pension funds. Pension funds, and KTRS in particular, face a relatively fixed contribution stream and have a required benefit obligation regardless of return. Endowment funds, by contrast, have much greater potential flexibility in fund raising as well as in their required contributions to their respective schools. Endowment funds generally pay a fixed percentage of the fund annually, say 5%, and have no absolute obligation; the payment depends somewhat on the investment return. They pay out less if returns are lower, more if returns are high. Pension funds have an absolute benefit requirement regardless of return. Pension funds also are entrusted with their members' retirement security, which is a much different level of responsibility. While both types of institutions have, in theory, a perpetual time horizon, there are enormous differences in volatility tolerance and cash flow requirements which mandate lower risk tolerances for the average pension fund.

KTRS fundamentally disagrees with the logic of Hammond Associates' conclusion that subpar returns have resulted in an "opportunity cost." Hammond Associates calculated such an "opportunity cost" by comparing the System's return over the ten-year period ended June 30, 2008 with the median return for a Russell Mellon Public Pension Plan universe. Comparisons with a broad universe are of little relevance given the unique constraints and liability requirements of each plan. KTRS's past asset allocation, as recommended by its external investment consultant, has been appropriate given the unique circumstances and resulting risk tolerance level of the fund. As acknowledged by Hammond Associates, KTRS has had a lower risk profile than the average fund. The fund's circumstances necessitated this. Returns have met the needs of our members over the long term while minimizing risk.

The Hammond Report shows underperformance for KTRS over the past ten years. This is mislseading. Through June 30, 2003 KTRS out-performed most other public pension plans. KTRS has a history of being a conservative, cautious investor, the fiduciary of the assets of active and retired teachers. It has only been in the last five years-a period marked by lax regulation and financial alchemy that such a strategy has not performed as well as more speculative strategies of others. And as you are now witnessing, this period of speculation is unwinding in unprecedented fashion. This is just the type environment that KTRS has always guarded against. We are proud to say our plan is going to weather this storm, just as we did during the unwinding of the tech bubble and better than those who gambled with the assets of others.

It is stated in the Draft Report of the Subcommittee on Investments dated 10-17-2008 that "the two systems have had lower returns than their actuarially assumed discount rate for the previous ten years." Weak returns for the fiscal year ended June 30, 2008 make this technically true, but the year produced negative returns for the vast majority of institutional investors. Returns versus an objective, such as an actuarial rate, will necessarily fluctuate based on the time period observed. As of June 30, 2007, KTRS had exceeded its actuarial return for one-, three-, five-, fifteen-, and twenty-year periods. As of June 30, 2008, the KTRS portfolio had returned 8.6% over twenty years, well ahead of its 7.5% actuarial return. In reality, KTRS returns have exhibited less volatility than those of most institutional investors while exceeding the actuarial return with admirable consistency.

Sincerely,

Paul L. Yancey

Paul L. Yancey
Chief Investment Officer

TEACHERS' RETIREMENT SYSTEM OF KENTUCKY

SERVING KENTUCKY TEACHERS SINCE 1940

GARY L. HARBIN, CPA
Executive Secretary
(502) 848-8500

October 22, 2008

Todd Hollenbach
Kentucky State Treasurer
Chair, Investment Subcommittee
Kentucky Public Pension Working Group
1050 US Highway 127 South, Suite 100
Frankfort, Kentucky 40601

RE: Final Recommendations
October 21, 2008

Dear Treasurer Hollenbach:

On Tuesday, October 21, 2008, at the meeting of the Kentucky Public Pension Working Group, you invited final input from members of the committee regarding the final report to be submitted.

KTRS believes that one investment advisory committee, with oversight responsibility for both retirement systems, would not be in the best interest of either KRS or KTRS plan participants. Such a committee has been recommended as a possibility. The plans have structural differences as well as differences in their funding level, liability stream, and cash flow needs, all of which influence appropriate investment policy. Plan managers have a fiduciary duty to manage assets in the interests of the plan's beneficiaries. The interests of both plans' members are better served, we believe, by separate investment committees that can set policy appropriate to each plan's needs. The investment committee member selection process should remain under the control of each plan's Board of Trustees. We believe that a management structure comprised of overlapping committees would be a disservice to our membership. Not only would its control be usurped by an outside group, but two committees serving in oversight roles might result in neither feeling fully responsible for the System's assets. Fiduciary responsibility is clear with a single governing board.

Hammond Associates' conclusions and recommendations were based on an analysis that was primarily "backward-looking." Little attention was given to KTRS's investment process and ongoing developments. The System's evolving needs and market developments over the past several years have led to a multi-year program of broadening the portfolio's diversification into international stocks and non-traditional investments, such as timberland. This program, begun in 2003, is simply a continuation of a disciplined process and long-term focus. Better diversification

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should lead to improved returns with less volatility for the overall portfolio. This focus has generated exceptionally stable returns through the System's history and we have every confidence that it will do so in the future. Better analysis of the ongoing process, rather than simply historical returns over a ten-year period, would likely have led to different conclusions. Specifically:

1. The System, in a disciplined fashion, is increasing diversification of its portfolio into additional asset classes. Over the last five years, the System has increased its international equity exposure, through cost averaging, as it moves toward a 15% allocation position. Incidentally, I should point out that the System has been served well by relying heavily on domestic equities, as opposed to international equities, over the last twenty years. During that period, domestic stocks have outperformed foreign equities by more than double and KTRS has outperformed the major domestic index, despite whatever contrary assertions are made by Hammond. Alternative investment opportunities undertaken by the System in recent years include private equity investments in both the U.S. and Europe. The System also has invested in timberland and has made commitments to infrastructure and energy investments.

2. Ennis Knupp, a nationally recognized investment consultant to statewide public pension plans, is currently conducting a best practices review of the System's investment program and asset allocation. The resulting report will be the basis of planning over the next three years.

3. A scheduled asset/liability management study is also under way, the results of which will also determine asset allocation decisions, including review of additional asset classes. This study is being conducted by the Cavanaugh Macdonald actuarial firm and investment consultants Becker, Burke and Ennis Knupp.

I would be remiss if I did not reiterate a concern that the Working Group has not adequately addressed. As of June 30, 2003, KTRS's, investment performance, over multi-year periods, clearly identified it as one of the strongest performing public pension programs. Over the last five years, the System did not commit itself to some of the more aggressive, speculative investment practices assumed by other investors. As a result, the System finds itself in a position where, on a relative basis, it is weathering the current financial crisis in a commendable fashion. The System was not swayed by so-called innovative instruments and asset classes that embraced high expected, but unrealistic investment goals. We retained our focus on being a conservative, long-term investor. Earlier this year, Asst. Secretary of the U.S. Treasury Department, Anthony W. Ryan, recently charged public pension administrators to be attentive of risk management "... given the characteristics of many of the investment strategies and securities in which pension plans have investments today, fiduciaries must return to some of the fundamentals of investment management. They must seek to excel in risk management as much as return management."

I respectively submit these comments for your attention.

Sincerely,

Gary L. Harbin

Input from committee member Christopher Posey, Urban Development

I would first like to offer just some commentary regarding this overall process. To Governor Beshear, I personally want to thank you for this opportunity to be engaged in the process of government as well as your appointment of myself to such a prestigious and diverse committee of distinguished leaders and persons from across the Commonwealth. I am truly blessed and a better informed resident of the Commonwealth due to this process. For that, I am thankful. To Chairman Todd Hollenbach, the gracious leader and host of the committee, thank you for your leadership and guidance through this difficult, yet timely internal review of our processes. Serving with you has been an honor and I am thankful to have met you and engaged with you in throughout this process.

In light of the current economic crisis we are encountering as a nation, I feel that we must absolutely take the appropriate and adequate steps necessary to safe guard the resources (to the best of our knowledge and ability) of those who entrust their resources to the Commonwealth. As we have seen on Wall Street, individuals and families wealth have been completely lost due to poor investment decisions and strategies coupled with limited to no oversight of those responsible for such assets and financial products. It is my opinion that upon the final investigation of those on Wall Street and the Securities and Exchange Commission that we will see unprecedented reform of laws pertaining to oversight and regulation concerning those who have responsibility over public funds.
The time is now for us to be proactive in our approach toward making sure that we are prudent in our approach and oversight of our public pension funds and investment strategies and policies. The people of the Commonwealth are depending on each one of us to get this right and make the absolute best informed decision based on the best available information.

What constitutes "Best Practices in Pension Fund Governance"?

I. Management and Oversight

I am in agreement with the recommendations as set forth by Hammond Associates. I would like to add that we make sure that these entities are independent and free of any of conflict of interest with either investment fund. It is imperative I believe to have continuous or at least interval access to firms like Hammond to give a review of, i.e., a report card of our progress. I believe the more layers of accountability we have the better. I do not mean to layer the process with more bureaucracy, but with sound oversight and transparency.
The expertise and continuing education of the oversight committee is an absolute must. If we do not allow persons without a valid license and insurance to drive on the roads of the Commonwealth then surely we should not allow persons without

proper licensure and background “drive” the decisions being made about our tax payers retirement funds.

II. Accountability

Although I understand the thought process for having one oversight committee (Executive Investment Committee) for both pension plans, I do not feel that this would be in our best interest. We should avoid at all cost and appearance of any form of collusion between the two funds. It is my belief that these two oversight committees must be separate but with equal oversight responsibility and accountability. There should also be transparency both in how the how the committees make decisions and how the committees deal with issues of accountability or the lack thereof. There should be an annual review of our policies, investment strategies against our peers across the industry.

In making any adjustments to the Freedom of Information Act, make sure that we do not give any appearance of trying to hide information. Make sure that the public is adequately informed without jeopardizing any pertinent investment information.
I am in agreement with the other recommendations of Hammond Associates.

III. Investment Policy

It is highly important that our investment policies and strategies are consistent with industry standards and sufficient based on credible, sound investment ideals. There must be clear cut policies with how the committee(s) will deal with underperformance and a policy in the event of substantial market losses, i.e., current market conditions.

Empower those individuals with the responsibility of managing the funds with resources and responsibility to make sufficient and timely decisions about market allocations.

I am in agreement with the other recommendations of Hammond Associates.

KENTUCKY EDUCATION ASSOCIATION

October 21, 2008

The Honorable Todd Hollenbach
Kentucky State Treasurer
Chair, Investment Subcommittee
Kentucky Public Pension Working Group
1050 U.S. Highway 127 South, Suite 100
Frankfort, Kentucky 40601

RE: Additional Comments and Information Regarding the Final Recommendations by Hammond Associates

Dear Treasurer Hollenbach:

Thank you for the opportunity to present additional comments and information regarding the analysis and final recommendations by Hammond Associates. The 40,000+ members of KEA either contribute to or receive a pension from one of the two retirement programs serving public education employees and retirees, Kentucky Retirement Systems and Kentucky Teachers' Retirement System.

The Hammond analysis concludes that the solution to the underperformance of KRS and KTRS is to change the structure of the investment committee of both retirement systems in order to upgrade the investment expertise available for oversight of the investment process. Pension fund performance is a serious topic that deserves serious consideration based on accurate information and data. Unfortunately, the Hammond analysis has some serious flaws. For example, the analysis points out that the investment portfolios of both systems lack sufficient diversification of asset classes. We agree that a primary driver of a benefit fund's investment return is its asset allocation structure. The analysis, however, does not report on an important factor behind achieving outstanding investment returns—the external investment advisors used by the retirement systems with better return rankings.

The role of external investment consultants is to assist boards of trustees to increase returns. Their main function is to help devise investment strategies and ensure that assets match liabilities. To accomplish this, investment consultants provide independent advice and recommendations to boards about investment objectives, asset allocations, conducting investment advisor searches, reviewing performance, and analyzing compliance with investment policies.

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The Hammond Associates' analysis ranked the Pennsylvania Public School Employees Retirement System as the top performing public employee plan in the country. Which investment consulting firm did that system use to help it achieve such outstanding performance? For the fiscal year ended June 30, 2007, Wilshire Associates Incorporated served as the general investment consultant for that system. The second ranked system in the analysis, the Louisiana Teachers Retirement System, selected Hammond Associates as its investment consultant in April 2008. The previous consultant, Holbein Associates, helped the system outperform most of its peers, but the board sought a replacement when the lead consultant left the firm. Based on research by the National Education Association, neither of the firms used by the Kentucky Systems (Becker Burke Associates and Strategic Investment Solutions) advises any of the top performers in the Hammond analysis. The Hammond analysis failed to consider this important factor.

Additionally, although the Hammond analysis points to the Virginia Retirement System and its use of an investment council as a model, neither of the top two performing systems (Pennsylvania School Employees and Louisiana Teachers) follow this model. Instead, both systems have large boards of trustees, with significant participant representation similar to KTRS. The entire PSERS sits on that fund's Finance Committee. The Louisiana TRS has a nine-member Investment Committee, which includes a majority of participant representatives.

When determining the "peer group" against which the Kentucky systems will be compared, we believe it important not only to select those plans with assets of a designated amount, such as the five billion dollar amount offered in Committee Suggestion 3, but to also take into account plan membership, and plan governance. Approximately 67 plans would have met that test in 2006, NEA's latest compilation of that information. We have been advised that the 2008 edition of the NEA *Characteristics of Large Public Education Pension Plans* will include approximately 90 plans that meet those conditions.

Finally, please accept into the record our October 7, 2008 letter to Governor Beshear, wherein we address our initial concerns to the August and September Hammond Associates Investment and Governance Reviews.

Thank you for your kind consideration.

Sincerely,

Sharron K. Oxendine

Sharron Oxendine
President

C: Jonathan Miller, Secretary, Finance Cabinet

KENTUCKY EDUCATION ASSOCIATION

October 7, 2008

Honorable Steven L. Beshear, Governor
Commonwealth of Kentucky
State Capitol
Frankfort, KY 40601

Dear Governor Beshear,

Thank you for your Administration's continuing efforts to protect the retirement systems of Kentucky's public school employees. KEA is honored to represent 40,000 of those educators, including retirees, active teachers and classified employees, and students studying to become teachers. I would like to share concerns our members have about options being discussed in the Investment Sub-group of the task force you appointed to look at unresolved pension issues.

KEA agrees with your Administration's desire to maximize returns on retirement systems' investments, especially since the majority our retirement benefits come from the systems' investments, not from employer or employee contributions.

I would like to address the systems' investment philosophy, their independence, and the composition and expertise of the KTRS Board of Trustees.

Investment Philosophy
KEA does not believe that higher returns on investments should be the only goal of the systems. We believe high returns must be balanced with security. Since retired teachers do not receive Social Security as a safety net, it is essential to minimize the risks of KTRS investments.

The nation's current market decline leads us to urge caution to those charged with making the retirement systems' investments. That decline also leads us to advise not relying solely on so-called expert consultants in making investments.

Independence of the Retirement Systems
KEA strongly believes that the final authority for making investment decisions should remain with the retirement systems boards of trustees. We believe that the best decisions are made by those most affected by those decisions.

To protect the safety of the retirement systems' investments as well as the independence of their boards of trustees, KEA believes it is of utmost importance to assure that all individuals who serve on those boards are free from conflicts of interest. In addition, we believe that all decisions about investments must also be free of political influence. During the previous administration, we saw all too well in the Transportation Cabinet the temptations that large amounts of state money can pose.

KTRS has existed successfully for seventy years. Its Board of Trustees has made wise changes as times have changed. KTRS has never made foolish decisions that have jeopardized the system's long-term health.

Composition and Expertise of the KTRS Board of Trustees and its Investment Committee
As you know, the Investment Sub-group has discussed the composition of the KTRS Board of Trustees. KEA advocates maintaining the current composition of the board and preserving the process through which trustees are elected by members of KTRS (active and retired).

KEA supports asking the KTRS Board of Trustees to augment the prerequisite qualifications of those running for the lay positions on the board. We support requiring those individuals to have professional expertise in investments. KEA also supports asking the board to include these lay individuals on its Investment Committee.

KEA further supports asking the KTRS Board of Trustees to expand the composition of its Investment Committee to seven, with four additional non-voting members. We suggest adding two teacher trustees as well as two outside consultants with expertise in investments. These four non-voting members would join the three voting members mandated by statute.

KEA supports increasing the quality of the training provided to all members of the KTRS Board, especially training regarding investments. For active teachers who serve as trustees, we encourage this training to be part of their required four days of professional development. With the new term limits for trustees enacted in the special session last summer, we believe improved training is a necessity.

We do not believe that any of these changes would require changes in the statute but can be accomplished through regulation by KTRS.

Finally, we encourage your Administration to only employ consultants who have significant experience working with large public pension systems similar in composition and characteristics to Kentucky's systems. We are especially concerned about the selection of Hammond Associates who have only limited experience with groups like ours. Further, we are concerned that Hammond Associates chose Virginia as a case study of the composition of boards of trustees of well-performing retirement systems, when they could have chosen many other well-performing systems whose composition is more similar to Kentucky's. Hammond Associates' apparent conclusion that investment returns would be higher with a different board composition lacks validity.

Thank you for the opportunity to express KEA members' views about these important issues. We look forward to continuing to work through them with you.

Sincerely,

Sharron K. Oxendine

Sharron K. Oxendine
President

Kentucky Retired Teachers Association

7505 Bardstown Road
(Bardstown Road & Gene Snyder Freeway)
Louisville, KY 40291-3234

October 23, 2008

RECEIVED
Office of the Secretary
OCT 27 2008
Finance and Administration Cabinet

Todd Hollenbach
Kentucky State Treasurer
Chair, Investment Subcommittee
Kentucky Public Pension Working Group
1050 U.S. Highway 127 South, Suite 100
Frankfort, KY 40601

RE: Comments on Recommendations

Dear Treasurer Hollenbach:

I am writing on behalf of the approximately 26,000 members of the Kentucky Retired Teachers Association (KRTA) who receive a pension from the Kentucky Teachers' Retirement System (KTRS). Since the Public Pension Working Group's Investment Subcommittee began its work shortly after the June 2008 Special Session, KRTA has closely followed the proceedings. One of KRTA's long standing goals is to "keep the administration of KTRS as it is presently constituted."

In our opinion, the KTRS Board of Trustees (a majority who are elected by the active and retired teachers) acting as a semi independent state agency has a record of 70 years of successful management that is unsurpassed in state government. To change the governance structure as proposed by Hammond Associates and others would endanger the system, which has been serving the best interest of Kentucky's public school teachers and retirees for so many years with marked success.

Suggestions 1, 2 and 3 discussed at the October 21, 2008, Investment Subcommittee meeting are doable and deserve serious consideration. Suggestion 4 provides the basis for increasing the "investment expertise" Hammond Associates recommends without destroying the KTRS Board of Trustees independence or usurping its authority. Additional tweaking of this proposal should provide a viable solution to Hammond Associates assertion that KTRS' investment expertise is inadequate.

Hammond Associates recommendations and suggestions 5 and 6 concerning placing governance responsibility in the hands of "investment experts" is totally inappropriate. I must remind you that the current economic state of our country rests solely at the feet of the "investment experts" who are in control of Wall Street.

The terms oversight, advisory and supervisory are not interchangeable words. To allow the Executive Branch to exercise "supervisory or oversight" responsibility over KTRS impinges upon the system's independence.

Please place into the record our October 14, 2008 letter to Governor Beshear and our October 15, 2008 letter to you. Both letters are enclosed for your convenience.

Sincerely,

Bob Wagoner

Bob Wagoner, Ed.D.
Executive Director

C: Jonathan Miller, Secretary, Finance Cabinet

Serving Retired Teachers Since 1957

Kentucky Retired Teachers Association

7505 Bardstown Road
(Bardstown Road & Gene Snyder Freeway)
Louisville, KY 40291-3234

October 14, 2008

Governor Steve Beshear
700 Capitol Avenue, Suite 100
Frankfort, KY 40601

Dear Governor Beshear:

I am writing on behalf of the approximately 26,000 members of the Kentucky Retired Teachers Association (KRTA) to thank you for your continued interest in protecting Kentucky's retirement system for teachers. As you know, Kentucky's retired teachers have become increasingly worried about their healthcare and pensions.

Since a large part of our retirement benefits come from the Kentucky Teachers' Retirement System's (KTRS) investments, we do not disagree with your administration wanting to maximize the system's return on investments. This desire, however, must be balanced with security. Since retired teachers do not have Social Security to fall back on as a safety net, it is essential that the risk exposure of KTRS' investments be minimized.

KRTA continues to support the independence of the KTRS Board of Trustees. The system's current governance structure has served it members well for over 70 years. This Board should continue to be the final authority for making investment decisions.

Our association supports the recommendation that was recently submitted to the Investments Sub-Work Group that calls for increased investment expertise qualifications for lay trustees; the addition of two (2) additional investment consultants to the Board's Investments Committee; adding two (2) existing trustees as ad hoc participants of the Investments Committee; and additional training for all trustees.

Your interest in our members issues is greatly appreciated. Our request is that we are afforded the opportunity to work through these concerns with you.

Sincerely,

Billy Triplett

Billy Triplett
President

Serving Retired Teachers Since 1957

(502) 231-5802 1-800-551-7979 (502) 231-0686 FAX krta98@aol.com

Kentucky Retired Teachers Association

7505 Bardstown Road
(Bardstown Road & Gene Snyder Freeway)
Louisville, KY 40291-3234

October 15, 2008

Todd Hollenbach
Office of the Treasurer
1050 US Hwy 127 South, Suite 100
Frankfort, KY 40601

Dear Treasurer Hollenbach:

I am writing on behalf of the approximately 26,000 members of the Kentucky Retired Teachers Association (KRTA) to thank you for your interest in protecting Kentucky's retirement system for teachers. Your work as chair of the Investments Sub-Work Group is greatly appreciated. However, after reading the July 23, August 22, September 23 and October 14 Hammond Associates reports, I find it necessary to voice several obvious concerns.

The system's investment philosophy cannot focus only on higher investment returns. As an ex officio member of the Kentucky Teachers' Retirement System's (KTRS) Board of Trustees, I know that you are fully aware that retired teachers have become increasingly worried about the security of their healthcare and pensions.

Since retired teachers do not have Social Security to fall back on as a safety net, it is essential that the risk exposure of KTRS' investments be minimized. The country's current economic situation leads us to strongly recommend caution by those responsible for making the retirement system's investments. Current conditions also lead us to suggest not relying only on the advice of expert consultants in making investment decisions.

The continued independence of KTRS is essential. The final authority for making investment decisions should remain with the Board of Trustees. We believe that the best decisions are made by those most affected by those decisions. It is vital that all individuals who serve on the Board are free from conflicts of interest and investment decisions must also be free of political influence.

We are especially concerned that Hammond Associates chose Virginia as an example of Boards of Trustees of well-performing retirement systems, when they could have chosen a system whose make up more closely resembles KTRS. It is our opinion, that Hammond Associates' apparent conclusion that investment returns would be higher with a different board structure is not supported quantitatively.

Finally, it appears that Hammond Associates were quite disingenuous toward KTRS in their final report and yesterday's testimony. Thank you for the opportunity to express KRTA members' views about these important issues.

Sincerely,

Bob Wagoner

Bob Wagoner, Ed.D.
Executive Director

COMMONWEALTH OF KENTUCKY

OFFICE OF THE STATE TREASURER
TODD HOLLENBACH

OFFICE OF THE SECRETARY OF STATE
TREY GRAYSON

October 23, 2008

Dear Governor Beshear,

State Treasurer Todd Hollenbach and Secretary of State Trey Grayson jointly submit to the Governor of the Commonwealth of Kentucky the following suggestion for the Kentucky Public Pension Working Group Subcommittee on Investments:

1. The retirement systems should post a quarterly report within 60 days of the end of the quarter on their respective websites containing the following:
   a. Actual and target asset allocation
   b. Identify outside managers including funds managed and overall strategy
   c. Performance of total pool and by asset class

2. The retirement systems should post an annual report within 90 days of the end of the fiscal year on their respective websites which, in addition to the information from the quarterly report, provides peer group comparisons for the total fund, and details the effect the difference in target and actual asset allocation has on the total performance. The peer group shall be a group of public plans with over $5 billion in assets prepared by an independent source.

3. An exemption from Commonwealth Open Records law should exist which allows the systems to shield the actual holdings of their outside managers from disclosure, but the holdings are not protected from the systems or the Commonwealth's audit requirements.

Both the Treasurer and Secretary of State have demonstrated a commitment to transparency and feel that this suggestion reflects not only the commitment to transparency, but also their commitment to good governance. Fiscal responsibility knows no political party line. Treasurer Hollenbach and Secretary of State Grayson come before you today Constitutional Officers committed to the Commonwealth of Kentucky and the people whom they serve.

Sincerely,

Todd Hollenbach
State Treasurer
Commonwealth of Kentucky

Trey Grayson
Secretary of State
Commonwealth of Kentucky