

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board
FROM: David Eager
Interim Executive Director
DATE: December 1, 2016
SUBJECT: Quarterly Reports of the Audit Committee

The Audit Committee held its quarterly meeting on November 3, 2016. The purpose of the meeting was to review and discuss, among other miscellaneous audit related items, the following:

The Audit Committee approved the May 5, 2016, Audit Committee meeting minutes.

➤ *Review of External Audit Report*

Mr. Jim Tenza and Mr. Joseph Overhults from Dean, Dorton, PLLC, will present the audit report to the Board.

- *Comprehensive Annual Financial Report (CAFR)
Management will present the CAFR and the Summary Annual Report (SAFR) to the Board*
- *Management Response to the GFOA
Management included the GFOA's recommendations in the 2016 CAFR.*

The Audit Committee approved the Draft Copy of the External Audit Report.

➤ *Review of Refund Payments (Inactive Members) Audit*

Please see the attached spreadsheet with findings, recommendations, and management's corrective action.

The Audit Committee approved the Refund Payments (Inactive Members) Audit Report.

➤ *Review of Travel and Procurement Card Expenditures Audit*

Please see the attached spreadsheet with findings, recommendations, and management's corrective action.

The Audit Committee approved the Travel and Procurement Card Expenditures Audit Report.

- *Review of START Project (Disability & Death Procedures/Process) Audit*

Please see the attached spreadsheet with findings, recommendations, and management's corrective action.

The Audit Committee approved the START Project (Disability & Death Procedures/Process) Audit Report.

- *Review of Telephone System Audit Report*

Please see the attached spreadsheet with findings, recommendations, and management's corrective action.

The Audit Committee approved the Telephone System Audit Report.

- *Review of Contracting and Execution Process Memo*

Ms. Erica Bradley gave an update on the Contract and Execution Process Audit. Management has assigned staff to draft procedures, and establish internal controls over the contract process. The final report will be presented at the February Audit Committee meeting.

- *Review of Quarterly Financial Statements 9/30/2016*
- *A-133 Disclosure Letter (Federal Awards) For the Fiscal Year Ended June 30, 2016*
- *Disclosures of Assets, Liabilities, and Contingencies – June 30, 2016*
- *Review of Information Disclosure Incidents, 1st Quarter Calendar Year 2016*
- *Review of Internal Audit Budget 6/30/2016, and 9/30/2016*
- *Review of Anonymous Reporting Spreadsheet*
- *Review of Investment Compliance Report*

➤ *Status of Current Audits Memoranda*

The Audit Committee approved the removal of the Compensation Classification Organization Structure Study – Wage and Hour FLSA and the Succession Planning audits from the audit plan

- *County Employees Retirement System Winter/Spring Board Election Memoranda*
- *KRS Auditor Independence Statements*
- *Audit Committee Meeting Dates for Calendar Year 2017*
- *Annual Review of the Charters of the Audit Committee, the Division of Internal Audit, and the Internal Audit Procedures Manual*
 - *Discuss the Role of the Audit Committee*

The Audit Committee deferred the annual review of the charters to the next Audit Committee Meeting.

- *KiZan Security Assessment Audit Report (Closed Session)*
- *Litigation (Closed Session)*

The Audit Committee approved the KiZan Security Assessment Audit Report in open session.

- *Other Business*
- *Professional Articles*

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

Refund Payments (Inactive Members) Finding Spreadsheet					
Finding #	Rating	Exception/Recommendation	Management Response	Date Completed	Date Verified
1	Low	<p>Exception: Prior year finding for accounts without the required Form 2001, Membership Information process has not been resolved.</p> <p>Recommendation: That the follow up process be documented and implemented within a timely manner.</p>	The Division Director of Member Services has reviewed the findings and recommendation and agrees. Problem Incident Report (PIR) 35964 was logged on May 11, 2016 to request that the criteria for the report be revised in order to provide the results required.	5/11/2016	8/10/2016

Travel & Pro-card Expenditures Finding Spreadsheet					
Finding #	Rating	Exception/Recommendation	Management Response	Date Completed	Date Verified
1	Low	<p>Exception: Error on one travel voucher.</p> <p>Recommendation: That all charges that appear to be over the \$10 limit, either have a receipt or an explanation document included with the travel voucher before it's approved and reimbursed.</p>	Management concurs with the finding. The charge was approved after verification from the employee that it was for multiple tolls. However, this should have been noted on the travel voucher or an explanation attached to the travel voucher.	8/10/2016	8/10/2016
2	Low	<p>Exception: Error in recording pro-card expenditure in Great Plains.</p> <p>Recommendation: That all journal entries in Great Plains should be thoroughly reviewed and reconciled to ensure accuracy and completeness.</p>	The error in recording the expense to Great Plains was the result of an erroneous finance charge on the Pro Card Statement. The charge was due to be removed by PNC Bank immediately; however, it took two months to post to the account. Accounting will always key charges regardless whether they are pending a refund. The refund will be credited to Great Plains once received.	8/5/2016	8/5/2016
3	Low	<p>Exception: Two travel vouchers without overnight stay (meals) were not completed correctly.</p> <p>Recommendation: That management ensure that all expenses noted on the travel voucher contain supporting documentation or an explanation of how the expense is eligible for reimbursement.</p>	Management concurs with the finding. The information security conference included sessions that extended past KRS regular business hours, which complied with the Travel Policy guidelines for reimbursement. The travel vouchers should have been returned to employee(s) for the actual time of the session or approver should have noted the exception and an explanation for payment.	8/10/2016	8/10/2016

START Project (Disability & Death) Finding Spreadsheet					
Finding #	Rating	Exception/Recommendation	Management Response	Date Completed	Date Verified
1	Low	<p>Exception: The Division of Disability & Death procedure manuals have not been reviewed/updated.</p> <p>Recommendation: That the Division of Disability & Death review and update these manuals annually, ensuring all staff are notified of the changes.</p>	The Disability and Death Branch staff currently update procedures and processes as changes and clarifications occur. However, beginning in January 2017, division staff will conduct a page by page review of the procedures and processes in January of each year with the review to be completed no later than March of the same year.	*	*

* Date completed and verified are not included. Corrective action documents have not been delivered to the auditor.

Telephone System Finding Spreadsheet					
Finding #	Rating	Exception/Recommendation	Management Response	Date Completed	Date Verified
1	Low	<p>No exceptions were noted during the telephone system audit. This is a follow-up to a CEM Benchmarking Study key peer measures.</p> <p>Recommendation: That Management continue to work with our staff and peers to improve the service to our members.</p>	Membership Support and other KRS Management will be conducting conference calls with other retirement plans during October 2016. Best practices will be implemented. We will be making modifications to the phone system menus and recordings to help reduce time negotiating the automated process. Additional staffing for MSUP are expected to complete training and be available to assist members in January 2017.	*	*

* Date completed and verified are not included. Corrective action documents have not been delivered to the auditor.



KENTUCKY RETIREMENT SYSTEMS

David L. Eager, Interim Executive Director

Perimeter Park West • 1260 Louisville Road • Frankfort, Kentucky 40601

kyret.ky.gov • Phone: 502-696-8800 • Fax: 502-696-8822



MEMORANDUM

Date: December 1, 2016

To: KRS Board of Trustees

From: David Eager,
Interim Executive Director

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

Subject: CERS Winter/Spring Election 2017

In accordance with the Board of Trustees Election Policy and Procedures (Nomination Procedures, Section 4), and in accordance with Kentucky Revised Statute 61.645(4)(a), I hereby certify that the following nominees for the two County Employees Retirement System (CERS) Board Seats were nominated by the Board of Directors at the quarterly Board Meeting held on September 15, 2016:

Ms. Jennifer M. Barnett
Mr. Richard J. Hobbs
Mr. James R. Jeffries
Mr. Duane J. Murner
Ms. Betty A. Pendergrass
Mr. Jerry W. Powell

The nominees were properly nominated in accordance with the aforementioned statute. I also certify that I witnessed and observed the nomination process. Sixteen applications, resumes, and background checks were received on, or before the July 31, 2016, deadline date. Two applicants withdrew their names, and three applicants were determined to be constitutionally ineligible. Eleven applicants were eligible for nomination.

The following Board Members cast their nomination ballots:

- 1.) Mr. John Farris
- 2.) Mr. John Chilton
- 3.) Mr. William Cook
- 4.) Mr. Ed Davis
- 5.) Mr. Joseph Hardesty
- 6.) Mr. David Harris

- 7.) Mr. Vince Lang
- 8.) Mr. Keith Peercy
- 9.) Ms. Mary Helen Peter
- 10.) Mr. Neil Ramsey
- 11.) Mr. David Rich
- 12.) Secretary Thomas Stephens

Mr. Thomas Elliott was present, but didn't cast a ballot. Mr. J. T. Fulkerson, Mr. Randy Stevens, and Mr. William Summers, IV were not present to cast a ballot.

Nomination Procedure

CERS members may nominate candidates by filing a petition with the Executive Director or his designee no later than November 30, 2016, or four months prior to the expiration of the term of office. The petition must bear the names, last four digits of Social Security numbers, and signatures for no less than one-tenth of the number of members voting in the last CERS election (23,174 ballots were counted and certified by the Board's contracted auditing firm in 2013: therefore, in accordance with KRS 61.645 (4) (b), at least 2,317 signatures are required to nominate a candidate by petition).

Election Procedure

After the deadline for petitions is past, the Executive Director or his designee is required to prepare an official ballot. The ballot will contain the name of each individual nominated by the Board and by petition. An optional photograph of each candidate and biographical information shall be included with the ballot. Candidates' position on the ballot shall be determined by random lottery. The candidates' biographical information will follow the same order as the candidates' positions on the ballot. The ballot allows for write-in votes. The ballot will be distributed to the eligible voters as of December 31, 2016, by mail to their last known address. **Only one ballot will be mailed to each eligible voter. Duplicate ballots will not be produced or mailed.** Eligible voters will return the ballots to a post office box accessible by the Board's external auditor, who will count the ballots and document the results. The candidates receiving the most votes for the positions to be elected shall be designated as the winners.

Election Timetable

DATE	EVENT	STATUTORY REFERENCE
November 30, 2016	Last day to file Petition	KRS 61.645 (4) (b)
December 31, 2016	Ballots prepared	KRS. 61.645 (4) (c)
January 20, 2017	Ballots mailed to CERS Membership	KRS 61.645 (4) (d)
March 1, 2017	Last day to postmark ballot	KRS 61.645 (4) (f)
March 15, 2017	Election results certified by External Auditor	KRS 61.645 (4) (e) (g)

November 3, 2016

Mr. John Chilton
Chairperson of the Audit Committee
Kentucky Retirement Systems
1260 Louisville Road
Frankfurt, KY 40601

Dear Mr. Chilton,

This letter is to inform the Audit Committee of Kentucky Retirement Systems (KRS) about significant matters related to the conduct of the annual audit so that it can appropriately discharge its oversight responsibility, and we can comply with our professional responsibilities.

The following summarizes various matters that must be communicated to you under auditing standards generally accepted in the United States of America.

The Respective Responsibilities of the Auditor and Management

Our responsibility under auditing standards generally accepted in the United States of America has been described in our arrangement letter dated March 4, 2016. The audit of the combining financial statements does not relieve management or those charged with governance of their responsibilities, which are also described in that letter.

Overview of the Planned Scope and Timing of the Financial Statement Audit

We have issued a separate communication dated March 4, 2016 regarding the planned scope and timing of our audit and have discussed with you our identification of and planned audit response to significant risks of material misstatement.

Significant Accounting Practices, Including Policies, Estimates and Disclosures

We have previously discussed with you our views about the qualitative aspects of KRS' significant accounting practices, including accounting policies, accounting estimates and financial statement disclosures. The following is a list of the matters, including the significant estimates, which you may wish to monitor for your oversight responsibilities of the financial reporting process:

- Fair value measurement of investments
- Actuarial valuation of accrued liability for future benefits
- Calculation of benefit payments
- Calculation of Installment Purchase Service (IPS) contracts

Audit Adjustments

There were no audit adjustments made to the original trial balance presented to us to begin our audit, except for one entry provided by KRS to reclassify amounts from fixed income to public equity.

Uncorrected Misstatements

We are not aware of any uncorrected misstatements other than misstatements that are clearly trivial.

Other Information in Documents Containing Audited Combining Financial Statements

Our responsibility for other information in documents containing the audited combining financial statements is to read the information and consider whether its content or manner of its presentation is materially inconsistent with the financial information covered by our auditors' report or whether it contains a material misstatement of fact. We read the Management's Discussion and Analysis for consistency with information in the combining financial statements. We have provided our comments to management. We plan to read the Comprehensive Annual Financial Report (CAFR) when a draft is available and provide any comments. We are not aware of other documents that will contain the audited combining financial statements.

Supplemental Schedules

With respect to the supplemental schedules accompanying the combining financial statements, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the method of preparing it had not changed from the prior period and the information is appropriate and complete in relation to the combining financial statements as a whole. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the combining financial statements, or to the combining financial statements themselves.

Disagreements with Management

We encountered no disagreements with management over the application of significant accounting principles, the basis for management's judgments on any significant matters, the scope of the audit, or significant disclosures to be included in the combining financial statements.

Consultation with Other Accountants

We are not aware of any consultations management had with other accountants about accounting or auditing matters.

Significant Issues Discussed or Subject to Correspondence with Management

No significant issues arising from the audit were discussed with or the subject of correspondence with management.

Difficulties Encountered in Performing the Audit

We did not encounter any significant difficulties in dealing with management during the audit.

Management Representations

A draft copy of the management representation letter that is expected to be obtained has been attached.

Closing

We will be pleased to respond to any questions you have about the foregoing. We appreciate the opportunity to continue to be of service to Kentucky Retirement Systems.

This report is intended solely for the information and use of the Audit Committee and is not intended to be, and should not be, used by anyone other than these specified parties.

Dean Dorton Allen Ford, PLLC

DRAFT

December 1, 2016

Dean Dorton Allen Ford, PLLC
106 West Vine Street, Suite 600
Lexington, KY 40507

This representation letter is provided in connection with your audits of the basic combining financial statements and supplementary information of Kentucky Retirement Systems (the System), a component unit of the Commonwealth of Kentucky, as of and for the fiscal years ended June 30, 2016 and 2015 for the purpose of expressing an opinion on whether the combining financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). We confirm that we are responsible for the fair presentation in the plan net assets for pension and insurance benefits and changes in plan net assets for pension and insurance benefits of the System, and whether the supplemental schedules are fairly presented in all material respects in relation to the basic combining financial statements taken as a whole in conformity with U.S. GAAP.

We confirm, to the best of our knowledge and belief, that as of the date of this letter:

Financial Statements

1. We have fulfilled our responsibilities, as set out in the terms of the audit arrangement letter dated March 4, 2016, for the preparation and fair presentation of the financial statements referred to above in accordance with U.S. GAAP.
2. We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
3. We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.
4. Significant assumptions used by us in making accounting estimates, including those measured at fair value, are reasonable and reflect our judgment based on our knowledge and experience about past and current events and our assumptions about conditions we expect to exist and courses of action we expect to take.
5. All events subsequent to the date of the financial statements, and for which U.S. GAAP requires adjustment or disclosure, have been adjusted or disclosed.
6. The effects of all known actual or possible litigation and claims have been accounted for and disclosed in accordance with U.S. GAAP.
7. In the normal course of business, the System is involved in litigation concerning the right of participants, or their beneficiaries, to receive benefits. KRS does not anticipate any material losses as a result of the contingent liabilities.
8. We have determined that KRS Perimeter Park West, Inc. is not a component unit of the System, as defined in Section 2100 of the Governmental Accounting Standards Board's Codification of Governmental Accounting and Financial Reporting Standards, as the activities of KRS Perimeter Park West, Inc. are not significant to the System as a whole.

9. We are a component unit of the Commonwealth of Kentucky as this term is defined in Section 2100 of the Governmental Accounting Standards Board's Codification of Governmental Accounting and Financial Reporting Standards.
10. We have complied with all aspects of contractual agreements that would have a material effect on the combining financial statements in the event of noncompliance. In connection therewith, we specifically represent that we are responsible for determining that we are not subject to the requirements of the Single Audit Act because we have not received, expended or otherwise been the beneficiary of the required amount of federal awards during the period of this audit.
11. We have no knowledge of any uncorrected misstatements in the financial statements.

Compliance Considerations

In connection with your audit conducted in accordance with Government Auditing Standards, we confirm that management:

12. Is responsible for compliance with the laws, regulations, and provisions of contracts and grant agreements applicable to the auditee.
13. Has properly classified all funds and activities
14. Has followed all applicable laws and regulations in adopting, approving, and amending budgets.
15. Has identified and disclosed to you all laws and regulations that have a direct and material effect on the determination of financial statement amounts, including legal and contractual provisions, or other financial data significant to audit objectives.
16. Acknowledges its responsibilities as it relates to non-audit services performed by the auditor, including a statement that it assumes all management responsibilities; that it oversees the services by designating an individual, preferably within senior management, who possesses suitable skill, knowledge or experience; that it evaluates the adequacy and results of the services performed; and that it accepts responsibility for the results of the services.

Information Provided

17. We have provided you with:
 - a. Access to all information of which we are aware that is relevant to the preparation and fair presentation of the financial statements such as records, documentation and other matters;
 - b. Additional information that you have requested from us for the purpose of the audit;
 - c. Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
 - d. All financial records and related data of all funds and activities, including those of all special funds, programs, departments, projects, activities, etc., in existence at any time during the period covered by your audit.
 - e. Minutes of the meetings of the governing board and committees of board members or summaries of actions of recent meetings for which minutes have not yet been prepared.

- f. All communication from grantors, lenders, other funding sources, or regulatory agencies concerning noncompliance with:
 - (1) Statutory, regulatory, or contractual provisions or requirements.
 - (2) Financial reporting practices that could have a material impact on the financial statements.
 - g. Plan instruments, trust agreements, insurance contracts, or investment contracts and amendments to such documents entered into during the fiscal year, including amendments to comply with applicable laws.
 - h. Actuarial reports prepared for the System during the fiscal year.
18. We have no knowledge of allegations of fraud or suspected fraud affecting the System's financial statements involving:
- a. Management.
 - b. Employees who have significant roles in internal control.
 - c. Others where the fraud could have a material effect on the financial statements.
19. We have no knowledge of any allegations of fraud or suspected fraud affecting the System's financial statements received in communications from employees, former employees, regulators, or others.
20. We have disclosed to you the identity of the System's related parties and all the related-party relationships and transactions of which we are aware.
21. We are aware of no significant deficiencies, including material weaknesses, in the design or operation of internal controls that could adversely affect the System's ability to record, process, summarize and report financial data.
22. We are aware of no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices.
23. We have no plans or intentions that may materially affect the carrying value or classification of assets and liabilities.
24. The following have been properly recorded and/or disclosed in the financial statements:
- a. Related-party transactions, including revenues, expenses, loans, transfers, leasing arrangements, and guarantees, and amounts receivable from or payable to related parties.
 - b. Guarantees, whether written or oral, under which the System is contingently liable.
 - c. Arrangements with financial institutions involving compensating balances or other arrangements involving restrictions on cash balances.
 - d. Any other liens or encumbrances on assets or revenues or any assets or revenues which were pledged as collateral for any liability or which were subordinated in any way.
 - e. The fair value of investments.
 - f. All significant estimates and material concentrations known to management which are required to be disclosed in accordance with the AICPA's Statement of Position No. 94-6, *Disclosure of Certain Significant Risks and Uncertainties*. Significant estimates are estimates at the balance sheet date

- which could change materially within the next year. Concentrations refer to volumes of business, revenues, available sources of supply, or markets for which events could occur which would significantly disrupt normal finances within the next year.
- g. Derivative financial instruments.
 - h. Deposits and investment securities categories of risk.
25. We are responsible for making the accounting estimates included in the financial statements. Those estimates reflect our judgment based on our knowledge and experience about past and current events and our assumptions about conditions we expect to exist and courses of action we expect to take. In that regard, adequate provisions have been made:
- a. To reduce receivables to their estimated net collectable amounts.
 - b. To reduce investments, intangibles, and other assets which have permanently declined in value to their realizable values.
 - c. For risk retention, including uninsured losses or loss retentions (deductibles) attributable to events occurring through June 30, 2016, and/or for expected retroactive insurance premium adjustments applicable to periods through June 30, 2016.
 - d. For pension obligations and post-retirement benefits other than pensions attributable to employee services rendered through June 30, 2016.
26. There are no:
- a. Material transactions that have not been properly recorded in the accounting records underlying the financial statements.
 - b. Violations or possible violations of laws or regulations whose effects should be considered for disclosure in the financial statements or as a basis for recording a loss contingency.
 - c. Other material liabilities or gain or loss contingencies that are required to be accrued or disclosed by *Statement of Financial Accounting Standards No. 5* and/or *GASB Statement No. 10*.
 - d. Line of credit or similar arrangements.
 - e. Agreements to repurchase assets previously sold.
 - f. Security agreements in effect under the Uniform Commercial Code.
 - g. Amounts of contractual obligations for construction and purchase of real property or equipment not included in the liabilities or encumbrances recorded on the books.
 - h. Any liabilities which are subordinated in any way to any other actual or possible liabilities.
 - i. Material amounts of rental obligations under long-term leases.
 - j. Special and extraordinary items.
27. We have satisfactory title to all owned assets.
28. Expenses or expenditures have been appropriately classified in the statement of changes in plan net assets, and allocations have been made on a reasonable basis.
29. Revenues are appropriately classified in the statements of changes in plan net assets.

30. Capital assets are properly capitalized, reported, and, if applicable, depreciated.
31. The System agrees with the actuarial methods and assumptions used by the actuary for funding purposes and for determining the System's accumulated plan benefits and benefit obligations and has no knowledge or belief that such methods or assumptions are inappropriate in the circumstances. We did not give any, nor cause any, instructions to be given to the System's actuary with respect to values or amounts derived, and we are not aware of any matters that have impacted the independence or objectivity of the System's actuary.
32. There have been no changes in:
 - a. The actuarial methods used in calculating amounts recorded or disclosed in the financial statements. However, changes that were made in the actuarial assumptions are fully disclosed in the financial statements.
 - b. Plan provisions between the actuarial valuation date and the date of this letter.
33. There were no omissions from the participants' data provided to the System's actuary for the purpose of determining the actuarial present value of accumulated plan benefits and actuarial present value of the plan's benefit obligations and other actuarially determined amounts in the financial statements.
34. Financial instruments with concentrations of credit risk have been properly recorded or disclosed in the financial statements.
35. With respect to supplementary information presented in relation to the financial statements as a whole:
 - a. We acknowledge our responsibility for the presentation of such information.
 - b. We believe such information, including its form and content, is fairly presented in accordance with accounting principles generally accepted in the United States of America.
 - c. The methods of measurement or presentation have not changed from those used in the prior period.
 - d. When supplementary information is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the supplementary information no later than the date of issuance of the supplementary information and the auditor's report thereon.
36. With respect to Management's Discussion and Analysis, Schedules of Changes in the Net Pension Liability, Schedules of the Net Pension Liability, Schedules of Employer Contributions, Schedules of Funding Progress and Schedules of Contributions from Employers and Other Contributing Entities presented as required by accounting principles generally accepted in the United States of America to supplement the basic financial statements:
 - a. We acknowledge our responsibility for the presentation of such required supplementary information.
 - b. We believe such required supplementary information is measured and presented in accordance with guidelines prescribed by accounting principles generally accepted in the United States of America.

- c. The methods of measurement or presentation have not changed from those used in the prior period.
 - d. The underlying significant assumptions or interpretations regarding the measurement or presentation of the actuarial accrued liability have been disclosed in Note M of the financial statements. Additionally, an actuary has completed valuations to determine the actuarial accrued liability and annual required contributions.
37. We have a process to track the status of audit findings and recommendations.
38. We take full responsibility for the financial statements and related notes.
39. During the course of your audit, you may have accumulated records containing data that should be reflected in our books and records. All such data have been so reflected. Accordingly, copies of such records in your possession are no longer needed by us.

David Eager
Interim Executive Director

Karen D. Roggenkamp
Chief Operations Officer

Todd E. Coleman, CPA
Controller



KENTUCKY RETIREMENT SYSTEMS

Financial Statements and Supplementary Information

For the Fiscal Years Ended June 30, 2016 and 2015

With Report of Independent Auditors

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DRAFT

REPORT OF INDEPENDENT AUDITORS

Board of Directors
Kentucky Retirement Systems
Frankfort, Kentucky

Report on the Financial Statements

We have audited the accompanying combining financial statements of the Pension Funds and Insurance Fund of the Kentucky Retirement Systems, a component unit of the Commonwealth of Kentucky, as of and for the fiscal year ended June 30, 2016, and the related notes to the combining financial statements, which collectively comprise the Kentucky Retirement Systems' basic combining financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these combining financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of combining financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these combining financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to the financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combining financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combining financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements of the combining financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the combining financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combining financial statements.

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**KENTUCKY RETIREMENT SYSTEMS
REPORT OF INDEPENDENT AUDITORS
(Continued)**

Opinion

In our opinion, the combining financial statements referred to above present fairly, in all material respects, the respective combining plan net position of the Pension Funds and Insurance Fund of the Kentucky Retirement Systems, a component unit of the Commonwealth of Kentucky, as of June 30, 2016, and the respective combining changes in plan net position for the fiscal year then ended, in accordance with accounting principles generally accepted in the United States of America.

Report on Summarized Comparative Information

We have previously audited Kentucky Retirement Systems' 2015 combining financial statements of the Pension Funds and Insurance Fund, and we expressed an unmodified audit opinion on those audited combining financial statements in our report dated December 3, 2015. In our opinion, the summarized comparative information presented herein as of and for the fiscal year ended June 30, 2015, is consistent, in all material respects, with the audited combining financial statements from which it has been derived.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis (pages 5 through 11) and the Schedules of Changes in the Net Pension Liability, Schedules of the Net Pension Liability, Schedules of Employer Contributions, Schedules of Funding Progress, and Schedules of Contributions from Employers and Other Contributing Entities (pages 69 through 86) be presented to supplement the basic combining financial statements. Such information, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic combining financial statements in an appropriate operational, economical, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combining financial statements, and other knowledge we obtained during our audit of the basic combining financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures did not provide us with sufficient evidence to express an opinion or provide any assurance.

Additional Supporting Schedules

Our audit was conducted for the purpose of forming an opinion on the combining financial statements that collectively comprise the Kentucky Retirement Systems' basic combining financial statements. The additional supporting schedules (pages 88 through 91) are presented for purposes of additional analysis and are not a required part of the basic combining financial statements. The additional supporting schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic combining financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic combining financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and

**KENTUCKY RETIREMENT SYSTEMS
REPORT OF INDEPENDENT AUDITORS
(Continued)**

other records used to prepare the basic combining financial statements or to the basic combining financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supporting schedules are fairly stated, in all material respects, in relation to the basic combining financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 1, 2016 on our consideration of the Kentucky Retirement Systems' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Kentucky Retirement Systems' internal control over financial reporting and compliance.

December 1, 2016
Lexington, Kentucky

DRAFT

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

DRAFT

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**

This discussion and analysis of Kentucky Retirement Systems' (KRS) financial performance provides an overview of the pension and insurance fund financial activities for the fiscal year ended June 30, 2016. Please read it in conjunction with the combining financial statements, which begin on page 13.

Financial Highlights-Pension Funds

The following highlights are explained in more detail later in this discussion.

Total Pension Net Position was \$11.6 billion at the beginning of the fiscal year and decreased by 6.6% to \$10.9 billion at June 30, 2016. The \$768.7 million decline is primarily attributable to negative cash flow experienced by all plans as benefit payments continued to rise and contributions declined. KERS non-hazardous experienced the largest net position change at \$347.5 million (14.9% decline).

Contributions

- Total contributions reported for fiscal 2016, were \$1,274.6 million compared to \$1,322.9 million in fiscal 2015. This change was caused by employer contribution rate decreases for CERS non-hazardous and CERS hazardous plans. KERS non-hazardous, KERS hazardous and SPRS experienced a decrease of \$25.0 million in contributions over the prior year due to lower payroll in fiscal 2016. Also, the Bank of America investment one-time settlement of \$23.0 million collected in fiscal 2015 attributed to the decrease in fiscal 2016.
- The member health insurance contributions totaled \$14.7 million, for the fiscal year ended June 30, 2016, compared to \$12.6 million in the prior fiscal year.

Investments

- The investment portfolio reported a net of expense return of -0.52% for the fiscal year, trailing fiscal 2015 net of expense returns of 2.01%. The investment portfolio experienced unrealized losses in the Non US and Emerging Market asset classes of Public Equity and Absolute Returns. These losses were slightly offset with gains in the US Public, Private Equity and Real Estate asset classes. The Emerging Market asset class was discontinued during fiscal 2016.
- The net depreciation in the fair value of investments was \$201.8 million for the fiscal year ended June 30, 2016 compared to net depreciation of \$14.8 million for the prior fiscal year. This \$187 million decrease was due to unfavorable market conditions.
- Interest, dividend and net securities lending income for fiscal 2016 was \$213.9 million compared to \$300.7 million in fiscal 2015.
- Investment expenses totaled \$88.0 million for fiscal 2016 compared to \$81.5 million in prior year.

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
(Continued)**

Financial Highlights-Pension Funds (Continued)

Deductions

- Pension benefits paid to retirees and beneficiaries for fiscal 2016 totaled \$1,903.6 million compared to \$1,832.8 million in fiscal 2015 (3.9% increase). Refund of contributions paid to former members upon termination of employment for fiscal 2016 totaled \$31.0 million compared to \$32.9 million in fiscal 2015.
- KRS' 2016 pension administrative expense totaled \$32.3 million compared to \$31.0 million in the prior year.

Actuarial

- The actuarial value of the total pension liability was determined as of June 30, 2016, using standard roll forward techniques starting with the total liability as of June 30, 2015. The roll forward calculation adds the annual cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year then applies the expected investment rate of return for the year.
- For the valuations as of June 30, 2016, the discount rate used to measure the total pension liability was reduced to 6.75% for KERS non-hazardous and SPRS. The discount rate for CERS, CERS hazardous and KERS hazardous remained at 7.5%. The long term assessed rate of return was based upon an analysis adopted by the Board of Trustees on December 3, 2015.
- The FY 2016 pension funded ratios by plan were:
 - KERS non-hazardous: 16.0%, a decline of 3.0%
 - KERS hazardous: 59.7%, a decline of 2.5%
 - CERS non-hazardous: 59.0%, a decline of 1.3%
 - CERS hazardous: 57.7%, a decline of 0.3%
 - SPRS: 30.3%, a decline of 3.5%

Financial Highlights-Insurance Fund

The following highlights are explained in more detail later in this discussion.

The combined net position of the insurance fund administered by KRS decreased by \$15.6 million during fiscal 2016. Total combined net position for the fiscal year was \$4.2 billion. All but one system ended with a net decrease in net position. KERS non-hazardous ended the fiscal year with a net increase of \$2.7 million.

Contributions

- Employer contributions of \$333.1 million were received in fiscal 2016 compared to \$343.6 million in fiscal 2015. Total contributions declined 3.1% primarily due to lower contribution rates across all systems. Contributions also decreased as most retirees have moved from KRS self-insured plans to vendor provided Medicare Advantage plans.

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
(Continued)**

Financial Highlights-Insurance Fund (Continued)

- The reimbursement of retired-reemployed health insurance for fiscal 2016 totaled \$9.2 million compared to \$8.8 million in the prior fiscal year. Employer contributions are required for all retirees returning to work, but employee contributions are waived.

Investments

- Interest, dividend and net securities lending income for fiscal 2016 was \$80.5 million compared to \$100.5 million in fiscal 2015. The primary driver of this decline was due to unrealized losses in the Non US and Emerging Market asset classes of Public Equity and Absolute Returns. These losses were slightly offset with gains in the US Public, Private Equity and Real Estate asset classes. The Emerging Market asset class was discontinued during fiscal 2016.
- The investment portfolio reported a net expense return of -0.09% for the fiscal year, trailing fiscal 2015 net of expense returns of 1.86%, and was below the 7.5% assessed rate of return fiscal 2016 target.
- The net depreciation in the fair value of investments for fiscal 2016 was \$51.5 million compared to net appreciation of \$3.9 million for the prior fiscal year. This \$55.4 million decrease was due to unfavorable market conditions.
- Investment expenses totaled \$34.1 million for fiscal 2016 compared to \$28.0 million in prior year.

Deductions

- The total of insurance premiums paid plus self-funded reimbursements was \$351.4 million for fiscal 2016. Insurance premiums paid plus self-funded healthcare reimbursements for the prior fiscal year totaled \$335 million. Premiums paid by the fund for hospital and medical insurance coverage (under age 65) totaled \$344.9 million. Payments for the self-funded healthcare reimbursements (over age 65) totaled \$6.4 million.
- KRS' 2016 insurance administrative expense totaled \$2.0 million compared to \$2.2 million in the prior year.

Actuarial

- The actuarial value of the total insurance liability was determined as of June 30, 2016, using standard roll forward techniques starting with the total liability as of June 30, 2015. The roll forward calculation adds the annual cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year then applies the expected investment rate of return for the year.
- For the valuations as of June 30, 2016, the discount rate used to measure the total insurance liability was 7.50% for all plans as adopted by the Board of Trustees on December 3, 2015.

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
(Continued)**

Financial Highlights-Insurance Fund (Continued)

- The FY 2016 insurance funded ratios by plan were:
 - KERS non-hazardous: 30.3%, an increase of 1.5%
 - KERS hazardous: 125.3%, an increase of 4.9%
 - CERS non-hazardous: 69.6%, an increase of 0.9%
 - CERS hazardous: 72.9%, an increase of 0.6%
 - SPRS: 65.8%, an increase of 1.4%

Using This Financial Report

Because of the long-term nature of a defined benefit pension plan and post-employment healthcare benefit plan, the combining financial statements alone cannot provide sufficient information to properly reflect the plans' ongoing plan perspective. This financial report consists of two combining financial statements and two required schedules of historical trend information. All plans within KRS are included in the aforementioned combining financial statements. The Combining Statement of Plan Net Position for the Pension Funds on page 13, and the Combining Statement of Plan Net Position for the Insurance Fund on page 16, provides a snapshot of the financial position of each of the three systems at June 30, 2016. The Combining Statement of Changes in Plan Net Position for the Pension Funds on pages 14-15, and the Combining Statement of Changes in Plan Net Position for the Insurance Fund on pages 17-18, summarizes the additions and deductions that occurred for each of the three systems during fiscal 2016.

The Schedules of the Net Pension Liability on pages 74-76, the Schedules of Changes in the Net Pension Liability on pages 69-73, and the Schedules of Funding Progress on pages 81-83, include current and historical trend information about the actuarially funded status of each plan from a long-term, ongoing plan perspective and the progress made in accumulating sufficient assets to pay benefits and insurance premiums when due. The Schedules of Employer Contributions on pages 77-79, and the Schedules of Contributions from Employers and Other Contributing Entities on pages 84-86 present current and historical trend information about the annual required contributions and the contributions made in relation to the requirement. These schedules provide information that contributes to understanding the changes over time in the funded status of the plans.

Kentucky Retirement Systems Combined

KRS' combined net position decreased \$784.3 million, during the fiscal year ended June 30, 2016. Net position for the prior fiscal year decreased by \$276.9 million. The decrease in net position for the plan year ended June 30, 2016 is primarily attributable to a decrease in net investment income. The analysis below focuses on net position (Table 1) and changes in net position (Table 2) of KRS' Pension and Insurance Funds.

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
(Continued)**

Kentucky Retirement Systems Combined (Continued)

**Table 1
Plan Net Position
(In Millions)**

	Pension Funds			Insurance Fund			Total		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Cash & Invest.	\$ 11,410.5	\$ 12,217.5	\$ 12,758.2	\$ 4,401.2	\$ 4,451.2	\$ 4,392.4	\$ 15,811.7	\$ 16,668.7	\$ 17,150.6
Receivables	442.5	459.2	750.2	171.0	148.1	289.3	613.5	607.3	1,039.5
Equip/Int Assets, net of dep/amort.	8.2	9.9	10.5	-	-	-	8.2	9.9	10.5
Total Assets	11,861.2	12,686.6	13,518.9	4,572.2	4,599.3	4,681.7	16,433.4	17,285.9	18,200.6
Total Liabilities	(983.4)	(1,040.1)	(1,503.0)	(340.9)	(352.4)	(527.3)	(1,324.3)	(1,392.5)	(2,030.3)
Plan Net Position	\$ 10,877.8	\$ 11,646.5	\$ 12,015.9	\$ 4,231.3	\$ 4,246.9	\$ 4,154.4	\$ 15,109.1	\$ 15,893.4	\$ 16,170.3

**Table 2
Changes in Plan Net Position
(In Millions)**

	Pension Funds			Insurance Fund			Total		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Additions:									
Member Cont.	\$ 307.4	\$ 298.5	\$ 275.0	\$ -	\$ -	\$ -	\$ 307.4	\$ 298.5	\$ 275.0
Employer Cont.	949.8	985.9	768.3	333.1	343.6	397.4	1,282.9	1,329.5	1,165.7
Health Ins. Cont.	14.7	12.6	12.4	-	-	-	14.7	12.6	12.4
Pension Spiking Cont	2.7	2.9	-	-	-	-	2.7	2.9	-
BoA Settlement	-	23.0	-	-	-	-	-	23.0	-
Premiums Rec'd	-	-	-	0.7	0.9	2.4	0.7	0.9	2.4
Retired Remp Ins.	-	-	-	9.2	8.8	5.6	9.2	8.8	5.6
Medicare Subsidy	-	-	-	-	-	-	-	-	-
Invest. Inc. (net)	(75.9)	204.4	1,643.0	(5.2)	76.4	527.1	(81.1)	280.8	2,170.1
Total Additions	1,198.7	1,527.3	2,698.7	337.8	429.7	932.5	1,536.5	1,957.0	3,631.2
Deductions:									
Benefit payments	1,903.6	1,832.8	1,769.7	-	-	-	1,903.6	1,832.8	1,769.7
Refunds	31.0	32.9	33.6	-	-	-	31.0	32.9	33.6
Administrative Exp.	32.3	31.0	32.6	2.0	2.2	1.6	34.3	33.2	34.2
Healthcare Costs	-	-	-	351.4	335.0	298.4	351.4	335.0	298.4
Capital Projects Exp.	0.5	-	-	-	-	-	0.5	-	-
Total Deductions	1,967.4	1,896.7	1,835.9	353.4	337.2	300.0	2,320.8	2,233.9	2,135.9
Inc. (Decrease) in Plan Net Position	\$ (768.7)	\$ (369.4)	\$ 862.8	\$ (15.6)	\$ 92.5	\$ 632.5	\$ (784.3)	\$ (276.9)	\$ 1,495.3

Net position of the pension funds decreased by \$768.7 million (\$10,877.8 million compared to \$11,646.5 million). All of these assets are restricted in use to provide monthly retirement allowances to members who contributed to the pension funds as employees and their beneficiaries. Net position of the insurance fund decreased by \$15.6 million (\$4,231.3 million compared to \$4,246.9 million). All of these assets are restricted in use to provide hospital and medical insurance benefits to members of the pension funds who receive a monthly retirement allowance.

Pension Fund Activities

Member contributions increased by \$8.9 million. This is partially due to an increase in service purchases due to the passage of Senate Bill 2. Retirement contributions are calculated by applying a percentage factor to salary and are remitted by each employer on behalf of the member. Nonhazardous members pay pension contributions of 5% of creditable compensation and hazardous members contribute 8% of creditable compensation.

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
(Continued)**

Pension Fund Activities (Continued)

Employer contributions decreased by \$36.1 million as a result of the reduction in the employer contribution rate applied to CERS Non-hazardous and Hazardous covered payrolls.

Total pension fund deductions increased by \$70.7 million caused by an increase in benefit payments, which were \$70.8 million higher than fiscal 2015.

Net investment income decreased by \$280.3 million. This is illustrated in Table 3. The pension funds experienced a decrease in income primarily due to the decrease in the fair value of investments.

Investment Income (Loss) - Pension	In Millions		
	2016	2015	2014
Increase (decrease) in fair value of investments	\$ (276)	\$ (557)	\$ 489
Investment income net of investment expense	125	219	281
Gain on sale of investments	75	542	873
Net investment income (loss)	<u>\$ (76)</u>	<u>\$ 204</u>	<u>\$ 1,643</u>

Insurance Fund Activities

Employer contributions paid into the insurance fund decreased by \$10.5 million over the prior fiscal year. This decrease is a result of the reduction in the employer contribution rate applied to CERS Non-hazardous and Hazardous covered payrolls.

Net investment income decreased \$81.6 million. This decrease in net investment income is due primarily to the decrease in the fair value of investments. This is illustrated in Table 4 as follows:

Investment Income (Loss) - Insurance	In Millions		
	2016	2015	2014
Increase (decrease) in fair value of investments	\$ (46)	\$ (126)	\$ 288
Investment income net of investment expense	47	72	81
Gain (loss) on sale of investments	(6)	130	158
Net investment income (loss)	<u>\$ (5)</u>	<u>\$ 76</u>	<u>\$ 527</u>

**KENTUCKY RETIREMENT SYSTEMS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
(Continued)**

Historical Trends

Accounting standards require that the Statement of Net Position state asset value at fair value and include only benefits and refunds due plan members and beneficiaries and accrued investment and administrative expense as of the reporting date. Information regarding the actuarial funding status of the Pension and Insurance Funds is provided in the Schedules of the Net Pension Liability on pages 74-76 and the Schedules of Funding Progress on pages 81-83. The asset value stated in the Schedules of Funding Progress is the actuarial value of assets. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the investment return assumption. The amount recognized each year is 20% of the difference between market value and expected market value. The actuarial accrued liability is calculated using the entry age normal cost funding method. This actuarial accrued liability is the measure of the cost of benefits that have been earned to date by KRS' members, but not yet paid. The difference in value between the actuarial accrued liability and the actuarial value of assets is defined as the unfunded actuarial accrued liability.

The unfunded actuarial accrued liability in the pension plans increased by \$1,521.4 million for a total unfunded amount of \$18,136.6 million as of June 30, 2016, compared to an unfunded amount of \$16,615.2 million as of June 30, 2015. In recent years, funding levels for the pension funds have fallen significantly due to investment returns less than the actuarially assumed rate and higher than anticipated retirement rates. In addition, KERS non-hazardous, KERS hazardous, and SPRS were funded less than the actuarially determined rate in prior years.

The insurance plan's unfunded actuarial accrued liability as of June 30, 2016, decreased to \$3,033.8 million from \$3,055.8 million as of June 30, 2015. This is a decrease in the unfunded actuarial accrued liability of \$22 million.

Annual required contributions of the employers as actuarially determined and actual contributions made by employers and other contributing entities in relation to the required contributions are provided in the Schedules of Employer Contributions on pages 77-79, and in the Schedules of Contributions from Employers and Other Contributing Entities on pages 84-86. The difference in the annual required contributions and actual contributions made by employers and other contributing entities in the KERS and SPRS funds is attributable to the fact that the employer contribution rate set by the Kentucky General Assembly was less than the rate recommended by the KRS Actuary, in prior years, and adopted by the KRS Board of Trustees.

COMBINING FINANCIAL STATEMENTS

DRAFT

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENT OF PLAN NET POSITION-PENSION FUNDS
As of June 30, 2016 (with Comparative Totals as of June 30, 2015)
(Dollars in Thousands)

	2016					2015	
	KERS Hazardous	KERS Non- Hazardous	CERS Hazardous	CERS Non- Hazardous	SPRS	Total	Total
ASSETS							
Cash and Short-Term Investments							
Cash	\$ 65	\$ 386	\$ 139	\$ 483	\$ 49	\$ 1,122	\$ 4,255
Short-Term Investments	15,248	85,979	55,234	143,880	5,903	306,244	395,368
Total Cash and Short-Term Investments	15,313	86,365	55,373	144,363	5,952	307,366	399,623
Receivables							
Contributions	3,674	57,461	14,307	40,414	10,582	126,438	149,629
Investment Income	16,083	60,891	56,297	176,388	6,367	316,026	308,302
Note Receivable	-	-	-	-	-	-	1,265
Total Receivables	19,757	118,352	70,604	216,802	16,949	442,464	459,196
Investments, at fair value							
Corporate and Government Bonds	47,855	311,226	183,583	559,524	28,408	1,130,596	2,680,423
Absolute Return	52,775	201,820	199,324	629,018	21,259	1,104,196	1,282,166
Private Equities	65,016	356,583	232,592	685,717	27,547	1,367,455	1,285,572
Derivatives	619	1,791	2,384	7,262	212	12,268	6,156
Corporate Stocks	272,136	728,375	1,059,962	3,260,514	95,419	5,416,406	5,201,092
Real Return	43,930	160,678	167,379	512,690	17,600	902,277	-
Real Estate	28,444	75,469	97,147	303,771	11,437	516,268	619,177
Total Investments, at fair value	510,775	1,835,942	1,942,371	5,958,496	201,882	10,449,466	11,074,586
Securities Lending Collateral Invested	31,861	118,742	120,755	369,572	12,754	653,684	743,261
Equipment (net of accumulated depreciation)	12	124	20	221	2	379	185
Intangible Assets (net of accumulated amortization)	231	2,666	373	4,548	35	7,853	9,739
Total Assets	577,949	2,162,191	2,189,496	6,694,002	237,574	11,861,212	12,686,590
LIABILITIES							
Accounts Payable	1,986	3,015	1,502	5,612	384	12,499	12,039
Investment Accounts Payable	16,222	60,142	57,062	177,422	6,423	317,271	284,809
Securities Lending Collateral Obligations	31,861	118,742	120,755	369,572	12,754	653,684	743,261
Total Liabilities	50,069	181,899	179,319	552,606	19,561	983,454	1,040,109
Plan Net Position for Pension Benefits	\$ 527,880	\$ 1,980,292	\$ 2,010,177	\$ 6,141,396	\$ 218,013	\$ 10,877,758	\$ 11,646,481

The accompanying notes are an integral part of the combining financial statements.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENT OF CHANGES IN PLAN NET POSITION-PENSION FUNDS
For the Fiscal Year Ended June 30, 2016 (with Comparative Totals for the Fiscal Year Ended June 30, 2015)
(Dollars in Thousands)

	2016					2015	
	KERS Hazardous	KERS Non- Hazardous	CERS Hazardous	CERS Non- Hazardous	SPRS	Total	Total
ADDITIONS							
Members' Contributions	\$ 15,055	\$ 101,677	\$ 51,554	\$ 133,987	\$ 5,149	\$ 307,422	\$ 298,490
Employers' Contributions	23,690	512,670	104,952	282,767	25,723	949,802	985,996
Pension Spiking Contributions	70	414	762	1,339	99	2,684	2,858
Health Insurance Contributions (HB1)	684	4,817	1,418	7,687	113	14,719	12,570
Bank of America Settlement	-	-	-	-	-	-	23,000
Total Contributions	39,499	619,578	158,686	425,780	31,084	1,274,627	1,322,914
Investment Income							
From Investing Activities:							
Net Depreciation in							
Fair Value of Investments	(7,502)	(45,200)	(31,313)	(111,343)	(6,487)	(201,845)	(14,831)
Interest/Dividends	10,079	40,149	38,076	117,432	4,276	210,012	297,935
Total Investing Activities Income (Loss)	2,577	(5,051)	6,763	6,089	(2,211)	8,167	283,104
Investment Expense	4,413	16,270	16,501	49,107	1,707	87,998	81,505
Net Income (Loss) from Investing Activities	(1,836)	(21,321)	(9,738)	(43,018)	(3,918)	(79,831)	201,599
From Securities Lending Activities:							
Securities Lending Income	216	865	845	2,620	90	4,636	3,056
Securities Lending Expense:							
Security Borrower Rebates (Income)	-	90	1	9	-	100	(159)
Security Lending Agent Fees	32	116	127	392	13	680	444
Net Income from Securities Lending Activities	184	659	717	2,219	77	3,856	2,771
Total Net Investment Income (Loss)	(1,652)	(20,662)	(9,021)	(40,799)	(3,841)	(75,975)	204,370
Total Additions	37,847	598,916	149,665	384,981	27,243	1,198,652	1,527,284

The accompanying notes are an integral part of the combining financial statements.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENT OF CHANGES IN PLAN NET POSITION-PENSION FUNDS
For The Fiscal Year Ended June 30, 2016 (with Comparative Totals for the Fiscal Year Ended June 30, 2015)
(Dollars in Thousands)
(Continued)

	2016					2015	
	KERS Hazardous	KERS Non- Hazardous	CERS Hazardous	CERS Non- Hazardous	SPRS	Total	Total
DEDUCTIONS							
Benefit Payments	59,306	923,288	213,448	651,247	56,268	1,903,557	1,832,799
Refunds	2,211	12,130	2,879	13,754	11	30,985	32,881
Capital Project Expenses	15	181	26	307	4	533	-
Administrative Expenses	903	10,807	1,337	19,077	176	32,300	31,020
Total Deductions	<u>62,435</u>	<u>946,406</u>	<u>217,690</u>	<u>684,385</u>	<u>56,459</u>	<u>1,967,375</u>	<u>1,896,700</u>
Net Decrease in Plan Net Position	(24,588)	(347,490)	(68,025)	(299,404)	(29,216)	(768,723)	(369,416)
Plan Net Position for Pension Benefits							
Beginning of Year	<u>552,468</u>	<u>2,327,782</u>	<u>2,078,202</u>	<u>6,440,800</u>	<u>247,229</u>	<u>11,646,481</u>	<u>12,015,897</u>
End of Year	<u>\$ 527,880</u>	<u>\$ 1,980,292</u>	<u>\$ 2,010,177</u>	<u>\$ 6,141,396</u>	<u>\$ 218,013</u>	<u>\$ 10,877,758</u>	<u>\$ 11,646,481</u>

The accompanying notes are an integral part of the combining financial statements.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENT OF PLAN NET POSITION-INSURANCE FUND
As of June 30, 2016 (with Comparative Totals as of June 30, 2015)
(Dollars in Thousands)

	2016					2015	
	KERS Hazardous	KERS Non- Hazardous	CERS Hazardous	CERS Non- Hazardous	SPRS	Total	Total
ASSETS							
Cash and Short-Term Investments							
Cash	\$ 24	\$ 57	\$ 11	\$ 55	\$ 5	\$ 152	\$ 894
Short-Term Investments	14,571	24,155	30,256	49,840	4,579	123,401	99,152
Total Cash and Short-Term Investments	14,595	24,212	30,267	49,895	4,584	123,553	100,046
Receivables							
Contributions	1,574	12,440	5,733	10,960	852	31,559	34,667
Investment Income	14,518	21,631	34,850	63,134	5,341	139,474	113,310
Note Receivable	-	-	-	-	-	-	141
Total Receivables	16,092	34,071	40,583	74,094	6,193	171,033	148,118
Investments, at fair value							
Corporate and Government Bonds	38,411	57,822	92,619	167,370	13,980	370,202	1,358,495
Derivatives	482	728	1,169	2,105	176	4,660	2,279
Private Equities	42,718	44,584	125,025	223,840	19,228	455,395	348,915
Absolute Return	43,319	65,279	103,780	185,283	16,243	413,904	463,486
Corporate Stocks	238,515	380,170	558,663	1,017,071	84,447	2,278,866	1,706,982
Real Return	35,905	54,252	86,894	157,216	13,124	347,391	-
Real Estate	22,176	29,424	52,708	96,158	8,439	208,905	236,443
Total Investments, at fair value	421,526	632,259	1,020,858	1,849,043	155,637	4,079,323	4,116,600
Security Lending Collateral Invested	20,908	31,468	49,470	88,990	7,443	198,279	234,509
Total Assets	473,121	722,010	1,141,178	2,062,022	173,857	4,572,188	4,599,273
LIABILITIES							
Accounts Payable	16	141	64	122	11	354	2,208
Investment Accounts Payable	14,800	22,083	35,547	64,360	5,454	142,244	115,664
Securities Lending Collateral Obligations	20,908	31,468	49,470	88,990	7,443	198,279	234,509
Total Liabilities	35,724	53,692	85,081	153,472	12,908	340,877	352,381
Plan Net Position for Insurance Benefits	\$ 437,397	\$ 668,318	\$ 1,056,097	\$ 1,908,550	\$ 160,949	\$ 4,231,311	\$ 4,246,892

The accompanying notes are an integral part of the combining financial statements.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENT OF CHANGES IN PLAN NET POSITION-INSURANCE FUND
For the Fiscal Year Ended June 30, 2016 (with Comparative Totals for the Fiscal Year Ended June 30, 2015)
(Dollars in Thousands)

	2016					2015	
	KERS Hazardous	KERS Non- Hazardous	CERS Hazardous	CERS Non- Hazardous	SPRS	Total	Total
ADDITIONS							
Employers' Contributions	\$ 15,929	\$ 131,935	\$ 66,757	\$ 108,269	\$ 10,228	\$ 333,118	\$ 343,604
Premiums Received from Retirees	(13)	240	(106)	629	(29)	721	879
Retired Reemployed Healthcare (HB1)	<u>837</u>	<u>3,880</u>	<u>862</u>	<u>3,567</u>	<u>9</u>	<u>9,155</u>	<u>8,822</u>
Total Contributions	16,753	136,055	67,513	112,465	10,208	342,994	353,305
Investment Income							
From Investing Activities:							
Net Appreciation (Depreciation) in							
Fair Value of Investments	(5,911)	(12,720)	(9,667)	(21,498)	(1,747)	(51,543)	3,890
Interest/Dividends	<u>8,187</u>	<u>12,142</u>	<u>19,746</u>	<u>36,102</u>	<u>3,043</u>	<u>79,220</u>	<u>99,338</u>
Total Investing Activities Income (Loss)	2,276	(578)	10,079	14,604	1,296	27,677	103,228
Investment Expense	<u>3,290</u>	<u>3,528</u>	<u>9,287</u>	<u>16,592</u>	<u>1,392</u>	<u>34,089</u>	<u>27,984</u>
Net Income (Loss) from Investing Activities	(1,014)	(4,106)	792	(1,988)	(96)	(6,412)	75,244
From Securities Lending Activities:							
Securities Lending Income	164	248	384	702	58	1,556	993
Securities Lending Expense:							
Security Borrower Rebates (Income)	9	10	19	36	2	76	(336)
Security Lending Agent Fees	<u>23</u>	<u>36</u>	<u>55</u>	<u>100</u>	<u>8</u>	<u>222</u>	<u>155</u>
Net Income from Securities Lending Activities	<u>132</u>	<u>202</u>	<u>310</u>	<u>566</u>	<u>48</u>	<u>1,258</u>	<u>1,174</u>
Total Net Investment Income (Loss)	<u>(882)</u>	<u>(3,904)</u>	<u>1,102</u>	<u>(1,422)</u>	<u>(48)</u>	<u>(5,154)</u>	<u>76,418</u>
Total Additions	15,871	132,151	68,615	111,043	10,160	337,840	429,723

The accompanying notes are an integral part of the combining financial statements.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENT OF CHANGES IN PLAN NET POSITION-INSURANCE FUND
For the Fiscal Year Ended June 30, 2016 (with Comparative Totals for the Fiscal Year Ended June 30, 2015)
(Dollars in Thousands)
(Continued)

	2016					2015	
	KERS Hazardous	KERS Non- Hazardous	CERS Hazardous	CERS Non- Hazardous	SPRS	Total	Total
DEDUCTIONS							
Healthcare Premiums Subsidies	17,439	126,550	68,518	118,603	13,836	344,946	328,923
Administrative Fees	97	821	343	715	62	2,038	2,180
Excise Tax	-	6	-	11	-	17	9
Self-Funding Insurance Costs	51	2,095	137	4,110	27	6,420	6,121
Total Deductions	<u>17,587</u>	<u>129,472</u>	<u>68,998</u>	<u>123,439</u>	<u>13,925</u>	<u>353,421</u>	<u>337,233</u>
Net Increase (Decrease) in Plan Net Position	(1,716)	2,679	(383)	(12,396)	(3,765)	(15,581)	92,490
Plan Net Position for Insurance Benefits							
Beginning of Year	<u>439,113</u>	<u>665,639</u>	<u>1,056,480</u>	<u>1,920,946</u>	<u>164,714</u>	<u>4,246,892</u>	<u>4,154,402</u>
End of Year	<u>\$ 437,397</u>	<u>\$ 668,318</u>	<u>\$ 1,056,097</u>	<u>\$ 1,908,550</u>	<u>\$ 160,949</u>	<u>\$ 4,231,311</u>	<u>\$ 4,246,892</u>

The accompanying notes are an integral part of the combining financial statements.

NOTES TO COMBINING FINANCIAL STATEMENTS

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KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
June 30, 2016

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

This summary of significant accounting policies of the Kentucky Retirement Systems (KRS) is presented to assist in understanding KRS' combining financial statements. The combining financial statements and notes are representations of KRS' management, which is responsible for their integrity and objectivity. These accounting policies conform to accounting principles generally accepted in the United States of America (GAAP) and have been consistently applied in the preparation of the combining financial statements.

Organization

Under the provisions of Kentucky Revised Statute Section 61.645, the Board of Trustees (the Board) of KRS administers the Kentucky Employees Retirement System (KERS), County Employees Retirement System (CERS), and State Police Retirement System (SPRS). Although the assets of the systems are invested as a whole, each system's assets are used only for the payment of benefits to the members of that plan, and a pro rata share of administrative costs, in accordance with the provisions of Kentucky Revised Statute Sections 16.555, 61.570, and 78.630.

On June 17, 2016, the Board was changed, by Executive Order, to include ten Governor appointees and seven elected members. See Note V for further detail regarding the governing reorganization.

Under the provisions of Kentucky Revised Statute Section 61.701, the Board of KRS administers the Kentucky Retirement Systems Insurance Fund. The statutes provide for a single insurance fund to provide group hospital and medical benefits to retirees drawing a benefit from the three pension funds administered by KRS: (1) KERS; (2) CERS; and (3) SPRS. The assets of the insurance fund are invested as a whole. The following notes apply to the various funds administered by KRS.

Basis of Accounting

KRS' combining financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which contributions are due. Employer contributions to the plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with terms of the plan. Premium payments are recognized when due and payable in accordance with terms of the plan. Administrative and investment expenses are recognized when incurred.

Method Used to Value Investments

Investments are reported at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Short-term investments are reported at cost, which approximates fair value. See Note D for further discussion of fair value measurements. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the dividend date. Gain (loss) on investments includes KRS' gains and losses on investments bought and sold as well held during the fiscal year.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Equipment

Equipment is valued at historical cost and depreciation is computed utilizing the straight-line method over the estimated useful lives of the assets ranging from three to ten years. Improvements, which increase the useful life of the equipment, are capitalized. Maintenance and repairs are charged to expense as incurred. The capitalization threshold used in fiscal years 2016 and 2015 was \$3,000 (see Note K for further information).

Intangible Assets

Intangible assets, currently computer software, are valued at historical cost and amortization is computed utilizing the straight-line method over the estimated useful lives of the assets which is ten years. The capitalization threshold used in fiscal years 2016 and 2015 was \$3,000 (see Note L for further information).

Contributions Receivable

Contributions receivable consist of amounts due from employers. The management of KRS considers contributions receivable to be fully collectible; accordingly, no allowance for doubtful accounts is considered necessary. If amounts become uncollectible, they will be charged to operations when that determination is made. If amounts previously written off are collected, they will be credited to income when received.

Investment Income Receivable and Investment Accounts Payable

Due to the timing of receiving partnership financial information, the fair values of the investments in certain limited partnerships have been estimated using the net asset value of the ownership interest in partners' capital as of March 31 of each fiscal year. KRS management will monitor differences in the fair values of these investments between March 31 and June 30, of each fiscal year, and will disclose any and all material differences.

The Investment Income Receivable and Investment Accounts Payable accounts consist of all buys and sells of securities, as well as all investment related accruals.

In fiscal 2015, KRS changed the reporting of private equity investment fees from a net basis to a gross basis. KRS made this decision to enhance transparency of the investment fees. Prior to 2015, the majority of KRS' private equity investment fees were netted against investment activity which is the standard used within the private equity sector. KRS' net investment income has always included these fees regardless of the reporting method used. See Note T for further detail.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Payment of Benefits

Benefits are recorded when paid.

Expense Allocation

Administrative expenses of KRS are allocated in proportion to the number of total members participating in each plan and direct investment manager expenses are allocated in proportion to the percentage of investment assets held by each plan.

Component Unit

KRS is a component unit of the Commonwealth of Kentucky (the Commonwealth) for financial reporting purposes.

KERS was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 61.515. CERS was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 78.520. SPRS was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 16.510. The Kentucky Retirement Systems Insurance Fund was created by the Kentucky General Assembly pursuant to the provisions of Kentucky Revised Statute 61.701. KRS' administrative budget is subject to approval by the Kentucky General Assembly. Employer contribution rates for KERS and SPRS are also subject to legislative approval. Employer contribution rates for CERS are determined by the Board of KRS without further legislative review. The methods used to determine the employer rates for KRS are specified in Kentucky Revised Statute 61.565. Employee contribution rates are set by statute and may be changed only by the Kentucky General Assembly.

Recent Accounting Pronouncements

In June 2015, the Governmental Accounting Standards Board (GASB) issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. The objective of this Statement is to improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. This Statement replaces Statements No. 43, *Financial Reporting for Postemployment Benefit Plans other than Pension Plans*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*. It also includes requirements for defined contribution OPEB plans that replace the requirements for those OPEB plans in Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, as amended, Statement 43, and Statement No. 50, *Pension Disclosures*. This Statement becomes effective for the fiscal year beginning July 1, 2016. KRS is evaluating the requirements of this Statement.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recent Accounting Pronouncements (Continued)

In June 2015, the GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The objective of this Statement is to address accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures. For defined benefit OPEB, this Statement identifies the methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosure and required supplementary information requirements about defined benefit OPEB also are addressed. This Statement becomes effective for the fiscal year beginning July 1, 2017. KRS is evaluating the requirements of this Statement.

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION

Membership in each retirement plan consisted of the following at June 30, 2016 and 2015:

	2016			2015		
	Non-Hazardous Position Employees	Hazardous Position Employees	Total	Non-Hazardous Position Employees	Hazardous Position Employees	Total
<u>Number of Members</u>						
Retirees and Beneficiaries						
Receiving Benefits	40,099	2,739	42,838	38,827	2,575	41,402
Inactive Memberships	43,929	4,067	47,996	42,479	3,761	46,240
Active Plan Members	38,121	3,987	42,108	39,289	3,932	43,221
Total	<u>122,149</u>	<u>10,793</u>	<u>132,942</u>	<u>120,595</u>	<u>10,268</u>	<u>130,863</u>
Number of Participating Employers			<u>358</u>			<u>354</u>

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

COUNTY EMPLOYEES RETIREMENT SYSTEM

	2016			2015		
	Non-Hazardous Position Employees	Hazardous Position Employees	Total	Non-Hazardous Position Employees	Hazardous Position Employees	Total
<u>Number of Members</u>						
Retirees and Beneficiaries						
Receiving Benefits	51,673	6,834	58,507	48,515	6,389	54,904
Inactive Memberships	75,904	2,309	78,213	72,965	2,142	75,107
Active Plan Members	<u>83,346</u>	<u>9,139</u>	<u>92,485</u>	<u>82,969</u>	<u>9,188</u>	<u>92,157</u>
Total	<u>210,923</u>	<u>18,282</u>	<u>229,205</u>	<u>204,449</u>	<u>17,719</u>	<u>222,168</u>
Number of Participating Employers			<u>1,140</u>			<u>1,136</u>

STATE POLICE RETIREMENT SYSTEM

	2016	2015
<u>Number of Members</u>	<u>Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>
Retirees and Beneficiaries Receiving Benefits	1,379	1,324
Inactive Memberships	262	257
Active Plan Members	<u>924</u>	<u>940</u>
Total	<u>2,565</u>	<u>2,521</u>
Number of Participating Employers	<u>1</u>	<u>1</u>

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

Hospital and medical contracts consisted of the following at June 30, 2016 and 2015:

	2016					2015				
	<u>Single</u>	<u>Couple/ Family</u>	<u>Parent</u>	<u>Medicare Without Prescription</u>	<u>Medicare With Prescription</u>	<u>Single</u>	<u>Couple/ Family</u>	<u>Parent</u>	<u>Medicare Without Prescription</u>	<u>Medicare With Prescription</u>
KERS Non-Hazardous	8,876	656	441	1,286	19,447	9,251	714	452	1,303	18,577
KERS Hazardous	663	439	97	66	1,302	656	448	110	62	1,177
CERS Non-Hazardous	8,164	465	235	2,499	23,007	8,098	473	242	2,531	21,520
CERS Hazardous	1,595	2,321	378	114	2,969	1,500	2,255	456	107	2,697
SPRS	246	447	77	18	850	265	441	81	16	777
Totals	<u>19,544</u>	<u>4,328</u>	<u>1,228</u>	<u>3,983</u>	<u>47,575</u>	<u>19,770</u>	<u>4,331</u>	<u>1,341</u>	<u>4,019</u>	<u>44,748</u>

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

Non-Hazardous Employees Pension Plan

Plan Description - KERS is a cost-sharing multiple-employer defined benefit pension plan that covers all regular full-time members employed in non-hazardous duty positions of any state department, board, or agency directed by Executive Order to participate in KERS. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Prior to July 1, 2009, cost-of-living adjustments (COLA) were provided annually equal to the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. Effective July 1, 2009, and on July 1 of each year thereafter, the COLA is limited to 1.5% provided the recipient has been receiving a benefit for at least 12 months prior to the effective date of the COLA. If the recipient has been receiving a benefit for less than 12 months prior to the effective date of the COLA, the increase shall be reduced on a pro-rata basis for each month the recipient has not been receiving benefits in the 12 months preceding the effective date of the COLA. The Kentucky General Assembly reserves the right to suspend or reduce the COLA if, in its judgment, the welfare of the Commonwealth so demands. No COLA has been granted since July 1, 2011.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

Contributions - For the fiscal years ended June 30, 2016 and 2015, plan members who began participating prior to September 1, 2008, were required to contribute 5% of their annual creditable compensation. These members were classified in the Tier 1 structure of benefits. The Commonwealth was required to contribute at an actuarially determined rate. Per Kentucky Revised Statute Section 61.565(3), normal contribution and past service contribution rates shall be determined by the Board on the basis of an annual valuation last preceding July 1 of a new biennium. The Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the Board. However, formal commitment to provide the contributions by the employer is made through the biennial budget. For both fiscal years ended June 30, 2016 and 2015, participating employers contributed 38.77%, of each employee's creditable compensation. The actuarially determined rates set by the Board for both fiscal years ended June 30, 2016 and 2015, was 38.77% of each employee's creditable compensation. Administrative costs of KRS are financed through employer contributions and investment earnings.

Plan members who began participating on, or after, September 1, 2008, were required to contribute a total of 6% of their annual creditable compensation. These members were classified in the Tier 2 structure of benefits. Five percent of the contribution was deposited to the member's account while the 1% was deposited to an account created for the payment of health insurance benefits under 26 USC Section 401(h) in the Pension Fund (see Kentucky Administrative Regulation 105 KAR 1:420E). Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% contribution to the 401(h) account is non-refundable and is forfeited. For plan members who began participating prior to September 1, 2008, their contributions remain at 5% of their annual creditable compensation.

Plan members who began participating on, or after, January 1, 2014, were required to contribute to the Cash Balance Plan. These members were classified in the Tier 3 structure of benefits. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and a defined contribution plan. Members in the plan contribute a set percentage of their salary each month to their own account. Non-hazardous members contribute 5% of their annual creditable compensation and 1% to the health insurance fund which is not credited to the member's account and is not refundable. The employer contribution rate is set annually by the Board based on an actuarial valuation. The employer contributes a set percentage of the member's salary. Each month, when employer contributions are received, an employer pay credit is deposited to the member's account. For non-hazardous members, their account is credited with a 4% employer pay credit. The employer pay credit represents a portion of the employer contribution.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

Hazardous Employees Pension Plan

Plan Description - KERS is a cost-sharing multiple-employer defined benefit pension plan that covers all regular full-time members employed in hazardous duty positions of any state department, board, or agency directed by Executive Order to participate in KERS. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Prior to July 1, 2009, COLAs were provided annually equal to the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. Effective July 1, 2009, and on July 1 of each year thereafter, the COLA is limited to 1.5% provided the recipient has been receiving a benefit for at least 12 months prior to the effective date of the COLA. If the recipient has been receiving a benefit for less than 12 months prior to the effective date of the COLA, the increase shall be reduced on a pro-rata basis for each month the recipient has not been receiving benefits in the 12 months preceding the effective date of the COLA. The Kentucky General Assembly reserves the right to suspend or reduce the COLA if, in its judgment, the welfare of the Commonwealth so demands. No COLA has been granted since July 1, 2011.

Contributions - For the fiscal years ended June 30, 2016 and 2015, plan members who began participating prior to September 1, 2008, were required to contribute 8% of their annual creditable compensation. These members were classified in the Tier 1 structure of benefits. The Commonwealth was required to contribute at an actuarially determined rate. Per Kentucky Revised Statute Section 61.565(3), normal contribution and past service contribution rates shall be determined by the Board on the basis of an annual valuation last preceding the July 1 of a new biennium. The Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the Board. However, formal commitment to provide the contributions by the employer is made through the biennial budget. For both fiscal years ended June 30, 2016 and 2015, participating employers contributed 26.34% of each employee's creditable compensation. The actuarially determined rates set by the Board for both fiscal years ended June 30, 2016 and 2015, was 26.34% of each employee's creditable compensation. Administrative costs of KRS are financed through employer contributions and investment earnings.

Plan members who began participating on, or after, September 1, 2008, were required to contribute a total of 9% of their annual creditable compensation. These members were classified in the Tier 2 structure of benefits. Eight percent of the contribution was deposited to the member's account while the 1% was deposited to an account created for the payment of health insurance benefits under 26 USC Section 401(h) in the Pension Fund (see Kentucky Administrative Regulation 105 KAR 1:420E). Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% contribution to the 401(h) account is non-refundable and is forfeited. For plan members who began participating prior to September 1, 2008, their contributions remain at 8% of their annual creditable compensation.

Plan members who began participating on, or after, January 1, 2014, were required to contribute to the Cash Balance Plan. These members were classified in the Tier 3 structure of benefits. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and defined contribution plan. Members in the plan contribute a set percentage of their salary each month to their own account.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

Hazardous members contribute 8% of their annual creditable compensation and 1% to the health insurance fund which is not credited to the member's account and is not refundable. The employer contribution rate is set annually by the Board based on an actuarial valuation. The employer contributes a set percentage of the member's salary. Each month, when employer contributions are received, an employer pay credit is deposited to the member's account. For hazardous members, their account is credited with a 7.5% employer pay credit. The employer pay credit represents a portion of the employer contribution.

COUNTY EMPLOYEES RETIREMENT SYSTEM

Non-Hazardous Employees Pension Plan

Plan Description - CERS is a cost-sharing multiple-employer defined benefit pension plan that covers all regular full-time members employed in non-hazardous duty positions of each participating county, city, and school board, and any additional eligible local agencies electing to participate in CERS. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Prior to July 1, 2009, COLAs were provided annually equal to the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. Effective July 1, 2009, and on July 1 of each year thereafter, the COLA is limited to 1.5% provided the recipient has been receiving a benefit for at least 12 months prior to the effective date of the COLA. If the recipient has been receiving a benefit for less than 12 months prior to the effective date of the COLA, the increase shall be reduced on a pro-rata basis for each month the recipient has not been receiving benefits in the 12 months preceding the effective date of the COLA. The Kentucky General Assembly reserves the right to suspend or reduce the COLA if, in its judgment, the welfare of the Commonwealth so demands. No COLA has been granted since July 1, 2011.

Contributions - For the fiscal years ended June 30, 2016 and 2015, plan members who began participating prior to September 1, 2008, were required to contribute 5% of their annual creditable compensation. These members were classified in the Tier 1 structure of benefits. The participating employers were required to contribute at an actuarially determined rate. Per Kentucky Revised Statute Section 78.545(33), normal contribution and past service contribution rates shall be determined by the Board on the basis of an annual valuation last preceding the July 1 of a new biennium. The Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the Board. For the fiscal years ended June 30, 2016 and 2015, participating employers contributed 17.06% and 17.67%, respectively, of each employee's creditable compensation. The actuarially determined rates set by the Board for the fiscal years ended June 30, 2016 and 2015, were 17.06% and 17.67%, respectively. Administrative costs of KRS are financed through employer contributions and investment earnings.

Plan members who began participating on, or after, September 1, 2008, were required to contribute a total of 6% of their annual creditable compensation. These members were classified in the Tier 2 structure of benefits. Five percent of the contribution was deposited to the member's account while the 1% was deposited to an account created for the payment of health insurance benefits under 26 USC Section 401(h) in the Pension Fund (see Kentucky Administrative Regulation 105 KAR 1:420E). Interest is paid each June 30 on members' accounts at a rate of 2.5%.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% contribution to the 401(h) account is non-refundable and is forfeited. For plan members who began participating prior to September 1, 2008, their contributions remain at 5% of their annual creditable compensation.

Plan members who began participating on, or after, January 1, 2014, were required to contribute to the Cash Balance Plan. These members were classified in the Tier 3 structure of benefits. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and a defined contribution plan. Members in the plan contribute a set percentage of their salary each month to their own account. Non-hazardous members contribute 5% of their annual creditable compensation and 1% to the health insurance fund which is not credited to the member's account and is not refundable. The employer contribution rate is set annually by the Board based on an actuarial valuation. The employer contributes a set percentage of the member's salary. Each month, when employer contributions are received, an employer pay credit is deposited to the member's account. For non-hazardous members, their account is credited with a 4% employer pay credit. The employer pay credit represents a portion of the employer contribution.

Hazardous Employees Pension Plan

Plan Description - CERS is a cost-sharing multiple-employer defined benefit pension plan that covers all regular full-time members employed in hazardous duty positions of each participating county, city and school board, and any additional eligible local agencies electing to participate in CERS. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Prior to July 1, 2009, COLAs were provided annually equal to the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. Effective July 1, 2009, and on July 1 of each year thereafter, the COLA is limited to 1.5% provided the recipient has been receiving a benefit for at least 12 months prior to the effective date of the COLA. If the recipient has been receiving a benefit for less than 12 months prior to the effective date of the COLA, the increase shall be reduced on a pro-rata basis for each month the recipient has not been receiving benefits in the 12 months preceding the effective date of the COLA. The Kentucky General Assembly reserves the right to suspend or reduce the COLA if, in its judgment, the welfare of the Commonwealth so demands. No COLA has been granted since July 1, 2011.

Contributions - For the fiscal years ended June 30, 2016 and 2015, plan members who began participating prior to September 1, 2008, were required to contribute 8% of their annual creditable compensation. These members were classified in the Tier 1 structure of benefits. The participating employers were required to contribute at an actuarially determined rate. Per Kentucky Revised Statute Section 78.545(33), normal contribution and past service contribution rates shall be determined by the Board on the basis of an annual valuation last preceding the July 1 of a new biennium. The Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the Board. For the fiscal years ended June 30, 2016 and 2015, participating employers contributed 32.95% and 34.31%, respectively, of each employee's creditable compensation.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

The actuarially determined rates set by the Board for the fiscal years ended June 30, 2016 and 2015, were 32.95% and 34.31%, respectively, of each employee's creditable compensation. Administrative costs of KRS are financed through employer contributions and investment earnings.

Plan members who began participating on, or after, September 1, 2008, were required to contribute a total of 9% of their annual creditable compensation. These members were classified in the Tier 2 structure of benefits. Eight percent of the contribution was deposited to the member's account while the 1% was deposited to an account created for the payment of health insurance benefits under 26 USC Section 401(h) in the Pension Fund (see Kentucky Administration Regulation 105 KAR 1:420E). Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% contribution to the 401(h) account is non-refundable and is forfeited. For plan members who began participating prior to September 1, 2008, their contributions remain at 8% of their annual creditable compensation.

Plan members who began participating on, or after, January 1, 2014, were required to contribute to the Cash Balance Plan. These members were classified in the Tier 3 structure of benefits. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and defined contribution plan. Members in the plan contribute a set percentage of their salary each month to their own account. Hazardous members contribute 8% of their annual creditable compensation and 1% to the health insurance fund which is not credited to the member's account and is not refundable. The employer contribution rate is set annually by the Board based on an actuarial valuation. The employer contributes a set percentage of the member's salary. Each month, when employer contributions are received, an employer pay credit is deposited to the member's account. For hazardous members, their account is credited with a 7.5% employer pay credit. The employer pay credit represents a portion of the employer contribution.

STATE POLICE RETIREMENT SYSTEM

Plan Description - SPRS is a single-employer defined benefit pension plan that covers all full-time state troopers employed in a hazardous duty position by the Kentucky State Police. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Prior to July 1, 2009, COLAs were provided annually equal to the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year, not to exceed 5% in any plan year. Effective July 1, 2009, and on July 1 of each year thereafter, the COLA is limited to 1.5% provided the recipient has been receiving a benefit for at least 12 months prior to the effective date of the COLA. If the recipient has been receiving a benefit for less than 12 months prior to the effective date of the COLA, the increase shall be reduced on a pro-rata basis for each month the recipient has not been receiving benefits in the 12 months preceding the effective date of the COLA. The Kentucky General Assembly reserves the right to suspend or reduce the COLA if, in its judgment, the welfare of the Commonwealth so demands. No COLA has been granted since July 1, 2011.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

Contributions - For the fiscal years ended June 30, 2016 and 2015, plan members who began participating prior to September 1, 2008, were required to contribute 8% of their annual creditable compensation. These members were classified in the Tier 1 structure of benefits. The Commonwealth was required to contribute at an actuarially determined rate. Per Kentucky Revised Statute Section 16.545(18), normal contribution and past service contribution rates shall be determined by the Board on the basis of an annual valuation last preceding the July 1 of a new biennium. The Board may amend contribution rates as of the first day of July of the second year of a biennium, if it is determined on the basis of a subsequent actuarial valuation that amended contribution rates are necessary to satisfy requirements determined in accordance with actuarial bases adopted by the Board. However, formal commitment to provide the contributions by the employer is made through the biennial budget. For both fiscal years ended June 30, 2016 and 2015, the Commonwealth contributed 75.76% of each employee's creditable compensation. The actuarially determined rates set by the Board for both fiscal years ended June 30, 2016 and 2015 was 75.76% of each employee's creditable compensation. Administrative costs of KRS are financed through employer contributions and investment earnings.

Plan members who began participating on, or after, September 1, 2008, were required to contribute a total of 9% of their annual creditable compensation. These members were classified in the Tier 2 structure of benefits. Eight percent of the contribution was deposited to the member's account while the 1% was deposited to an account created for the payment of health insurance benefits under 26 USC Section 401(h) in the Pension Fund (see Kentucky Administrative Regulation 105 KAR 1:420E). Interest is paid each June 30 on members' accounts at a rate of 2.5%. If a member terminates employment and applies to take a refund, the member is entitled to a full refund of contributions and interest; however, the 1% contribution to the 401(h) account is non-refundable and is forfeited. For plan members who began participating prior to September 1, 2008, their contributions remain at 8% of their annual creditable compensation.

Plan members who began participating on, or after, January 1, 2014, were required to contribute to the Cash Balance Plan. These members were classified in the Tier 3 structure of benefits. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and defined contribution plan. Members in the plan contribute a set percentage of their salary each month to their own account. Hazardous members contribute 8% of their annual creditable compensation and 1% to the health insurance fund which is not credited to the member's account and is not refundable. The employer contribution rate is set annually by the Board based on an actuarial valuation. The employer contributes a set percentage of the member's salary. Each month, when employer contributions are received, an employer pay credit is deposited to the member's account. For hazardous members, their account is credited with a 7.5% employer pay credit. The employer pay credit represents a portion of the employer contribution.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

Plan Description - The Kentucky Retirement Systems Insurance Fund (Insurance Fund) was established to provide hospital and medical insurance for members receiving benefits from KERS, CERS, and SPRS. The Insurance Fund pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. For the fiscal year ended June 30, 2016, insurance premiums withheld from benefit payments for members of the systems were \$20.6 million and \$1.2 million for KERS non-hazardous and hazardous, respectively; \$22.6 million and \$2.2 million for CERS non-hazardous and hazardous, respectively; and, \$241,535 for SPRS. For fiscal year 2015, insurance premiums withheld from benefit payments for members of the systems were \$21.2 million and \$1.1 million for KERS non-hazardous and hazardous, respectively; \$22.6 million and \$1.7 million for CERS non-hazardous and hazardous, respectively; and, \$135,018 for SPRS. The Insurance Fund pays the same proportion of hospital and medical insurance premiums for the spouse and dependents of retired hazardous members killed in the line of duty. As of June 30, 2016, the Insurance Fund had 113,280 retirees and beneficiaries for whom benefits were available.

The amount of contribution paid by the Insurance Fund is based on years of service. For members participating prior to July 1, 2003, years of service and respective percentages of the maximum contribution are as follows:

<u>Years of Service</u>	<u>% Paid by Insurance Fund</u>
20 or More	100%
15 - 19	75%
10 - 14	50%
4 - 9	25%
Less Than 4	0%

As a result of House Bill 290 (2004 Kentucky General Assembly), medical insurance benefits are calculated differently for members who began participating on, or after, July 1, 2003. Once members reach a minimum vesting period of ten years, non-hazardous employees whose participation began on, or after, July 1, 2003 earn \$10 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Hazardous employees whose participation began on, or after, July 1, 2003 earn \$15 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Upon death of a hazardous employee, the employee's spouse receives \$10 per month for insurance benefits for each year of the deceased employee's earned hazardous service. This dollar amount is subject to adjustment annually, which is currently 1.5%, based upon Kentucky Revised Statutes. As of June 30, 2016, non-hazardous employees whose participation began on, or after, July 1, 2003 earn \$12.99 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. Hazardous employees whose participation began on, or after, July 1, 2003 earn \$19.48 per month for insurance benefits at retirement for every year of earned service without regard to a maximum dollar amount. This benefit is not protected under the inviolable contract provisions of Kentucky Revised Statute 16.652, 61.692 and 78.852. The Kentucky General Assembly reserves the right to suspend or reduce this benefit if, in its judgment, the welfare of the Commonwealth so demands.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE B – PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION (CONTINUED)

On August 6, 2012, the Board voted to cease self-funding of healthcare benefits for most KRS Medicare eligible retirees. The Board elected to contract with Humana Insurance Company to provide healthcare benefits to KRS' retirees through a fully-insured Medicare Advantage Plan. The Humana Medicare Advantage Plan became effective January 1, 2013.

NOTE C – CASH AND SHORT-TERM INVESTMENTS AND SECURITIES LENDING COLLATERAL

The provisions of GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions* require that cash received as collateral on securities lending transactions, and investments made with that cash, be reported as assets on the financial statements. In accordance with GASB No. 28, KRS classifies certain other investments, not related to the securities lending program, as short-term. Cash and short-term investments consist of the following at June 30:

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

	<u>2016</u>	<u>2015</u>
Cash	\$ 451,041	\$ 1,900,500
Short-Term Investments	101,227,210	119,412,200
Securities Lending Collateral Invested	<u>150,602,925</u>	<u>180,822,466</u>
Total	<u>\$ 252,281,176</u>	<u>\$ 302,135,166</u>

COUNTY EMPLOYEES RETIREMENT SYSTEM

	<u>2016</u>	<u>2015</u>
Cash	\$ 621,299	\$ 2,138,933
Short-Term Investments	199,113,359	268,159,676
Securities Lending Collateral Invested	<u>490,326,943</u>	<u>547,046,264</u>
Total	<u>\$ 690,061,601</u>	<u>\$ 817,344,873</u>

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

**NOTE C – CASH AND SHORT-TERM INVESTMENTS AND SECURITIES LENDING COLLATERAL
 (CONTINUED)**

STATE POLICE RETIREMENT SYSTEM

	<u>2016</u>	<u>2015</u>
Cash	\$ 49,175	\$ 215,325
Short-Term Investments	5,902,617	7,795,849
Securities Lending Collateral Invested	<u>12,753,573</u>	<u>15,392,066</u>
Total	<u>\$ 18,705,365</u>	<u>\$ 23,403,240</u>

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

	<u>2016</u>	<u>2015</u>
Cash	\$ 152,362	\$ 894,438
Short-Term Investments	123,400,027	99,151,683
Securities Lending Collateral Invested	<u>198,278,633</u>	<u>234,509,400</u>
Total	<u>\$ 321,831,022</u>	<u>\$ 334,555,521</u>

NOTE D – INVESTMENTS

Kentucky Revised Statute 61.650 grants the responsibility for the investment of plan assets to the Board of KRS. The Board has established an Investment Committee which is specifically charged with the oversight and investment of plan assets. The Investment Committee recognizes their duty to invest the funds in accordance with the "Prudent Person Rule" (set forth in Kentucky Revised Statute 61.650) and manage those funds consistent with the long-term nature of the systems. The Investment Committee has adopted a *Statement of Investment Policy* that contains guidelines and restrictions for deposits and investments. By statute, all investments are to be registered and held in the name of KRS. The *Statement of Investment Policy* contains the specific guidelines for the investment of pension and insurance assets. Additionally, the Investment Committee establishes specific investment guidelines that are summarized below and are included in the Investment Management Agreement for each investment management firm.

Equity Investments - Investments may be made in common stock, securities convertible into common stock, preferred stock of publicly traded companies on stock markets, asset class relevant Exchange Traded Funds' (ETF's) or any other type of security contained in a manager's benchmark. Each individual equity account has a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions and standards of performance.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

Fixed Income Investments – The fixed income accounts may include, but are not limited to, the following fixed income securities: US Government and Agency bonds; investment grade US corporate credit; investment grade non-US corporate credit; non-investment grade US corporate credit including both bonds and bank loans; non-investment grade non-US corporate credit including bonds and bank loans; municipal bonds; non-US sovereign debt; mortgages, including residential mortgage backed securities; commercial mortgage backed securities, and whole loans; asset-backed securities and emerging market debt (EMD), including both sovereign EMD and corporate EMD; and, asset class relevant ETF's.

Mortgages - Investment may be made in real estate mortgages on a direct basis or in the form of mortgage pool instruments.

Private Equity/Equity Real Estate/Real Return/Absolute Return Investments - Subject to the specific approval of the Investment Committee of the Board, investments may be made for the purpose of creating a diversified portfolio of alternative investments. The Board may invest in real estate or alternative investments including, but not limited to and without limitation, venture capital, private equity, private placements, real assets and absolute return investments which the Investment Committee believes has excellent potential to generate income and which may have a higher degree of risk.

Cash Equivalent Securities - The following short-term investment vehicles are considered acceptable:

Publicly traded investment grade corporate bonds, variable rate demand notes, government and agency bonds, mortgages, municipal bonds, and collective Short Term Investment Fund's (STIF), money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper) and repurchase agreements, relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail.

All instruments shall have a maturity at the time of purchase that does not exceed two years. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

KRS' fixed income managers, who utilize cash equivalent securities as an integral part of their investment strategy, are exempt from the permissible investments contained in the preceding paragraph. Permissible short-term investments for fixed income managers shall be included in the investment manager's investment guidelines.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

Investment Expenses – In accordance with GASB Statement No. 25, *Financial Reporting for Defined Pension Benefit Plans and Note Disclosures for Defined Contribution Plans*, KRS has exercised professional judgment to report investment expenses. It is not cost-beneficial to separate certain investment expenses from either the related investment income or the general administrative expenses. In fiscal 2015, KRS changed the reporting of private equity investment fees from a net basis to a gross basis. KRS made this decision to enhance transparency of the investment fees. Prior to 2015, the majority of KRS' private equity investment fees were netted against investment activity which is the standard used within the private equity sector. KRS' net investment income has always included these fees regardless of the reporting method used.

Derivatives - Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indices. Investments may be made in derivative securities, or strategies which make use of derivative instruments, only if such investments do not cause the portfolio to be in any way leveraged beyond a 100% invested position.

In accordance with GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, KRS provides this additional disclosure regarding its derivatives:

As of June 30, 2016, KRS has the following derivative instruments outstanding:

<u>Item</u>	<u>Type</u>	<u>Objective</u>	<u>Cost</u>	<u>Notional Cost</u>	<u>Market Value</u>	<u>Terms</u>	<u>Notional Market Value</u>
Pension:							
A	US Equity Index Futures	Hedge against the drop in the equity markets or to equitize cash	-	\$6,105,855	\$10,974,393,837	9/16/2016	-
B	Fixed Income Securities	Hedge against sudden or dramatic shifts in interest rates	-	(\$8,498,441)	\$10,974,393,837	12/30/2016	-
Insurance:							
C	US Equity Index Futures	Hedge against risk that interest rates will move in an adverse direction	-	\$2,819,233	\$4,317,978,535	9/16/2016	-
D	Fixed Income Securities	Hedge against sudden or dramatic shifts in interest rates	-	(\$3,156,723)	\$4,317,978,535	12/30/2016	-

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

All derivative instruments have various effective dates and maturity dates.

It is the policy of KRS that investment managers may invest in derivative securities, or strategies which make use of derivative investments, only if such investments do not cause the portfolio to be in any way leveraged beyond a 100% invested position. Examples of such derivatives include, but are not limited to, foreign currency forward contracts, collateralized mortgage obligations, treasury inflation protected securities, futures, options and swaps.

Investments in derivative securities which are subject to large or unanticipated changes in duration or cash flows, such as interest only, principal only, inverse floater, or structured note securities are permitted only to the extent authorized in a contract or an alternative investment offering memorandum or agreement.

Investments in securities such as collateralized mortgage obligations and planned amortization class issues are allowed if, in the judgment of the investment manager, they are not expected to be subject to large or unanticipated changes in duration or cash flows. Investment managers may make use of derivative securities for defensive or hedging purposes. Any derivative security shall be sufficiently liquid that it can be expected to be sold at, or near, its most recently quoted market price.

For accounting and financial reporting purposes, all derivative instruments are considered investment derivative instruments. The derivatives have been segregated on the Combining Statement of Plan Net Position for both Pension and Insurance Funds.

Risks:

Basis Risk: Derivative instruments A and C expose KRS to basis risk in that the value of the underlying equity index future may decrease in fair value relative to the cash market.

Interest Rate Risk: Derivative instruments B and D expose KRS to interest rate risk in that changes in interest rates will adversely affect the fair values of KRS' financial instruments.

In June 2011, the GASB issued Statement No. 64, *Derivative Instruments: Application of Hedge Accounting Termination Provisions, an Amendment of GASB Statement No. 53*. The objective of this Statement is to clarify whether an effective hedging relationship continues and hedge accounting should continue to be applied. Upon the termination of a hedging derivative instrument, hedge accounting should cease and investment income should immediately recognize deferred outflows of resources or deferred inflows of resources. KRS maintains its derivative instruments as investment derivative instruments for all accounting and financial reporting purposes. Therefore, hedge accounting and the related effectiveness testing is not performed.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

Custodial Credit Risk for Deposits - Custodial credit risk for deposits is the risk that in the event of a financial institution failure, KRS' deposits may not be returned. All non-investment related bank balances are held by JP Morgan Chase. All non-investment related bank balances are held in KRS' name and each individual account is insured by the Federal Deposit Insurance Corporation (FDIC). In 2010, the US Congress passed the Financial Crisis Bill and permanently increased the FDIC deposit insurance coverage to \$250,000. These cash balances are invested daily by the local institution in overnight repurchase agreements which are required by Kentucky Administrative Regulations (200 KAR 14:081) to be collateralized at 102% of the principal amount.

As of June 30, 2016 and 2015, deposits for KRS pension funds were \$5.7 million and \$7.9 million, respectively. None of these balances were exposed to custodial credit risk as they were either insured or collateralized at required levels.

As of June 30, 2016 and 2015, deposits for KRS insurance fund were \$162,409 and \$892,995, respectively. None of these balances were exposed to custodial credit risk as they were either insured or collateralized at required levels.

Custodial Credit Risk for Investments - Custodial credit risk for investments is the risk that in the event of the failure of the counterparty to a transaction, KRS will not be able to recover the value of investments or collateral securities that are in the possession of an outside third party. KRS does not have an explicit policy with regards to Custodial Credit Risk for investments. As of June 30, 2016 and 2015, the following currencies were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent but not in KRS' name. These funds are cash held by KRS' Global Managers and consist of various currencies.

Pension Funds	<u>2016</u>	<u>2015</u>
Foreign Currency	\$ 1,286,190,462	\$ 1,107,035,125
Insurance Fund		
Foreign Currency	\$ 513,059,219	\$ 405,226,690

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

Investment Summary

The following tables present a summary of the investments by type as of June 30, 2016 and 2015:

	2016	2015
Pension Funds		
Fixed Income Securities	\$ 1,130,595,132	\$ 2,680,423,440
Short-Term Investments	306,243,184	395,367,724
Equity Securities	5,416,405,517	5,201,092,389
Private Equity Limited Partnerships	1,367,455,984	1,285,572,446
Real Estate	516,267,596	619,177,193
Real Return	902,277,351	-
Derivatives	12,267,866	6,156,232
Absolute Return	1,104,194,904	1,282,165,506
	<u>\$ 10,755,707,534</u>	<u>\$ 11,469,954,930</u>
	2016	2015
Insurance Fund		
Fixed Income Securities	\$ 370,201,984	\$ 1,358,494,646
Short-Term Investments	123,400,027	99,151,683
Equity Securities	2,278,866,187	1,706,981,715
Private Equity Limited Partnerships	455,394,737	348,915,161
Real Estate	208,905,457	236,443,112
Real Return	347,390,860	-
Derivatives	4,659,129	2,278,887
Absolute Return	413,903,171	463,486,065
	<u>\$ 4,202,721,552</u>	<u>\$ 4,215,751,269</u>

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

Credit Risk of Debt Securities - Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The debt security portfolios are managed by the Investment Division staff and by external investment management firms. All portfolio managers are required by the *Statement of Investment Policy* to maintain diversified portfolios. Each portfolio is also required to be in compliance with risk management guidelines that are assigned to them based upon the portfolio's specific mandate. In total, the pension and insurance funds debt securities portfolios are managed using the following guidelines adopted by the Board of KRS:

- Bonds, notes or other obligations issued or guaranteed by the US Government, its agencies or instrumentalities are permissible investments and may be held without restrictions.
- Fixed income investments will be similar in type to those securities found in the KRS fixed income benchmarks and the characteristics of the KRS fixed income portfolio will be similar to the KRS fixed income benchmarks.
- The duration of the total fixed income portfolio shall not deviate from the KRS Fixed Income by more than 25%.
- The duration of the Treasury Inflation Protected Securities (TIPS) portfolio shall not deviate from the KRS Fixed Income Index by more than 10%.
- The amount invested in the debt of a single corporation shall not exceed 5% of the total market value of KRS' assets.
- No public fixed income manager shall invest more than 5% of the market value of assets held in any single issue short-term instrument, with the exception of US Government issued, guaranteed or agency obligations.
- The amount invested in SEC Rule 144a securities shall not exceed 7.5% of the market value of the aggregate market value of KRS' core fixed income investments.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

The following table presents the KRS pension funds debt ratings as of June 30, 2016 and 2015:

Quality Rating	Pension Funds Debt Securities Investments at Fair Value As of June 30, 2016 and 2015	
	2016	2015
AAA	\$ 86,006,920	\$ 32,799,444
AA+	52,605,953	220,525,397
AA	11,482,914	19,544,218
AA-	21,615,482	29,318,050
A-1+	-	546,266
A+	19,591,386	16,624,270
A	33,957,742	30,690,688
A-	25,109,303	54,108,960
BBB+	46,520,336	65,256,861
BBB	50,102,866	69,164,919
BBB-	60,336,036	125,695,004
BB+	64,643,931	147,737,994
BB	65,913,438	124,243,472
BB-	63,249,470	101,087,356
B+	73,861,004	147,998,684
B	54,209,825	120,008,446
B-	36,620,111	91,895,479
CCC+	19,077,470	45,867,312
CCC	4,594,360	10,687,090
CCC-	1,596,538	3,151,024
CC	2,109,047	2,560,088
D	5,403,526	3,881,933
NR	130,560,323	778,261,251
Total Credit Risk Debt Securities	929,167,981	2,241,654,206
Government Agencies	3,454,645	2,310,824
Government Mortgage-Backed Securities (GNMA)	84,497,645	234,372,835
Gov't Issued Commercial Mortgage Backed	7,692,825	4,504,823
Government Bonds	105,782,036	146,629,121
Indexed Linked Bonds	-	50,951,631
Total Debt Securities	\$ 1,130,595,132	\$ 2,680,423,440

At both June 30, 2016 and 2015, the weighted average quality rating of the pension fund debt securities portfolio was AA+. As of June 30, 2016 and 2015, the KRS pension portfolio had \$521,839,042 and \$1,577,380,129, respectively, in debt securities rated below BBB-. The government agencies in which KRS is invested are Fannie Mae and the Federal Home Loan Bank whose credit ratings are AA+.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

The following table presents the KRS insurance fund debt ratings as of June 30, 2016 and 2015:

Quality Rating	Insurance Fund Debt Securities Investments at Fair Value As of June 30, 2016 and 2015	
	2016	2015
AAA	\$ 31,289,627	\$ 36,199,356
AA+	19,649,877	30,949,483
AA	4,081,442	5,594,558
AA-	7,649,085	9,538,154
A+	7,553,833	15,158,170
A-1+	-	202,350
A	11,668,832	30,746,413
A-	8,752,068	30,022,792
BBB+	16,229,373	32,416,543
BBB	17,770,749	27,473,957
BBB-	18,634,688	34,131,541
BB+	19,898,753	34,246,856
BB	18,098,149	27,533,223
BB-	18,819,867	26,031,520
B+	20,603,493	30,210,910
B	17,158,409	28,480,371
B-	9,418,206	15,454,963
CC	748,501	572,136
CCC	1,199,449	941,558
CCC+	5,524,662	10,077,032
CCC-	65,000	221,552
D	2,034,383	753,803
NR	45,390,901	570,268,422
Total Credit Risk Debt Securities	302,239,347	997,225,663
Government Agencies	1,184,725	3,248,856
Government Mortgage-Backed Securities (GNMA)	28,514,083	113,157,827
Gov't Issued Commercial Mortgage Backed	2,461,840	2,633,272
Government Bonds	35,801,989	121,740,145
Indexed Linked Bonds	-	120,488,883
Total Debt Securities	\$ 370,201,984	\$ 1,358,494,646

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

As a result of the most recently approved Asset/Liability Modeling Study, the investment staff began to diversify the insurance fixed income allocation to mirror that of the pension funds. As part of this process, the TIPS allocation (previously the only fixed income expense within the insurance portfolio) was moved to the newly created Real Return Asset Class. The government agencies in which KRS is invested are Fannie Mae and the Federal Home Loan Bank whose credit ratings are AA+.

Concentration of Credit Risk Debt Securities - Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's exposure in a single issuer.

The total debt securities portfolio is managed using the following general guidelines adopted by the Board of KRS:

- Bonds, notes or other obligations issued or guaranteed by the US Government, its agencies or instrumentalities are permissible investments and may be held without restrictions.
- Debt obligations of any single US Corporation shall be limited to a maximum of 5% of the total portfolio at market value.

Interest Rate Risk – Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration measures the sensitivity of the market prices of fixed income securities to changes in the yield curve. Duration is measured using two methodologies: effective and modified duration. Effective duration uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price and makes adjustments for any bond features that would retire the bonds prior to maturity. The modified duration, similar to effective duration, measures the sensitivity of the market prices to changes in the yield curve, but does not assume the securities will be called prior to maturity.

The KRS pension fund benchmarks its fixed income securities portfolio to a 50/50 blend of the Barclays US Universal Index and the Barclays US High Yield Index. As of June 30, 2016 and 2015, the modified duration of the KRS pension fund fixed income benchmark was 4.71 and 5.75, respectively. At the same points in time, the modified duration of the KRS pension fund fixed income securities portfolio was 5.61 and 4.26, respectively.

The KRS insurance fund benchmarks its fixed income securities portfolio to a 50/50 blend of the Barclays US Universal Index and the Barclays US High Yield Index. As of June 30, 2016 and 2015, the modified duration of the KRS insurance fund fixed income benchmark was 4.71 and 5.74, respectively. At the same points in time, the modified duration of the KRS insurance fund fixed income securities portfolio was 5.51 and 3.38, respectively.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

KRS Pension Funds Interest Rate Risk

	<u>2016</u>	<u>Weighted Average Effective Duration</u>	<u>2015</u>	<u>Weighted Average Effective Duration</u>
Asset Backed Securities	\$ 85,826,862	5.72	\$ 80,682,959	6.00
Bank Loans	130,653,480	6.89	333,921,080	5.39
Collateralized Bonds	18,041,017	3.58	23,939,151	4.33
Commercial Mortgage Backed Securities	64,195,499	3.07	51,075,672	2.77
Corporate Bonds-Industrial	434,383,557	5.92	577,639,674	6.23
Corporate Bonds-Utilities	32,233,991	6.94	135,127,865	6.94
Government Agencies	14,953,503	3.92	71,507,431	6.32
Government Bonds	10,159,793	10.58	87,724,008	6.90
Government Mortgage Backed Securities	86,491,191	3.25	387,421,860	3.63
Municipal Bonds	49,941,575	6.45	20,440,231	8.63
Supranational Bonds	14,676,180	3.13	2,125,860	1.77
Treasuries	173,967,110	5.42	524,545,015	3.26
Swaps	-	-	37,213,933	0.01
Mutual Funds	-	-	329,645,324	-
Other	15,071,374	8.86	17,413,377	0.27
Total	<u>\$ 1,130,595,132</u>	<u>5.61</u>	<u>\$ 2,680,423,440</u>	<u>4.26</u>

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

KRS Insurance Fund Interest Rate Risk

	2016	Weighted Average Effective Duration	2015	Weighted Average Effective Duration
Asset Backed Securities	\$ 28,848,599	5.02	\$ 46,009,988	5.33
Bank Loans	47,825,672	7.38	122,994,721	5.33
Collateralized Bonds	6,181,112	3.74	8,661,856	2.86
Commercial Mortgage Backed Securities	23,688,347	2.68	23,913,669	1.82
Corporate Bonds-Industrial	124,326,615	5.95	165,550,838	6.10
Corporate Bonds-Utilities	10,221,840	7.18	33,246,797	7.45
Government Agencies	4,991,646	4.16	15,280,118	6.50
Government Bonds	3,893,414	10.42	7,042,551	10.18
Government Mortgage Backed Securities	29,228,940	3.17	113,157,827	5.20
Municipal/Provincial Bonds	19,211,704	6.18	15,864,191	5.65
Supranational Bonds	5,657,243	3.08	5,272,325	3.38
Treasuries	61,156,679	5.29	276,548,407	5.32
Swaps	-	-	407,197,975	0.01
Mutual Funds	-	-	107,920,082	-
Other	4,970,173	5.89	9,833,301	2.79
Total	\$ 370,201,984	5.51	\$ 1,358,494,646	3.38

Foreign Currency Risk - Foreign currency risk is the risk that changes in exchange rates will adversely affect the value of a non-US dollar based investment or deposit within the KRS portfolio. KRS' currency risk exposure, or exchange rate risk, primarily resides with KRS' international equity holdings, but also affects other asset classes. KRS does not have a formal policy to limit foreign currency risk; however, some individual managers are given the latitude to hedge some currency exposures.

All foreign currency transactions are classified as Short-Term Investments.

All gains and losses associated with these transactions are recorded in the *Net Appreciation (Depreciation) in the Fair Value of Investments* on the combining financial statements.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

The following tables present KRS' exposure to foreign currency risk as of June 30, 2016 and 2015:

	Pension Funds	
	Investments at Fair Value	
	June 30, 2016 and 2015	
	2016	2015
Foreign Equities		
Australian Dollar	\$ 78,593,286	\$ 45,524,360
Brazilian Real	4,760,264	10,038,834
British Pound Sterling	280,518,178	230,990,599
Canadian Dollar	61,297,521	31,007,486
Chilean Peso	5,195,087	1,615,419
Columbian Peso	-	70,063
Danish Krone	33,033,338	30,880,488
Egyptian Pound	977,744	1,265,953
Euro	341,558,953	276,713,338
German Mark	-	209,275
Hong Kong Dollar	60,936,946	50,442,004
Hungarian Forint	-	2,043,077
Indian Rupee	6,604,336	4,715,132
Indonesian Rupiah	20,838,490	20,221,999
Israeli Shekel	7,193,594	5,856,040
Japanese Yen	202,208,317	165,124,397
Malaysian Ringgit	6,341,219	-
Mexican Peso	23,129,878	13,703,693
New Zealand Dollar	46,924,432	8,083,459
Norwegian Krone	30,363,379	22,454,960
Philippine Peso	9,651,420	11,219,442
Polish Zloty	826	12,073
Singapore Dollar	32,414,224	21,281,454
South African Rand	4,163,057	3,784,217
South Korean Won	34,652,485	20,624,933
Swedish Krona	36,933,026	30,324,551
Swiss Franc	48,606,745	75,604,802
Taiwan Dollar New	12,983,328	5,988,056
Thai Bhat	8,390,986	14,259,536
Turkish Lira	9,982,390	3,517,813
Total Securities subject to		
Foreign Currency Risk	1,408,253,449	1,107,577,453
US Dollars	9,347,454,085	10,362,377,477
Total Investment Securities	\$ 10,755,707,534	\$ 11,469,954,930

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

	Insurance Fund	
	Investments at Fair Value	
	June 30, 2016 and 2015	
	2016	2015
Foreign Equities		
Australian Dollar	\$ 29,491,913	\$ 16,529,875
Brazilian Real	1,739,994	3,478,125
British Pound Sterling	115,192,745	85,519,211
Canadian Dollar	25,186,673	11,027,509
Chilean Peso	2,512,823	562,254
Danish Krone	12,353,869	11,219,733
Egyptian Pound	338,920	438,824
Euro	138,440,564	101,969,846
Hong Kong Dollar	23,281,445	18,617,003
Hungarian Forint	8	690,197
Indian Rupee	2,763,003	1,767,719
Indonesian Rupiah	8,253,105	7,140,659
Israeli Shekel	3,139,611	2,247,542
Japanese Yen	79,845,758	59,941,785
Malaysian Ringgit	2,249,962	-
Mexican Peso	8,929,122	4,647,950
New Taiwan Dollar	5,732,370	2,323,811
New Zealand Dollar	17,584,209	3,039,386
Norwegian Krone	11,478,621	8,182,370
Philippine Peso	3,689,967	4,068,766
Polish Zloty	435	5,570
Singapore Dollar	13,069,717	7,674,464
South African Rand	-	1,380,066
South Korean Won	15,212,664	7,532,005
Swedish Krona	14,230,187	11,203,658
Swiss Franc	18,618,020	27,719,374
Thai Bhat	3,559,025	5,246,060
Turkish Lira	4,427,570	1,216,790
Total Securities subject to Foreign Currency Risk	561,322,300	405,390,552
US Dollars	3,641,399,252	3,810,360,717
Total Investment Securities	\$ 4,202,721,552	\$ 4,215,751,269

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE D – INVESTMENTS (CONTINUED)

In accordance with GASB Statement No. 72, Fair Value Measurement and Application, KRS provides this additional disclosure regarding the fair value of its pension and insurance investments. KRS categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. KRS had the following recurring Pension Funds' fair value measurements as of June 30, 2016:

<u>Pension Funds' Investments and Derivatives Measured at Fair Value</u>	<u>Value as of June 30, 2016</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Cash and Cash Equivalents	\$ 300,578,203	\$ 758,936	\$ 191,624,753	\$ 108,194,514
Convertible Securities	24,621,656	14,426,398	10,195,258	-
Equity	5,583,565,055	4,321,524,205	-	1,262,040,850
Fixed Income Securities	1,300,762,010	242,628,527	974,953,469	83,180,014
Futures Contracts	(17,268)	(17,268)	-	-
Other	317,862,013	317,862,013	-	-
Preferred Securities	77,499,123	13,896,325	63,602,798	-
Alternative Investments	402,247,618	-	-	402,247,618
Natural Resources	12,827,886	-	-	12,827,886
Private Equity	2,219,493,642	-	-	2,219,493,642
Real Estate	516,267,596	-	-	516,267,596
Total	<u>\$10,755,707,534</u>	<u>\$ 4,911,079,136</u>	<u>\$ 1,240,376,278</u>	<u>\$ 4,604,252,120</u>

KRS had the following recurring Insurance Fund's fair value measurements as of June 30, 2016:

<u>Insurance Fund's Investments and Derivatives Measured at Fair Value</u>	<u>Value as of June 30, 2016</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Cash and Cash Equivalents	\$ 124,634,718	\$ 274,615	\$ 78,579,998	\$ 45,780,105
Convertible Securities	9,843,774	5,859,651	3,984,123	-
Equity	1,863,358,777	1,805,230,510	-	58,128,267
Fixed Income Securities	928,819,057	107,506,185	310,552,640	510,760,232
Futures Contracts	(14,704)	(14,704)	-	-
Other	104,062,433	104,062,433	-	-
Preferred Securities	30,857,897	5,611,497	25,246,400	-
Alternative Investments	132,377,484	-	-	132,377,484
Natural Resources	5,699,154	-	-	5,699,154
Private Equity	794,177,505	-	-	794,177,505
Real Estate	208,905,457	-	-	208,905,457
Total	<u>\$ 4,202,721,552</u>	<u>\$ 2,028,530,187</u>	<u>\$ 418,363,161</u>	<u>\$ 1,755,828,204</u>

**KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)**

NOTE D – INVESTMENTS (CONTINUED)

KRS defined the Fair Value Hierarchy and Levels as follows:

Level 1 – Quoted prices (unadjusted) in an active market for identical assets or liabilities that KRS has the ability to access at the measurement date (e.g., prices derived from NYSE, NASDAQ, Chicago Board of Trade, and Pink Sheets).

Level 2 – Inputs other than quoted market prices included in Level 1 that are directly or indirectly observable for the asset or liability (e.g., matrix pricing, market corroborated pricing and inputs such as yield curves and indices).

Level 3 – Unobservable inputs for the asset or liability used to measure to fair value that rely on KRS' own assumptions about the market participant's assumptions that may be used in pricing the asset or liability (e.g., investment manager pricing for private placements, private equities, hedge funds, etc.).

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using quoted prices (unadjusted) in an active market for identical assets or liabilities that KRS has the ability to access at the measurement date. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Commercial and residential mortgage backed securities, private equity, and real estate classified in Level 3 are valued on KRS' own assumptions about the market participant's assumptions that may be used in pricing the asset or liability.

NOTE E – CM GROWTH CAPITAL PARTNERS, LLP

On August 11, 2014, and May 1, 2015, KRS issued two promissory notes to CM Growth Capital Partners, LLP, (CM) in the amounts of \$1,300,000 and \$105,208, respectively. These transactions were approved by the Investment Committee. These notes were issued to provide working capital to CM (formerly Camelot). The interest rate assigned to the notes was 17.5% compounded quarterly. The maturity date of the two notes was January 24, 2016; on August 17, 2015, the two notes were paid in full along with accrued interest. The principal amount at June 30, 2015, was \$1,405,208 and the accrued interest due was \$282,142, which totaled \$1,687,350. The note receivable and accrued interest has been allocated among the plans.

NOTE F – SECURITIES LENDING TRANSACTIONS

Kentucky Revised Statutes Sections 61.650 and 386.020(2) permit the Pension and Insurance Funds to lend their securities to broker-dealers and other entities. The borrowers of the securities agree to transfer to the Funds' custodial banks either cash collateral or other securities with an initial fair value of 102% or 105% of the value of the borrowed securities. The borrowers of the securities simultaneously agree to return the borrowed securities in exchange for the collateral at a later date.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE F – SECURITIES LENDING TRANSACTIONS (CONTINUED)

Securities lent for cash collateral are presented as unclassified above in the schedule of custodial credit risk; securities lent for securities collateral are classified according to the category for the securities loaned. The types of securities lent include US Treasuries, US Agencies, US Corporate Bonds, US Equities, Global Fixed Income Securities, and Global Equities Securities.

The *Statement of Investment Policy* does not address any restrictions on the amount of loans that can be made. At June 30, 2015, KRS had no credit risk exposure to borrowers because the collateral amounts received exceeded the amounts out on loan. The contracts with the custodial banks require them to indemnify KRS if the borrowers fail to return the securities and one or both of the custodial banks have failed to live up to their contractual responsibilities relating to the lending of securities.

All securities loans can be terminated on demand by either party to the transaction. Deutsche Bank invests cash collateral as permitted by state statute and Board policy. The agent of the Funds cannot pledge or sell collateral securities received unless the borrower defaults. KRS maintains a conservative approach to investing the cash collateral with Deutsche Bank, emphasizing capital preservation, liquidity, and credit quality. As of June 30, 2016, the fair value of the Pension Funds' and Insurance Fund's securities lending collateral invested/obligations totaled \$653.7 million and \$198.3 million, respectively.

NOTE G – RISK OF LOSS

KRS is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and, natural disasters. Under the provisions of the Kentucky Revised Statutes, the Kentucky Board of Claims is vested with full power and authority to investigate, hear proof, and to compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to \$200,000 for a single claim and \$350,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Board of Claims are paid from the fund of the agency having a claim or claims before the Board of Claims.

Claims against the Board of KRS, or any of its staff as a result of an actual or alleged breach of fiduciary duty, are insured with a commercial insurance policy. Coverage provided is limited to \$5,000,000 with a self-insured retention of \$250,000 for each claim. Defense costs incurred in defending such claims will be paid by the insurance company. However, the total defense cost and claims paid shall not exceed the total aggregate coverage of the policy. The aggregate limit for all loss is \$5,000,000, and the HIPAA and PPACA fines and penalties sub-limit is \$1,500,000.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. A claimant may receive reimbursement for all medical expenses related to the illness or injury and up to 66.67% of wages for temporary disability. Each agency pays premiums based on fund reserves and payroll. Settlements did not exceed insurance coverage in any of the past three fiscal years. Thus, no secondary insurance had to be utilized. There were no claims which were appealed to the Kentucky Workers' Compensation Board.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE H – CONTINGENCIES

In the normal course of business, KRS is involved in litigation concerning the right of participants, or their beneficiaries, to receive benefits. KRS does not anticipate any material losses as a result of the contingent liabilities.

NOTE I – INCOME TAX STATUS

The Internal Revenue Service has ruled that KRS qualifies under Section 401(a) of the Internal Revenue Code and is, generally, not subject to tax. KRS is subject to income tax on any unrelated business income; however, KRS had no unrelated business income in fiscal years 2016 and 2015.

NOTE J – DEFINED BENEFIT PENSION PLAN

All eligible employees of KRS participate in KERS (non-hazardous), a cost-sharing, multiple-employer defined pension plan that covers all regular full-time employees in non-hazardous positions of any Kentucky State Department, Board or Agency directed by Executive Order to participate in the system. The plan provides for retirement, disability and death benefits to plan members. Plan benefits are extended to beneficiaries of plan members under certain circumstances. Tier one plan members who began participating prior to September 1, 2008, contributed 5% of creditable compensation for the periods ended June 30, 2016, 2015, and 2014. Tier two plan members who began participating on, or after, September 1, 2008, and Tier three plan members who began participating on, or after, January 1, 2015, contributed 6% of creditable compensation for the periods ended June 30, 2016, 2015, and 2014.

The chart below includes the covered payroll and contribution amounts for KRS for the three periods ended June 30 included in this discussion.

	June 30,		
	2016	2015	2014
Covered Payroll	\$ 14,579,042	\$ 14,137,788	\$ 13,916,055
Required Employer Contributions	5,652,295	5,481,221	3,722,937
Employer Percentage Contributed	100%	100%	100%

NOTE K – EQUIPMENT

	June 30,	
	2016	2015
Equipment, cost	\$ 2,819,040	\$ 2,577,051
Less Accumulated Depreciation	(2,441,324)	(2,391,644)
Equipment, net	\$ 377,716	\$ 185,407

Depreciation expense for the fiscal years ended June 30, 2016 and 2015 was \$49,680 and \$43,589, respectively.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE L – INTANGIBLE ASSETS

The provisions of GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets* require that intangible assets be recognized in the Combining Statement of Plan Net Position only if they are considered identifiable. In accordance with GASB No. 51, KRS has capitalized software costs as indicated below for the Strategic Technology Advancements for the Retirement of Tomorrow (START) project.

Software consists of the following:

	June 30,	
	2016	2015
Software, cost	\$ 17,300,826	\$ 17,300,826
Less Accumulated Amortization	(9,448,411)	(7,561,348)
Intangible Assets, net	<u>\$ 7,852,415</u>	<u>\$ 9,739,478</u>

Amortization expense for the fiscal years ended June 30, 2016 and 2015 was \$1.9 million and \$1.6 million, respectively.

NOTE M – ACTUARIAL VALUATION

The following details significant actuarial information and assumptions utilized in determining the unfunded (overfunded) actuarial accrued liabilities for both Pension and Insurance Funds:

KRS Pension and Insurance Funds had the following Unfunded (Overfunded) Actuarial Accrued Liabilities as of June 30:

	2016	2015
<u>Pension Funds:</u>		
Kentucky Employees Retirement System (Non-Hazardous)	\$ 11,112,411,929	\$ 10,008,682,909
Kentucky Employees Retirement System (Hazardous)	377,218,942	338,745,630
County Employees Retirement System (Non-Hazardous)	4,541,084,447	4,265,476,908
County Employees Retirement System (Hazardous)	1,565,337,050	1,516,524,591
State Police Retirement System	540,592,758	485,768,500
Total Pension Funds	<u>18,136,645,126</u>	<u>16,615,198,538</u>
<u>Insurance Fund:</u>		
Kentucky Employees Retirement System (Non-Hazardous)	1,713,407,904	1,718,686,990
Kentucky Employees Retirement System (Hazardous)	(95,414,943)	(76,609,957)
County Employees Retirement System (Non-Hazardous)	908,310,062	910,370,977
County Employees Retirement System (Hazardous)	423,033,984	416,308,115
State Police Retirement System	84,493,568	87,063,770
Total Insurance Fund	<u>3,033,830,575</u>	<u>3,055,819,895</u>
Total Unfunded (Overfunded) Actuarial Accrued Liability	<u>\$ 21,170,475,701</u>	<u>\$ 19,671,018,433</u>

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

The following is the Schedule of Funding Progress for the fiscal year ended June 30, 2016:

	<u>Actuarial Value of Assets</u>	<u>Actuarial Accrued Liability (AAL) Entry Age Normal</u>	<u>Percent Funded</u>	<u>Covered Payroll</u>	<u>Unfunded AAL as a % of Covered Payroll</u>
Insurance Fund:					
KERS Non-Hazardous	\$ 743,270,060	\$ 2,456,677,964	30.3	\$ 1,529,248,873	112.0
KERS Hazardous	473,160,173	377,745,230	125.3	147,563,457	(64.7)
CERS Non-Hazardous	2,079,811,055	2,988,121,117	69.6	2,352,761,794	38.6
CERS Hazardous	1,135,784,220	1,558,818,204	72.9	492,850,521	85.8
SPRS	<u>172,703,691</u>	<u>257,197,259</u>	<u>67.1</u>	<u>45,551,469</u>	<u>185.5</u>
Total Insurance Fund	<u>\$ 4,604,729,199</u>	<u>\$ 7,638,559,774</u>	<u>60.3</u>	<u>\$ 4,567,976,114</u>	<u>66.4</u>

The Schedule of Funding Progress for the Insurance Fund is on pages 81-83.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

The provisions of GASB Statement No. 67, *Financial Reporting for Pension Plans*, were issued in June 2012. This Statement replaces the requirements of Statements No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, and No. 50, *Pension Disclosures*, as they relate to pension plans that are administered through trusts or equivalent arrangements that meet that criteria. The provisions of that Statement are presented below:

KERS:

The Net Pension Liability is equal to the Total Pension Liability minus the Fiduciary Net Position. That result as of June 30, 2016, for the plan is presented in the table below:

	<u>Non-Hazardous</u>	<u>Hazardous</u>
Total Pension Liability	\$ 13,379,781,165	\$ 919,517,466
Fiduciary Net Position	<u>1,980,292,118</u>	<u>527,879,431</u>
Net Pension Liability	<u>\$ 11,399,489,047</u>	<u>\$ 391,638,035</u>
Ratio of Fiduciary Net Position to Total Pension Liability	14.8%	57.41%

The following presents the net pension liability of KERS, calculated using the discount rate of 6.75%, as well as what KERS' net position liability would be if it were calculated using a discount rate that is one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate for non-hazardous and one percentage point lower (6.5%) or one percentage point higher (8.5%) than the current rate for hazardous:

	1% Decrease (5.75%)	<u>Non-Hazardous</u> Current Discount Rate (6.75%)	1% Increase (7.75%)
Net Pension Liability	\$12,842,328,478	\$11,399,489,047	\$10,186,892,118
	1% Decrease (6.5%)	<u>Hazardous</u> Current Discount Rate (7.5%)	1% Increase (8.5%)
Net Pension Liability	\$492,060,681	\$391,638,035	\$307,344,933

The total pension liability was determined by an actuarial valuation as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25%
Salary Increases	4%, average, including inflation
Investment Rate of Return	Non-hazardous, 6.75%, net of pension plan investment expense, including inflation Hazardous, 7.5%, net of pension plan investment expense, including inflation

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized:

Non-Hazardous:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Cash Equivalent Long Term Expected Real Rate of Return</u>
Combined Equity	50%	5.3%
Intermediate Duration Fixed Income	11%	1%
Custom KRS Fixed Income	11%	3.33%
Core Real Estate	5%	4.25%
Diversified Hedge Funds	10%	4%
Private Equity	2%	8%
Diversified Inflation Strategy	8%	3.15%
Cash Equivalent	<u>3%</u>	<u>(.25)%</u>
Total	100%	

Hazardous:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Cash Equivalent Long Term Expected Real Rate of Return</u>
Combined Equity	44%	5.4%
Combined Fixed Income	19%	1.5%
Real Return (Diversified Inflation Strategies)	10%	3.5%
Real Estate	5%	4.5%
Absolute Return (Diversified Hedge Funds)	10%	4.25%
Private Equity	10%	8.5%
Cash Equivalent	<u>2%</u>	<u>(.25)%</u>
Total	100%	

CERS:

The Net Pension Liability is equal to the Total Pension Liability minus the Fiduciary Net Position. That result as of June 30, 2016, for the plan is presented in the table below:

	<u>Non-Hazardous</u>	<u>Hazardous</u>
Total Pension Liability	\$ 11,065,012,656	\$ 3,726,115,488
Fiduciary Net Position	<u>6,141,394,419</u>	<u>2,010,174,047</u>
Net Pension Liability	<u>\$ 4,923,618,237</u>	<u>\$ 1,715,941,441</u>

Ratio of Fiduciary Net Position to
 Total Pension Liability

55.5%

53.95%

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

The following presents the net pension liability of CERS, calculated using the discount rate of 7.5%, as well as what CERS' net position liability would be if it were calculated using a discount rate that is one percentage point lower (6.5%) or one percentage point higher (8.5%) than the current rate for non-hazardous and hazardous:

		<u>Non-Hazardous</u>	
	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Net Pension Liability	\$6,135,625,606	\$4,923,618,237	\$3,884,686,628

		<u>Hazardous</u>	
	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Net Pension Liability	\$2,155,722,903	\$1,715,941,441	\$1,353,197,862

The total pension liability was determined by an actuarial valuation as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25%
Salary Increases	4%, average, including inflation
Investment Rate of Return	7.5%, net of pension plan investment expense, including inflation

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized for both Non-hazardous and Hazardous:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Cash Equivalent Long Term Expected Real Rate of Return</u>
Combined Equity	44%	5.4%
Combined Fixed Income	19%	1.5%
Real Return (Diversified Inflation Strategies)	10%	3.5%
Real Estate	5%	4.5%
Absolute Return (Diversified Hedge Funds)	10%	4.25%
Private Equity	10%	8.5%
Cash Equivalent	<u>2%</u>	(.25)%
Total	100%	

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

SPRS:

The Net Pension Liability is equal to the Total Pension Liability minus the Fiduciary Net Position. That result as of June 30, 2016, for the plan is presented in the table below:

	<u>Hazardous</u>
Total Pension Liability	\$ 795,421,298
Fiduciary Net Position	<u>218,012,479</u>
Net Pension Liability	<u>\$ 577,408,819</u>

Ratio of Fiduciary Net Position to Total Pension Liability	27.41%
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The following presents the net pension liability of SPRS, calculated using the discount rate of 6.75%, as well as what SPRS' net position liability would be if it were calculated using a discount rate that is one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

	<u>Hazardous</u>		
	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Net Pension Liability	\$665,253,333	\$577,408,819	\$503,953,106

The total pension liability was determined by an actuarial valuation as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25%
Salary Increases	4%, average, including inflation
Investment Rate of Return	6.75%, net of pension plan investment expense, including inflation

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized below:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Cash Equivalent Long Term Expected Real Rate of Return</u>
Global Equity	54%	5.3%
Intermediate Duration Fixed Income	9%	1%
Custom KRS Fixed Income	9%	3.33%
Core Real Estate	5%	4.25%
Diversified Hedge Funds	10%	4%
Private Equity	2%	8%
Diversified Inflation Strategy	8%	3.15%
Cash Equivalent	<u>3%</u>	(.25)%
Total	100%	

For All Plans:

The projection of cash flows used to determine the discount rate assumed that the employer would contribute the actuarially determined contribution rate of projected compensation. The remaining amortization period of the unfunded actuarial accrued liability is 27 years. Once the unfunded actuarial accrued liability is fully amortized, the employer will only contribute the normal cost rate and the administrative expense rate on the close payroll for existing members.

The actuarial valuation date upon which the total pension liability was based is June 30, 2015. An expected total pension liability is determined as of June 30, 2016, using standard roll forward techniques. The roll forward calculation adds the annual cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year then applies the expected investment rate of return for the year. The procedure was used to determine the total pension liability as of June 30, 2016.

The mortality table used for active members is RP-2000 Combined Mortality Table projected with Scale BB to 2013 (multiplied by 50% for males and 30% for females). For healthy retired members and beneficiaries, the mortality table used is the RP-2000 Combined Mortality Table projected with Scale BB to 2013 (set back one year for females). For disabled members, the RP-2000 Combined Disabled Mortality Table projected with Scale BB to 2013 (set back four years for males) is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period July 1, 2008 – June 30, 2013. The long term assumed rate of return was based upon an analysis adopted by the Board of Trustees on December 3, 2015. The discount rate used to measure the total pension liability for KERS Non-Hazardous and SPRS was 6.75%. However, for KERS Hazardous, CERS Non-Hazardous, and Hazardous, the discount rate remained at 7.5%.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

The long-term expected return on plan assets is reviewed as part of the regular experience studies prepared every five years for the Systems. The most recent analysis, performed for the period covering fiscal years 2008 through 2013, is outlined in a report dated December 3, 2015. Several factors are considered in evaluating the long-term rate of return assumption including long-term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The assumption is intended to be a long-term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

The projection of cash flows used to determine the discount rate assumed that employers would contribute the actuarially determined contribution rate of projected compensation over the remaining

The discount rate determination does not use a municipal bond rate. Projected future benefit payments for all current plan members were projected through 2117.

INSURANCE FUND

The actuarial valuation for the Insurance Fund involves estimates of the value of reported amounts and assumptions about the probability of future events. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Calculations are based on the benefits provided under the terms of the insurance plan in effect at the time of each valuation and on the pattern of sharing costs between the employer and plan members as of the valuation date. Actuarial calculations of the insurance plan reflect a long-term perspective.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE M – ACTUARIAL VALUATION (CONTINUED)

	<u>Non-Hazardous</u>	<u>Hazardous</u>
Valuation Date	June 30, 2016	June 30, 2016
Actuarial Cost Method	Entry Age	Entry Age
Amortization Method	Level Percent Closed	Level Percent Closed
Remaining Amortization Period	27 Years	27 Years
Asset Valuation Method	Five-year smoothed Market	Five-year smoothed Market
Medical Trend Assumption (Pre-Medicare)	7.5%-5%	7.5%-5%
Medical Trend Assumption (Post-Medicare)	5.5%-5%	5.5%-5%
Year Ultimate Trend	2020	2020
Dollar Contribution Trend	1.5%	1.5%
Actuarial Assumptions:		
Investment Rate of Return*	7.5%	7.5%
*Includes Price Inflation at	3.25%	3.25%

NOTE N – PENSION LEGISLATION

House Bill 1 was signed by the Governor on June 27, 2008. It contained a number of changes that KRS implemented effective September 1, 2008. House Bill 1 also contained statutory changes to Kentucky Revised Statute 61.637, the law governing members who become reemployed following retirement.

Employee contributions for non-hazardous employees who began participating with KRS on, or after, September 1, 2008, contributed a total of 6% of all their creditable compensation to KRS. These members were classified in the Tier 2 structure of benefits. Five percent of this contribution was deposited to the individual employee's account, while the other 1% was deposited to an account created under 26 USC Section 401(h) in the KRS Pension Fund (see Kentucky Administrative Regulation 105 KAR 1:420E) for the payment of health insurance benefits.

Hazardous employees who began participating with KRS on, or after, September 1, 2008, contributed a total of 9% of all their creditable compensation, with 8% credited to the member's account, and 1% deposited to the KRS Pension Fund 401(h) account for the payment of health insurance benefits. Interest paid each June on these members' accounts is set at a rate of 2.5%. If a member terminates his/her employment and applies to take a refund, the member is entitled to a full refund of contributions and interest in his/her account; however, the 1% contributed to the 401(h) account in the KRS Pension Fund is non-refundable and is forfeited.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE N – PENSION LEGISLATION (CONTINUED)

The Employer contribution rates were established as follows (effective July 1, 2015) for fiscal year 2016:

KERS Non-Hazardous	38.77%
KERS Hazardous	26.34%
CERS Non-Hazardous	17.06%
CERS Hazardous	32.95%
SPRS	75.76%

Although the majority of changes enacted in House Bill 1 only impacted new hires on, or after, September 1, 2008, there were some changes that affected all members and retirees of KRS:

Cost of Living Adjustment (COLA): Beginning July 1, 2009, COLA for retirees are set by statute at 1.5% each July 1. The Kentucky General Assembly may increase this percentage at any time, but only if appropriate funding is allocated. The General Assembly may also reduce or suspend the annual COLA.

Service Purchase Costs: The actuarial factors used to determine the cost to purchase a service must assume the earliest date a member can retire with an unreduced benefit, and must also assume a 1.5% COLA will be enacted. This change results in an increased service purchase cost for any purchase calculated on, or after, September 1, 2008. This change also affects the cost billed to employers for sick leave when an employee retires.

Payment Options: The Partial Lump Sum Payment Option was made available only to those employees who retired on, or before, January 1, 2009.

Kentucky Revised Statute 61.637 was modified significantly by House Bill 1. A retired member who was reemployed on, or after, September 1, 2008, cannot accrue additional service credit in KRS, even if employed in a position that would otherwise be required to participate in KRS. However, if a retiree is reemployed in a regular full time position, his/her employer is required to pay contributions on all creditable compensation earned during the period of reemployment. These contributions are used to reduce the unfunded actuarial liability.

House Bill 300 was signed by the Governor on April 11, 2012. The Bill makes changes/additions to information and definitions regarding placement agents, audits to be performed on KRS by the Kentucky Auditor of Public Accounts, terms of service of Trustees of the Board, terms of service of Board officers (Chair and Vice Chair), among other changes.

Senate Bill 2 was signed by the Governor on April 4, 2013. It contained a number of changes to the pension system that KRS implemented, effective January 1, 2014. The Bill created the hybrid cash balance plan for members who began participation on, or after, January 1, 2014. These members were classified in the Tier 3 structure of benefits. The Cash Balance Plan is known as a hybrid plan because it has characteristics of both a defined benefit plan and a defined contribution plan.

**KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)**

NOTE N – PENSION LEGISLATION (CONTINUED)

The plan resembles a defined contribution plan because it determines the value of benefits for each participant based on individual accounts. However, the assets of the plan remain in a single investment pool like a traditional defined benefit plan. The plan is a defined benefit plan since it uses a specific formula to determine benefits.

All regular full time employees who began participation with KRS on, or after, January 1, 2014 contribute to the hybrid cash balance plan. Participation in the plan is mandatory unless the employee is employed in a non-participating position. Employment classifications that are non-participating include part-time, seasonal, temporary, probationary (CERS only), interim, emergency, and independent contractors.

Members and employers contribute a specified amount into the member's account. The account earns a guaranteed amount of interest at the end of each fiscal year. If the member has participated in the plan during the fiscal year, there may be an additional interest credit added to the member's account depending on KRS' investment returns. All interest is paid on the preceding year's balance.

When a member is eligible to retire, the benefit is calculated based on the member's accumulated account balance. A member earns service credit for each month he contributes to the plan. Once a member obtains 60 months of service credit, he is considered vested. Vesting may change the level of benefits to which the member is entitled.

Members in the hybrid cash balance plan contribute a set percentage of their salary each month to their own account as required by Kentucky law:

- non-hazardous members – 5% of creditable compensation
- hazardous members – 8% of creditable compensation
- all members – 1% to the health insurance fund which is not credited to the member's account and is not refundable

The employer contribution rate is based on an actuarial valuation. The employer contributes a set percentage of the member's salary. Each month, when employer contributions are received, an employer pay credit is deposited to the member's account. If the member is non-hazardous, his account is credited with a 4% employer pay credit. If the member is hazardous, his account is credited with a 7.5% employer pay credit. The employer pay credit represents a portion of the employer contribution.

In addition, Senate Bill 2 implemented provisions requiring employers to pay the actuarial cost of increases in an employee's salary in the last five years prior to retirement, which result in increases to the employee's pension, commonly known as pension spiking. All salary increases greater than 10% from one fiscal year to the next are presumed pension spikes. The law specifically excludes three situations from being considered toward pension spiking: 1. bona fide promotions; 2. career advancements; and 3. lump sum compensatory time paid at termination.

KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)

NOTE N – PENSION LEGISLATION (CONTINUED)

For all members who retire on, or after, January 1, 2014, KRS will analyze the last five years of wages used in the retirement calculation to determine if a pension spike has occurred. If a pension spike has occurred, KRS will notify the last employer. Regardless of when the pension spike occurred, the last participating employer shall be required to pay for any additional actuarial costs resulting from annual increases in employee salary greater than ten percent (10%), which do qualify under one of the three exceptions.

If there were multiple last employers, the cost is divided equally amongst them. The employer is permitted a 12 month period to remit the amount due.

As part of the Cash Balance Plan group of benefits, an additional interest credit may be applied which is referred to as upside sharing interest. The upside sharing interest is not guaranteed, and the following conditions must be met before it is credited to a member's account:

1. The Systems' geometric average net investment return (GANIR) for the last five years must exceed 4%.
2. The member must have been active and participating in the fiscal year.

If a system's GANIR for the previous five years exceeds 4%, then the member's account will be credited with 75% of the amount over 4%. This credit will be applied to the account balance as of June 30 of the previous year.

Upside sharing interest is credited to both the member contribution balance and Employer Pay Credit balance. Upside sharing interest is an additional interest credit. Member accounts automatically earn 4% interest annually. The GANIR is calculated on an individual system basis. It is possible that one system may get an upside sharing percentage, and another system would not.

	KERS Non- Hazardous	KERS Hazardous	CERS Non- Hazardous	CERS Hazardous	SPRS
5 Year Geometric Average Return	5.1%	5.32%	5.16%	5.34%	5.1%
Less Guarantee Rate of 4%	<u>4.00%</u>	<u>4.00%</u>	<u>4.00%</u>	<u>4.00%</u>	<u>4.00%</u>
Upside Sharing Interest	<u>1.1%</u>	<u>1.32%</u>	<u>1.16%</u>	<u>1.34%</u>	<u>1.1%</u>
Upside Sharing Interest X 75% = Upside Gain	.83%	.99%	.87%	1.01%	.83%
Interest Rate Earned (4% + Upside)	4.83%	4.99%	4.87%	5.01%	4.83%
Total Interest Credited to Member Accounts	\$380,458	\$110,239	\$672,783	\$147,772	\$13,511

This interest was calculated on the members' balances as of June 30, 2015, and credited to each member account on June 30, 2016.

**KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)**

NOTE N – PENSION LEGISLATION (CONTINUED)

During its 2015 regular session, the Kentucky General Assembly enacted House Bill 62, which created Kentucky Revised Statute 61.522. Kentucky Revised Statute 61.522 established a path for participating agencies to voluntarily cease their participation in KERS or CERS by paying their portion of the unfunded liability. Additionally, it authorizes KRS to involuntarily remove certain participating agencies from KERS or CERS. In December 2015 and again in June 2016, KRS published 105 KAR 1:145, an administrative regulation that defined the pension withdrawal process.

Pursuant to Kentucky Revised Statute 61.522 and 105 KAR 1:145, two employers that participate in KERS have sought to end their participation. As of July 1, 2016, the Kentucky Employers Mutual Insurance company (KEMI) and Commonwealth Credit Union (CCU) ceased reporting approximately 500 full-time employees. Once KRS' 2016 annual valuation is complete, KRS' actuary will calculate KEMI's and CCU's portion of KRS' actuarial unfunded liability. KEMI and CCU will then have to determine if they wish to continue to participate in KERS or withdraw from KERS by paying their portion of the KERS unfunded liability. Final determination regarding the status of KEMI's and CCU's participation in KERS is expected to occur during the third quarter of fiscal 2017. Consequently, no provision has been made in the combining financial statements.

NOTE O – REIMBURSEMENT OF RETIRED – REEMPLOYED HEALTH INSURANCE

As a result of the passage of House Bill 1 on September 1, 2008, if a retiree is reemployed in a regular full time position and has chosen health insurance coverage through KRS, the employer is required to reimburse KRS for the health insurance premium paid on the retiree's behalf, not to exceed the cost of the single premium rate. As of June 30, 2016 and 2015, the reimbursement totaled \$14.7 million and \$12.6 million, respectively.

NOTE P – RECIPROCITY AGREEMENT

KRS has a reciprocity agreement with Kentucky Teachers' Retirement System (KTRS) for the payment of insurance benefits for those members who have creditable service in both systems.

NOTE Q – RELATED PARTY

Perimeter Park West, Inc. (PPW) is a legally separate, tax-exempt Kentucky corporation established in 1998 to own the land and buildings on which KRS is located. PPW leases the buildings to KRS (the lease is renewed periodically) and provides maintenance for the buildings and land. PPW is considered a related party to KRS and has its own separate financial audit. The following presents the amounts recorded between KRS and PPW for the fiscal year ended June 30, 2016:

Lease payments to PPW from KRS:	\$ 698,220
Dividends to KRS from PPW:	\$ -

**KENTUCKY RETIREMENT SYSTEMS
 NOTES TO COMBINING FINANCIAL STATEMENTS
 JUNE 30, 2016
 (CONTINUED)**

NOTE R – CITY OF FORT WRIGHT

In June 2014, the City of Fort Wright, a participating employer in CERS, filed a lawsuit against KRS alleging that the Board invested CERS funds in investments that were prohibited by both statutory and common law. In addition, the City of Fort Wright alleged that the Board paid substantial asset management fees, which the suit alleges were improper. Although the exact nature and source of the relief sought is unclear, it appears that the City of Fort Wright is seeking a declaration of rights, an injunction barring the placement of CERS assets in certain types of investments, an accounting of CERS assets, restitution of management fees to CERS, and attorney fees. As noted above, the exact nature and scope of the relief sought in this suit is unclear; therefore, no provision has been made in the combining financial statements. In September 2016 the Kentucky Court of Appeals issued an Opinion regarding the appeal of the Trial Court's ruling upon dispositive motions. A Motion for Discretionary Review of the Court of Appeals ruling was filed at the Kentucky Supreme Court on October 21, 2016.

On September 2, 2015, a CERS member filed a complaint that is substantially similar in terms of allegation and ambiguous requests for relief to that of the City of Fort Wright. The exact nature and scope of the relief sought is unclear; therefore, no provision has been made in the combining financial statements. The member's complaint is currently being held in abeyance pending the outcome of the City of Fort Wright's appeal.

NOTE S – CITY OF HILLVIEW

The City of Hillview, a participating employer in CERS, filed a petition for Chapter 9 Bankruptcy protection on August 20, 2015, following a multi-million dollar civil judgment. Although KRS is listed as a debtor in this action, the impact, if any, on CERS is unclear. Consequently, no provision has been made in the combining financial statements as a result of this litigation. An Order Dismissing the Chapter 9 case was issued on May 9, 2016, without impact on CERS.

NOTE T – REDUCTION OF RECEIVABLE

Employers reported June 2015 wages earned in the following month of July 2015 (next fiscal year) and the new Annual Required Contribution (ARC) rate was applied. The Commonwealth's approved budget guidelines paid contributions at the fiscal year 2015 ARC rate in effect when the wages were earned. It is unlikely that KRS will receive payments at the new ARC rate for that period; therefore, contribution receivables have been reduced as of June 30, 2015:

	<u>2016</u>	<u>2015</u>
KERS Non-Hazardous	\$ -	\$ 5,981,880
SPRS	<u>-</u>	<u>91,618</u>
TOTAL	<u>\$ -</u>	<u>\$ 6,073,498</u>

For fiscal 2016, no reduction was necessary since the ARC remained the same as fiscal 2015.

**KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)**

NOTE U – BANK OF AMERICA SETTLEMENT

In August 2014, Bank of America reached a \$16.65 billion settlement with US regulators to settle charges that it misled investors into buying troubled mortgage-backed securities. The settlement called for the bank to pay a \$9.65 billion cash penalty and provide \$7 billion of consumer relief to homeowners and communities. Bank of America admitted having sold billions of dollars of risky mortgage-backed securities while concealing key facts about the quality of the underlying loans. It also admitted to having made misrepresentations to Fannie Mae and Freddie Mac about the quality of loans sold to those government-controlled mortgage companies. KRS' share of this settlement amounted to \$23,000,000, and was received on October 24, 2014. The amount was allocated among the plans in the fiscal 2015 combining financial statements as follows:

KERS Non-Hazardous	\$ 8,442,347
KERS Hazardous	767,141
CERS Non-Hazardous	10,280,391
CERS Hazardous	2,865,365
SPRS	<u>644,756</u>
TOTAL	<u>\$ 23,000,000</u>

NOTE V – GOVERNANCE REORGANIZATION

The Governor of Kentucky issued a series of Executive Orders (EO) that impacted the governance of the Kentucky Retirement Systems. EO 2016-211, issued on April 20, 2016, removed one of the trustees from the Board of Trustees before his term had expired. The Governor then issued EO 2016-214, on April 21, 2016, appointing another person as trustee in place of the trustee removed under EO 2016-211. After that person declined the appointment, the Governor issued EO 2016-273 on May 18, 2016, appointing another person as trustee in place of the trustee removed under EO 2016-211. The Attorney General of Kentucky issued an opinion on May 17, 2016, that the Governor did not have the authority to remove a board member prior to the expiration of his term.

On June 17, 2016, the Governor issued EO 2016-340, in which the Board of Trustees established under KRS 61.645 was abolished and a new Board of Directors was created. The EO changed other provisions of KRS 61.645 including adding four (4) additional board members, giving the Governor the authority to appoint the Chair and Vice-Chair of the Board of Directors, requiring that the Governor approve the Executive Director appointed by the Board of Directors, and transferring KRS employees from the personnel system established in KRS 61.645 and 105 KAR 1:370 to the Commonwealth's personnel system under KRS Chapter 18A. The Governor cited his authority to reorganize executive branch agencies under KRS 12.028. The Board of Directors established in EO 2016-340 is currently managing the assets and administrative duties of KRS.

Two KRS Trustees/Directors and the Attorney General of the Commonwealth have challenged the Governor's authority to remove a Trustee prior to the end of that Trustee's term of office and his authority to suspend statutory provisions in order to reorganize KRS. (EOs 2016-211, 214, 273, and 340). KRS expects an opinion to be issued on the merits of the suit prior to January 1, 2017. As it is unclear as to any financial impact these issues may cause, no provision has been made in the combining financial statements as a result of the Executive Orders or the litigation.

KENTUCKY RETIREMENT SYSTEMS
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2016
(CONTINUED)

NOTE V – GOVERNANCE REORGANIZATION (CONTINUED)

The Board of Directors, as of December 1, 2016, is comprised of John Farris, Chair, Governor Appointee; John E. Chilton, Vice Chair, Governor Appointee; William S. Cook, Governor Appointee; Edwin Davis, elected by CERS; Thomas K. Elliott, Governor Appointee (non-voting); Joseph Hardesty, Governor Appointee; David L. Harris, Governor Appointee; J. T. Fulkerson, Governor Appointee; Vince Lange, elected by KERS; Neil P. Ramsey, Governor Appointee; David Rich, elected by CERS; Randy K. Stevens, Governor Appointee; Thomas B. Stephens, Personnel Secretary; Mary Helen Peter, elected by KERS; Keith Peercy, elected by SPRS; David J. Adams, Governor Appointee; David L. Harris, Governor Appointee; Mark Lattis, Governor Appointee; and, William Summers, elected by CERS.

NOTE W – SUBSEQUENT EVENTS

Management has evaluated the period June 30, 2016, to December 1, 2016, (the date the combining financial statements were available to be issued) for items requiring recognition or disclosure in the combining financial statements. In September 2016, KRS contracted with the Public Financial Management Group, Inc. (PFM) to perform a study of its operations and investments. The report from the study will be completed on, or before, December 31, 2016. In addition, KRS is in the process of reviewing its asset allocation with special focus on the 10% allocation to absolute return. A number of external money managers in the absolute return allocation will be eliminated over the course of the following 24 months.

REQUIRED SUPPLEMENTARY INFORMATION

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KENTUCKY RETIREMENT SYSTEMS
REQUIRED SUPPLEMENTARY INFORMATION
June 30, 2016
Schedules of Changes in the Net Pension Liability*
(\$ in Thousands)

*This is a ten year schedule. However, the information in this schedule is not required to be presented retroactively. Years will be added to this schedule in future fiscal years until ten years of data is available.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM (KERS) - PENSION FUNDS

<u>Non-Hazardous</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability (TPL)			
Service Cost	\$ 139,631	\$ 143,847	\$ 133,361
Interest	891,897	859,509	853,652
Benefit Changes	-	-	-
Difference between Expected and Actual			
Experience	-	30,958	-
Changes of Assumptions	923,999	694,591	-
Benefit Payments	(923,288)	(905,790)	(889,936)
Refunds of Contributions	<u>(12,130)</u>	<u>(13,552)</u>	<u>(13,627)</u>
Net Change in TPL	1,020,109	809,563	83,450
TPL – Beginning	<u>12,359,673</u>	<u>11,550,110</u>	<u>11,466,660</u>
TPL – Ending (a)	<u>\$13,379,782</u>	<u>\$12,359,673</u>	<u>\$11,550,110</u>
Plan Net Position			
Contributions – Employer	\$ 513,084	\$ 521,692	\$ 296,836
Contributions – Member	106,494	104,605	97,487
Net Investment Income	(20,662)	44,569	337,922
Benefit Payments	(923,288)	(905,790)	(889,936)
Administrative Expense	(10,988)	(10,474)	(11,145)
Refunds of Contributions	(12,130)	(13,552)	(13,627)
Other	<u>-</u>	<u>8,442</u>	<u>-</u>
Net Change in Plan Net Position	(347,490)	(250,508)	(182,463)
Plan Net Position – Beginning	<u>2,327,782</u>	<u>2,578,290</u>	<u>2,760,753</u>
Plan Net Position – Ending (b)	<u>\$ 1,980,292</u>	<u>\$ 2,327,782</u>	<u>\$ 2,578,290</u>
Net Pension Liability – Ending (a) – (b)	<u>\$11,399,490</u>	<u>\$10,031,891</u>	<u>\$ 8,971,820</u>

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Changes in the Net Pension Liability
 (\$ in Thousands)

KENTUCKY EMPLOYEES RETIREMENT SYSTEM (KERS) - PENSION FUNDS

<u>Hazardous</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability (TPL)			
Service Cost	\$ 20,751	\$ 18,729	\$ 16,880
Interest	64,851	61,005	59,594
Benefit Changes	-	-	-
Difference between Expected and Actual			
Experience	-	6,066	-
Changes of Assumptions	-	52,166	-
Benefit Payments	(59,306)	(56,774)	(54,321)
Refunds of Contributions	<u>(2,211)</u>	<u>(2,609)</u>	<u>(2,830)</u>
Net Change in TPL	24,085	78,583	19,323
TPL – Beginning	<u>895,433</u>	<u>816,850</u>	<u>797,527</u>
TPL – Ending (a)	<u>\$ 919,518</u>	<u>\$ 895,433</u>	<u>\$ 816,850</u>
Plan Net Position			
Contributions – Employer	\$ 23,760	\$ 28,536	\$ 11,671
Contributions - Member	15,739	13,207	12,546
Net Investment Income	(1,652)	8,701	80,724
Benefit Payments	(59,306)	(56,774)	(54,321)
Administrative Expense	(918)	(844)	(898)
Refunds of Contributions	(2,211)	(2,609)	(2,830)
Other	<u>-</u>	<u>767</u>	<u>-</u>
Net Change in Plan Net Position	(24,588)	(9,016)	46,892
Plan Net Position – Beginning	<u>552,468</u>	<u>561,484</u>	<u>514,592</u>
Plan Net Position – Ending (b)	<u>\$ 527,880</u>	<u>\$ 552,468</u>	<u>\$ 561,484</u>
Net Pension Liability – Ending (a) – (b)	<u>\$ 391,638</u>	<u>\$ 342,965</u>	<u>\$ 255,366</u>

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Changes in the Net Pension Liability
 (\$ in Thousands)

COUNTY EMPLOYEES RETIREMENT SYSTEM (CERS) - PENSION FUNDS

<u>Non-Hazardous</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability (TPL)			
Service Cost	\$ 209,100	\$ 207,399	\$ 192,482
Interest	780,587	733,003	710,527
Benefit Changes	-	-	-
Difference between Expected and Actual			
Experience	-	49,966	-
Changes of Assumptions	-	606,293	-
Benefit Payments	(651,247)	(615,335)	(582,850)
Refunds of Contributions	<u>(13,754)</u>	<u>(13,524)</u>	<u>(14,286)</u>
Net Change in TPL	324,686	967,802	305,873
TPL – Beginning	<u>10,740,232</u>	<u>9,772,523</u>	<u>9,466,650</u>
TPL – Ending (a)	<u>\$11,065,011</u>	<u>\$10,740,325</u>	<u>\$ 9,772,523</u>
Plan Net Position			
Contributions – Employer	\$ 284,106	\$ 298,565	\$ 324,231
Contributions – Member	141,674	140,311	128,568
Net Investment Income	(40,799)	110,569	895,531
Benefit Payments	(651,247)	(615,335)	(582,850)
Administrative Expense	(19,384)	(18,212)	(18,615)
Refunds of Contributions	(13,754)	(13,524)	(14,286)
Other	<u>-</u>	<u>10,280</u>	<u>-</u>
Net Change in Plan Net Position	(299,404)	(87,346)	732,579
Plan Net Position - Beginning	<u>6,440,800</u>	<u>6,528,146</u>	<u>5,795,568</u>
Plan Net Position – Ending (b)	<u>\$ 6,141,396</u>	<u>\$ 6,440,800</u>	<u>\$ 6,528,147</u>
Net Pension Liability – Ending (a) – (b)	<u>\$ 4,923,615</u>	<u>\$ 4,299,525</u>	<u>\$ 3,244,376</u>

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Changes in the Net Pension Liability
 (\$ in Thousands)

COUNTY EMPLOYEES RETIREMENT SYSTEM (CERS) - PENSION FUNDS

<u>Hazardous</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability (TPL)			
Service Cost	\$ 66,249	\$ 71,935	\$ 66,762
Interest	262,886	247,008	238,665
Benefit Changes	-	-	-
Difference between Expected and Actual Experience	-	41,935	-
Changes of Assumptions	-	166,849	-
Benefit Payments	(213,448)	(200,134)	(189,635)
Refunds of Contributions	<u>(2,879)</u>	<u>(3,111)</u>	<u>(2,665)</u>
Net Change in TPL	112,808	324,482	113,127
TPL – Beginning	<u>3,613,308</u>	<u>3,288,826</u>	<u>3,175,699</u>
TPL – Ending (a)	<u>\$ 3,726,116</u>	<u>\$ 3,613,308</u>	<u>\$ 3,288,826</u>
Plan Net Position			
Contributions – Employer	\$ 105,714	\$ 108,072	\$ 115,240
Contributions – Member	52,972	47,693	43,722
Net Investment Income	(9,021)	37,104	288,490
Benefit Payments	(213,448)	(200,134)	(189,635)
Administrative Expense	(1,363)	(1,289)	(1,721)
Refunds of Contributions	(2,879)	(3,111)	(2,665)
Other	<u>-</u>	<u>2,865</u>	<u>-</u>
Net Change in Plan Net Position	(68,025)	(8,800)	253,431
Plan Net Position – Beginning	<u>2,078,202</u>	<u>2,087,002</u>	<u>1,833,571</u>
Plan Net Position – Ending (b)	<u>\$ 2,010,177</u>	<u>\$ 2,078,202</u>	<u>\$ 2,087,002</u>
Net Pension Liability – Ending (a) – (b)	<u>\$ 1,715,939</u>	<u>\$ 1,535,106</u>	<u>\$ 1,201,824</u>

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Changes in the Net Pension Liability
 (\$ in Thousands)

STATE POLICE RETIREMENT SYSTEM (SPRS) - PENSION FUNDS

<u>Hazardous</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability (TPL)			
Service Cost	\$ 8,402	\$ 7,696	\$ 7,142
Interest	52,951	50,660	50,391
Benefit Changes	-	-	-
Difference between Expected and Actual			
Experience	-	9,331	-
Changes of Assumptions	56,191	40,202	-
Benefit Payments	(56,268)	(54,766)	(53,026)
Refunds of Contributions	<u>(11)</u>	<u>(85)</u>	<u>(213)</u>
Net Change in TPL	61,265	53,038	4,294
TPL - Beginning	<u>734,157</u>	<u>681,119</u>	<u>676,825</u>
TPL – Ending (a)	<u>\$ 795,422</u>	<u>\$ 734,157</u>	<u>\$ 681,119</u>
Plan Net Position			
Contributions – Employer	\$ 25,822	\$ 31,990	\$ 20,279
Contributions - Member	5,262	5,244	5,076
Net Investment Income	(3,841)	3,427	40,374
Benefit Payments	(56,268)	(54,766)	(53,026)
Administrative Expense	(180)	(201)	(214)
Refunds of Contributions	(11)	(85)	(213)
Other	<u>-</u>	<u>646</u>	<u>-</u>
Net Change in Plan Net Position	(29,216)	(13,745)	12,276
Plan Net Position - Beginning	<u>247,229</u>	<u>260,974</u>	<u>248,698</u>
Plan Net Position – Ending (b)	<u>\$ 218,013</u>	<u>\$ 247,229</u>	<u>\$ 260,974</u>
Net Pension Liability – Ending (a) – (b)	<u>\$ 577,409</u>	<u>\$ 486,928</u>	<u>\$ 420,145</u>

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of the Net Pension Liability
 (\$ in Thousands)

KENTUCKY EMPLOYEES RETIREMENT SYSTEM (KERS) - PENSION FUNDS

	<u>2016</u>	<u>2015</u>	<u>2014</u>
<u>Non-Hazardous</u>			
Total Pension Liability (TPL)	\$ 13,379,782	\$ 12,359,673	\$ 11,550,110
Plan Net Position	<u>1,980,292</u>	<u>2,327,782</u>	<u>2,578,290</u>
Net Pension Liability	<u>\$ 11,399,490</u>	<u>\$ 10,031,891</u>	<u>\$ 8,971,820</u>
Ratio of Plan Net Position to TPL	14.80%	18.83%	22.32%
Covered Employee Payroll	\$ 1,631,025	\$ 1,544,234	\$ 1,577,496
Net Pension Liability as a Percentage of Covered Employee Payroll	698.92%	649.64%	568.74%
 <u>Hazardous</u>			
Total Pension Liability (TPL)	\$ 919,518	\$ 895,433	\$ 816,850
Plan Net Position	<u>527,880</u>	<u>552,468</u>	<u>561,484</u>
Net Pension Liability	<u>\$ 391,638</u>	<u>\$ 342,965</u>	<u>\$ 255,366</u>
Ratio of Plan Net Position to TPL	57.41%	61.7%	68.74%
Covered Employee Payroll	\$ 158,828	\$ 128,680	\$ 129,076
Net Pension Liability as a Percentage of Covered Employee Payroll	246.58%	266.53%	197.84%

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of the Net Pension Liability
 (\$ in Thousands)

COUNTY EMPLOYEES RETIREMENT SYSTEM (CERS) - PENSION FUNDS

	<u>2016</u>	<u>2015</u>	<u>2014</u>
<u>Non-Hazardous</u>			
Total Pension Liability (TPL)	\$ 11,065,011	\$ 10,740,325	\$ 9,772,523
Plan Net Position	<u>6,141,396</u>	<u>6,440,800</u>	<u>6,528,147</u>
Net Pension Liability	<u>\$ 4,923,615</u>	<u>\$ 4,299,525</u>	<u>\$ 3,244,376</u>
Ratio of Plan Net Position to TPL	55.50%	59.97%	66.80%
Covered Employee Payroll	\$ 2,417,187	\$ 2,296,716	\$ 2,272,270
Net Pension Liability as a Percentage of Covered Employee Payroll	203.69%	187.2%	142.78%
<u>Hazardous</u>			
Total Pension Liability (TPL)	\$ 3,726,116	\$ 3,613,308	\$ 3,288,826
Plan Net Position	<u>2,010,177</u>	<u>2,078,202</u>	<u>2,087,002</u>
Net Pension Liability	<u>\$ 1,715,939</u>	<u>\$ 1,535,106</u>	<u>\$ 1,201,824</u>
Ratio of Plan Net Position to TPL	53.95%	57.52%	63.46%
Covered Employee Payroll	\$ 526,334	\$ 483,641	\$ 479,164
Net Pension Liability as a Percentage of Covered Employee Payroll	326.02%	317.41%	250.82%

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of the Net Pension Liability
 (\$ in Thousands)

STATE POLICE RETIREMENT SYSTEM (SPRS) - PENSION FUNDS

<u>Hazardous</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability (TPL)	\$ 795,422	\$ 734,157	\$ 681,119
Plan Net Position	<u>218,013</u>	<u>247,229</u>	<u>260,974</u>
Net Pension Liability	<u>\$ 577,409</u>	<u>\$ 486,928</u>	<u>\$ 420,145</u>
Ratio of Plan Net Position to TPL	27.41%	33.68%	38.32%
Covered Employee Payroll	\$ 46,685	\$ 45,765	\$ 44,616
Net Pension Liability as a Percentage of Covered Employee Payroll	1,236.82%	1,063.97%	941.69%

**KENTUCKY RETIREMENT SYSTEMS
REQUIRED SUPPLEMENTARY INFORMATION
JUNE 30, 2016
(CONTINUED)**

**Schedules of Employer Contributions
(\$ in Thousands)**

KENTUCKY EMPLOYEES RETIREMENT SYSTEM (KERS) - PENSION FUNDS

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
<u>Non-Hazardous</u>										
Actuarially Determined										
Employer Contribution	\$ 512,670	\$ 520,948	\$ 520,765	\$ 485,396	\$ 441,094	\$ 381,915	\$ 348,495	\$ 294,495	\$ 264,743	\$ 176,774
Actual Employer										
Contributions	<u>513,084</u>	<u>521,691</u>	<u>296,836</u>	<u>280,874</u>	<u>214,786</u>	<u>193,754</u>	<u>144,051</u>	<u>112,383</u>	<u>104,655</u>	<u>88,249</u>
Annual Contribution										
Deficiency (Excess)	<u>\$ (414)</u>	<u>\$ (743)</u>	<u>\$ 223,929</u>	<u>\$ 204,522</u>	<u>\$ 226,308</u>	<u>\$ 188,161</u>	<u>\$ 204,444</u>	<u>\$ 182,112</u>	<u>\$ 160,088</u>	<u>\$ 88,525</u>
Covered Employee Payroll	\$1,631,025	\$ 1,544,234	\$ 1,577,496	\$ 1,644,409	\$ 1,644,897	\$ 1,731,633	\$1,815,146	\$ 1,754,413	\$ 1,837,873	\$ 1,780,223
Actual Contributions as a Percentage of Covered- Employee Payroll	31.46%	33.78%	18.82%	17.08%	13.06%	11.19%	7.94%	6.41%	5.69%	4.96%
<u>Hazardous</u>										
Actuarially Determined										
Employer Contribution	\$ 23,690	\$ 28,374	\$ 13,570	\$ 21,502	\$ 20,265	\$ 20,605	\$ 17,815	\$ 15,708	\$ 14,147	\$ 12,220
Actual Employer										
Contributions	<u>23,759</u>	<u>28,536</u>	<u>11,670</u>	<u>27,334</u>	<u>20,809</u>	<u>19,141</u>	<u>17,658</u>	<u>15,843</u>	<u>15,257</u>	<u>13,237</u>
Annual Contribution										
Deficiency (Excess)	<u>\$ (69)</u>	<u>\$ (162)</u>	<u>\$ 1,900</u>	<u>\$ (5,832)</u>	<u>\$ (544)</u>	<u>\$ 1,464</u>	<u>\$ 157</u>	<u>\$ (135)</u>	<u>\$ (1,110)</u>	<u>\$ (1,017)</u>
Covered Employee Payroll	\$ 158,828	\$ 128,680	\$ 129,076	\$ 132,015	\$ 131,977	\$ 133,054	\$ 143,558	\$ 146,044	\$ 148,710	\$ 144,838
Actual Contributions as a Percentage of Covered- Employee Payroll	14.96%	22.18%	9.04%	20.71%	15.77%	14.39%	12.3%	10.85%	10.26%	9.14%

**KENTUCKY RETIREMENT SYSTEMS
REQUIRED SUPPLEMENTARY INFORMATION
JUNE 30, 2016
(CONTINUED)**

**Schedules of Employer Contributions
(\$ in Thousands)**

COUNTY EMPLOYEES RETIREMENT SYSTEM (CERS) - PENSION FUNDS

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
<u>Non-Hazardous</u>										
Actuarially Determined										
Employer Contribution	\$ 282,767	\$ 297,715	\$ 324,231	\$ 294,914	\$ 261,764	\$ 218,985	\$ 186,724	\$ 161,097	\$ 138,311	\$ 112,508
Actual Employer										
Contributions	<u>284,106</u>	<u>298,566</u>	<u>324,231</u>	<u>294,914</u>	<u>275,736</u>	<u>248,519</u>	<u>207,076</u>	<u>179,285</u>	<u>150,925</u>	<u>124,261</u>
Annual Contribution										
Deficiency (Excess)	<u>\$ (1,339)</u>	<u>\$ (851)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (13,972)</u>	<u>\$ (29,534)</u>	<u>\$ (20,352)</u>	<u>\$ (18,188)</u>	<u>\$ (12,614)</u>	<u>\$ (11,753)</u>
Covered Employee Payroll	\$ 2,417,187	\$ 2,296,716	\$ 2,272,270	\$ 2,236,277	\$ 2,236,546	\$ 2,276,596	\$ 2,236,855	\$ 2,183,612	\$ 2,166,613	\$ 2,076,848
Actual Contributions as a										
Percentage of Covered-										
Employee Payroll	11.75%	13%	14.27%	13.19%	12.33%	10.92%	9.26%	8.21%	6.97%	5.98%
<u>Hazardous</u>										
Actuarially Determined										
Employer Contribution	\$ 104,952	\$ 107,514	\$ 115,240	\$ 120,140	\$ 83,589	\$ 78,796	\$ 76,391	\$ 69,056	\$ 64,082	\$ 53,890
Actual Employer										
Contributions	<u>105,713</u>	<u>108,071</u>	<u>115,240</u>	<u>120,140</u>	<u>89,329</u>	<u>85,078</u>	<u>82,887</u>	<u>78,152</u>	<u>72,155</u>	<u>61,553</u>
Annual Contribution										
Deficiency (Excess)	<u>\$ (761)</u>	<u>\$ (557)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (5,740)</u>	<u>\$ (6,282)</u>	<u>\$ (6,496)</u>	<u>\$ (9,096)</u>	<u>\$ (8,073)</u>	<u>\$ (7,663)</u>
Covered Employee Payroll	\$ 526,334	\$ 483,641	\$ 479,164	\$ 461,673	\$ 464,229	\$ 466,964	\$ 466,549	\$ 469,315	\$ 474,241	\$ 458,999
Actual Contributions as a										
Percentage of Covered-										
Employee Payroll	20.08%	22.35%	24.05%	26.02%	19.24%	18.22%	17.77%	16.65%	15.21%	13.41%

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Employer Contributions
 (\$ in Thousands)

STATE POLICE RETIREMENT SYSTEM (SPRS) - PENSION FUNDS

Hazardous	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Actuarially Determined Employer Contribution	\$ 25,723	\$ 31,444	\$ 25,808	\$ 23,117	\$ 20,498	\$ 18,463	\$ 18,765	\$ 15,952	\$ 13,823	\$ 9,024
Actual Employer Contributions	<u>25,822</u>	<u>31,990</u>	<u>20,279</u>	<u>18,501</u>	<u>15,362</u>	<u>12,657</u>	<u>9,489</u>	<u>8,186</u>	<u>7,443</u>	<u>6,142</u>
Annual Contribution Deficiency (Excess)	<u>\$ (99)</u>	<u>\$ (546)</u>	<u>\$ 5,529</u>	<u>\$ 4,616</u>	<u>\$ 5,136</u>	<u>\$ 5,806</u>	<u>\$ 9,276</u>	<u>\$ 7,766</u>	<u>\$ 6,380</u>	<u>\$ 2,882</u>
Covered Employee Payroll	\$ 46,685	\$ 45,765	\$ 44,616	\$ 45,256	\$ 48,373	\$ 48,693	\$ 51,507	\$ 51,660	\$ 53,269	\$ 49,248
Actual Contributions as a Percentage of Covered- Employee Payroll	55.31%	69.9%	45.45%	40.88%	31.76%	25.99%	18.42%	15.85%	13.97%	12.47%

**KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)**

The actuarially determined contribution rates are determined on a biennial basis beginning with the fiscal years ended 2016 and 2017, determined as of June 30, 2015. The amortization period of the unfunded liability has been reset as of July 1, 2013 to a closed 30 year period. The following actuarial methods and assumptions were used to determine contribution rates reported for all Systems:

Actuarial Cost Method	Entry Age
Amortization Method	Level of Percentage of Payroll, closed
Remaining Amortization Period	27 years
Asset Valuation Method	5 year Smoothed Market
Inflation	3.25%
Salary Increase	4%, average, including Inflation
Investment Rate of Return	6.75% for both KERS Non-hazardous and SPRS; and, 7.5%, for KERS Hazardous, CERS Non-hazardous, CERS Hazardous, Net of Pension Plan Investment Expense, including Inflation

There were no changes of benefit terms. However, the following change in assumptions were adopted by the Board of Trustees and reflected in the valuation performed as of June 30, 2015:

- The assumed investment rate of return (discount rate) was decreased from 7.5% to 6.75% for KERS Non-hazardous and SPRS; however, the assumed investment rate of return (discount rate) remained at 7.5% for KERS Hazardous, CERS Non-hazardous, and CERS Hazardous.

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Funding Progress

KENTUCKY EMPLOYEES RETIREMENT SYSTEM (KERS)-INSURANCE FUND

	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) Entry Age Normal	Unfunded AAL (UAAL)	Percent Funded	Covered Payroll	UAAL as a % of Covered Payroll
<u>Non-Hazardous</u>	(a)	(b)	(b-a)	(a/b)	(c)**	[(b-a)/c]
June 30, 2007	\$621,171,658	\$5,201,355,055	\$4,580,183,397	11.9%	\$1,780,223,493	257.3
June 30, 2008	603,197,761	5,431,499,285	4,828,301,524	11.1	1,837,873,488	262.7
June 30, 2009	534,172,580	4,507,325,571	3,973,152,991	11.9	1,754,412,912	226.5
June 30, 2010	471,341,628	4,466,136,041	3,994,794,413	10.6	1,815,146,388	220.1
June 30, 2011	451,620,442	4,280,089,633	3,828,469,191	10.6	1,731,632,748	221.1
June 30, 2012	446,080,511	3,125,330,157	2,679,249,646	14.3	1,644,896,681	162.9
June 30, 2013	497,584,327	2,128,754,134	1,631,169,807	23.4	1,644,408,698	99.2
June 30, 2014	621,236,646	2,226,759,925	1,605,523,279	27.9	1,577,496,447	101.8
June 30, 2015	695,018,262	2,413,705,252	1,718,686,990	28.8	1,544,234,409	111.3
June 30, 2016	743,270,060	2,456,677,964	1,713,407,904	30.3	1,529,248,873	112.0
<u>Hazardous</u>						
June 30, 2007	\$251,536,756	\$504,842,981	\$253,306,225	49.8%	\$144,838,020	174.9
June 30, 2008	288,161,759	541,657,214	253,495,455	53.2	148,710,060	170.5
June 30, 2009	301,634,592	491,132,170	189,497,578	61.4	146,043,576	129.8
June 30, 2010	314,427,296	493,297,529	178,870,233	63.7	143,557,944	124.6
June 30, 2011	329,961,615	507,058,767	177,097,152	65.1	133,053,792	133.1
June 30, 2012	345,573,948	384,592,406	39,018,458	89.9	131,976,754	29.6
June 30, 2013	370,774,403	385,517,675	14,743,272	96.2	132,015,368	11.2
June 30, 2014	419,395,867	396,986,820	(22,409,047)	105.6	129,076,038	(17.4)
June 30, 2015	451,514,191	374,904,234	(76,609,957)	120.4	128,680,130	(59.5)
June 30, 2016	473,160,173	377,745,230	(95,414,943)	125.3	147,563,457	(64.7)
<u>Total</u>						
June 30, 2007	\$872,708,414	\$5,706,198,036	\$4,833,489,622	15.3%	\$1,925,061,513	251.1
June 30, 2008	891,359,520	5,973,156,499	5,081,796,979	14.9	1,986,583,548	255.8
June 30, 2009	835,807,172	4,998,457,741	4,162,650,569	16.7	1,900,456,488	219.0
June 30, 2010	785,768,924	4,959,433,570	4,173,664,646	15.8	1,958,704,332	213.1
June 30, 2011	781,582,057	4,787,148,400	4,005,566,343	16.3	1,864,686,540	214.8
June 30, 2012	791,654,459	3,509,922,563	2,718,268,104	22.6	1,776,873,435	153.0
June 30, 2013	868,358,730	2,514,271,809	1,645,913,079	34.5	1,776,424,066	92.7
June 30, 2014	1,040,632,513	2,623,746,745	1,583,114,232	39.7	1,706,572,485	92.8
June 30, 2015	1,146,532,453	2,788,609,486	1,642,077,033	41.1	1,672,914,539	98.2
June 30, 2016	1,216,430,233	2,834,423,194	1,617,992,961	42.9	1,676,812,330	96.5

**Actuarially Computed

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Funding Progress

COUNTY EMPLOYEES RETIREMENT SYSTEM (CERS)-INSURANCE FUND

	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) Entry Age Normal	Unfunded AAL (UAAL)	Percent Funded	Covered Payroll	UAAL as a % of Covered Payroll
	(a)	(b)	(b-a)	(a/b)	(c)**	[(b-a)/c]
<u>Non-Hazardous</u>						
June 30, 2007	\$960,285,900	\$3,333,966,070	\$2,373,680,170	28.8%	\$2,076,848,328	114.3
June 30, 2008	1,168,883,170	3,583,193,466	2,414,310,296	32.6	2,166,612,648	111.4
June 30, 2009	1,216,631,769	3,070,386,018	1,853,754,249	39.6	2,183,611,848	84.9
June 30, 2010	1,293,038,593	3,158,340,174	1,865,301,581	40.9	2,236,855,380	83.4
June 30, 2011	1,433,450,793	3,073,973,205	1,640,522,412	46.6	2,276,595,948	72.1
June 30, 2012	1,512,853,851	2,370,771,288	857,917,437	63.8	2,236,546,345	38.4
June 30, 2013	1,628,244,197	2,443,894,100	815,649,903	66.6	2,236,277,489	36.5
June 30, 2014	1,831,199,465	2,616,914,600	785,715,135	70.0	2,272,270,287	34.6
June 30, 2015	1,997,456,463	2,907,827,440	910,370,977	68.7	2,296,715,957	39.6
June 30, 2016	2,079,811,055	2,988,121,117	908,310,062	69.6	2,352,761,794	38.6
<u>Hazardous</u>						
June 30, 2007	\$512,926,549	\$1,646,460,011	\$1,133,533,462	31.2%	\$458,998,956	247.0
June 30, 2008	613,526,319	1,769,782,957	1,156,256,638	34.7	474,241,332	243.8
June 30, 2009	651,130,782	1,593,548,263	942,417,481	40.9	469,315,464	200.8
June 30, 2010	692,769,770	1,674,703,216	981,933,446	41.4	466,548,660	210.5
June 30, 2011	770,790,274	1,647,702,755	876,912,481	46.8	466,963,860	187.8
June 30, 2012	829,040,842	1,364,843,057	535,802,215	60.7	464,228,923	115.4
June 30, 2013	892,774,391	1,437,332,817	544,558,426	62.1	461,672,567	118.0
June 30, 2014	997,733,237	1,493,864,379	496,131,142	66.8	479,164,016	103.5
June 30, 2015	1,087,707,118	1,504,015,233	416,308,115	72.3	483,640,601	86.1
June 30, 2016	1,135,784,220	1,558,818,204	423,033,984	72.9	492,850,521	85.8
<u>Total</u>						
June 30, 2007	\$1,473,212,449	\$4,980,426,081	\$3,507,213,632	29.6%	\$2,535,847,284	138.3
June 30, 2008	1,782,409,489	5,352,976,423	3,570,566,934	33.3	2,640,853,980	135.2
June 30, 2009	1,867,762,551	4,663,934,281	2,796,171,730	40.0	2,652,927,312	105.4
June 30, 2010	1,985,808,363	4,833,043,390	2,847,235,027	41.1	2,703,404,040	105.3
June 30, 2011	2,204,241,067	4,721,675,960	2,517,434,893	46.7	2,743,559,808	91.8
June 30, 2012	2,341,894,693	3,735,614,345	1,393,719,652	62.7	2,700,775,268	51.6
June 30, 2013	2,521,018,588	3,881,226,917	1,360,208,329	65.0	2,697,950,056	50.4
June 30, 2014	2,828,932,702	4,110,778,979	1,281,846,277	68.8	2,751,434,303	46.6
June 30, 2015	3,085,163,581	4,411,842,673	1,326,679,092	69.9	2,780,356,558	47.7
June 30, 2016	3,215,595,275	4,546,939,321	1,331,344,046	70.7	2,845,612,315	46.8

**Actuarially Computed

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Funding Progress

STATE POLICE RETIREMENT SYSTEM (SPRS) - INSURANCE FUND

<u>Year Ended</u>	<u>Actuarial Value of Assets (a)</u>	<u>Actuarial Accrued Liability (AAL) Entry Age Normal (b)</u>	<u>Unfunded AAL (UAAL) (b-a)</u>	<u>Percent Funded (a/b)</u>	<u>Covered Payroll (c)**</u>	<u>UAAL as a % of Covered Payroll [(b-a)/c]</u>
June 30, 2007	\$115,215,912	\$432,763,229	\$317,547,317	26.6%	\$49,247,580	644.8
June 30, 2008	123,961,197	445,107,468	321,146,271	27.8	53,269,080	602.9
June 30, 2009	123,526,647	364,031,141	240,504,494	33.9	51,660,396	465.5
June 30, 2010	121,175,083	434,960,495	313,785,412	27.9	51,506,712	609.2
June 30, 2011	123,687,289	438,427,763	314,740,474	28.2	48,692,616	646.4
June 30, 2012	124,372,072	333,903,782	209,531,710	37.2	48,372,506	433.2
June 30, 2013	136,321,060	222,326,743	86,005,683	61.3	45,256,202	190.0
June 30, 2014	155,594,760	234,271,127	78,676,367	66.4	44,615,885	176.3
June 30, 2015	167,774,940	254,838,710	87,063,770	65.8	45,764,515	190.2
June 30, 2016	172,703,691	257,197,259	84,493,568	67.1	45,551,469	185.5

**Actuarially Computed

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Contributions From Employers and Other Contributing Entities

KENTUCKY EMPLOYEES RETIREMENT SYSTEM (KERS) – INSURANCE FUND

Non-Hazardous

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$219,768,964	\$64,014,332	\$10,744,049	34.0%
June 30, 2008	558,745,820	56,744,942	6,633,538	11.3
June 30, 2009	362,707,378	74,542,932	8,167,982	22.8
June 30, 2010	376,556,187	93,976,917	8,550,914	27.2
June 30, 2011	294,897,813	129,335,552	-	43.9
June 30, 2012	297,904,224	156,057,216	-	52.4
June 30, 2013	286,143,134	165,330,557	-	57.8
June 30, 2014	208,880,813	166,609,592	-	79.8
June 30, 2015	130,455,026	135,940,337	-	104.2
June 30, 2016	121,898,903	135,815,817	-	111.4

Hazardous

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$31,304,778	\$19,534,819	\$104,669	62.7%
June 30, 2008	51,214,929	21,997,341	73,891	43.1
June 30, 2009	34,670,467	20,807,204	186,081	60.6
June 30, 2010	35,045,278	21,921,535	319,059	63.5
June 30, 2011	29,585,257	19,952,580	-	67.4
June 30, 2012	28,326,206	24,538,087	-	86.6
June 30, 2013	26,252,911	25,682,403	-	97.8
June 30, 2014	15,627,018	23,873,967	-	152.8
June 30, 2015	13,151,938	14,882,343	-	113.2
June 30, 2016	9,185,866	16,765,530	-	182.5

Total

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$251,073,742	\$83,549,151	\$10,848,718	37.6%
June 30, 2008	609,960,749	78,742,283	6,707,429	14.0
June 30, 2009	397,377,845	95,350,136	8,354,063	26.1
June 30, 2010	411,601,465	115,898,452	8,869,973	30.3
June 30, 2011	324,483,070	149,288,132	-	46.0
June 30, 2012	326,230,430	180,595,303	-	55.4
June 30, 2013	312,396,045	191,012,960	-	61.1
June 30, 2014	224,507,831	190,483,559	-	84.8
June 30, 2015	143,606,964	150,822,680	-	105.0
June 30, 2016	131,084,769	152,581,347	-	116.4

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Contributions From Employers and Other Contributing Entities

COUNTY EMPLOYEES RETIREMENT SYSTEM (CERS) – INSURANCE FUND

Non-Hazardous

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$285,600,490	\$147,608,801	\$9,623,431	55.1%
June 30, 2008	406,541,729	196,110,111	6,003,181	49.7
June 30, 2009	264,733,532	123,852,611	7,623,628	49.7
June 30, 2010	266,331,326	166,607,097	9,156,991	66.0
June 30, 2011	213,429,424	186,885,576	-	87.6
June 30, 2012	214,421,008	171,924,836	-	80.2
June 30, 2013	195,560,870	159,992,643	-	81.8
June 30, 2014	130,651,800	123,278,028	-	94.4
June 30, 2015	119,510,589	119,443,608	-	99.9
June 30, 2016	110,987,287	111,836,358	-	100.8

Hazardous

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$115,938,899	\$70,072,785	\$656,523	61.0%
June 30, 2008	168,723,639	90,113,200	419,774	53.7
June 30, 2009	126,757,348	70,785,241	627,938	56.3
June 30, 2010	129,227,449	83,042,875	1,493,440	65.4
June 30, 2011	109,226,667	98,592,286	-	90.3
June 30, 2012	110,762,577	92,563,664	-	83.6
June 30, 2013	102,010,672	85,319,393	-	83.6
June 30, 2014	74,360,438	74,791,619	-	100.6
June 30, 2015	69,102,811	71,778,130	-	103.9
June 30, 2016	64,253,032	67,619,149	-	105.2

Total

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$401,539,389	\$217,681,586	\$10,279,954	56.8%
June 30, 2008	575,265,368	286,223,311	6,422,955	50.9
June 30, 2009	391,490,880	194,637,852	8,251,566	51.8
June 30, 2010	395,558,775	249,649,972	10,650,431	65.8
June 30, 2011	322,656,091	285,477,862	-	88.5
June 30, 2012	325,183,585	264,488,500	-	81.3
June 30, 2013	297,571,542	245,312,036	-	82.4
June 30, 2014	205,012,238	198,069,647	-	96.6
June 30, 2015	188,613,400	191,221,738	-	101.4
June 30, 2016	175,240,319	179,455,507	-	102.4

KENTUCKY RETIREMENT SYSTEMS
 REQUIRED SUPPLEMENTARY INFORMATION
 JUNE 30, 2016
 (CONTINUED)

Schedules of Contributions From Employers and Other Contributing Entities

STATE POLICE RETIREMENT SYSTEM (SPRS) – INSURANCE FUND

Year Ended	Annual Required Contributions	Actual Contributions	Retiree Drug Subsidy Contributions	Percentage Contributed
June 30, 2007	\$15,233,320	\$6,488,600	\$361,942	45.0%
June 30, 2008	43,469,735	7,329,229	183,564	17.3
June 30, 2009	29,324,666	7,413,552	229,240	26.1
June 30, 2010	30,302,151	8,369,428	273,684	28.5
June 30, 2011	25,772,574	11,050,964	-	42.9
June 30, 2012	28,246,786	11,960,468	-	42.3
June 30, 2013	27,234,229	16,828,681	-	61.8
June 30, 2014	20,879,022	14,493,242	-	69.4
June 30, 2015	9,889,797	10,381,881	-	105.0
June 30, 2016	8,552,633	10,237,021	-	119.7

In accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans*, KRS provides this additional disclosure regarding its money-weighted rate of return for the pension funds. The money-weighted rate of return is a method of calculating period-by-period returns on pension plan investments that adjusts for the changing amounts actually invested. For purposes of this Statement, money weighted-rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense, adjusted for the changing amounts actually invested.

Money-Weighted Rates of Return

As of June 30

Pension Funds	<u>2016</u>	<u>2015</u>	<u>2014</u>
KERS Non-Hazardous	-0.97	1.89	15.5
KERS Hazardous	-0.33	1.69	15.65
CERS Non-Hazardous	-0.62	1.65	15.56
CERS Hazardous	-0.46	1.88	15.5
SPRS	-1.76	1.71	15.66

The money-weighted rates of return declined due to unfavorable conditions in the capital markets. This table is intended to show information for ten years; additional years' information will be displayed as it becomes available.

ADDITIONAL SUPPORTING SCHEDULES

DRAFT

**KENTUCKY RETIREMENT SYSTEMS
ADDITIONAL SUPPORTING SCHEDULES**

**Schedule of Administrative Expenses
For the Fiscal Years Ended June 30
(Dollars in Thousands)**

	<u>2016</u>	<u>2015</u>
Personnel		
Salaries and Per Diem	\$ 14,685	\$ 14,292
Fringe Benefits	8,947	8,687
Unemployment Compensation	13	-
Tuition Assistance	<u>27</u>	<u>34</u>
Total Personnel	23,672	23,013
Contractual		
Actuarial Services	450	337
Audit Services	99	108
Healthcare	15	3
Legal Counsel	415	722
Medical Review Services	339	315
Miscellaneous	<u>112</u>	<u>269</u>
Total Contractual	1,430	1,754
Communication		
Printing	172	81
Telephone	201	105
Postage	276	300
Travel	<u>113</u>	<u>116</u>
Total Communication	762	602
Internal Audit		
Travel/Conferences	4	4
Dues/Subscriptions	1	1
Miscellaneous	<u>1</u>	<u>1</u>
Total Internal Audit	6	6
Investments-Pension Fund		
Travel/Conferences	29	37
Dues/Subscriptions	6	8
Computer	-	21
Contractual	189	225
Miscellaneous	5	7
Tuition	6	-
Legal	<u>153</u>	<u>126</u>
Total Investments	388	424

KENTUCKY RETIREMENT SYSTEMS
 ADDITIONAL SUPPORTING SCHEDULES
 JUNE 30, 2016
 (CONTINUED)

Schedule of Administrative Expenses
 For the Fiscal Years Ended June 30
 (Dollars in Thousands)
 (Continued)

	<u>2016</u>	<u>2015</u>
Rentals		
Office Space	731	718
Equipment	<u>69</u>	<u>76</u>
Total Rentals	800	794
Information Technology		
Software	456	435
Hardware	1,006	642
Services	<u>1,237</u>	<u>669</u>
Total Information Technology	2,699	1,746
Miscellaneous		
Utilities	217	223
Supplies	75	116
Insurance	255	82
Dues & Subscriptions	38	47
Maintenance	4	4
Other	<u>17</u>	<u>20</u>
Total Miscellaneous	606	492
Depreciation/Amortization	<u>1,937</u>	<u>2,189</u>
Total Pension Fund Administrative Expense	<u>32,300</u>	<u>31,020</u>
Healthcare Fees	<u>2,038</u>	<u>2,180</u>
Total Insurance Fund Administrative Expense	<u>2,038</u>	<u>2,180</u>
Total Administrative Expenses	<u>\$ 34,338</u>	<u>\$ 33,200</u>

KENTUCKY RETIREMENT SYSTEMS
 ADDITIONAL SUPPORTING SCHEDULES
 JUNE 30, 2016
 (CONTINUED)

Schedule of Direct Investment Expenses
 For the Fiscal Years Ended June 30
 (Dollars in Thousands)

	<u>2016</u>	<u>2015</u>
<u>PENSION FUNDS</u>		
Security Lending Fees		
Borrower (Income) Rebates	\$ 100	\$ (159)
Lending Agent Fees	<u>680</u>	<u>444</u>
Total Security Lending	780	285
Contractual Services		
Investment Management	51,711	53,610
Security Custody	945	1,010
Investment Consultant	1,141	1,258
Private Equity Performance Fees	<u>34,201</u>	<u>25,627</u>
Total Contractual Services	87,998	81,505
<u>INSURANCE FUND</u>		
Security Lending Fees		
Borrower (Income) Rebates	76	(336)
Lending Agent Fees	<u>222</u>	<u>155</u>
Total Security Lending	298	(181)
Contractual Services		
Investment Management	19,508	18,661
Security Custody	600	675
Investment Consultant	428	448
Private Equity Performance Fees	<u>13,553</u>	<u>8,200</u>
Total Contractual Services	<u>34,089</u>	<u>27,984</u>
Total Investment Expenses	<u>\$ 123,165</u>	<u>\$ 109,593</u>

KENTUCKY RETIREMENT SYSTEMS
ADDITIONAL SUPPORTING SCHEDULES
JUNE 30, 2016
(CONTINUED)

Schedule of Professional Consultant Fees
For the Fiscal Years Ended June 30
(Dollars in Thousands)

	<u>2016</u>	<u>2015</u>
Actuarial Services	\$ 450	\$ 337
Medical Review Services	339	315
Audit Services	99	108
Legal Counsel	415	722
Healthcare	15	3
Miscellaneous	<u>112</u>	<u>269</u>
Total	<u>\$ 1,430</u>	<u>\$ 1,754</u>

**REPORT OF INDEPENDENT AUDITORS ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED
ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE
WITH *GOVERNMENT AUDITING STANDARDS***

DRAFT

**REPORT OF INDEPENDENT AUDITORS ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED
ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE
WITH GOVERNMENT AUDITING STANDARDS**

Board of Directors
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the combining financial statements of the Pension Funds and Insurance Fund of the Kentucky Retirement Systems (KRS) as of and for the fiscal year ended June 30, 2016, and the related notes to the combining financial statements, which collectively comprise KRS' basic combining financial statements, and have issued our report thereon dated December 1, 2016.

Internal Control Over Financial Reporting

In planning and performing our audit of the combining financial statements, we considered KRS' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the combining financial statements, but not for the purpose of expressing an opinion on the effectiveness of KRS' internal control. Accordingly, we do not express an opinion on the effectiveness of KRS' internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether KRS' combining financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of combining financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests

**BOARD OF TRUSTEES
KENTUCKY RETIREMENT SYSTEMS
REPORT ON INTERNAL CONTROL OVER FINANCIAL
REPORTING AND ON COMPLIANCE AND OTHER MATTERS
(CONTINUED)**

disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Governmental Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

December 1, 2016
Lexington, Kentucky

DRAFT

SCHEDULE OF FINDINGS AND RESPONSES

DRAFT

KENTUCKY RETIREMENT SYSTEMS
Schedule of Findings and Responses
For the Fiscal Year Ended June 30, 2016

Section I - Summary of Auditors' Results

- a. The type of report issued on the financial statements: **Unmodified opinion**
- b. Material weaknesses identified in the internal control over financial reporting: **No**
- c. Significant deficiencies identified in the internal control over financial reporting: **No**
- d. Non-compliance which is material to the financial statements: **No**

Section II - Summary of Findings and Responses

We noted no findings during the course of the audit.

DRAFT

MEMORANDUM

Date: October 25, 2016
To: Connie Davis
 Director of Internal Audit
From: Karen Roggenkamp
 Chief Operations Officer
Re: **FY 2017 Financial Highlights**

KENTUCKY RETIREMENT SYSTEMS						
Net Position Comparison – Pension Fund						
	KERS	KHAZ	CERS	CHAZ	SPRS	TOTAL
First Quarter of FY 2017	\$2,012,892,023	\$550,018,529	\$6,335,386,552	\$2,081,480,999	\$229,164,030	\$11,208,942,135
FY 2016 End of Period (6/30/16)	\$1,980,292,118	\$527,879,431	\$6,141,394,419	\$2,010,174,047	\$218,012,479	\$10,877,752,495
Change in Net Position	\$32,599,905	\$22,139,098	\$193,992,134	\$71,306,952	\$11,151,551	\$331,189,640

FY 2017 Summary (period ending September 30):

Total Pension Net Assets were \$11.2 Billion at quarter end compared to \$10.9 Billion at the end of Fiscal Year (FY) 2016. The primary factors of \$331.2 Million (3.0%) increase were higher employer contributions and positive investment performance.

Comments & Comparisons to Prior Year:

- Total **Contributions** were \$408 Million which is an increase of \$97.8 Million from first quarter of FY16. The following were the major drivers of the increase in contributions:
 - Member contributions increased by \$10.5M due to an increase in covered payroll for CERS and CHAZ.
 - Employer contributions increased by \$62.3M due to an increase in the contribution rate across all plans.
 - The inflow of \$24.5 M as appropriated by the General Fund during last year’s legislative session.
- Overall **Investment Income** was \$428.4M compared to a negative \$548.0M last year. The major drivers of the increase in Investment Income were:
 - The net appreciation in the FV of Investments increased from a negative \$564.7M in FY16 to a positive \$359.5M in FY17. The increase in FV for the first quarter of FY17 was driven primarily by the performance in the Public Equity sector with realized gains of \$110.0M and unrealized gains of \$176.6M for FY17.
 - Interest and Dividends earned during the 2017 fiscal year increased by \$53.3M from prior year to \$94.6M. Partnership income from Absolute Return, Private Equity and Real Return in the amount of \$50.1 was the primary contributor to the increase in income.
 - Investment expenses were \$26.4M slightly higher than FY16 of \$25.7M. The fees remain consistent with the prior year at 0.24% of the Fair Value of the portfolio.
- Total **Deductions** were \$505.2M (up \$16.7M from 2016). Benefits/Refunds totaled \$497.2M. The 4.0% increase was comparable to prior years. Pension administrative expenses were \$8.0M compared to \$10.5M for same period last year. In FY 2017, DEI health plan administrative expenses are charged to the Insurance Trust.

KENTUCKY RETIREMENT SYSTEMS						
Net Position Comparison – Insurance Fund						
	KERS	KHAZ	CERS	CHAZ	SPRS	TOTAL
First Quarter of FY 2017	\$696,926,475	\$451,569,846	\$1,983,190,992	\$1,094,250,347	\$166,182,913	\$4,392,120,573
FY 2016 End of Period (6/30/16)	\$668,318,886	\$437,395,843	\$1,908,549,216	\$1,056,097,315	\$160,947,901	\$4,231,309,161
Change in Net Position	\$28,607,590	\$14,174,003	\$74,641,776	\$38,153,032	\$5,235,012	\$160,811,413

FY 2017 Summary (period ending September 30):

Total Insurance Net Assets were \$4.2 Billion at the end of Fiscal Year (FY) 2016 and increased by 3.8% to \$4.4 Billion. Total contributions and net investment income of \$250.4M offset deductions of \$89.5M, resulted in an increase in net position of \$160.8M.

Comments & Comparisons to Prior Year:

- Total **Contributions** were \$83.1M (\$1.1M lower than 2016) due to a decrease in required employer contributions credited to the insurance fund across three of the five plans.
- Overall **Investment Income** was positive \$176.4M compared to a negative \$202.2M in 2016. The major drivers of Investment Income were:
 - The net appreciation in the FV of Investments was positive \$143.2M compared to negative \$216.7M in 2016. The increase in FY during the first quarter of FY17 is primarily due to the positive performance in the Public Equity sector reporting realized gains of \$61.9M and unrealized gains of \$56.0M.
 - Interest and Dividends were \$33.2M (increase of \$18.7M from the prior year). Partnership income of \$16.3M accompanied with dividends of \$11.6M were the major source of income for the quarter.
 - Investment expenses were \$9.4M, slightly higher than FY16 of \$8.4M. The fees remain consistent with the prior year at 0.22% of the Fair Value of the portfolio.
- Total **Deductions** were \$89.5M (higher by \$1.7M compared to 2016). A slight increase in Healthcare Premiums accounted for increase.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF NET POSITION
PENSION FUNDS
As of September 30, 2016
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2017	2016		
ASSETS									
Cash and Short-term Investments									
Cash Deposits	\$ 1,308,048	\$ 939,826	\$ 219,724	\$ 809,315	\$ 241,060	\$ 3,517,972	\$ 3,634,178	-3%	
Short-term Investments	\$ 74,483,856	\$ 129,751,565	\$ 7,006,974	\$ 54,847,645	\$ 12,479,959	\$ 278,569,999	\$ 360,608,552	-23%	1
Total Cash and Short-term Investments	\$ 75,791,904	\$ 130,691,391	\$ 7,226,698	\$ 55,656,960	\$ 12,721,018	\$ 282,087,971	\$ 364,242,730		
RECEIVABLES									
Accounts Receivable	\$ 73,285,373	\$ 42,591,919	\$ 12,237,500	\$ 16,849,054	\$ 6,147,255	\$ 151,111,101	\$ 126,001,549	20%	2
Accounts Receivable - Investments	\$ 50,159,714	\$ 140,158,635	\$ 5,251,831	\$ 44,894,758	\$ 12,986,497	\$ 253,451,434	\$ 268,011,668	-5%	
Accounts - Alternate Participation				\$ 94,335		\$ 94,335	\$ 101,245	-7%	
Total Receivables	\$ 123,445,088	\$ 182,750,553	\$ 17,489,331	\$ 61,838,146	\$ 19,133,752	\$ 404,656,871	\$ 394,114,462		
INVESTMENTS, AT FAIR VALUE									
Fixed Income	\$ 312,758,865	\$ 561,426,498	\$ 28,484,221	\$ 184,181,734	\$ 48,033,165	\$ 1,134,884,483	\$ 2,473,696,554	-54%	3
Public Equities	\$ 756,344,978	\$ 3,425,418,535	\$ 103,248,673	\$ 1,113,743,873	\$ 291,490,014	\$ 5,690,246,073	\$ 4,755,097,350	20%	4
Private Equities	\$ 354,475,133	\$ 698,859,083	\$ 27,594,371	\$ 237,561,197	\$ 65,941,280	\$ 1,384,431,064	\$ 1,312,174,909	6%	
Derivatives	\$ 2,745,937	\$ 11,243,020	\$ 326,814	\$ 3,693,025	\$ 956,564	\$ 18,965,359	\$ 12,647,026	50%	5
Absolute Return	\$ 200,939,944	\$ 626,274,645	\$ 21,166,270	\$ 198,454,316	\$ 52,544,384	\$ 1,099,379,558	\$ 1,185,701,511	-7%	
Real Return	\$ 155,978,834	\$ 524,062,991	\$ 17,392,583	\$ 172,185,606	\$ 45,005,199	\$ 914,625,212			
Real Estate	\$ 76,962,749	\$ 305,024,379	\$ 11,497,798	\$ 97,518,769	\$ 28,539,321	\$ 519,543,015	\$ 630,525,324	-18%	6
Total Investments, at Fair Value	\$ 1,860,206,440	\$ 6,152,309,150	\$ 209,710,729	\$ 2,007,338,519	\$ 532,509,927	\$ 10,762,074,764	\$ 10,369,842,673		
FIXED/INTANGIBLE ASSETS									
Fixed Assets	\$ 929,074	\$ 1,700,704	\$ 11,003	\$ 153,235	\$ 91,375	\$ 2,885,391	\$ 2,577,051	12%	
Intangible Assets	\$ 5,919,584	\$ 9,960,922	\$ 100,005	\$ 826,734	\$ 493,581	\$ 17,300,826	\$ 17,300,826	0%	
Accumulated Depreciation	\$ (782,943)	\$ (1,441,406)	\$ (8,723)	\$ (130,380)	\$ (77,873)	\$ (2,441,324)	\$ (2,402,572)	2%	
Accumulated Amortization	\$ (3,253,792)	\$ (5,413,100)	\$ (64,663)	\$ (454,062)	\$ (262,794)	\$ (9,448,411)	\$ (8,033,113)	18%	
Total Fixed Assets	\$ 2,811,924	\$ 4,807,121	\$ 37,622	\$ 395,527	\$ 244,289	\$ 8,296,483	\$ 9,442,191		
Total Assets	\$ 2,062,255,355	\$ 6,470,558,216	\$ 234,464,380	\$ 2,125,229,152	\$ 564,608,986	\$ 11,457,116,089	\$ 11,137,642,055		
LIABILITIES									
Accounts Payable	\$ 1,817,567	\$ 3,436,408	\$ 323,660	\$ 1,562,790	\$ 2,330,363	\$ 9,470,788	\$ 10,700,732	-11%	7
Investment Accounts Payable	\$ 47,545,765	\$ 131,735,253	\$ 4,976,699	\$ 42,185,363	\$ 12,260,095	\$ 238,703,175	\$ 206,751,597	15%	8
Total Liabilities	\$ 49,363,332	\$ 135,171,661	\$ 5,300,359	\$ 43,748,153	\$ 14,590,458	\$ 248,173,963	\$ 217,452,329		
Total Plan Net Assets	\$ 2,012,892,024	\$ 6,335,386,554	\$ 229,164,020	\$ 2,081,480,999	\$ 550,018,528	\$ 11,208,942,126	\$ 10,920,189,726		

NOTE - Variance Explanation

- 1 Short Term Investments is primarily comprised of the cash that is on hand with the custodial bank along with any small amounts of cash managers and brokers may have; therefore, the variance is driven by cash flow
- 2 The increase in Accounts Receivable is a result of the increase in the contribution rates (funding of the ARC).
- 3 & 4 The large change in asset values for Fixed Income and Public Equities is the new asset allocation adopted January 1, 2016 that increased the allocation to Public Equities by 9% and reduced the allocation to Fixed Income by 7%.
- 5 Derivatives include currency forwards/futures as permitted by KRS investment policy. Derivative income increases as the hedging investment offsets the strong USD.
- 6 The reduction in Real Estate has been a result distribution payouts and little funding to offset the payouts.
- 7 The decrease in Accounts Payable is due to a decrease in credit invoices at end of the quarter.
- 8 Variance is a result of transactions activity which is based on each individual manager.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF CHANGES IN NET POSITION
PENSION FUNDS
For the Three Months Ended September 30, 2016
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2017	2016		
ADDITIONS									
Member Contributions	\$ 24,554,700	\$ 36,648,102	\$ 1,549,034	\$ 15,163,707	\$ 4,124,195	\$ 82,039,738	\$ 71,563,389	15%	1
Employer Contributions	\$ 162,647,897	\$ 83,696,189	\$ 10,011,242	\$ 30,871,872	\$ 9,698,451	\$ 296,925,651	\$ 234,611,131	27%	2
General Fund Appropriations	\$ 14,548,250		\$ 6,250,000		\$ 3,750,000	\$ 24,548,250			
Pension Spiking Contributions	\$ 68,377	\$ 249,529		\$ 131,390	\$ 10,867	\$ 460,164	\$ 794,127	-42%	3
Health Insurance Contributions (HB1)	\$ 1,227,044	\$ 2,150,516	\$ 34,102	\$ 428,598	\$ 178,690	\$ 4,018,949	\$ 3,271,147	23%	4
Total Contributions	\$ 203,046,267	\$ 122,744,336	\$ 17,844,377	\$ 46,595,568	\$ 17,762,204	\$ 407,992,752	\$ 310,239,794		
INVESTMENT INCOME									
From Investing Activities									
Net Appreciation in FV of Investments	\$ 54,505,302	\$ 212,554,845	\$ 6,002,285	\$ 69,348,841	\$ 17,060,649	\$ 359,471,921	\$ (564,700,246)	164%	5
Interest/Dividends	\$ 20,897,947	\$ 50,736,192	\$ 2,025,000	\$ 16,418,650	\$ 4,509,408	\$ 94,587,197	\$ 41,304,261	129%	6
Total Investing Activities Income	\$ 75,403,249	\$ 263,291,036	\$ 8,027,285	\$ 85,767,491	\$ 21,570,057	\$ 454,059,118	\$ (523,395,985)		
Investment Expense	\$ 5,721,805	\$ 14,211,804	\$ 546,809	\$ 4,637,736	\$ 1,293,391	\$ 26,411,544	\$ 25,709,080	3%	
Net Income from Investing Activities	\$ 69,681,444	\$ 249,079,233	\$ 7,480,476	\$ 81,129,755	\$ 20,276,665	\$ 427,647,573	\$ (549,105,065)		
From Securities Lending Activities									
Securities Lending Income	\$ 195,373	\$ 668,140	\$ 22,732	\$ 217,327	\$ 56,303	\$ 1,159,876	\$ 1,165,146		
Securities Lending Borrower Rebates	\$ 51,062	\$ 136,468	\$ 4,939	\$ 44,079	\$ 11,222	\$ 247,770	\$ (67,622)		
Security Lending Agent Fee	\$ 21,647	\$ 79,751	\$ 2,669	\$ 25,987	\$ 6,762	\$ 136,816	\$ 141,687		
Net Income from Securities Lending	\$ 122,664	\$ 451,921	\$ 15,124	\$ 147,262	\$ 38,319	\$ 775,290	\$ 1,091,081	-29%	
Total Investment Income	\$ 69,804,108	\$ 249,531,154	\$ 7,495,600	\$ 81,277,017	\$ 20,314,984	\$ 428,422,863	\$ (548,013,984)		
Total Additions	\$ 272,850,375	\$ 372,275,490	\$ 25,339,977	\$ 127,872,585	\$ 38,077,188	\$ 836,415,615	\$ (237,774,190)		
DEDUCTIONS									
Benefit Payments	\$ 233,971,535	\$ 169,218,670	\$ 14,143,528	\$ 55,411,024	\$ 15,168,973	\$ 487,913,731	\$ 469,202,717	4%	
Refunds	\$ 3,566,852	\$ 4,279,756	\$ 980	\$ 912,032	\$ 544,257	\$ 9,303,877	\$ 8,836,865	5%	
Administrative Expenses	\$ 2,666,974	\$ 4,707,831	\$ 42,983	\$ 235,923	\$ 220,984	\$ 7,874,695	\$ 10,364,554	-24%	8
Capital Project Expenses	\$ 45,108	\$ 77,098	\$ 936	\$ 6,653	\$ 3,876	\$ 133,672	\$ 112,140	19%	
Total Deductions	\$ 240,250,470	\$ 178,283,356	\$ 14,188,427	\$ 56,565,633	\$ 15,938,090	\$ 505,225,975	\$ 488,516,276		
Net Increase(Decrease) in Plan Net Assets	\$ 32,599,905	\$ 193,992,134	\$ 11,151,551	\$ 71,306,952	\$ 22,139,098	\$ 331,189,640	\$ (726,290,466)		
PLAN NET ASSETS HELD IN TRUST FOR PENSION BENEFITS									
Beginning of Period	\$ 1,980,292,118	\$ 6,141,394,419	\$ 218,012,479	\$ 2,010,174,047	\$ 527,879,431	\$ 10,877,752,495	\$ 11,646,480,202		
End of Period	\$ 2,012,892,023	\$ 6,335,386,552	\$ 229,164,030	\$ 2,081,480,999	\$ 550,018,529	\$ 11,208,942,135	\$ 10,920,189,736		

NOTE - Variance Explanation

- 1 The increase in Member Contributions is due to an increase in covered payroll for CERS and CERS Haz.
- 2 The increase in Employer Contributions is due to an increase in covered payroll for CERS and CERS Haz, and the increase in the Employer Contribution rate.
- 3 Pension Spiking contributions decreased due to a decrease in Pension Spiking billings for the quarter.
- 4 The increase in Health Insurance Contributions is due to an increase in covered payroll in all systems except KERS.
- 5 Positive market conditions resulting primarily within the Public Equity sector.
- 6 Positive market conditions resulting in an increase in Interest and Dividends
- 7 Securities Lending Activity varies depending on the demands of the market
- 8 Decrease is due to a change in processing of Insurance Admin Fees.

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF NET POSITION
INSURANCE FUNDS
As of September 30, 2016
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2017	2016		
ASSETS									
Cash and Short-Term Investments									
Cash Deposits	\$ 52,536	\$ 54,501	\$ 15,221	\$ 30,447	\$ 24,774	\$ 177,479	\$ 927,198	-81%	1
Short-term Investments	\$ 22,895,559	\$ 37,276,070	\$ 2,927,818	\$ 23,106,104	\$ 11,070,155	\$ 97,275,705	\$ 86,187,687	13%	2
Total Cash and Short-term	\$ 22,948,095	\$ 37,330,571	\$ 2,943,040	\$ 23,136,550	\$ 11,094,929	\$ 97,453,184	\$ 87,114,884		
RECEIVABLES									
Accounts Receivable	\$ 12,877,908	\$ 11,492,833	\$ 794,987	\$ 4,802,205	\$ 570,131	\$ 30,538,063	\$ 31,115,200	-2%	
Investment Accounts Receivable	\$ 19,314,793	\$ 56,273,555	\$ 4,775,040	\$ 31,015,526	\$ 12,966,874	\$ 124,345,787	\$ 97,174,827	28%	3
Total Receivables	\$ 32,192,701	\$ 67,766,387	\$ 5,570,027	\$ 35,817,731	\$ 13,537,005	\$ 154,883,850	\$ 128,290,026		
INVESTMENTS, AT FAIR VALUE									
Fixed Income	\$ 58,689,896	\$ 169,783,309	\$ 14,205,689	\$ 93,891,457	\$ 38,952,619	\$ 375,522,970	\$1,272,693,648	-70%	4
Public Equities	\$ 399,835,694	\$ 1,069,970,639	\$ 88,870,798	\$ 587,845,730	\$ 250,733,115	\$ 2,397,255,976	\$1,556,423,419	54%	5
Private Equities	\$ 46,315,933	\$ 234,142,837	\$ 20,047,921	\$ 130,929,686	\$ 44,713,617	\$ 476,149,994	\$ 380,560,422	25%	6
Derivatives	\$ 1,138,544	\$ 3,279,523	\$ 273,722	\$ 1,821,138	\$ 750,843	\$ 7,263,770	\$ 4,688,054	55%	7
Absolute Return	\$ 68,716,526	\$ 195,040,073	\$ 17,097,952	\$ 109,245,041	\$ 45,600,348	\$ 435,699,940	\$ 448,479,092	-3%	
Real Return	\$ 56,120,255	\$ 163,055,220	\$ 13,212,432	\$ 87,993,348	\$ 36,211,232	\$ 356,592,488			
Real Estate	\$ 29,813,137	\$ 97,452,841	\$ 8,551,871	\$ 53,422,775	\$ 22,473,234	\$ 211,713,858	\$ 233,318,179	-9%	
Total Investments, at Fair Value	\$ 660,629,985	\$ 1,932,724,443	\$ 162,260,385	\$ 1,065,149,174	\$ 439,435,009	\$ 4,260,198,996	\$3,896,162,814		
Total Assets	\$ 715,770,781	\$ 2,037,821,400	\$ 170,773,451	\$ 1,124,103,456	\$ 464,066,943	\$ 4,512,536,031	\$4,111,567,725		
LIABILITIES									
Accounts Payable	\$ 302,361	\$ 654,489	\$ 10,891	\$ 112,569	\$ 54,481	\$ 1,134,792	\$ 543,951	109%	8
Investment Accounts Payable	\$ 18,541,934	\$ 53,975,918	\$ 4,579,649	\$ 29,740,539	\$ 12,442,615	\$ 119,280,655	\$ 77,989,656	53%	9
Total Liabilities	\$ 18,844,295	\$ 54,630,408	\$ 4,590,539	\$ 29,853,109	\$ 12,497,097	\$ 120,415,447	\$ 78,533,607		
Total Plan Net Assets	\$ 696,926,485	\$ 1,983,190,993	\$ 166,182,912	\$ 1,094,250,347	\$ 451,569,846	\$ 4,392,120,583	\$4,033,034,118		

NOTE - Variance Explanation

- 1 Variance is a result of continuous fluctuation of deposits and transactions that flow through the cash account.
- 2 Short Term Investments is primarily comprised of the cash that is on hand with the custodial bank along with any small amounts of cash managers and brokers may have; therefore, the variance is driven by cash flow
- 3 Variance is a result of transactions activity which is based on each individual manager
- 4 & 5 The large change in asset values for Fixed Income and Public Equities is the new asset allocation adopted January 1, 2016 that increased the allocation to Public Equities by 9% and reduced the allocation to Fixed Income by 7%.
- 6 Derivatives include currency forwards/futures as permitted by KRS investment policy. Derivative income increases as the hedging
- 7 The Insurance Fund is able to invest more as a whole in Private Equity because all plans are able to participate
- 8 Increase due to handling of payables in START
- 9 Variance is a result of transactions activity which is based on each individual manager

KENTUCKY RETIREMENT SYSTEMS
COMBINING STATEMENTS OF CHANGES IN NET POSITION
INSURANCE FUNDS
For the Three Months Ended September 30, 2016
(Unaudited)(In Whole Dollars)

	KERS	CERS	SPRS	CHAZ	KHAZ	2017	2016		
ADDITIONS									
Employer Contributions	\$ 33,255,705	\$ 29,839,458	\$ 2,357,901	\$ 13,767,484	\$ 1,092,855	\$ 80,313,403	\$ 81,394,593	-1%	1
Insurance Premiums	\$ 53,257	\$ 153,421	\$	\$ 1,031	\$ 3,778	\$ 211,488	\$ 248,136	-15%	
Retired Reemployed Healthcare	\$ 942,343	\$ 1,227,336	\$	\$ 215,592	\$ 231,587	\$ 2,616,859	\$ 2,605,039	0%	
Total Contributions	\$ 34,251,306	\$ 31,220,215	\$ 2,357,901	\$ 13,984,107	\$ 1,328,219	\$ 83,141,749	\$ 84,247,767		
INVESTMENT INCOME									
From Investing Activities									
Net Appreciation in FV of Investments	\$ 22,859,954	\$ 64,567,669	\$ 5,397,862	\$ 35,624,945	\$ 14,741,621	\$ 143,192,051	\$ (216,695,616)	166%	2
Interest/Dividends	\$ 5,237,642	\$ 14,974,281	\$ 1,291,324	\$ 8,257,353	\$ 3,456,024	\$ 33,216,625	\$ 14,530,347	129%	3
Total From Investing Activities	\$ 28,097,597	\$ 79,541,949	\$ 6,689,186	\$ 43,882,298	\$ 18,197,645	\$ 176,408,676	\$ (202,165,269)		
Investment Expense	\$ 1,197,912	\$ 4,454,615	\$ 381,703	\$ 2,466,826	\$ 939,751	\$ 9,440,807	\$ 8,417,596	12%	4
Net Income from Investing Activities	\$ 26,899,685	\$ 75,087,334	\$ 6,307,483	\$ 41,415,473	\$ 17,257,895	\$ 166,967,869	\$ (210,582,865)		
From Securities Lending									
Securities Lending Income	\$ 57,753	\$ 153,444	\$ 12,633	\$ 84,084	\$ 36,102	\$ 344,017	\$ 362,246		
Security Lending Borrower Rebates	\$ 9,110	\$ 26,786	\$ 2,166	\$ 14,551	\$ 6,391	\$ 59,004	\$ (2,983)		
Security Lending Agent Fees	\$ 7,297	\$ 18,999	\$ 1,570	\$ 10,430	\$ 4,456	\$ 42,752	\$ 41,956		
Net Income from Securities Lending	\$ 41,347	\$ 107,659	\$ 8,898	\$ 59,103	\$ 25,255	\$ 242,261	\$ 323,272	-25%	5
Total Net Income from Investments	\$ 26,941,031	\$ 75,194,993	\$ 6,316,380	\$ 41,474,576	\$ 17,283,150	\$ 167,210,130	\$ (210,259,593)		
Total Additions	\$ 61,192,338	\$ 106,415,208	\$ 8,674,281	\$ 55,458,683	\$ 18,611,369	\$ 250,351,879	\$ (126,011,826)		
DEDUCTIONS									
Healthcare Premiums Subsidies	\$ 32,017,716	\$ 30,615,704	\$ 3,416,970	\$ 17,182,068	\$ 4,393,273	\$ 87,625,730	\$ 85,716,317	2%	
Administrative Expense	\$ 219,989	\$ 198,342	\$ 16,798	\$ 93,662	\$ 26,272	\$ 555,064	\$ 513,673	8%	
Self Funded Healthcare Costs	\$ 347,043	\$ 959,386	\$ 5,502	\$ 29,921	\$ 17,821	\$ 1,359,673	\$ 1,605,611	-15%	6
Excise Tax Insurance						\$	\$ 8,904		
Total Deductions	\$ 32,584,748	\$ 31,773,433	\$ 3,439,269	\$ 17,305,651	\$ 4,437,366	\$ 89,540,467	\$ 87,844,504		
Net Increase(Decrease) in Plan Net Assets	\$ 28,607,590	\$ 74,641,776	\$ 5,235,012	\$ 38,153,032	\$ 14,174,003	\$ 160,811,413	\$ (213,856,330)		
NET PLAN ASSETS HELD IN TRUST FOR INSURANCE BENEFITS									
Beginning of Period	\$ 668,318,886	\$ 1,908,549,216	\$ 160,947,901	\$ 1,056,097,315	\$ 437,395,843	\$ 4,231,309,161	\$ 4,246,890,439		
End of Period	\$ 696,926,475	\$ 1,983,190,992	\$ 166,182,913	\$ 1,094,250,347	\$ 451,569,846	\$ 4,392,120,573	\$ 4,033,034,108		

NOTE - Variance Explanation

- 1 The decrease in Insurance Premiums is due to a decrease in direct billing to retirees.
- 2 Positive market conditions resulting primarily within the Public Equity sector.
- 3 Positive market conditions resulting in an increase in Interest and Dividends
- 4 Securities Lending Activity varies depending on the demands of the market
- 5 Overall expense as a proportionate share of FV has remained constant but in Q1 of FY16 Absolute Return Fees were not yet fully reported
- 6 Decrease due to lower self funded direct billing from Humana.

KENTUCKY RETIREMENT SYSTEMS

Cash Flow									
KERS					KHAZ				
	FY 2016	FY 2017	FY 2017	FY 2018		FY 2016	FY 2017	FY 2017	FY 2018
\$000's	Preliminary	Q1 Actual	Estimated	Estimated	\$000's	Preliminary	Q1 Actual	Estimated	Estimated
Inflows					Inflows				
Employer Contributions	513,084	162,716	656,361	669,736	Employer Contributions	23,760	9,709	33,877	34,455
Employee Contributions	106,494	25,782	86,319	86,319	Employee Contributions	15,739	4,303	13,205	13,205
Total Contributions	619,578	188,498	742,680	756,055	Total Contributions	39,499	14,012	47,082	47,660
HB 303 Funding		14,548	58,193	67,574	HB 303 Funding		3,750	15,000	10,000
Total Inflows	619,578	203,046	800,873	823,629	Total Inflows	39,499	17,762	62,082	57,660
Outflows					Outflows				
Benefits	923,288	233,972	950,987	979,517	Benefits	59,306	15,169	61,678	64,145
Refunds/Adjustments	12,311	3,567	12,130	12,130	Refunds/Adjustments	2,211	544	2,211	2,211
Administrative Expenses	10,808	2,712	10,808	10,808	Administrative Expenses	916	225	1,199	1,203
Total Outflows	946,407	240,251	973,925	1,002,455	Total Outflows	62,433	15,938	65,088	67,559
Cash Flows	(326,829)	(37,205)	(173,052)	(178,826)	Cash Flows	(22,934)	1,824	(3,006)	(9,899)
Net Investment Income	(20,662)	69,804	133,670	133,670	Net Investment Income	(1,652)	20,315	39,741	39,741
Actuarial Assumptions FY16			@6.75%	@6.75%	Actuarial Assumptions FY16			@7.50%	@7.50%
Net Increase/Decrease	(347,491)	32,599	(39,382)	(45,156)	Net Increase/Decrease	(24,586)	22,139	36,735	29,842

Notes:

- Employer contributions include the ARC contributions and partially offset by the employer pay credit as defined in SB2 of 2013 (Tier 3).
- Employee contributions include 5%/6% payroll contributions, member service purchases, and employer pay credit.
- KRS will update FY17 and FY 18 cash flow estimates as the year progresses.

KENTUCKY RETIREMENT SYSTEMS

Cash Flow									
CERS					CHAZ				
	FY 2016	FY 2017	FY 2017	FY 2018		FY 2016	FY 2017	FY 2017	FY 2018
\$000's	Preliminary	Q1 Actual	Estimated	Estimated	\$000's	Preliminary	Q1 Actual	Estimated	Estimated
Inflows					Inflows				
Employer Contributions	284,106	83,946	288,447	288,447	Employer Contributions	105,714	31,003	111,123	111,123
Employee Contributions	141,673	38,799	109,947	109,947	Employee Contributions	52,972	15,592	42,030	42,030
Total Inflows	425,779	122,745	398,394	398,394	Total Inflows	158,686	46,595	153,153	153,153
Outflows					Outflows				
Benefits	651,247	169,219	677,297	704,389	Benefits	213,448	55,411	221,986	230,865
Refunds/Adjustments	13,754	4,280	13,754	13,754	Refunds/Adjustments	2,879	912	2,879	2,879
Administrative Expenses	19,385	4,785	24,450	24,530	Administrative Expenses	1,366	243	2,098	2,105
Total Outflows	684,386	178,284	715,501	742,673	Total Outflows	217,693	56,566	226,963	235,849
Cash Flows	(258,607)	(55,539)	(317,107)	(344,279)	Cash Flows	(59,007)	(9,971)	(73,810)	(82,696)
Net Investment Income	(40,799)	249,531	133,670	133,670	Investment Gains/Losses	(9,021)	81,277	150,763	150,763
Actuarial Assumptions FY16			@7.50%	@7.50%	Actuarial Assumptions FY16			@7.50%	@7.50%
Net Increase/Decrease	(299,406)	193,992	(183,437)	(210,609)	Net Increase/Decrease	(68,028)	71,306	76,953	68,067

Notes:

1. Employer contributions include the ARC contributions and partially offset by the employer pay credit as defined in SB2 of 2013 (Tier 3).
2. Employee contributions include 5%/6% payroll contributions, member service purchases, and employer pay credit.
3. KRS will update FY17 and FY 18 cash flow estimates as the year progresses.

KENTUCKY RETIREMENT SYSTEMS				
Cash Flow				
SPRS				
	FY 2016	FY 2017	FY 2017	FY 2018
\$000's	Preliminary	Q1 Actual	Estimated	Estimated
Inflows				
Employer Contributions	25,822	10,011	34,820	35,875
Employee Contributions	5,262	1,583	4,166	4,166
Total Contributions	31,084	11,594	38,986	40,041
HB 303 Funding		6,250	25,000	10,000
Total Inflows	31,084	17,844	63,986	50,041
Outflows				
Benefits	56,268	14,144	58,916	60,859
Refunds/Adjustments	11	1	11	11
Administrative Expenses	178	44	343	344
Total Outflows	56,457	14,189	59,270	61,214
Cash Flows	(25,373)	3,655	4,716	(11,173)
Net Investment Income	(3,841)	7,496	14,716	14,716
Actuarial Assumptions FY16			@6.75%	@6.75%
Net Increase/Decrease	(29,214)	11,151	19,432	3,543

Notes:

1. Employer contributions include the ARC contributions and partially offset by the employer pay credit as defined in SB2 of 2013 (Tier 3).
2. Employee contributions include 5%/6% payroll contributions, member service purchases, and employer pay credit.
3. KRS will update FY17 and FY 18 cash flow estimates as the year progresses.

KRS ADMINISTRATIVE BUDGET FY 2017
FIRST QUARTER BUDGET-TO-ACTUAL ANALYSIS
For Period Ending September 30, 2016

Acc't #	Account Name	Budgeted	Actual Expenditures	Remaining	% Remaining
PERSONNEL					
111	Salaries	\$14,520,000	\$4,267,369	\$10,252,631	70.61%
113	Casual Labor	\$0	\$0	\$0	
114	Wages (Per Diem)	\$56,000	\$2,881	\$53,119	94.85%
115	Wages (Overtime)	\$450,000	\$81,316	\$368,684	81.93%
119	Wages (Block 50)	\$100,000	\$15,051	\$84,949	84.95%
120	Benefits	\$0	\$0	\$0	
120	Miscellaneous	\$0	\$0	\$0	
121	Emp Paid FICA	\$1,107,282	\$303,732	\$803,550	72.57%
122	Emp Paid Retirement	\$6,744,764	\$2,027,447	\$4,717,317	69.94%
123	Emp Paid Health Ins	\$2,402,968	\$673,270	\$1,729,698	71.98%
124	Emp Paid Life Ins	\$4,003	\$1,024	\$2,979	74.42%
125	Emp Paid HRA	\$0	\$88,266	(\$88,266)	
126	Health Insurance Admin Fee	\$26,400	\$7,992	\$18,408	69.73%
127	HRA Adm Fee	\$13,000	\$4,104	\$8,896	68.43%
128	Emp Paid Sick Leave	\$40,000	\$0	\$40,000	100.00%
129	Adoption Assistance Benefit	\$0	\$0	\$0	
111A	Escrow For Admin Fees	\$0	\$0	\$0	
131	Workers Compensation	\$50,400	\$50,422	(\$22)	-0.04%
132	Unemployment	\$10,000	\$0	\$10,000	100.00%
133	Tuition Assistance	\$35,000	\$8,981	\$26,019	74.34%
133I	Investment Tuition Assistance	\$5,000	\$1,310	\$3,690	73.80%
133T	Audit Tuition Assistance	\$2,500	\$0	\$2,500	100.00%
135	Bonds	\$3,000	\$0	\$3,000	100.00%
141	LEGAL & AUDITING SERVICES				
141A	Legal Hearing Officers	\$350,000	\$63,821	\$286,179	81.77%
141B	Legal (Stoll, Keenon)	\$250,000	\$13,718	\$236,282	94.51%
141C	Polsinelli Shugart	\$100,000	\$0	\$100,000	100.00%
141E	Reinhart	\$500,000	\$89,894	\$410,106	82.02%
141F	Ice Miller	\$500,000	\$17,971	\$482,029	96.41%
141L	Legal Expense	\$0	\$48,094	(\$48,094)	
142	Auditing	\$250,000	\$25,000	\$225,000	90.00%
146	CONSULTING SERVICES				
146A	Medical Reviewers	\$380,000	\$76,240	\$303,760	79.94%
146B	Medical Reports	\$10,000	\$0	\$10,000	100.00%
146C	Medical Exams	\$35,000	\$1,163	\$33,837	96.68%
146E	Escrow for Actuary Fees	\$0	\$0	\$0	
150	CONTRACTUAL SERVICES				
150C	Miscellaneous Contracts	\$275,000	\$16,066	\$258,934	94.16%
150D	Health Consultant	\$125,000	\$0	\$125,000	100.00%
150E	Banking	\$9,000	\$0	\$9,000	100.00%
150F	PBI	\$9,000	\$0	\$9,000	100.00%
150G	Human Resources Consulting	\$100,000	\$0	\$100,000	100.00%
150H	Health Insurance Admin Fee	\$2,500,000	\$551,748	\$1,948,252	77.93%
150I	Investment Consulting	\$600,000	\$0	\$600,000	100.00%
150J	Medical Claims TPA	\$1,843,772	\$0	\$1,843,772	100.00%
150K	Pharmacy Claims TPA	\$1,099,200	\$0	\$1,099,200	100.00%
159	Actuarial Services	\$650,000	\$20,240	\$629,760	96.89%
162	Facility Security Charges	\$3,200	\$798	\$2,402	75.07%
	PERSONNEL SUBTOTAL	\$35,159,489	\$8,457,922	\$26,701,567	75.94%

KRS ADMINISTRATIVE BUDGET FY 2017
First QUARTER BUDGET-TO-ACTUAL ANALYSIS

Acc't #	Account Name	Budgeted	Actual Expenditures	Remaining	% Remaining
	OPERATIONAL				
211	Natural Gas	\$25,000	\$480	\$24,520	98.08%
212	Electric	\$190,000	\$32,700	\$157,300	82.79%
221	Rent-NonState Building	\$33,500	\$8,172	\$25,328	75.61%
222	Rent -State Owned Building	\$710,200	\$177,615	\$532,585	74.99%
223	Equipment Rental	\$12,000	\$7,163	\$4,837	40.31%
224	Copier Rental	\$100,000	\$10,048	\$89,952	89.95%
226	Rental Carpool	\$0	\$0	\$0	
232	Vehicle/Equip. Mainten.	\$29,000	\$1,288	\$27,712	95.56%
241	Postage	\$525,000	\$65,610	\$459,390	87.50%
242	Freight	\$1,200	\$149	\$1,051	87.62%
251	Printing (State)	\$1,000	\$0	\$1,000	100.00%
252	Printing (non-state)	\$300,000	\$20,227	\$279,773	93.26%
254	Insurance	\$85,000	\$0	\$85,000	100.00%
256	Garbage Collection	\$15,000	\$2,727	\$12,273	81.82%
259	Conference Expense	\$40,000	\$2,791	\$37,209	93.02%
259I	Conference Exp. Investment	\$12,600	\$2,000	\$10,600	84.13%
259T	Conference Exp. Audit	\$1,500	\$0	\$1,500	100.00%
300	MARS Usage	\$35,000	\$6,775	\$28,225	80.64%
321	Office Supplies	\$150,000	\$11,012	\$138,988	92.66%
331	Data Processing Supplies	\$150,000	\$1,935	\$148,065	98.71%
343	Motor Fuels & Lubricants	\$3,000	\$440	\$2,560	85.33%
346	Furniture & Office Equipment	\$350,000	\$0	\$350,000	100.00%
361	Travel (In-State)	\$75,000	\$8,893	\$66,107	88.14%
361I	Travel (In-State) Investment	\$1,500	\$0	\$1,500	100.00%
361T	Travel (In-State) Audit	\$500	\$0	\$500	100.00%
362	Travel (Out of State)	\$20,000	\$2,918	\$17,082	85.41%
362I	Travel (Out of State) Invest	\$50,000	\$10,512	\$39,488	78.98%
362T	Travel (Out of State) Audit	\$2,500	\$0	\$2,500	100.00%
381	Dues & Subscriptions	\$85,000	\$20,394	\$64,606	76.01%
381I	Dues & Subscriptions Invest	\$15,000	\$620	\$14,380	95.87%
381T	Dues & Subscriptions Audit	\$5,000	\$220	\$4,780	95.60%
399	Miscellaneous	\$75,211	\$1,015	\$74,196	98.65%
399I	Miscellaneous Investment	\$20,000	\$609	\$19,391	96.95%
399T	Miscellaneous Audit	\$2,000	\$0	\$2,000	100.00%
601	Capital Outlay	\$0	\$0	\$0	
802	COT Charges	\$90,000	\$19,143	\$70,857	78.73%
814	Telephone - Wireless	\$8,000	\$1,192	\$6,808	85.10%
815	Telephone - Other	\$250,000	\$21,411	\$228,589	91.44%
847	Computer Equip./Software	\$4,000,000	\$461,635	\$3,538,365	88.46%
847I	Comp. Equip./Software Invest	\$190,000	\$0	\$190,000	100.00%
847T	Comp. Equip./Software Audit	\$1,000	\$0	\$1,000	100.00%
	OPERATIONAL SUBTOTAL	\$7,659,711	\$899,694	\$6,760,017	88.25%
	TOTALS	\$42,819,200	\$9,357,615	\$33,461,585	78.15%

KRS ADMINISTRATIVE BUDGET FY 2017

INTERNAL AUDIT - BUDGET-TO-ACTUAL ANALYSIS

For Period Ending September 30, 2016

Acc't #	Account Name	Budgeted	Actual Expense	Remaining	% Remaining
	PERSONNEL (1)				
133T	Audit Tuition Assistance	\$2,500	\$0	\$2,500	100%
	PERSONNEL SUBTOTAL			\$2,500	#DIV/0!
	OPERATIONAL				
259T	Conference Exp. Audit	\$1,500	\$0	\$1,500	100%
361T	Travel (In-State) Audit	\$500	\$0	\$500	100%
362T	Travel (Out of State) Audit	\$2,500	\$0	\$2,500	100%
381T	Dues & Subscriptions Audit	\$5,000	\$220	\$4,780	96%
399T	Miscellaneous Audit	\$2,000	\$0	\$2,000	100%
847T	Comp. Equip./Software Audit	\$1,000	\$0	\$1,000	100%
	OPERATIONAL SUBTOTAL	\$12,500	\$220	\$12,280	98%
	TOTALS	\$12,500	\$220	\$14,780	118%

INVESTMENT - BUDGET-TO-ACTUAL ANALYSIS

For Period Ending September 30, 2016

Acc't #	Account Name	Budgeted	Actual Expense	Remaining	% Remaining
	PERSONNEL (1)				
133I	Investment Tuition Assistance	\$5,000		\$5,000	100%
	CONTRACTUAL SERVICES				
141E	Reinhart	\$500,000		\$500,000	100%
150I	Investment Consulting (2)	\$600,000		\$600,000	100%
	PERSONNEL SUBTOTAL	\$1,105,000	\$0	\$1,105,000	100%
	OPERATIONAL				
259I	Conference Exp. Investment	\$12,600	\$2,000	\$10,600	84%
361I	Travel (In-State) Investment	\$1,500	\$0	\$1,500	100%
362I	Travel (Out of State) Investment	\$50,000	\$10,512	\$39,488	79%
381I	Dues & Subscriptions Invest	\$15,000	\$620	\$14,380	96%
399I	Miscellaneous Investment	\$20,000	\$609	\$19,391	97%
847I	Comp. Equip./Software Investment	\$190,000	\$0	\$190,000	100%
	OPERATIONAL SUBTOTAL	\$289,100	\$13,741	\$275,359	95%
	TOTALS	\$1,394,100	\$13,741	\$1,380,359	99%

(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: December 1, 2016

SUBJECT: Investment Committee Quarterly Report

The Investment Committee held two special investment committee meetings this quarter, in addition to its regularly scheduled meeting on November 2, 2016. The first special meeting occurred October 14, 2016. At the October 14th meeting Mark Lattis was sworn in as a KRS Board member. KRS Investment Staff provided an update on the securities lending program with Deutsche Bank. Karen Roggenkamp and Ann Case provided a presentation on historical and projected cash flows for each individual pension system. Joe Gilbert provided a presentation on the U.S. Public Equity Structure. Anthony Chiu was introduced as a new employee and he presented some information on the legacy Private Equity investments. All of the above discussions and presentations were for informational purposes only and no action was taken.

Also at the October 14th meeting Mr. Harris and Mr. Peden discussed Hedge Fund Allocations. A preliminary timeline to restructure the hedge fund allocations was presented to the committee to facilitate discussion. Mr. Farris moved and was seconded by Mr. Ramsey to have Mr. Peden and Mr. Ramsey work together to develop a schedule for the most efficient timeline and strategy in exiting the 10% allocation to absolute return/hedge funds. The motion passed unanimously. Mr. Bill Cook recused himself from any decision on the KRS Hedge Fund investments.

The purpose of the November 2, 2016 meeting was to evaluate investment activities, program structure, management, controls, and performance results of the Pension and Insurance Funds, for the quarter ending September 30, 2016, along with various other subjects. It was noted at the start of the meeting that Brent Aldridge, Director of Alternative Investments, had retired October 1 and that Terry Metcalf, a member of the Investment Operations Team, had left KRS for another opportunity.

Erica Bradley, Compliance Officer, presented the Quarterly Compliance Report. An investment policy that was previously suspended until November 2016 was discussed and it was approved by the Investment Committee to continue to suspend this policy until the entire Investment Policy Statement was discussed at a future meeting.

Rich Robben, Deputy CIO and Director of Fixed Income, presented the Broker Dealer Approval list. It was recommended to add Susquehanna Financial Group to the list and this list of Broker Dealers

was approved by the Investment Committee.

Rich Robben also gave an update on the wind down of the Securities Lending program. No action was taken by the Investment Committee.

Kamp Consulting provided a presentation on pension asset/liability modeling and benchmarking. This was for informational purposes only and no action was taken.

The Investment Team presented the following Asset Class Annual Reviews. Andy Kiehl, Director of Real Return and Real Estate, along with Mark White from Albourne presented the Real Return review. Andy Kiehl along with Ed Schwartz from ORG presented the Real Estate review. Anthony Chiu, Senior Investment Analyst in Private Markets, along with Tad Fergusson and Ahman Dirks from PCA presented the Private Equity review. Joe Gilbert along with Tony Johnson from RVK presented the Public Equity review. Rich Robben along with Tony Johnson from RVK presented the Fixed Income review.

Mr. Neil Ramsey provided a presentation regarding the strategy to eliminate the 10% allocation to absolute return. Mr. Ramsey outlined the criteria used to determine which hedge fund managers would be the next group of managers to be redeemed. That criteria included betas to the equity and high yield markets, manager fees, and size of firm. Using this criteria the managers that are slated for redemption fall mainly into the long/short equity, equity market neutral, and event investing strategies. This selection criteria also applies to the underlying hedge fund managers in the Prisma managed Daniel Boone portfolio. All hedge fund managers and strategies not immediately scheduled for redemption will undergo further evaluation seeking possible restructure opportunities and fee renegotiation. This was provided for informational purposes only and was a follow-up discussion to a motion approved at the October 14, 2016 Investment Committee Meeting.

At the November 17, 2016 meeting the Investment Committee discussed the asset allocation by each respective Pension and Insurance System. No action was taken on this subject. The Investment Committee received an educational presentation on the actuarial assumptions from Cavanaugh McDonald. The Investment Committee members received copies of proposed 2017 legislation that may affect KRS Investments, but no discussion occurred and no action was taken. There was also a Legislative discussion on HB 62 regarding the discount rate, but no action was taken. KRS Investment Staff recommended moving its Securities Lending program to BNY Mellon from Deutsche Bank. This recommendation was approved by the Investment Committee.

Please see the next page for a summary of the Pension and Insurance performance information ending September 30, 2016.



Kentucky Retirement Systems Quarterly Investment Update: 9/30/16

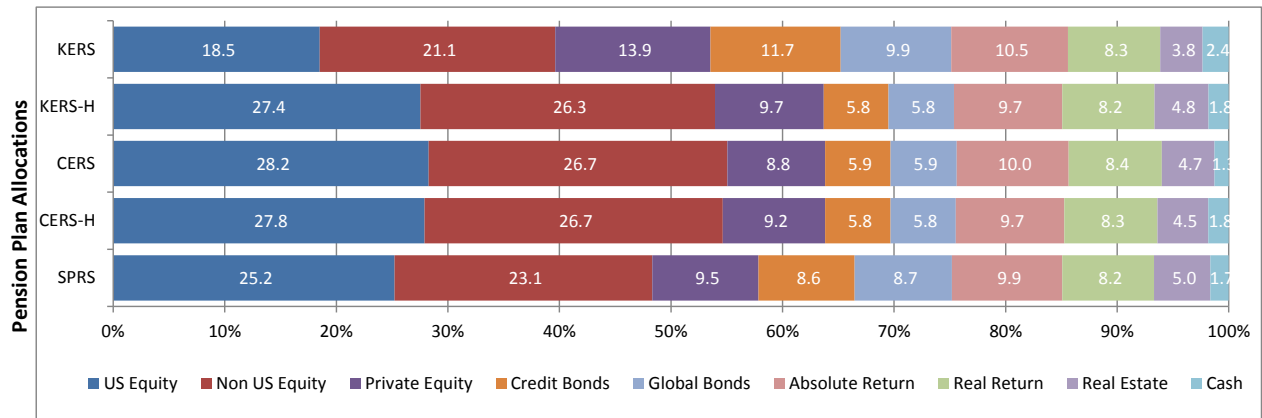
Pension	QTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	Since inception	Inception Date
TOTAL FUND	4.01	4.01	8.69	5.35	7.96	5.02	6.98	9.09	4/1/1984
Performance Benchmark	3.97	3.97	8.75	5.58	8.26	5.40	7.15	9.22	4/1/1984
US PUBLIC	4.22	4.22	14.78	9.38	15.65	7.13	8.25	11.12	4/1/1984
Performance Benchmark	4.40	4.40	14.96	10.44	16.36	7.41	8.29	11.13	4/1/1984
EQUITY NON US	7.03	7.03	10.41	1.17	6.58	2.36		2.23	7/1/2000
Performance Benchmark	7.14	7.14	10.04	0.71	6.57	2.23		2.68	7/1/2000
PUBLIC EQUITY	5.60	5.60	12.36	4.82	10.66	4.53	7.10	10.39	4/1/1984
Performance Benchmark	5.75	5.75	12.13	4.78	10.67	4.30	6.86	10.22	4/1/1984
FIXED INCOME	2.49	2.49	7.47	4.83	4.87	5.36	5.98	7.74	4/1/1984
Performance Benchmark	3.24	3.24	10.27	5.61	4.42	5.44	6.04	7.58	4/1/1984
REAL RETURN	3.20	3.20	11.07	2.49	3.07			3.77	7/1/2011
Performance Benchmark	1.96	1.96	8.09	1.69	2.85			2.91	7/1/2011
ABSOLUTE RETURN	2.38	2.38	-1.60	3.10	4.54			3.96	4/1/2010
Performance Benchmark	1.23	1.23	-2.13	2.52	2.61			2.48	4/1/2010
REAL ESTATE	2.18	2.18	8.38	8.55	8.99	6.47	5.80	5.86	7/1/1984
Performance Benchmark	1.91	1.91	10.80	11.97	11.66	5.19	8.36	6.42	7/1/1984
PRIVATE EQUITY	2.00	2.00	3.99	12.17	11.73	7.22		10.78	7/1/2002
Performance Benchmark	2.00	2.00	3.99	12.17	15.39	10.13		10.34	7/1/2002
CASH ACCOUNT	0.11	0.11	0.53	0.30	0.36	1.40	2.69	3.72	1/1/1988
Performance Benchmark	0.07	0.07	0.20	0.09	0.08	0.84	2.25	3.27	1/1/1988



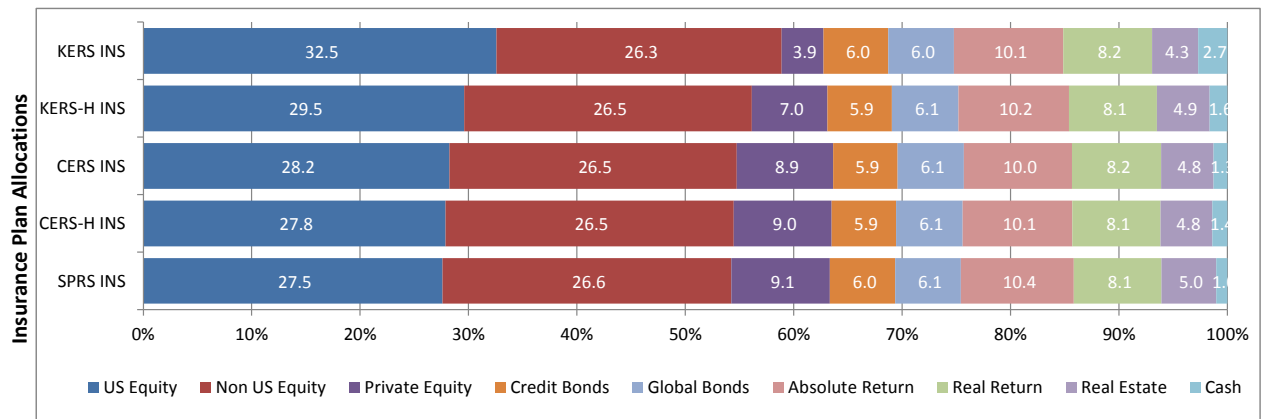
Kentucky Retirement Systems Quarterly Investment Update: 9/30/16

Insurance	QTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	Since inception	Inception Date
TOTAL FUND	3.98	3.98	9.32	5.23	7.61	4.26	6.21	7.28	4/1/1987
Performance Benchmark	3.96	3.96	8.99	5.80	8.39	4.79	6.67	7.69	4/1/1987
US PUBLIC	4.18	4.18	15.57	9.65	15.82	7.02	7.89	9.30	7/1/1992
Performance Benchmark	4.40	4.40	14.96	10.44	16.36	7.34	7.68	9.14	7/1/1992
EQUITY NON US	7.08	7.08	10.26	1.06	6.13	2.43		2.24	4/1/2000
Performance Benchmark	7.14	7.14	10.04	0.71	6.57	1.88		1.75	4/1/2000
PUBLIC EQUITY	5.56	5.56	12.78	5.09	10.63	4.39	6.77	8.36	7/1/1992
Performance Benchmark	5.76	5.76	12.17	4.86	10.63	4.13	6.48	8.14	7/1/1992
FIXED INCOME	2.02	2.02	7.26	4.14	4.47	5.45	6.43	6.57	7/1/1992
Performance Benchmark	3.24	3.24	10.27	5.61	4.42	5.54	6.46	6.57	7/1/1992
REAL RETURN	2.90	2.90	10.64	2.40	2.83			3.52	7/1/2011
Performance Benchmark	1.90	1.90	8.24	1.88	2.96			3.01	7/1/2011
ABSOLUTE RETURN	2.34	2.34	-1.57	3.11	4.54			3.88	5/1/2009
Performance Benchmark	1.23	1.23	-2.13	2.52	2.61			2.48	5/1/2009
REAL ESTATE	2.32	2.32	8.70	9.62	8.67			8.82	4/1/2010
Performance Benchmark	1.91	1.91	10.80	11.97	11.66			5.70	4/1/2010
PRIVATE EQUITY	1.45	1.45	6.98	14.89	13.28	9.40		9.46	7/1/2002
Performance Benchmark	1.45	1.45	6.98	14.89	15.39	9.46		9.70	7/1/2002
CASH ACCOUNT	0.10	0.10	0.36	0.26	0.29	1.14	2.41	2.75	7/1/1992
Performance Benchmark	0.07	0.07	0.20	0.09	0.08	0.84	2.25	2.62	7/1/1992

KRS - PENSION								
	Market Value	Month	FYTD	1 YR	3 YR	5 YR	10 YR	ITD
KERS	\$ 1,937,304,233.66	0.98	3.69	7.32	5.37	7.93	5.01	9.08
KY Ret. KERS Plan Index		0.89	3.64	8.50	5.59	8.27	5.41	9.22
KERS- H	\$ 545,716,283.40	0.94	3.84	8.81	5.38	7.97	5.03	9.09
KY Ret. KERS Haz Plan Index		0.88	4.03	8.58	5.26	8.10	5.33	9.20
CERS	\$ 6,290,484,104.40	0.93	4.11	9.03	5.34	7.96	5.02	9.09
KY Ret. CERS Plan Index		0.86	4.06	8.71	5.25	8.10	5.32	9.20
CERS- H	\$ 2,064,895,560.54	0.93	4.08	9.05	5.38	7.98	5.03	9.09
KY Ret. CERS Haz Plan Index		0.87	4.05	8.67	5.25	8.10	5.32	9.20
SPRS	\$ 216,992,834.56	0.91	3.57	7.57	4.80	7.64	4.87	9.04
KY Ret. SPRS Plan Index		0.83	3.83	8.74	5.28	8.11	5.33	9.20



KRS - INSURANCE								
	Market Value	Month	FYTD	1 YR	3 YR	5 YR	10 YR	ITD
KERS INS	\$ 684,298,436.67	0.78	4.10	9.37	4.89	7.36	4.14	7.24
KY Ins. KERS Plan Index		0.74	4.14	9.34	5.33	8.13	4.67	7.64
KERS - H INS	\$ 451,029,430.45	0.83	3.97	9.26	5.22	7.61	4.27	7.29
KY Ins. KERS Haz Plan Index		0.78	4.06	9.16	5.40	8.18	4.69	7.65
CERS INS	\$ 1,972,298,117.91	0.86	3.96	9.30	5.30	7.66	4.29	7.29
KY Ins. CERS Plan Index		0.81	4.00	9.04	5.46	8.22	4.71	7.66
CERS - H INS	\$ 1,089,530,248.32	0.87	3.95	9.34	5.34	7.69	4.30	7.30
KY Ins. CERS Haz Plan Index		0.81	4.00	9.03	5.46	8.22	4.71	7.66
SPRS INS	\$ 165,383,591.88	0.88	3.96	9.25	5.30	7.66	4.29	7.29
KY Ins. SPRS Plan Index		0.81	4.00	9.02	5.48	8.23	4.72	7.66



KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: David L. Eager, Interim Executive Director

DATE: December 1, 2016

SUBJECT: Initial Retirement Cases, First Quarter, 16-17

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

<u>MODE</u>	<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>	<u>PERCENT</u>
Normal Retirement	218	553	0	771	28.0%
Early Retirement	628	1145	13	1786	64.0%
Disability Retirement	27	72	0	99	4.0%
Retirement Eligible Refund	25	43	0	68	2.0%
Death of Members Eligible to Retire	17	36	0	53	2.0%
Grand Totals	915	1849	13	2777	100%

RETIREES WITH 27 OR MORE YEARS OF SERVICE

	<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
Under Normal Retirement Age	309	278	9	596
At and Over Normal Retirement Age	18	44	0	62
Grand Totals	327	322	9	658

RECOMMENDATION: This report is provided for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board
FROM: David L. Eager, Interim Executive Director
DATE: December 1, 2016
SUBJECT: Death Benefit Payments, First Quarter, 16-17

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

	<u>Number of Deceased Retirees</u>	<u>Total Amount Paid</u>
KERS	255	\$1,275,000.00
CERS	347	\$1,735,000.00
SPRS	5	\$25,000.00
TOTALS	<u>607</u>	<u>\$3,035,000.00</u>

RECOMMENDATION: This report is provided for informational purposes only.

Kentucky Retirement Systems

To: Members of the Board

From: David Eager
Executive Director, Interim

Date: December 1, 2016

Subject: Refund of Member Contributions for Quarter Ended September 2016

There were 2,076 refunds totaling \$9,946,772 paid to former members of the systems during the first quarter. Refund payments during the past (12) twelve quarters were as follows:

Quarter Ended	Amount	Number of Refunds
09/30/2016	\$9,946,770	2,076
06/30/2016	\$7,409,420	1,343
03/31/2016	\$7,166,689	1,170
12/31/2015	\$7,546,369	1,219
09/30/2015	\$9,457,518	1,967
06/30/2015	\$7,830,169	1,334
03/31/2015	\$8,735,671	1,393
12/31/2014	\$7,953,236	1,338
09/30/2014	\$11,208,677	2,465
06/30/2014	\$8,829,317	2,167
03/31/2014	\$8,595,267	1,605
12/31/2013	\$8,063,089	1,696
09/30/2013	\$9,525,226	1,791

This report is provided for informational purposes only.

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board
FROM: David Eager, Interim Executive Director
DATE: December 1, 2016
SUBJECT: Report of Decisions by the Medical Examiners

DISABILITY

During the first quarter of the fiscal year, the Medical Examiners reviewed a total of 162 applicants for disability retirement. There were 79 (48.77%) recommended for approval and 83 (51.23%) recommended for denial.

Approvals

<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
28	51	0	79

Duty Related Approvals

<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
0	0	0	0

Denials

<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
23	59	1	83

HAZARDOUS DISABILITY

During the first quarter of the fiscal year, the Medical Examiners reviewed a total of 13 applicants for hazardous disability retirement. There were 4 (30.77%) recommended for denial and 9 (69.23%) recommended for approval.

Approvals

<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
3	1	0	4

In the Line of Duty Approvals

<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
0	5	0	5

Total and Permanent Approvals

<u>KERS</u>	<u>CERS</u>	<u>SPRS</u>	<u>TOTAL</u>
0	0	0	0

ANNUAL REVIEW OF DISABILITY RECIPIENTS

During the first quarter of the fiscal year, the Medical Examiners made final decisions on a total of 179 annual reviews of disability recipients. The disability benefits of 173 recipients (96.65%) were continued and the disability benefits of 6 recipients (3.35%) 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: David L. Eager
Interim Executive Director
DATE: December 1, 2016
SUBJECT: Disability Appeals Committee Quarterly Report

The Disability Appeals Committee held meetings on July 18, August 30 and September 19, 2016. A total of 41 disability claims were acted upon during the quarter resulting in 25 denials, 7 approvals, 5 remands, and 4 dismissals.

Denials

KERS	CERS	SPRS
10	15	0

Approvals

KERS	CERS	SPRS
1	6	0

Dismissals

KERS	CERS	SPRS
0	4	0

Remands

KERS	CERS	SPRS
2	3	0

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

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board
FROM: David L. Eager
Interim Executive Director

DATE: December 1, 2016

SUBJECT: Administrative Appeals Committee Quarterly Report

The Administrative Appeals Committee held meetings on July 18, August 30, and September 19, 2016. A total of 16 cases were acted upon in the quarter resulting in 2 denials, 2 continuances, 3 not bona fide, and 9 dismissals.

<u>Denials</u>		
KERS	CERS	SPRS
1	1	0

<u>Continuances</u>		
KERS	CERS	SPRS
0	2	0

<u>Discontinuances</u>		
KERS	CERS	SPRS
0	0	0

<u>Reinstatements</u>		
KERS	CERS	SPRS
0	0	0

<u>Not Bona Fide</u>		
KERS	CERS	SPRS
0	3	0

<u>Remands</u>		
KERS	CERS	SPRS
0	0	0

<u>Dismissals</u>		
KERS	CERS	SPRS
3	6	0

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

KENTUCKY RETIREMENT SYSTEMS

TO: Members of the Board

FROM: Chris Miller

DATE: December 1, 2016

SUBJECT: Participation of Additional Agencies and Hazardous Positions

PARTICIPATION—NONHAZARDOUS

There are no new agencies electing to participate with CERS at this time

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 Winchester has requested hazardous duty coverage for the following position with a date of March 1, 2017:

Single Role Paramedic

There are no new employees to be covered under hazardous duty coverage at this time. Attached are copies of the Position Questionnaire and Job Description.

The Hardin County Fiscal Court has requested hazardous duty coverage for the following positions with a date of December 1, 2016:

EMT Advanced

There are no new employees to be covered under hazardous duty coverage at this time. Attached are copies of the Position Questionnaire and Job Descriptions.

Campbell County Fire District 1 has requested hazardous duty coverage for the following position with an effective date of December 1, 2016:

Fire Captain

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

Knott County Fiscal Court has requested hazardous duty coverage for the following position with a **Retroactive** date of **March 1, 2014**:

County Police Chief

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

The City of Ludlow has requested hazardous duty coverage for the following positions with an effective date of December 1, 2016:

**Lieutenant
Firefighter**

**Fire Chief
Firefighter/Paramedic**

**EMT
Captain**

There are 11 employees to be covered under hazardous duty coverage at this time. Attached is a copy of the Position Questionnaire and Job Description.

The City of Pikeville has requested hazardous duty coverage for the following position with a date of December 1, 2016:

Commissioner of Public Safety

There are no new employees to be covered under hazardous duty coverage 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 Winchester has requested hazardous duty coverage for the following positions with a date of **March 1, 2017**:

Single Role Paramedic

There are no new employees to be covered under hazardous duty coverage at this time. Attached are copies of the Position Questionnaire and Job Description.

The Hardin County Fiscal Court has requested hazardous duty coverage for the following position with an effective date of **December 1, 2016**.

EMT Advanced

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

Campbell County Fire District 1 has requested hazardous duty coverage for the following position with an effective date of December 1, 2016:

Fire Captain

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

Knott County Fiscal Court has requested hazardous duty coverage for the following position with a **Retroactive** date of **March 1, 2014**:

County Police Chief

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

The City of Ludlow has requested hazardous duty coverage for the following positions with an effective date of December 1, 2016:

**Lieutenant
Firefighter**

**Fire Chief
Firefighter/Paramedic**

**EMT
Captain**

There are 11 employees to be covered under hazardous duty coverage at this time. Attached is a copy of the Position Questionnaire and Job Description.

Mason County Fiscal Court has requested hazardous duty coverage for the following positions with an effective date of December 1, 2016:

Sheriff

Deputy Sheriff

There are seven (7) employees to be covered under hazardous duty coverage at this time. Attached is a copy of the Position Questionnaire and Job Description.

