



KENTUCKY RETIREMENT SYSTEMS

Financial Statements and Supplementary Information

*For the Fiscal Years Ended June 30, 2017 and 2016
With Report of Independent Auditors*

FINANCIAL

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Report of Independent Auditors

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

Report on the Combining 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 ending June 30, 2017, 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 Combining 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 such 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 that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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, 2017, 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 the Kentucky Retirement Systems' 2016 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 1, 2016. In our opinion, the summarized comparative information presented herein as of and for the fiscal year ended June 30, 2016, 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 21-28) and the Schedules of Changes in Employers' Total Pension Liability (TPL) (pages 66-70), Schedules of Employers' Net Pension Liability (pages 71-72), Schedules of Employers' Contributions, (pages 73-75), Schedule of Changes in Employers' Net OPEB Liability (page 78), Schedule of the Employers' Net OPEB Liability (page 79), Schedule of Employers' OPEB Contributions (pages 82-84), 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 Pension Funds and the Insurance Fund of the Kentucky Retirement Systems' basic combining financial statements. The additional supporting schedules (pages 86-87) 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 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 additional supporting schedules are fairly stated, in all material respects, in relation to the basic combining financial statements as a whole.

The Introductory, Actuarial, Investment, and Statistical sections are presented for purposes of additional analysis and are not a required part of the combining financial statements. These sections have not been subjected to the auditing procedures applied in the audit of the combining financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 7, 2017 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 effectiveness of the Kentucky Retirement Systems' 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.

Dean Dotson Allen Ford, PLLC

December 7, 2017
Lexington, Kentucky

Management's DISCUSSION & ANALYSIS (Unaudited)

This discussion and analysis of Kentucky Retirement Systems' (KRS) financial performance provides an overview of the Pension and Insurance Funds financial activities for the fiscal year ending June 30, 2017. Please read it in conjunction with the combining financial statements, which begin on page 29.

Pension Funds

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

Total Pension Net Position was \$10.9 billion at the beginning of the fiscal year and increased by 9.6% to \$11.9 billion at June 30, 2017. The \$1.0 billion increase is primarily attributable to positive investment income, higher contributions, and additional General Fund appropriations of \$98.2 million.

CONTRIBUTIONS

- » Total contributions reported for fiscal year 2017, were \$1,674.0 million compared to \$1,274.6 million in fiscal year 2016. This change was caused by employer contribution rate increases for all plans except for CERS Hazardous and KERS Hazardous plans; the General Fund appropriations of \$98.2 million for KERS and SPRS plans; and, the Employer Cessation Contributions of \$53.2 million for KERS Non-Hazardous plan. CERS Hazardous and KERS Hazardous plans contributions are lower due to the improved funding status.
- » The member health insurance (401h) contributions totaled \$17.0 million for the fiscal year ended June 30, 2017, compared to \$14.7 million in the prior fiscal year. This increase was mainly due to new employees in Tier 3.

INVESTMENTS

- » The investment portfolio for the Pension Plan reported a net return of 13.47% for fiscal year 2017, compared to the -0.52% return for fiscal year 2016. The investment portfolio experienced realized and unrealized gains across all of the portfolios.
- » The net appreciation in the fair value of investments for fiscal 2017 was \$1,164.1 million compared to net depreciation of \$212.9 million for the prior fiscal year. This \$1,377.0 million increase was due to favorable market conditions.
- » Interest, dividend, and net securities lending income for fiscal 2017 was \$336.6 million compared to \$198.6 million in fiscal 2016. The primary driver of this increase was due to favorable market conditions resulting in increased income and dividends across all portfolios.

- » Investment expenses totaled \$85.5 million for fiscal 2017 compared to \$61.7 million (reclassified) in the prior year. A prior year correction was made for June 30, 2016, which resulted in a reclassification between Management Fees and Net Appreciation in Fair Value of Investments. The correction did not impact the overall value of the assets or net position.

DEDUCTIONS

- » Pension benefits paid to retirees and beneficiaries for fiscal year 2017 totaled \$1,981.1 million compared to \$1,903.6 million in fiscal year 2016 (4% increase). The increase was due to a 16% increase in the number of retirees to 118,922. Refund of contributions paid to former members upon termination of employment for fiscal year 2017 totaled \$30.7 million compared to \$31.0 million in fiscal year 2016, a 1% decrease, due to less members taking a refund when employment terminated.
- » KRS' 2017 Pension administrative expense totaled \$33.1 million compared to \$32.3 million in the prior year. The increase was mainly due to the higher employer contribution made to KERS Non-Hazardous retirement plan for KRS staff.

ACTUARIAL

- » The actuarial value of the total pension liability was determined as of June 30, 2017. The discount rate and assumed rate of return used to measure the total pension liability was 5.25% for the KERS Non-Hazardous and SPRS Pension plans. The rate of 6.25% was used for the KERS Hazardous and CERS Pension plans. The payroll growth assumptions for the KERS and SPRS Pension Plans were 0.00% and 2.00% for the CERS Pension Plan. The assumed inflation factor was 2.30% for all plans. The changes in economic assumptions increased the KRS unfunded liability by \$5.0 billion.

Insurance Fund

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

The combined net position of the insurance fund administered by KRS increased by \$552.6 million during fiscal 2017. Total combined net position for the fiscal year was \$4,783.9 million. Total contributions and net investment income of \$914.2 million offset deductions of \$361.6 million which resulted in the net position increase.

CONTRIBUTIONS

- » Employer contributions of \$315.0 million were received in fiscal 2017 compared to \$333.1 million in fiscal 2016. Total contributions declined 5.4% primarily due to lower contribution rates for the KERS Hazardous, the CERS Hazardous and the SPRS systems.
- » The reimbursement of retired/re-employed health insurance for fiscal 2017 totaled \$8.9 million compared to \$9.2 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 2017 was \$128.1 million compared to \$78.2 million in fiscal 2016. The primary driver of this increase was due to favorable market conditions resulting in increased income and dividends across all portfolios.
- » The investment portfolio reported a net return of 13.72% for the fiscal year, outperforming 2016 net of expense returns of -0.09%, and the 6.25% assumed rate of return for fiscal 2017 target.
- » The net appreciation in the fair value of investments for fiscal 2017 was \$480.3 million compared to net depreciation of \$54.5 million for the prior fiscal year. This \$534.8 million increase was due to favorable market conditions.
- » Investment expenses totaled \$34.2 million for fiscal 2017 compared to \$28.8 million (reclassified) in the prior year. A prior year correction was made for June 30, 2016, which resulted in a reclassification between Management Fees and Net Appreciation in Fair Value of Investments. The correction did not impact the overall value of the assets or net position.

DEDUCTIONS

- » The total of insurance premiums paid plus self-funded reimbursements was \$359.4 million for fiscal 2017. Insurance premiums paid plus self-funded healthcare reimbursements for the prior fiscal year totaled \$351.4 million. Premiums paid by the fund for hospital and medical insurance coverage (under age 65) totaled \$353.6 million. Payments for the self-funded healthcare reimbursements (over age 65) totaled \$5.8 million.
- » KRS' 2017 insurance administrative expense increased slightly in 2017 (\$2.2 million) compared to 2016 (\$2.0 million).

ACTUARIAL

- » The actuarial value of the total insurance liability was determined as of June 30, 2017. The discount rate and assumed investment rate of return used to measure the total insurance liability was 6.25% for all plans. Payroll Growth and Inflation for KERS Non-Hazardous, KERS Hazardous and SPRS was 0% and 2.30% respectively. Payroll Growth and Inflation for CERS Non-Hazardous and CERS Hazardous was 2.00% and 2.30% respectively. The changes in economic assumptions increased the unfunded insurance liability from \$3.03 billion to \$3.61 billion.

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 29, and the Combining Statement of Plan Net Position for the Insurance Fund on page 31, provides a snapshot of the financial position of each of the three systems at June 30, 2017. The Combining Statement of Changes in Plan Net Position for the Pension Funds on page 30, and the Combining Statement of Changes in Plan Net Position for the Insurance Fund on page 32, summarizes the additions and deductions that occurred for each of the three systems during fiscal 2017.

The Economic Assumptions for the Pension and Insurance Plans as of June 30 on page 58, the Schedules of Changes in Employers' Net Pension Liability on page 66-70, the Schedules of the Employer Net Pension Liability on pages 71-72, the Schedule of Changes in Employers' Net OPEB Liability on page 78, the Schedule of the Employers' Net OPEB Liability on page 79, 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 the Employers Contributions – Pensions on pages 73-75, and the Schedule of the Employers Contributions – OPEB pages 82-84 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 increased \$1,596.7 million, during the fiscal year ended June 30, 2017, compared to net position for the prior fiscal year. The increase in net position for the plan year ended June 30, 2017, is primarily attributable to an increase in net investment incomes, higher contributions; and, General Fund appropriations. The analysis focuses on net position (Table 1) and changes in net position (Table 3) of KRS' Pension and Insurance Funds.

FUND ACTIVITIES

Net position of the pension funds increased by \$1,044.1 million (\$11,921.9 million compared to \$ 10,877.8 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 increased by \$552.6 million (\$4,783.9 million compared to \$4,231.3 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.

Financial data presented in this report is abbreviated "in thousands" or "in millions."

Table 1: Plan Net Position (\$ In Thousands)

	Pension Funds			Insurance Funds			Total		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Cash & Invest.	\$12,168,664	\$11,410,516	\$12,217,470	\$4,936,437	\$4,401,155	\$4,451,155	\$17,105,101	\$15,811,671	\$16,668,625
Receivables	347,625	442,464	459,196	103,747	171,033	148,118	451,372	613,497	607,314
Equip/Int Assets, net of dep/amort.	6,311	8,232	9,924	-	-	-	6,311	8,232	9,924
Total Assets	12,522,600	11,861,212	12,686,590	5,040,184	4,572,188	4,599,273	17,562,784	16,433,400	17,285,863
Total Liabilities	(600,694)	(983,454)	(1,040,109)	(256,279)	(340,877)	(352,381)	(856,973)	(1,324,331)	(1,392,490)
Plan Net Position	\$11,921,906	\$10,877,758	\$11,646,481	\$4,783,905	\$4,231,311	\$4,246,892	\$16,705,811	\$15,109,069	\$15,893,373

Pension Fund Activities

Member contributions increased by \$26.8 million. This is primarily due to an increase in covered payroll in CERS Non-Hazardous and CERS Hazardous. Retirement contributions are calculated by applying a percentage factor to salary and are remitted by each employer on behalf of the member. Non-Hazardous members pay pension contributions of 5% of creditable compensation and Hazardous members contribute 8% of creditable compensation.

Employer contributions increased by \$216.5 million as a result of the increase in the contribution rates for KERS Non-Hazardous, CERS Non-Hazardous, and SPRS.

Total pension fund deductions increased by \$77.7 million. The 4% increase was primarily driven by CERS Non-Hazardous and CERS Hazardous retirement benefit payments.

Net investment income increased by \$1,491.1 million. This is illustrated in Table 2. The pension funds experienced an increase in income primarily due to the increase in the fair value of investments.

Table 2. Investment Income (Loss) for Pension Funds (\$ In Thousands)

Investment Income (Loss) - Pension	2017	2016	2015
Increase (decrease) in fair value of investments	\$603,703	\$(270,041)	\$(556,979)
Investment income net of investment expense	251,064	136,917	219,201
Gain on sale of investments	560,380	57,149	542,148
Net investment income (loss)	\$1,415,147	\$(75,975)	\$204,370

Table 3: Changes in Plan Net Position (\$ In Thousands)

	Pension Funds			Insurance Fund			Total		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Additions:									
Member Cont.	\$334,232	\$307,422	\$298,490	\$-	\$-	\$-	\$334,232	\$307,422	\$298,490
Employer Cont.	1,166,269	949,802	985,996	314,987	333,118	343,604	1,481,256	1,282,920	1,329,600
Heath Ins. Cont.	16,964	14,719	12,570	-	-	-	16,964	14,719	12,570
Pension Spiking Cont.	5,156	2,684	2,858	-	-	-	5,156	2,684	2,858
BoA Settlement	-	-	23,000	-	-	-	-	-	23,000
General Fund Appro.	98,193	-	-	-	-	-	98,193	-	-
Employer Cessation Cont.	53,215	-	-	15,567	-	-	68,782	-	-
Premiums Rec'd	-	-	-	548	721	879	548	721	879
Retired Remp Ins.	-	-	-	8,893	9,155	8,822	8,893	9,155	8,822
Medicare Subsidy	-	-	-	2	-	-	2	-	-
Invest. Inc. (Loss)	1,415,147	(75,975)	204,370	574,187	(5,154)	76,418	1,989,334	(81,129)	280,788
Total Additions	3,089,176	1,198,652	1,527,284	914,184	337,840	429,723	4,003,360	1,536,492	1,957,007
Deductions:									
Benefit payments	1,981,100	1,903,557	1,832,799	-	-	-	1,981,100	1,903,557	1,832,799
Refunds	30,696	30,985	32,881	-	-	-	30,696	30,985	32,881
Administrative Exp.	33,109	32,300	31,020	2,202	2,038	2,180	35,311	34,338	33,200
Healthcare Costs	-	-	-	359,388	351,383	335,053	359,388	351,383	335,053
Capital Projects Exp.	123	533	-	-	-	-	123	533	-
Total Deductions	2,045,028	1,967,375	1,896,700	361,590	353,421	337,233	2,406,618	2,320,796	2,233,933
Inc. (Decrease) in Plan Net Position	\$1,044,148	\$(768,723)	\$(369,416)	\$552,594	\$(15,581)	\$92,490	\$1,596,742	\$(784,304)	\$(276,926)

Insurance Fund Activities

Employer contributions paid into the Insurance Fund decreased by \$18.1 million over the prior fiscal year. This decrease is a result of the reduction in the employer contribution rate applied to CERS Non-Hazardous, Hazardous, and SPRS covered payrolls.

Net investment income increased \$579.3 million. This increase in net investment income is due primarily to the increase in the fair value of investments. This is illustrated in Table 4 as follows:

Table 4. Investment Income (Loss) for Insurance Fund (\$ In Thousands)

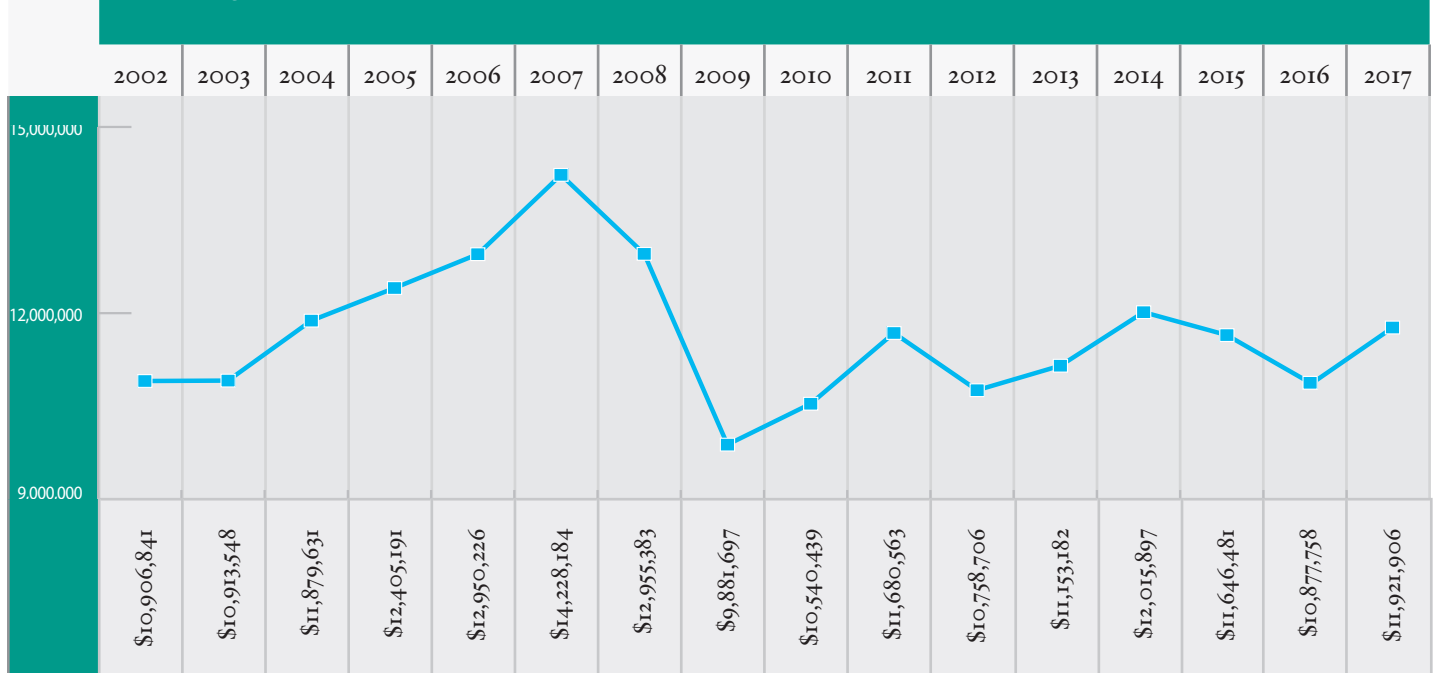
Investment Income (Loss) - Insurance	2017	2016	2015
Increase (decrease) in fair value of investments	\$256,937	\$(46,852)	\$(126,416)
Investment income net of investment expense	93,902	49,380	72,528
Gain (loss) on sale of investments	223,348	(7,682)	130,306
Net investment income (loss)	\$574,187	\$(5,154)	\$76,418

Historical Trends

Accounting standards require that the Combining Statement of Net Position state asset value at fair value and include only benefits and refunds due plan members and beneficiaries; accrued investment income (Loss); 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 Net Pension Liability on pages 71-72, and Net OPEB Liability on page 79. The asset value stated in the Schedules of Changes in Employers' Total Pension Liability on pages 66-70 and Net OPEB Liability on page 78 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.

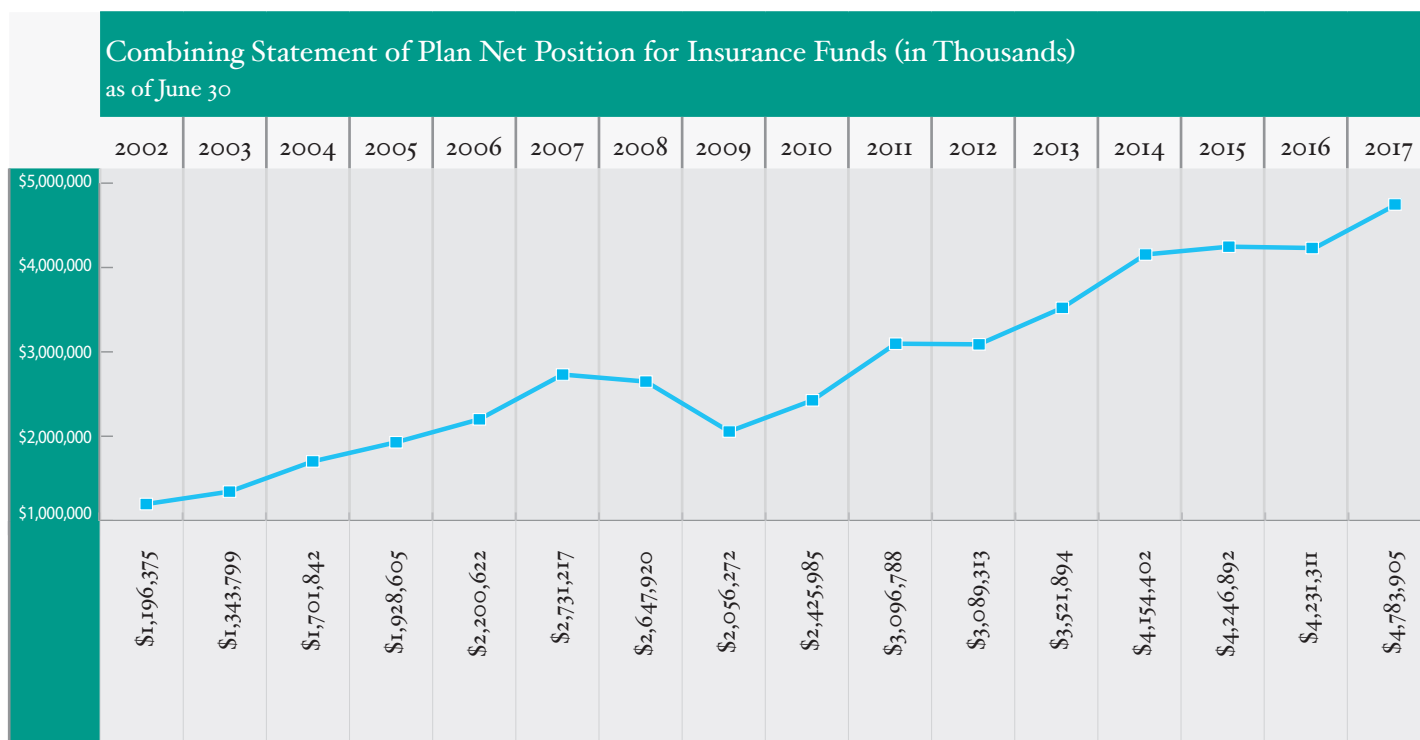
The unfunded actuarial accrued liability in the Pension Plans increased by \$5,000.9 million for a total unfunded amount of \$23,137.5 million as of June 30, 2017, compared to an unfunded amount of \$18,136.6 million as of June 30, 2016. In recent years, funding levels for the Pension Funds have decreased significantly due to a number of factors including: the change in assumptions for the 2017 valuations, investment returns that were less than the actuarially assumed rates, lower payroll growth, and higher than anticipated retirement rates. In addition, KERS Non-Hazardous, KERS Hazardous, and SPRS were funded less than the actuarially determined rate until fiscal year 2015.

Combining Statement of Plan Net Position for Pension Funds (\$ In Thousands) as of June 30

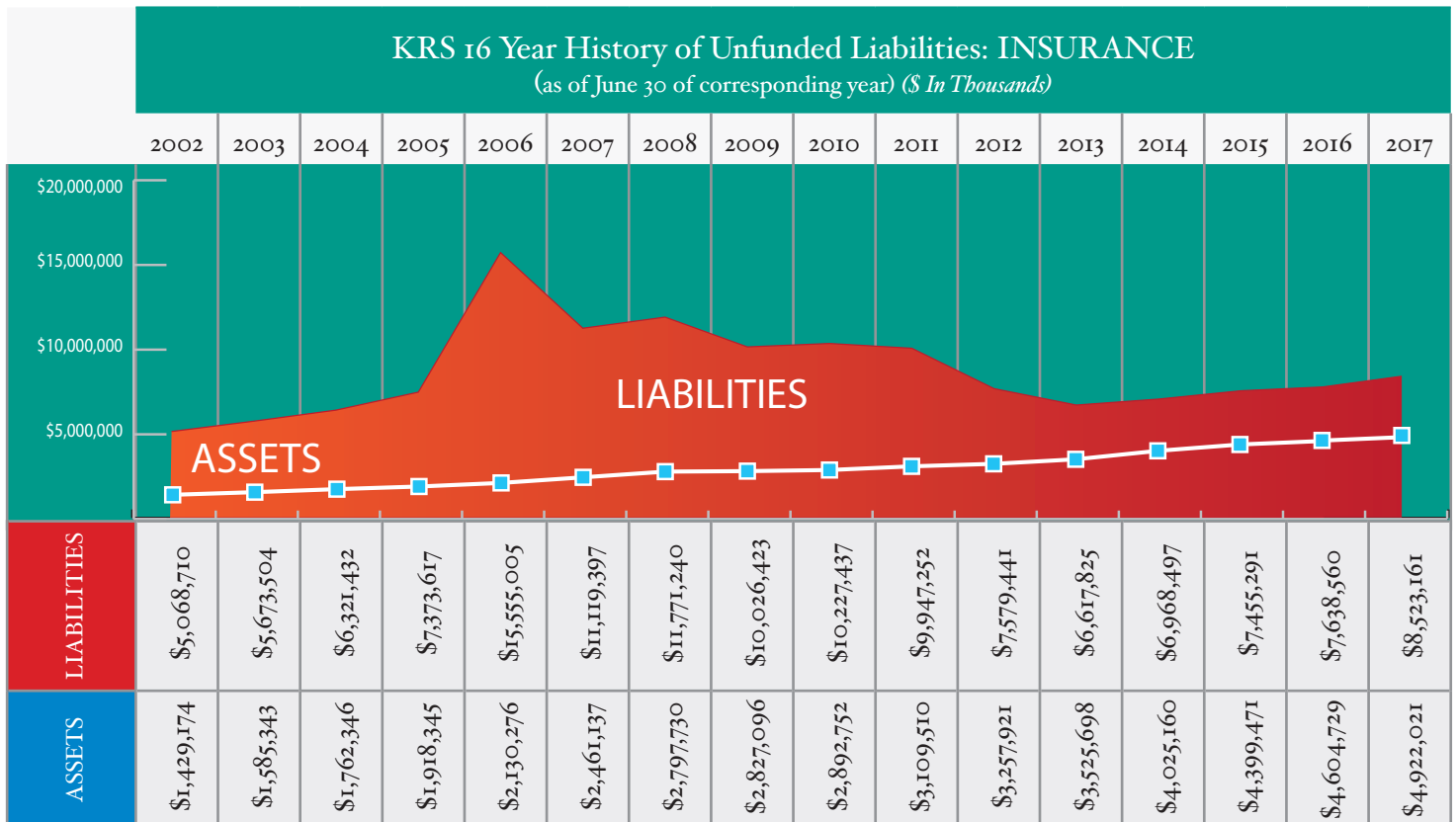
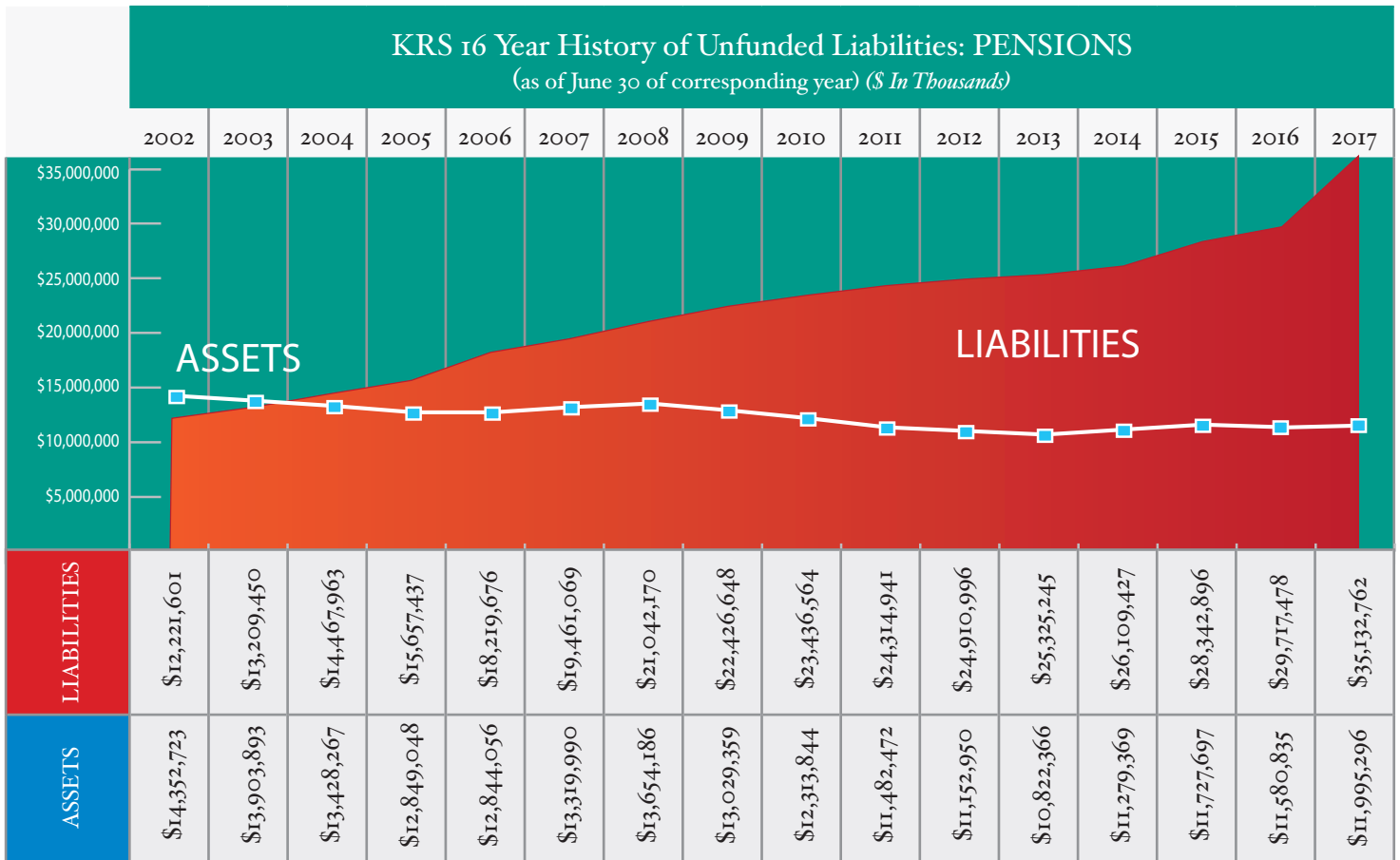


The Insurance Plan's unfunded actuarial accrued liability as of June 30, 2017, was \$3,601.1 million compared to \$3,033.8 million as of June 30, 2016. This is an increase in the unfunded actuarial accrued liability of \$567.3 million (primarily due to 2017 economic valuation assumptions).

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 - Pension on pages 73-75, and in the Schedules of Contributions - OPEB on pages 82-84. 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.



The following two charts show the unfunded liability trends for the Pension Funds and Insurance Fund:



Combining Statements of Net Position - PENSION FUNDS

As of June 30, 2017 with Comparative Totals as of June 30, 2016 (\$ In Thousands)

ASSETS	KERS	KERS	CERS	CERS	SPRS	KRS Total	KRS Total
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		2017	2016
CASH AND SHORT-TERM INVESTMENTS							
Cash Deposits	\$1,295	\$202	\$1,377	\$398	\$94	\$3,366	\$1,122
Short-Term Investments	114,474	24,158	241,690	94,636	11,973	486,931	306,244
Total Cash and Short-Term Investments	115,769	24,360	243,067	95,034	12,067	490,297	307,366
RECEIVABLES							
Accounts Receivable	72,979	7,290	45,293	11,530	13,039	150,131	126,336
Accounts Receivable - Investments	37,131	10,038	111,339	34,893	3,999	197,400	316,026
Accounts - Alternate Participation	-	-	-	94	-	94	102
Total Receivables	110,110	17,328	156,632	46,517	17,038	347,625	442,464
INVESTMENTS, AT FAIR VALUE							
Fixed Income	298,401	49,289	569,194	186,885	29,401	1,133,170	1,130,596
Public Equities	817,021	325,287	3,667,140	1,205,590	122,230	6,137,268	5,416,406
Private Equities	375,366	76,247	815,918	275,179	31,352	1,574,062	1,367,455
Derivatives	3,224	1,237	13,947	4,604	441	23,453	12,268
Absolute Return	163,325	44,427	529,213	167,588	17,204	921,757	1,104,196
Real Return	164,692	52,187	557,469	188,078	19,891	982,317	902,277
Real Estate	80,535	27,693	295,613	94,522	11,164	509,527	516,268
Total Investments, at Fair Value	1,902,564	576,367	6,448,494	2,122,446	231,683	11,281,554	10,449,466
Security Lending Collateral Invested	62,354	19,995	230,954	75,707	7,803	396,813	653,684
FIXED/INTANGIBLE ASSETS							
Fixed Assets	929	91	1,701	153	11	2,885	2,819
Intangible Assets	5,920	494	9,961	827	100	17,302	17,302
Accumulated Depreciation	(816)	(81)	(1,498)	(135)	(9)	(2,539)	(2,440)
Accumulated Amortization	(3,894)	(318)	(6,500)	(547)	(78)	(11,337)	(9,449)
Total Fixed Assets	2,139	186	3,664	298	24	6,311	8,232
Total Assets	2,192,936	638,236	7,082,811	2,340,002	268,615	12,522,600	11,861,212
LIABILITIES							
Accounts Payable	3,137	2,404	5,181	1,803	443	12,968	12,499
Investment Accounts Payable	34,664	9,916	107,534	34,813	3,986	190,913	317,271
Securities Lending Collateral	62,354	19,995	230,954	75,707	7,803	396,813	653,684
Total Liabilities	100,155	32,315	343,669	112,323	12,232	600,694	983,454
Total Plan Net Position	\$2,092,781	\$605,921	\$6,739,142	\$2,227,679	\$256,383	\$11,921,906	\$10,877,758

See accompanying notes to the combining financial statements.

"The displayed market values include investable assets held by each System, and its associated contributions, payables, and equipment and intangible assets; unlike those found in the Investment Section (pages 116-119), which include only those investable assets held by each System."

Combining Statements of Changes In Plan Net Position - PENSION FUNDS

for the Fiscal Year ending June 30, 2017 with Comparative Totals for the fiscal year ending June 30, 2016 (\$ In Thousands)

ADDITIONS	KERS	KERS	CERS	CERS	SPRS	KRS Total	KRS Total
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		2017	2016
Member Contributions	\$100,544	\$17,523	\$150,714	\$60,102	\$5,349	\$334,232	\$307,422
Employer Contributions	644,803	37,630	331,493	114,315	38,028	1,166,269	949,802
General Fund Appropriations	58,193	15,000	-	-	25,000	98,193	-
Pension Spiking Contributions	909	344	2,061	1,632	210	5,156	2,684
Health Insurance Contributions (HBI)	5,156	811	9,158	1,708	131	16,964	14,719
Employer Cessation Contribution	53,215	-	-	-	-	53,215	-
Total Contributions	862,820	71,308	493,426	177,757	68,718	1,674,029	1,274,627
INVESTMENT INCOME							
From Investing Activities							
Net Appreciation (Depreciation) in FV	170,057	58,939	688,184	225,648	21,255	1,164,083	(212,892)
Interest/Dividends	66,216	16,221	184,728	60,211	7,223	334,599	194,788
Total Investing Activities Income (Loss)	236,273	75,160	872,912	285,859	28,478	1,498,682	(18,104)
Investment Expense	15,600	4,267	48,166	15,765	1,722	85,520	61,727
Net Income (Loss) from Investing Activities	220,673	70,893	824,746	270,094	26,756	1,413,162	(79,831)
From Securities Lending Activities							
Securities Lending Income	477	155	1,791	587	60	3,070	4,636
Securities Lending Expense							
Securities Lending Borrower Rebates	110	37	432	141	14	734	100
Securities Lending Agent Fees	55	18	204	67	7	351	680
Net Income from Securities Lending	312	100	1,155	379	39	1,985	3,856
Total Net Investment Income (Loss)	220,985	70,993	825,901	270,473	26,795	1,415,147	(75,975)
Total Additions	1,083,805	142,301	1,319,327	448,230	95,513	3,089,176	1,198,652
DEDUCTIONS							
Benefit Payments	948,489	61,231	687,460	226,985	56,935	1,981,100	1,903,557
Refunds	11,819	2,106	14,430	2,315	26	30,696	30,985
Administrative Expenses	10,974	919	19,614	1,421	181	33,109	32,300
Capital Project Expenses	34	4	77	7	1	123	533
Total Deductions	971,316	64,260	721,581	230,728	57,143	2,045,028	1,967,375
Net Increase (Decrease) in Plan Net Position	112,489	78,041	597,746	217,502	38,370	1,044,148	(768,723)
Total Plan Net Position - PENSION							
Beginning of Period	1,980,292	527,880	6,141,396	2,010,177	218,013	10,877,758	11,646,481
End of Period	\$2,092,781	\$605,921	\$6,739,142	\$2,227,679	\$256,383	\$11,921,906	\$10,877,758

See accompanying notes to the combining financial statements.

Combining Statement of Plan Net Position - INSURANCE FUND

As of June 30, 2017 (with Comparative Totals as of June 30, 2016) (\$ In Thousands)

	KERS	KERS	CERS	CERS	SPRS	KRS Total	KRS Total
ASSETS	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		2017	2016
CASH AND SHORT-TERM INVESTMENTS							
Cash Deposits	\$82	\$30	\$58	\$49	\$24	\$243	\$152
Short-Term Investments	45,548	16,254	76,039	40,364	6,653	184,858	123,401
Total Cash and Short-Term Investments	45,630	16,284	76,097	40,413	6,677	185,101	123,553
RECEIVABLES							
Accounts Receivable	12,762	565	11,576	2,579	767	28,249	31,559
Accounts Receivable - Investments	12,099	7,780	34,092	18,693	2,834	75,498	139,474
Total Receivables	24,861	8,345	45,668	21,272	3,601	103,747	171,033
INVESTMENTS, AT FAIR VALUE							
Fixed Income	60,360	38,873	166,223	91,875	13,881	371,212	370,202
Public Equities	441,668	270,111	1,165,790	640,408	96,165	2,614,142	2,278,866
Private Equities	61,318	55,669	283,439	157,861	24,058	582,345	455,395
Derivatives	1,578	976	4,301	2,363	357	9,575	4,660
Absolute Return	61,933	40,824	172,897	97,353	15,346	388,353	413,904
Real Return	66,711	38,825	183,912	93,457	12,462	395,367	347,391
Real Estate	29,809	22,479	97,495	53,457	8,555	211,795	208,905
Total Investments, at Fair Value	723,377	467,757	2,074,057	1,136,774	170,824	4,572,789	4,079,323
Security Lending Collateral Invested	29,676	18,450	80,042	43,848	6,531	178,547	198,279
Total Assets	823,544	510,836	2,275,864	1,242,307	187,633	5,040,184	4,572,188
LIABILITIES							
Accounts Payable	241	22	624	114	12	1,013	354
Investment Accounts Payable	12,221	7,922	34,645	19,032	2,899	76,719	142,244
Securities Lending Collateral	29,676	18,450	80,042	43,848	6,531	178,547	198,279
Total Liabilities	42,138	26,394	115,311	62,994	9,442	256,279	340,877
Total Plan Net Position	\$781,406	\$484,442	\$2,160,553	\$1,179,313	\$178,191	\$4,783,905	\$4,231,311

See accompanying notes to the combining financial statements.

Combining Statements of Changes in Plan Net Position - INSURANCE FUND

for the fiscal year ending June 30, 2017 (with Comparative Totals for the fiscal year ending June 30, 2016) (\$ In Thousands)

ADDITIONS	KERS	KERS	CERS	CERS	SPRS	KRS Total	KRS Total
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		2017	2016
Employer Contributions	\$133,024	\$4,688	\$117,310	\$50,743	\$9,222	\$314,987	\$333,118
Medicare Drug Reimbursement	1	-	1	-	-	2	-
Insurance Premiums	248	(51)	707	(301)	(55)	548	721
Retired Reemployed Healthcare	3,765	932	3,402	794	-	8,893	9,155
Employer Cessation Contributions	15,567	-	-	-	-	15,567	-
Total Contributions	152,605	5,569	121,420	51,236	9,167	339,997	342,994
INVESTMENT INCOME							
From Investing Activities							
Net Appreciation (Depreciation) in FV	75,308	49,400	217,622	119,919	18,036	480,285	(54,534)
Interest/Dividends	19,709	13,113	57,871	31,817	4,869	127,379	76,939
Total Investing Activities Income	95,017	62,513	275,493	151,736	22,905	607,664	22,405
Investment Expense	4,227	3,402	16,245	8,992	1,362	34,228	28,817
Net Income (Loss) from Investing Activities	90,790	59,111	259,248	142,744	21,543	573,436	(6,412)
From Securities Lending Activities							
Securities Lending Income	178	111	480	263	39	1,071	1,556
Securities Lending Expense							
Security Lending Borrower Rebates	31	20	83	46	7	187	76
Security Lending Agent Fees	22	14	59	33	5	133	222
Net Income from Securities Lending	125	77	338	184	27	751	1,258
Total Net Investment Income (Loss)	90,915	59,188	259,586	142,928	21,570	574,187	(5,154)
Total Additions	243,520	64,757	381,006	194,164	30,737	914,184	337,840
DEDUCTIONS							
Healthcare Premiums Subsidies	127,648	17,562	124,573	70,407	13,405	353,595	344,946
Administrative Expense	861	105	789	381	66	2,202	2,038
Self Funded Healthcare Costs	1,920	45	3,635	160	24	5,784	6,420
Excise Tax Insurance	3	-	6	-	-	9	17
Total Deductions	130,432	17,712	129,003	70,948	13,495	361,590	353,421
Net Increase (Decrease) in Plan Net Position	113,088	47,045	252,003	123,216	17,242	552,594	(15,581)
Total Plan Net Position - Insurance							
Beginning of Period	668,318	437,397	1,908,550	1,056,097	160,949	4,231,311	4,246,892
End of Period	\$781,406	\$484,442	\$2,160,553	\$1,179,313	\$178,191	\$4,783,905	\$4,231,311

See accompanying notes to the combining financial statements.

NOTE A. Summary of Significant Accounting Policies

This summary of significant accounting policies of 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 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 KERS, CERS, and SPRS, in accordance with the provisions of Kentucky Revised Statute Sections 16.555, 61.570, and 78.630. The assets of the systems are segregated by plan, where 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.

Under the provisions of Kentucky Revised Statute Section 61.701, the KRS Board 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 also segregated by plan. 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.

A prior year correction was made for June 30, 2016, which resulted in a reclassification between Management Fees and Net Appreciation in Fair Value of Investments. The correction did not impact the overall value of the assets or the net decrease in plan net position.

Investment returns are recorded in all plans net of investment fees.

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 2017 and 2016 was \$3,000 (see Note J 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 10 years. The capitalization threshold used in fiscal years 2017 and 2016 was \$3,000 (see Note K for further information).

Contributions Receivable

Contributions receivable consists of amounts due from employers. The KRS management 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 consist of all buys and sells of securities which have not closed, as well as all investment related accruals.

Payment of Benefits

Benefits are recorded when paid.

Expense Allocation

KRS administrative expenses 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 GASB issued Statement No. 75, Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions. The objective of this Statement is to address accounting and financial reporting for Other Post-employment Benefits (OPEB) that are 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 became effective for the fiscal year beginning July 1, 2017. KRS will provide the agencies their proportionate share in the OPEB unfunded liability, calculated by Gabriel, Roeder, Smith & Co. (GRS), to be used in their financial reports for fiscal year end June 30, 2018.

In June 2017, the GASB issued Statement No. 87, Leases. The objective of this Statement is to address government lessees recognition of lease liabilities, intangible assets, and report amortization expense for using the lease, interest expense on the lease liability, and note disclosures about the lease. Another objective of this Statement is to address government lessors recognition of a lease receivable, deferred inflow, and report lease revenue, interest income, and note disclosures about the lease. This Statement becomes effective for the fiscal year beginning July 1, 2020. KRS is evaluating the impact of this Statement to the financial report.

GASB Statement 84, Fiduciary Activities, establishes criteria for identifying fiduciary activities of all state and local governments and clarifies whether and how business type activities should report their fiduciary activities. This Statement becomes effective for the fiscal year beginning July 1, 2018. KRS is evaluating the impact of this Statement to the financial report.

GASB Statement 82, Pension Issues, was designed to improve consistency in the application of the pension standards by clarifying or amending related areas of existing guidance. Specifically, the practice issues raised by stakeholders during implementation related to GASB 67, 68, and 73. This Statement became effective for the fiscal year beginning July 1, 2017. KRS is evaluating the impact of this Statement to the financial report.

Note B. Plan Descriptions & Contribution Information

Membership in each retirement plan consists of the following as of June 30, 2017 and 2016.
Membership Information.*

KERS							
Members	2017			2016			Total
	Non-Hazardous	Hazardous	Total	Non-Hazardous	Hazardous	Total	
Retirees and Beneficiaries Receiving Benefits	40,813	2,823	43,636	40,099	2,739	42,838	
Inactive Memberships	44,848	4,363	49,211	43,929	4,067	47,996	
Active Plan Members	36,725	4,061	40,786	38,121	3,987	42,108	
Total	122,386	11,247	133,633	122,149	10,793	132,942	
Number of Participating Employers			354				358

CERS							
Members	2017			2016			Total
	Non-Hazardous	Hazardous	Total	Non-Hazardous	Hazardous	Total	
Retirees and Beneficiaries Receiving Benefits	54,018	7,186	61,204	51,673	6,834	58,507	
Inactive Memberships	78,940	2,442	81,382	75,904	2,309	78,213	
Active Plan Members	84,401	9,321	93,722	83,346	9,139	92,485	
Total	217,359	18,949	236,308	210,923	18,282	229,205	
Number of Participating Employers			1,138				1,140

SPRS			
Members	2017		2016
Retirees and Beneficiaries Receiving Benefits		1,393	1,379
Inactive Memberships		278	262
Active Plan Members		910	924
Total		2,581	2,565
Number of Participating Employers		1	1

*Each person is only counted once in the Membership by System report. A member who has both a membership account and a retired account is included in retired count. Members who have multiple membership accounts are included under the system where they most recently contributed. Members who have more than one retirement account are included in the system with the greatest service credit. If the retired accounts have equal service credit, they are counted first in SPRS, CERS Hazardous, KERS Hazardous, CERS Non-Hazardous, then KERS Non-Hazardous.

Hospital & Medical Contracts consisted of the following as of June 30, 2017

	Single	Couple/ Family	Parent	Medicare Without Prescription	Medicare With Prescription
KERS Non-Hazardous	8,627	663	411	1,229	20,215
KERS Hazardous	667	432	88	72	1,401
CERS Non-Hazardous	8,313	462	222	2,462	24,247
CERS Hazardous	1,645	2,387	395	125	3,205
SPRS	251	420	79	17	897
Totals	19,503	4,364	1,195	3,905	49,965

Hospital & Medical Contracts consisted of the following as of June 30, 2016

	Single	Couple/ Family	Parent	Medicare Without Prescription	Medicare With Prescription
KERS Non-Hazardous	8,876	656	441	1,286	19,447
KERS Hazardous	663	439	97	66	1,302
CERS Non-Hazardous	8,164	465	235	2,499	23,007
CERS Hazardous	1,595	2,321	378	114	2,969
SPRS	246	447	77	18	850
Totals	19,544	4,328	1,228	3,983	47,575

Medical Insurance coverage is provided based on the member's initial participation date and length of service. Members receive either a percentage or dollar amount for insurance coverage.

Pension Plan Descriptions

These systems provide for retirement, disability, and death benefits to system members. Retirement benefits may be extended to beneficiaries of members under certain circumstances.



Kentucky Employees Retirement System

This system consists of two plans - Non-Hazardous and Hazardous. Each plan is a cost-sharing, multiple-employer defined benefit pension plan that covers all regular full-time members employed in positions of any state department, board, or agency directed by Executive Order to participate in KERS. See Note M (6) for pension legislation allowing agencies to voluntarily apply to cease participation in the system.



County Employees Retirement System

This system consists of two plans - Non-Hazardous and Hazardous. Each plan is a cost-sharing, multiple-employer defined benefit pension plan that covers all regular full-time members employed in positions of each participating county, city, and school board, and any additional eligible local agencies electing to participate in CERS.



State Police Retirement System

This system is a single-employer defined benefit pension plan that covers all full-time state troopers employed in positions by the Kentucky State Police.

Cost of Living Adjustment (COLA)

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. After July 1, 2009, the COLAs were limited to 1.50%. No COLA has been granted since July 1, 2011.

Contributions

The Commonwealth is required to contribute at an actuarially determined rate for KERS and SPRS pensions. Participating employers are required to contribute at an actuarially determined rate for CERS pensions. Per Kentucky Revised Statute Sections {KERS 61.565(3); CERS 78.545(33); SPRS 16.645(18)}, 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 KERS and SPRS.

For the fiscal year ended June 30, 2017, participating employers contributed a percentage of each employee's creditable compensation. The actuarially determined rates set by the Board for the fiscal year is a percentage of each employee's creditable compensation. Administrative costs of KRS are financed through employer contributions and investment earnings. See chart below for the 2017 and 2016 fiscal year employer contribution rates, including the actuarially recommended rates.

**TIER 1:**

Tier 1 plan members who began participating prior to September 1, 2008, are required to contribute 5% (Non-Hazardous) and 8% (Hazardous) of their annual creditable compensation. These members are classified in the Tier 1 structure of benefits. 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.

**TIER 2:**

Tier 2 plan members, who began participating on, or after, September 1, 2008, and before January 1, 2014, are required to contribute 6% (Non-Hazardous) and 9% (Hazardous) of their annual creditable compensation, while 1% of these contributions are 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). These members are classified in the Tier 2 structure of benefits. 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.

**TIER 3:**

Tier 3 plan members, who began participating on, or after, January 1, 2014, are required to contribute to the Cash Balance Plan. 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. Members contribute 5% (Non-Hazardous) and 8% (Hazardous) of their annual creditable compensation, and an additional 1% to the health insurance fund (401(h) account) 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. A member's account is credited with a 4% (Non-Hazardous) and 7.5% (Hazardous) employer pay credit. The employer pay credit represents a portion of the employer contribution.

Contribution Rate Breakdown by System as of June 30, 2017

	Pension				Insurance				Combined Total			
	Employer Contribution Rates		Actuarially Recommended Rates		Employer Contribution Rates		Actuarially Recommended Rates		Employer Contribution Rates		Actuarially Recommended Rates	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
KERS Non-Hazardous	40.24%	30.84%	38.93%	30.84%	8.35%	7.93%	8.35%	7.93%	48.59%	38.77%	47.28%	38.77%
KERS Hazardous	21.08%	16.37%	21.08%	16.37%	2.74%	9.97%	2.74%	9.97%	23.82%	26.34%	23.82%	26.34%
CERS Non-Hazardous	13.95%	12.42%	13.95%	12.42%	4.73%	4.64%	4.93%	4.64%	18.68%	17.06%	18.88%	17.06%
CERS Hazardous	21.71%	20.26%	21.71%	20.26%	9.35%	12.69%	9.79%	12.69%	31.06%	32.95%	31.50%	32.95%
SPRS	70.34%	53.90%	66.47%	53.90%	18.87%	21.86%	18.87%	21.86%	89.21%	75.76%	85.34%	75.76%



Tier 3 Plan

Interest is paid into the Tier 3 member's account. The account currently earns 4% interest credit on the member's account balance as of June 30 of the previous year. The member's account may be credited with additional interest if the system's five-year Geometric Average Net Investment Return (GANIR) exceeded 4%. If the member was actively employed and participating in the fiscal year, and if the systems' GANIR for the previous five years exceeds 4%, then the member's account will be credited with 75% of the amount of the returns over 4% on the account balance as of June 30 of the previous year (Upside Sharing Interest). It is possible that one system in KRS may get an Upside Sharing Interest, while one may not.

Upside Sharing Interest

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 Interest, and another system would not.

The chart below shows the interest calculated on the members' balances as of June 30, 2016, and credited to each member account on June 30, 2017.

$(A-B) = C \times 75\% = D$ then $B+D = \text{Interest}$ (\$ In Thousands)						
System	A	B	C	D		
	5 Year Geometric Average Return	Less Guarantee Rate of 4%	Upside Sharing Interest	Upside Sharing Interest X 75% = Upside Gain	Interest Rate Earned (4%+Upside)	Total Interest Credited to Member Accounts
KERS Non-Hazardous	7.41%	4.00%	3.41%	2.56%	6.56%	\$1,366
KERS Hazardous	7.98%	4.00%	3.98%	2.99%	6.99%	\$410
CERS Non-Hazardous	7.85%	4.00%	3.85%	2.89%	6.89%	\$2,565
CERS Hazardous	8.07%	4.00%	4.07%	3.05%	7.05%	\$616
SPRS	7.59%	4.00%	3.59%	2.69%	6.69%	\$53

Insurance Plan Description

The Kentucky Retirement Systems' Insurance Fund (Insurance Fund) was established to provide hospital and medical insurance for eligible members receiving benefits from KERS, CERS, and SPRS. The eligible non-Medicare retirees are covered by the Department of Employee Insurance (DEI) plans. KRS submits the premium payments to DEI. The Board contracts with Humana to provide health care benefits to the eligible Medicare retirees through a Medicare Advantage Plan. 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, 2017, insurance premiums withheld from benefit payments for members of the Systems were \$20.3 million and \$1.3 million for KERS Non-Hazardous and Hazardous, respectively; \$22.9 million and \$2.7 million for CERS Non-Hazardous and Hazardous, respectively; and, \$290,387 for SPRS. For fiscal year 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 KERS Hazardous, respectively; \$22.6 million and \$2.2 million for CERS Non-Hazardous and CERS Hazardous, respectively; and \$241,535 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 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 10 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. See chart for current values for Dollar Contribution. 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.

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:

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:

Portion Paid by Insurance Fund	
Years of Service	Paid by Insurance Fund (%)
20+ years	100.00%
15-19 years	75.00%
10-14 years	50.00%
4-9 years	25.00%
Less than 4 years	0.00%

Dollar Contribution for Fiscal Year 2017 For Member participation date on or after July 1, 2003	
System	(in Whole Dollars)
KERS Non-Hazardous	\$13.18
KERS Hazardous	\$19.77
CERS Non-Hazardous	\$13.18
CERS Hazardous	\$19.77
SPRS	\$19.77

Note C. Cash, Short-Term Investments & 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 as of June 30, 2017.

Cash, Short-Term Investments, & Securities Lending Collateral		
KERS (\$ In Thousands)		
	2017	2016
Cash	\$1,497	\$451
Short-Term Investments	138,632	101,227
Securities Lending Collateral Invested	82,349	150,603
Total	\$222,478	\$252,281
CERS (\$ In Thousands)		
	2017	2016
Cash	\$1,775	\$622
Short-Term Investments	336,326	199,114
Securities Lending Collateral Invested	306,661	490,327
Total	\$644,762	\$690,063
SPRS (\$ In Thousands)		
	2017	2016
Cash	\$94	\$49
Short-Term Investments	11,973	5,903
Securities Lending Collateral Invested	7,803	12,754
Total	\$19,870	\$18,706
KRS - Insurance Fund (\$ In Thousands)		
	2017	2016
Cash	\$243	\$152
Short-Term Investments	184,858	123,401
Securities Lending Collateral Invested	178,547	198,279
Total	\$363,648	\$321,832

Note D. Investments

Kentucky Revised Statute 61.650 grants the responsibility for the investment of plan assets to the KRS Board. 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); 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.

Fixed Income Investments

The fixed income accounts may include, but are not limited to, the following fixed income securities: U.S. Government and Agency bonds; investment grade U.S. corporate credit; investment grade non-U.S. corporate credit; non-investment grade U.S. corporate credit including both bonds and bank loans; non-investment grade non-U.S. corporate credit including bonds and bank loans; municipal bonds; non-U.S. 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

Investments 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, 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, real assets, and absolute return investments. The Investment Committee believes absolute returns have the potential to generate substantial income, but may have a higher degree of risk. It is important to note that the KERS (Non-Hazardous) and SPRS have not made any new investments in Private Equity since 2010 and 2016, respectively, due to the inability to invest in long-term investments as a result of cash flow constraints. During fiscal year 2017, the Board made the decision to begin reducing KRS’ exposure to absolute returns and dissolve any fund of funds relationships.

**PRUDENT PERSON
RULE -**
A legal maxim restricting the discretion in a client's account to investments that a prudent person seeking reasonable income and preservation of capital might buy for his or her own portfolio.

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; Short Term Investment Funds (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 is used.

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.

Investment Expenses

In accordance with GASB Statement No. 67 and 74, 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 year 2015, KRS changed private equity investment fees from a net basis to a gross basis. KRS made this decision to enhance transparency reporting. 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. During the 2017 Regular Session of the Kentucky General Assembly, the Legislators passed SB2 which requires the reporting of all investment fees and expenses. KRS staff continues to work with managers to enhance fees and expenses reporting.

Derivatives

Derivative instruments are financial contracts that have various effective dates and maturity dates and 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. Investments in derivative securities are subject to large or unanticipated changes in duration or cash flows, and can be interest only, principal only, inverse floater, or structured note securities. These are permitted only to the extent that they are 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 so that it can be expected to be sold at, or near, its most recently quoted market price.

It is the KRS policy 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.

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 the Pension and Insurance Funds.

In accordance with GASB Statement No. 53, Accounting and Financial Reporting for Derivative Instruments, KRS provides additional disclosure regarding its derivatives. In the following graphic, derivative instruments A, C, D, and F represent those underlying investments that may decrease in fair value relative to the cash market. Similarly, derivative instruments B and E may expose KRS to interest rate risk in that changes in interest rates will adversely affect the fair values of KRS' financial instruments.

As of June 30, 2017, KRS had the following derivative instruments outstanding:

Derivative Instruments (\$ In Thousands)						
Pension						
Item	Type	Objective	Term	Market Value ¹	Notional Value	Risk Exposure (%)
A	U.S. Equity Index Futures	Hedge against the drop in equity markets or to equalize cash	9/15/2017	\$11,774,972	\$11,253	0.10%
B	Fixed Income Securities	Hedge against sudden or dramatic shifts in interest rates	9/29/2017	\$11,774,972	\$97,983	0.83%
C	Forwards	Hedge against the volatility of an asset's price	9/20/2017	\$11,774,972	\$3,233	0.03%
Insurance						
Item	Type	Objective	Term	Market Value ¹	Notional Value	Risk Exposure (%)
D	U.S. Equity Index Futures	Hedge against the drop in equity markets or to equalize cash	9/15/2017	\$4,756,432	\$4,060	0.09%
E	Fixed Income Securities	Hedge against sudden or dramatic shifts in interest rates	9/29/2017	\$4,756,432	\$36,319	0.76%
F	Forwards	Hedge against the volatility of an asset's price	9/20/2017	\$4,756,432	\$1,446	0.03%

¹Market Value is total market value of all plans.

RISKS

Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that may occur as a result of a financial institution's failure, whereby KRS' deposits may not be returned. All non-investment related bank balances are held by JP Morgan Chase and each individual account is insured by the Federal Deposit Insurance Corporation (FDIC). In 2010, 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, 2017, and 2016, deposits for KRS Pension Funds were \$4.7 million and \$5.7 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, 2017, and 2016, deposits for KRS Insurance Fund were \$251,825 and \$162,409, 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, a government will not be able to recover the value of an investment or collateral securities that are in the possession of an outside party. As of June 30, 2017, and 2016, the currencies in the chart below 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.

Custodial Credit Risk (<i>\$ In Thousands</i>)		
	2017	2016
Pension Fund		
Foreign Currency	\$ 1,408,163	\$1,568,880
Insurance Fund		
Foreign Currency	\$557,016	\$646,194

Pension Fund Securities

As of June 30, 2017, and 2016, the KRS Pension portfolio had \$539.2 million and \$521.8 million respectively, in debt securities rated below BBB-. The government agencies in which KRS invested are Fannie Mae and the Federal Home Loan Bank, whose credit ratings are AA+.

Pension Funds Investment Summary		
(\$ In Thousands)		
Type	2017	2016
Fixed Income	\$1,133,170	\$1,130,595
Public Equities	6,137,268	5,416,406
Private Equities	1,574,062	1,367,456
Derivatives	23,453	12,268
Absolute Return	921,757	1,104,195
Real Return	982,317	902,277
Real Estate	509,527	516,268
Short-Term Investments	486,931	306,243
Accounts Receivable/ Payable	6,487	(1,245)
Total	\$11,774,972	\$10,754,462

Note: Differences due to rounding.

Insurance Fund Securities

As of June 30, 2017, and 2016, the KRS Insurance portfolio had \$165.9 million and \$159.0 million respectively, in debt securities rated below BBB-. The government agencies in which KRS invested are Fannie Mae and the Federal Home Loan Bank, whose credit ratings are AA+.

Insurance Fund Investment Summary		
(\$ In Thousands)		
Type	2017	2016
Fixed Income	\$371,213	\$370,202
Public Equities	2,614,142	2,278,866
Private Equities	582,345	455,395
Derivatives	9,574	4,659
Absolute Return	388,353	413,903
Real Return	395,368	347,391
Real Estate	211,795	208,905
Short-Term Investments	184,860	123,400
Accounts Receivable/ Payable	(1,220)	(2,770)
Total	\$4,756,432	\$4,199,951

Note: Differences due to rounding.

Credit Risk 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:

- » Bonds, notes, or other obligations issued or guaranteed by the U.S. 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 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 U.S. Government issued, guaranteed or agency obligations.

The table presents the KRS Pension Funds debt ratings as of June 30, 2017, and 2016:

Pension Funds Debt Securities			
<i>at Fair Value as of June 30 (\$ In Thousands)</i>			
Rating	2017	2016	
AAA	\$88,072	\$86,007	
AA+	40,496	52,606	
AA	6,378	11,483	
AA-	13,342	21,615	
A+	15,739	19,591	
A	35,514	33,958	
A-	27,005	25,109	
BBB+	56,193	46,520	
BBB	63,483	50,103	
BBB-	73,754	60,336	
BB+	73,429	64,644	
BB	68,279	65,913	
BB-	78,218	63,249	
B+	75,043	73,861	
B	70,787	54,210	
B-	40,369	36,620	
CCC+	14,997	19,077	
CCC	13,999	4,594	
CCC-	5,432	1,597	
CC	9,009	2,109	
D	18,596	5,404	
NR	71,094	130,560	
Total Credit Risk Debt Securities	\$959,227	\$929,168	
Government Agencies	901	3,455	
Government Mortgage-Backed Securities	82,149	84,498	
Government Issued Commercial Mortgage Backed	19,808	7,693	
Government Bonds	71,084	105,782	
Total	\$1,133,169	\$1,130,596	

Note: These ratings are based on Standard & Poor's (S&P) Global Ratings. Where S&P ratings are unavailable, equivalent Fitch and Moody's Ratings are used as proxies.

The table presents the KRS Insurance Fund debt ratings as of June 30, 2017, and 2016:

Insurance Fund Debt Securities			
<i>at Fair Value as of June 30 (\$ In Thousands)</i>			
Rating	2017	2016	
AAA	\$26,700	\$31,290	
AA+	15,518	19,650	
AA	2,275	4,081	
AA-	4,337	7,649	
A+	5,813	7,554	
A	12,369	11,669	
A-	9,554	8,752	
BBB+	20,081	16,229	
BBB	22,688	17,771	
BBB-	26,914	18,635	
BB+	22,620	19,899	
BB	19,733	18,098	
BB-	21,762	18,820	
B+	20,999	20,603	
B	19,232	17,158	
B-	12,468	9,418	
CCC+	3,545	5,525	
CCC	3,394	1,199	
CCC-	1,161	65	
CC	2,282	749	
D	4,479	2,034	
NR	34,176	45,391	
Total Credit Risk Debt Securities	\$312,102	\$302,239	
Government Agencies	322	1,185	
Government Mortgage-Backed Securities	27,723	28,514	
Government Issued Commercial Mortgage Backed	6,978	2,462	
Government Bonds	24,088	35,802	
Total	\$371,213	\$370,202	

Note: These ratings are based on Standard & Poor's (S&P) Global Ratings. Where S&P ratings are unavailable, equivalent Fitch and Moody's Ratings are used as proxies.

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 U.S. Government, its agencies, or instrumentalities are permissible investments and may be held without restrictions.
- » Debt obligations of any single U.S. 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 Funds benchmarks its fixed income securities portfolio to a 50/50 blend of the Barclays U.S. Universal Index and the Barclays U.S. High Yield Index. As of June 30, 2017, and 2016, the modified duration of the KRS Pension Funds' fixed income benchmark was 4.71 and 5.75, respectively. At the same points in time, the modified duration of the KRS Pension Funds' fixed income securities portfolio was 5.06 and 5.61, respectively.

KRS Pension Funds Interest Rate Risk as of June 30, 2017, and 2016:

Pension Funds GASB 40 - Interest Rate Risk - Modified Duration For the Fiscal Year Ended June 30, 2017 (\$ In Thousands)					
TYPE	2017	Weighted Avg Modified Duration	2016	Weighted Avg Modified Duration	
Asset Backed Securities	\$74,249	5.97	\$85,827	5.72	
Financial Institutions	195,269	4.48	130,653	6.89	
Collateralized Mortgage Obligations	14,937	2.93	18,041	3.58	
Commercial Mortgage Backed Securities	90,171	2.97	64,195	3.07	
Corporate Bonds - Industrial	434,421	5.54	434,384	5.92	
Corporate Bonds - Utilities	31,381	5.99	32,234	6.94	
Agencies	15,968	3.93	14,954	3.92	
Government Bonds - Sovereign Debt	4,533	8.42	10,160	10.58	
Mortgage Back Securities Passthrough - Not CMO's	82,975	5.05	86,491	3.25	
Local Authorities - Municipal Bonds	22,644	3.11	49,942	6.45	
Supranational - Multi-National Bonds	18,672	2.78	14,676	3.13	
Treasuries	131,953	6.16	173,967	5.42	
Other	15,996	3.59	15,071	8.86	
Total	\$1,133,169	5.06	\$1,130,595	5.61	

The KRS Insurance Fund benchmarks its fixed income securities portfolio to a 50/50 blend of the Barclays U.S. Universal Index and the Barclays U.S. High Yield Index. As of June 30, 2017, and 2016, the modified duration of the KRS Insurance Fund fixed income benchmark was 4.85 and 4.71, respectively. At the same points in time, the modified duration of the KRS Insurance Fund fixed income securities portfolio was 4.85 and 3.38, respectively.

KRS Insurance Fund Interest Rate Risk as of June 30, 2017, and 2016:

Insurance Fund: GASB 40 - Interest Rate Risk - Modified Duration For the Fiscal Year Ended June 30, 2017 (\$ In Thousands)

TYPE	2017	Weighted Avg Modified Duration	2016	Weighted Avg Modified Duration
Asset Backed Securities	\$20,244	5.35	\$28,849	5.02
Financial Institutions	73,800	4.18	47,826	7.38
Collateralized Mortgage Obligations	5,462	3.25	6,181	3.74
Commercial Mortgage Backed Securities	33,521	3.13	23,688	2.68
Corporate Bonds - Industrial	123,030	5.47	124,327	5.95
Corporate Bonds - Utilities	10,482	5.92	10,222	7.18
Agencies	6,025	3.80	4,992	4.16
Government Bonds - Sovereign Debt	1,738	8.19	3,893	10.42
Mortgage Back Securities Passthrough	27,568	5.09	29,229	3.17
Local Authorities - Municipal Bonds	8,750	3.06	19,212	6.18
Supranational - Multi-National Bonds	7,211	2.72	5,657	3.08
Treasuries	46,853	6.00	61,157	5.29
Other	6,529	3.38	4,970	5.89
Total	\$371,213	4.85	\$370,202	3.38

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the value of a non-U.S. 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 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 following table present KRS' exposure to foreign currency risk as of June 30, 2017, and 2016:

Pension Funds - GASB 40 - Foreign Currency Risk		
<i>For the Year Ended June 30, 2016-2017 (\$ In Thousands)</i>		
	2017	2016
Australian Dollar	\$38,506	\$38,927
Brazilian Real	18,032	4,670
British Pound Sterling	270,742	278,268
Canadian Dollar	75,198	61,249
Chilean Peso	777	5,195
Columbian Peso	1,001	-
Czech Koruna	375	-
Danish Krone	36,732	33,033
Egyptian Pound	949	978
Euro	445,443	341,559
Hong Kong Dollar	61,886	60,937
Indian Rupee	17,037	6,604
Indonesian Rupiah	28,606	20,838
Israeli Shekel	16,932	7,194
Japanese Yen	228,164	202,208
Malaysian Ringgit	6,284	6,341
Mexican Peso	13,729	13,810
New Zealand Dollar	17,149	17,054
Norwegian Krone	21,189	21,709
Philippine Peso	6,488	9,706
Polish Zloty	1	1
Singapore Dollar	10,519	8,935
South African Rand	7,574	4,163
South Korean Won	34,465	34,652
Swedish Krona	26,267	28,442
Swiss Franc	55,668	48,607
Taiwan Dollar	27,215	12,983
Thai Bhat	9,779	8,391
Turkish Lira	10,719	9,982
Total Securities Subject to Foreign Currency Risk	1,487,424	1,408,163
U.S. Dollar	10,287,547	9,468,026
Total Investment Securities	\$11,774,972	\$10,754,462

Note: Differences due to rounding and exchange rates. 2016 totals have been updated to reflect accruals.

The following table present KRS' exposure to foreign currency risk as of June 30, 2017, and 2016:

GASB 40 - Foreign Currency Risk Insurance Fund		
For the Year Ended June 30, 2016-2017 (\$ In Thousands)		
	2017	2016
Australian Dollar	\$15,723	\$14,357
Brazilian Real	7,660	1,740
British Pound Sterling	109,861	110,092
Canadian Dollar	30,632	25,187
Chilean Peso	312	2,513
Columbian Peso	378	-
Czech Koruna	153	-
Danish Krone	15,048	12,354
Egyptian Pound	329	339
Euro	186,582	138,441
Hong Kong Dollar	25,891	23,281
Indian Rupee	7,206	2,763
Indonesian Rupiah	11,865	8,253
Israeli Shekel	6,949	3,140
Japanese Yen	94,145	79,846
Malaysian Ringgit	2,238	2,250
Mexican Peso	5,157	5,472
New Zealand Dollar	6,546	6,288
Norwegian Krone	8,460	8,215
Philippine Peso	2,429	3,704
Singapore Dollar	4,985	4,225
South African Rand	3,590	2,065
South Korean Won	15,685	15,213
Swedish Krona	9,968	11,090
Swiss Franc	23,446	18,618
Taiwan Dollar	11,427	5,732
Thai Bhat	4,164	3,559
Turkish Lira	4,660	4,428
Total Securities Subject to Foreign Currency Risk	615,488	513,145
U.S. Dollar	4,140,943	3,686,806
Total Investment Securities	\$4,756,432	\$4,199,951

Note: Differences due to rounding and exchange rates. 2016 totals have been updated to reflect accruals.

GASB 72

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 GAAP.

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 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.

KRS had the following recurring Fair Value measurements as of June 30, 2017:

FY 2017 GASB 72 Pension Funds (\$ In Thousands)				
Asset Type	Market value	Level		
		1	2	3
Alternative Investments	\$529,066	\$-	\$-	\$529,066
Cash & Cash Equivalents	303,488	6,229	180,519	116,740
Convertible Or Exchangeable Securities	28,347	19,442	8,905	-
Equity	6,300,098	4,536,206	-	1,763,892
Fixed Income Securities	1,353,140	255,668	967,737	129,735
Futures Contracts	56	56	-	-
Natural Resources	49,810	-	-	49,810
Other	339,129	339,129	-	-
Preferred Securities	82,060	24,071	57,989	-
Private Equity	2,085,499	-	-	2,085,499
Real Estate	509,528	-	-	509,528
Total	\$11,580,221	\$5,180,803	\$1,215,150	\$5,184,268

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

FY 2017 GASB 72 Insurance Fund (\$ In Thousands)				
Asset Type	Market value	Level		
		1	2	3
Alternative Investments	\$201,817	\$-	\$-	\$201,817
Cash & Cash Equivalents	109,394	1,766	59,341	48,287
Convertible Or Exchangeable Securities	11,635	7,988	3,647	-
Equity	1,979,725	1,915,089	-	64,636
Fixed Income Securities	1,186,094	130,675	307,960	747,460
Futures Contracts	11	11	-	-
Natural Resources	37,796	-	-	37,796
Other	111,025	111,025	-	-
Preferred Securities	32,743	9,838	22,904	-
Private Equity	798,404	-	-	798,404
Real Estate	211,796	-	-	211,796
Total	\$4,680,440	\$2,176,392	\$393,852	\$2,110,196

Note: The fair value hierarchies do not reflect cash and accruals thus totals differ from the Investment Summaries.

Note E. 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. The types of securities lent include U.S. Treasuries, U.S. Agencies, U.S. Corporate Bonds, U.S. 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. As of June 30, 2017, 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 BNY Mellon, emphasizing capital preservation, liquidity, and credit quality.

As of June 30, 2017, the cash collateral received for the securities on loan for the Pension and Insurance Funds was \$396.8 million and \$178.5 million, respectively compared to the Fair Value of the underlying securities of \$387.2 million and \$174.2 million, respectively.

Note F. 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 Claims Commission is vested with full power and authority to investigate, hear proof, and 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 Kentucky Claims Commission are paid from the fund of the agency having a claim or claims before the Kentucky Claims Commission.

Claims against the KRS Board, or any of its staff as a result of an actual or alleged breach of fiduciary duty, are insured with two commercial insurance policies. Hallmark Specialty provides coverage of up to \$2.5 million and ANV Global Services provides coverage up to \$2.5 million for a total coverage of \$5 million, 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 policies. The aggregate limit for all loss is \$5 million, and the HIPAA and PPACA fines and penalties sub-limit is \$1.5 million.

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.

Note G. 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 H. Defined Benefit Pension Plan

COVERED PAYROLL-
The employee payroll that is subject to Pension Contributions Withholding.

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 EO 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 1 Plan members contributed 5% of creditable compensation for the fiscal years ended June 30, 2017, 2016, and 2015. Tier 2 and Tier 3 Plan members contributed 6% of creditable compensation for the fiscal years ended June 30, 2017, 2016, and 2015.

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

Payroll and Contributions as of June 30 (<i>\$ In Thousands</i>)			
	2017	2016	2015
Covered Payroll	\$13,945	\$14,579	\$14,138
Required Employer Contributions	\$6,776	\$5,652	\$5,481
Employer Percentage Contributed	100%	100%	100%

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 2017 and 2016.

Note J. Equipment

Equipment Expenses as of June 30 (\$ In Thousands)		
	2017	2016
Equipment, cost	\$2,885	\$2,819
Less Accumulated Depreciation	(2,539)	(2,440)
Equipment, net	\$346	\$379

Depreciation expenses rose to \$2,539 in fiscal year 2017, an increase \$101 thousand over fiscal year 2016.

Note K. Intangible Assets

The provisions of GASB Statement No. 51, Accounting and Financial Reporting for Intangible Assets, requires 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 Expenses as of June 30 (\$ In Thousands)		
	2017	2016
Software, Cost	\$17,302	\$17,302
Less Accumulated Amortization	(11,337)	(9,449)
Intangible Assets, Net	\$5,965	\$7,853

Amortization expense rose to \$11,337 in fiscal year 2017, an increase of \$1.9 million over fiscal year 2016.

INTANGIBLE ASSET-
An asset that is not physical in nature. Corporate intellectual property, items such as patents, trademarks, copyrights, business methodologies, goodwill and brand recognition, are all common intangible assets in today's marketplace.

Note L. Actuarial Valuation

Working with actuary GRS, completed an actuarial valuation of the Pension and Insurance plans for the period ending June 30, 2017. The 2017 actuarial calculations by Plan included economic actuarial changes from the prior year assumptions, as approved by Board of Trustees in their July 12, 2017, meeting. The Board began with the most recent actuarial experience study for the period of July 1, 2008 through June 30, 2013. The Board contracted with Milliman to complete a review of Investment Return Assumptions and Funding Methodology. The Board also reviewed economic assumption recommendations from GRS, RVK (KRS general investment consultants), and other capital market industry leaders. The following two charts show the sensitivity to the economic assumptions for the Pension Funds and Insurance Fund.

Economic Assumptions - Pension as of June 30										
	KERS		KERS		CERS		CERS		SPRS	
	Non-Hazardous		Hazardous		Non-Hazardous		Hazardous			
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Assumed Investment Return	5.25%	6.75%	6.25%	7.50%	6.25%	7.50%	6.25%	7.50%	5.25%	6.75%
Inflation Factor	2.30%	3.25%	2.30%	3.25%	2.30%	3.25%	2.30%	3.25%	2.30%	3.25%
Payroll Growth	0.00%	4.00%	0.00%	4.00%	2.00%	4.00%	2.00%	4.00%	0.00%	4.00%

Economic Assumptions - Insurance as of June 30										
	KERS		KERS		CERS		CERS		SPRS	
	Non-Hazardous		Hazardous		Non-Hazardous		Hazardous			
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Assumed Investment Return	6.25%	7.50%	6.25%	7.50%	6.25%	7.50%	6.25%	7.50%	6.25%	7.50%
Inflation Factor	2.30%	3.25%	2.30%	3.25%	2.30%	3.25%	2.30%	3.25%	2.30%	3.25%
Payroll Growth	0.00%	4.00%	0.00%	4.00%	2.00%	4.00%	2.00%	4.00%	0.00%	4.00%

GASB 67

GRS completed reports by Plan in compliance with the GASB Statement No. 67 "Financial Reporting for Pension Plans." The total pension liability, net pension liability, and sensitivity information shown in these reports are based on an actuarial valuation date of June 30, 2016, using generally accepted actuarial principles. GRS did not conduct the June 30, 2016, actuarial valuation; however, GRS did replicate the prior actuary's (Cavanaugh Macdonald Consulting, LLC) results on the same assumption, methods, and data. The roll-forward is based on the results of this replication. The actuarial methods, assumptions, results, and sensitivity analysis are in the Required Supplementary Information, pages 64-87.

GASB 74

GRS completed reports by plan in compliance with the GASB Statement No. 74, "Financial Reporting for Postemployment Benefit Plans Other than Pension Plans" (OPEB) for the fiscal year ending June 30, 2017. The total OPEB liability, net OPEB liability, and sensitivity information shown in these reports were based on an actuarial valuation date of June 30, 2016. The total OPEB liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2017, using generally accepted actuarial principles. GRS did not conduct the June 30, 2016 actuarial valuation; however, GRS did replicate the prior actuary's (Cavanaugh Macdonald Consulting, LLC) valuation results on the same assumptions, methods, and data, as of that date. The roll-forward was based on the results of this replication. The actuarial methods, assumptions, results, and sensitivity analysis are in the Required Supplementary Information, pages 64-87.

Note M. Pension Legislation

During the 2017 Regular Session of the Kentucky General Assembly, the following six bills passed that have an impact on KRS:

1. Senate Bill 2 made several changes to the internal governance and operational structure of KRS. Two major changes placed KRS employees under Kentucky Revised Statutes 18A, the Personnel Cabinet, for hiring, firing, promotions, pay grades, status, and evaluations. The second major change placed KRS under the Model Procurement Code for all purchases, except Investment Contracts. The bill also included a section that confirmed much of the Governor's Executive Order from June 2016, including the composition of the Board of Trustees.

2. Senate Bill 3 required the retirement information for any member of the General Assembly, past or present, to be available to the public upon request. Unless a KRS member is a current or former member of the Kentucky General Assembly their retirement benefit information is still confidential.

3. Senate Bill 104 contained changes to how pension "spikes" are determined. A "pension spike" is when a person who is nearing retirement has their salary increase by more than 10% over the previous year's salary.

Senate Bill 104 also has language that would allow Tier 1 and 2 active members to "opt out," or withdraw, from one of those Tiers and join Tier 3, which is the hybrid cash balance plan. The opt-out provision would not take effect unless KRS receives a favorable Private Letter Ruling from the Internal Revenue Service (IRS). Until then, KRS is unable to process any member requests related to this provision.

4. Senate Bill 126 amends the definition of "final compensation" for Tier 2 participants (members who began participating in KRS between September 1, 2008, and January 1, 2014) to allow state and county employees to use partial fiscal years to reach a final compensation calculation that is at least 60 months for Non-Hazardous employees and at least 36 months for Hazardous employees.

5. House Bill 173, the KRS "housekeeping" bill, makes various changes to allow KRS statutes to conform to

federal law requirements and generally help KRS become more operationally efficient. This is the first KRS housekeeping bill to pass the General Assembly since 2010.

6. House Bill 62/House Bill 351. 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 June 30, 2017, the Kentucky Employers Mutual Insurance company (KEMI) and Commonwealth Credit Union (CCU) ceased participation in KRS. KEMI and CCU paid their actuarial determined proportionate share of KRS' actuarial unfunded liability. The total amount for both KEMI's and CCU's cessation has been reported in the combining financial statements.

State legislation passed during the 2015 Session created new statutes that allowed participating agencies to voluntarily cease participation in the Systems. In order to cease participation, one requirement is that the agency has to pay the full actuarial cost of their obligation to the KRS. Until the 2017 Session, agencies were allowed to pay in a lump sum, or through installments over a time period that could be as long as 20 years.

House Bill 351 removes the installment payment option and specifies the formula for determining the assumed rate of return shall be the lesser of the assumed rate of return in the KRS' most recent actuarial valuation or the yield on a thirty (30) year United States Treasury Bond as of the employer's effective cessation date, but shall in no case be lower than the assumed rate of return utilized in the KRS' most recent actuarial valuation minus three and one-half percent (3.5%). The new formula will help ensure that the full actuarial cost for an agency to leave KRS will be paid by that agency.

Note N. 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, which was denied. The case is now proceeding at the Franklin Circuit Court on the merits of the claim made. The City of Fort Wright filed a Renewed Motion for Declaratory Judgment on May 1, 2017. KRS will file its reply to this Renewed Motion upon the resolution of a pending discovery issue.

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. No new action has been taken in this matter to date.

Note O. 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 P. Reimbursement of Retired Re-employed Health Insurance

As a result of the passage of House Bill 1 on September 1, 2008, if a retiree is re-employed 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. For the fiscal years ended June 30, 2017, and 2016, the reimbursement totaled \$17.0 million and \$14.7 million, respectively.

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, 2017:

<i>(\$ In Thousands)</i>	
Lease payments to PPW from KRS:	\$710
Dividends to KRS from PPW:	-

Note R. Reduction of Receivable

Employers reported wages that were earned in June 2016 in July 2016 (fiscal year 2017) and the new Annual Required Contribution (ARC) rate was applied. The Commonwealth's approved budget guidelines paid contributions at the fiscal year 2016 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, 2017, as noted in the chart.

For fiscal year 2016, no reduction was necessary since the ARC remained the same as fiscal year 2015. For fiscal year 2017, the ARC had changed from fiscal year 2016, therefore a reduction was necessary.

Reduction Receivable <i>(\$ In Thousands)</i>		
	2017	2016
KERS Non-Hazardous	\$4,645	-
SPRS	261	-
TOTAL	\$4,906	-

Note S. Governance Reorganization

On June 17, 2016, Governor Matt Bevin issued Executive Order (EO) 2016-340 which abolished the Board of Trustees that had been established under Kentucky Revised Statute 61.645 and created a new Board of Directors. The EO also altered Kentucky Revised Statute 61.645 in the following ways:

- » it added four additional board members;
- » it gave the Governor the authority to appoint the Chair and Vice-Chair of the Board of Directors;
- » it required that the Governor approve the Executive Director appointed by the Board of Directors; and,
- » it transferred KRS employees from the personnel system established in Kentucky Revised Statute 61.645 and 105 KAR 1:370 to the Commonwealth's personnel system under Kentucky Revised Statute Chapter 18A.

The Governor cited his authority to reorganize executive branch agencies under Kentucky Revised Statute 12.028.

EO 2016-340 was largely unchanged by SB 2, but it notably reverted the Board of Directors back to a Board of Trustees. SB 2 made additional changes which include, but are not limited to, the following requirements:

- » KRS must follow the Model Procurement Code for purchases and contracts;
- » KRS has to disclose net investment fees, investment returns, and commissions on its website and upon an open records request;
- » The Chair and Vice Chair of the Board are to be elected by the members of the Board of Trustees;
- » Investment experience is a prerequisite for six members of the Board;
- » The Kentucky Senate must confirm gubernatorial board appointees; and,
- » Board, staff, and investment consultants should abide by the Chartered Financial Analyst code of conduct.

Board member information is provided in the introduction of this document.

It should be noted that two Board members 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 in office and his authority to suspend statutory provisions in order to reorganize KRS. (EOs 2016-211, 214, 273, and 340). There is no financial impact these issues may cause, therefore, no provision has been made in the combining financial statements as a result of the EO, SB 2, or the litigation.

Note T. PFM Study

In September 2016, the Commonwealth contracted with PFM, LLC, to perform a comprehensive Pension Performance and Best Practices Analysis of all the state's retirement systems, including KRS. Their report included their analysis of operations, investments, plan structure, etc. and was presented on August 29, 2017.

Note U. Western Kentucky University

On November 17, 2016, Western Kentucky University (WKU) a participating employer, filed a petition for declaration of rights in the Franklin Circuit Court in Frankfort, KY. The petition involved a dispute as to whether WKU can terminate a group of its employees which participated in KERS and reutilize those same employees through a privatization process excusing WKU from its obligations to pay contributions to the KERS Fund. This matter is currently still in litigation. No substantive decisions have been issued on the merits of the case. The exact nature and scope of the relief sought is still unclear; therefore, no provision has been made in the combined financial statements.

Note V. Subsequent Events

Management has evaluated the period June 30, 2017, to December 7, 2017, (the date the combining financial statements were available to be issued) for items requiring recognition or disclosure in the combining financial statements.

REQUIRED

SUPPLEMENTARY INFORMATION

INCLUDING GASB 67 AND 74

Actuary Assumption Changes - Pension

Schedule of Changes in Employers' TPL

KERS Non-Hazardous

KERS Hazardous

CERS Non-Hazardous

CERS Hazardous

SPRS

Schedule of Employer NPL

KERS Non-Hazardous

KERS Hazardous

CERS Non-Hazardous

CERS Hazardous

SPRS

Schedule of Employers' Contributions Pension

KERS Non-Hazardous

KERS Hazardous

CERS Non-Hazardous

CERS Hazardous

SPRS

Sensitivity to the NPL to Changes in the Discount Rate

Notes to Schedule of Employers' Contributions

Actuary Assumption Changes – Insurance

Schedule of Changes in Employers' Net OPEB Liability

Schedule of the Employers' Net OPEB Liability

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate

Notes to Schedule of Employers' OPEB Contribution

Development of Single Discount Rate

Schedule of Employers' OPEB Contributions

KERS Non-Hazardous

KERS Hazardous

CERS Non-Hazardous

CERS Hazardous

SPRS

Money Weighted Rates of Return

Additional Supporting Schedules

Schedule of Administrative Expenses

Schedule of Direct Investment Expenses

Schedule of Professional Consultant Fees

GASB 67 Reporting – Actuarial Information

This supplementary information is provided in connection with GASB Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2017, and is included for KERS, CERS, and SPRS pension plans, administered by KRS.

The liability calculations presented were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plans’ funding requirements. The plans’ liability for other purposes may produce significantly different results.

The total pension liability, net pension liability, and sensitivity information shown in the supplementary schedules are based on an actuarial valuation date of June 30, 2016. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2017, using generally accepted actuarial principles. GRS did not conduct the June 30, 2016, actuarial valuation; however, GRS did replicate the prior actuary’s valuations results on the same assumption, methods, and data, as of that date. The roll-forward is based on the results of their replication. Information disclosed for years prior to June 30, 2017, was prepared by KRS’s prior actuary, Cavanaugh Macdonald Consulting, LLC.

There was no legislation enacted during the 2017 legislative session that had a material change in benefit provisions for any of the plans. However, subsequent to the actuarial valuation date, but prior to the measurement date, the Board adopted updated actuarial assumptions which were used in performing the actuarial valuation as of June 30, 2017. Specifically, Total Pension Liability as of June 30, 2017, is determined using a 2.30% price inflation assumption for all the plans, and the assumed rate of return was 5.25% for the KERS Non-Hazardous system and SPRS. For the KERS Hazardous and CERS plans, a 6.25% assumed rate of return was used. This single discount rate was based on the expected rate of return on pension plan investments for each plan. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the Pension Plans’ fiduciary net position and future contributions were projected to be sufficient to finance all the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on Pension Plan investments was applied to all periods of the projected benefit payments to determine the total pension liability for each system. The projection of cash flows used to determine the single discount rate assumes that the KERS, SPRS, and CERS employers contribute the actuarially determined contributions.

GASB No. 74

Financial Reporting for Post-employment Benefit Plans Other Than Pension Plans, is a new accounting standard for OPEB plans which is effective for plans with fiscal years ending after June 15, 2017. Based on guidance issued by GASB in connection with this new accounting standard, the 1% of member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an OPEB asset. As a result, the reported fiduciary net position as of June 30, 2017, is net of the 401(h) asset balance.

These tables are intended to show information for ten years; additional years' information will be displayed as it becomes available. Also, schedules provided by the Actuary were prepared for individual plan and have been rounded to the nearest thousand and percentages to two decimal points. This may result in small rounding variances between schedules.

Schedule of Changes in Employers' TPL - KERS Non-Hazardous				
(\$ In Thousands)				
	2017	2016	2015	2014
Service Cost	\$143,858	\$139,631	\$143,847	\$133,361
Interest	870,725	891,897	859,509	853,653
Benefit Changes	-	-	-	-
Difference between Expected and Actual Experience	(134,379)	-	30,958	-
Changes of Assumptions	2,145,530	923,999	694,592	-
Benefit Payments	(960,309)	(935,419)	(919,343)	(903,564)
Net Change in TPL	2,065,425	1,020,108	809,563	83,450
TPL – Beginning	13,379,781	12,359,673	11,550,110	11,466,660
TPL – Ending (a)	15,445,206	13,379,781	12,359,673	11,550,110
Plan Net Position				
Contributions – Employer	757,121	513,084	521,691	296,836
Contributions – Member	100,543	106,495	104,606	97,487
Net Investment Income (Loss)	220,985	(20,663)	44,570	337,923
Benefit Payments	(948,490)	(923,288)	(905,791)	(889,937)
Administrative Expense	(10,957)	(10,989)	(10,474)	(11,145)
Refunds of Contributions	(11,819)	(12,130)	(13,552)	(13,627)
Other	¹ (30,805)	-	8,442	-
Net Change in Plan Net Position	76,578	(347,491)	(250,508)	(182,463)
Plan Net Position – Beginning	² 1,980,292	2,327,783	2,578,291	2,760,754
Plan Net Position – Ending (b)	2,056,870	1,980,292	2,327,783	2,578,291
Net Pension Liability – Ending (a) – (b)	\$13,388,336	\$11,399,489	\$10,031,890	\$8,971,819
Plan Fiduciary Net Position as a Percentage	13.00%	15.00%	19.00%	22.00%
Covered Employee Payroll	³ \$1,602,396	\$1,631,025	\$1,544,234	\$1,577,496
Net Pension Liability as a Percentage of Covered Employee Payroll	835.50%	698.90%	649.60%	568.70%

1. 401(b) plan asset balance (less 401(b) contribution during 2017) that is considered an OPEB asset under GASB 74 for FYE 2017.

2. Plan fiduciary net position at June 30, 2016 is equal to the amount in the prior year's financials and include 401(b) plan assets.

3. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Changes in Employers' TPL - KERS Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Total Pension Liability (TPL)				
Service Cost	\$21,081	\$20,751	\$18,729	\$16,880
Interest	66,589	64,851	61,005	59,594
Benefit Changes	-	-	-	-
Difference between Expected and Actual Experience	26,902	-	6,067	-
Changes of Assumptions	127,878	-	52,165	-
Benefit Payments	(63,338)	(61,518)	(59,383)	(57,151)
Net Change in TPL	179,112	24,084	78,583	19,323
TPL – Beginning	919,518	895,433	816,850	797,527
TPL – Ending (a)	1,098,630	919,517	895,433	816,850
Plan Net Position				
Contributions – Employer	52,974	23,759	28,536	11,670
Contributions - Member	17,524	15,739	13,207	12,546
Net Investment Income (Loss)	70,994	(1,653)	8,701	80,724
Benefit Payments	(61,231)	(59,306)	(56,773)	(54,320)
Administrative Expense	(919)	(916)	(844)	(897)
Refunds of Contributions	(2,106)	(2,211)	(2,610)	(2,830)
Other	¹ (3,586)	-	767	-
Net Change in Plan Net Position	73,650	(24,588)	(9,016)	46,893
Plan Net Position – Beginning	² 527,879	552,467	561,484	514,591
Plan Net Position – Ending (b)	601,529	527,879	552,468	561,484
Net Pension Liability – Ending (a) – (b)	\$497,101	\$391,638	\$342,965	\$255,366
Plan Fiduciary Net Position as a Percentage	55.00%	57.00%	62.00%	69.00%
Covered Employee Payroll	³ \$178,511	\$158,828	\$128,680	\$129,076
Net Pension Liability as a Percentage of Covered Employee Payroll	279.50%	246.60%	266.50%	197.80%

1. 401(b) plan asset balance (less 401(b) contribution during 2017) that is considered an OPEB asset under GASB 74 for FYE 2017.

2. Plan fiduciary net position at June 30, 2016 is equal to the amount in the prior year's financials and include 401(b) plan assets.

3. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Changes in Employers' TPL - CERS Non-Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Service Cost	\$193,082	\$209,101	\$207,400	\$192,482
Interest	803,555	780,587	733,002	710,526
Benefit Changes	-	-	-	-
Difference between Expected and Actual Experience	(208,015)	-	49,966	-
Changes of Assumptions	1,388,800	-	606,293	-
Benefit Payments	(701,891)	(665,000)	(628,858)	(597,136)
Net Change in TPL	1,475,532	324,687	967,803	305,872
TPL – Beginning	11,065,013	10,740,325	9,772,522	9,466,650
TPL – Ending (a)	\$12,540,544	\$11,065,013	\$10,740,325	\$9,772,522
Plan Net Position				
Contributions – Employer	\$333,554	\$284,105	\$298,565	\$324,231
Contributions – Member	150,715	141,674	140,311	128,568
Net Investment Income (Loss)	825,900	(40,800)	110,568	895,530
Benefit Payments	(687,461)	(651,246)	(615,335)	(582,850)
Administrative Expense	(19,609)	(19,385)	(18,212)	(18,615)
Refunds of Contributions	(14,430)	(13,753)	(13,523)	(14,286)
Other	¹ (42,827)	-	10,280	-
Net Change in Plan Net Position	545,843	(299,405)	(87,346)	732,578
Plan Net Position - Beginning	² \$6,141,394	6,440,800	6,528,146	5,795,568
Plan Net Position – Ending (b)	\$6,687,237	\$6,141,395	\$6,440,800	\$6,528,146
Net Pension Liability – Ending (a) – (b)	\$5,853,307	\$4,923,618	\$4,299,525	\$3,244,376
Plan Fiduciary Net Position as a Percentage	53%	56%	60%	67%
Covered Employee Payroll	³ \$2,376,290	\$2,417,187	\$2,296,716	\$2,272,270
Net Pension Liability as a Percentage of Covered Employee Payroll	246.30%	203.70%	187.20%	142.80%

1. 401(b) plan asset balance (less 401(b) contribution during 2017) that is considered an OPEB asset under GASB 74 for FYE 2017.

2. Plan fiduciary net position at June 30, 2016 is equal to the amount in the prior year's financials and include 401(b) plan assets.

3. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Changes in Employers' TPL - CERS Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Service Cost	\$58,343	\$66,249	\$71,934	\$66,761
Interest	270,860	262,886	247,008	238,665
Benefit Changes	-	-	-	-
Difference between Expected and Actual Experience	92,588	-	41,935	-
Changes of Assumptions	536,667	-	166,849	-
Benefit Payments	(229,299)	(216,327)	(203,244)	(192,299)
Net Change in TPL	729,159	112,807	324,482	113,127
TPL – Beginning	3,726,115	3,613,308	3,288,825	3,175,699
TPL – Ending (a)	4,455,274	3,726,115	3,613,307	3,288,826
Plan Net Position				
Contributions – Employer	115,947	105,713	108,071	115,240
Contributions – Member	60,101	52,972	47,692	43,722
Net Investment Income (Loss)	270,473	(9,020)	37,104	288,490
Benefit Payments	(226,984)	(213,448)	(200,134)	(189,635)
Administrative Expense	(1,421)	(1,366)	(1,288)	(1,721)
Refunds of Contributions	(2,315)	(2,879)	(3,111)	(2,664)
Other	¹ (7,979)	-	2,865	-
Net Change in Plan Net Position	207,822	(68,028)	(8,801)	253,432
Plan Net Position – Beginning	² 2,010,174	2,078,202	2,087,002	1,833,570
Plan Net Position – Ending (b)	2,217,996	2,010,174	2,078,202	2,087,002
Net Pension Liability – Ending (a) – (b)	\$2,237,278	\$1,715,941	\$1,535,106	\$1,201,824
Plan Fiduciary Net Position as a Percentage	50%	54%	58%	64%
Covered Employee Payroll	³ \$526,559	\$526,334	\$483,641	\$479,164
Net Pension Liability as a Percentage of Covered Employee Payroll	424.90%	326.00%	317.40%	250.80%

1. 401(b) plan asset balance (less 401(b) contribution during 2017) that is considered an OPEB asset under GASB 74 for FYE 2017.

2. Plan fiduciary net position at June 30, 2016 is equal to the amount in the prior year's financials and include 401(b) plan assets.

3. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Changes in Employer's TPL - SPRS

(\$ In Thousands)

	2017	2016	2015	2014
Service Cost	\$8,297	\$8,402	\$7,695	\$7,142
Interest	51,768	52,951	50,661	50,391
Benefit Changes	-	-	-	-
Difference between Expected and Actual Experience	8,143	-	9,331	-
Changes of Assumptions	136,602	56,191	40,201	-
Benefit Payments	(56,960)	(56,279)	(54,850)	(53,239)
Net Change in TPL	147,850	61,265	53,038	4,294
TPL - Beginning	795,421	734,156	681,118	676,824
TPL - Ending (a)	943,271	795,421	734,156	681,118
Plan Net Position				
Contributions - Employer	63,239	25,822	31,990	20,279
Contributions - Member	5,348	5,263	5,244	5,075
Net Investment Income (Loss)	26,795	(3,843)	3,426	40,374
Benefit Payments	(56,934)	(56,268)	(54,765)	(53,026)
Administrative Expense	(181)	(178)	(201)	(215)
Refunds of Contributions	(26)	(11)	(85)	(213)
Other	¹ (517)	-	645	-
Net Change in Plan Net Position	37,724	(29,215)	(13,746)	12,274
Plan Net Position - Beginning	² 218,012	247,227	260,974	248,700
Plan Net Position - Ending (b)	255,736	218,012	247,228	260,974
Net Pension Liability - Ending (a) - (b)	\$687,535	\$577,409	\$486,928	\$420,144
Plan Fiduciary Net Position as a Percentage	27%	27%	34%	38%
Covered Employee Payroll	³ \$54,065	\$46,685	\$45,765	\$44,616
Net Pension Liability as a Percentage of Covered Employee Payroll	1271.70%	1236.80%	1064.00%	941.70%

1. 401(b) plan asset balance (less 401(b) contribution during 2017) that is considered an OPEB asset under GASB 74 for FYE 2017.

2. Plan fiduciary net position at June 30, 2016 is equal to the amount in the prior year's financials and include 401(b) plan assets.

3. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Employer NPL - KERS Non-Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Total Pension Liability (TPL)	\$15,445,206	\$13,379,782	\$12,359,673	\$11,550,110
Plan Net Position	2,056,870	1,980,292	2,327,782	2,578,291
Net Pension Liability	\$13,388,337	\$11,399,490	\$10,031,891	8,971,819
Ratio of Plan Net Position to TPL	13.30%	14.80%	18.83%	22.30%
Covered Employee Payroll ¹	\$1,602,396	\$1,631,025	\$1,544,234	1,577,496
Net Pension Liability as a Percentage of Covered Employee Payroll	835.50%	698.92%	649.64%	568.70%

Schedule of Employer NPL - KERS Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Total Pension Liability (TPL)	\$1,098,630	\$919,518	\$895,433	\$816,850
Plan Net Position	601,529	527,880	552,468	561,484
Net Pension Liability	\$497,101	\$391,638	\$342,965	255,366
Ratio of Plan Net Position to TPL	54.80%	57.41%	61.70%	68.70%
Covered Employee Payroll ¹	\$178,511	\$158,828	\$128,680	129,076
Net Pension Liability as a Percentage of Covered Employee Payroll	278.50%	246.58%	266.53%	197.80%

Schedule of Employer NPL - CERS Non-Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Total Pension Liability (TPL)	\$12,540,545	\$11,065,011	\$10,740,325	\$9,772,523
Plan Net Position	6,687,237	6,141,396	6,440,800	6,528,146
Net Pension Liability	\$5,853,307	\$4,923,615	\$4,299,525	3,244,376
Ratio of Plan Net Position to TPL	53.30%	55.50%	59.97%	66.80%
Covered Employee Payroll ¹	\$2,376,290	\$2,417,187	\$2,297,716	\$2,272,270
Net Pension Liability as a Percentage of Covered Employee Payroll	246.30%	203.69%	187.20%	142.80%

Schedule of Employer NPL - CERS Hazardous

(\$ In Thousands)

	2017	2016	2015	2014
Total Pension Liability (TPL)	\$4,455,275	\$3,726,116	\$3,613,308	\$3,288,826
Plan Net Position	2,217,996	2,010,177	2,078,202	2,087,002
Net Pension Liability	\$2,237,279	\$1,715,939	\$1,535,106	\$1,201,823
Ratio of Plan Net Position to TPL	49.80%	53.95%	57.52%	63.50%
Covered Employee Payroll ¹	\$526,559	\$526,334	\$483,641	\$479,164
Net Pension Liability as a Percentage of Covered Employee Payroll	424.90%	326.02%	317.41%	250.80%

Schedule of Employer NPL - SPRS

(\$ In Thousands)

	2017	2016	2015	2014
Total Pension Liability (TPL)	\$943,271	\$795,421	\$734,156	\$681,118
Plan Net Position	255,736	218,012	247,228	260,974
Net Pension Liability	\$687,535	\$577,409	\$486,928	\$420,144
Ratio of Plan Net Position to TPL	27.10%	27.41%	33.70%	38.30%
Covered Employee Payroll ¹	\$54,065	\$46,685	\$45,765	\$44,616
Net Pension Liability as a Percentage of Covered Employee Payroll	1,236.80%	1,236.82%	1,064.00%	941.70%

¹ Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Employers' Contributions Pension - KERS Non-Hazardous

(\$ In Thousands)

Fiscal Year Ending	Actuarially Determined Contribution(1)	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll (2)	Actual Contributions as a Percentage of Covered Payroll
2017	\$623,813	\$757,121	\$(133,308)	\$1,602,396	47.25%
2016	512,670	513,084	(414)	1,631,025	31.46%
2015	520,948	521,691	(743)	1,544,234	33.78%
2014	520,765	296,836	223,929	1,577,496	18.82%
2013	485,396	280,874	204,522	1,644,409	17.08%
2012	441,094	214,786	226,308	1,644,897	13.06%
2011	381,915	193,754	188,161	1,731,633	11.19%
2010	348,495	144,051	204,444	1,815,146	7.94%
2009	294,495	112,383	182,112	1,754,413	6.41%
2008	\$264,743	\$104,655	\$160,088	\$1,837,873	5.69%

Notes: 1. Actuarially determined contribution rate for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 2. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Employers' Contributions Pension - KERS Hazardous

(\$ In Thousands)

Fiscal Year Ending	Actuarially Determined Contribution(1)	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll (2)	Actual Contributions as a Percentage of Covered Payroll
2017	\$37,630	\$52,974	\$(15,344)	\$178,511	29.68%
2016	23,690	23,759	(69)	158,828	14.96%
2015	28,374	28,536	(162)	128,680	22.18%
2014	13,570	11,670	1,900	129,076	9.04%
2013	21,502	27,334	(5,832)	131,015	20.86%
2012	20,265	20,809	(544)	131,977	15.77%
2011	20,605	19,141	1,464	133,054	14.39%
2010	17,815	17,658	157	143,558	12.30%
2009	15,708	15,843	(135)	146,044	10.85%
2008	\$14,147	\$15,257	\$(1,110)	\$148,710	10.26%

Notes: 1. Actuarially determined contribution rate for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 2. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Employers' Contributions Pension - CERS Non-Hazardous

(\$ In Thousands)

Fiscal Year Ending	Actuarially Determined Contribution(1)	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll (2)	Actual Contributions as a Percentage of Covered Payroll
2017	\$331,492	\$333,554	\$(2,062)	\$2,376,290	14.04%
2016	282,767	284,106	(1,339)	2,417,187	11.75%
2015	297,715	298,566	(851)	2,296,716	13.00%
2014	324,231	324,231	-	2,272,270	14.27%
2013	294,914	294,914	-	2,236,277	13.19%
2012	261,764	275,736	(13,972)	2,236,546	12.33%
2011	218,985	248,519	(29,534)	2,276,596	10.92%
2010	186,724	207,076	(20,352)	2,236,855	9.26%
2009	161,097	179,285	(18,188)	2,183,612	8.21%
2008	\$138,311	\$150,925	\$(12,614)	\$2,166,613	6.97%

Notes: 1. Actuarially determined contribution rate for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 2. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Employers' Contributions Pension - CERS Hazardous

(\$ In Thousands)

Fiscal Year Ending	Actuarially Determined Contribution(1)	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll (2)	Actual Contributions as a Percentage of Covered Payroll
2017	\$114,316	\$115,947	\$(1,631)	\$526,559	22.02%
2016	104,952	105,713	(761)	526,334	20.08%
2015	107,514	108,071	(557)	483,641	22.35%
2014	115,240	115,240	-	479,164	24.05%
2013	120,140	120,140	-	461,673	26.02%
2012	83,589	89,329	(5,740)	464,229	19.24%
2011	78,796	85,078	(6,282)	466,964	18.22%
2010	76,391	82,887	(6,496)	466,549	17.77%
2009	69,056	78,152	(9,096)	469,315	16.65%
2008	\$64,082	\$72,155	\$(8,073)	\$474,241	15.21%

Notes: 1. Actuarially determined contribution rate for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 2. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Schedule of Employer's Contributions Pension - SPRS

(\$ In Thousands)

Fiscal Year Ending	Actuarially Determined Contribution(1)	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll (2)	Actual Contributions as a Percentage of Covered Payroll
2017	\$35,937	\$63,240	\$(27,303)	\$54,065	116.97%
2016	25,723	25,822	(99)	46,685	55.31%
2015	31,444	31,990	(546)	45,765	69.90%
2014	25,808	20,279	5,529	44,616	45.45%
2013	23,117	18,501	4,616	45,256	40.88%
2012	20,498	15,362	5,136	48,373	31.76%
2011	18,463	12,657	5,806	48,693	25.99%
2010	18,765	9,489	9,276	51,507	18.42%
2009	15,952	8,186	7,766	51,660	15.85%
2008	\$13,823	\$7,443	\$6,380	\$53,269	13.97%

Notes: 1. Actuarially determined contribution rate for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 2. Based on derived compensation for fiscal year ending 2017 using the provided employer contribution information.

Sensitivity to the NPL to Changes in the Discount Rate

(\$ In Thousands)

	KERS	KERS	CERS	CERS	SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
1% Decrease	\$15,286,445	\$632,314	\$7,382,286	\$2,812,972	\$806,575
Current Discount Rate	\$13,388,337	\$497,101	\$5,853,307	\$2,237,279	\$687,535
1% Increase	\$11,810,153	\$384,902	\$4,574,329	\$1,761,839	\$589,650

The actuarially determined contribution rates effective for fiscal year ending 2017 that are documented in the schedule on the previous pages are calculated as of June 30, 2015. Based on the June 30, 2015 actuarial valuation report (produced by the prior actuary), the actuarial methods and assumptions used to calculate these contribution rates are below:

Notes to Schedule of Employers' Contributions					
	KERS	KERS	CERS	CERS	SPRS
Item	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	28 years, closed	28 years, closed	28 years, closed	28 years, closed	28 years, closed
Investment Return:	7.50%	7.50%	7.50%	7.50%	7.50%
Inflation:	3.25%	3.25%	3.25%	3.25%	3.25%
Salary Increase:	4.00%, average	4.00%, average	4.00%, average	4.00%, average	4.00%, average
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)

GASB 74 Reporting – Actuarial Information

The supplementary reports contain information for the KERS, CERS, and SPRS plans in connection with the GASB Statement No. 74, Financial Reporting for Post-employment Benefit Plans Other than Pension Plans (OPEB) for the fiscal year ending June 30, 2017.

The liability calculations presented were performed for the purpose of satisfying the requirements of GASB No. 74 and are not applicable for other purposes, such as determining the plans' funding requirements. The plans' liability for other purposes may produce significantly different results.

The total OPEB liability, net OPEB liability, and sensitivity information shown in the supplemental information are based on an actuarial valuation date of June 30, 2016. The total OPEB liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2017, using generally accepted actuarial principles. GRS did not conduct the June 30, 2016, actuarial valuation; however, GRS did replicate the prior actuary's (Cavanaugh Macdonald Consulting, LLC) valuation results on the same assumptions, methods, and data, as of that date. The roll-forward is based on the results of our replication.

There was no legislation enacted during the 2017 legislative session that had a material change in benefit provisions for any of the systems. However, subsequent to the actuarial valuation date, but prior to the measurement date, the Board adopted updated actuarial assumptions which will be used in performing the actuarial valuations as of June 30, 2017. Specifically, the total OPEB liability as of June 30, 2017, was determined using a 2.30% price inflation assumption and an assumed rate of return of 6.25%.

The fully-insured premiums KRS pays for the KERS, CERS, and SPRS Health Insurance Plans are blended rates based on the combined experience of active and retired members. Because the average cost of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees, there is an implicit employer subsidy for the non-Medicare eligible retirees. GASB 74 requires that the liability associated with this implicit subsidy be included in the calculation of the total OPEB liability.

The discount rates used to measure the total OPEB liability as of June 30, 2017, are represented on page 81. For both Hazardous and Non-Hazardous groups, the single discount rate is based on the expected rate of return on OPEB plan investments of 6.25% and a municipal bond rate of 3.56%, as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2017. Future contributions are projected in accordance with the Board's current funding policy, which includes the requirement that each participating employer in the system contribute the actuarially determined contribution rate, which is determined using a closed funding period (26 years as of June 30, 2017) and the actuarial assumptions and methods adopted by the Board. Current assets, future contributions, and investment earnings are projected to be sufficient to pay the projected benefit payments from the retirement system. However, the cost associated with the implicit employer subsidy is not currently being included in the calculation of the system's actuarial determined contributions, and it is GRS' understanding that any cost associated with the implicit subsidy will not be paid out of the system's trust. Therefore, the municipal bond rate was applied to future expected benefit payments associated with the implicit subsidy.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and, changes in plan provisions or applicable law.

Based on guidance issued by GASB in connection with this new accounting standard, the 1% of member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered as an OPEB asset. As a result, the reported fiduciary net position as of June 30, 2016, and as of June 30, 2017, includes these 401(h) assets. Additionally, these member contributions and associated investment income are included in the reconciliation of the fiduciary net position.

Schedules provided by the Actuary were prepared by individual plan and have been rounded to the nearest thousand and percentages are two decimal points. This may result in small rounding variances between schedules.

Schedule of Changes in Employers' Net OPEB Liability						
(\$ In Thousands)						
	KERS	KERS	CERS	CERS	SPRS	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		
Total OPEB Liability						
Service Cost	\$46,992	\$8,002	\$85,468	\$20,493	\$4,147	
Interest	192,911	27,591	240,854	113,166	17,993	
Benefit Changes	-	-	-	-	-	
Difference between Expected and Actual Experience	(3,921)	(1,029)	(6,641)	(2,471)	(572)	
Changes of Assumptions	414,835	89,401	520,286	391,061	57,312	
Benefit Payments ¹	(139,601)	(16,618)	(140,121)	(63,656)	(12,123)	
Net Change in Total OPEB Liability	511,216	107,347	699,846	458,593	66,757	
Total OPEB Liability - Beginning	\$2,842,116	\$387,522	\$3,523,031	\$1,557,079	\$246,477	
Total OPEB Liability - Ending (a)	\$3,353,332	\$494,869	\$4,222,877	\$2,015,672	\$313,234	
Plan Fiduciary Net Position						
Contributions – Employer ²	162,636	4,579	133,326	44,325	7,862	
Contributions – Member	5,156	811	9,158	1,708	131	
Benefit Payments ¹	(139,601)	(16,618)	(140,120)	(63,656)	(12,123)	
OPEB Plan Net Investment Income	94,239	59,614	264,782	143,892	21,627	
OPEB Plan Administrative Expense	(861)	(105)	(789)	(381)	(66)	
Net Change in Plan Fiduciary Net Position	121,569	48,281	266,356	125,888	17,431	
Plan Fiduciary Net Position – Beginning	695,801	440,557	1,946,179	1,063,113	161,407	
Plan Fiduciary Net Position – Ending (b)	817,370	488,838	2,212,535	1,189,001	178,838	
Net OPEB Liability – Ending (a) – (b)	\$2,535,962	\$6,031	\$2,010,342	\$826,671	\$134,396	
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	24.40%	98.80%	52.40%	59.00%	57.10%	
Covered Employee Payroll ³	\$1,593,097	\$171,087	\$2,480,130	\$542,710	\$48,873	
Net OPEB Liability as a Percentage of Covered Employee Payroll	159.20%	3.50%	81.10%	152.30%	275.00%	

1. Includes expected benefits due to the implicit subsidy for members under age 65. Benefit payments are offset by insurance premiums received from retirees and by Medicare Drug Reimbursements.
2. Includes expected benefits due to the implicit subsidy for members under age 65. 3. Based on derived compensation for fiscal year ending 2017 using the provided employer insurance contribution information.

Schedule of the Employers' Net OPEB Liability

As of June 30, 2017 (\$ In Thousands)

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/ (Asset)	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	Covered Employee Payroll	Net OPEB Liability as a Percentage of Covered Employee Payroll
KERS Non-Hazardous	\$3,353,332	\$817,370	\$2,535,962	24.40%	\$1,593,097	159.20%
KERS Hazardous	494,869	488,838	6,031	98.80%	171,087	3.50%
CERS Non-Hazardous	4,222,878	2,212,536	2,010,342	52.40%	2,480,130	81.10%
CERS Hazardous	2,015,673	1,889,001	826,672	59.00%	542,710	152.30%
SPRS	\$313,234	\$178,838	\$134,396	57.10%	\$48,873	275.00%

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Trend Rate

(\$ In Thousands)

	KERS	KERS	CERS	CERS	SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate					
1% Decrease	\$2,964,846	\$73,452	\$2,558,049	\$1,107,853	\$176,059
Current Discount Rate	2,535,962	6,031	2,010,342	826,672	134,396
1% Increase	2,179,533	(49,209)	1,554,564	596,619	100,088
Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate					
1% Decrease	2,154,747	(49,729)	1,542,036	585,188	96,881
Current Healthcare Cost Trend Rate	2,535,962	6,031	2,010,342	826,672	134,396
1% Increase	\$3,014,646	\$75,248	\$2,619,113	\$1,125,544	\$180,781

The actuarially determined contribution rates effective for fiscal year ending 2017, that are documented in the schedule on the previous pages are calculated as of June 30, 2015. Based on the June 30, 2015, actuarial valuation report (produced by the prior actuary), the actuarial methods and assumptions used to calculate these contribution rates are below:

Notes to Schedule of Employers' OPEB Contribution					
	KERS	KERS	CERS	CERS	SPRS
Item	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
Actuarial Cost Method:	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method:	20 % of the difference between the market value of assets and the expected actuarial value of assets is recognized	20 % of the difference between the market value of assets and the expected actuarial value of assets is recognized	20 % of the difference between the market value of assets and the expected actuarial value of assets is recognized	20 % of the difference between the market value of assets and the expected actuarial value of assets is recognized	20 % of the difference between the market value of assets and the expected actuarial value of assets is recognized
Amortization Method:	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay	Level Percent of Pay
Amortization Period:	28 Years, Closed	28 Years, Closed	28 Years, Closed	28 Years, Closed	28 Years, Closed
Payroll Growth Rate:	4.00%	4.00%	4.00%	4.00%	4.00%
Investment Return:	7.50%	7.50%	7.50%	7.50%	7.50%
Inflation:	3.25%	3.25%	3.25%	3.25%	3.25%
Salary Increase:	4.00%, average	4.00%, average	4.00%, average	4.00%, average	4.00%, average
Mortality:	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)	RP-2000 Combined Mortality Table, projected to 2013 with Scale BB (set back 1 year for females)
Healthcare Trend Rates:					
Pre-65	Initial trend starting at 7.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 5 years.	Initial trend starting at 7.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 5 years.	Initial trend starting at 7.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 5 years.	Initial trend starting at 7.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 5 years.	Initial trend starting at 7.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 5 years.
Post-65	Initial trend starting at 5.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 2 years.	Initial trend starting at 5.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 2 years.	Initial trend starting at 5.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 2 years.	Initial trend starting at 5.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 2 years.	Initial trend starting at 5.50% and gradually decreasing to an ultimate trend rate of 5.00% over a period of 2 years.

Development of Single Discount Rate

	KERS	KERS	CERS	CERS	SPRS
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	
As of June 30, 2017					
Single Discount Rate	5.83%	5.87%	5.84%	5.96%	6.01%
Long-Term Expected Rate of Return	6.25%	6.25%	6.25%	6.25%	6.25%
Long-Term Municipal Bond Rate (1)	3.56%	3.56%	3.56%	3.56%	3.56%
As of June 30, 2016					
Single Discount Rate	6.90%	7.20%	6.89%	7.37%	7.42%
Long-Term Expected Rate of Return	7.50%	7.50%	7.50%	7.50%	7.50%
Long-Term Municipal Bond Rate (1)	2.92%	2.92%	2.92%	2.92%	2.92%

Notes: 1 Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2017 (or as of June 30, 2016).

Schedule of Employers' OPEB Contributions - KERS Non-Hazardous (\$ In Thousands)

	1	2	3	4	
Fiscal Year Ending June 30	Actuarially Determined Contribution	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Actual Contributions as a Percentage of Covered Payroll
2017	\$133,024	\$152,356	\$(19,332)	\$1,593,097	9.56%
2016	121,899	135,816	(13,917)	1,529,249	8.88%
2015	130,455	135,940	(5,485)	1,544,234	8.80%
2014	208,881	166,610	42,271	1,577,496	10.56%
2013	286,143	165,331	120,812	1,644,409	10.05%
2012	297,904	156,057	141,847	1,644,897	9.49%
2011	294,898	129,336	165,562	1,731,633	7.47%
2010	376,556	102,528	274,028	1,815,146	5.65%
2009	362,707	82,711	279,996	1,754,413	4.71%
2008	\$558,746	\$63,378	\$495,368	\$1,837,873	3.45%

Notes: 1. Data for years prior to 2017 are based on contribution data provided in the 2016 CAFR, based on calculations provided by the prior actuary. 2. Actuarially determined contribution for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 3. Employer contributions do not include the expected implicit subsidy. 4. Based on derived compensation for fiscal year ending 2017 using the provided employer insurance contribution information.

Schedule of Employers' OPEB Contributions - KERS Hazardous (\$ In Thousands)

	1	2	3	4	
Fiscal Year Ending June 30	Actuarially Determined Contribution	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Actual Contributions as a Percentage of Covered Payroll
2017	\$4,688	\$5,620	\$(932)	\$171,087	3.28%
2016	9,186	16,766	(7,580)	147,563	11.36%
2015	13,152	14,882	(1,730)	128,680	11.57%
2014	15,627	23,874	(8,247)	129,076	18.50%
2013	26,253	25,682	571	132,015	19.45%
2012	28,326	24,538	3,788	131,977	18.59%
2011	29,585	19,953	9,632	133,054	15.00%
2010	35,045	22,241	12,804	143,558	15.49%
2009	34,670	20,993	13,677	146,044	14.37%
2008	\$51,215	\$22,071	\$29,144	\$148,710	14.84%

Notes: 1. Data for years prior to 2017 are based on contribution data provided in the 2016 CAFR, based on calculations provided by the prior actuary. 2. Actuarially determined contribution for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 3. Employer contributions do not include the expected implicit subsidy. 4. Based on derived compensation for fiscal year ending 2017 using the provided employer insurance contribution information.

Schedule of Employers' OPEB Contributions - CERS Non-Hazardous (\$ In Thousands)

	1	2	3	4	
Fiscal Year Ending June 30	Actuarially Determined Contribution	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Actual Contributions as a Percentage of Covered Payroll
2017	\$122,270	\$120,712	\$1,558	\$2,480,130	4.87%
2016	110,987	111,836	(849)	2,352,762	4.75%
2015	119,511	119,444	67	2,296,716	5.20%
2014	130,652	123,278	7,374	2,272,270	5.43%
2013	195,561	159,993	35,568	2,236,277	7.15%
2012	214,421	171,925	42,496	2,236,546	7.69%
2011	213,429	186,886	26,543	2,276,596	8.21%
2010	266,331	175,764	90,567	2,236,855	7.86%
2009	264,734	131,476	133,258	2,183,612	6.02%
2008	\$406,542	\$202,113	\$204,429	\$2,166,613	9.33%

Notes: 1. Data for years prior to 2017 are based on contribution data provided in the 2016 CAFR, based on calculations provided by the prior actuary. 2. Actuarially determined contribution for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 3. Employer contributions do not include the expected implicit subsidy. 4. Based on derived compensation for fiscal year ending 2017 using the provided employer insurance contribution information.

Schedule of Employers' OPEB Contributions - CERS Hazardous (\$ In Thousands)

	1	2	3	4	
Fiscal Year Ending June 30	Actuarially Determined Contribution	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Actual Contributions as a Percentage of Covered Payroll
2017	\$53,131	\$51,537	\$1,594	\$542,710	9.50%
2016	64,253	67,619	(3,366)	492,851	13.72%
2015	69,103	71,778	(2,675)	483,641	14.84%
2014	74,360	74,792	(432)	479,164	15.61%
2013	102,011	85,319	16,692	461,673	18.48%
2012	110,763	92,564	18,199	464,229	19.94%
2011	109,227	98,592	10,635	466,964	21.11%
2010	129,227	84,536	44,691	466,549	18.12%
2009	126,757	71,413	55,344	469,315	15.22%
2008	\$168,724	\$90,533	\$78,191	\$474,241	19.09%

Notes: 1. Data for years prior to 2017 are based on contribution data provided in the 2016 CAFR, based on calculations provided by the prior actuary. 2. Actuarially determined contribution for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 3. Employer contributions do not include the expected implicit subsidy. 4. Based on derived compensation for fiscal year ending 2017 using the provided employer insurance contribution information.

Schedule of Employer's OPEB Contributions - SPRS (\$ In Thousands)

	1	2	3	4	
Fiscal Year Ending June 30	Actuarially Determined Contribution	Total Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Actual Contributions as a Percentage of Covered Payroll
2017	\$9,222	\$9,222	\$-	\$48,873	18.87%
2016	8,553	10,237	(1,684)	45,551	22.47%
2015	9,890	10,382	(492)	45,765	22.69%
2014	20,879	14,493	6,386	44,616	32.48%
2013	27,234	16,829	10,405	45,256	37.19%
2012	28,247	11,960	16,287	48,373	24.72%
2011	25,773	11,051	14,722	48,693	22.70%
2010	30,302	8,643	21,659	51,507	16.78%
2009	29,325	7,643	21,682	51,660	14.79%
2008	\$43,470	\$7,513	\$35,957	\$53,269	14.10%

Notes: 1. Data for years prior to 2017 are based on contribution data provided in the 2016 CAFR, based on calculations provided by the prior actuary. 2. Actuarially determined contribution for fiscal year ending 2017 is based on the contribution rate calculated with the June 30, 2015, actuarial valuation. 3. Employer contributions do not include the expected implicit subsidy. 4. Based on derived compensation for fiscal year ending 2017 using the provided employer insurance contribution information.

Money-Weighted Rates of Return

In accordance with GASB Statement No. 67, Financial Reporting for Pension Plans, and GASB Statement No. 74, *Financial Reporting for Post Employment Benefit Plans Other than Pension Plan*, 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.

See below for the money-weighted rates of return as of June 30, 2017, 2016, 2015, and 2014, as calculated by the custodial bank, BNY-Mellon:

Money - Weighted Rates of Return						
	KERS	KERS	CERS	CERS	SPRS	
	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous		
Pension Funds						
2017	12.08%	13.45%	13.80%	13.72%	12.50%	
2016	-0.97%	-0.33%	-0.62%	-0.46%	-1.76%	
2015	1.89%	1.69%	1.65%	1.88%	1.71%	
2014	15.50%	15.65%	15.56%	15.50%	15.66%	
Insurance Fund						
2017	13.77%	13.75%	13.67%	13.69%	13.69%	

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

Additional Reporting Schedules

Schedule of Administrative Expenses For the Fiscal Years Ended June 30 *(\$ In Thousands)*

	2017	2016
Personnel		
Salaries and Per Diem	\$13,999	\$14,685
Pension, Insurance Related Benefits	10,014	8,947
Unemployment Compensation	-	13
Tuition Assistance	18	27
Total Personnel	24,031	23,672
Contractual		
Actuarial Services	334	450
Audit Services	152	99
Healthcare	10	15
Legal Counsel	571	415
Medical Review Services	420	339
Miscellaneous	57	112
Total Contractual	1,544	1,430
Communication		
Printing	206	172
Telephone	191	201
Postage	471	276
Travel	61	113
Total Communication	929	762
Internal Audit		
Travel/Conferences	1	4
Dues/Subscriptions	1	1
Miscellaneous	2	1
Total Internal Audit	4	6
Investments-Pension Fund		

	2017	2016
Travel/Conferences	34	29
Dues/Subscriptions	12	6
Contractual	-	189
Miscellaneous	1	5
Tuition	2	6
Legal	380	153
Total Investments	429	388
Rentals		
Office Space	743	731
Equipment	85	69
Total Rentals	828	800
Information Technology		
Software	320	456
Hardware	878	1,006
Services	1,594	1,237
Total Information Technology	2,792	2,699
Miscellaneous		
Utilities	211	217
Supplies	119	75
Insurance	235	255
Dues & Subscriptions	46	38
Maintenance	4	4
Other	17	17
Total Miscellaneous	632	606
Depreciation/Amortization	1,920	1,937
Total Pension Fund Administrative Expense	33,109	32,300
Healthcare Fees	2,202	2,038
Total Insurance Fund Administrative Expense	2,202	2,038
Total Administrative Expenses	\$35,311	\$34,338

Schedule of Direct Investment Expenses For the Fiscal Years Ended June 30

(\$ In Thousands)

	2017	2016
PENSION FUNDS		
Security Lending Fees		
Borrower (Income) Rebates	\$734	\$100
Lending Agent Fees	351	680
Total Security Lending	\$1,085	\$780
Contractual Services		
Investment Management	53,780	51,711
Private Equity Performance Fees	29,651	7,930
Security Custody	1,084	945
Investment Consultant	1,005	1,141
Total Contractual Services	\$85,520	\$61,727
INSURANCE FUND		
Security Lending Fees		
Borrower (Income) Rebates	187	76
Lending Agent Fees	133	222
Total Security Lending	\$320	\$298
Contractual Services		
Investment Management	23,094	19,508
Private Equity Performance Fees	10,007	8,281
Security Custody	718	600
Investment Consultant	409	428
Total Contractual Services	\$34,228	\$28,817
Total Investment Expenses	\$121,153	\$91,622

Schedule of Professional Consultant Fees For the Fiscal Years Ended June 30

(\$ In Thousands)

	2017	2016
Actuarial Services	\$344	\$450
Medical Review Services	420	339
Audit Services	152	99
Legal Counsel	951	568
Healthcare	10	15
Miscellaneous	57	112
Total	\$1,934	\$1,583

REPORT 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



REPORT OF INDEPENDENT AUDITORS

Board of Trustees
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited, in accordance with 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 Kentucky Retirement Systems (KRS) as of and for the fiscal year ended June 30, 2017, 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 7, 2017.

Internal Control Over Financial Reporting

In planning and performing our audit of the 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 over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting 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 over financial reporting that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified. We did identify a deficiency in internal control, described in the accompanying schedule of finding and response that we consider to be a significant deficiency as item 2017-001.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether KRS' combining financial statements are free from 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 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 disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

We noted certain matters that we have reported to management of KRS in a separate letter dated December 7, 2017.

KRS' Response to Finding

KRS' response to the finding identified in our audit is described in the accompanying schedule of finding and response. KRS' response was not subjected to the auditing procedures applied in the audit of the combining financial statements and, accordingly, we express no opinion on it.

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 results 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 *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Dean Dotson Allen Ford, PLLC

December 7, 2017
Lexington, Kentucky

SCHEDULE OF FINDING AND RESPONSE

FOR THE FISCAL YEAR ENDED JUNE 30, 2017

2017-01: Member and Employer Contribution Accruals

Criteria or specific requirement

The calculation of member and employer contributions to be accrued as of June 30, 2017 should reflect the actual contributions received related to the current fiscal year, but received subsequent to the end of the fiscal year.

Condition, Context and Cause

During our audit, we noted that the accrual calculation performed at year end for member and employer contributions was calculated using an estimate based upon the contributions received in the last month of the fiscal year. Due to staffing turnover during the year, some employees have transitioned to new positions, and this resulted in an estimate for the accrual being used instead of using actual information from the month subsequent to the fiscal year end. The primary cause of the understatement of the accrual was due to several employer contribution corrections related prior months being processed in June 2017, thus reducing the employer contributions in June 2017, causing the estimate to be understated.

Effect

Since the employer contributions in June 2017 were reduced by the corrections related to prior months, it resulted in an understatement of contributions receivable and contributions by approximately \$17.1 million and \$4.9 million for Pension Funds and Insurance Fund, respectively.

Recommendation

We recommend that management prepare written instructions to be included as part of the KRS's accounting policies and procedures manual and implement additional training for staff regarding the calculation and review of accruals and closing processes, to ensure that estimates made at the fiscal year end are consistent with actual amounts in the subsequent period. In addition, we recommend that management more closely monitor accrual accounts throughout the financial reporting process.

Management Response and Corrective Action Plan

Management consulted with their actuarial firm regarding the under accrual and concluded the understatement noted above was not material to the combining financial statements, as it resulted in the net position for the Pension Funds to be understated by 1.64% and total assets to be understated by 0.14%. The impact on the Insurance Fund was an understatement of 0.88% for the net position and 0.10% for total assets. Accounting management has updated their procedures to review employer contribution history and more accurately validate the final year-end accrual.