KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Affirmative Action Plan

Pursuant to Section 3.03 of the Kentucky Retirement Systems Personnel Policies, the Kentucky Retirement Systems has implemented an Affirmative Action Plan to promote and assure equitable treatment of all persons who are now employed, being considered for employment, seeking employment, and who will be recruited for employment in the future. The Kentucky Retirement Systems has already taken substantial steps towards fulfilling the requirements of the Affirmative Action Plan, as described in Section 3.03(3) of the Personnel Policy.

The Kentucky Retirement Systems provides periodic training to its leadership team to ensure compliance with federal and state laws. Such training covers harassment based on all legally protected categories (race, color, sex, religion, national origin, age, and disability), anti discrimination laws in general, and reasonable accommodation and inquiries under the ADA.

The Kentucky Retirement Systems continues to seek appropriate recruitment sources for females and minorities.

The current employment statistics for the Kentucky Retirement Systems show that as of June 30, 2015, there are 258 full-time employees. There are 158 female employees, representing 61.24% of the staff, and 25 employees who are members of minority groups, representing approximately 9.69% of the staff. Females make up 56.86% of the leadership positions in the Kentucky Retirement Systems, while employees who are members of minority groups hold 5.88% of the leadership positions in the Kentucky Retirement Systems.

In order to establish clear long term-hiring goals for minorities and females, Kentucky Retirement Systems will follow the goals provided by the Commonwealth of Kentucky's Personnel Cabinet. The current goal for minority employment in State Government is 11.7% through June 30, 2015.

RECOMMENDATION: This memorandum is presented for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

OVERALL AND MINORITY FULL TIME EMPLOYMENT
BY TYPE OF EMPLOYMENT AND DIVISION
AS OF JUNE 30, 2015

KRS AREA/DIVISION	KRS EMPLOYMENT CATEGORY											
	LEADERSHIP			PROFESSIONAL			SUPPORT			TOTALS		
	Total	Minor.	(%)	Total	Minor.	(%)	Total	Minor.	(%)	Total	Minor.	(%)
Executive Staff	5	0	0.0%	0	0	0.0%	2	0	0.0%	7	0	0.0%
Communications	1	0	0.0%	5	0	0.0%	0	0	0.0%	6	0	0.0%
Legal	3	1	33.3%	5	0	0.0%	5	0	0.0%	13	1	7.7%
Human Resources	1	0	0.0%	3	1	33.3%	0	0	0.0%	4	1	25.0%
Internal Audit	1	0	0.0%	2	1	50.0%	0	0	0.0%	3	1	33.3%
Administration	**11**	**1**	**9.1%**	**15**	**2**	**13.3%**	**7**	**0**	**0.0%**	**33**	**3**	**9.1%**
Accounting	4	0	0.0%	10	0	0.0%	0	0	**0.0%**	14	0	0.0%
Disability & Death	5	0	0.0%	17	1	5.9%	4	0	**0.0%**	26	1	3.8%
Employer Reporting Compliance & Education	3	0	0.0%	18	2	11.1%	0	0	0.0%	21	2	9.5%
Enterprise & Technology Services	5	0	0.0%	30	4	13.3%	5	0	0.0%	40	4	10.0%
Investments	3	0	0.0%	5	1	0.0%	1	0	0.0%	9	1	11.1%
Member Services	7	0	0.0%	33	3	9.1%	2	0	0.0%	42	3	7.1%
Membership Support	4	1	25.0%	20	1	5.0%	5	1	20.0%	29	3	10.3%
Procurement & Office Services	4	1	25.0%	0	0	0.0%	12	3	25.0%	16	4	25.0%
Retiree Health Care	3	0	0.0%	15	2	13.3%	2	0	0.0%	20	2	10.0%
Retiree Services (Payroll)	2	0	0.0%	6	2	33.3%	0	0	0.0%	8	2	25.0%
TOTALS	**51**	**3**	**5.88%**	**169**	**18**	**10.65%**	**38**	**4**	**10.53%**	**258**	**25**	**9.69%**

KENTUCKY RETIREMENT SYSTEMS

OVERALL AND MINORITY (FEMALE) FULL TIME EMPLOYMENT
BY TYPE OF EMPLOYMENT AND DIVISION
AS OF JUNE 30, 2015

KRS AREA/DIVISION	KRS EMPLOYMENT CATEGORY											
	LEADERSHIP			PROFESSIONAL			SUPPORT			TOTALS		
	Total	Female	(%)	Total	Female	(%)	Total	Female	(%)	Total	Female	(%)
Executive Staff	5	2	40.0%	0	0	0.0%	2	2	100.0%	7	4	57.1%
Communications	1	1	100.0%	5	3	60.0%	0	0	0.0%	6	4	66.7%
Legal	3	2	66.7%	5	3	60.0%	5	5	100.0%	13	10	76.9%
Human Resources	1	1	100.0%	3	3	100.0%	0	0	0.0%	4	4	100.0%
Internal Audit	1	1	100.0%	2	2	100.0%	0	0	0.0%	3	3	100.0%
Administration	**11**	**7**	**63.6%**	**15**	**11**	**73.3%**	**7**	**7**	**100.0%**	**33**	**25**	**75.8%**
Accounting	4	3	75.0%	10	9	90.0%	0	0	0.0%	14	12	85.7%
Disability & Death	5	4	80.0%	17	15	88.2%	4	4	100.0%	26	23	88.5%
Employer Reporting Compliance & Education	3	2	66.7%	18	11	61.1%	0	0	0.0%	21	13	61.9%
Enterprise & Technology Services	5	1	20.0%	30	10	33.3%	5	1	20.0%	40	12	30.0%
Investments	3	0	0.0%	5	1	0.0%	1	1	0.0%	9	2	22.2%
Member Services	7	5	71.4%	33	18	54.5%	2	2	100.0%	42	25	59.5%
Membership Support	4	1	25.0%	20	10	50.0%	5	4	80.0%	29	15	51.7%
Procurement & Office Services	4	2	50.0%	0	0	0.0%	12	10	83.3%	16	12	75.0%
Retiree Health Care	3	3	100.0%	15	7	46.7%	2	2	100.0%	20	12	60.0%
Retiree Services (Payroll)	2	1	50.0%	6	6	100.0%	0	0	0.0%	8	7	87.5%
TOTALS	**51**	**29**	**56.86%**	**169**	**98**	**57.99%**	**38**	**31**	**81.58%**	**258**	**158**	**61.24%**

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: June 15, 2015

SUBJECT: Human Resources Committee Report

The KRS Human Resources Committee will meet immediately prior to the Board meeting. The Committee Chair and KRS staff will give a report, including any recommendations to the Board at the meeting.

RECOMMENDATION: This memorandum is presented for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the KRS Board of Trustees

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Actuarial Audit Report

Accompanying this memorandum you will find the actuarial audit report prepared by Segal Consulting. The results of the actuarial audit will be presented at the KRS Board meeting on September 10 by Kim Nicholl and Matthew Strom from Segal Consulting.

RECOMMENDATION: None. This document is presented for information purposes only at this time.

Segal Consulting

Kentucky Retirement Systems

INDEPENDENT ACTUARIAL AUDIT OF THE JUNE 30, 2014 ACTUARIAL VALUATIONS AND THE 2008-2013 EXPERIENCE STUDY

Segal Consulting

101 North Wacker Drive, Suite 500 Chicago, IL 60606-1724
T 312.984.8500 F 312-984-9364 www.segalco.com

August 21, 2015

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Re: **Independent Actuarial Audit of the June 30, 2014 Actuarial Valuations and the 2008-2013 Experience Study**

Ladies and Gentlemen:

We are pleased to present the results of Segal's actuarial audit of the June 30, 2014, actuarial valuations and review of the 2008-2013 experience study. The purpose of this audit is to conduct a review of the actuarial methods, assumptions, and procedures employed by the Kentucky Retirement Systems (KRS) and the Systems' actuary Cavanaugh Macdonald Consulting (CMC). This audit includes the following:

1. ***Report review*** – a review of the valuation results and reports for the County Employees Retirement System (CERS), the Kentucky Employees Retirement System (KERS), and the State Police Retirement System (SPRS). The results were reviewed to determine if they comply with actuarial standards and whether such valuation reports reflect appropriate disclosure information under any required reporting.

2. ***Validation of benefits valued through test lives and data review*** – discussion of the procedures used to validate the participant data and the test lives selected, with a detailed review of the findings.

3. ***Methods and assumptions review*** – an analysis and benchmarking of the actuarial assumptions and a review of the actuarial methods utilized in determining the funded status and accrued liability as of June 30, 2014, for compliance with generally accepted actuarial principles, as well as a review of the experience study report for the five-year period ending June 30, 2013.

This review was conducted under the supervision of Kim Nicholl, a Fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA, and Matthew Strom, a Fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. This review was conducted in accordance with the standards of practice prescribed by the Actuarial Standards Board.

The assistance of the KRS staff and Cavanaugh Macdonald is gratefully acknowledged.

We appreciate the opportunity to serve as an independent actuarial advisor for KRS and we are available to answer any questions you may have on this report.

Sincerely,

Kim Nicholl

Kim Nicholl, FSA, MAAA, EA
Senior Vice President and Actuary

Matthew A. Strom

Matthew A. Strom, FSA, MAAA, EA
Vice President and Actuary

kn/ms

Table of Contents

Executive Summary

The Board of Trustees of the Kentucky Retirement Systems (KRS) retained Segal Consulting (Segal) to conduct an independent actuarial audit of the Systems' June 30, 2014, actuarial valuations and the 2008-2013 experience study, as performed by the KRS Consulting Actuary, Cavanaugh Macdonald Consulting (CMC). The Board requested an opinion on the reasonableness, consistency, and accuracy of the following:

- Demographic and financial data used in the actuarial valuations;
- Methods, procedures, and assumptions used in the actuarial valuations;
- Format of the actuarial valuation reports;
- Conclusions of the actuarial valuations; and
- Results and the actuarial assumptions generated from the experience study.

The objective of a **limited scope audit** (actuarial review) of any system is to provide validation that the liabilities and costs of the system are reasonable and being calculated as intended. This audit is not a full replication of the actuarial valuation results, but rather is a review of the key components in the valuation process that encompass the derivation of the liabilities and costs for the Systems. These key components are the data, the benefits valued, the actuarial assumptions and funding method used, and the asset valuation method employed. The valuation reports and the valuation output for a select group of test lives provide the detail necessary to validate each of these key components.

We reviewed all information supplied to us. We also requested and reviewed additional information provided by Cavanaugh Macdonald. Finally, we considered the reasonableness of the actuarial assumptions and methods in the context of our own experience, and those of other state and local pension systems.

In summary, we found the following:

1. The Recommended Employer Contribution Rates appear to be understated;
2. The economic assumptions are within norms for the peer group, with the aggregate investment return assumption towards the middle of the peer group range;
3. Several of the actuarial assumptions were either incorrectly or incompletely disclosed in the valuation reports;
4. The demographic actuarial assumptions recommended in the 2008-2013 experience study are for the most part sound and appropriate;
5. The valuation reports for CERS, KERS and SPRS provide sufficient detail upon which to render opinions; and
6. The review of selected test lives identified several areas where modifications to the valuation programming should be made.

Executive Summary

These items and recommendations are described in more detail throughout this report.

Conclusions

This audit reviewed the findings of the June 30, 2014, actuarial valuations and 2008-2013 experience study. We have found a number of inconsistencies in the valuation report and test lives, which are described in detail in Section II of this report. We generally agree with the results of the experience study, with a few recommendations for improvement, as described in Section III. We found the actuarial cost method and asset valuation method conform with the Actuarial Standards of Practice.

The data appears complete and with a cursory analysis of the information supplied by KRS staff, we were able to closely match the participant counts reported by Cavanaugh Macdonald.

Finally, we offer ideas to improve the quality and understanding of the valuation reports and experience review process. Several suggestions and recommendations are made throughout this document. We would classify them as either: a) “presentation” suggestions to enhance the valuation process or report; b) something to be examined during the next experience review; and c) something that may affect the cost of the Systems. Where we make a comment in this regard in this report, we have identified the location in the margin with the following icons:

Enhancement to valuation process or report

Examine during next experience review

May affect the cost of the Systems

Section I: Purpose, Scope and Methodology of the Audit

Purpose of the Audit

The KRS Board retained Segal to conduct an independent review of the Systems' current actuarial calculations, assumptions and methods. The Board requested an assessment of the validity of the data used in the valuations, a review of the appropriateness of the current funding method and procedures, an evaluation of both economic and non-economic assumptions, a test of the valuation results, and a review of the actuarial reports to determine if there is consistency in the presentation of the actuarial results and whether they are consistent with professional standards.

Scope of the Audit

This actuarial audit has a specified, limited scope in its review. A full scope audit would include performing the 2014 actuarial valuations from start to finish, in essence, a parallel valuation for each of the three Systems. This limited scope audit reviews the valuations already performed, through reviewing the benefits, assumptions, and methods, without a full replication of the actuarial valuation results. This review is conducted by analyzing detailed output of certain selected test lives from each membership group.

By not performing a full parallel valuation for each System, the following assumptions are made:

1. The current actuary's valuation system is accurately applying each assumption consistent with the test life review; and

2. The valuation system is adding together liabilities appropriately for each decrement (retirement, turnover, disability, and death), for each member, and over the entire population (meaning no participant group is being "dropped off" and no particular liabilities are being omitted).

What a limited scope audit can provide is:

1. Assurance that appropriate benefits are being valued;

2. Confirmation that the valuation system is accurately applying decrements to the test lives;

3. Confirmation that the program is valuing benefits as described in the valuation reports and consistent with applicable statutes;

4. A measurement of economic actuarial assumptions against a peer group and hence an assessment of their reasonableness;

5. A review of the reasonableness of actuarial funding and asset valuation methods;

6. An indication as to whether the liabilities and contribution rates shown are not reasonable or are incorrectly calculated; and

7. An assessment of whether the valuation appropriately reflects information required to be disclosed under required reporting standards (GASB, etc.).

Section I: Purpose, Scope and Methodology of the Audit

Methodology of the Audit for the 2014 Actuarial Valuations

The purpose of this audit is to express an opinion regarding the reasonableness and accuracy of the actuarial assumptions, methods, valuation results, and contribution rates. The limited scope review is not the same as an actuarial valuation, but represents a "second opinion" of the findings and processes included in the valuation.

The measurement of the reasonableness of the funding levels encompasses three key analyses:

1. A verification of the benefits being projected for future payment;

2. A verification of the appropriateness of the actuarial assumptions that are used in calculating the liability; and

3. A verification of the appropriateness of the funding and asset valuation methods.

Benefits Analysis

Critical to projecting future benefits is receiving complete and accurate data. We reviewed the process by which data is prepared for the actuarial valuation, including:

1. An assessment of the completeness of the data;

2. A review of the data screening process employed; and

3. An examination of individual test life calculations.

We developed computer models that generated test life output, which enabled us to compare our test life results with Cavanaugh Macdonald's results. These models also allowed us to confirm that the Cavanaugh Macdonald valuations project benefits in a manner consistent with the Summary of Plan Provisions in the valuation reports. For purposes of this study, we regard differences of less than 3% to be acceptable for the Total Present Value of Benefits (PVB) and 5% to be acceptable for the review of census data.

Assumptions Analysis

The second critical component in assessing the reasonableness of the funding levels is in the selection and the application of the actuarial assumptions. With respect to the assumptions, we:

1. Reviewed the 2008-2013 experience study report;

2. Independently determined the reasonability of the investment return assumption by using Segal Rogerscasey's capital market assumptions; and

3. Benchmarked the economic assumptions against a survey of state and local employee retirement systems.

Section I: Purpose, Scope and Methodology of the Audit

Methods Analysis

The third component in assessing funding levels is the selection and application of the actuarial cost method (including the method for amortizing the unfunded actuarial accrued liability) and the asset valuation method (including smoothing techniques).

Data Used in the Valuation

We independently obtained data files directly from KRS and Cavanaugh Macdonald. With minimal data scrubbing, we found that the counts for the active and retired files were relatively close, and well within the 5% threshold we established for determining materiality of differences.

All data for actives, inactives, annuitants and beneficiaries was provided as of the valuation date (June 30, 2014). In situations where there is missing or invalid data, we assume the Cavanaugh Macdonald valuation software applies adjustments to the data records for completeness. Given the large size of the data, this shortens the amount of staff time spent on data reconciliation (for both Cavanaugh Macdonald and KRS) without sacrificing any material accuracy in the valuation results.

The tables that follow summarize our determination of key data elements as compared to those shown in the valuation report.

June 30, 2014
Analysis of Participant Data – CERS

	Non-Hazardous			Hazardous		
	Cavanaugh Macdonald	**Segal**	**Ratio of Segal/ CMC**	**Cavanaugh Macdonald**	**Segal**	**Ratio of Segal/ CMC**
Active Members:						
Number	81,115	83,546	1.03	9,194	9,520	1.04
Total payroll	2,272,270,287	2,297,798,569	1.01	479,164,016	496,507,516	1.04
Average Salary	28,013	27,503	0.98	52,117	52,154	1.01
Average Age	48.1	48.1	1.00	39.2	39.7	1.01
Average Service	9.6	9.5	0.99	10.6	10.6	1.04
Retirees:						
Number	41,784	41,805	1.00	6,294	6,297	1.00
Annual Benefits	483,416,413	478,246,523	0.99	170,787,472	168,249,250	0.99
Average Benefit	11,569	11,440	0.99	27,135	26,719	0.98
Average Age	69.5	69.5	1.00	61.0	61.0	1.00
Disability Retirees:						
Number	3,656	3,645	1.00	489	489	1.00
Annual Benefits	39,689,408	39,498,133	1.00	7,913,389	7,827,683	0.99
Average Benefit	10,856	10,836	1.00	16,183	16,008	0.99
Average Age	64.1	64.2	1.00	54.9	54.9	1.00
Beneficiaries:						
Number	4,495	4,524	1.01	863	875	1.01
Annual Benefits	38,474,722	38,219,184	0.99	12,306,971	12,005,682	0.98
Average Benefit	8,559	8,448	0.99	14,261	13,721	0.96
Average Age	68.8	74.7	**1.09**	56.9	57.8	1.01

June 30, 2014
Analysis of Participant Data – KERS

	Non-Hazardous			Hazardous		
	Cavanaugh Macdonald	**Segal**	**Ratio of Segal/ CMC**	**Cavanaugh Macdonald**	**Segal**	**Ratio of Segal/ CMC**
Active Members:						
Number	40,365	41,491	1.03	4,024	4,152	1.03
Total payroll	1,577,496,447	1,619,088,337	1.03	129,076,038	130,227,565	1.01
Average Salary	39,081	39,023	1.00	32,077	31,365	0.98
Average Age	44.8	45.0	1.00	40.6	40.5	1.00
Average Service	10.5	10.4	0.99	7.4	7.3	0.98
Retirees:						
Number	34,965	34,972	1.00	3,114	3,114	1.00
Annual Benefits	783,372,355	774,981,348	0.99	49,675,129	47,440,385	0.96
Average Benefit	22,404	22,160	0.99	15,952	15,235	0.96
Average Age	67.7	67.7	1.00	63.1	63.1	1.00
Disability Retirees:						
Number	1,904	1,901	1.00	145	145	1.00
Annual Benefits	24,300,056	24,235,084	1.00	1,269,006	1,258,843	0.99
Average Benefit	12,763	12,749	1.00	8,752	8,682	0.99
Average Age	64.6	64.6	1.00	58.1	58.1	1.00
Beneficiaries:						
Number	4,354	4,375	1.00	361	369	1.02
Annual Benefits	58,374,245	57,818,521	0.99	3,327,283	3,184,405	0.96
Average Benefit	13,407	13,216	0.99	9,217	8,630	**0.94**
Average Age	71.1	77.7	**1.09**	65.1	68.5	1.05

June 30, 2014 Analysis of Participant Data – SPRS			
	Cavanaugh Macdonald	**Segal**	**Ratio of Segal/CMC**
Active Members:			
Number	855	862	1.01
Total payroll	44,615,885	44,939,554	1.01
Average Salary	52,182	52,134	1.00
Average Age	37.8	37.8	1.00
Average Service	10.9	11.1	1.01
Retirees:			
Number	1,191	1,191	1.00
Annual Benefits	47,952,621	47,670,486	0.99
Average Benefit	40,330	40,026	0.99
Average Age	61.8	61.8	1.00
Disability Retirees:			
Number	52	52	1.00
Annual Benefits	937,598	937,598	1.00
Average Benefit	18,031	18,031	1.00
Average Age	56.8	56.8	1.00
Beneficiaries:			
Number	172	173	1.01
Annual Benefits	4,542,227	4,501,454	0.99
Average Benefit	26,408	26,020	0.99
Average Age	65.3	68.1	1.04

As previously mentioned, we were able to match most information reported by Cavanaugh Macdonald to within 1% with minimal data scrubbing.

For beneficiaries in pay status, Cavanaugh Macdonald's processed data shows dates of birth that are inconsistent with those reported in the System data. We assume the birth dates used for the valuation for this group are from a source other than the data provided by the System, but we were not provided with this source data and cannot verify that it is consistent with Cavanaugh Macdonald's processed data. We recommended these differences be evaluated.

Valuation Results

We have reviewed the Recommended Employer Contribution Rate for each System and have the following observation:

1. The required employer contributions are equal to the sum of the employer's share of normal cost (i.e., total normal cost, less expected member contributions), plus administrative expenses, plus an unfunded accrued liability amortization payment. The dollar amounts from that calculation are expressed as a percentage of payroll and the resulting Recommended Employer Contribution Rates are used as the basis to collect contributions from employers. However, in each of the five Systems, there are inconsistencies between the reported contribution requirement dollar amounts and these amounts expressed as a percentage of payroll. In other words, certain dollar amounts divided by payroll are represented correctly while other dollar amounts divided by payroll are incorrect. In all cases, the Recommended Employer Contribution Rate shown in the valuation report is too low, as summarized below:

	KERS Non-hazardous	KERS Hazardous	CERS Non-hazardous	CERS Hazardous	SPRS
Recommended Contribution Amount	$533,300,144	$22,251,747	$284,594,456	$97,856,421	$26,251,394
Payroll	$1,577,496,447	$129,076,038	$2,272,270,287	$479,164,016	$44,615,885
Recommended Rate Shown in Report	33.57%	17.09%	12.42%	20.26%	58.44%
Recommended Amount ÷ Payroll	33.81%	17.24%	12.52%	20.42%	58.84%
Projected FY16 Payroll	$1,722,700,000	$141,000,000	$2,481,400,000	$523,300,000	$48,700,000
Potential FY16 Contribution Shortfall	$4,134,480	$211,500	$2,481,400	$837,280	$194,800

Valuation Report

While the accuracy of the actuarial valuation is the primary focus of an actuarial review, the content and presentation of the actuarial valuation results to a layperson and professional are also important. Our report recommendations are to provide clarity to the existing report. Based on our review of the actuarial valuation report, we offer the following comments:

1. Since GASB Statement 67 related to plan accounting was effective for the Systems' financial reporting as of June 30, 2014, the required calculations for GASB 67 should be included in the

actuarial valuation report in place of the GASB 25 disclosure information. Since GASB 27 is still required as of June 30, 2014, employer disclosure information related to GASB 27 is correctly included in the 2014 valuation report, but will not be required in the June 30, 2015, and later valuation reports.

2. "Section IV - Comments on Valuation" simply describes the information presented in Schedule A, without highlighting important or noteworthy items.

3. In the tables labeled as "Experience Gain/(Loss)," it would be more appropriate to see demographic gains and losses expressed as a percentage of actuarial accrued liability and investment gains and losses expressed as a percentage of assets.

4. In the tables labeled as "Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience," it would be informative to show the gain or loss attributable to actual contributions that are more or less than expected, particularly since actual payroll growth has been less than expected.

5. While the summary section describes changes to the KEHP insurance benefits for non-Medicare retirees, no corresponding gain or loss in accrued liability is identified in the reconciliation.

6. In the reconciliation of accrued liability, it is not clear where gains or losses due to insurance plan participation rates higher or lower than expected are included.

7. Several of the actuarial assumptions were either incorrectly or incompletely disclosed in the valuation reports:

   a. Cavanaugh Macdonald's valuations determine results using a 7.75% rate of return. The CERS valuation report incorrectly discloses 7.50%.

   b. Retirement rates disclosed in the valuation report for CERS Hazardous participants do not match the rates used in the valuation.

   c. The KERS and CERS valuation reports disclose non-Hazardous insurance enrollment assumptions of 90% and 85% respectively. This enrollment assumption is only applied to participants hired before July 1, 2003. Participants hired on or after July 1, 2003 are assumed to participate at 100%.

   d. The valuation reports fail to disclose the insurance plan election assumption for non-Medicare retirees.

   e. For Medicare retirees, a weighted average of the various insurance options is used. The valuation reports fail to disclose that a weighted average is used, or the resulting average premium.

8. The description of the insurance plan benefit amount per year of service for members whose participation began on or after September 1, 2008 does not include the cost of living adjustments. The 1.5% increase to the benefit described for those members whose participation began on or after 7/1/2003, but before 9/1/2008 is an assumption and should be listed in the assumption section. The

System increases the benefit amount by a cost of living adjustment that may be different each year and has not equaled 1.5% in all prior years.

Projected Benefits in the Valuation

We requested test lives in order to compare the benefit amounts projected in the valuations against our understanding of the CERS, KERS and SPRS benefits summarized in the valuation report. We did not run "parallel" valuations of each System, which is beyond the scope of this audit. We reproduced the present value of future salary, present value of future benefits, actuarial accrued liability, and normal cost for the test lives received to determine whether Cavanaugh Macdonald correctly projected plan benefits and whether the costs and liabilities were determined in accordance with the actuary's stated methods and assumptions.

Based on our review of the individual test life calculations, we have the following observations and/or recommendations:

1. Termination decrement liabilities are determined by valuing the greater of the annuitized contribution balance and the regular retirement benefit. This assumption is not disclosed in the valuation reports for active members hired before January 1, 2014.

2. For pension test lives covering active members hired before August 1, 2004, the return of contributions benefit for some participants is calculated using a 2.0% interest assumption for the termination decrement, whereas for the death and disability decrements it is calculated using a 2.5% interest assumption, which matches the assumption disclosed in the valuation reports. Since termination decrement liabilities are based on the larger of the deferred regular benefit and the annuitized return of contributions benefit, the use of the 2% interest assumption could understate the liability.

3. For pension test lives covering active members hired before January 1, 2014, the valuation reports state that a pre-retirement death benefit is payable to the beneficiary of a non-active participant who dies with at least 144 months of service. These death benefits are not valued in the termination decrement for current active members, resulting in an understatement of liabilities.

4. For hazardous pension active test lives covering active members hired before January 1, 2014, the $5,000 life insurance benefit is valued as an annuity instead of as a one-time death benefit, resulting in an overstatement of liabilities.

5. The service used to determine pension benefit factors is calculated inconsistently. For some projected benefit calculations, rounded service is used to determine the benefit factor, whereas exact service is used for other benefit calculations. For example, in the test life for the CERS non-hazardous active hired prior to January 1, 2014, the benefit multiplier at age 60 (19.67 years of service) is 1.3%, consistent with the participant's exact service at that age. However, the benefit multiplier at age 66 (25.67 years of service) is 1.75%, implying the service used to determine the multiplier was rounded to 26.

6. The death benefit for all hazardous pension active members was valued assuming a normal retirement age of 55, but the valuation reports indicate that those hired after September 1, 2008 should have a normal retirement age of 60, resulting in an overstatement of liabilities.

7. The assumed deferred vested retirement age is applied inconsistently for pension actives with frozen service in a former plan. For example, in the CERS non-hazardous active test life with hazardous liability in the old plan, Cavanaugh Macdonald assumes benefits are deferred to age 65 for the termination decrement, whereas the valuation report indicates that benefits are deferred to age 55. In contrast, for the KERS non-hazardous active test life with hazardous liability in the new plan, Cavanaugh Macdonald assumes deferred vested retirement age is 55, whereas the valuation report indicates that deferred vested retirement age is 65.

8. For insurance test lives covering participants hired on or after September 1, 2008, the annual 1.5% increase in the retiree's allowance is not applied once a participant terminates or retires, resulting in an understatement of liabilities.

9. For insurance test lives covering participants hired on or after January 1, 2014, the allowance is missing for participants who terminate before age 57, even if they meet all the requirements for an allowance paid at retirement, resulting in an understatement of liabilities.

The individual test life comparison exhibits on the following pages summarize the calculations performed by Segal and Cavanaugh Macdonald and show the differences by each liability category, as well as the ratio of Segal's results to Cavanaugh Macdonald's results.

June 30, 2014 Valuation of the
County Employees Retirement System – Non-Hazardous
Test Life Comparison

Test Life Description	Present Value of Future Salary			Present Value of Benefits			Accrued Liability			Normal Cost		
	CMC	Segal	Ratio of Segal/ CMC	CMC	Segal	Ratio of Segal/ CMC	CMC	Segal	Ratio of Segal/ CMC	CMC	Segal	Ratio of Segal/ CMC
Pension Disabled Retiree				171,113	171,118	1.00						
Pension Retiree 1				128,210	128,216	1.00						
Pension Retiree 2				188,567	188,574	1.00						
Pension Retiree 3				19,886	19,891	1.00						
Pension Surviving Spouse				235,532	235,532	1.00						
Pension Vested Terminated				5,297	5,298	1.00						
Pension hired prior to 8/1/04	260,599	260,610	1.00	142,453	143,284	1.01	117,236	115,968	0.99	3,242	3,512	**1.08**
Pension hired prior to 9/1/08	349,218	349,222	1.00	53,845	54,449	1.01	26,841	26,555	0.99	2,223	2,297	1.03
Pension hired prior to 1/1/14	209,975	210,007	1.00	20,463	21,054	1.03	7,374	7,586	1.03	1,138	1,171	1.03
Pension hired after 1/1/14	342,355	342,366	1.00	23,093	23,492	1.02	0	0	1.00	2,274	2,313	1.02
Pension with Hazardous Service – Old Plan	611,296	611,297	1.00	7,123	9,310	**1.31**	3,338	4,330	**1.30**	318	418	**1.31**
Pension with Hazardous Service – New Plan	597,750	597,753	1.00	2,945	3,324	**1.13**	1,008	1,138	**1.13**	156	176	**1.13**
Insurance Retiree 1				38,417	38,418	1.00						
Insurance Retiree 2				36,720	36,721	1.00						
Insurance hired prior to 8/1/04				61,642	61,641	1.00	47,892	48,085	1.00	1,768	1,743	0.99
Insurance hired prior to 9/1/08				11,777	11,777	1.00	6,288	6,288	1.00	452	452	1.00
Insurance hired after 1/1/14				2,185	2,936	**1.34**	0	0	n/a	215	289	**1.34**
Insurance hired prior to 1/1/14				6,864	7,879	**1.15**	2,474	2,839	**1.15**	382	438	**1.15**

* Items above that are blank are not applicable to that test life.

June 30, 2014 Valuation of the County Employees Retirement System - Hazardous Test Life Comparison

Test Life Description	Present Value of Future Salary			Present Value of Benefits			Accrued Liability			Normal Cost		
	CMC	Segal	Ratio of Segal/ CMC	CMC	Segal	Ratio of Segal/ CMC	CMC	Segal	Ratio of Segal/ CMC	CMC	Segal	Ratio of Segal/ CMC
Pension Dependent Child				7,837	7,838	1.00						
Pension Disabled Retiree				11,811	11,814	1.00						
Pension Retiree 1				84,288	84,294	1.00						
Pension Retiree 2				219,004	219,012	1.00						
Pension Retiree 3				623,731	623,737	1.00						
Pension Surviving Spouse				106,571	106,571	1.00						
Pension Vested Terminated				43,248	43,249	1.00						
Pension hired prior to 8/1/04	493,168	493,180	1.00	271,160	271,594	1.00	201,880	200,138	0.99	8,745	9,020	1.03
Pension hired prior to 9/1/08	537,767	537,766	1.00	188,881	188,938	1.00	98,400	97,600	0.99	9,909	10,003	1.01
Pension hired prior to 1/1/14	1,295,144	1,296,844	1.00	204,971	213,942	**1.04**	52,751	55,008	**1.04**	11,221	11,701	**1.04**
Pension hired after 1/1/14	430,600	430,754	1.00	53,561	53,660	1.00	0	0	1.00	3,714	3,720	1.00
Pension with Non-Hazardous Service – Old Plan	171,987	173,897	1.01	8,733	8,765	1.00	8,371	8,397	1.00	109	109	1.00
Pension with Non-Hazardous Service – New Plan	119,094	119,094	1.00	2,150	2,144	1.00	999	997	1.00	195	195	1.00
Insurance Surviving Spouse				49,787	49,574	1.00						
Insurance Retiree 3				98,535	98,535	1.00						
Insurance Retiree 2				76,461	76,461	1.00						
Insurance hired prior to 8/1/04				244,542	244,342	1.00	179,421	179,209	1.00	8,220	8,222	1.00
Insurance hired prior to 9/1/08				27,549	27,550	1.00	15,243	14,782	0.97	1,348	1,307	0.97
Insurance hired prior to 1/1/14				13,261	15,153	**1.14**	3,415	3,899	**1.14**	726	829	**1.14**
Insurance hired after 1/1/14				7,325	8,439	**1.15**	0	0	n/a	508	585	**1.15**

* Items above that are blank are not applicable to that test life.

June 30, 2014 Valuation of the Kentucky Employees Retirement System – Non-Hazardous Test Life Comparison

	Present Value of Future Salary			Present Value of Benefits			Accrued Liability			Normal Cost		
Test Life Description	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**
Pension Disabled Retiree				152,682	152,687	1.00						
Pension Retiree 1				409,334	409,340	1.00						
Pension Retiree 2				107,314	107,314	1.00						
Pension Surviving Spouse				46,577	46,577	1.00						
Pension Vested Terminated				3,522	3,523	1.00						
Pension hired prior to 8/1/04	127,112	127,112	1.00	159,013	159,541	1.00	144,229	143,659	1.00	4,591	4,932	**1.07**
Pension hired prior to 9/1/08	147,484	147,484	1.00	68,098	69,094	1.01	52,269	52,562	1.01	4,886	5,102	**1.04**
Pension hired prior to 1/1/14	287,020	287,028	1.00	24,379	24,640	1.01	7,306	7,384	1.01	1,243	1,256	1.01
Pension hired after 1/1/14	294,391	294,403	1.00	19,121	20,116	**1.05**	0	0	1.00	1,577	1,659	**1.05**
Pension with Hazardous Service – Old Plan	579,834	579,840	1.00	38,224	38,261	1.00	30,324	30,353	1.00	843	843	1.00
Pension with Hazardous Service – New Plan	217,878	218,317	1.00	2,387	2,281	**0.96**	998	953	**0.95**	181	172	**0.95**
Insurance Retiree 2				25,735	25,736	1.00						
Insurance Retiree 1				36,011	36,011	1.00						
Insurance hired prior to 8/1/04				30,674	30,674	1.00	24,750	24,558	0.99	1,840	1,813	0.99
Insurance hired prior to 9/1/08				7,046	7,046	1.00	6,436	6,407	1.00	188	188	1.00
Insurance hired prior to 1/1/14				2,745	4,525	**1.65**	823	1,356	**1.65**	140	231	**1.65**
Insurance hired after 1/1/14				1,913	2,904	**1.52**	0	0	n/a	158	240	**1.52**

* Items above that are blank are not applicable to that test life.

June 30, 2014 Valuation of the Kentucky Employees Retirement System – Hazardous Test Life Comparison

	Present Value of Future Salary			Present Value of Benefits			Accrued Liability			Normal Cost		
Test Life Description	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**
Pension Dependent Child				29,787	29,794	1.00						
Pension Disabled Retiree 1				41,473	41,480	1.00						
Pension Disabled Retiree 2				128,262	128,266	1.00						
Pension Retiree 1				133,355	133,360	1.00						
Pension Retiree 2				5,059	5,066	1.00						
Pension Surviving Spouse				88,388	88,388	1.00						
Pension Vested Terminated				9,300	9,300	1.00						
Pension hired prior to 8/1/04	161,924	161,924	1.00	252,600	253,245	1.00	228,050	226,251	0.99	6,592	7,248	**1.10**
Pension hired prior to 9/1/08	296,155	296,155	1.00	92,205	92,254	1.00	51,192	49,897	0.97	4,537	4,686	1.03
Pension hired prior to 1/1/14	358,303	358,355	1.00	60,827	65,833	**1.08**	22,881	24,762	**1.08**	2,945	3,188	**1.08**
Pension hired after 1/1/14	186,947	186,947	1.00	26,098	23,976	**0.92**	0	0	1.00	3,226	2,955	**0.92**
Pension with Non-Hazardous Service – Old Plan	296,155	296,155	1.00	944	939	0.99	562	545	0.97	42	44	**1.04**
Pension with Non-Hazardous Service – New Plan	47,251	47,251	1.00	5,259	5,382	1.02	4,683	4,793	1.02	576	589	1.02
Insurance Retiree 1				81,654	81,653	1.00						
Insurance hired prior to 8/1/04				304,117	304,111	1.00	271,413	271,511	1.00	8,781	8,753	1.00
Insurance hired prior to 9/1/08				19,537	19,536	1.00	11,638	11,409	0.98	874	857	0.98
Insurance hired prior to 1/1/14				11,687	13,883	**1.19**	4,397	5,223	**1.19**	566	672	**1.19**
Insurance hired after 1/1/14				5,429	6,172	**1.14**	0	0	n/a	671	736	**1.10**

* Items above that are blank are not applicable to that test life.

June 30, 2014 Valuation of the State Police Retirement System Test Life Comparison

	Present Value of Future Salary			Present Value of Benefits			Accrued Liability			Normal Cost		
Test Life Description	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**	**CMC**	**Segal**	**Ratio of Segal/ CMC**
Pension Dependent Child				14,632	14,638	1.00						
Pension Disabled Retiree				173,261	173,271	1.00						
Pension Retiree 1				234,108	234,111	1.00						
Pension Retiree 2				202,651	202,656	1.00						
Pension Surviving Spouse				596,210	596,212	1.00						
Pension Vested Terminated				29,750	29,751	1.00						
Pension hired prior to 8/1/04	465,752	465,751	1.00	194,156	194,576	1.00	124,247	122,605	0.99	8,031	8,218	1.02
Pension hired prior to 9/1/08	586,402	588,139	1.00	146,290	146,487	1.00	57,654	56,785	0.98	7,105	7,169	1.01
Pension hired prior to 1/1/14	660,627	669,932	1.01	108,132	109,441	1.01	25,363	25,397	1.00	5,814	5,821	1.00
Insurance Retiree 1				142,738	142,741	1.00						
Insurance Retiree 2				83,781	83,031	0.99						
Insurance Surviving Spouse				78,527	78,526	1.00						
Insurance hired prior to 8/1/04				181,556	181,448	1.00	113,100	111,078	0.98	7,864	7,742	0.98
Insurance hired prior to 9/1/08				22,617	22,617	1.00	9,304	9,287	1.00	1,067	1,065	1.00
Insurance hired prior to 1/1/14				13,695	15,361	**1.12**	3,216	3,568	**1.11**	736	817	**1.11**

* Items above that are blank are not applicable to that test life.

As part of our analysis, we have reviewed the principal assumptions used in the actuarial valuation report for the valuation as of June 30, 2014, for consistency, reasonableness and compatibility. In addition, we have reviewed the 2014 experience study report (that covered experience for the five-year period ending June 30, 2013), and have also compared the current set of economic assumptions to those used by a peer group of 126 systems covering state and local employees, the Public Fund Survey published by the National Association of State Retirement Administrators.

ECONOMIC ASSUMPTIONS

Inflation:

The underlying price inflation assumption of 3.50% is at the high end of the range of 2.75% to 3.50% (based on valuations primarily covering fiscal years ending in 2013). The Experience Study recommended a 25 basis point reduction in inflation to 3.25%, which would be more towards the middle of the Public Fund Survey range. However, the Experience Study report cited several sources of data that would point to an inflation assumption under 3%. In addition, it should be noted that the U.S. Federal Reserve formally targets long-term inflation of 2%. This assumption should be monitored in future experience studies and further reduction will likely be required.

Investment Return:

The 7.75% assumption, when compared to the peer group, is also towards the middle of the range of 7.00% to 8.00%. Based on the Experience Study, the real rate of return on assets was unchanged (4.25%), so the recommended decrease from 7.75% to 7.50% was the result of the recommended 25 basis point decrease in the underlying inflation assumption.

In testing the real rate of return assumption for reasonableness, we used Segal Rogerscasey's capital market assumptions and KRS's various asset allocation targets. The Segal Rogerscasey assumptions are based on a 20-year horizon. Based on the information that would have been available when the 2014 Experience Study Report was issued, we calculated the median real rate of return to be between 5.05% - 5.10%. The Segal Rogerscasey assumptions are not net of investment fees, so the adjusted median real rate of return is 4.85% - 4.90%. Including the proposed inflation assumption of 3.25%, the median net investment return is over 8%. On this basis, we believe the 7.75% assumption used in the 2014 actuarial valuation and the 7.50% recommendation from the 2014 Experience Study are reasonable.

We also tested the real rate of return assumption using the current Segal Rogerscasey capital market assumptions, which are effective in 2015. Based on this updated information, we calculated the median real rate of return to be between 4.85% - 4.90%. Adjusting for investment expenses, the median real rate of return is 4.65% - 4.70%. Including the proposed inflation assumption of 3.25%, the median net investment return is over 7.90% - 7.95%. Therefore, even using current capital market information, we believe the 7.50% recommendation from the 2014 Experience Study is appropriate.

The data presented in the Experience Study Report based on the RVKuhns capital market assumptions shows lower median real rates of return compared to the Segal Rogerscasey assumptions. And both the RVKuhns and Segal Rogerscasey assumptions are likely different than capital market expectations of other investment consulting firms. Another approach to consider for future experience studies would be to

base the analysis on a composite of capital market assumptions from several investment consulting firms. This would provide a broader view of the universe of expectations.

Finally, we note that the calculated 50th percentile real returns shown in the Experience Study Report for the various groups are the same over all time horizons. Typically, we expect to see the 50th percentile returns decline over time due to geometric compounding. It appears that arithmetic returns were used in this analysis, however, we believe it is more appropriate to use long-term geometric returns.

Payroll Growth

The wage inflation assumption is used as the payroll growth assumption, which determines the unfunded liability amortization as a level percentage of payroll. An assumption of 4.5% was used in the June 30, 2014, actuarial valuation and a recommendation was made in the experience study to lower this to 4.0% (or 3.25% inflation, plus 0.75% real wage inflation).

Reviewing actual recent experience and based on our experience with other retirement systems, the 4.0% recommendation is aggressive. Actual increases in payroll for all KRS members, adjusted for differences in headcount, is approximately 2.21% for the five-year period ending June 30, 2014. During that same period, actual national price inflation was 2.02%, which implies real wage inflation of 0.19% for KRS. To the extent that actual payroll increases are lower than the assumption, contributions collected will be less than expected resulting in contribution losses.

Salary Scale:

For all members, the salary scale assumption is comprised of a merit and seniority component ranging from 0.25% to 8.50% for non-hazardous members and 0.00% to 15.50% for hazardous members and a real wage inflation rate of 4.50% (reflecting 3.50% salary inflation and 1.00% productivity increases). The investment return and salary progression assumptions are internally consistent, and seem reasonable for the purpose of the actuarial valuation.

In the Experience Study Report, the salary increase analysis was performed using total salaries of active members in each year. We believe this method makes it difficult to assess the difference components of salary increases (inflationary increases versus merit and seniority increases). A better approach is to look at year-over-year increases, net of the actual inflation experienced in each year of the study period. In this way, the merit and seniority component can be studied independently from inflation. Actual salary increases over the period were relatively close to expected in aggregate, but without this separate analysis, it is difficult to understand how the merit and seniority component behaved over the study period. We note that inflation during this period was well under 3.5% and believe that, as a result, the merit and seniority component was greater than expected. Reflecting this difference would have likely resulted in a recommendation to increase the salary increase assumption.

Mortality:

The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006 and the 1994 Group Annuity Mortality Table for all other members. Mortality rates for disabled annuitants are based on the post-retirement table, set forward five years.

The actuary's guide for determining the reasonableness of demographic assumptions is Actuarial Standard of Practice (ASOP) No. 35. The following is an excerpt from this ASOP that provides guidance on setting the mortality assumptions. Note that the ASOP quoted below was modified in September 2010 and is applicable for actuarial valuations with measurement dates on or after June 30, 2011.

Excerpt from ASOP 35, Section 3.5.3 – Mortality and Mortality Improvement Assumptions:

The actuary should consider the effect of mortality improvement both prior to and subsequent to the measurement date. With regard to mortality improvement, the actuary should do the following:

i. adjust mortality rates to reflect mortality improvement prior to the measurement date. For example, if the actuary starts with a published mortality table, the mortality rates may need to be adjusted to reflect mortality improvement from the effective date of the table to the measurement date. Such an adjustment is not necessary if, in the actuary's professional judgment, the published mortality table reflects expected mortality rates as of the measurement date.

ii. include an assumption as to expected mortality improvement after the measurement date. This assumption should be disclosed in accordance with section 4.1.1, even if the actuary concludes that an assumption of zero future improvement is reasonable as described in section 3.1. Note that the existence of uncertainty about the occurrence or magnitude of future mortality improvement does not by itself mean that an assumption of zero future improvement is a reasonable assumption.

The valuation report notes that "…there is some margin in the current mortality tables for possible future improvement in mortality rates…", however, no indication is given as to the magnitude of the margin. The Experience Study Report, which recommends a change to the RP-2000 mortality tables, indicates that, with projection to 2013 (Scale BB) and a one year set back for females, there is 37% margin for males and 19% margin for females. We believe this is an adequate margin to be in compliance with the revised ASOP standard. Alternatively, mortality tables with no margin in the valuation year, but with generational improvement applied in the future also satisfy the ASOP requirement. We also note that the Experience Study Report says that "…there is no need for a margin for future improvements as there is for retirees," however, we do not believe this can be inferred from ASOP 35.

We do wish to point out an alternative (and probable improvement in methodology) that could be considered in the future. Rather than perform the actual versus expected analysis using headcounts (i.e., the number of retirees that died), another approach is to perform the analysis on a benefits-weighted basis. This methodology takes into account the correlation, if any, between the health of the annuitants and their benefit size.

Reviewing the Experience Study analysis and data contained therein, we note that the actual number of deaths prior to age 65 seems extraordinarily high when compared to 1983 Group Annuity Mortality, but particularly so when compared to RP-2000. For example, between ages 55 and 64, there were over 1,380 observed deaths from the data, compared to 900 expected under 1983 Group Annuity Mortality (50% more than expected) and 700 expected under the proposed RP-2000 variation (nearly double the expected number). Additionally, under age 40, the data shows 96 actual deaths, yet the proposed table would result in less than 1 person being expected to die. Beyond age 65, actual experience was reasonably close to expected and proposed. We recommend that the underlying data be reviewed and that a cross-section of pre-65 reported deaths be verified for accuracy.

Although the employee groups are allocated between "hazardous and non-hazardous" categories, the mortality data is not studied separately for retirees in former hazardous occupations. While it is probable that upon achieving retirement age, all retirees would exhibit the same mortality experience, it would be worth studying the information separately and have the conclusion drawn from the data. We note that there is no mention of this distinction in the report.

Retirement Rates:

The valuation employs retirement rates for some groups that are based on age (KERS and CERS non-hazardous) and other groups that are based on years of service (KERS and CERS hazardous and SPRS members). The 100% retirement age of 75 for the age-based rates appears reasonable based on the data and information provided in the Experience Study Report, although, in general, this is higher than the 100% retirement age we observe in other retirement systems. For the service-based tables, the 100% retirement age is 65 for members participating before September 1, 2008, and age 60 for members participating on or after September 1, 2008.

Actual experience during the five-year experience study period resulted in nearly universal experience losses for all five membership groups. The magnitude of the losses was substantial (1.4% of actuarial accrued liability, on average). The experience losses were due to retirements that were earlier than anticipated by the retirement assumption. As a result, in general, earlier retirement rates were recommended. However, we have the following observations and comments concerning the retirement rate evaluation and recommendations contained in the experience study:

1. Actual experience from 2012/2013 was excluded from the study because plan changes contained in SB2 "may have caused members to retire when they otherwise would not have." We note that retirement losses in 2009 and 2011 were of similar magnitude as 2013 (2009 was slightly larger and 2011 was slightly smaller). Excluding an entire year's worth of experience may have been extreme and including this experience with a smaller weighting relative to the other years would have been a reasonable alternative approach.

2. The Experience Study analysis includes the 100% retirement age (for example, the table on page 30 of the Experience Study Report). However, based on the observed data, because many active members are working beyond age 75, the total actual to expected ratio is misleading. For example, for KERS non-hazardous, the reported actual to expected ratio is 0.92, but based on experience through age 74, it was 0.996. Recommended rates were adjusted such that the actual to proposed is 0.97, but excluding members age 75 and older, the ratio would be 1.05.

3. The totals on the two tables on pages 38 and 40 of the Experience Study Report are incorrect; the totals only sum from age 55 through 71. The last four numbers are excluded. The correct actual to expected ratio for the table on page 38 is 0.74 and for the table on page 40 is 0.88.

Turnover Rates:

Separate unisex, service-based tables for separation from active service apply to the various membership groups during the first five years of service. Beyond five years, rates are age-based. The Experience Study analysis recommended a change to all rates based on service and we agree with this recommended approach. During the five-year experience review period, there were significant gains related to turnover experience (0.9% of actuarial accrued liability, on average). As a result, in general, lower turnover rates were recommended.

Based on the information contained in the table on page 62 of the Experience Study Report, the experience from the CERS hazardous group was significantly different than expected over the study period. In each of the five years, experience gains due to turnover was at least 0.8% of the actuarial accrued liability. The expected number of terminations was 1,485 compared to 4,696 actual terminations. It is very surprising that the actual experience over the last five years could have been so vastly different than the assumption. Even the proposed assumption has an actual to expected ratio of 1.51. We recommend that this data be reviewed for accuracy.

Looking at the KERS non-hazardous withdrawal rates (page 55 of the Experience Study Report) and KERS hazardous withdrawal rates (page 58), the extremely large number of actual terminations relative to expected in the 19+ and 17+ years of service groups relative to expected is surprising. The actual to expected ratio for these groups are 2.86 and 7.55, respectively. We recommend that this data be reviewed for accuracy as well.

Disability Rates:

Age-based, unisex disability rates are applied only to eligible members. Based on the analysis in the Experience Study Report, we believe the current and proposed disability rates are reasonable.

Other Comments:

It does not appear that the type of disability and death (i.e., duty related versus non-duty related) was studied as part of the Experience Study Report. 25% of deaths among hazardous members are assumed to be duty related. We recommend that this 25% assumption be supported with some type of analysis based on whatever data is available and relevant.

Overall, the economic and demographic actuarial assumptions adopted by the KRS Board are reasonable and consistent with generally accepted actuarial standards and practices contained in Actuarial Standard of Practice No. 27 covering economic assumptions and Actuarial Standard of Practice No. 35 covering demographic and non-economic assumptions.

FUNDING METHOD FOR LIABILITIES

The funding method employed is the entry age normal (EAN) actuarial cost method and is the same method used by more than three-quarters of the plans in the Public Funds Survey. We recommend adding a description of the method to the valuation report. In any event, we find the current method to be reasonable.

ASSET VALUATION METHOD

The June 30, 2014 actuarial valuation uses an "actuarial" value of assets for purposes of establishing the required employer contributions. The current method smoothes investment gains and losses for each fiscal year by recognizing these gains and losses evenly over a five-year period. This method does not impose a corridor, which would place a limit on the spread between actuarial value of assets (AVA) and market value of assets (MVA).

An essential part of the public sector budgeting process is that material budget items, including pension contributions, should have a level cost pattern from year to year to the extent possible. Segal recognizes the importance of this requirement and assists clients in establishing reasonable methodologies for recognizing investment gains and losses and limiting the potential volatility that may result in increased contributions due to investment results.

The actuary's guide for determining the reasonableness of an asset smoothing method is ASOP No. 44. The following is an excerpt from this ASOP that establishes the qualities a reasonable asset smoothing method must exhibit.

From the Actuarial Standard of Practice No. 44:

3.3 Selecting Methods Other Than Market Value **--** *If the considerations in section 3.2 have led the actuary to conclude that an asset valuation method other than market value may be appropriate, the actuary should select an asset valuation method that is designed to produce actuarial values of assets that bear a reasonable relationship to the corresponding market values. The qualities of such an asset valuation method include the following:*

a. The asset valuation method is likely to produce actuarial values of assets that are sometimes greater than and sometimes less than the corresponding market values.

b. The asset valuation method is likely to produce actuarial values of assets that, in the actuary's professional judgment, satisfy both of the following:

1. The asset values fall within a reasonable range around the corresponding market values. For example, there might be a corridor centered at market value, outside of which the actuarial value of assets may not fall, in order to assure that the difference from market value is not greater than the actuary deems reasonable.

2. Any differences between the actuarial value of assets and the market value are recognized within a reasonable period of time. For example, the actuary might use a method where the actuarial value of assets converges toward market value at a pace that the actuary deems reasonable, if the investment return assumption is realized in future periods.

In lieu of satisfying both (1) and (2) above, an asset valuation method could satisfy section 3.3(b) if, in the actuary's professional judgment, the asset valuation method either (i) produces values within a sufficiently narrow range around market value or (ii) recognizes differences from market value in a sufficiently short period.

Two key principles arise from ASOP 44. These are that acceptable asset smoothing must create asset values that fall within a reasonable range around market value and are recognized in a reasonable period of time. In lieu of satisfying both of these principles, a smoothing method could satisfy the requirements if, in the actuary's professional judgment, the range around market value is sufficiently narrow or the differences are recognized in a sufficiently short period.

Segal has established an internal policy, which is consistent with others in the actuarial community, that five years is a sufficiently short period to constitute a reasonable asset smoothing method even if no corridor is used. Therefore, it is our opinion that the method utilized by KRS is reasonable.

FUNDING POLICY CONTRIBUTION

By statute, the KRS Board of Trustees must approve the employer contribution rates for the upcoming fiscal year based upon the results of the most recent actuarial valuation. The funding policy set by the Board of Trustees provides that the contribution rate consists of the normal cost and an amortization payment (level percentage of payroll) on the unfunded accrued liability (UAL). In accordance with the changes contained in SB2, the amortization period was reestablished as a closed 30 year period beginning with the June 30, 2013, actuarial valuation. The amortization period will decrease by one each year in the future. This type of closed period amortization provides a contribution schedule that, if actual experience is reasonably close to expected, will amortize the existing unfunded liability over time. We believe this funding policy is sufficient and provides a reasonable contribution rate schedule for adequately funding the Systems.

INSURANCE ASSUMPTIONS

Health Care Trend Rate

Trend is a measure of the rate of change, over time, of the per capita health care rates. It includes factors such as medical inflation, utilization, plan design, and technology improvements. CMC's methodological approach consists of "published annual health care inflation surveys in conjunction with actual plan experience, where credible". In addition, CMC assumes an ultimate trend rate of 5.0% for each plan. We agree with their approach. Additionally, the trend rates developed are reasonable and produce results consistent with trend rates used for other similar plans.

Morbidity

Morbidity or aging factors are used to estimate variation in per capita health care rates by age for the benefits being modeled. CMC currently relies upon the paper "Aging Curves for Helath Care Costs in Retirements", The North American Actuarial Journal, July 2005, Jeffrey P. Petertil; using "Representative Curve for General Use" for ages 65 and older. This approach and the aging factors used by CMC are reasonable and appropriate for the valuation.

Plan Election

Non-Medicare retirees have several options regarding insurance coverage. There is no discussion or analysis regarding the plan election assumption for these retirees.

CMC assumes that the proportion of current Medicare retirees electing each coverage option will remain unchanged. There are separate assumptions for hazardous and non-hazardous plans. This approach is supported by the data, reasonable and appropriate for the valuation.

Participation

The participation assumption is used to project what percentage of members elect retiree health care coverage upon retirement.

For members retiring from active status who were hired before July 1, 2003, CMC has updated their approach to base participation on retiree contribution percentage, which is based on service at retirement. This approach, and proposed assumption change, is supported by the data, reasonable and appropriate for the valuation.

For vested members retiring from inactive status who were hired before July 1, 2003, CMC recommends new assumptions based on recent experience. While the assumption changes are supported by the data, reasonable and appropriate for the valuation, we question why a service-based analysis was not performed.

For members retiring from active or inactive vested status who were hired after July 1, 2003, CMC did not have sufficient data to perform an experience study and recommends continuing to use the current assumptions of 100% participation. We believe this assumption may be conservative, especially for non-hazardous non-Medicare retirees. We would suggest that when the experience is next reviewed, in addition to considering service-based participation rates, rates of participation may also vary by Medicare status at retirement.

Members who become disabled in the line of duty, and surviving spouses and dependents of members who die in the line of duty, receive 100% of their health care paid by KRS. Continuing to assume that 100% will participate is reasonable and appropriate for the valuation.

For hazardous division retirees, CMC recommends updated assumptions regarding the percentage of members having spouses who elect coverage based on recent experience. The recommended assumptions are supported by the data, reasonable and appropriate for the valuation.

Other

Each valuation report indicates a large gain due to “Death or waiver after retirement”, but “waiver after retirement” is not included in the experience study.

This limited scope audit reviewed the data used, the benefits valued, the valuation results, and the actuarial methods and assumptions employed in the June 30, 2014, actuarial valuations. We found a number of inconsistencies in the valuation report and test lives, and we generally agree with the results of the experience study, with a few recommendations for improvement. We found the actuarial cost method and asset valuation method conform with the Actuarial Standards of Practice. The data appears complete and with a cursory analysis of the information supplied by KRS staff, we were able to closely match the participant counts reported by Cavanaugh Macdonald.

Below we summarize our comments and recommendations for your consideration:

A. Valuation Results

1. The Recommended Employer Contribution Rates appear to be understated.

B. Valuation Report

1. Since GASB Statement 67 related to plan accounting was effective for the Systems' financial reporting as of June 30, 2014, the required calculations for GASB 67 should be included in the actuarial valuation report in place of the GASB 25 disclosure information.

2. "Section IV - Comments on Valuation" simply describes the information presented in Schedule A, without highlighting important or noteworthy items.

3. In the tables labeled as "Experience Gain/(Loss)," it would be more appropriate to see demographic gains and losses expressed as a percentage of actuarial accrued liability and investment gains and losses expressed as a percentage of assets.

4. In the tables labeled as "Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience," it would be informative to show the gain or loss attributable to actual contributions that are more or less than expected, particularly since actual payroll growth has been less than expected.

5. While the summary section describes changes to the KEHP insurance benefits for non-Medicare retirees, no corresponding gain or loss in accrued liability is identified in the reconciliation.

6. In the reconciliation of accrued liability, it is not clear where gains or losses due to insurance plan participation rates higher or lower than expected are included.

7. Several of the actuarial assumptions were either incorrectly or incompletely disclosed in the valuation reports.

8. The description of the insurance plan benefit amount per year of service for members whose participation began on or after September 1, 2008 does not include the cost of living adjustments.

C. Projected Benefits

1. Termination decrement liabilities are determined by valuing the greater of the annuitized contribution balance and the regular retirement benefit. This assumption is not disclosed in the valuation reports for active members hired before January 1, 2014.

2. For pension test lives covering active members hired before August 1, 2004, the return of contributions benefit for some participants is calculated using a 2.0% interest assumption for the termination decrement, whereas for the death and disability decrements it is calculated using a 2.5% interest assumption, which matches the assumption disclosed in the valuation reports.

3. For pension test lives covering active members hired before January 1, 2014, the valuation reports state that a pre-retirement death benefit is payable to the beneficiary of a non-active participant who dies with at least 144 months of service. These death benefits are not valued in the termination decrement for current active members, resulting in an understatement of liabilities.

4. For hazardous pension active test lives covering active members hired before January 1, 2014, the $5,000 life insurance benefit is valued as an annuity instead of as a one-time death benefit, resulting in an overstatement of liabilities.

5. The service used to determine pension benefit factors is calculated inconsistently. For some projected benefit calculations, rounded service is used to determine the benefit factor, whereas exact service is used for other benefit calculations.

6. The death benefit for all hazardous pension active members was valued assuming a normal retirement age of 55, but the valuation reports indicate that those hired after September 1, 2008 should have a normal retirement age of 60, resulting in an overstatement of liabilities.

7. The assumed deferred vested retirement age is applied inconsistently for pension actives with frozen service in a former plan.

8. For insurance test lives covering participants hired on or after September 1, 2008, the annual 1.5% increase in the retiree's allowance is not applied once a participant terminates or retires, resulting in an understatement of liabilities.

9. For insurance test lives covering participants hired on or after January 1, 2014, the allowance is missing for participants who terminate before age 57, even if they meet all the requirements for an allowance paid at retirement, resulting in an understatement of liabilities.

D. Assumptions and Methods

1. We believe that the 7.50% investment return assumption recommendation is reasonable.

2. Monitor the inflation assumption in future actuarial investigations and compare to the U.S. Federal Reserve's formal long-term inflation target of 2%.

3. Reviewing actual recent experience and based on our experience with other retirement systems, the 4.0% payroll growth recommendation is aggressive.

4. Review the underlying data used in the experience study to confirm that the conclusions are accurate.

5. Consider explicitly studying the mortality experience on a benefits-weighted basis.

6. Study the increases in individual salaries by netting out actual price inflation during the experience period.

7. Consider analyzing retirement experience by excluding experience at the assumed 100% retirement age and beyond.

8. The exclusion of actual 2012/2013 retirement experience may have been extreme and including this experience with a smaller weighting relative to the other years would have been a reasonable alternative approach.

In this report, we have noted areas that we believe will improve the usefulness and clarity of the KRS annual actuarial valuations and experience study, and improve the valuation results. We are available to discuss any aspect of our review with KRS staff or the Systems' actuary.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen, Esq.
Executive Director

DATE: September 10, 2015

SUBJECT: Quarterly Reports of the Audit Committee

The Audit Committee held its quarterly meeting on August 27, 2015. The purpose of the meeting was to review and discuss, among other miscellaneous audit related items, the following:

- *Review of Auditor of Public Accounts (APA) 2013 Audit Follow-up Audit 2015*

  Findings

  APA Significant Deficiencies

  1. ***2013-KRS-03 Revenues and Expenditures in EMARS and KRS' Financial Reporting System are not Reconciled.***

     <u>APA Recommendation:</u> *KRS review the codes to ensure they are coded correctly.*

     <u>Internal Audit Follow-up:</u> *The Accounting Staff is in the process of reviewing the detailed codes.*

     Note: *Staff reviewed the general codes in GP to ensure they are correct. The General codes are accurate.*

     Management Comment
     (Mr. Todd E. Coleman, CPA, Controller)
     Concur. The GP codes are correct. In addition, it should be noted that no financial reporting is performed by KRS through the Emars

system. Emars is a cash basis system and KRS Reports on the accrual system.

2. ***2013-KRS-05 KRS' Financial statement preparation process is not adequate.***

APA Recommendation: *Accounting evaluate the financial statement preparation process to ensure sufficient controls are in place to promote accurate and complete financial reporting that follows applicable accounting standards. The supporting information used to prepare the statements and notes should be evaluated for accuracy prior to use in the financial statements and notes. The supporting information should also be thoroughly and independently reviewed.*

Internal Audit Follow-up: *Management will combine the quarterly preparations with the Year End (YE) procedures. Management plans to document the process during the Fiscal Year End (FYE) 2015 preparation of financial statements.*

Note: *Management provided a brief description of the financial statement preparation process.*

Management Comment
(Mr. Todd E. Coleman, CPA, Controller)
KRS Accounting Staff have continued to improve both internal controls documentation and financial statement preparation. Staff has become more familiar with START processes and how this information flows to Great Plains. Improvements have been made in both information quality and timeliness of Investment results from BYN Mellon. In addition, a flux analysis has been added to the financial statements, with variance 10% or higher researched/explained to the Audit Committee and Board of Trustees.

3. ***2013-KRS-06 KRS did not ensure access to its Pension Administration and Accounting Systems was appropriate.***

APA Recommendation: *KRS provide security access training to Human Resource (HR) staff and other managers responsible for requesting system access to ensure all are aware of the required documentation necessary to grant access to The Strategic Technology Advancements for Retirement of Tomorrow (START) system and Great Plains (GP) system.*

<u>Internal Audit Follow-up:</u> *Management provided documentation of completed account reviews. However, documentation of the training was unavailable.*

Note: *Management discussed at Director's meeting with all managers/directors, including HR, as part of second quarter security account review. HR emails/discussions occurred in weeks prior to this meeting. A KRS Access Quick Reference Guide to the process of requesting access to KRS Systems was developed, discussed in a directors' meeting, and distributed to KRS chief officers, directors, Division of Enterprise and Technology Services (DETS), managers, and Enterprise Project Manager Office (EPMO) staff.*

Management Comment
None

4. ***2013-KRS-08 KRS Process for waiving penalties associated with late employer contributions is not adequate.***

<u>APA Recommendation:</u> *Accounting update the Accounting Manual to include penalty and interest procedures.*

<u>Internal Audit Follow-up:</u> *Management should prepare procedures for penalty and interest to be included in the Accounting Procedures Manual.*

Note: *Management provided an explanation of penalty and interest.*

Management Comment
(Mr. Todd E. Coleman, CPA, Controller)
Accounting staff now has a defined process in place for considering fee waivers. The outstanding invoice report that includes fee waivers is reviewed in the Quarterly Audit Committee.

5. ***2013-KRS-08 KRS Process for waiving penalties associated with late employer contributions is not adequate.***

<u>APA Recommendation:</u> *KRS update the START system for annual compounding of penalties and interest.*

<u>Internal Audit Follow-up:</u> *Management should update the START system for annual compounding of penalties and interest.*

Note: *Management provided an explanation of why the update to the START system for annual compounding of interest and penalties has* *not been completed. Management has discussed annual compounding of interest and penalties for all invoices, not just penalties related to late employer contributions. The update would require significant resources that have not been available to date.*

Management Comment
None

6. ***2013-KRS-10 KRS did not classify intangible assets correctly.***

APA Recommendation: *Accounting implement YE procedures, or a checklist to ensure appropriate journal entries are made to correct Great Plains accounts.*

Internal Audit Follow-up: *Accounting management is preparing YE procedures during the 2015 YE process.*

Note: *Accounting management provided a monthly accruals checklist.*

Management Comment
None

7. ***2013-KRS-11 KRS does not have procedures established to ensure investments are recorded in the proper accounting period.***

APA Recommendation: *Review of year end processes and implement controls to ensure investments are recorded in the correct year and plan.*

Internal Audit Follow-up: *Accounting will work with the Division of Investments to ensure proper recording of investments, and the Accounting Policy/Procedures manual will be updated to include details. The process should be documented for FYE 2015.*

MANAGEMENT'S RESPONSE
(Mr. Todd E. Coleman, CPA, Controller)
Concur. Accounting will work with Investments to document the appropriate procedures of the Accounting Policy/Procedures Manual. Improvements in BNY Mellon reporting, including quarterly accruals, have improved controls around Investment reporting. Deputy Controller and Investments work closely together to ensure proper reporting.

8. ***2013-KRS-15 The accuracy of the plan splits for the administrative budget cannot be verified.***

   APA Recommendation: *KRS ensure the Comprehensive Annual Financial Report (CAFR) plan member participation counts agree to the financial statement member participation counts.*

   Internal Audit Follow-up: *The Chief Operations Officer, Information Technology, and Communications are working together to ensure the counts agree for FYE 2015, and provide explanations if they do not agree. They will document the process for the 2015 CAFR.*

   Management Comment
   (Mr. Todd E. Coleman, CPA, Controller)
   Concur. Accounting will document procedures for the close of fiscal 2015 to detail the plan member counts.

APA Internal Control Deficiencies

1. ***2013-01 KRS did not finalize their disaster recovery plan or ensure critical backup data was properly secured before being transported to the offsite facility.***

   APA Recommendation: *KRS continue to finalize their Disaster Recovery Plan (DRP) and ensure testing is conducted as soon as possible.*

   Internal Audit Follow-up: *The DR Plan has not been tested. Please see finding 3 below.*

   Note: *Management provided a copy of the Business Continuity Plan (BCP). Management updated the plan, version 1.6, on 4/1/14, and version 1.9 on 3/4/15. On 4/1/15 management decided that the KRS BCP be updated twice per year, in keeping with the Systems' Policy under Section 2.1 of the Plan that requires the BCP to be reviewed at least annually. The most recent update occurred on March 4, 2015 to reflect KRS staff changes and changes to the contact information of various vendors. The backup site was utilized for three consecutive days without issue during a live BC event in early March 2015 when heavy snowfall resulted in the Governor declaring a State of Emergency in the Commonwealth.*

   Management Comment
   None

2. ***2013-01 KRS did not finalize their disaster recovery plan or ensure critical backup data was properly secured before being transported to the offsite facility.***

   APA Recommendation: *All staff involved in the DRP processes should be provided a copy of these documents and receive training to ensure they are aware of their assigned responsibilities.*

   Internal Audit Follow-up: *Management has not completed the replication or training of staff.*

   Note: *Management will complete high level documentation updates by 12/31/15. Finalization and distribution of DR Plan and training will be completed after implementation of replication of all tier 1, 2, and 3 data to the disaster recovery site by 10/31/15.*

   Management has continued to work on the DR Plan, and has made great strides in updating equipment and purchasing equipment for the DR site. Management's goal is to have the site ready by the end of October, and training of staff after October.

   Management Comment
   None

3. ***2013-01 KRS did not finalize their disaster recovery plan or ensure critical backup data was properly secured before being transported to the offsite facility.***

   APA Recommendation: *Any agreements with external entities, to ensure processing continues in the event of a disaster or extended system outage, should be documented within the BCP and updated as necessary.*

   Internal Audit Follow-up: *Internal Audit was unable to locate formal written agreements with KTRS and Treasury. Management stated that they were oral agreements. Internal Audit noted in the Kentucky Revised Statutes 61.660 (1), 61.599 (2)(a), and 61.623 (5) (a) that " All payments by the fund (KRS) shall be paid by him (Treasurer)…" The Accounting Staff informed Internal Audit that they could check a box on the EMARS screen and the checks would be mailed from Treasury, when the box is not checked the checks are returned to KRS. Internal Audit recommends that a written agreement/memorandum of understanding between KRS and KTRS be prepared.*

Note: *Agreements with Kentucky Teachers Retirement System (KTRS) and Treasury have been documented in the Business Continuity Plan.*

Management Comment
None

4. ***2013-13 KRS paid a fee for a service not included in the Revised Written Investment Contract.***

APA Recommendation: *KRS ensure fees paid have a contractual basis.*

Internal Audit Follow-up: *All other contracts not included in the contract logs will be monitored by the Division Director and Accounting to ensure proper payment of fees.*

Note: *Management has established contract logs for contracts over $40,000, Investment contracts, and Information Technology contracts.*

Management Comment
None

5. ***2013-15 The information sent to the Actuary from KRS did not agree to the information received from the Actuary by the Auditor.***

APA Recommendation: *APA recommended research of the one participant's information in START that did not agree with the data sent to the actuary before the actuarial data is sent for fiscal year 2014.*

Internal Audit Follow-up: *Management researched the data in START with the data sent to the actuary. There are various reasons why the data doesn't match, for example one member has multiple accounts in START, CERS and KERS. However, the Actuary counts them as one account/member. Also, the Actuary uses a bell shape curve for their calculations and throws out the outliers. START maintains all members and accounts.*

There was no documentation for the one participant's information that did not agree with the data sent to the actuary before the actuarial data was sent for fiscal year 2014.

Management Comment
(Mr. Todd E. Coleman, CPA, Controller)

Concur. Accounting will work with the IT Division to ensure data sent to the Actuary is reconciled to the data maintained at KRS. However, it must noted that the Actuary defines a member in a different way than does KRS for actuarial calculations. That difference will be defined in the documentation.

6. ***2013-15 The information sent to the Actuary from KRS did not agree to the information received from the Actuary by the Auditor.***

   APA Recommendation: *APA recommended management document existing reconciliation procedures between START data and the data sent to actuary.*

   Internal Audit Follow-up: *Management will document the reconciliation procedures for the FYE 2015 START data to actuary data.*

   Management Comment
   (See #5 above)

7. ***2013-15 The information sent to the Actuary from KRS did not agree to the information received from the Actuary by the Auditor.***

   APA Recommendation: *Management document a formal annual reconciliation procedure between START data and data sent to actuary.*

   Internal Audit Follow-up: *Management will document the annual reconciliation procedures for the FYE 2015 START data to actuary data.*

   Management Comment
   (See #5 above)

The Audit Committee approved the report of the Auditor of Public Accounts (APA) 2013 Audit Follow-up Audit 2015

- *Review of Travel and Procurement Card Expenditures*

  Findings

  1. Errors noted on travel vouchers
  Level of Severity: Low
  The auditor noted the following exceptions:

a. *Documentation for one out-of-state Investment (362I) travel expenditure was missing. The total reimbursed for this travel voucher was $466.81. The auditor was unable to ensure this travel expenditure was valid, reasonable, and appropriate.*
*(**Auditor note**: There was another travel expenditure missing documentation when the auditor looked through the files, but a copy of this travel voucher and supporting documentation was available from the traveler. However, for the travel expenditure noted in this finding the traveler is no longer an employee of KRS.)*

b. *One out-of-state Investment (362I) travel expenditure for an interview revealed that KRS had inadvertently reimbursed the individual for an unallowable expense. Resulting in an overpayment of $5.50.*
*(**Auditor note**: The oversight was not caught during the review and approval by management. Reimbursement from the traveler will not be collected as this is not an employee of KRS.)*

c. *One out-of-state (362) travel expenditure was coded to the wrong account. This expenditure was for an Internal Audit employee and should have been coded to the out-of-state Internal Audit (362T) account.*
*(**Auditor note**: The auditor noted this during testing and accounting staff corrected the error prior to the audit concluding.)*

d. *One out of state (362) travel expenditure was approved for gratuity exceeding the $3 per occurrence under section 5 E6 of the travel policy. Management has been approving based on 15% as set under section 6 D5, but this only applies to persons set in section 6 A. Resulting in an overpayment of $4.*
*(**Auditor note**: After discussion with management, it was determined that the employee would not be required to reimburse KRS for this error, since management has been approving all gratuity according to the 15% rule.)*

e. *One out-of-state (362) travel expenditure had two exceptions noted. This expenditure did not include a copy of the request for travel form completed prior to travel. An oversight in the review of the lodging receipt resulting in an overpayment of $27 for parking fees charged to the traveler's credit card, but credited back in a separate transaction.*
*(**Auditor note**: The traveler was required to reimburse KRS for the overpayment. The traveler has reimbursed KRS prior to the audit concluding.)*

f. *One in-state (361) traveler overstated their travel mileage. According to the travel policy section 3 G3, states mileage shall be paid for the shorter of mileage between: the home and travel destination, or workstation and travel destination. The traveler claimed mileage from their home to travel destination on several occasions, however the mileage from their workstation to travel destination was shorter. These errors resulted in an overpayment of $95.24 to the traveler.*
*(**Auditor note**: These errors occurred on four different travel vouchers from June 2014 through November 2014. Management caught this error on other travel vouchers after November 2014 and the traveler was only reimbursed for the shorter distance. The traveler will be required to reimburse KRS for the overpayment. The Accounting division has requested the reimbursement from the traveler.)*

g. *One in-state (361) travel voucher documented a round trip mileage on two separate lines, but inadvertently claimed the round-trip total mileage on both lines resulting in an overpayment. This error was not caught during the review and approval by management. The error resulted in an overpayment of $49.28.*
*(**Auditor note**: The traveler will be required to reimburse KRS for the overpayment. The Accounting division has received the reimbursement from the traveler.)*

Recommendations

Internal audit recommends:

a. *That all travel vouchers be thoroughly reviewed and approved at every level to ensure that travel expenses are allowable, calculated correctly, funds available, have the appropriate supporting documentation, and coded to the appropriate account.*
b. *That overpayments mentioned above be collected.*
c. *That all out of state travel vouchers include a copy of the request for travel form before approved for reimbursement.*
d. *That the travel policy and procedures be updated to remove the $3 per occurrence gratuity from section 5 E6 and add the 15% rule as noted in section 6 D5.*

Management Comments

(Mr. Todd E. Coleman, CPA, Controller)

The Division of Accounting concurs with the recommendation presented. Accounting will continue to review the travel vouchers in a prudent manner to ensure that travel expenses are allowable, calculated correctly, etc. The overpayments are *in the process of being collected from the travelers and we will ensure that all out of state travel has prior approval.*

(Ms. Karen D. Roggenkamp, Chief Operations Officer)
We will recommend that the Audit Committee and the Board of Trustees approve a change to the Travel policy that taxi/shuttle tips be capped at 15% regardless of the traveler's position title. This better conforms to the needs of our Investment business area and their travel outside of the Commonwealth.

2. ***Employee training on travel policy has not been conducted for all KRS staff.***
   <u>Level of Severity: Low</u>
   In the prior year's (FY13 & FY14) travel and pro-card audits the Internal Auditor recommended that Management perform a formal training with all staff that travel, may travel, or approve travel for KRS. All new employees that may travel for KRS should receive this training prior to traveling. Management may want to consider doing this training annually as a refresher to what the policy and procedures require for travel expenses to be reimbursed. This recommendation was made due to the high number of errors noted during the testing of travel expenditures.

   This training has not been performed for all KRS staff. One division requested training before a travel project began and this division was trained on what the travel policy required for reimbursement. The travel policy was sent to the Board shortly after the audit concluded for clarification and revisions. Management decided to wait until the Board approved the policy changes before conducting the training. The Board approved the travel policy changes at the September 11, 2014 Board meeting.

   The travel policy training still had not been performed for the staff prior to the FY15 audit concluding. Management is currently meeting to discuss how to conduct this training. Training will be scheduled for FY16.

   The lack of travel policy training could result and has resulted in travel reimbursement errors and/or overpayments.

   Good internal controls dictate that policy and procedures be in place and followed by all staff for travel reimbursement to ensure that expenses are valid, reasonable, and appropriate.

Recommendation

Internal audit recommends that since the travel policy changes have been approved by the Board that staff travel training be performed in a timely manner

Management Comments

(Mr. Todd E. Coleman, CPA, Controller)

The Division of Accounting concurs with the recommendation presented. Accounting is currently in the process of preparing travel training for all employees. We anticipate that this training will be ready to present to staff in July.

(Ms. Karen D. Roggenkamp, Chief Operations Officer)

The Travel Policy is readily accessible to all KRS employees. It is the responsibility of employees to comply with the Travel Policy. To assist in compliance. Management is considering an annual employee Board and Management Policy certification. Additionally, a short KRS YouTube will be available by August 1, 2015 that will highlight the key sections of the travel voucher and related policy requirements. This will be available to all employees as well as future KRS employees. To further assist, we plan to post examples of properly completed travel vouchers that can be accessed by employees.

3. ***Meal reimbursements for travel without overnight stays were not allowable per the travel policy.***

Level of Severity: Low

During the testing of meal reimbursements for travel without overnight stays paid through payroll for tax purposes, it was noted that two employees were reimbursed for meals that did not meet the travel policy requirements. According to the travel policy, authorized travel to a destination more than (40) miles from the Traveler's work station or home, and the traveler remains in travel status during the mealtime hours established in this policy is eligible for reimbursement.

Two employees did not travel more than 40 miles from their workstation or home, and so they were not eligible for the meal reimbursement. The reimbursement was paid through payroll for tax purposes as required by the IRS. The amounts paid were minimal and would cause an administrative burden to correct, so it has been determined that this issue will not be corrected. However, going forward all payroll meal reimbursements will be thoroughly reviewed to avoid this mistake.

According to the Travel Policy and Procedures Section 5 C4, "A Traveler shall be eligible for reimbursement for subsistence while traveling in Kentucky, if the authorized work requires overnight travel or authorized travel to a destination more than (40) miles from the Traveler's work station or home, and the Traveler remains in travel status during the mealtime hours established in this policy."

Good internal controls dictate that policy and procedures be in place and followed by all staff for travel reimbursement to ensure that expenses are valid, reasonable, and appropriate.

Recommendations

Internal audit recommends:

a. *That the travel voucher for travel without overnight stays be updated to include mileage and mileage documentation when sent to Human Resources (HR), so that it can be reviewed by HR for the 40 mile requirement before payment.*
b. *Management should thoroughly review all travel vouchers to ensure reimbursement is eligible per the travel policy.*

Management Comment

(Ms. Karen D. Roggenkamp, Chief Operations Officer)

Since one travel form is submitted to Accounting and the Non-overnight form is submitted to Payroll, it was difficult to verify the mileage qualification. The Non-overnight travel voucher form is now updated requiring mileage and a certification added that the requested reimbursement complies with the Travel policy.

4. ***Meal reimbursements for travel without overnight stays were paid due to travel policy wording.***
   Level of Severity: Low

During the testing of meal reimbursements for travel without overnight stays paid through payroll for tax purposes, it was noted that one employee requested meal reimbursement for travel without overnight stays due to the home address being more than 40 miles from the travel destination. For mileage the policy states the Traveler is paid for the shorter of mileage between: the home and travel destination, or workstation and travel destination. Which is what this employee claimed for mileage. The employee used two different locations in order to qualify based on the policy wording.

It has been determined that the two policy sections do not agree with each other due to the wording of one, and allow for the employee to use two different locations for one travel event. This could allow a *traveler the opportunity to claim reimbursement they are not entitled to.*

Recommendation

Internal audit recommends:

a. *That the language in the travel policy for Section 5 C4 be updated to say, "more than (40) miles from the Traveler's workstation and home; or*
b. *That meal reimbursements for travel without overnight stays while traveling in Kentucky be removed. As this reimbursement causes an administrative burden for monitoring and correcting in the payroll system.*

Management Comment

(Ms. Karen D. Roggenkamp, Chief Operations Officer)

We will recommend that the Audit Committee and the Board of Trustees approve a change to the Travel policy that replaces or with "more than 40 miles from Traveler's workstation and home."

Procurement Card Findings & Recommendations:

5. ***Procurement card expenditure supporting documentation missing.***
Level of Severity: Low

During the testing of pro-card expenditures for four of the twelve months it was noted that we do not always have supporting documentation for each data usage charge ($30) for all fourteen accounts that KRS pays. Accounting was able to provide an e-mail that listed all fourteen accounts and who they belong to from a previous review requested by Management.

For three of the four months reviewed KRS never paid more than fourteen accounts. Not all payments could be verified through supporting documentation for these three months. However, in September 2014 the pro-card statement shows seventeen charges. The explanation for this is that depending on the billing date and credit card cutoff date one account could be charged for two different billing cycles in one credit card cycle. The problem is that without supporting documentation for each charge we cannot determine which account we are paying and ensure that we are not paying for the same period on the next month's pro-card statement.

Recommendations

Internal audit recommends:

a. *Some form of documentation should be obtained for all purchases made on a pro-card.*

b. *The Accounting Division should ensure that all transactions have supporting documentation on file when reconciling and paying the monthly pro-card statement.*

Management Comments
(Mr. Todd E. Coleman, CPA, Controller)
The Division of Accounting concurs with the recommendation presented. Accounting will continue to ensure that appropriate documentation is on file for charges made to the pro-card prior to reconciling and paying.

(Ms. Karen D. Roggenkamp, Chief Operations Officer)
This finding was related to monthly data charges for KRS iPads. IPads with cell carrier configurations (vs. WI-FI enabled) are limited to 14 users for business continuity purposes. We will look for ways to match charges with documentation although billing timing (carrier vs. procard issuers) is problematic.

6. ***Procurement Cardholder Agreements were not signed on an annual basis.***
Level of Severity: Low
During testing the auditor noted that all five cardholders agreements were not updated/signed annually for FYE 6/30/2015. The agreements were signed in September 2013 and have not been updated since then.

Recommendation
Internal Audit recommends that the Accounting Division should ensure that all cardholders are signing the agreements annually.

Management Comments
(Mr. Todd E. Coleman, CPA, Controller)
The Division of Accounting concurs with the recommendation presented. Accounting will work with the pro-card issuing bank to ensure that cardholder agreements are signed on an annual basis.

(Ms. Karen D. Roggenkamp, Chief Operations Officer)
Management will ensure that agreements are signed annually.

7. ***Two procurement card expenditures were coded to the wrong general ledger account in Great Plains.***
Level of Severity: Low
During testing of pro-card expenditures the auditor found two expenditures that were coded to the wrong account when they were posted in Great Plains. While this has no effect on the financial

statements, it is important that all expenses are coded to the correct account.

Recommendation

Internal audit recommends that the Accounting Division should ensure that the account marked on the supporting documentation is accurate before posting it in Great Plains.

Management Comments

(Mr. Todd E. Coleman, CPA, Controller)

The Division of Accounting concurs with the recommendation presented. Accounting will ensure that the pro-card expenses are charged to the correct general ledger account prior to reconciling and payment.

(Ms. Karen D. Roggenkamp, Chief Operations Officer)

The expenditures were valid KRS administrative expenses, but coded to a non-travel account. Accounting will continue to monitor procard GL recording.

The Audit Committee Approved the report of the Travel and Procurement Card Expenditures Audit.

- *Review of Death Audit utilizing Lexis Nexis*

Finding and Recommendation

No findings and recommendations noted for the Death Audit process. All prior year findings and recommendations have been resolved. The death audit reports are being monitored and documented by the Division of Disability & Death, and the Out of Country retirees and beneficiaries living status are being monitored by the Division of Retiree Services (Payroll).

Management Comments

(Ms. Chrystal McChesney, Retirement Program Manager Death Branch)

I agree with the final findings of the audit of the process of death audits using Lexis Nexis.

(Mr. David Nix, Director Division of Retiree Payroll)

I have reviewed your draft report dated 06/30/2015 entitled Review of Death Audit utilizing Lexis Nexis, for the period of FY 2015 and the Executive Summary. I agree with the reports as written.

The Audit Committee Approved the report of the Death Audit utilizing Lexis Nexis.

- *Review of Refund Payments (Inactive Members)*

Finding

1. ***One refunded member did not have the required forms on file.***
<u>Level of Severity: Low</u>
During the testing of a sample of refund payments it was noted that one of the 104 (1%) member refunds did not have the required documentation on file in START-LOB. This member did not have Form 2001 – Member Information on file. Issues with missing member documentation have been noted in prior audits and a Project Incident Report (PIR) has been logged to resolve problems with reports to identify members who fail to return required forms.

Recommendations

Internal audit recommends that:

a. All required member documentation be on file prior to processing a refund.
b. PIR 32936 be resolved in a timely manner, so that a process for following up on members who fail to return required documentation can be implemented.

Auditor note: *The Member Services Division has been notified of the one account and will work to resolve the missing documentation.*

Management Comments
(Ms. Shauna Miller, Director, Member Services)

I have reviewed the refund in question and agree that staff did not ensure that valid Form 2001 was on file prior to processing the refund. I believe this to be an oversight as procedure requires that staff ensures valid Form 2001 is on file prior to processing a refund. Historically, KRS has not monitored the receipt of the Form 2001 upon a member's initial participation. A welcome letter with Form 2001 enclosed is mailed to new participants and they are advised to complete and return to KRS.

With the implementation of START, reports were designed to identify Member accounts with missing forms. However, as of now those reports are not functional. I logged PIR 32936 on April 16, 2015 to resolve the remaining issues with the reports. Once functional, I will devise a procedure to follow-up with members who have not submitted valid Form 2001.

2. ***The contributions and interest reported on the refund report does not agree to the amount paid when there are multiple payees.***
   Level of Severity: Low
   During the refund payments audit it was noted that the refund report in START is not recording the accurate contributions and interest (C&I) amounts when there are multiple payees. The START refund report does not document the amount paid to each refunded member, so the auditor thought she could add the contributions and interest columns together and subtract any applicable tax deduction to get the amount paid. However, when the auditor used this calculation to determine the amount paid and compared it to the member's account the amounts did not ever agree when there were multiple payees. It was determined that the amount reported on the refund was doubled for each payee, however the amount paid to each payee according to the account in START was correct. PIR 32935 was logged to correct this issue.

   Recommendation
   Internal audit recommends that contributions and interest amounts reported for multiple payee accounts on the refund report be resolved through PIR 32935 in a timely manner.

   Management Comments
   Agree with findings and have logged PIR 32935 and requested that it be expedited.

The Audit Committee approved the report of the Refund Payment (Inactive Members) Audit.

- *Review of General Manager Risk – Absolute Return, Real Return and Real Estate*

- *Actuarial Audit – The Segal Company*

The Audit Committee approved The Segal Company Actuarial Audit report.

- *Dean, Dorton – Update of Annual Audit for Fiscal Year End 2015*

- *Review of Quarterly Financial Statements 06/30/2015 (Unaudited)*

- *Review of Outstanding Invoices*

- *Review of Management Follow up on Audit Findings and Recommendations Summary Dashboard*

- *Review of Information Disclosure Incidents, 2nd Quarter Calendar Year 2015*
- *Review of Investment Compliance Report*
- *GASB 68*
- *Review of Internal Audit Budget 6/30/2015*
- *Review of Anonymous Reporting Spreadsheet*
- *State Police Employees Retirement System Board Election Memoranda*
- *Status of Current Audits Memoranda*
- *Request For External Assessment of KRS' IT Infrastructure*

The Audit Committee approved the Request for External Assessment of KRS' IT Infrastructure.

- *KRS Travel Policy and Procedures (Amendment)*

The Audit Committee approved the KRS Travel Policy and Procedures (Amendment).

RECOMMENDATION: The Audit Committee requests that the Board ratify the actions taken by the Audit Committee.

h:/boardmemo Sep 15.doc

KENTUCKY RETIREMENT SYSTEMS
William A. Thielen, Executive Director

Perimeter Park West ▾ 1260 Louisville Road ▾ Frankfort, Kentucky 40601
kyret.ky.gov ▾ Phone: 502-696-8800 ▾ Fax: 502-696-8822

MEMORANDUM

Date: August 27, 2015

To: Mike Cherry, Chair,
Audit Committee of the Board of Trustees

From: Connie A. Davis, CIA, CRMA, CAD
Internal Audit Director

Re: Request for Third-Party Assessment of KRS' IT Infrastructure

Please see the attached Request for Third-Party Assessment of KRS' IT Infrastructure. Management will present the request to the committee, and will answer any questions the committee may have.

Action is required of the Committee.

Enclosure

cc: David Rich, Vice Chair
Audit Committee of the Board of Trustees

Sec. Timothy Longmeyer, Esq., Member
Audit Committee of the Board of Trustees

Dr. Daniel L. Bauer, Member
Audit Committee of the Board of Trustees

Mary Helen Peter, Member
Audit Committee of the Board of Trustees

Randy K. Stevens, Member
Audit Committee of the Board of Trustees

Keith A. Peercy, Member
Audit Committee of the Board of Trustees

William A. Thielen, Esq.
Executive Director

Brian C. Thomas, Esq.
General Counsel

h:/KiZan Security Audit memo Aug 15

KENTUCKY RETIREMENT SYSTEMS
William A. Thielen, Executive Director

Perimeter Park West • 1260 Louisville Road • Frankfort, Kentucky 40601
kyret.ky.gov • Phone: 502-696-8800 • Fax: 502-696-8822

MEMORANDUM

To: Karen Roggenkamp
Chief Operations Officer

From: Mark H. McChesney, CISM, CISA, CISSP, CGEIT, CRISC MHM
Director, Division of Enterprise and Technology Services

Date: July 24, 2015

Subject: Request for External Assessment of KRS' IT Infrastructure

The purpose of this memo is to request the technical services of KiZAN to assess the security of KRS' information technology systems and networks and to seek the authorization of the KRS Audit Committee to perform this assessment. An annual independent review of our infrastructure is critical to ensure the security fitness of our resources.

The results of the assessment are also used by KRS' external auditors in preparation of their findings. The most recent audit by the Auditor of Public Accounts (APA) also utilized the 2013 report as part of their project. We have completed a independent assessment each year since 2006.

The KiZAN Statement of Work with pricing estimate of $29,040.00 is attached for your reference.

Attachment (1)

KiZAN

Innovation - Solutions - Results

Systems Engineering
Security
Managed Services
Solutions Development

2900 Eastpoint Parkway • Louisville, Kentucky • 40223 • 502.327.0333 • FAX: 513.297.5929
130 Crowne Point Place • Cincinnati, Ohio • 45241 • 513.563.6000 • FAX: 513.297.5929

Statement of Work
Enterprise Security Assessment
Kentucky Retirement Systems

Overview:

Kentucky Retirement Systems (KRS) has asked KIZAN to perform security assessments of select devices identified by KRS, including (estimated number of devices in parentheses):

- Externally accessible addresses, both KRS and START-related (10),
- Networking and other infrastructure devices (20),
- KRS servers (100, primarily Microsoft Windows Server platforms),
- Phone system and badge servers (16),
- START servers and related devices (75, primarily Microsoft Windows Server platforms),
- Various tests and data gathering for all workstations (primarily Windows XP and Windows 7 platforms) in the environment,
- Other miscellaneous devices (10)

Project Activities:

The following activities are included in this assessment:

- Assess externally accessible hosts from the Internet for configuration errors and exposure to known vulnerabilities.

- Conduct discovery of the KRS network's overall security posture, including but not limited to:

    - Interviews with IT staff, detailed reviews of Microsoft Active Directory (AD) security/account policies
    - AD Privileged account usage patterns
    - Document AD user, computer, group, and OU object statistics
    - Document Active Directory Group Policy Object (GPO) settings and linked locations (OU's)
    - Review enterprise DR/backup procedures for critical servers (primarily Windows platforms)
    - Review placement and configuration of network devices such as switches, firewalls, wireless APs, mail and virus filtering appliances
    - Review various implementations of security-related technologies in the enterprise

- Review security testing results for servers and workstations on the network (primarily Windows platforms), to include such information as operating system related configurations, patch levels, vulnerability testing findings, etc. Verify and perform additional testing where necessary.

- Perform AD resource access testing using non-privileged user account; include access to Windows file and print resources as well as network services. Testing will be performed from various VLANs within the KRS network.

- Review firewall rule sets and verify filters to and from various subnets, including the Internet as well as KRS/START environments. Review other security logs (GFI, domain controller, event logs from Windows Update Server, etc.) as necessary. Include both edge firewalls as well as application-based filtering devices (web proxies, for example).

- Review enterprise log management mechanisms policies and procedures.

- Review enterprise policies and procedures for data backup, encryption, off-site storage, and physical printout/removable media.

- Provide project documentation, including technical discussions of assessment methodologies and findings, detailed information and references regarding vulnerability remediation procedures, as well as a checklist of recommendations for network security going forward.

Pricing Information and Estimated Hours:

Tasks	Rate/Hour	Qty	Total
Assess externally accessible hosts from the Internet.	$165	16	$2,640.00
Network discovery	$165	8	$1,320.00
Review testing results (KRS and START), verify and tests as needed	$165	80	$13,200.00
Access testing, account usage patterns, and directory analysis	$165	12	$1,980.00
Firewall rule set and log reviews	$165	12	$1,980.00
Documentation of findings and recommendations	$165	48	$7,920.00
Total		176	$29,040.00

Note: The hours and associated costs shown in this Statement of Work (SOW) are included as method to help the customer and KIZAN approximate the number of hours that will be required to perform the tasks listed. The numbers of hours listed in this SOW are estimates that are based upon KIZAN's desire to provide the customer with a 'good-faith' estimation of what is required to perform the desired work. The customer is charged only for hours worked in 15-minute increments. **The pricing in this SOW references GSA contract # GS-35F-0129P.**

Costs in excess of the maximum project budget must be approved using the KIZAN Change Request using the process documented herein. Every attempt will be made to do so on an activity-by-activity basis.

Schedule

KIZAN will supply one full time resource to work on the project.

Roles for Project:

	Assigned to Client	*Assigned to KIZAN*
Client Project Manager	**Mark McChesney**	
KIZAN Project Manager		Ted Chang

Client Responsibilities

- Work with KiZAN project manager to provide necessary information as necessary.

KiZAN Responsibilities

- To complete all activities outlined above in the "Activities" section.

Confidentiality Statement

KIZAN, its employees, agents or subcontractors shall not disclose, publish or authorize others to publish any confidential information obtained from the records of the client or prepared by KIZAN for use by the client. Company warrants that it will not sell, loan, share, or otherwise use any of the clients' data with any third party whatsoever except by prior written approval by the client.

Security Assessment Indemnity Statement

In due process of any security assessment that KiZAN conducts, KiZAN always recommends that, if possible, EVERY device (server, workstation, infrastructure and mobile device) be assessed and reported upon. Only under these circumstances can KIZAN guarantee than a given environment is truly in the secured state that the assessment and the accompanying findings report indicate. In the event that the customer requests an assessment that is less than 'all device and environment inclusive', and then KIZAN can only report on its findings of the specified devices indicated in this statement of work. Under this circumstance, the assessment and findings report is simply a statement of discovered security at the time of the assessment. Under no circumstances does the findings and assessment report guarantee any preconceived or stated level of security. Nor, under any circumstance, does KiZAN guarantee that a given device cannot be compromised by any existing or yet-to-be created tools and utilities.

Change Request Process

A KIZAN Change Request (attached) will be the vehicle for communication changes to the Statement of Work. The Change Request must describe the change, the rationale for the changes and the cost and effect the change will have on the project. The designated Project Manager of the requesting party will review the proposed change and determine whether to submit the request to the other party. Both Project Managers will review the proposed change and approve it for further investigation or reject it. KIZAN will specify any charges for such investigation. If the investigation is authorized, the Project Managers will sign the Change Request, which will constitute approval for the investigation charges. KIZAN will invoice Client for any such charges. The investigation will determine the effect that the implementation of the Change Request will have on price, schedule and other terms and conditions on this Statement of Work. A written Change Request must be signed by both parties to authorize implementation of agreed upon changes.

Additional Client Responsibilities:

The responsibilities listed in this section are in addition to those responsibilities specified in the above *Statement of Work* and are to be provided by Client at no charge to KIZAN. Prior to the start of this Statement of Work, Client will designate a person, named the Client Project Manager, to whom all KIZAN communications will be addressed, with the authority to act for Client in all aspects of the contract.

The Client Project Manager's responsibilities include:

1) Review the Agreement, Statement of Work and associated attachments with KIZAN.
2) Coordinate with KIZAN any changes to the plan, schedule or procedures that are generated by Client.
3) Inform KIZAN on matters where Client requires appropriate action by KIZAN professionals to rectify deviations on items associated with this engagement.
4) Arrange office facilities for KIZAN personnel to perform work on-site at Client.
5) Identify individuals who will be available to work with KIZAN personnel, including a network technical professional, server technical professional and management interface.
6) With the KIZAN Project Manager, administer KIZAN Change Request as defined above
7) Obtain and provide information, data, decisions and approvals within a reasonable, mutually agreed upon time period for KIZAN's request, unless both KIZAN and Client agree to an extended response time.
8) Resolve deviations from the project plan, which may be caused by Client.
9) Help resolve project issues and escalates issues within the Client organization, as necessary.

Statement of Work Approved by:

Kentucky Retirement Systems	KiZAN
Signature:	Signature:
Print Name:	Print Name:
Title: Date:	Title: Date:

Administrative Information			
Client Project Manager (primary contact)		Invoice to (if different)	
Name:		Name:	
Address		Address	
Phone:		Phone:	
Fax		Fax	
E-mail		E-mail	
		PO Number (if required)	
Assigned Project Number		Tax exempt? (Certificate required)	
Comments			

KiZAN Change Order Request

Name:	Date:
Company:	Project:
Importance: High Medium Low	(Circle One)

Requested Change Summary (Please attach relevant documentation)

For KiZAN Use Only
Impact of Change

Hours to Complete: Target Completion Date: Cost:

Change Approved by:

CLIENT	KIZAN
Signature:	Signature:
Print Name:	Print Name:
Title:	Title:

KENTUCKY RETIREMENT SYSTEMS
TRAVEL POLICY AND PROCEDURES

Approval Date: May 20, 2004
Amended Dates: August 19, 2004; February 15, 2007;
February 19, 2009; August 18, 2011, September 11, 2014, September 10, 2015

Section 1: Scope

A. This policy is enacted pursuant to KRS 61.645(9)(c)(4), which provides that employees of Kentucky Retirement Systems ("KRS") are to be reimbursed for all reasonable and necessary travel expenses and disbursements made in the performance of their official duties. Additionally, this policy is enacted pursuant to the Bylaws of the Board of Trustees of KRS, which provides for reimbursement of travel expenses of KRS Board of Trustee members which have been incurred in the performance of their official duties. Pursuant to Kentucky Revised Statute 61.645(13), the expenses incurred on or behalf of KRS and the Board during the fiscal year shall be paid from the retirement allowance account.

B. Pursuant to the provisions of KRS 61.645, the Board of Trustees is permitted to conduct the business of KRS as necessary, limited only by its fiduciary obligations.

C. Pursuant to KRS Chapter 11A, all actual and necessary reimbursements for any Traveler shall be consistent with the requirements of the Kentucky Executive Branch Code of Ethics.

D. Employees of KRS are entitled to the minimum protections provided in KRS Chapter 45, but the Board of Trustees may expand upon those provisions under KRS 61.645.

E. The term "Traveler" as used in this policy shall be construed to mean all KRS Board of Trustees members, employees, or contractors eligible for reimbursement, authorized to conduct business on behalf of the Retirement System.

Section 2: Authorization and Reimbursement

A. Reimbursement under this policy shall only be made for expenses incurred by KRS' Travelers who have been authorized to conduct business on behalf of KRS. Reimbursement shall be made only for those types of expenses specifically authorized by the terms of this policy. KRS will not pay for or reimburse for a Traveler's personal expenses; however, if personal expenses are inadvertently paid for or reimbursed by KRS, the Traveler who receives the reimbursement shall repay the amount of personal expense to KRS within ten (10) business days after notice to do so. If the Traveler fails to reimburse KRS, the failure shall be grounds for disciplinary action up to and including dismissal.

B. Reimbursement under this policy shall only be made up to the most reasonably economical, standard accommodation and transportation available. Reimbursement of expenses without prior authorization shall be at the discretion of the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Retirement Systems Board of Trustees or the Trustee designated by the Chair.

C. Requests for reimbursement for KRS Trustees and employees shall be made on the appropriate travel voucher designated by KRS Management. Requests for reimbursement shall be made within thirty (30) days of the Traveler's returning from travel. Additionally, requests for reimbursement for travel occurring within the thirty day period prior to the end of the fiscal year, shall be submitted within five (5) business days of the Traveler's return from travel. Approval of requests submitted outside of the reimbursement request submission period may be approved at the discretion of the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Board of Trustees, or the Trustee designated by the Chair.

D. Prior to travel, a KRS Traveler shall obtain authorization to travel on official business of KRS by a Division Director, Chief Officer and/or the Executive Director, or his or her designee. Prior to or after travel, the Executive Director shall obtain authorization to travel on official business of KRS outside the Commonwealth of Kentucky by the Chair of the Board of Trustees, or the Trustee designated by the Chair to approve travel reimbursements.

1. In the event of travel outside of Franklin County, but within the Commonwealth of Kentucky, the Traveler shall obtain pre-authorization through e-mail documentation, or a Request for Travel Form.

2. In the event of travel outside the Commonwealth of Kentucky, the Traveler shall obtain prior written authorization on a Request for Travel Form.

3. The Request for Travel Form shall contain the following information:

   a) Name and Title of the Traveler requesting travel authorization;
   b) Purpose of the travel;
   c) Vicinity and length of time of travel;
   d) Estimated cost of travel;
   e) Signature and date of signature of person requesting authorization;
   f) Signature and date of signature of Division Director;
   g) Signature and date of signature of Chief Officer; and
   h) Signature and date of signature of the Executive Director or person authorized by the Executive Director; or
   i) If the Traveler is KRS' Executive Director, the signature and date of signature of the Chair of the Board of Trustees or Trustee authorized by the Chair.

E. A Traveler's "official workstation" shall be the street address of the Retirement System, unless otherwise designated by the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Retirement Systems Board of Trustees, or Trustee designated by the Chair. The "official workstation" for contractors eligible for reimbursement shall be their principal place of business as designed in the contract, unless otherwise designated by the Executive Director.

F. The "home" of a Traveler shall be the Traveler's principal place of residence, unless otherwise designated by the Executive Director.

G. "High rate areas" means the city, state, or metropolitan areas designated by the Secretary of the Finance and Administration Cabinet as a high rate area, in effect at the time of travel. A Traveler is eligible for reimbursement at the "high rate area" reimbursement rate, if the Traveler was located within the high rate area for no less than one (1) hour of the applicable mealtime hours.

~~F.~~H. A Traveler may add vacation days prior to or after travel, but reimbursement shall be limited to the expenses incurred over the time periods and distances required for Agency business.

~~G.~~I. A Traveler may travel with a companion; however, reimbursement shall be limited to the expenses attributable to the Traveler, excluding the companion, over the time periods and distances required for Agency business.

~~H.~~J. The Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Retirement Systems Board of Trustees, or Trustee authorized by the Chair, shall make a final determination regarding any controversy over travel reimbursement, including approval of travel without prior written authorization.

Section 3: Transportation

A. *Economy required*:~~.~~

(1) Travelers traveling on official business of KRS shall use the most economical, standard transportation reasonably available and take the most practicable direct and usually traveled routes. Additional expenses incurred by use of other transportation or routes shall be assumed by the Traveler.

(2) Round-trip, excursion or other negotiated reduced-rate rail or plane fares shall be obtained, if practicable.

(3) Tickets prepaid by KRS shall be purchased through agency business travel accounts provided by a major charge card company or commercial travel agencies.

(4) Tickets purchased in person, through the Internet, a travel company, or a travel agency shall be paid by the traveler and reimbursed upon the submission of ~~on~~ a ~~Travel~~ travel ~~Payment Voucher (“V~~voucher~~”)~~ with receipts or purchased with a ProCard issued under the KRS ProCard Policy.

(5) Change fees shall only be reimbursed to the Traveler if determined necessary by the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Retirement Systems Board of Trustees, or Trustee authorized by the Chair. Items considered change fees shall include, but not be limited to, fees for upgraded seat selection, priority boarding, or upgraded class.

(6) Exceptions may be made at the discretion of the Executive Director, or in the case of travel by the Executive Director, the Chair of the Board of Trustees, or the Trustee designated by the Chair, if other arrangements will be in the best interest of KRS.

B. *State vehicles*~~.~~:

State-owned vehicles with their credit cards may be used for KRS business travel when available and feasible. Mileage ~~payment~~ reimbursement shall not be claimed if a state-owned vehicle~~s~~ ~~are~~is used.

~~*Privately owned vehicles.*~~
~~Mileage claims for use of privately owned vehicles shall be allowed if a state vehicle was not available or feasible.~~

C. *Buses, ~~shuttles~~Shuttles, ~~subways~~Subways, ~~t~~Taxis, or similar services:~~.~~*

For city travel, travelers are encouraged to use buses, shuttles, and subways. Reimbursement for ~~T~~taxi fare or other similar services, such as digital network ridesharing services, shall be allowed when more economical transportation is not feasible.

D. *Airline ~~travel~~Travel:~~.~~*

Commercial airline travel shall be the lowest negotiated coach or tourist class. Additional expense for first-class, business-class, or similar upgrades shall not be reimbursed or paid for by KRS. Payment shall be made in accordance with subsection (A) of this section.

E. *Special Transportation*:~~.~~

(1) Rental vehicles~~,~~:

a. The cost of rental vehicles, hiring cars, or other special conveyances in lieu of ordinary transportation shall be allowed if written justification from the traveler prior to travel is submitted and approved by the Executive Director, his or her designee. The Executive Director shall not be subject to the prior written approval requirement of this subsection.

b. The cost of renting a vehicles shall be purchased with a KRS ProCard, pursuant to the KRS ProCard Policy

c. Exceptions may be made to the required pre-approval and method of payment at the discretion of the Executive Director, or in the case of travel by the Executive Director, the Chair of the Board of Trustees, or the Trustee designated by the Chair, if other arrangements will be in the best interest of KRS.

(2) Private Aircraft:

Privately owned aircraft may be used if, prior to travel, it is determined to be to the advantage of KRS, measured both by travel costs and travel time. Reimbursement for use of privately owned aircraft shall be made if, prior to use, written justification was submitted to and approved by the Executive Director, or a designated representative.

G *Mileage Privately Owned Vehicles:*

(1) Mileage claims for use of privately owned vehicles shall be allowed if a state vehicle was not ~~available or feasible~~utilized.

(2) KRS employees and contractors shall not be reimbursed for mileage from his or her home to workstation/workstation to home.

~~(2)~~(3) KRS Board of Trustee members shall be eligible to receive reimbursement for mileage for the commute between his or her home and workstation.

(3) If the Traveler's point of origin or point of return for travel is the Traveler's home, mileage shall be ~~paid~~ reimbursed for the shorter amount of mileage between: the home and travel destination, or workstation and travel destination. Vicinity travel and authorized travel within the area of a Traveler's workstation shall be listed on separate lines on the Voucher document.

(4) Reimbursement for authorized use of a privately owned vehicle shall be made at the IRS established standard mileage rate which changes periodically. The mileage reimbursement rate includes reimbursement for vehicle use, gas, maintenance, registration, and any personal automobile insurance coverage required by law.~~Reimbursement for authorized use of a privately owned vehicle shall be made at the IRS established standard mileage rate which changes periodically; and shall not exceed the cost of commercial coach fare. The mileage reimbursement rate includes reimbursement for vehicle use, gas, maintenance, registration, and any personal automobile insurance coverage required by law.~~

(5) Calculation for mileage for travel shall be based on the lowest mileage calculation from Google Maps, Apple Maps or Map Quest. A printout documenting the

lowest mileage calculation for each section of travel shall be attached to the travel voucher.

Section 4: Accommodations

A. Lodging shall be the most reasonably economical, as determined by considering the reason for the travel as well as the location, state of repair, and amenities of the lodging.

B. Facilities providing special government rates or commercial rates shall be used, if feasible.

C. State-owned facilities shall be used for meetings and lodging if available, practicable and economical.

D. Cost for lodging within forty (40) miles of the Traveler's official workstation or home shall be reimbursed only if approved by the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Board of Trustees, or Trustee designated by the Chair.

E. *Group lodging, by contract*.

(1) KRS may contract with hotels, motels and other establishments for four (4) or more travelers to use rooms on official business. Government rates shall be requested.

(2) The contract may also apply to meals and gratuities. The contract rates and the cost of rooms and meals per person shall not exceed limits set in these policies and procedures.

(3) A Traveler shall not claim reimbursement or subsistence for room and meals paid directly to an establishment providing these services.

(4) Payment shall be made directly to the contracted vendor and shall not include personal charges of travelers or others in the official service of KRS.

(5) Contracted group meeting rooms and lodging and meal charges are exempt from Kentucky sales tax. The KRS sales-use tax number assigned by the Revenue Cabinet shall be specified on the payment document.

(6) Tax exempt numbers shall not be used by individual travelers to avoid point of sale payment of Kentucky sales tax connected with lodging costs. Sales tax payments shall be reimbursed on a travel voucher.

(7) When using state park facilities, reimbursement for rooms and meals may be made by an Interaccount Document subject to the limits of these policies and procedures.

Section 5: Reimbursement Rates.

A. The following persons may be exempt from the provisions of this section, subject to the provisions of Section 6:

(1) Executive Director;

(2) Board of Trustees members;

(3) Chief Officers and the General Counsel;

(4) Investment Division Directors; and/or

(5) A KRS Traveler, traveling on assignment with the Executive Director, Board of Trustees members, the General Counsel or Chief Officers.

B. *Lodging*.

(1) A traveler traveling on official KRS business shall be reimbursed for the actual cost of lodging, if the lodging is determined by KRS Controller or Chief Operations Officer to be the most economical; and the traveler has provided the hotel, motel, or other establishment's receipts to be reimbursed for the travel expenses. Reimbursement for lodging shall not exceed the cost of a single room rate or one-half the double rate.

(2) The request for travel form, if required, the lodging receipts, and any other relevant documentation, shall be attached to the travel voucher for reimbursement. All reasonable and necessary travel expenses shall be reimbursed if the travel was pre-approved as evidenced by a signed and dated request for travel form. Reimbursements shall not be limited by the estimates included on the request for travel form. If the employee or Board member fails to have the travel pre-approved, travel expenses shall not be reimbursed unless it is determined by the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Retirement Systems Board of Trustees, or Trustee authorized by the Chair, that the travel expenses were reasonable and necessary and should be reimbursed.

C. *Subsistence*.

(1) A Traveler traveling on official KRS business shall be eligible for subsistence reimbursement for breakfast, lunch, or dinner expenses while traveling in or outside Kentucky, but within the United States, its possessions or Canada, at the rates established in these policies and procedures, if his or her authorized work requires travel during the mealtime hours established by this policy pursuant to and limited by the following:

(A) The Traveler is in travel status during the entire mealtime. For purposes of this Travel Policy the mealtime periods shall be as follows:

a. Breakfast mealtime- A Traveler shall be in continuous travel status on or before 6:30 a.m. through 9 a.m.

b. Lunch mealtime- A Traveler shall be in continuous travel status on or before 11:00 a.m. through 2:00 p.m.

c. Dinner mealtime- A Traveler shall be in continuous travel status on or before 5:00 p.m. through 9:00 p.m.

(B) The authorize travel requires:

a. An overnight stay; or

b. Travel is to a destination more than (40) miles from the Traveler's workstation and home.

1. Subsistence reimbursement for a Traveler who does not travel overnight is a taxable fringe benefit subject to applicable federal and state reporting and withholding requirements.

2. A separate designated travel voucher shall be submitted for subsistence reimbursement for travelers who do not travel overnight.

(2) Per diem subsistence reimbursement rates are as follows:

(A) **Non-high rate areas**:

Breakfast:	$8;
Lunch:	$10;
Dinner:	$18.

(B) **High rate areas**:

Breakfast:	$10;
Lunch:	$12;
Dinner:	$24.

(3) Unless otherwise noted below, a Traveler eligible for subsistence reimbursement may request reimbursement of the applicable per diem amount or reimbursement of actual expenses up to the per diem amount.

(4) Travelers authorized to travel outside the United States, its territories, or Canada shall be reimbursed for their actual and necessary expenses for subsistence.

(5) If a registration fee entitles the Traveler to subsistence or subsistence is otherwise covered by KRS, no claims for reimbursement for those meals shall be submitted or paid.

(6) Under no circumstances shall a KRS Traveler be reimbursed for the cost of alcoholic beverages or other substances prohibited by the Kentucky Retirement Systems' Personnel Policy, Kentucky Revised Statutes, or applicable administrative regulation.

~~(1) A Traveler traveling on official KRS business shall be eligible for subsistence for breakfast, lunch, or dinner expenses while traveling in or outside Kentucky, but within the United States, its possessions or Canada, at the rates established in these policies and procedures, if his or her authorized work requires travel during the mealtime hours established by this policy. Unless otherwise noted below, a Traveler eligible for subsistence reimbursement may request reimbursement of the applicable per diem amount or reimbursement of actual expenses up to the per diem amount.~~

~~(2) Under no circumstances shall a KRS Traveler be reimbursed for the cost of alcoholic beverages or other substances prohibited by the Kentucky Retirement Systems' Personnel Policy, Kentucky Revised Statutes, or applicable administrative regulation.~~

~~(3) A Traveler shall be eligible for reimbursement if he is in travel status during the entire mealtime. For example, to be eligible for breakfast reimbursement, a traveler shall begin travel at or before 6:30 a.m. and return at or after 9 a.m. This requirement shall apply to all meals. To be eligible for lunch reimbursement, a traveler shall begin travel before 11:00 a.m. and return at or after 2:00 p.m. To be eligible for dinner reimbursement, a Traveler shall begin travel before 5:00 p.m. and return at or after 9:00 p.m.~~

~~(4) A Traveler shall be eligible for reimbursement for subsistence while traveling in Kentucky, if the authorized work requires overnight travel or authorized travel to a destination more than (40) miles from the Traveler's work station or home, and the Traveler remains in travel status during the mealtime hours established in this policy.~~

~~(5) Mealtime hours and per diem subsistence reimbursement rates are as follows:~~

~~(A) Rates for **non-high rate areas**:~~
~~Breakfast: authorized travel 6:30 a.m. through 9 a.m. - - $8;~~
~~Lunch: authorized travel 11 a.m. through 2 p.m. - - $10;~~
~~Dinner: authorized travel 5 p.m. through 9 p.m. - - $18.~~

~~b. Rates for **high rate areas**:~~
~~Breakfast: authorized travel 6:30 a.m. through 9 a.m. - - $10;~~
~~Lunch: authorized travel 11 a.m. through 2 p.m. - - $12;~~
~~Dinner: authorized travel 5 p.m. through 9 p.m. - - $24.~~

~~For the purposes of this Travel Policy, "high rate areas" means the city, state, or metropolitan areas designated by the Secretary of the Finance and Administration Cabinet as a high rate area, and included in the Cabinet's policies and procedures manual incorporated by reference in 200 KAR 5:021 in effect at the time of travel. A Traveler is eligible for reimbursement at the "high rate area" reimbursement rate, if the Traveler was located within the high rate area for no less than one (1) hour of the applicable mealtime hours.~~

~~(6) Travelers authorized to travel outside the United States, its territories, or Canada shall be reimbursed for their actual and necessary expenses for subsistence.~~

~~(7) If a registration fee entitles the registrant to subsistence or subsistence is otherwise covered by KRS, no claims for reimbursement for those meals shall be submitted or paid.~~

~~(8) Subsistence reimbursement for a Traveler who does not travel overnight is a taxable fringe benefit, according to the Internal Revenue Service. For this reimbursement, KRS will withhold the applicable federal employment taxes and report this fringe benefit on the traveler's W-2 Form. A separate designated travel voucher shall be submitted for subsistence reimbursement for travelers who do not travel overnight.~~

~~D. *Transportation Rates*.~~

~~(1) Reimbursement for authorized use of a privately owned vehicle shall be made at the IRS established standard mileage rate which changes periodically; and shall not exceed the cost of commercial coach fare. The mileage reimbursement rate includes reimbursement for vehicle use, gas, maintenance, registration, and any personal automobile insurance coverage required by law.~~

~~(2) Calculation for mileage for travel shall be based on the calculation from Google Maps, Apple Maps or Map Quest. A print out must be attached to the travel voucher for the lowest mileage (either from home or KRS). Reimbursement for the actual cost of commercial transportation shall be made upon submission of receipts with the travel voucher.Calculation for mileage for travel shall be based on the calculation from a generally accepted mapping software or web-based mileage program.~~

~~(3) Reimbursement for the actual cost of commercial transportation shall be made upon submission of receipts with the travel voucher.~~

~~(4) Reimbursement for use of privately owned aircraft shall be made if, prior to use, written justification was submitted to and approved by the Executive Director, or a designated representative.~~

E. *Other Reimbursement*:

~~.~~

(1) Actual costs for parking, or bridge and highway toll charges shall be reimbursed upon submission of receipts with a completed travel voucher.

(2) Reimbursement shall be made for reasonable charges for baggage handling, delivery of baggage to or from a common carrier, lodging or storage, and overweight baggage charges, if the charges directly relate to official business.

(3) Registration fees required for admittance to approved meetings or conventions shall be reimbursed.

(4) Telephone, fax or electronic device connection costs for necessary official business shall be reimbursed. However, if KRS has provided reasonable access to telephone, fax or electronic device connection for the Traveler, additional unnecessary charges for similar access shall not be reimbursed.

(5) Telephone calls to KRS offices shall be made through the KRS toll free number, or lowest available service.

(6) Reasonable gratuities for baggage handling, parking, taxi/shuttle transportation, or concierge services. Taxi/shuttle/parking transportation gratuities are not to exceed 15% of the total cost of the service. Baggage handling and concierge services are reimbursed up to $3.00 per occurrence not to exceed $12.00 per day, unless otherwise reimbursed pursuant to this policy.~~Reasonable gratuities for baggage handling, parking, taxi/shuttle transportation, or concierge services not to exceed $3.00 per occurrence, unless otherwise reimbursed pursuant to this policy.~~

(7) Receipts for numerical paragraphs one (1) through six (6), for each cost less than ten dollars ($10.00), shall not be required; however, the Traveler shall provide written explanation of the items for which he or she is requesting reimbursement, including a brief description item, the date incurred, and the amount of the expense

Section 6: Actual and Necessary Expenses

A. The following persons are eligible for actual and necessary expenses, subject to the provisions of this Section:

(1) Executive Director;

(2) Board of Trustees members;

(3) Chief Officers;

(4) Investment Division Directors; and/or

(5) A KRS Traveler traveling on assignment with the Executive Director, Board of Trustees members, the General Counsel or Chief Officers.

B. Upon return from travel, travelers specified above must elect to receive either actual and necessary expense reimbursement or the per diem amount for meals as set out in Section 5 above for the entirety of the travel.

C. Actual and necessary expenses of official business travel~~,~~ shall only be reimbursed upon submission of receipts. . Receipts shall contain a line item description of the items or services purchased. It is the Traveler's burden to produce adequate documentations to support a request for actual and necessary expenses. A credit card statement, unsupported by additional documentation, shall not be considered a valid receipt.

D. Actual and necessary expenses for official business travel shall include:

(1) Lodging;

(2) Meals, (not to exceed twice the amounts provided in Section 5 above);

(3) Commercial transportation;

(4) Taxes related to actual and necessary expenses; and

(5) Reasonable gratuities for baggage handling, parking, taxi/shuttle transportation, or concierge services. Taxi/shuttle/parking transportation gratuities are not to exceed 15% of the total cost of the service. Baggage handling and concierge services are reimbursed up to $3.00 per occurrence not to exceed $12.00 per day, unless otherwise reimbursed pursuant to this policy.~~Reasonable gratuities, not to exceed 15% of the total cost of the service.~~

Section 7: Reimbursement documents

A. Reimbursement for authorized travel as outlined in these policy and procedures shall be requested for reimbursement on the approved travel voucher by all KRS Board of Trustees members and employees. The travel voucher should include the name of the Traveler, a detailed description of the travel, the amounts to be reimbursed, a description of the expenses to be reimbursed, and the date of preparation of the voucher.

B. Contractors, authorized to conduct business on behalf of the Retirement System and eligible for reimbursement for authorized travel as outlined in this policy and the applicable contractual agreement, shall submit the approved travel voucher or other documentation that includes the name of the Traveler, a detailed description of the travel, the amounts to be reimbursed, a description of the expenses to be reimbursed, and expense receipts.

C. A separate designated travel voucher shall be submitted for subsistence reimbursement for all KRS Board of Trustees members and employees who do not travel overnight.

D. The Traveler shall indicate whether the reimbursement should be in the form of check or direct deposit.

E. The Traveler, the Traveler's supervisor, and the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Board of Trustees, or Trustee designated by the Chair, shall sign the travel voucher prior to reimbursement.

F. Necessary travel expenses incurred by a Traveler as a result of circumstances outside of the Traveler's control. Such expenses shall be accompanied by receipts and other relevant documentation, a written detailed explanation or the circumstances resulting in the expenses, and attached to a completed designated travel voucher. These expenses may be reimbursed to the Traveler by the Retirement System at the discretion of the Executive Director, his or her designee, or in the case of travel by the Executive Director, the Chair of the Retirement Systems Board of Trustees, or Trustee authorized by the Chair.

(Signature Page to Follow)

CERTIFICATION

We, the Chair of the Board of Trustees and the Executive Director, do hereby certify that th~~is~~e Kentucky Retirement Systems ~~Board of Trustees~~ Travel Policy and Procedures was amended by the Board of Trustees on this the ~~11th~~ 10th day of September ~~2014~~2015.

Thomas K. Elliott, Chair	Date
William A. Thielen, Executive Director	Date

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Kentucky Retirement Systems Board of Trustees

FROM: William A. Thielen
Executive Director

DATE: September 3, 2015

SUBJECT: Retiree Health Plan Committee Report

The Retiree Health Plan Committee met on Thursday, September 3, 2014 to discuss and make decisions regarding the non-Medicare and Medicare eligible health plans for KRS retirees for the 2016 plan year. The recommendations of the Committee are documented below in the bolded red font.

Non Medicare-Eligible Retirees (KEHP Plan).

1. Recommendation as to what the monthly maximum contribution amount for the Non Medicare-Eligible plan.

NOTE: See PowerPoint Presentation, this contains the information on Tobacco Use fee, access to the Consumer Directed Health Plans, and completion of the Living Well Promise. 2016 KEHP plan premiums will be provided as a confidential handout during the Committee meeting.

Retiree Health Care Committee recommends that the KRS Board select the KEHP LivingWell PPO plan option as the contribution plan and set the contribution rate of $721.14 as the 100% contribution the Trust will pay for a retiree with a service credit of 240 months of service or greater. Because the Committee recommends the selection of the LivingWell PPO as the contribution plan, the hazardous rates would be tied to the rates for the LivingWell PPO Couple, Parent Plus, and Family plans.

Note: The Tobacco Use Fee remains unchanged for 2016. Retirees (including spouses and dependents) who are tobacco users will be responsible for paying the Tobacco Use Fee. This fee is $40.00 for the Single Level/Option and $80.00 for the Parent Plus, Couple, and Family Level/Option.

2. Recommendation as to whether KRS should default retirees/beneficiaries and their dependents into a plan for 2016.

Each year there are retirees who, due to unforeseen circumstances, failed to submit an application during open enrollment. KRS is without the power to allow them to enroll without a qualifying event. As a result, KRS' Board promulgated an administrative regulation, 105 KAR

1:410 which was effective 2/6/2015, to allow KRS to default retirees and their dependents into a health plan so that these individuals will not be without coverage for the year simply because they forgot to enroll during open enrollment. Each year several decisions must be made by the Board to facilitate the administration of the default process:

a. Recommendation as to which plan should be the default plan.

DEI is defaulting employees into the Standard CDHP plan; however, the Board may choose any of the four plans as a default plan.

b. Recommendation as to the circumstances under which retirees and their dependents should be defaulted into a plan for 2016.

   i. KRS Management recommends that current enrollees be defaulted at the same level of coverage as the previous plan year (single, parent plus, couple, family).

   ii. KRS Management recommends new retirees be defaulted into a single level of coverage.

   iii. KRS Management recommends retirees and beneficiaries not currently enrolled in a plan will not be defaulted into a plan.

   iv. Cross Reference Retirees with Active Employee Spouse: KRS 61.702(3)(a)5 provides the employer's contribution for the working member or spouse to be applied toward the premium, and the KRS insurance trust fund shall pay the balance not to exceed the monthly contribution. The Cross Reference plan is a Family plan. Unless, amended by the Board, the Cross Reference contribution will equal the monthly maximum contribution determined above.

   Please be advised that DEI has made changes to the Cross Reference default process for 2016 plan year for retirees/employees enrolled in the Living Well plans. DEI's changes are as outlined below.

   1. If both cross-referenced plan holders fulfilled their Living Well Promise in 2015, they will be enrolled automatically in the same plan at the same level for 2016.

   2. If one of the cross-referenced plan holders fulfilled the Living Well Promise in 2015 while the other did not, the plan holder who fulfilled the Living Well Promise will be defaulted into a Parent Plus Plan with the same Living Well plan the person was enrolled in for 2015. The plan holder who did not fulfill the Living Well Promise will be defaulted into the default plan at the single level.

   KRS Management recommends **retirees who are cross-referenced plan holders with a working spouse and both plan holders did not fulfill their**

Living Well Promise in 2015, be defaulted to Parent Plus level of coverage in order for KRS to provide coverage for dependent children. KRS Management will reach out individually to each of these cross referenced retiree plan holders to attempt completion of the 2016 application.

Retiree Health Care Committee recommends that the KRS Board allow new retirees and retirees currently enrolled in a LivingWell KEHP plan who did not complete the LivingWell Promise (including spouses and dependents) and do not fill out a 2016 KEHP Insurance Application to be enrolled by default in the Standard CDHP plan. This includes default enrollment as set forth above in 2b (i), (ii), (iii), and (iv).

Medicare-Eligible Retirees

1. Recommendation as to what the contribution rate should be for the Medicare-Eligible plan for 2016.

NOTE: See PowerPoint Presentation, from Humana and Information from Cavanaugh Macdonald.

Retiree Health Care Committee recommends setting the contribution rate for the KRS Premium Plan at $244.25. Note: The premium for the KRS Essential Plan is $77.76, the Medical Only Plan is $158.25, the MA Mirror Premium Plan is $311.19, and the MA Mirror Essential Plan is at $198.25). Note: the KRS Board of Trustees approved the premium rates above in the July 15, 2015 Special Meeting based on review of the MA RFP (request for proposal).

2. Recommendation as to whether KRS should continue to pay for the additional administrative fees for retirees who are required to enroll in one of the Mirror plans and who fall under certain exceptions.

On September 4, 2014, the Board approved payment for administrative fees for individuals who need to be enrolled in one of the Mirror Plans for several enumerated reasons (administrative exceptions):

- Individual is scheduled for a transplant or surgery at a hospital that Humana confirms will not accept Humana Medicare Advantage for said procedure for said individual.

- Individual is undergoing treatment by a specialist that Humana confirms will not accept Humana Medicare Advantage for said treatment for said individual.

- Individual resides outside Humana's Filed and Approved MA-PPO network service area where Humana affirms there are provider access issues (e.g., non-acceptance of Humana Medicare Advantage

The Committee should make a recommendation as to whether KRS will continue to pay this administrative fee for administrative exceptions in 2016.

Retiree Health Care Committee recommends that KRS continue to pay the administrative fee for administrative exceptions in 2016, under the circumstances as set forth in the three bullet points above.

3. Recommendation as to whether KRS should default retirees and their dependents into a plan for 2016.

Each year there are retirees who, due to unforeseen circumstances, failed to submit an application during open enrollment. KRS is without the power to allow them to enroll without a qualifying event. As a result, KRS' Board promulgated an administrative regulation, 105 KAR 1:410 which was effective 2/6/2015, to allow KRS to default retirees and their dependents into a health plan so that these individuals will not be without coverage for the year simply because they forgot to enroll during open enrollment.

a. If the Committee recommends that KRS default retirees and their dependents into a plan, recommendation as to which plan should be the default plan.

Due to federal law/regulations, the Medical Only or Mirror Plan without Prescription Drug coverage would be the only option available as a default plan for the Medicare-eligible population.

b. If the Committee recommends that KRS default retirees and their dependents into a plan, recommendation as to the circumstances under which retirees and their dependents should be defaulted into a plan for 2016.

   i. KRS Management would recommend that current enrollees and new retirees be defaulted into a plan. Retirees and beneficiaries not currently enrolled would not be defaulted into a plan.

   ii. Current enrollee would be defaulted at the same level of coverage as the previous plan year (single).

   iii. New retirees would be defaulted into a single level of coverage.

Retiree Health Care Committee recommends that Medicare eligible retirees (and their dependents) who fail to enroll in a plan during open enrollment be defaulted into the KRS Medical Only plan as set forth in 3b (i), (ii), and (iii) above. <u>Note</u>: If the spouse and dependents are not Medicare eligible, they will be defaulted into the KEHP Standard CDHP plan at the same Level/Option as the previous plan year (Single, Parent Plus, Couple, and Family).

The Retiree Health Plan Committee also reviewed an informational presentation regarding the impact of 105 KAR 1:410 to the Hazarodus Duty Dependents.

Implementation of 105 KAR 1:410 and Internal Audit's Recommendations

Background

In August 2014, KRS' Internal Audit Division provided a report of the results of their review of health insurance billings. In particular, it was determined that KRS relies on DEI to verify dependent eligibility for KEHP coverage. However, it was recommended that KRS staff initiate a process to verify eligibility of hazardous insurance dependents since KRS is making a contribution towards the premium for these members.

On September 11, 2014, KRS' Board of Trustees authorized staff to file the new ordinary regulation, 105 KAR 1:410, with LRC. This regulation incorporates the repealed regulatory provisions of 105 KAR 1:290 and 105 KAR 1:360. The regulation became effective 2/6/2015.

Currently, KRS makes contributions towards dependent health insurance coverage for hazardous retirees until the dependent child is age 26. This regulation clarifies the definition of dependent child as defined in Kentucky Revised Statutes 16.505(17). The impact is that KRS will no longer make contributions towards dependent children between the ages of 22 and 26.

As of August 2015,

- KRS had 401 Hazardous Duty Retirees with Dependents between 18-22 years of age,
- 722 Hazardous Duty Retirees with Dependents between 22-26 years of age, and
- 930 Hazardous Duty Retirees with multiple dependents between the age of 1 year old to 25 year old and they may also be impacted, but due to the multiple dependents, this analysis will require a manual review process.

Implementation

1. This change was effective 2/6/15, but since this impacts the amount KRS will contribute towards health insurance for hazardous members, we would like to implement with insurance Plan Year 2016 to provide our members with adequate notification. KEHP will not let these individuals drop these individuals so we could face estoppel issues, not to mention creating hardship for our hazardous members. Also, notifying our members during Open Enrollment

would afford them ample opportunity to locate adequate coverage for the 22+ year old child through the insurance market.

2. KRS will notify impacted retirees of this change prior to open enrollment via certified mail and will also include another notification in the open enrollment materials. KRS will provide two (2) notices in September 2015: one sent certified and if not picked up, a notice will be mailed, regular first class. <u>Note</u> – a non-certified mailing will be sent to retirees with hazardous duty dependents that may or may not be financially impacted in September 2015.

3. Once the change is implemented and KRS moves forward with identifying members impacted, we will notify these members 3 months prior to the child turning 22.

   KRS will also require that a dependent child meet the definition in KRS 16.505(17) in order to provide health insurance contribution for the dependent child.
   "Dependent child" means a child in the womb and a natural or legally adopted child of the member who has neither attained age eighteen (18) nor married or who is an unmarried full-time student who has not attained age twenty-two (22)"

4. KRS will require the Form 6256 (Designation of Spouse and/or Dependent Child for Health Insurance Certification of Dependent Eligibility) from the Retiree on a yearly basis. This form is verification that 1) he/she has a spouse and/or 2) has eligible dependents.
   Note: This form also advises that the **retiree will be responsible for payment of premiums** if the person no longer meets the criteria of dependent child as defined in KRS 16.505(17).

   "Dependent child" means a child in the womb and a natural or legally adopted child of the member who has neither attained age eighteen (18) nor married or who is an unmarried full-time student who has not attained age twenty-two (22)"

5. KRS will request the documentation, if the member did not provide it, KRS would not contribute towards the dependents' insurance coverage **until the appropriate documents are provided**. However, once the documentation is received and processed by KRS, KRS would being contributing towards the dependent coverage prospectively. KRS would follow this process starting January 1, 2016.

6. KRS will follow the same process for disabled dependents.

Kentucky Retirement Systems

2016 Medicare Advantage Renewal

September 3, 2015

Humana

Emerging Trends

- **Medical Services Trends**
  - Increasing Emergency Room and Urgent Care utilization
    - ER visits YTD have increased by 9.8% for KRS compared to 7.6% for the Humana Group MA Book of Business
    - Urgent Care visits YTD have increased by 13.4% for KRS compared to 20.7% for the Humana MA Book of Business
  - Increasing Utilization and Unit Cost for Chemotherapy
    - YTD cost up 13.2% for KRS vs. 7.3% for Humana's Group MA Book of Business

- **Pharmacy Services Trend – Specialty Drugs**
  - In 2020 the % of specialty drug sales is expected to be 47% compared to 39% in 2013.
  - Increasing cost and utilization of specialty drugs

    Hepatitis C Drugs
    - 2014: 27 members/ 77 prescriptions/ $2 million in claims
    - Jan. – June 2015: 14 members / 37 prescriptions/ $1.1 million in claims

    New Class of Cholesterol Meds
    - PCSK9 Inhibitors: injectable drugs with cost projection of $10,000 per year.

2016 KRS Landscape

Health Plans Offered

Kentucky Retirement Systems				
Plan Name	**2013 Membership**	**2014 Membership**	**2015 Membership**	**Plan Description**
Medicare Advantage Premium (Medical and Pharmacy)	31,146	35,659	40,684	The Medicare Advantage plans are "transitional" PPOs. This means the In Network and Out of Network benefits are the same. Members can see any provider or hospital as long as they accept Medicare assignment and will bill Humana. Claims are submitted to Humana and we pay Medicare's part and the enhanced benefits provided by KRS.
Medicare Advantage Essential (Medical and Pharmacy)	2,743	3,347	3,918	
Medical Only (Pharmacy not Included)	4,396	4,212	4,228	Medicare Secondary. Original Medicare pays primary. Member may select this plan if a spouse has a Medicare Advantage plan, receive benefits from Tricare or VA, do not have Part B or do not want pharmacy benefits.
Mirror Plan (Medical and Pharmacy)	779	98	71	Medicare Secondary. Original Medicare pays primary. This plan is for members who lose Part B at any time during the plan year. Members move in and out of this plan based on Part B status.
Total	**39,064**	**43,316**	**48,901**	

Kentucky Retirement Systems Rate History

Humana Medicare Advantage Plans

Plan Name	2012 (Prior Carrier)	2013 Humana *	% change 2013 over 2012	2014 Humana	% change 2014 over 2013	2015 Humana	% change 2015 over 2014	2016 Humana	% change 2016 over 2015	% change 2016 over 2012
Premium Plan Rate	**$372.00**	**$198.31**	**-46.7%**	**$212.39**	**7.0%**	**$244.25**	**15%**	**$244.25**	**0%**	**-34.3%**
Membership	33,491	31,146		35,659		36,995		40,684		
Est. Annualized Dollar Amount	$149,503,824	$74,118,759		$90,883,380		$108,432,345		$119,244,804		
Essential Plan Rate	**$171.00**	**$84.08**	**-50.2%**	**$67.62**	**-19.6%**	**$77.76**	**15%**	**$77.76**	**0%**	**-54.5%**
Membership	3,074	2,743		3,347		3,468		3,918		
Est. Annualized Dollar Amount	$6,307,848	$2,767,577		$2,715,890		$3,236,060		$3,655,964		

*Effective date of Humana Medicare Advantage contract with Kentucky Retirement Systems

2016 Renewal Summary

Medicare Advantage Plans

MAPD Premium $320 Deductible / $1,000 MOOP	2013 Members 31,146	2014 Members 35,659	2015 Members 36,995	2016 Membership 40,684
Total Required Revenue	$970.85	$981.07	$1,009.50	$1032.49
Projected Claims	$918.33	$921.34	$1,003.67	$1013.88
Admin Fee	$45.31	$47.57	$44.78	$46.46
Profit/Risk Margin	$7.21	$12.16	($38.95)	($27.85)
Net Government Reimbursement	$772.55	$768.68	$765.25	$788.24
Premium	**$198.31**	**$212.39**	**$244.25**	**$244.25**

MAPD Essential $320 Deductible / $1,000 MOOP	2013 Members 2,743	2014 Members 3,347	2015 Members 3,468	2016 Members 3,918
Total Required Revenue	$856.62	$699.70	$698.07	$742.96
Projected Claims	$808.67	$647.11	$645.89	$667.07
Admin Fee	$45.31	$47.57	$44.78	$46.46
Profit/Risk Margin	$2.64	$5.02	$7.40	$29.43
Net Government Reimbursement	$772.54	$632.09	$620.31	$665.20
Premium	**$84.08**	**$67.62**	**$77.76**	**$77.76**

Financial Commitments

Humana Medicare Advantage Plans

2016 Gain Share

- An arrangement in which a percentage of overages are shared between the carrier and client in the event actual MER results are more favorable than projected.
  - If MER is < 91.10%: KRS will receive 50% of the difference between a 91.10% MER and actual MER multiplied by Total Premium Revenue.

Renewal Commitments for 2017/2018

- 2017 & 2018 Admin Fee Cap - not to exceed 4% annually
- 2017 & 2018 Medical Trend Cap - not to exceed 5.5% annually

Kentucky Retirement Systems Rate History
Medical Only and Mirror Plan

Plan Name	2012 Rate (Prior Carrier)	2013 Humana Rate	% change 2013 over 2012	2014 Humana Rate	% change 2014 over 2013	2015 Humana Rate	% change 2015 over 2014	2016 Human a Rate	% change 2016 over 2015	% change 2016 over 2012
Medical Only (4,228 members)	**$147.00**	**$157.00**	6.8%	**$166.00**	5.7%	**$162.00**	-2.4%	**$158.25**	-2.3%	7.6%
Mirror Plan with Premium PDP (61 members)	NA	**$302.00**	NA	**$298.99**	0.01%	**$314.94**	5.3%	**$311.19**	-2.3%	NA
Mirror Plan with Essential PDP (10 members)	NA	**$190.00**	NA	**$200.78**	5.6%	**$202.00**	0.01%	**$198.25**	-3.5%	NA

2016 Renewal Summary

Medical Only and Mirror Plan

Medical Only/Mirror Plan ASO Fee	2015 Member Contribution	2016 Member Contribution
2014: $31.45 PMPM 2015: $33.02 PMPM **2016: $28.92 PMPM**	$33.02 (Humana ASO fee) + $128.98 (Expected claims cost*) = $162.00	$28.92 (Humana ASO fee) + $129.33 (Expected claims cost*) = $158.25 *see Cavanaugh Macdonald recommendation

PDP Only (Mirror Plan Rx)	Number of Members	2015 Humana Rate	2016 Humana Rate	% change 2016 over 2015
Premium	61	$152.94	$152.94	0%
Essential	10	$40.00	$40.00	0%

Mirror Plan + PDP Rx	2015 Member Contribution	2016 Member Contribution
Mirror plan + Premium PDP	$152.94 PDP + $33.02 (Humana ASO fee) + $128.98 (Expected claims cost*) = $314.94	$152.94 PDP + $28.92 (Humana ASO fee) + $129.33 (Expected claims cost*) = $311.19 *see Cavanaugh Macdonald recommendation
Mirror plan + Essential PDP	$40.00 PDP + $33.02 (Humana ASO fee) + $128.98 (Expected claims cost*) = $202.00	$40.00 PDP + $28.92 (Humana ASO fee) + $129.33 (Expected claims cost*) = $198.25 *see Cavanaugh Macdonald recommendation

Member Engagement Activity

Clinical Programs & In Home Assessments

- Retiree Meetings, held annually in October/November
  - 1247 retirees attended in 2014 at 14 locations across the state
- Attended KPR Annual Convention and Chapter Meetings
- Co-branded mail campaign encouraging participation in Humana's Clinical Care program and Health and Well-being Assessment
  - Participation in Humana Clinical Care Programs has improved to 62.4% as of July, the Humana benchmark is 62.8%
  - 15,804 Health and Well-being Assessments have been completed YTD. More than double the number of assessments completed in 2014

Appendix

Humana

Glossary of Terms

PMPM – billed on a ‘Per Member Per Month’ basis

PDP – Prescription Drug Plan

MA – Medicare Advantage Plan

MAPD – Medicare Advantage Prescription Drug plan

ASO Fee – Administrative Services Only fee

MRA – Medicare Risk Adjustment

YTD – Year to Date

CMS – Centers for Medicare & Medicaid Services

MOOP – Maximum Out of Pocket

MER – Medical expense ratio (revenue/claims)

TrOOP – True Out of Pocket Maximum

Kentucky Retirement Systems

Non-Medicare Eligible Health Insurance Plans

Kentucky Employee Health Plans (KEHP)

Kentucky Employees" Health Plan (KEHP)

- Plans
  - LivingWell PPO (requires LivingWell Promise)
    - Co-insurance 80% plan paid and 20% member paid.
    - Plan covers 100% of in-network preventive care.
    - Features co-pays for most medical services and all pharmacy services
    - Separate pharmacy and medical maximum out of pocket for 2016
    - This plan meets the 1994 Standard of Care
  - Standard PPO
    - Co-insurance 70% plan paid and 30% member paid.
    - Plan covers 100% of in-network preventive care.
    - Features co-pays for some medical services.
    - Separate pharmacy and medical maximum out of pocket for 2016
    - Co-pays on pharmacy are subject to a minimum and maximum amount ($10-$25).

(Additional information about the LivingWell Plans are on slide 6)

Board Decision Point:

Select Contribution Plan:

- Current plan for 2015 is the LivingWell PPO Plan
- Current contribution rate for 240 months of non-Hazardous and Hazardous Retiree Service Credit (100%) is **$708.56**
- Current Hazardous Spouse/Dependent (Couple **$1,543.58**, Family **$1,716.92**, Parent Plus **$1007.46** for Hazardous)
- Administrative Fee paid to DEI (Department of Employee Insurance) – currently $6.58 PMPM(per member per month)

Board Decision Point: Allow KRS Retirees to access the Consumer-Driven plan that includes a health reimbursement account (HRA)?

- CDHP Plans
  - LivingWell CDHP (requires LivingWell Promise)
    - HRA funds for single coverage is $500.
    - HRA funds for couple, parent-plus, and family coverage is $1000.
    - Has the lowest co-insurance – 85% plan paid and 15% member paid.
    - Plan covers 100% of in-network preventive care.
    - This plan exceeds the 1994 Standard of Care

  - Standard CDHP
    - HRA funds for single coverage is $250.
    - HRA funds for couple, parent-plus, and family coverage is $500.
    - Has coinsurance at 70% plan paid and 30% member paid.
    - Plan covers 100% of in-network preventive care.

(Additional information about the LivingWell Plans are on slide 6)

Default Plan

Option if no health insurance or waiver election is made during open enrollment

- Plan Identified by Department of Employee Insurance (DEI) as the Standard CDHP

Board Decision Point:

- Continue with the Standard CDHP as the KRS non-Medicare Default Plan

- Define Group to be automatically enrolled:
  - Retirees/Spouse/Dependants currently enrolled in a KEHP and New Retirees.
  - Consider increased cost to Trust due to automatic enrollment.
  - Define opt-out timeframe (January 2016).

Tobacco Usage Fee:

Non-smoking premium incentive is unchanged for plan year 2016. It does include all tobacco products and covered spouses and dependents (age 18 or older).

Tobacco – means all tobacco products including, but not limited to, cigarettes, pipes, chewing tobacco, snuff, dip, and any other tobacco products regardless of the frequency or method of use.

Tobacco Use Fee:

- $40 additional premium for Retiree Single Coverage
- $80 additional premium for Retiree Couple, Parent Plus or Family Coverage

Board Decision Point:

- Continue to define population for application:
  - All retirees with eligible spouses and dependants.
  - Hazardous Duty as well as non-Hazardous Duty.
  - All Trusts

- LivingWell Promise
  - Failure to Agree on the Health Insurance Application will result in default into a Standard plan option for 2016. If the member is unable to fulfill the promise because of a physical or mental health condition, KEHP will work with them to develop an alternative way to qualify for either LivingWell plan option.
  - Members will complete online the HumanaVitality Health Assessment between January 1, 2016-May 1, 2016 or Complete a VitalityCheck (biometric screening)
  - The assessment will provide members with a Vitality Age and goals that provide specific steps to improve their health.
  - Only the planholder is required to complete the LivingWell Promise. If a cross-reference option is selected the retiree and spouse must complete the Health Assessment or VitalityCheck (biometric screening).
  - Personal health information will not be collected by KEHP and any information disclosed during the assessment will be kept confidential. KEHP may receive aggregate data from HumanaVitality based on the Health Assessment completed by members.
- Impact for 2016
  - If the Retiree or Eligible Dependents failed to fulfill the LivingWell Promise they will not be allowed to enroll in the plan for 2017 and would only be eligible for the Standard (no LivingWell) plan options.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the KRS Board of Trustees

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Cavanaugh Macdonald Response to Actuarial Audit Report

Accompanying this memorandum you will find a letter of response to the Segal Actuarial Audit Report prepared by Cavanaugh Macdonald. Cavanaugh Macdonald's response to the actuarial audit report will be presented at the meeting by Todd Green and Alisa Bennett from Cavanaugh Macdonald.

RECOMMENDATION: None. This document is presented for information purposes only at this time.

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

August 25, 2015

Mr. William A. Thielen
Executive Director
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

RE: ACTUARIAL AUDIT RESULTS

Dear Bill:

We have received a draft copy of the Kentucky Retirement System Independent Actuarial Audit of the June 30, 2014 Actuarial Valuations and the 2008-2013 Experience Study dated August 18, 2015 which was produced by Segal to detail their findings of the review of our July 1, 2014 valuations, as well as our latest experience study report.

Segal has detailed a number of issues that will allow us to fine-tune future valuations and experience studies. We have reviewed each issue (in bold) and, as appropriate, provided our comments on the following pages.

Sincerely,

Todd B. Green, ASA, FCA, MAAA
Principal and Consulting Actuary

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

S:\Kentucky Retirement Systems\2015\Miscellaneous Correspondence\Audit Response Letter TG.doc

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com
Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE

Data Used in the Valuation

For beneficiaries in pay status, Cavanaugh Macdonald's processed data shows dates of birth that inconsistent with those reported in the System data. We assume the birth dates used in the valuation for this group are from a source other than the data provided by the System, but we were not provided with this source data and cannot verify that it is consistent with Cavanaugh Macdonald's processed data. We recommended these differences be evaluated.

It is our understanding that the date of birth provided by the System transmitted in the valuation data for beneficiaries is actually the date of birth for the member who died. For new beneficiaries we ask for the correct date of birth. If it is not available we adjust the date of birth three years older or younger depending on the member's gender. We will update the valuation report to describe this process.

Valuation Results

Segal suggests that the recommended employer contribution rates appear to be understated.

We do not agree with this assessment.

The employer contribution rates for the next fiscal year for the pension funds are determined by applying an interest adjustment for timing of contributions and then dividing by the expected payroll in the year it will be paid. The dollar amount of the recommended employer contribution divided by payroll as of the valuation date will not match the employer contribution rates shown in our report for the pension funds. In the future, we will more clearly describe the process in the valuation report.

As an example, for KERS Non-hazardous, the employer contribution rate is determined by:

- Applying an interest adjustment to the normal cost ($133,361,104), amortization of the unfunded ($467,668,933) and the administrative expense load ($11,144,929).
- Payroll is determined by projecting it to the year in which the contributions will made to the plan.
- The employer contribution which includes an adjustment for interest is divided by projected payroll to determine the total contribution rate for the System. From this amount the employee contribution rate is subtracted from the total to determine the employer's contribution rate.

Alternatively, the employer contribution rates for the next fiscal year for the insurance funds are determined by dividing the dollar amount of the recommended employer contribution as of the valuation date by the payroll as of the valuation date. This methodology inherently assumes that the employer contribution rate will remain level as a percentage of payroll from the valuation date to the next fiscal year. Under this methodology, the dollar amount of the recommended employer contribution divided by payroll as of the valuation date will match the employer contribution rates shown in our report for the insurance funds.

While these methods are not identical, both methods are valid and do not result in understating the employer contribution rates. Furthermore, we perform 20-year projections with each valuation on both the insurance and pension funds. These projections show our methodology to produce employer rates sufficient to meet the funding goals of KRS.

Valuation Report

Since GASB Statement 67 related to plan accounting was effective for the Systems' financial reporting as of June 30, 2014, the required calculations for GASB 67 should be included in the actuarial valuation report in place of the GASB 25 disclosure information.

GASB 67 replaces GASB 25, and represents a significant departure from the requirements of that older statement. GASB 25 was issued as a funding friendly statement that required pension plans to report items consistent with the results of the plan's actuarial valuations, as long as those valuations met certain parameters. GASB 67 divorces accounting and funding, creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System. Since GASB 67 is a departure from the funding friendly statement, we issue separate GASB 67 reports for the five retirement funds. Since the GASB 25 disclosure information is consistent with the funding valuation, we can continue to provide GASB 25 disclosure information in the funding valuation. If the Board feels that this information is no longer necessary or not relevant any longer, we will no longer include GASB 25 disclosure information in the funding valuation report for the retirement funds.

"Section IV - Comments on Valuation" simply describes the information presented in Schedule A, without highlighting important or noteworthy items.

We include noteworthy items in our Executive Summary and elsewhere in our reports, but we would be happy to discuss with KRS the inclusion of additional information in Section IV if it is desired.

In the tables labeled as "Experience Gain/(Loss)," it would be more appropriate to see demographic gains and losses expressed as a percentage of actuarial accrued liability and investment gains and losses expressed as a percentage of assets.

We will be happy to discuss with KRS the inclusion consider this in our next valuation.

In the tables labeled as "Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience," it would be informative to show the gain or loss attributable to actual contributions that are more or less than expected, particularly since actual payroll growth has been less than expected.

We will consider this in our next valuation.

While the summary section describes changes to the KEHP insurance benefits for non-Medicare retirees, no corresponding gain or loss in accrued liability is identified in the reconciliation.

Changes in claims costs more or less than expected, for both Medicare and non-Medicare eligible retirees, is captured under Pay or Claims Increases in our gain and loss.

In the reconciliation of accrued liability, it is not clear where gains or losses due to insurance plan participation rates higher or lower than expected are included.

It is included under Death or Waiver after Retirement.

Several of the actuarial assumptions were either incorrectly or incompletely disclosed in the valuation reports.

- ***a. Cavanaugh Macdonald's valuations determine results using a 7.75% rate of return. The CERS valuation report incorrectly discloses 7.50%.***
- ***b. Retirement rates disclosed in the valuation report for CERS Hazardous participants do not match the rates used in the valuation.***
- ***c. The KERS and CERS valuation reports disclose non-Hazardous insurance enrollment assumptions of 90% and 85% respectively. This enrollment assumption is only applied to participants hired before July 1, 2003. Participants hired on or after July 1, 2003 are assumed to participate at 100%.***
- ***d. The valuation reports fail to disclose the insurance plan election assumption for non-Medicare retirees.***
- ***e. For Medicare retirees, a weighted average of the various insurance options is used. The valuation reports fail to disclose that a weighted average is used, or the resulting average premium.***

We will correct a. and b. in our next valuation report. Item c. will change due to the experience study but we will take care to fully disclose all enrollment assumptions in our next valuation report. In regards to items d and e, we will add some clarifying language in our next valuation report.

The description of the insurance plan benefit amount per year of service for members whose participation began on or after September 1, 2008 does not include the cost of living adjustments.

We will consider this in our next valuation and discuss with KRS to make sure benefits are described as administered.

Projected Benefits

Termination decrement liabilities are determined by valuing the greater of the annuitized contribution balance and the regular retirement benefit. This assumption is not disclosed in the valuation reports for active members hired before January 1, 2014.

We will disclose this in our next valuation report.

For pension test lives covering active members hired before August 1, 2004, the return of contributions benefit for some participants is calculated using a 2.0% interest assumption for the termination decrement, whereas for the death and disability decrements it is calculated using a 2.5% interest assumption, which matches the assumption disclosed in the valuation report.

For pension test lives covering active members hired before January 1, 2014, the valuation reports state that a pre-retirement death benefit is payable to the beneficiary of a non-active participant who dies with at least 144 months of service. These death benefits are not valued in the termination decrement for current active members, resulting in an understatement of liabilities.

For hazardous pension active test lives covering active members hired before January 1, 2014, the $5,000 life insurance benefit is valued as an annuity instead of as a one-time death benefit, resulting in an overstatement of liabilities.

The service used to determine pension benefit factors is calculated inconsistently. For some projected benefit calculations, rounded service is used to determine the benefit factor, whereas exact service is used for other benefit calculations.

The death benefit for all hazardous pension active members was valued assuming a normal retirement age of 55, but the valuation reports indicate that those hired after September 1, 2008 should have a normal retirement age of 60, resulting in an overstatement of liabilities.

For insurance test lives covering participants hired on or after September 1, 2008, the annual 1.5% increase in the retiree's allowance is not applied once a participant terminates or retires, resulting in an understatement of liabilities.

For insurance test lives covering participants hired on or after January 1, 2014, the allowance is missing for participants who terminate before age 57, even if they meet all the requirements for an allowance paid at retirement, resulting in an understatement of liabilities.

We agree and will address these items in our next valuation. We recalculated the Actuarial Accrued Liabilities members as of June 30, 2014 for each System. The percentage change in the liability is detailed in the table below. In each case the overall impact on the liability is much less than 1% in all cases.

Change in Accrued Liability Due to Revisions

Pension Funds					
	KERS Non-Haz	KERS Haz	CERS Non-Haz	CERS Haz	SPRS
Actuarial Accrued Liability	0.06%	-0.09%	0.00%	0.02%	0.02%
Insurance Funds					
	KERS Non-Haz	KERS Haz	CERS Non-Haz	CERS Haz	SPRS
Actuarial Accrued Liability	0.12%	0.08%	0.16%	0.04%	0.02%

The assumed deferred vested retirement age is applied inconsistently for pension actives with frozen service. For example, in the CERS non-hazardous active test life with hazardous liability in the old plan, Cavanaugh Macdonald assumes the benefits are deferred to age 65 for the termination decrement, whereas the valuation report indicates that benefits are deferred to age 55. In contrast, for the KERS non-hazardous active test life with hazardous liability in the new plan, Cavanaugh Macdonald assumes deferred vested retirement age is 55, whereas the valuation report indicated that deferred vested retirement age is 65.

We disagree with the assessment of the auditing actuary. They are referring to a member who is active in the CERS Non-Hazardous System but has prior service in the CERS Hazardous System. This member will receive both a hazardous and non-hazardous retirement benefit. Our assumption is that the person will eventually retire from the System in which he is currently active. Therefore we are assuming that all benefit payments will commence at 65. The opposite holds true for the KERS member above, although we believe they are referencing a KERS Hazardous member. He is anticipated to retire from the KERS Hazardous Plan therefore all benefits would commence at age 55. We will improve the description of this calculation in the valuation report.

Assumptions and Methods

We believe that the 7.50% investment return assumption recommendation is reasonable.

We agree.

Monitor the inflation assumption in future actuarial investigations and compare to the U.S. Federal Reserve's formal long-term inflation target of 2%.

We monitor and consider the inflation assumption in our experience studies.

Study the increases in individual salaries by netting out actual price inflation during the experience period.

We consider this when we perform all of our experience studies. We noted in our experience study, "Due to the **low inflation** environment coupled with budgetary issues that faced state and local government during the experience period, we recommend no change to the salary scale other than the reduction due to the lowering of the wage base component of the total salary increase assumption from 4.50% to 4.00%."

Consider analyzing retirement experience by excluding experience at the assumed 100% retirement age and beyond.

We do not consider retirement experience that occurs at the assumed 100% retirement age and beyond.

The exclusion of actual 2012/2013 retirement experience may have been extreme and including this experience with a smaller weighting relative to the other years would have been a reasonable alternative approach.

As noted in our experience study, “Retirements that occurred during the 2012/2013 plan year were not included in this analysis due to significant plan changes which were implemented under SB2 which may have caused members to retire when they otherwise would not have.” Including this data in the experience study would have unnecessarily influenced the setting of a long-term assumption.

Section II: Review of Report and Validation of Benefits Valued

In the charts, it appears that the factors for Segal/CMC are inverted for Pension with Hazardous Service – Old Plan and Pension with Hazardous Service – New Plan.

MEMORANDUM

Date: August 20, 2015

To: Connie Davis
Director of Internal Audit

From: Karen Roggenkamp
Chief Operations Officer

Re: **FY 2015 Financial Highlights**

KENTUCKY RETIREMENT SYSTEMS							
Net Position Comparison – Pension Fund							
	KERS	KHAZ	CERS	CHAZ	SPRS		TOTAL
FY 15 Net Position	$2,329,910,643	$552,636,925	$6,444,374,027	$2,078,483,592	$247,273,138		$11,652,678,325
FY 14 Net Position	$2,578,291,044	$561,483,727	$6,528,146,353	$2,087,002,261	$260,974,259		$12,015,897,645
Change in Net Position	($248,380,401)	($8,846,802)	($83,772,326)	($8,518,670)	($13,701,121)		($363,219,320)

Total Pension Net Assets were $12.01 Billion at the beginning of Fiscal Year (FY) 2015 and decreased by 3.12% to $11.65B at June 30, 2015. The decrease of $363.2 Million was comprised of the following:

- Total **Contributions** were $1.33B ($273M higher than 2014) due to increased employee contributions, service purchases, and higher employer payments (KERS and SPRS). In addition, a one-time amount of $23M was received from the Bank of America settlement in the first quarter of 2015.
- Overall **Investment Income** was $204M compared to $1.64B in 2014. The major drivers of the decline in Investment Income were:
  - ➢ The net appreciation in the FV of Investments was negative $15.9M compared to a positive $1.37B in 2014. The 2015 Pension Investment performance was 2.01% compared to 15.55% in 2014.
  - ➢ Interest and Dividends earned during the 2015 fiscal year declined by $25.9M from prior year to $297.7M. Within the public equities space, in particular the Non-US portfolio, strategy shifts combined with a strengthening USD resulted in lower income for the current fiscal year. Additionally, a maturing Private Equity program generated capital disbursements (higher capital returns) versus interest payments. The Fixed Income portfolio generated similar investment income in FY15 as it did in FY14, as a low rate environment continued to persist. The decline in investment income was felt most within the KERS plan; however, improved employer contributions helped to stabilize these earnings later in 2015.
  - ➢ Investment expenses were $80.41M. Although the 2014-recorded expenses were $46.3M, KRS made a proactive transparency change in 2015 to record all fees in Investment Expense. This change included fees related to Private Equity investments, which previously were netted against Investment assets in 2014. Normalized 2014 expenses would be comparable to 2015 reported expenses.
- Total **Deductions** were $1.89B (up $62.3M from 2014). Benefits/Refunds totaled $1.86B. The 3.6% increase was comparable to prior years. Administrative expenses were $31.0M ($1.6M lower than 2014).

KENTUCKY RETIREMENT SYSTEMS							
Net Position Comparison – Insurance Fund							
	KERS	KHAZ	CERS	CHAZ	SPRS		TOTAL
FY 15 Net Position	$665,631,508	$439,109,670	$1,920,933,576	$1,056,474,241	$164,713,215		$4,246,862,210
FY 14 Net Position	$646,904,183	$433,524,589	$1,878,711,180	$1,030,303,789	$164,957,032		$4,154,400,773
Change in Net Position	$18,727,325	$5,585,081	$42,222,396	$26,170,453	$(243,816)		$92,461,438

Total Insurance Net Assets were $4.15 Billion at the beginning of Fiscal Year (FY) 2015 and increased by 2.2% to $4.24 Billion at June 30, 2015. The increase of $92.5 Million was comprised of the following:

- Total **Contributions** were $353.3M ($52.2M lower than 2014) due to a decrease in required employer contributions across all plans. The decrease was partially offset by higher retired reemployed contributions of $3.2M.
- Overall **Investment Income** was $76.4M compared to $527.1M in 2014. The major drivers of Investment Income were:
  - The net appreciation in the FV of Investments was $3.8M compared to $445.7M in 2014. The 2015 Insurance Investment performance was 1.86% compared to 14.89% in 2014.
  - Interest and Dividends were $99.3M (increase of $3.5M from the prior year) as KERS and CERS plans benefited from longer-term investments and a more stable cash flow.
  - Investment expenses were $27.9M. Although the 2014-recorded expenses were $15.7M, KRS made a proactive transparency change in 2015 to record all fees in Investment Expense. This change included Private Equity Investment fees, which previously were netted against Investment assets. Normalized 2014 expenses would be comparable to 2015 reported expenses.
- Total **Deductions** were $337.2M (higher by $37.1M compared to 2014). Healthcare Premiums accounted for $36.7 M of the increase. Self Funded Healthcare Administrative expenses of $6.1M were paid for retirees unable to participate in the Humana Medicare Advantage Plans (relatively unchanged from 2014).

KENTUCKY RETIREMENT SYSTEMS
William A. Thielen, Executive Director

Perimeter Park West ▾ 1260 Louisville Road ▾ Frankfort, Kentucky 40601
kyret.ky.gov ▾ Phone: 502-696-8800 ▾ Fax: 502-696-8822

MEMORANDUM

Date: August 27, 2015

To: Mike Cherry, Chair
Audit Committee of the Board of Trustees

From: Connie A. Davis, CIA, CGAP, CRMA, CAD
Internal Audit Director

Re: Review of Quarterly Financial Statements
For the Fiscal Year Ended June 30, 2015 (Unaudited)

The financial statements for the fiscal year ended June 30, 2015, (unaudited) are attached. Please note that the financial highlights of the financial statements are also included. This information is presented for review and discussion.

No action is required of the Committee.

Enclosure

cc: David Rich, Vice Chair
Audit Committee of the Board of Trustees

Sec. Timothy Longmeyer, Esq., Member
Audit Committee of the Board of Trustees

Dr. Daniel L. Bauer, Member
Audit Committee of the Board of Trustees

Mary Helen Peter, Member
Audit Committee of the Board of Trustees

Randy K. Stevens, Member
Audit Committee of the Board of Trustees

Keith A. Peercy, Member
Audit Committee of the Board of Trustees

William A. Thielen, Esq.
Executive Director

Karen D. Roggenkamp
Chief Operations Officer

Brian C. Thomas, Esq.
General Counsel

File

h:/fsmemo Aug 15

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF PLAN NET POSITION
PENSION FUNDS
As of June 30, 2015
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2015	2014		
ASSETS									
Cash and Short-term Investments									
Cash Deposits	$1,738,743	$1,556,216	$215,325	$582,717	$161,757	$4,254,758	$3,744,308	13.63%	1
Short-term Investments	$97,851,979	$196,484,748	$7,795,849	$71,674,928	$21,560,221	$395,367,724	$440,983,259	-10.34%	2
Total Cash and Short-term Investments	$99,590,722	$198,040,963	$8,011,174	$72,257,645	$21,721,978	$399,622,482	$444,727,566	-10.14%	
RECEIVABLES									
Accounts Receivable	$69,303,415	$56,612,745	$9,836,546	$14,841,796	$5,377,769	$155,972,271	$107,936,270	44.50%	3
Accounts Receivable - Investments	$61,166,521	$171,746,366	$6,212,753	$54,556,385	$14,366,350	$308,048,374	$642,101,102	-52.02%	4
Accounts - Alternate Participation				$107,629		$107,629	$113,526	-5.19%	
Total Receivables	$130,469,935	$228,359,111	$16,049,299	$69,505,810	$19,744,119	$464,128,274	$750,150,898	-38.13%	
INVESTMENTS, AT FAIR VALUE									
Fixed Income	$548,573,814	$1,478,773,744	$51,149,984	$477,676,764	$124,249,131	$2,680,423,439	$3,051,301,974	-12.15%	5
Public Equities	$881,431,919	$2,999,507,621	$110,380,734	$961,709,810	$248,062,305	$5,201,092,389	$5,358,280,375	-2.93%	
Private Equities	$344,071,561	$640,746,109	$26,929,867	$212,533,164	$62,556,432	$1,286,837,133	$1,287,466,227	-0.05%	
Derivatives	$1,241,318	$3,405,087	$128,419	$1,095,152	$286,257	$6,156,232	$4,050,284	52.00%	6
Absolute Return	$266,391,289	$705,646,947	$26,915,152	$223,749,315	$59,462,803	$1,282,165,506	$1,303,197,181	-1.61%	
Real Estate	$113,323,341	$348,220,317	$13,754,295	$112,134,290	$31,744,951	$619,177,193	$427,105,738	44.97%	7
Total Investments, at Fair Value	$2,155,033,242	$6,176,299,826	$229,258,451	$1,988,898,495	$526,361,878	$11,075,851,893	$11,431,401,780	-3.11%	
Security Lending Collateral Invested	$145,666,730	$413,476,369	$15,392,066	$133,569,895	$35,155,736	$743,260,796	$882,096,979	-15.74%	8
FIXED/INTANGIBLE ASSETS									
Fixed Assets (net of accumulated depreciation)	$58,446	$110,310	$470	$10,181	$6,001	$185,407	$221,197	-16.18%	9
Intangible Assets (net of accumulated amortization)	$3,305,507	$5,634,771	$48,551	$465,139	$285,512	$9,739,479	$10,318,371	-5.61%	
Total Fixed Assets	$3,363,953	$5,745,081	$49,021	$475,320	$291,513	$9,924,886	$10,539,568	-5.83%	
Total Assets	$2,534,124,582	$7,021,921,350	$268,760,011	$2,264,707,164	$603,275,224	$12,692,788,330	$13,518,916,791	-6.11%	
LIABILITIES									
Accounts Payable	$2,846,461	$5,402,995	$315,402	$1,346,081	$2,128,562	$12,039,499	$8,935,787	34.73%	10
Investment Accounts Payable	$55,700,747	$158,667,947	$5,779,415	$51,307,597	$13,354,003	$284,809,708	$611,986,389	-53.46%	11
Securities Lending Collateral	$145,666,730	$413,476,369	$15,392,066	$133,569,895	$35,155,736	$743,260,796	$882,096,979	-15.74%	12
Total Liabilities	$204,213,938	$577,547,310	$21,486,883	$186,223,572	$50,638,300	$1,040,110,003	$1,503,019,155	-30.80%	
Total Plan Net Position	**$2,329,910,644**	**$6,444,374,040**	**$247,273,128**	**$2,078,483,591**	**$552,636,924**	**$11,652,678,326**	**$12,015,897,636**	**-3.02%**	

NOTE - Variance Explanation

1 *Large Deposit settled on the last day of the fiscal year*
2 *Cash is being invested in longer term vehicles through New Managers and Capital Calls*
3 *Increase in Employer Contributions Rate for FY 2015*
4 *Variance is a result of transactions activity which is based on each individual manager*
5 *Additional Funding has been placed in the Real Estate Asset class through a reduction in TIPS.*
6 *Derivatives include currency forwards/futures as permitted by KRS investment policy. Derivative income increases as the hedging investment offsets the strong USD.*
7 *Additional funding has been placed in the Real Estate Asset class*
8 *PIMCO was a large contributor to the Program and they are no longer participating in the SL program*
9 *In FY 2014 a review of the Fixed Asset Policy was done which resulted in an increase in the individual threshold from $750 to $3,000 per item. A clean up was done to remove any items that were below the threshold.*
10 *Increase in Outstanding Credit Invoice*
11 *Variance is a result of transactions activity which is based on each individual manager*
12 *Removal of PIMCO as a participating manager of the Securities Lending Program*

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF CHANGES IN PLAN NET POSITION
PENSION FUNDS
For the Twelve Months Ending June 30, 2015
(Unaudited)(In Whole Dollars)

	KERS	**CERS**	**SPRS**	**CHAZ**	**KHAZ**	**2015**	**2014**	% Chg	
ADDITIONS									
Member Contributions	$100,424,471	$133,636,499	$5,150,288	$46,609,087	$12,669,450	$298,489,795	$275,031,676	8.53%	
Employer Contributions	$523,167,592	$301,399,528	$31,495,500	$107,830,137	$28,554,410	$992,447,166	$768,256,773	29.18%	1
Pension Spiking Contributions	$742,687	$850,142	$545,869	$556,690	$162,137	$2,857,525			$2
Bank of America Settlement	$8,442,347	$10,280,391	$644,756	$2,865,365	$767,141	$23,000,000			$3
Health Insurance Contributions (HB1)	$4,181,046	$6,674,325	$94,220	$1,082,700	$537,228	$12,569,520	$12,366,990	1.64%	
Total Contributions	$636,958,143	$452,840,885	$37,930,634	$158,943,980	$42,690,365	$1,329,364,006	$1,055,655,439	25.93%	
INVESTMENT INCOME									
From Investing Activities									
Net Appreciation in FV of Investments	($5,186,837)	($7,690,787)	($1,328,868)	($403,510)	($1,312,633)	($15,922,635)	$1,361,939,741	-101.17%	4
Interest/Dividends	$65,504,470	$160,713,657	$6,373,550	$51,202,921	$13,886,187	$297,680,785	$323,626,914	-8.02%	
Total Investing Activities Income	$60,317,633	$153,022,870	$5,044,682	$50,799,411	$12,573,554	$281,758,150	$1,685,566,655	-83.28%	
Investment Expense	$16,315,268	$44,163,869	$1,681,302	$14,240,230	$4,013,205	$80,413,874	$46,349,957	73.49%	5
Net Income from Investing Activities	$44,002,364	$108,859,001	$3,363,380	$36,559,181	$8,560,349	$201,344,276	$1,639,216,698	-87.72%	
From Securities Lending Activities									
Securities Lending Income	$592,299	$1,712,510	$60,678	$550,322	$140,054	$3,055,863	$4,066,093	-24.85%	
Securities Lending Expense									
Securities Lending Borrower Rebates	$40,577	($143,132)	($4,542)	($42,010)	($9,915)	($159,022)	($433,161)	-63.29%	
Security Lending Agent Fee	$75,897	$256,776	$8,993	$82,095	$20,640	$444,401	$674,888	-34.15%	
Security Lending Commission Expense									
Net Income from Securities Lending	$475,825	$1,598,866	$56,227	$510,236	$129,329	$2,770,483	$3,824,366	-27.56%	6
Total Investment Income	$44,478,189	$110,457,867	$3,419,607	$37,069,417	$8,689,678	$204,114,759	$1,643,041,063	-87.58%	
Total Additions	$681,436,332	$563,298,752	$41,350,241	$196,013,397	$51,380,043	$1,533,478,765	$2,698,696,502	-43.18%	
DEDUCTIONS									
Benefit Payments	$905,790,711	$615,334,770	$54,765,255	$200,133,703	$56,773,173	$1,832,797,611	$1,769,767,564	3.56%	
Refunds	$13,552,144	$13,523,666	$85,000	$3,110,537	$2,609,464	$32,880,811	$33,621,122	-2.20%	
Administrative Expenses	$10,473,878	$18,212,642	$201,108	$1,287,827	$844,208	$31,019,662	$32,592,529	-4.83%	
Total Deductions	$929,816,733	$647,071,078	$55,051,362	$204,532,067	$60,226,845	$1,896,698,085	$1,835,981,214	3.31%	
Net Increase(Decrease) in Plan Net Position	($248,380,401)	($83,772,326)	($13,701,121)	($8,518,670)	($8,846,802)	($363,219,319)	$862,715,288	-142.10%	
PLAN NET ASSETS HELD IN TRUST FOR PENSION BENEFITS									
Beginning of Period	**$2,578,291,044**	**$6,528,146,353**	**$260,974,259**	**$2,087,002,261**	**$561,483,727**	**$12,015,897,645**	**$11,153,182,356**	**7.74%**	
End of Period	**$2,329,910,643**	**$6,444,374,027**	**$247,273,138**	**$2,078,483,592**	**$552,636,925**	**$11,652,678,325**	**$12,015,897,645**	**-3.02%**	
	-9.63%	-1.28%	-5.25%	-0.41%	-1.58%	-3.02%	7.74%		

NOTE - Variance Explanation

1 *Increase in Employer Contribution Rate*
2 *Effective date 1/1/15*
3 *Funds Received in FY15*
4 *Unfavorable Market Conditions*
5 *Increase in Manager Fees from Private Equity as KRS has required more transparent reporting for Private Equity Managers*
6 *PIMCO was a large contributor to the Program and they are no longer participating in the SL program*

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF PLAN NET POSITION
INSURANCE FUNDS
As of June 30, 2015
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2015	2014		
ASSETS									
Cash and Short-Term Investments									
Cash Deposits	$286,050	$541,534	$12,380	$24,766	$29,707	$894,438	$354,145	152.56%	1
Short-term Investments	$20,559,334	$39,657,364	$4,743,292	$24,255,634	$9,936,058	$99,151,683	$138,688,699	-28.51%	2
Medicare Drug Deposit	($0)		($0)	($0)		($0)	$100,039	-100.00%	3
Total Cash and Short-term Investments	$20,845,384	$40,198,898	$4,755,672	$24,280,401	$9,965,765	$100,046,120	$139,142,883	-28.10%	
RECEIVABLES									
Accounts Receivable	$12,309,772	$14,341,534	$909,043	$5,754,428	$1,352,347	$34,667,123	$36,667,589	-5.46%	
Investment Accounts Receivable	$17,614,575	$51,245,531	$4,399,732	$28,216,980	$11,804,623	$113,281,441	$252,676,542	-55.17%	4
Total Receivables	$29,924,347	$65,587,065	$5,308,775	$33,971,407	$13,156,970	$147,948,565	$289,344,131	-48.87%	
INVESTMENTS, AT FAIR VALUE									
Security Lending Collateral Invested	$36,359,334	$106,186,220	$9,116,073	$58,472,047	$24,375,726	$234,509,400	$293,369,587	-20.06%	5
Fixed Income	$208,527,455	$616,374,839	$52,089,448	$340,965,453	$140,537,452	$1,358,494,646	$1,445,430,202	-6.01%	
Public Equities	$276,927,027	$768,439,964	$64,167,505	$417,492,853	$179,954,365	$1,706,981,715	$1,661,738,753	2.72%	
Derivatives	$352,384	$1,033,401	$88,684	$565,977	$238,441	$2,278,887	$868,135	162.50%	6
Private Equities	$40,493,430	$166,890,178	$15,083,308	$92,976,895	$33,611,870	$349,055,682	$270,841,221	28.88%	7
Absolute Return	$71,871,965	$208,348,528	$18,258,718	$116,561,246	$48,445,608	$463,486,065	$430,008,984	7.79%	
Real Estate	$36,345,644	$106,604,372	$9,535,296	$58,404,179	$25,553,621	$236,443,112	$151,004,974	56.58%	8
Total Investments, at Fair Value	$634,517,905	$1,867,691,282	$159,222,960	$1,026,966,604	$428,341,357	$4,116,740,107	$3,959,892,269	3.96%	
Total Assets	$721,646,970	$2,079,663,465	$178,403,480	$1,143,690,459	$475,839,818	$4,599,244,192	$4,681,748,871	-1.76%	
LIABILITIES									
Accounts Payable	$899,686	$801,076	$64,478	$342,353	$100,673	$2,208,266	$47,017	4596.69%	9
Investment Accounts Payable	$18,756,431	$51,742,592	$4,509,714	$28,401,818	$12,253,749	$115,664,304	$233,931,484	-50.56%	10
Securities Lending Collateral	$36,359,334	$106,186,220	$9,116,073	$58,472,047	$24,375,726	$234,509,400	$293,369,587	-20.06%	11
Total Liabilities	$56,015,451	$158,729,888	$13,690,265	$87,216,218	$36,730,148	$352,381,970	$527,348,088	-33.18%	
Total Plan Net Position	$665,631,518	$1,920,933,577	$164,713,214	$1,056,474,241	$439,109,670	$4,246,862,222	$4,154,400,783	2.23%	

NOTE - Variance Explanation

1 *KRS makes every attempt to keep cash on has at a minimal but often times cash flows cause a variance in what is on hand*
2 *Cash is being invested in longer term vehicles through New Managers and Capital Calls*
3 *KRS was able to close the required Medicare Drug Deposit Account with the closing of the self funding program*
4 *Variance is a result of transactions activity which is based on each individual manager*
5 *PIMCO was a large contributor to the Program and they are no longer participating in the SL program*
6 *Derivatives include currency forwards/futures as permitted by KRS investment policy. Derivative income increases as the hedging investment offsets the strong USD.*
7 *Additional Funds placed in Private Equity through the reduction in TIPS (Fixed Income)*
8 *Additional Funds placed in Real Estate through the reduction in TIPS (Fixed Income)*
9 *Insurance Reimburses the Pension Fund for any Administrative Expenses, the transfer totals where not confirmed until after 6/30/15*
10 *Variance is a result of transactions activity which is based on each individual manager*
11 *PIMCO was a large contributor to the Program and they are no longer participating in the SL program*

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATMENTS OF CHANGES IN PLAN NET POSITION
INSURANCE FUNDS
For the Twelve Months Ending June 30, 2015
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2015	2014		
ADDITIONS									
Employer Contributions	$132,208,490	$115,835,909	$10,379,046	$71,007,592	$14,172,905	$343,603,942	$397,435,426	-13.54%	1
Medicare Drug Reimbursement							$14,295	-100.00%	2
Insurance Premiums	$271,718	$582,678	$843	$10,020	$14,056	$879,315	$2,446,707	-64.06%	3
Retired Reemployed Healthcare	$3,731,847	$3,607,700	$2,834	$770,539	$709,438	$8,822,358	$5,611,023	57.23%	4
Total Contributions	$136,212,055	$120,026,286	$10,382,724	$71,788,151	$14,896,399	$353,305,615	$405,507,451	-12.87%	
INVESTMENT INCOME									
From Investing Activities									
Net Appreciation in FV of Investments	($3,750,027)	$4,652,009	$102,083	$2,801,843	($36,822)	$3,769,087	$445,660,269	-99.15%	5
Interest/Dividends	$15,908,044	$44,615,325	$3,958,100	$24,358,189	$10,470,450	$99,310,108	$95,813,060	3.65%	
Total From Investing Activities	$12,158,017	$49,267,334	$4,060,184	$27,160,033	$10,433,628	$103,079,195	$541,473,329	-80.96%	
Investment Expense	$3,654,438	$13,082,126	$1,185,520	$7,175,588	$2,765,329	$27,863,001	$15,660,653	77.92%	6
Net Income from Investing Activities	$8,503,579	$36,185,208	$2,874,663	$19,984,444	$7,668,298	$75,216,194	$525,812,676	-85.70%	
From Securities Lending									
Securities Lending Income	$151,703	$450,709	$37,957	$249,534	$102,772	$992,673	$1,364,988	-27.28%	
Securities Lending Expense									
Security Lending Borrower Rebates	($53,028)	($152,562)	($13,348)	($81,705)	($35,493)	($336,137)	($111,969)	200.20%	
Security Lending Agent Fees	$23,898	$70,472	$5,937	$38,704	$16,103	$155,115	$221,544	-29.98%	
Net Income from Securities Lending	$180,832	$532,799	$45,368	$292,534	$122,162	$1,173,695	$1,255,414	-6.51%	7
Total Net Income from Investments	$8,684,412	$36,718,007	$2,920,031	$20,276,979	$7,790,460	$76,389,889	$527,068,090	-85.51%	
Total Additions	$144,896,467	$156,744,293	$13,302,755	$92,065,129	$22,686,860	$429,695,503	$932,575,541	-53.92%	
DEDUCTIONS									
Healthcare Premiums Subsidies	$123,127,689	$110,032,112	$13,459,812	$65,404,041	$16,901,316	$328,924,969	$292,241,016	12.55%	8
Administrative Expense	$892,952	$781,721	$64,478	$338,815	$100,673	$2,178,639	$1,612,889	35.08%	9
Self Funded Healthcare Costs	$2,145,320	$3,702,445	$22,232	$151,613	$99,653	$6,121,263	$6,169,315	-0.78%	
Excise Tax Insurance	$3,182	$5,620	$48	$208	$136	$9,194	$40,340	-77.21%	10
Total Deductions	$126,169,142	$114,521,897	$13,546,571	$65,894,677	$17,101,779	$337,234,065	$300,063,561	12.39%	
Net Increase(Decrease) in Plan Net Position	$18,727,325	$42,222,396	($243,816)	$26,170,453	$5,585,081	$92,461,438	$632,511,980	-85.38%	
NET PLAN ASSETS HELD IN TRUST FOR INSURANCE BENEFITS									
Beginning of Period	$646,904,183	$1,878,711,180	$164,957,032	$1,030,303,789	$433,524,589	$4,154,400,773	$3,521,888,793	17.96%	
End of Period	$665,631,508	$1,920,933,576	$164,713,215	$1,056,474,241	$439,109,670	$4,246,862,212	$4,154,400,773	2.23%	
	2.89%	2.25%	-0.15%	2.54%	1.29%	2.23%	17.96%		

NOTE - Variance Explanation

1 *Reduction in Employer Contribution Rates for the Insurance Fund*
2 *Move from Self Funding Insurance Program to Premiums Based Program*
3 *Increase in both retired reemployed and premiums charged*
4 *Enhanced Reporting to Capture those not being reported as well as more retirees coming back to work*
5 *Unfavorable Market Conditions*
6 *Increase in Manager Fees from Private Equity as KRS has required more transparent reporting for Private Equity Managers*
7 *PIMCO was a large contributor to the Program and they are no longer participating in the SL program*
8 *Increase in Premiums paid to Humana*
9 *Remainder of Self Funded Population, expenses are unpredictable*
11 *This charge is based on the number of insurance policies administered by KRS. There are far less since the move from the self-funded insurance program*

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board of Trustees

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: KRS Administrative Budget-to-Actual Expenditure Update

Accompanying this memorandum, you will find the spreadsheets showing KRS Administrative budget-to-actual expenditures for the twelve months of Fiscal Year 2014-15. Key informational items for this period include:

- Total expenditures through June 30 totaled $31.0 million (24 percent below budget).
- Overall, salaries and benefits were on target with the budget. Actual legal expenses were approximately $1.2 million below budget related to lower Seven Counties litigation. Auditing and Technology expenses were higher than expected caused by GASB 68 implementation and technology equipment replacement. These higher expenses were offset by favorability in health care, investment consulting, and postage/printing.
- Additional information includes two ancillary reports showing the split out of Internal Audit and Investments actual expenses (both were below budget for FY 2015).

RECOMMENDATION: None. This item is presented for information purposes only.

KRS ADMINISTRATIVE BUDGET 2014-2015
BUDGET-TO-ACTUAL ANALYSIS
As of June 30, 2015

Acc't #	Account Name	Budgeted	Acutal Expenses	Remaining	% Remaining
	PERSONNEL				
111	Salaries	$14,426,125	$14,292,021	$134,104	1%
120	Benefits	$8,842,352	$8,654,939	$187,413	2%
131	Workers Compensation	$34,000	$32,365	$1,635	5%
132	Unemployment	$10,000	$0	$10,000	100%
133	Tuition Assistance	$35,000	$33,505	$1,495	4%
133I	Investment Tuition Assistance	$5,000	$1,169	$3,831	77%
133T	Audit Tuition Assistance	$2,500	$749	$1,751	70%
135	Bonds	$3,000	$204	$2,796	93%
141	**LEGAL & AUDITING SERVICES**				
141A	Legal Hearing Officers	$344,000	$220,949	$123,051	36%
141B	Legal (Stoll, Keenon)	$225,000	$111,617	$113,383	50%
141C	Polsinelli Shugart	$100,000	$21,661	$78,339	78%
141E	Reinhart	$350,000	$125,554	$224,446	64%
141F	Ice Miller	$1,200,000	$367,526	$832,474	69%
142	Auditing	$70,000	$107,542	($37,542)	-54%
146	**CONSULTING SERVICES**				
146A	Medical Reviewers	$380,000	$290,644	$89,356	24%
146B	Medical Reports	$10,000	$180	$9,820	98%
146C	Medical Exams	$20,000	$23,993	($3,993)	-20%
150	**CONTRACTUAL SERVICES**				
150C	Miscellaneous Contracts	$205,000	$267,867	($62,867)	-31%
150D	Health Consultant	$125,000	$124,965	$35	0%
150E	Banking	$9,000	$0	$9,000	100%
150F	PBI	$9,000	$0	$9,000	100%
150G	Human Resources Consulting	$100,000	$0	$100,000	100%
150H	Health Insurance Admin Fee	$1,867,700	$2,057,553	($189,853)	-10%
150I	Investment Consulting	$1,600,000	$225,000	$1,375,000	86%
150J	Medical Claims TPA	$2,841,997	$0	$2,841,997	100%
150K	Pharmacy Claims TPA	$2,773,369	$0	$2,773,369	100%
159	Actuarial Services	$500,000	$336,862	$163,138	33%
162	Facility Security Charges	$3,000	$1,378	$1,622	54%
	PERSONNEL SUBTOTAL	**$36,091,043**	**$27,298,244**	**$8,792,799**	**24%**

KRS ADMINISTRATIVE BUDGET 2014-2015
BUDGET-TO-ACTUAL ANALYSIS

Acc't #	Account Name	Budgeted	Actual Expenditures	Remaining	% Remaining
	OPERATIONAL				
211	Natural Gas	$25,000	$21,247	$3,753	15%
212	Electric	$187,800	$188,586	($786)	0%
221	Rent-NonState Building	$33,500	$31,488	$2,012	6%
222	Rent -State Owned Building	$686,300	$686,413	($113)	0%
223	Equipment Rental	$5,000	$10,153	($5,153)	-103%
224	Copier Rental	$86,000	$65,704	$20,296	24%
226	Rental Carpool	$0	$0	$0	
232	Vehicle/Equip. Mainten.	$29,000	$968	$28,032	97%
241	Postage	$525,000	$299,644	$225,356	43%
242	Freight	$1,200	$765	$435	36%
251	Printing (State)	$1,000	$0	$1,000	100%
252	Printing (non-state)	$300,000	$81,392	$218,608	73%
254	Insurance	$81,300	$81,975	($675)	-1%
256	Garbage Collection	$12,300	$13,477	($1,177)	-10%
259	Conference Expense	$40,000	$22,027	$17,973	45%
259I	Conference Exp. Investment	$12,600	$3,017	$9,583	76%
259T	Conference Exp. Audit	$1,500	$1,302	$198	13%
300	MARS Usage	$25,000	$30,400	($5,400)	-22%
321	Office Supplies	$96,300	$76,553	$19,747	21%
331	Data Processing Supplies	$45,000	$9,776	$35,224	78%
343	Motor Fuels & Lubricants	$2,707	$2,755	($48)	-2%
346	Furniture & Office Equipment	$50,000	$29,684	$20,316	41%
361	Travel (In-State)	$109,000	$76,543	$32,457	30%
361I	Travel (In-State) Investment	$1,500	$0	$1,500	100%
361T	Travel (In-State) Audit	$500	$116	$384	77%
362	Travel (Out of State)	$40,000	$17,270	$22,730	57%
362I	Travel (Out of State) Invest	$51,050	$33,637	$17,413	34%
362T	Travel (Out of State) Audit	$2,500	$2,475	$25	1%
381	Dues & Subscriptions	$37,000	$47,390	($10,390)	-28%
381I	Dues & Subscriptions Invest	$42,000	$7,646	$34,354	82%
381T	Dues & Subscriptions Audit	$1,000	$1,020	($20)	-2%
399	Miscellaneous	$2,500	$19,825	($17,325)	-693%
399I	Miscellaneous Investment	$16,700	$6,912	$9,788	59%
399T	Miscellaneous Audit	$500	$86	$414	83%
601	Capital Outlay	$300,000	$0	$300,000	100%
802	COT Charges	$90,000	$90,783	($783)	-1%
814	Telephone - Wireless	$8,000	$4,908	$3,092	39%
815	Telephone - Other	$150,000	$99,853	$50,147	33%
847	Computer Equip./Software	$1,550,000	$1,624,643	($74,643)	-5%
847I	Comp. Equip./Software Invest	$190,000	$21,305	$168,695	89%
847T	Comp. Equip/Software Audit	$1,000	$500	$500	50%
	OPERATIONAL SUBTOTAL	**$4,839,757**	**$3,712,239**	**$1,127,518**	**23%**
	TOTALS	**$40,930,800**	**$31,010,483**	**$9,920,317**	**24%**

KRS ADMINISTRATIVE BUDGET 2014-15

INTERNAL AUDIT - BUDGET-TO-ACTUAL ANALYSIS

As of June 30, 2015

Acc't #	Account Name	Budgeted	Actual Expense	Remaining	% Remaining
	PERSONNEL (1)				
133T	Audit Tuition Assistance	$2,500	$749	$1,751	70%
	PERSONNEL SUBTOTAL	**$2,500**	**$749**	**$1,751**	**70%**
	OPERATIONAL				
259T	Conference Exp. Audit	$1,500	$1,302	$198	13%
361T	Travel (In-State) Audit	$500	$116	$384	77%
362T	Travel (Out of State) Audit	$2,500	$2,475	$25	1%
381T	Dues & Subscriptions Audit	$1,000	$1,020	($20)	-2%
399T	Miscellaneous Audit	$500	$86	$414	83%
847T	Comp. Equip/Software Audit	$1,000	$500	$500	50%
	OPERATIONAL SUBTOTAL	**$7,000**	**$5,499**	**$1,501**	**21%**
	TOTALS	**$9,500**	**$6,248**	**$3,252**	**34%**

INVESTMENT AUDIT - BUDGET-TO-ACTUAL ANALYSIS

As of June 30, 2015

Acc't #	Account Name	Budgeted	Actual Expense	Remaining	% Remaining
	PERSONNEL (1)				
133I	Investment Tuition Assistance	$5,000	$1,169	$3,831	77%
	CONTRACTUAL SERVICES				
141E	Reinhart	$125,000	$125,554		
150I	Investment Consulting (2)	$1,600,000	$225,000	$1,375,000	86%
	PERSONNEL SUBTOTAL	**$1,730,000**	**$351,723**	**$1,378,831**	**80%**
	OPERATIONAL				
259I	Conference Exp. Investment	$12,600	$3,017	$9,583	76%
361I	Travel (In-State) Investment	$1,500	$0	$1,500	100%
362I	Travel (Out of State) Investment	$51,050	$33,637	$17,413	34%
381I	Dues & Subscriptions Invest	$42,000	$7,646	$34,354	82%
399I	Miscellaneous Investment	$16,700	$6,912	$9,788	59%
847I	Comp. Equip./Software Investment	$190,000	$21,305	$168,695	89%
	OPERATIONAL SUBTOTAL	**$313,850**	**$72,517**	**$241,333**	**77%**
	TOTALS	**$2,043,850**	**$424,240**	**$1,620,164**	**79%**

(1) Staff salaries are included in total KRS Budget reporting.
(2) Management Consulting Fees were expensed to the Trusts for Investment Fee Transparency.

KENTUCKY RETIREMENT SYSTEMS
INVESTMENTS

TO: Kentucky Retirement System Board of Trustees

FROM: David Peden, Chief Investment Officer

DATE: September 10, 2015

SUBJECT: Investment Committee Quarterly Report

The Investment Committee held its regularly scheduled meeting on August 25, 2015. The purpose of the meeting was to evaluate investment activities, program structure, management, controls, and performance results of the Pension and Insurance Funds, for the quarter ending June 30, 2015, along with various other subjects.

The meeting began with approval of the minutes for the previous Investment Committee meeting held on May 5, 2015.

Erica presented the Quarterly Compliance Report. A discussion was held regarding policy changes that will be forth coming at the November 2015 Investment Committee meeting specific to securities issued using the Reg. 144a. There was also a discussion on a corporate action involving Safeway and Albertsons grocery and a related security that was held in the S&P 500 account.

The Management Update was given by David Peden, CIO, which included a review of some of the standard quarterly reports. These reports included the: Monthly Performance Update, Investment Division Budget Report, the quarterly Manager Meeting and Related Expense Tracking Report, the Internally Managed Portfolio Asset Report, Internally Managed Portfolio Transactions Report, Securities Lending Report, Domestic Equity Commissions Report, Global Equity Commissions Report, and the Securities Litigation Report were provided for informational purposes.

The Standing Quarterly Committee Topics, Potential Future Topics List, and an overview of the supplied articles of interest were reviewed. Questions were encouraged and addressed throughout the reports.

KRS Investment Staff, Prisma Capital Partners, and consultant Albourne recommended an initial investment of approximately $40 million to Tourbillon Global Master Fund and an initial $20 million each to Glenview Capital Management LLC and QMS Diversified Global Macro. This recommendation was approved by the KRS Investment Committee. All five pension systems and all five insurance systems will participate in this investment. The investment managers in the marketing and due diligence process used no placement agents.

CEM Benchmarking presented a draft study analyzing the KRS investment cost effectiveness. The benchmarking report compares the KRS cost and return performance to CEM's pension database on a five year look back basis. CEM was also able to do some analysis on a twenty year basis since KRS has been reporting data to CEM for over twenty years. The presentation was for informational purposes only and not action was taken by the investment committee.

Consultant RV Kuhns presented the results of the asset/liability studies for the five insurance systems. Questions were encouraged and asked throughout the presentation. This was for informational purposes only and no action was taken.

Staff and Consultant RV Kuhns presented the results of the asset allocation studies for the five pension systems and five insurance systems. Questions were encouraged and asked throughout the presentation. No action was taken at this time and the topic will be discussed again in November.

Erica Bradley presented the results of an internal audit titled "General Manager Risks – Absolute Return, Real Return, and Real Estate Report". The report identified three instances where there was conflict between the dollar amount invested with a manager and the investment committee approved dollar amount. One of the managers was approved for the higher dollar amount at the August meeting bringing it back into compliance. The other two managers will be taken up at the November meeting. In addition, the Investment Committee requested some recommendations to be presented in November around the policy that addresses additional contributions to already approved managers. The audit also led to a discussion around the legal process involving our outside legal counsel and KRS' alternative investment managers. The investment committee requested additional information on that topic for November.

Please see the next page for a summary of the Pension and Insurance performance information ending June 30, 2015.

Pension Funds Performance Overview Rates of Return (%) as of June 30, 2015								
	One Year		Three Years		Five Years		Ten Years	
	Fund	Index	Fund	Index	Fund	Index	Fund	Index
Equity	0.68	0.64	13.33	13.13	11.67	12.31	6.40	6.17
Fixed Income	1.44	1.61	3.70	2.33	5.02	3.85	4.88	4.60
Private Equity	9.61	9.61	14.33	14.33	13.83	19.44	8.74	10.73
Real Estate	7.85	12.40	9.30	11.60	11.42	13.44	6.03	6.00
Absolute Return	5.49	6.08	8.71	6.43	6.59	4.15	N/A	
Real Return	-3.98	-2.86	1.29	2.32	N/A		N/A	
Cash Equivalents	0.16	0.02	0.36	0.05	0.35	0.06	1.91	1.34
Total Fund	2.01	3.13	9.32	9.64	9.18	9.85	6.05	6.30

Insurance Funds Performance Overview Rates of Return (%) as of June 30, 2015								
	One Year		Three Years		Five Years		Ten Years	
	Fund	Index	Fund	Index	Fund	Index	Fund	Index
Equity	0.93	0.70	13.22	12.98	11.34	12.18	6.08	5.88
Fixed Income	0.16	1.61	3.01	2.33	4.65	4.30	4.91	4.64
Private Equity	14.56	14.56	15.85	15.85	15.66	20.05	9.14	10.17
Real Estate	7.79	12.40	8.42	11.60	11.76	13.44	N/A	
Absolute Return	5.55	6.08	8.67	6.43	6.59	4.15	N/A	
Real Return	-3.90	-2.77	0.85	2.35	N/A		N/A	
Cash Equivalents	0.21	0.02	0.31	0.05	0.28	0.06	1.74	1.34
Total Fund	1.86	3.79	8.82	9.86	9.33	11.09	5.52	6.02

RECOMMENDATION: The Board is requested to ratify the actions of the Investment Committee.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the KRS Board of Trustees

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: CEM Investment Cost Effectiveness Analysis

Accompanying this memorandum you will find the Investment Cost Effectiveness Analysis prepared for KRS by CEM Benchmarking. The report will be presented at the meeting by Rogier Slingerland of CEM Benchmarking.

RECOMMENDATION: None. This document is presented for information purposes only at this time.

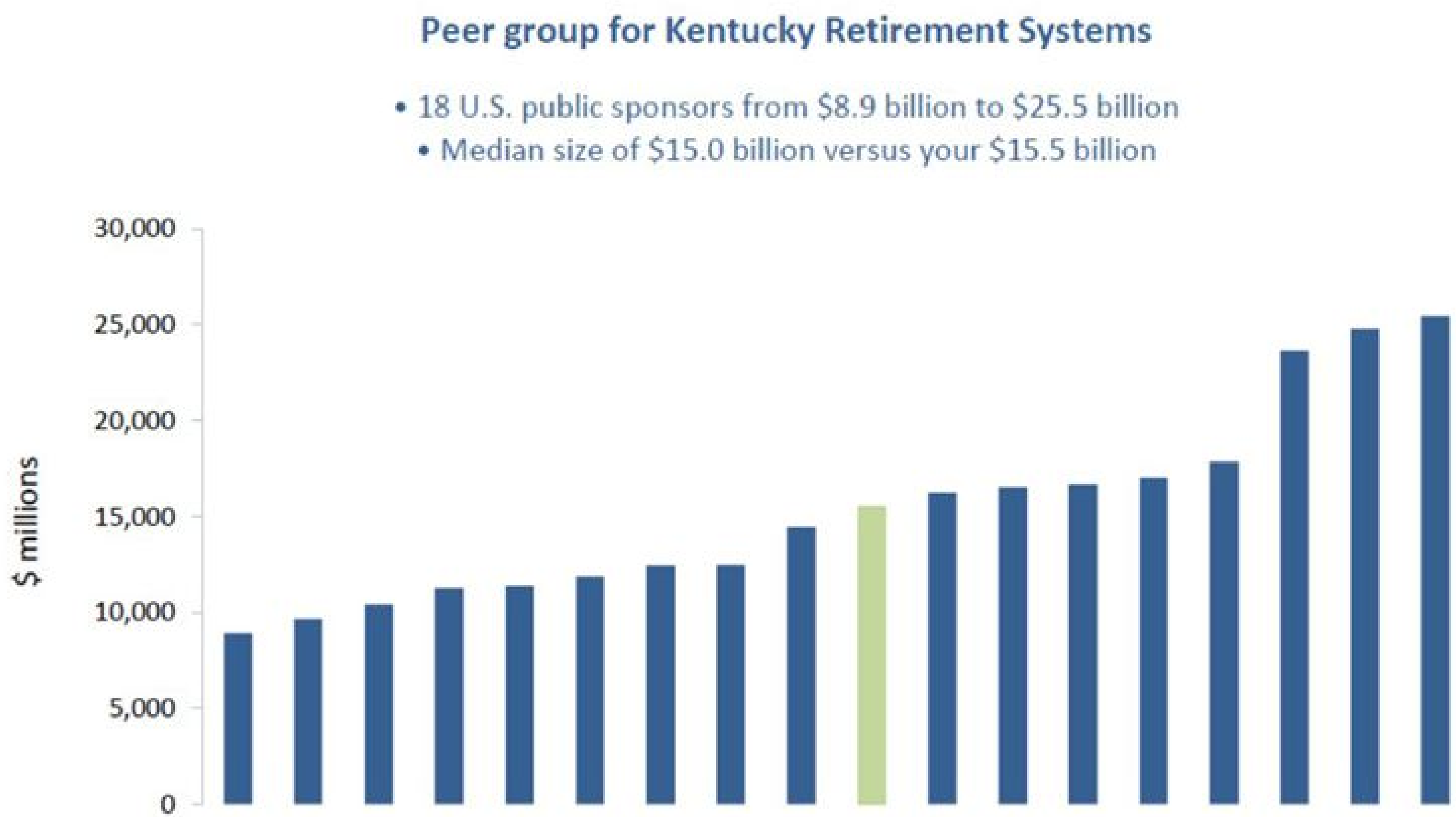
Kentucky Retirement Systems

Investment benchmarking draft results 2014

CEM Benchmarking

Rogier Slingerland
+1 513-801-7507
rogier@cembenchmarking.com

Your fund is being compared to a custom peer group because size impacts costs:

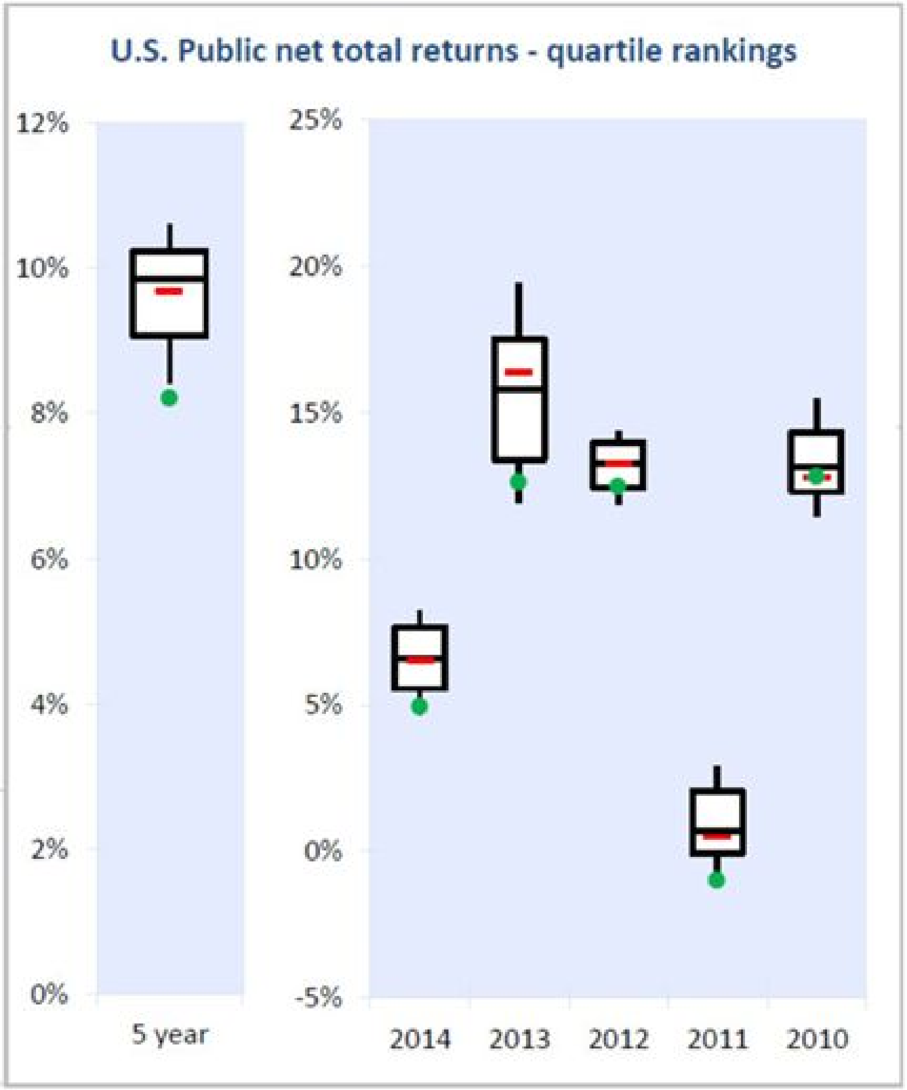


To preserve client confidentiality, given potential access to documents as permitted by the Freedom of Information Act, we do not disclose your peers' names in this document.

Your 5-year net total return of 8.2% compares to a peer median return of 9.7%.

- The U.S. Public 5-year median net return was 9.8%

	Your 5-year
Net total fund return	8.2%
- Policy return	9.2%
= Net value added	-1.0%



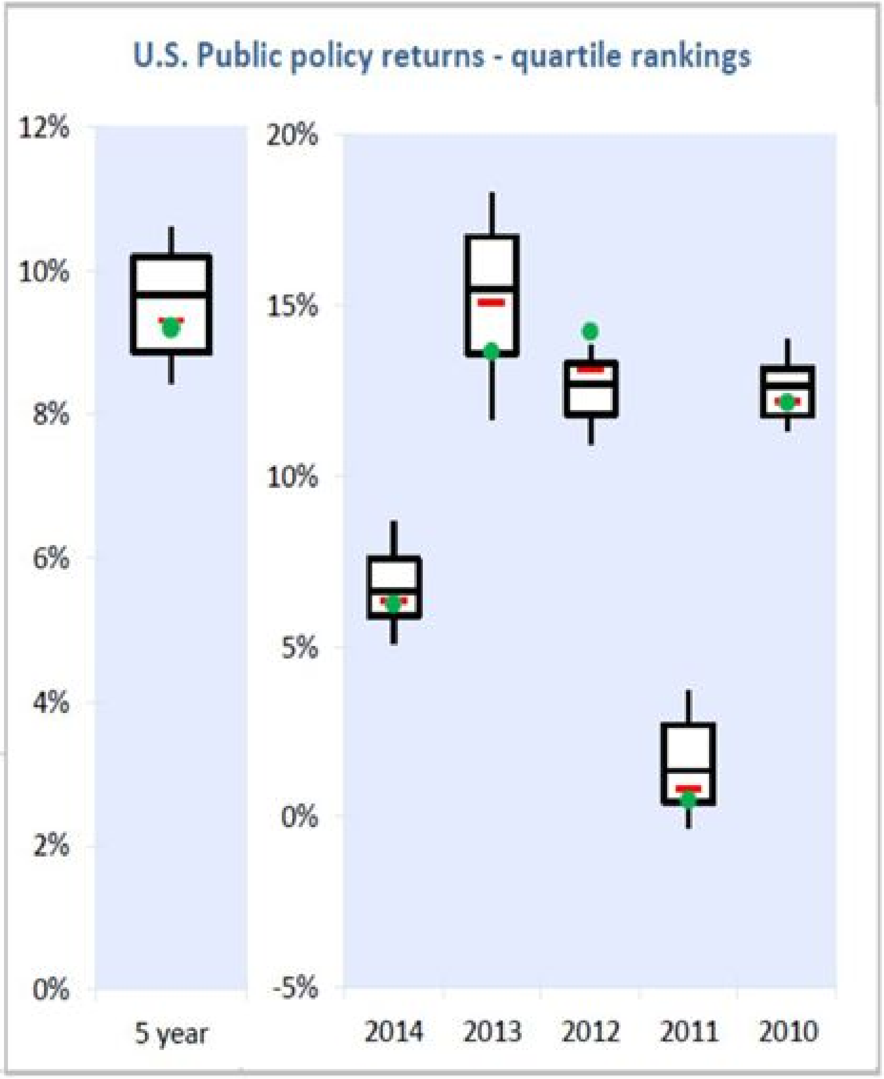
CEM Benchmarking

Your 5-year policy return of 9.2% was close to the peer median of 9.3%

- The 5-year U.S. Public median policy return was 9.7%.

- Your policy return reflects your investment policy, which should reflect your:
  - Long term capital market expectations
  - Liabilities
  - Appetite for risk

* The policy returns for all participants were adjusted to reflect private equity benchmarks based on lagged, investable public-market indices.



Differences in policy return are caused by differences in policy mix and benchmarks:

Your 5-year policy return was below the U.S. Public median primarily because of:

- Your lower allocation to Stock;
- Your higher allocation to Inflation indexed bonds;
- Your higher allocation to Hedge Funds.

Partially offsetting these negatives is the positive impact of a higher allocation to Private Equity.

5-Year average policy mix

	Your Fund	Peer Avg.	U.S. Public Avg.
U.S. Stock	22%	25%	25%
EAFE Stock	0%	4%	7%
Emerging Market Stock	3%	1%	2%
ACWIxUS Stock	20%	13%	9%
Other Stock	0%	9%	9%
Total Stock	45%	52%	52%
U.S. Bonds	14%	21%	19%
Inflation Indexed Bonds	7%	4%	2%
High Yield Bonds	2%	3%	2%
Fixed Income - Emerging	1%	1%	1%
Global Bonds	4%	1%	2%
Cash	2%	-1%	0%
Other Fixed Income	0%	1%	1%
Total Fixed Income	30%	29%	27%
Hedge Funds	8%	2%	4%
Real Assets[1]	7%	9%	10%
Private Equity	10%	7%	8%
Total	100%	100%	100%

1. Real assets includes commodities, natural resources, infrastructure, REITS and real estate.

CEM Benchmarking

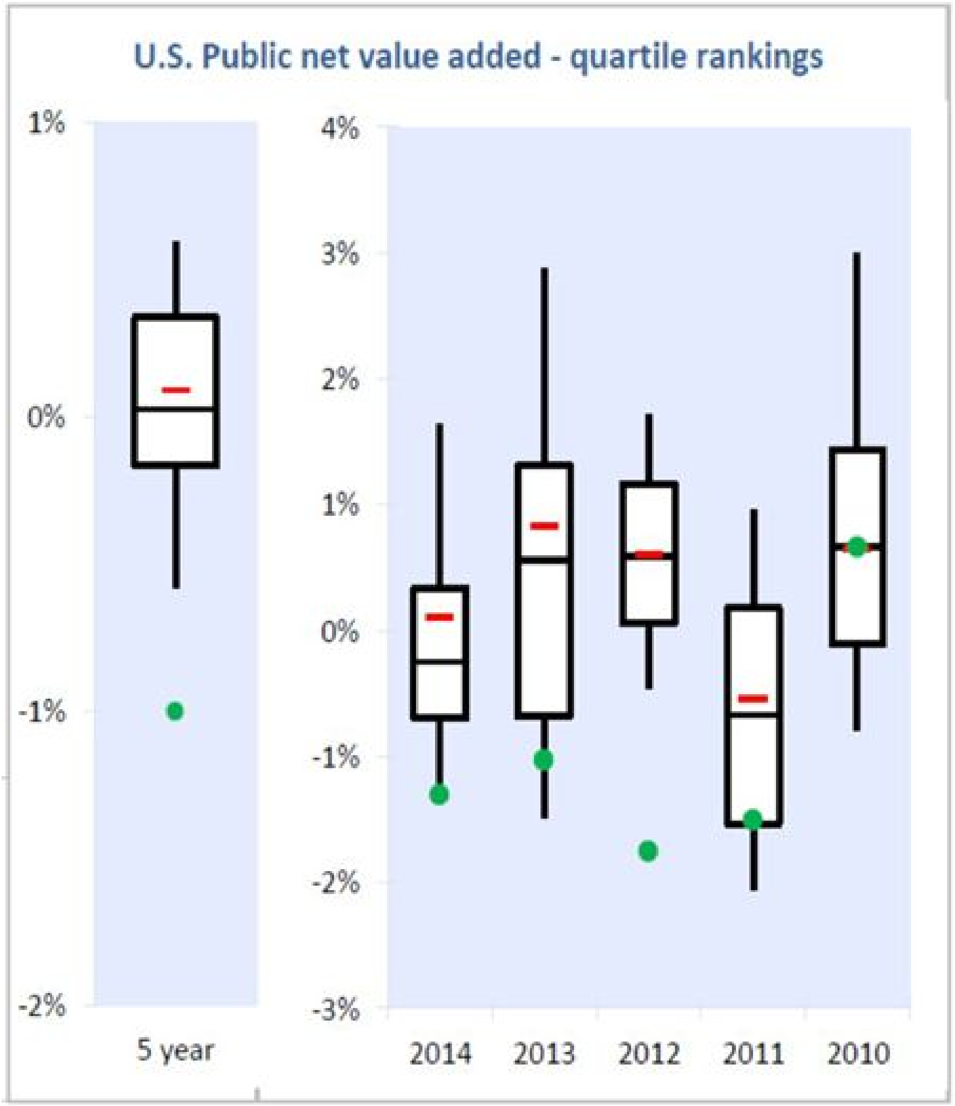
Your 5-year net value added of -1.0% compares to the peer median of 0.0%.

Net value added equals total net return minus policy return.

- The 5-year U.S. Public median net value added was 0.1%.

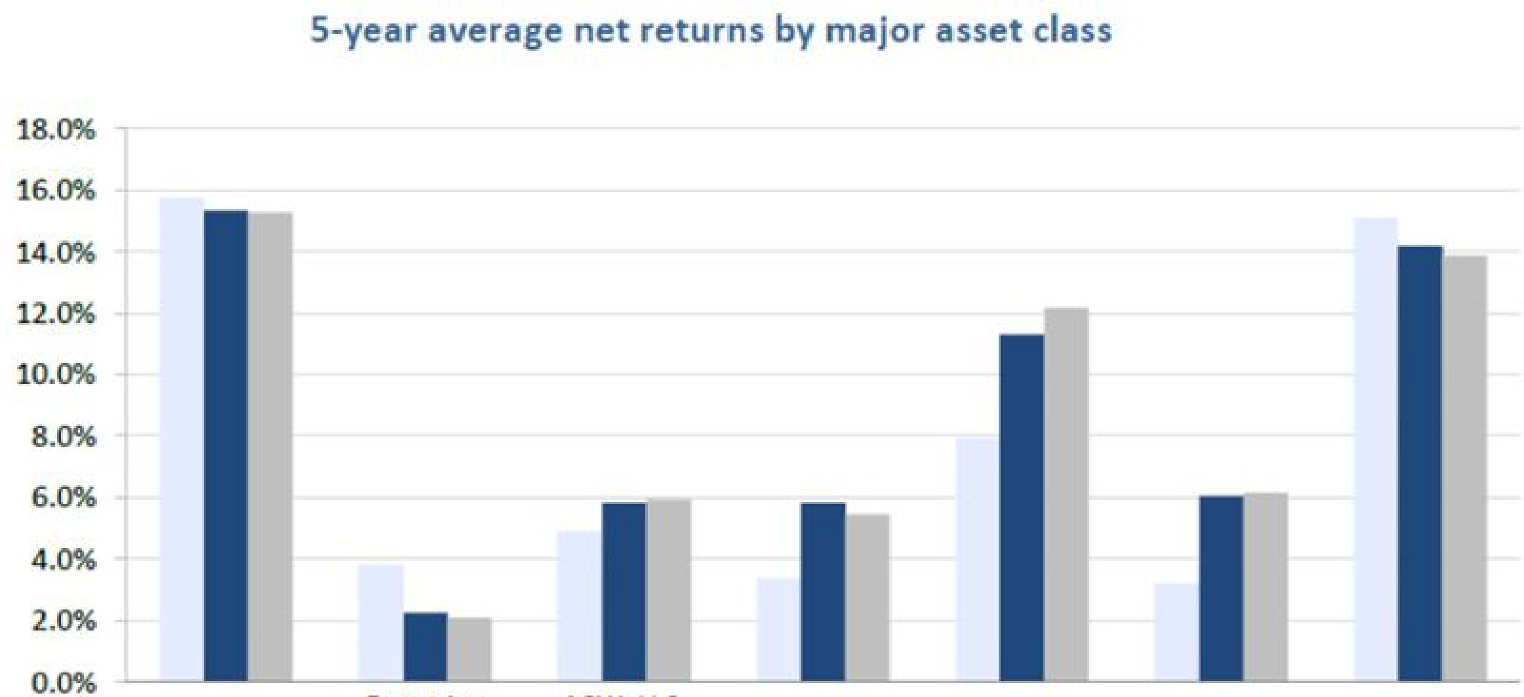
Value added for Kentucky Retirement Systems

Year	Net Return	Policy Return	Net value Added
2014	4.9%	6.2%	(1.3%)
2013	12.6%	13.6%	(1.0%)
2012	12.5%	14.2%	(1.7%)
2011	(1.0%)	0.5%	(1.5%)
2010	12.8%	12.1%	0.7%
5-year	8.2%	9.2%	(1.0%)



CEM Benchmarking

You had higher 5-year net returns in U.S. Stock, Emerging market stock and Private Equity relative to the U.S. Public average.

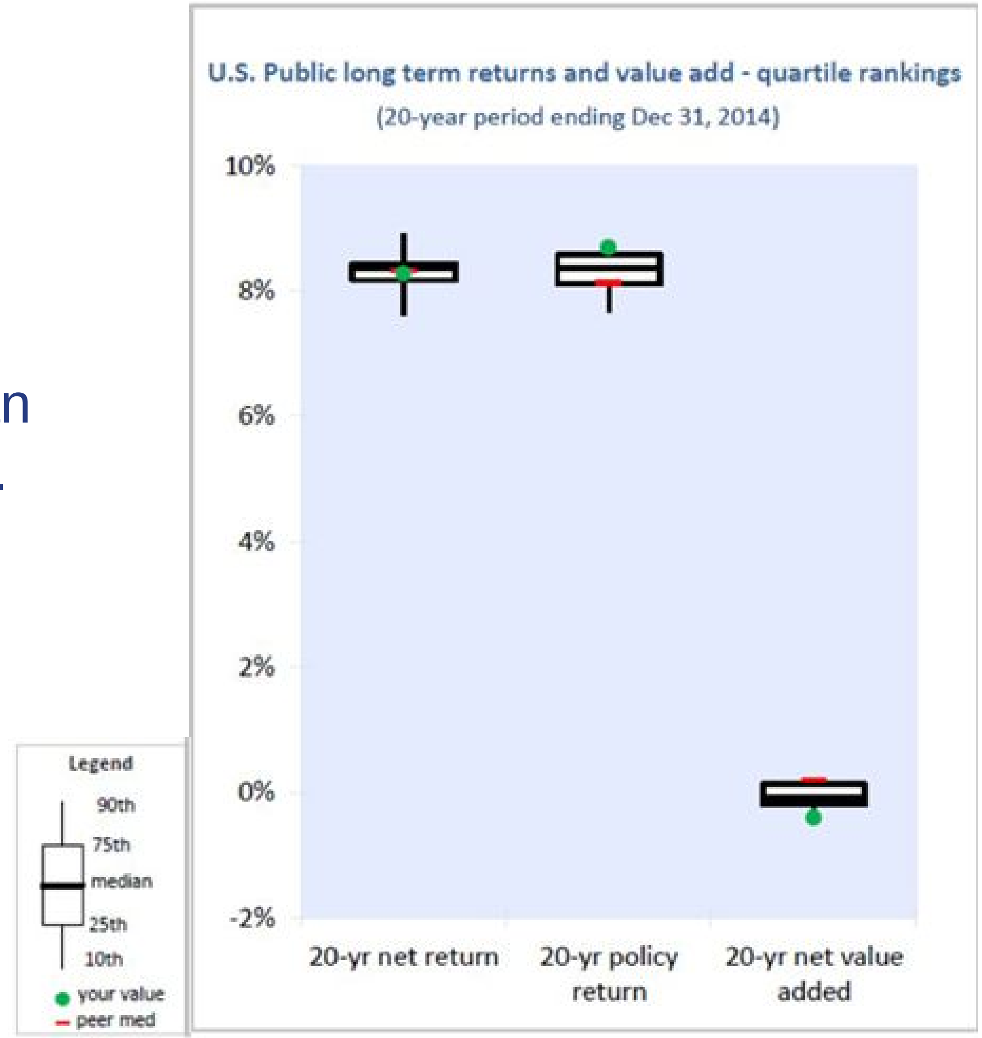


	U.S. Stock	Emerging Market Stock	ACWxU.S. Stock	Fixed Income	Real Estate	Hedge Funds	Private Equity
Your fund	15.8%	3.8%	4.9%	3.4%	7.9%	3.2%	15.1%
U.S. Public average	15.3%	2.2%	5.8%	5.8%	11.3%	6.1%	14.2%
Peer average	15.3%	2.1%	5.9%	5.4%	12.2%	6.1%	13.9%

CEM Benchmarking

Your long-term net return of 8.3% was equal to the peer return.

- The 20-year U.S. Public net return was 8.4%.
- Your 20-year policy return of 8.7% was above both the U.S. Public median and peer median of 8.4% and 8.1% respectively.
- Your 20-year net value added of -0.4% was below both the U.S. Public median and peer median of -0.1% and 0.2% respectively.



Your investment costs were $126.2 million or 81.6 bps in 2014.

Asset management costs by asset class and style ($000s)	Internal Mgmt		External Management				
	Passive	Overseeing of external	Passive fees	Active base fees	Perform. fees [3]	Total	
U.S. Stock - Broad/All				2,035		2,035	
U.S. Stock - Large Cap	90			276		366	
U.S. Stock - Mid Cap				1,488		1,488	
U.S. Stock - Small Cap			458			458	
Stock - Emerging			207	2,582		2,789	
Stock - ACWIxU.S.			854	5,852		6,707	
Fixed Income - U.S.				3,022		3,022	
Fixed Income - Emerging				626		626	
Fixed Income - Global				1,776		1,776	
Fixed Income - Inflation Indexed	60			184		244	
Fixed Income - High Yield				3,720	1,160	4,880	
Hedge Funds - Direct				886	940 [3]	1,827	
Hedge Funds - Fund of Funds				30,691 [2]	26,021 [3]	56,713	
Real Estate - LPs				6,899 [1]	1,997 [3]	6,899	
Other Real Assets				3,210	3,702	3,210	
Diversified Private Equity		320		3,137 [1]	-294	3,457	
LBO		5,028		14,601 [1]	18,105	19,630	
Venture Capital		340		4,661 [1]	12,604	5,001	
Total asset management costs excluding private asset performance fees						121,125	78.3bp
Oversight, custodial and other costs [4]							
Oversight of the fund						786	
Trustee & custodial						2,038	
Consulting and performance measurement						1,490	
Audit						76	
Other						720	
Total oversight, custodial & other costs						5,110	3.3bp
Total investment cost (excluding transaction and private asset performance fees)						126,235	81.6bp

CEM Benchmarking

Your costs are 6.9 bps above the expected the benchmark of 74.8 bps.

Your cost versus benchmark

	$000s	basis points
Your total investment cost	126,235	81.6 bp
Your benchmark cost	115,631	74.8 bp
Your excess cost	10,604	6.9 bp

Explanation of your cost status

	Excess Cost/ (Savings) $000s	Excess Cost/ (Savings) bps
1. Higher cost implementation style		
• Use of external active management (vs. lower cost passive and internal)	(1,391)	(0.9)
• More fund of funds	10,061	6.5
• Less overlays	(652)	(0.4)
• Other style differences	(150)	(0.1)
	7,868	5.1
2. Paying more than peers for some services		
• External investment management costs	1,036	0.7
• Internal investment management costs	54	0.0
• Oversight, custodial & other costs	1,646	1.1
	2,736	1.8
Total excess cost	10,604	6.9

CEM Benchmarking

Implementation style differences account for 5.1 bps above the benchmark. This is driven mainly by FoF Hedge Funds.

Calculation of the cost impact of differences in implementation style

Asset class	Your avg holdings in $mils (A)	% External active: You	% External active: Peer average	% External active: More/ (less) (B)	Premium vs passive & internal[1] (C)	Cost/ (savings) $000s (A X B X C)	Cost/ (savings) bps
U.S. Stock - Broad/All	374	100.0%	26.9%	73.1%	38.4 bp	1,050	
U.S. Stock - Large Cap	2,216	10.5%	36.2%	(25.7%)	26.7 bp	(1,519)	
U.S. Stock - Mid Cap	495	68.6%	72.8%	(4.3%)	47.7 bp	(101)	
U.S. Stock - Small Cap	335	0.0%	73.1%	(73.1%)	56.9 bp	(1,391)	
Stock - Emerging	495	66.7%	85.3%	(18.6%)	46.3 bp	(427)	
Stock - ACWIxU.S.	3,017	60.0%	60.5%	(0.5%)	30.4 bp	(43)	
Fixed Income - U.S.	1,367	100.0%	67.0%	33.0%	15.0 bp	676	
Fixed Income - Emerging	147	100.0%	97.1%	2.9%	Insufficient[2]	0	
Fixed Income - Global	574	100.0%	100.0%	0.0%		0	
Fixed Income - Inflation Indexed	762	35.9%	57.1%	(21.2%)	12.9 bp	(208)	
Fixed Income - High Yield	724	100.0%	93.9%	6.1%	Insufficient[2]	0	
Real Estate ex-REITs	636	100.0%	98.5%	1.5%	Insufficient[2]	0	
of which Ltd Partnerships represent:		100.0%	70.7%	29.3%	30.7 bp	572	
Other Real Assets	713	100.0%	100.0%	0.0%		0	
Diversified Private Equity	190	100.0%	100.0%	0.0%		0	
LBO	1,146	100.0%	100.0%	0.0%		0	
Venture Capital	347	100.0%	98.7%	1.3%	Insufficient[2]	0	
Impact of less/more external active vs. lower cost styles						(1,391)	(0.9) bp
		Fund of funds % of LPs			vs. direct LP[1]		
Hedge Funds	1,617	95.3%	28.2%	67.1%	123.0 bp	13,344	
Real Estate ex-REITs - LPs	636	0.0%	1.1%	(1.1%)	Insufficient[2]	0	
Diversified Private Equity - LPs	190	0.0%	26.6%	(26.6%)	73.4 bp	(371)	
LBO - LPs	1,146	0.0%	26.6%	(26.6%)	73.4 bp	(2,236)	
Venture Capital - LPs	347	0.0%	26.6%	(26.6%)	73.4 bp	(676)	
Impact of less/more fund of funds vs. direct LPs						10,061	6.5 bp
		Overlays and other					
Impact of lower use of portfolio level overlays						(652)	(0.4) bp
Impact of mix of internal passive, internal active, and external passive[3]						(150)	(0.1) bp
Total impact of differences in implementation style						7,868	5.1 bp

CEM Benchmarking

The net impact of differences in external management costs is 0.7 bps.

Cost impact of paying more/(less) for external asset management

	Your avg holdings in $mils	Cost in bps			Cost/ (savings) in $000s
		Your Fund	Peer median	More/ (less)	
	(A)			(B)	(A X B)
U.S. Stock - Broad/All - Active	374	54.4	40.9	13.5	506
U.S. Stock - Large Cap - Active	232	11.9	27.4	(15.5)	(360)
U.S. Stock - Mid Cap - Active	339	43.9	47.7	(3.8)	(128)
U.S. Stock - Small Cap - Passive	335	13.7	4.3*	9.4	314
Stock - Emerging - Passive	165	12.5	15.0*	(2.5)	(41)
Stock - Emerging - Active	330	78.1	61.4	16.8	554
Stock - ACWIxU.S. - Passive	1,206	7.1	5.8	1.3	152
Stock - ACWIxU.S. - Active	1,811	32.3	36.2	(3.9)	(704)
Fixed Income - U.S. - Active	1,367	22.1	17.2	4.9	674
Fixed Income - Emerging - Active	147	42.4	48.5	(6.1)	(90)
Fixed Income - Global - Active	574	30.9	26.3	4.6	262
Fixed Income - Inflation Indexed - Active	274	6.7	14.8	(8.1)	(222)
Fixed Income - High Yield - Active	724	67.4[1]	52.2	15.2	1,098
Hedge Funds - Active	77	238.8	239.5	(0.7)	(6)
Hedge Funds - Fund of Fund	1,540	368.3	362.5	5.7	881
Real Estate ex-REITs - Limited Partnership	636	108.5	112.5	(4.0)	(251)
Other Real Assets - Active	713	45.0	48.8	(3.8)	(269)
Diversified Private Equity - Active	190	181.8	165.8	16.0	304
LBO - Active	1,146	171.3	165.4	5.9	673
Venture Capital - Active	347	144.3	211.0	(66.7)	(2,310)
Total impact of paying more/less for external management					1,036
Total in bps					0.7 bp

*Universe median used as peer data was insufficient.

[1] You paid performance fees in these asset classes.

The net impact of paying more/less for internal asset management costs was immaterial.

Cost impact of paying more/(less) for internal asset management

	Your avg holdings in $mils	Cost in bps			Cost/ (savings) in $000s
		Your Fund	Peer median	More/ (less)	
	(A)			(B)	(A X B)
U.S. Stock - Large Cap - Passive	1,984	0.5	0.4	0.1	13
U.S. Stock - Mid Cap - Passive	156	0.0	Excluded		
Fixed Income - Inflation Indexed - Passive	488	1.2	0.4*	0.8	41
Total impact of paying more/less for internal management					54
Total in bps					0.0 bp

CEM Benchmarking

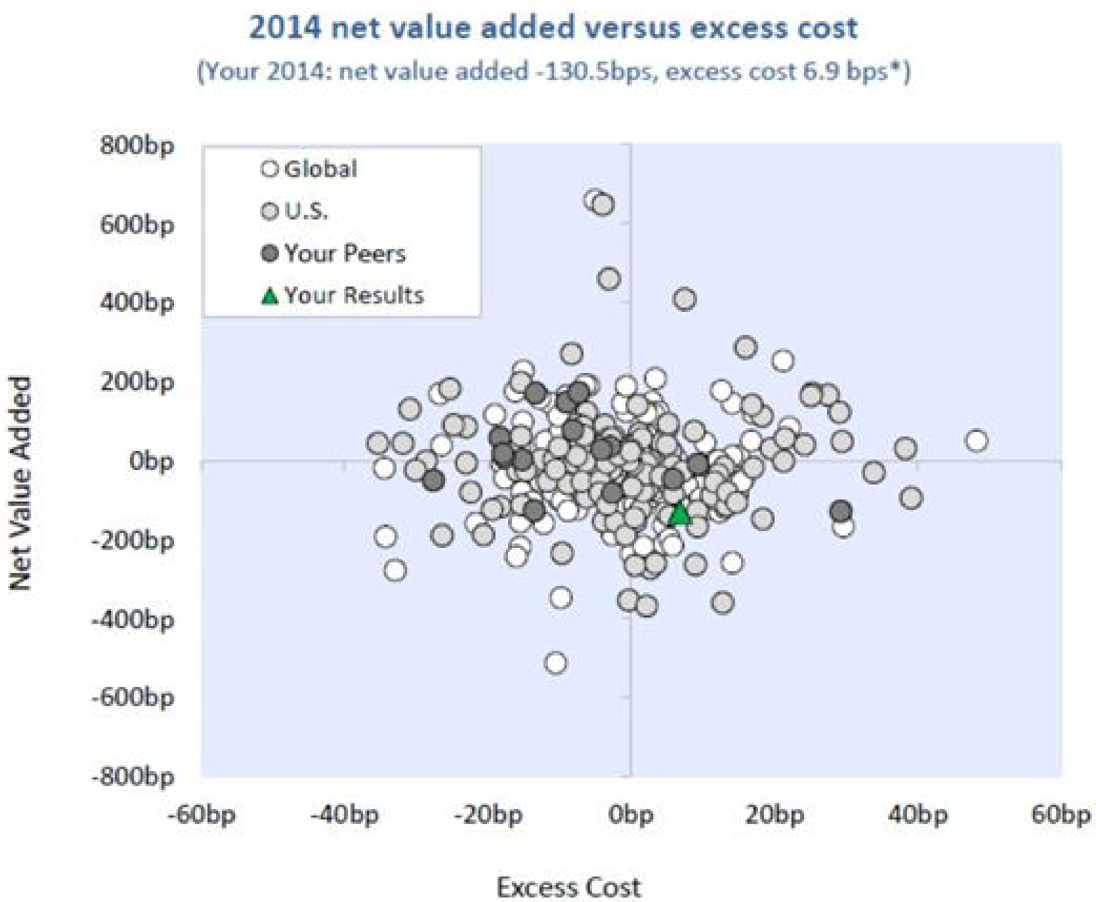
The net impact of differences in oversight, custodial & other costs is 1.1 bps.

Cost impact of differences in oversight, custodial & other costs

	Your avg holdings in $mils	Cost in bps			Cost/ (savings) in $000s
		Your fund	Peer median	More/ (less)	
	(A)			(B)	(A X B)
Oversight	15,468	0.5	1.1	(0.6)	(941)
Consulting	15,468	1.0	0.6	0.4	610
Custodial*	15,468	1.3	0.4	0.9	1,436
Audit	15,468	0.0	0.1	(0.0)	(18)
Other	15,468	0.5	0.1	0.4	559
Total					1,646
Total in bps					1.1 bp

* Important additional information about your custodial fees relative to peers:
1. The peer median of 0.4 bps is unusually low. The U.S. universe median custodial cost was 0.9 bps. (See page 3 in Section 6).

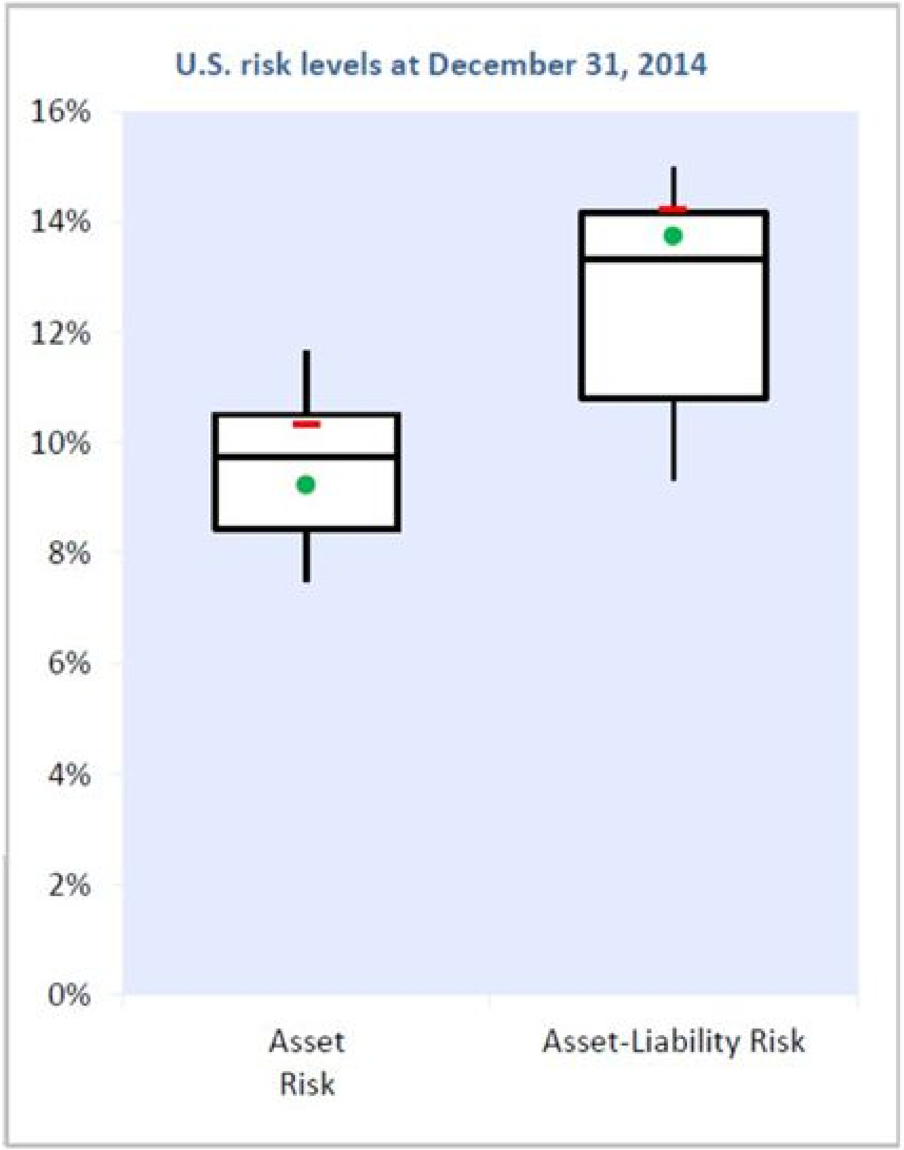
Your position on the cost effectiveness chart.



CEM Benchmarking

Comparison of risk levels

- Your asset risk of 9.2% was below the peer median of 9.8%.
- Your asset-liability risk of 13.7% was below the peer median of 14.2%.



CEM Benchmarking

Key takeaways

Returns

- Your 5-year net total return was 8.2%. This was below the U.S. Public median of 9.8% and below the peer median of 9.7%.
- Your 5-year policy return was 9.2%. This was below the U.S. Public median of 9.7% and close to the peer median of 9.3%.

Value added

- Your 5-year net value added was -1.0%. This was below the U.S. Public median of 0.0% and below the peer median of 0.1%.

Long term performance

- Your 20-year net return of 8.3% was close to the U.S. Public median of 8.4% and equal to the peer median of 8.3%.

Cost and cost effectiveness

- Your investment cost of 81.6 bps was above your benchmark cost of 74.8 bps. This suggests that your fund was high cost compared to your peers.
- Your fund was high cost because you had a higher cost implementation style and you paid more than peers for some services.
- Your 2014 performance placed in the negative value added, high cost quadrant of the cost effectiveness chart.

Risk

- Your asset risk of 9.2% was below the U.S. median of 9.8%. Your asset-liability risk of 13.7% was above the U.S. median of 13.3%.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Initial Retirement Cases, Fourth Quarter, 14-15

The tables below show the distribution of new retirees who retired during this quarter of the fiscal year by retirement mode and the retirees with 27 or more years of service.

DISTRIBUTION BY RETIREMENT MODE

MODE	KERS	CERS	SPRS	TOTAL	PERCENT
Normal Retirement	100	261	0	361	28.8%
Early Retirement	263	421	4	688	54.9%
Disability Retirement	25	54	0	79	6.3%
Retirement Eligible Refund	23	38	0	61	4.9%
Death of Members Eligible to Retire	19	45	1	65	5.1%
Grand Totals	430	819	5	1254	100%

RETIREES WITH 27 OR MORE YEARS OF SERVICE

	KERS	CERS	SPRS	TOTAL
Under Normal Retirement Age	73	79	1	153
At and Over Normal Retirement Age	8	12	0	20
Grand Totals	81	91	1	173

RECOMMENDATION: This report is provided for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Death Benefit Payments, Fourth Quarter, 14-15

The table below reflects the number of deceased retired members whose death benefit was paid during this quarter of the fiscal year and the total amount paid by each system.

DEATH BENEFIT PAYMENTS

	Number of Deceased Retirees	Total Amount Paid
KERS	247	$1,235,000.00
CERS	325	$1,625,000.00
SPRS	7	$35,000.00
TOTALS	579	$2,895,000.00

RECOMMENDATION: This report is provided for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Excess Benefit Payroll, Fourth Quarter, 14-15

The table below reflects the number of excess benefit payments established during this quarter of the fiscal year and the total payments paid from each system.

EXCESS BENEFIT PAYMENTS

	Number of Excess Payments	Total Amount Paid
KERS	45	$291,975.51
CERS	6	$24,282.83
TOTAL	51	$316,258.34

RECOMMENDATION: This report is provided for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen, Executive Director

DATE: September 10, 2015

SUBJECT: Report of Decisions by the Medical Examiners

DISABILITY

During the fourth quarter of the fiscal year, the Medical Examiners reviewed a total of 138 applicants for disability retirement. There were 69 (50.00%) recommended for denial and 69 (50.00%) recommended for approval.

Approvals

KERS	CERS	SPRS	TOTAL
24	45	0	69

Duty Related Approvals

KERS	CERS	SPRS	TOTAL
0	0	0	0

Denials

KERS	CERS	SPRS	TOTAL
23	46	0	69

HAZARDOUS DISABILITY

During the fourth quarter of the fiscal year, the Medical Examiners reviewed a total of 2 applicants for hazardous disability retirement. There was 1 (50.00%) recommended for denial and 1 (50.00%) recommended for approval.

Approvals

KERS	CERS	SPRS	TOTAL
0	1	0	1

In the Line of Duty Approvals

KERS	CERS	SPRS	TOTAL
0	0	0	0

Total and Permanent Approvals

KERS	CERS	SPRS	TOTAL
0	0	0	0

ANNUAL REVIEW OF DISABILITY RECIPIENTS

During the fourth quarter of the fiscal year, the Medical Examiners made final decisions on a total of 197 annual reviews of disability recipients. The disability benefits of 192 recipients (97.46%) were continued and the disability benefits of 5 recipients (2.54%) were terminated.

RECOMMENDATION: This is for informational purposes only. No action is required by the board.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Disability Appeals Committee Quarterly Report

The Disability Appeals Committee held meetings on April 24, May 26 and June 22, 2015. A total of 34 disability claims were acted upon during the quarter resulting in 16 denials, 7 approvals, 1 remand and 10 dismissals.

Denials

KERS	CERS	SPRS
6	10	0

Approvals

KERS	CERS	SPRS
3	4	0

Dismissals

KERS	CERS	SPRS
5	5	0

Remands

KERS	CERS	SPRS
1	0	0

RECOMMENDATION: This is for informational purposes only. No action is required by the Board.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen
Executive Director

DATE: September 10, 2015

SUBJECT: Administrative Appeals Committee Quarterly Report

The Administrative Appeals Committee held meetings on April 24, May 26 and June 22, 2015. A total of 13 cases were acted upon in the quarter resulting in 4 continuances, 2 denials, 1 remand and 6 dismissals.

Denials

KERS	CERS	SPRS
1	1	0

Continuances

KERS	CERS	SPRS
1	3	0

Discontinuances

KERS	CERS	SPRS
0	0	0

Reinstatements

KERS	CERS	SPRS
0	0	0

Remands

KERS	CERS	SPRS
1	0	0

Dismissals

KERS	CERS	SPRS
4	2	0

RECOMMENDATION: This is for informational purposes only. No action is required by the Board.

`

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: William A. Thielen

DATE: September 10, 2015

SUBJECT: Participation of Additional Agencies and Hazardous Positions

PARTICIPATION—NONHAZARDOUS

1. There is one (1) new agency electing to participate with the County Employees Retirement System under non-hazardous coverage. Copies of minutes, resolution to participate and agency budget will be available at the meeting for review. Contract for Health Insurance has been received for the agency electing to participate in CERS.

   RECOMMENDATION: The Executive Director recommends that the Board approve the participation of the Trimble County Water District #1.

2. There is one (1) agency that desires to participate with the Kentucky Employees Retirement System under non-hazardous coverage. Copies of the Executive Order relating to the creation of the Kentucky Communications Network Authority and the Board of the Kentucky Communications Network Authority will be available at the meeting for review.

   RECOMMENDATION: The Executive Director recommends the Board determine that the Kentucky Communications Network Authority is eligible and qualified to participate in the Kentucky Employees Retirement System and that the effective date of participation be September 1, 2015.

THE FOLLOWING AGENCIES ARE ASKING FOR HAZARDOUS DUTY COVERAGE ON POSITIONS FOR EMPLOYEES WHO HAVE A PARTICIPATION DATE PRIOR TO SEPTEMBER 1, 2008.

The City of Ashland has requested hazardous duty coverage for the following position with an effective date of October 1, 2015:

Police Major

There are no employees to be covered under hazardous duty at this time. Attached is a copy of the Position Questionnaire and Job Description.

The Walton Fire District has requested hazardous duty coverage for the following position with an effective date of October 1, 2015:

Training Coordinator

There are no employees to be covered under hazardous duty at this time. Attached is a copy of the Position Questionnaire and Job Description.

HAZARDOUS POSITIONS (FOR EMPLOYEES HIRED 9/1/08 OR AFTER)

The City of Clarkson has requested hazardous duty coverage for the following positions with a **retroactive** date of **June 1, 2015**:

Police Chief	**Patrol Officer**

There is one (1) employee to be covered under hazardous duty at this time. Attached are copies of the Position Questionnaires and Job Descriptions.

The City of Perryville has requested hazardous duty coverage for the following position with a **retroactive** date of **June 1, 2015:**

Police Chief

There is one (1) employee to be covered under hazardous duty at this time. Attached is a copy of the Position Questionnaire and Job Description.

Daviess County Sheriff has requested hazardous duty coverage for the following positions with a **retroactive** date of **September 1, 2010**:

Sheriff	**Chief Deputy/Major**
Captain	**Lieutenant**
Sergeant	**Corporal**
Deputy Sheriff	**Detective**

There are four (4) employees to be covered under hazardous duty at this time. Attached are copies of the Position Questionnaires and Job Descriptions.

RECOMMENDATION: The positions for which hazardous duty has been requested are presented for discussion.