REPORT OF THE AUDIT OF THE KENTUCKY TEACHERS' RETIREMENT SYSTEM

For The Fiscal Year Ended June 30, 2014



ADAM H. EDELEN AUDITOR OF PUBLIC ACCOUNTS www.auditor.ky.gov

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ADAM H. EDELEN AUDITOR OF PUBLIC ACCOUNTS

Board of Trustees Kentucky Teachers' Retirement System Frankfort, Kentucky

Independent Auditor's Report

Report on the Financial Statements

We have audited the accompanying financial statements of the Kentucky Teachers' Retirement System, a component unit of the Commonwealth of Kentucky, as of and for the year ended June 30, 2014, and the related notes to the financial statements, which collectively comprise the Kentucky Teachers' Retirement System basic financial statements as listed in the table of contents.

Management Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these 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 financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements of the 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 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 financial statements.

209 St. Clair Street Frankfort, KY 40601-1817

Board of Trustees Kentucky Teachers' Retirement System

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Kentucky Teachers' Retirement System, a component unit of the Commonwealth of Kentucky, as of June 30, 2014 and the changes in fiduciary net position for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Emphasis-of-Matter

Reporting Entity

As discussed in Note 1, the financial statements present only the Kentucky Teachers' Retirement System, and are not intended to present fairly the financial position of the Commonwealth of Kentucky, or the results of its operations in conformity with accounting principles generally accepted in the United States of America.

GASB 67

As discussed in Note 2 to the financial statements, during the year ended June 30, 2014, the Kentucky Teachers' Retirement System adopted Governmental Accounting Standards Board Statement 67, Financial Reporting for Pension Plans. Our opinion is not modified with respect to this matter.

Comparative Financial Statements

The financial statements of Kentucky Teachers' Retirement Systems for the year ended June 30, 2013, were audited by other auditors whose report dated December 16, 2013, stated that the fiduciary net position as of June 30, 2013 and changes in fiduciary net position for the year then ended were in conformity with accounting principles generally accepted in the United States of America. The financial statements for the year then ended, were audited by other auditors whose report, dated December 16, 2013, expressed an unmodified opinion on those statements.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis (pages 7 through 11) and the Schedule of Changes in Net Pension Liability (page 57), Schedule of Net Pension Liability (page 58), Schedule of Employer Contributions (page 58) Schedule of Investment Returns (page 59), Medical Insurance Schedule of Funding Progress and Schedule of Employer Contributions (page 60), and Life Insurance Schedule of Funding Progress and Schedule of Employer Contributions (page 61) be presented to supplement the basic financial statements. Such information, although not a part of the basic 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 financial statements in an appropriate

Board of Trustees Kentucky Teachers' Retirement System

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 financial statements, and other knowledge we obtained during our audit of the basic 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.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Kentucky Teachers' Retirement System's basic financial statements. The additional supporting schedules (page 65 through 66) are presented for purposes of additional analysis and are not a required part of the basic financial statements. The Schedule of Administrative Expenses, Schedule of Professional Services and Contracts, and Schedule of Contracted Investment Management Expenses are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic 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 financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Administrative Expenses, Schedule of Professional Services and Contracts, and Schedule of Contracted Investment Management Expenses are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 15, 2014 on our consideration of the Kentucky Teachers' Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Kentucky Teachers' Retirement System's internal control over financial reporting and compliance.

Respectfully submitted

Adam H. Edelen Auditor of Public Accounts

December 15, 2014

MANAGEMENT'S DISCUSSION AND ANALYSIS

KENTUCKY TEACHERS' RETIREMENT SYSTEM MANAGEMENT'S DISCUSSION AND ANALYSIS

This discussion and analysis of The Teachers' Retirement System of the State of Kentucky (Kentucky Teachers' Retirement System, KTRS, System, or Plan) financial performance provides an overview of the defined benefit and medical insurance plans' financial year ended June 30, 2014. Please read it in conjunction with the respective financial statements, which begin on page 14.

USING THIS FINANCIAL REPORT

Because of the long-term nature of the defined benefit retirement annuity plan, and the medical and life insurance plans, financial statements alone cannot provide sufficient information to properly reflect the ongoing perspective of the System. The Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position (on pages 14-17) provide information about the activities of the defined benefit retirement annuity plan, medical insurance plan, life insurance plan and the tax-sheltered annuity plan as a whole. The Kentucky Teachers' Retirement System is the fiduciary of funds held in trust for its members.

The Required Supplementary Information includes historical trend information about the funded status of the defined benefit retirement annuity plan. The Supporting Schedules section includes historical trend information about the actuarial funded status of the medical insurance and life insurance plans from a long-term, ongoing plan perspective and the progress made in accumulating sufficient assets to pay benefits and insurance premiums when due. The Schedules of Employer Contributions present historical trend information about the required contributions of employers and the contributions made by employers 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 TEACHERS' RETIREMENT SYSTEM AS A WHOLE

In the fiscal year ended June 30, 2014, Kentucky Teachers' Retirement System's combined fiduciary net position increased by \$2,107 million – from \$16,613.4 million in 2013 to \$18,720.4 million in 2014. In 2012, the combined net position totaled \$15,229 million. The following summaries focus on fiduciary net position and changes in fiduciary net position of Kentucky Teachers' Retirement System's defined benefit retirement annuity plan, medical insurance plan, life insurance plan and other funds.

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

		Defi	ned Benefit P	an]	Medical	Insurance	Plan	Life Ins	urance F	und
		2014	2013	2012	2	2014	2013	2012	 2014	2013	2012
Cash & Investments	\$	18,426.8	\$ 16,549.7	\$ 15,123.6	\$	536.2	\$ 456.5	\$ 344.9	\$ 89.7	\$ 88.8	\$ 91.1
Receivables		310.5	173.0	133.4		12.4	16.8	16.3	1.1	1.1	1.1
Capital Assets		11.5	9.2	6.8							
Total Assets		18,748.8	16,731.9	15,263.8		548.6	473.3	361.2	 90.8	89.9	92.2
Total Liabilities		(656.2)	(623.1)	(466.7)		(12.6)	(59.6)	(22.5)			
Net Position	\$	18,092.6	\$ 16,108.8	\$ 14,797.1	\$	536.0	\$ 413.7	\$ 338.7	\$ 90.8	\$ 89.9	\$ 92.2
	*1	otals	2014	201	13	20 2	12				
	Cash & Inv	estments	\$ 19,05	2.7 \$ 17,0	95.0	\$15,5	59.6				
	Receivables		· · · · ·	,	90.9	· ·	50.8				
	Capital Ass	ets	1	1.5	9.2		6.8				
	Total Ass	ets	\$ 19,38	8.2 \$ 17,2	.95.1	15,7	17.2				
	Total Liab	ilities	(66	8.8) (6	582.7)	(48	9.20)				
	Net Positio	n	\$ 18,71	9.4 \$ 16,6	512.4	\$15,2	28.0				

Summary of Fiduciary Net Position (In Millions)

The fiduciary net position of the defined benefit retirement annuity plan increased by 12.3 percent (\$18,092.6 million compared to \$16,108.8 million) and in 2012, the fiduciary net position of the defined benefit plan totaled \$14,797.1 million. The increases are primarily due to improvements in market conditions which resulted in a net investment income increase of \$.8 billion more than 2013. The 2014 amount was \$2.5 billion more than 2012. The defined benefit retirement annuity plan assets are restricted to providing monthly retirement allowances to members and their beneficiaries. Fiduciary net position of the medical insurance plan increased by 29.6 percent (\$536.0 million compared to \$413.7 million) primarily due to contributions from members and employers exceeding insurance expenses due to legislation passed in 2010. This compares to 2012 where fiduciary net position of the medical insurance fund totaled \$338.7 million. Plan assets are restricted to providing hospital and medical insurance benefits to members and their spouses.

^{*}Other Funds consisting of the 403(b) Tax Shelter Plan, the Excess Benefit Fund and the Losey Scholarship fund had a combined plan net position of \$1.0 million for year ended 2014, and .9 million for years ended 2013 and 2012.

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KENTUCKY TEACHERS' RETIREMENT SYSTEM MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

Summary of Changes in Fiduciary Net Position (In Millions)

- Additions:	<u>2014</u>	2013		2012								
Additions:				2012		2014	2013	2012	2	014	2013	2012
Member Contributions	\$ 305.0	\$ 30	4.7 §	\$ 309.8	\$	135.2	\$ 119.8	\$ 100.3	\$		\$	\$
Employer Contributions	563.3	56	8.2	557.3		157.7	166.6	174.0		1.0	1.7	1.7
Net Investment Income (loss)	2,803.2	2,03	9.9	309.7		67.7	30.7	(4.0)		4.6	0.7	6.4
Other Income						4.9		3.8				
Total Additions	3,671.5	2,91	2.8	1,176.8		365.5	317.1	274.1		5.6	2.4	8.1
Deductions:												
Benefit Payments	1,654.4	1,57	0.7	1,482.9						4.7	4.6	4.4
Refunds	25.5	2	2.1	19.5								
Administrative Expense	7.9		8.4	7.8		1.1	1.3	1.2				
Insurance Expenses						242.1	240.9	229.0				
Total Deductions	1,687.8	1,60	1.2	1,510.2	. <u> </u>	243.2	242.2	230.2		4.7	4.6	4.4
Increase/(Decrease) in Net Position	\$ 1,983.7	\$ 1,31	1.6 \$	\$ (333.4)	\$	122.3	\$ 74.9	\$ 43.9	\$	0.9	\$ (2.2)	\$ 3.7
Totals 20	<u>14 2</u>	2013	<u>201</u>	12								
Additions:												
Member Contributions \$	440.2 \$	424.5	\$	410.1								
Employer Contributions	722.0	736.5		733.0								
	2,875.5	2,071.3		312.1								
Other Income	4.9			3.8								
Total Additions 4	4,042.6	3,232.3	1	,459.0								
Deductions:												
	1,659.1	1,575.3	1	,487.3								
Refunds	25.5	22.1	1	19.5								
Administrative Expense	9.0	9.7		9.0								
Insurance Expenses	242.1	240.9		229.0								
	1,935.7 \$	1,848.0	\$ 1	,744.8								
Increase/(Decrease) in Net Position \$ 2	2,106.9 \$	1,384.3	\$	(285.8)								

*Other Funds consisting of the 403(b) Tax Shelter Plan, the Excess Benefit Fund and the Losey Scholarship fund had a combined plan net position of \$1.0 million for years ended 2014, and .9 million for years ended 2013 and 2012.

DEFINED BENEFIT RETIREMENT ANNUITY PLAN ACTIVITIES

Retirement contributions are calculated by applying a percentage factor to salary and are paid monthly by each member. Members may also pay contributions to repurchase previously refunded service credit or to purchase various types of elective service credit.

KENTUCKY TEACHERS' RETIREMENT SYSTEM MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

In 2014, employer contributions totaled \$563.3 million, a net decrease of \$4.9 million from the prior fiscal year. The decrease was due to declining amortization payments from the State on prior benefit improvements. In 2013, employer contributions increased \$10.9 million compared to the prior fiscal year due to an increased amount needed from the State to match contributions made by members.

In 2014, the System experienced an increase in net investment income compared to the previous year (\$2,803.2 million compared to \$2,039.9 million). For 2012, net investment income totaled \$309.7 million. The increase in the fair value of investments is mainly due to favorable market conditions for the year ended June 30, 2014. Total deductions in 2014 increased \$86.6 million. The increase was caused principally by an increase of \$83.7 million in defined benefit payments. Members who were drawing benefits as of June 2014 received an increase of one and one-half percent to their retirement allowances in July 2014. Also, there was an increase of 1,170 members and beneficiaries on the retired payroll as of June 30, 2014.

OTHER POST EMPLOYMENT BENEFIT ACTIVITIES

During the 2014 fiscal year, the medical insurance plan member contributions increased \$15.4 million and employer contributions decreased \$8.9 million from fiscal year 2013. The member contributions increased primarily due to the implementation of the Shared Responsibility Plan beginning July 1, 2010 which includes increased contributions from active and retired members, employers and the state. The employer contributions decreased due to less transition funding paid by the State as the Shared Responsibility Plan phases in until the 2016 fiscal year.

Net investment income increased \$37 million from \$30.7 million in 2013 to \$67.7 million in 2014. In 2012, net investment income totaled a negative \$4 million.

The life insurance plan has an actuarial valuation conducted independently from the defined benefit plan. Total life insurance benefits paid for 2014, 2013, and 2012 were \$4.7, \$4.6, and \$4.4 million respectively.

HISTORICAL TRENDS

Accounting standards require that the Statement of Fiduciary Net Position present asset values at fair value and include only benefits and refunds due plan members and beneficiaries and accrued investment and administrative expenses as of the reporting date. Information required according to new accounting standards regarding the funded status of the defined benefit retirement annuity plan is presented in Note 4 of the financial statements. The blended discount rate mandated by the new accounting standards result in a lower funding level when compared to the actuarially determined funded levels reported in past years. The Schedule of Employer Contributions is provided in the Required Supplementary Information.

The actuarial funding of the medical insurance and life insurance plans is provided in the Schedule of Funding Progress presented in the Required Supplementary Information. The asset value, stated in the Schedule of Funding Progress, is determined by the System's independent actuary. The actuarial accrued liability is calculated using the entry age cost method. Although the medical insurance plan continues to have a large unfunded actuarial liability, the current obligations are being met by current

KENTUCKY TEACHERS' RETIREMENT SYSTEM MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

funding. Effective July 1, 2010 the Shared Responsibility Plan for funding retiree health benefits requires members, retirees, participating employers and the state to make contributions for pre-funding retiree medical benefits. Annual required contributions of the medical insurance plan are provided in the Schedule of Employer Contributions presented in the Required Supplementary Information and a shortfall of employer contributions has resulted in an accumulated net Other Post Employment Benefit obligation of \$1,503,952,786 as of June 30, 2014.

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FINANCIAL STATEMENTS

KENTUCKY TEACHERS' RETIREMENT SYSTEM STATEMENT OF FIDUCIARY NET POSITION As of June 30, 2014

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	Total
ASSETS	Denent I fan		Insurance I fair	Tullus	10ta1
Cash	\$ 63,110,212	\$ 2,954,897	\$ 487,301	\$ 52,939	\$ 66,605,349
Prepaid Expenses	70,971	20,000			90,971
Receivables					
Contributions	40,339,941	7,059,521	110,926		47,510,388
Due From Other Trust Funds	1,177,057				1,177,057
State of Kentucky	54,812,142	2,983,504	65,549		57,861,195
Investment Income	44,000,029	1,152,675	939,004	2,146	46,093,854
Investment Sales Receivable	169,491,434	1,227,111			170,718,545
Other Receivables	653,721				653,721
Total Receivables	310,474,324	12,422,811	1,115,479	2,146	324,014,760
Investments, at fair value (See Note 5)					
Short Term Investments	784,994,421	112,371,006	2,755,752	468,433	900,589,612
Bonds and Mortgages	3,242,639,057	21,234,589	86,494,824	243,188	3,350,611,658
Equities	11,266,188,790	300,857,011		205,506	11,567,251,307
Alternative Investments	643,890,290	4,251,239			648,141,529
Real Estate	733,045,846				733,045,846
Additional Categories	1,233,210,529	94,456,754			1,327,667,283
Total Investments, at fair value	17,903,968,933	533,170,599	89,250,576	917,127	18,527,307,235
Invested Security Lending Collateral	459,645,254				459,645,254
Capital Assets, at cost net of accumulated					
depreciation of \$3,393,371.51 (See Note 2)	11,495,190				11,495,190
Total Assets	18,748,764,884	548,568,307	90,853,356	972,212	19,389,158,759
LIABILITIES					
Accounts Payable	1,815,576	4,059,733	780	8	5,876,097
Due To Other Trust Funds		1,145,785	29,606	1,665	1,177,056
Insurance Claims Payable		120,992			120,992
Revenues Collected in Advance		3,624,881			3,624,881
Investment Purchases Payable	194,733,439	3,621,466			198,354,905
Obligations under Securities Lending	459,645,254				459,645,254
Total Liabilities	656,194,269	12,572,857	30,386	1,673	668,799,185
Net Position - Restricted for Pension and					
Other Post-Employment Benefits	\$18,092,570,615	\$ 535,995,450	\$ 90,822,970	\$970,539	\$18,720,359,574

The Combining Statement of Fiduciary Net Position-Other Funds is presented on page 19. The accompanying notes are an integral part of the financial statements.

KENTUCKY TEACHERS' RETIREMENT SYSTEM STATEMENT OF FIDUCIARY NET POSITION As of June 30, 2013

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	Total
Assets					
Cash	\$ 26,650,916	\$ 6,879,174	\$ 226,483	\$ 68,943	\$ 33,825,516
Prepaid Expenses	125,364	147,000			272,364
Receivables					
Contributions	38,461,507	9,771,489	22,945		48,255,941
Due from Other Trust Funds	1,300,238				1,300,238
State of Kentucky	31,975,561	3,350,147	69,683		35,395,391
Investment Income	48,247,677	1,375,970	1,039,330	1,607	50,664,584
Investment Sales Receivable	52,391,569	2,348,249			54,739,818
Other Receivables	656,500				656,500
Total Receivables	173,033,052	16,845,855	1,131,958	1,607	191,012,472
Investments at fair value (See Note 5)					
Short Term Investments	796,485,774	56,915,874	1,907,900	541,819	855,851,367
Bonds and Mortgages	3,093,270,830	64,728,260	86,715,442	238,626	3,244,953,158
Equities	10,102,552,862	243,022,751		120,315	10,345,695,928
Alternative Investments	540,739,121	1,255,715			541,994,836
Real Estate	642,611,173				642,611,173
Additional Categories	882,969,785	83,487,054			966,456,839
Total Investments, at fair value	16,058,629,545	449,409,654	88,623,342	900,760	16,597,563,301
Invested Security Lending Collateral	464,229,713				464,229,713
Capital Assets, at cost net of accumulated					
depreciation of \$2,536,306 (See Note 2)	9,249,324				9,249,324
Total Assets	16,731,917,914	473,281,683	89,981,783	971,310	17,296,152,690
Liabilities					
Accounts Payable	1,513,830	4,058,236			5,572,066
Due To Other Trust Funds		1,275,206	24,425	607	1,300,238
Insurance Claims Payable		137,000			137,000
Revenues Collected in Advance		49,373,905			49,373,905
Investment Purchases Payable	157,366,066	4,771,571			162,137,637
Obligations Under Security Lending	464,229,713				464,229,713
Total Liabilities	623,109,609	59,615,918	24,425	607	682,750,559
Net Position - Restricted for Pension and					
Other Post-Employment Benefits	\$16,108,808,305	\$ 413,665,765	\$ 89,957,358	\$970,703	\$ 16,613,402,131

The Combining Statement of Plan Net Position-Other Funds is presented on page 20.

KENTUCKY TEACHERS' RETIREMENT SYSTEM STATEMENT OF CHANGES IN FIDUCIARY NET POSITION For The Fiscal Year Ended June 30, 2014

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	Total
ADDITIONS					
Contributions					
State of Kentucky	\$ 483,330,289	\$ 105,441,052	\$ 839,681	\$	\$ 589,611,022
Other Employers	79,995,960	52,247,362	166,410	80,000	132,489,732
Member	304,981,620	135,190,891			440,172,511
Total Contribution	868,307,869	292,879,305	1,006,091	80,000	1,162,273,265
Other Income					
Recovery Income		4,879,981			4,879,981
Investment Income					
Net Appreciation/(Depreciation) in FV of Inv	2,422,760,237	61,300,016	1,244,808	35,535	2,485,340,596
Interest	207,296,849	7,146,893	3,336,961	9,312	217,790,015
Dividends	179,227,537	5,237		3,172	179,235,946
Rental Income, Net	29,245,271				29,245,271
Securities Lending, Gross Earnings	2,708,225		197	77	2,708,499
Gross Investment Income	2,841,238,119	68,452,146	4,581,966	48,096	2,914,320,327
Less: Investment Expense	(37,177,750)	(711,083)	(9,062)	(93)	(37,897,988)
Less: Securities Lending Expense	(812,413)		(59)	(23)	(812,495)
Total Net Investment Income	2,803,247,956	67,741,063	4,572,845	47,980	2,875,609,844
Total Additions	3,671,555,825	365,500,349	5,578,936	127,980	4,042,763,090
DEDUCTIONS					
Benefits	1,654,375,700		4,692,000	127,564	1,659,195,264
Refunds of Contributions	25,461,843				25,461,843
Insurance Expenses		242,070,531			242,070,531
Administrative Expense	7,955,972	1,100,133	21,324	580	9,078,009
Total Deductions	1,687,793,515	243,170,664	4,713,324	128,144	1,935,805,647
Net Increase (Decrease)	1,983,762,310	122,329,685	865,612	(164)	2,106,957,443
Net Position-Restricted for Pension and					
Other Postemployment Benefits					
Beginning of year	16,108,808,305	413,665,765	89,957,358	970,703	16,613,402,131
Ending of year	\$ 18,092,570,615	\$ 535,995,450	\$ 90,822,970	\$ 970,539	\$ 18,720,359,574

The Combining Statement of Fiduciary Net Position-Other Funds is presented on page 19.

KENTUCKY TEACHERS' RETIREMENT SYSTEM STATEMENT OF CHANGES IN FIDUCIARY NET POSITION For The Fiscal Year Ended June 30, 2013

	Defined Benefit Plan	Medical Insurance	Life Insurance	Other Funds	Total
ADDITIONS					
Contributions					
State of Kentucky	\$ 486,936,783	\$ 129,586,274	\$ 1,392,223	\$	\$ 617,915,280
Other Employers	81,296,663	36,990,170	288,272	140,000	118,715,105
Member	304,738,728	119,795,780			424,534,508
Total Contributions	872,972,174	286,372,224	1,680,495	140,000	1,161,164,893
Other Income					
Recovery Income		34,976			34,976
Investment Income/(Loss)					
Net Appreciation/(Depreciation) in					
Fair Value of Investments	1,601,781,093	25,431,394	(2,822,147)	(18,885)	1,624,371,455
Interest	254,918,477	5,822,532	3,496,517	9,684	264,247,210
Dividends	184,104,556	20,949		1,507	184,127,012
Rental Income, Net	30,059,686				30,059,686
Securities Lending, Gross Earnings	3,077,116		390	3	3,077,509
Gross Investment Income/(Loss)	2,073,940,928	31,274,875	674,760	(7,691)	2,105,882,872
Less: Investment Expense	(33,143,497)	(556,039)			(33,699,536)
Less: Securities Lending Expense	(923,168)				(923,168)
Total Net Investment Income/(Loss)	2,039,874,263	30,718,836	674,760	(7,691)	2,071,260,168
Total Additions	2,912,846,437	317,126,036	2,355,255	132,309	3,232,460,037
DEDUCTIONS					
Benefits	1,570,722,924		4,614,718	114,632	1,575,452,274
Refunds of Contributions	22,059,094				22,059,094
Insurance Expenses		240,931,618			240,931,618
Administrative Expense	8,377,003	1,275,206	24,425	607	9,677,241
Total Deductions	1,601,159,021	242,206,824	4,639,143	115,239	1,848,120,227
Net Increase(Decrease)	1,311,687,416	74,919,212	(2,283,888)	17,070	1,384,339,810
Net Position - Restricted for Pension and Other Postemployment Benefits					
Beginning of Year	14,797,120,889	338,746,553	92,241,246	953,633	15,229,062,321
End of Year	\$ 16,108,808,305	\$ 413,665,765	\$ 89,957,358	\$ 970,703	\$ 16,613,402,131

The Combining Statement of Plan Net Position-Other Funds is presented on page 20.

KENTUCKY TEACHERS' RETIREMENT SYSTEM COMBINING STATEMENT OF FIDUCIARY NET POSITION As Of Fiscal Year Ended June 30, 2014 Other Funds

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	Total
Assets				
Cash	\$	\$ 52,940	\$	\$ 52,940
Receivables				
Investment Income			2,145	2,145
Investments at Fair Value				
Short Term Investments	377,268		91,165	468,433
Bonds and Mortgages			243,188	243,188
Equities			205,506	205,506
Total Investments	377,268		539,859	917,127
Total Assets	377,268	52,940	542,004	972,212
Liabilities				
Accounts Payable	3		5	8
Due to Other Trust Funds	99	435	1,131	1,665
Net Position - Restricted for Pension and				
Other Post-Employment Benefits	\$ 377,166	\$ 52,505	\$ 540,868	\$ 970,539

KENTUCKY TEACHERS' RETIREMENT SYSTEM COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION For The Fiscal Year Ended June 30, 2014 Other Funds

	403(b)	Supplemental	Losey	T 4 1
Additions	Tax Shelter	Benefit Fund	Scholarship	Total
Contributions				
	\$	\$ 80,000	\$	\$ 80,000
Other Employers	Ф	\$ 80,000	\$	\$ 80,000
Investment Income/(Loss)				
Net Appreciation/(Depreciation) in				
Fair Value of Investments			35,535	35,535
Interest	234		9,078	9,312
Dividends			3,172	3,172
Securities Lending, Gross			77	77
Gross Investment Income/(Loss)	234		47,862	48,096
Less Securities Lending Expense			(23)	(23)
Less Investment Expense	(38)		(55)	(93)
Total Additions	196	80,000	47,784	127,980
Deductions				
Benefits	13,986	95,578	18,000	127,564
Administrative Expense	63	435	82	580
Total Deductions	14,049	96,013	18,082	128,144
Net Increase (Decrease)	(13,853)	(16,013)	29,702	(164)
Net Position - Restricted for Pension and				
Other Post-Employment Benefits				
Beginning of Year	391,019	68,518	511,166	970,703
End of Year	\$ 377,166	\$ 52,505	\$ 540,868	\$ 970,539

KENTUCKY TEACHERS' RETIREMENT SYSTEM COMBINING STATEMENT OF FIDUCIARY NET POSITION As Of Fiscal Year Ended June 30, 2013 Other Funds

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	Total
Assets				
Cash	\$	\$ 68,943	\$	\$ 68,943
Receivables				
Investment Income			1,607	1,607
Investments at Fair Value				
Short Term Investments	391,095		150,724	541,819
Bonds and Mortgages			238,626	238,626
Equities			120,315	120,315
Total Investments	391,095		509,665	900,760
Total Assets	391,095	68,943	511,272	971,310
Liabilities				
Due to Other Trust Funds	76	425	106	607
Net Position - Restricted for Pension and Other Post-Employment Benefits	\$ 391.019	\$ 68,518	\$ 511,166	\$ 970,703
Other i ost-Employment Denefits	\$ 371,019	φ 00,510	φ 511,100	φ 970,703

KENTUCKY TEACHERS' RETIREMENT SYSTEM COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION For The Fiscal Year Ended June 30, 2013 Other Funds

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	Total
Additions				
Contributions				
Other Employers	\$	\$ 140,000	\$	\$ 140,000
Investment Income/(Loss)				
Net Appreciation/(Depreciation) in				
Fair Value of Investments			(18,885)	(18,885)
Interest	448		9,236	9,684
Dividends			1,507	1,507
Securities Lending, Net			3	3
Total Net Investment Income/(Loss)	448		(8,139)	(7,691)
Total Additions	448	140,000	(8,139)	132,309
Deductions				
Benefits	14,260	80,372	20,000	114,632
Administrative Expense	76	425	106	607
Net Increase (Decrease)	(13,888)	59,203	(28,245)	17,070
Net Position - Restricted for Pension and				
Other Post-Employment Benefits				
Beginning of Year	404,907	9,315	539,411	953,633
End of Year	\$ 391,019	\$ 68,518	\$ 511,166	\$ 970,703

NOTES TO FINANCIAL STATEMENTS

NOTE 1 DESCRIPTION OF RETIREMENT ANNUITY PLAN

A. REPORTING ENTITY

The Teachers' Retirement System of the State of Kentucky (KTRS) was created by the 1938 General Assembly and is governed by Chapter 161 Section 220 through Chapter 161 Section 990 of the Kentucky Revised Statutes (KRS). KTRS is a blended component unit of the Commonwealth of Kentucky and therefore is included in the Commonwealth's financial statements. KTRS is a cost-sharing multiple-employer defined benefit plan with a special funding situation established to provide retirement annuity plan coverage for local school districts and other public educational agencies in the state.

KRS 161.250 provides that the general administration and management of KTRS, and the responsibility for its proper operation, is vested in a board of trustees. The board of trustees consists of the chief state school officer, the State Treasurer, and seven elected trustees. Four of the elected trustees are active teachers, two are not members of the teaching profession, and one is an annuitant of the retirement system.

B. PARTICIPANTS

As of June 30, 2014 a total of 208 employers participated in the plan. Employers are comprised of local school districts, Department of Education Agencies, universities, the Kentucky Community and Technical College System, and other educational organizations. The State under GASB No. 67 is recognized as a non-employer contributing entity providing the employer matching contributions for members employed by the local school districts and regional educational cooperatives.

According to KRS 161.220 "... any regular or special teacher, or professional occupying a position requiring certification or graduation from a four (4) year college or university ... " is eligible to participate in the System. The following illustrates the classifications of members:

	2014	2013
Active contributing members:		
Vested	48,836	48,620
Non-vested	24,571	26,211
Inactive members, vested	7,762	7,194
Inactive members, non-vested	27,689	22,848
Retirees and beneficiaries currently receiving benefits	48,576	47,406
	1 55 40 4	1.50.050
Total members, retirees, and beneficiaries	157,434	152,279

NOTE 1 DESCRIPTION OF RETIREMENT ANNUITY PLAN (CONTINUED)

C. BENEFIT PROVISIONS

For Members Before July 1, 2008:

Members become vested when they complete five (5) years of credited service. To qualify for monthly retirement benefits, payable for life, members must either:

- 1.) Attain age fifty-five (55) and complete five (5) years of Kentucky service, or
- 2.) Complete twenty-seven (27) years of Kentucky service.

Non-university members receive monthly payments equal to two percent (2%) (service prior to July 1, 1983) and two and one-half percent (2.5%) (service after July 1, 1983) of their final average salaries for each year of credited service. Non-university members who became members on or after July 1, 2002 will receive monthly benefits equal to two percent (2%) of their final average salary for each year of service if, upon retirement, their total service is less than ten (10) years. New members after July 1, 2002 who retire with ten (10) or more years of total service will receive monthly benefits equal to two and one-half percent (2.5%) of their final average salary for each year of service, including the first ten (10) years. In addition, non-university members who retire July 1, 2004 and later with more than thirty (30) years of service will have their multiplier increased for all years over thirty (30) from two and one-half percent (2.5%) to three percent (3%) to be used in their benefit calculation.

University employees receive monthly benefits equal to two percent (2%) of their final average salary for each year of credited service.

The final average salary is the member's five (5) highest annual salaries except members at least age fifty-five (55) with twenty-seven (27) or more years of service may use their three (3) highest annual salaries. For all members, the annual allowance is reduced by 5% per year from the earlier of age 60 or the date the member would have completed 27 years of service. The minimum annual service allowance for all members is \$440 multiplied by credited service.

For Members On or After July 1, 2008:

Members become vested when they complete five (5) years of credited service. To qualify for monthly retirement benefits, payable for life, members must either:

- 1.) Attain age sixty (60) and complete five (5) years of Kentucky service, or
- 2.) Complete twenty-seven (27) years of Kentucky service, or
- 3.) Attain age fifty-five (55) and complete ten (10) years of Kentucky service.

NOTE 1 DESCRIPTION OF RETIREMENT ANNUITY PLAN (CONTINUED)

The annual retirement allowance for non-university members is equal to: (a) one and seven tenths percent (1.7%) of final average salary for each year of credited service if their service is 10 years or less; (b) two percent (2.0%) of final average salary for each year of credited service if their service is greater than 10 years but no more than 20 years; (c) two and three tenths percent (2.3%) of final average salary for each year of credited service if their service is greater than 20 years of credited service if their service is greater than 20 years but no more than 26 years; (d) two and one half percent (2.5%) of final average salary for each year of credited service if their service is greater than 26 years but no more than 30 years; (e) three percent (3.0%) of final average salary for years of credited service greater than 30 years.

The annual retirement allowance for university members is equal to: (a) one and one-half percent (1.5%) of final average salary for each year of credited service if their service is 10 years or less; (b) one and seven tenths percent (1.7%) of final average salary for each year of credited service if their service is greater than 10 years but no more than 20 years; (c) one and eighty five hundredths percent (1.85%) of final average salary for each year of credited service is greater than 20 years but less than 27 years; (d) two percent (2.0%) of final average salary for each year of credited service is greater than or equal to 27 years.

The final average salary is the member's five (5) highest annual salaries except members at least age fifty-five (55) with twenty-seven (27) or more years of service may use their three (3) highest annual salaries. For all members, the annual allowance is reduced by 6% per year from the earlier of age 60 or the date the member would have completed 27 years of service.

Other Benefits:

The System provides post-employment medical benefits to retirees as fully described in Note 8. The System also provides disability benefits for vested members at the rate of sixty percent (60%) of the final average salary. A life insurance benefit, payable upon the death of a member, is \$2,000 for active contributing members and \$5,000 for retired or disabled members.

Cost of living increases are one and one-half percent (1.5%) annually. Additional ad hoc increases and any other benefit amendments must be authorized by the General Assembly.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. BASIS OF ACCOUNTING

The financial statements are prepared on the accrual basis of accounting. Member contributions and employer matching are recognized in the fiscal year due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

B. CASH

KTRS has seven cash accounts. At June 30, 2014, the retirement annuity cash account totaled \$34,981,587, the employer control cash account totaled \$27,413,166 and the administrative expense fund cash account was \$715,459 for a total of \$63,110,212 as carrying value of cash in the defined benefit plan. The medical insurance trust cash account totaled \$2,921,118 and the medical insurance claims cash account totaled \$33,779 for a total of \$2,954,897 as carrying value of cash in the medical insurance plan. The life insurance plan cash account totaled \$487,301 and the excess benefit fund cash account contained \$52,939. Therefore, the carrying value of cash was \$66,605,349 and the bank balance was \$64,193,257 and funds controlled by the Commonwealth of Kentucky of \$4,612,451. The variance is primarily due to outstanding checks and items not processed by the bank on June 30, 2014.

C. CAPITAL ASSETS

Capital assets are recorded at historical cost less straight-line accumulated depreciation. The classes of capital assets are furniture and equipment, the KTRS office buildings, and land. Furniture and equipment are depreciated over an average useful life of five (5) years. The office buildings are depreciated over forty years. The Pathway System will be capitalized and amortized or depreciated over ten years. The Pathway System will replace KTRS's legacy computer system and be KTRS's primary line of business information technology system. As of June 30, 2014, the project to build and implement the Pathway System was approximately sixty-five percent (65%) complete.

D. INVESTMENTS

Plan investments are reported at fair value. Fair value is the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller. Short-term securities are carried at cost, which approximates fair value. Fixed income and common and preferred stocks are generally valued based on published market prices and quotations from national security exchanges and securities pricing services. Real estate is primarily valued based on appraisals performed by independent appraisers. Alternative investments such as private equity, timberland, and other additional categories are valued using the most recent general partner statement of fair value based on independent appraisals, updated for any subsequent partnership interests' cash flows.

Purchase and sales of debt securities, equity securities, and short-term investments are recorded on the trade date. Real estate equity transactions are recorded on the settlement date. Upon sale of investments, the difference between sales proceeds and cost is reflected in the statement of changes in fiduciary net position. Investment expenses consist of investment manager and consultant fees along with fees for custodial services.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

E. COMPENSATED ABSENCES

Expenses for accumulated vacation days and compensatory time earned by the System's employees are recorded when earned. Upon termination or retirement, employees of the System are paid for accumulated vacation time limited to sixty (60) days and accumulated compensatory time limited to two hundred-forty (240) hours. As of June 30, 2014 and 2013 accrued compensated absences were \$1,058,460 and \$979,037.

F. RISK MANAGEMENT

Destruction of assets, theft, employee injuries and court challenges to administrative policy are among the various risks to which the System is exposed. In order to cover such risks the System carries appropriate insurance policies such as fire and tornado, employee bonds, fiduciary liability, worker's compensation and equipment insurance.

G. OTHER RECEIVABLES

KTRS allows qualified purchases of service credit to be made by installment payments not to exceed a five (5) year period. Revenue is recognized in the initial year of the installment contract agreement. The June 30, 2014 and 2013 installment contract receivables were \$653,721 and \$656,500.

H. USE OF ESTIMATES

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

I. INCOME TAXES

The defined benefit plan is organized as a tax-exempt retirement plan under the Internal Revenue Code. The tax sheltered annuity plan is no longer continued and will be fully terminated when all lifetime annuities have expired. The System's management believes that it has operated the plans within the constraints imposed by federal tax law.

J. RECENT PRONOUNCEMENTS

In June 2011, the GASB issued Statement No. 63, Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position. GASB Statement No. 63 provides financial

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

reporting guidance relative to deferred outflows of resources, a consumption of net assets by KTRS that is applicable to a future reporting period, and deferred inflows of resources, an acquisition of net assets by KTRS that is applicable to a future reporting period. GASB Statement No. 63 incorporates deferred outflows and inflows of resources into the definitions of the required components of the residual measure, renaming such measure as net position, rather than net assets. The provisions of GASB Statement No. 63 are effective for fiscal periods beginning after December 15, 2011 (the fiscal year ended June 30, 2013) and did not have a significant impact on the Systems' financial statements.

In April 2012, GASB issued Statement No. 65, Items Previously Reported as Assets and Liabilities. This pronouncement clarifies the appropriate reporting of deferred outflows of resources and deferred inflows of resources to ensure consistency in financial reporting. GASB Statement No. 65 is effective for fiscal years beginning after December 15, 2012 (the fiscal year ended June 30, 2014) and did not have a significant impact on the System's financial statements.

GASB Statement No. 67 which was adopted during the year ended June 30, 2014, addresses accounting and financial reporting requirements for pension plans. The requirements for GASB No. 67 require changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The implementation of GASB No. 67 did not significantly impact the accounting for accounts receivable and investment balances. The total pension liability, determined in accordance with GASB No. 67, is presented in Note 4 and in the Required Supplementary Information.

K. RECLASSIFICATIONS

Due to the implementation of GASB No. 67, certain 2013 amounts have been reclassified in conformity with the 2014 presentation regarding the amount paid by the State as a nonemployer contributing entity on the Statement of Changes in Fiduciary Net Position.

NOTE 3: CONTRIBUTIONS AND FUNDS OF THE SYSTEM

A. CONTRIBUTIONS

Contribution rates are established by Kentucky Revised Statutes. Non-university members are required to contribute 11.355 percent of their salaries to the System; university members are required to contribute 9.375 percent of their salaries. KRS 161.565 allows each university to reduce the contribution of its members by 2.215 percent; therefore, university members contribute 7.16 percent of their salary to KTRS. For members employed by local school districts, the State, as a non-employer contributing entity, contributes 13.105 percent of salary for those who joined before July 1, 2008 and 14.105 percent for those who joined thereafter.

NOTE 3: CONTRIBUTIONS AND RESERVES (CONTINUED)

Other participating employers are required to contribute the percentage contributed by members plus an additional 3.25 percent of members' gross salaries.

The member and employer contributions consist of retirement annuity contributions and other postemployment benefit contributions to the medical and life insurance plans. The member postemployment medical contribution is 2.25 percent. The employer post-employment medical contribution is .75 percent of member gross salaries. Also, after July 1, 2010 employers (other than the state) contribute 1.5 percent of members' salaries and the state contributes the net cost of health insurance premiums for new retirees after June 30, 2010 in the non-Medicare eligible group. If a member leaves covered employment before accumulating five (5) years of credited service, accumulated member contributions to the retirement annuity plan plus interest are refunded upon the member's request.

B. FUNDS OF THE SYSTEM

Teacher Savings Fund

This fund was established by KRS 161.420(2) as the Teacher Savings Fund and consists of contributions paid by university and non-university members. The fund also includes interest authorized by the Board of Trustees from the Guarantee Fund. The accumulated contributions of members that are returned upon withdrawal or paid to the estate or designated beneficiary in the event of death are paid from this fund. Upon retirement, the member's contributions and the matching state contributions are transferred from this fund to Allowance Reserve Fund, the fund from which retirement benefits are paid.

State Accumulation Fund

This fund was established by KRS 161.420(3) as the State Accumulation Fund and receives state appropriations to the Retirement System. The state matches an amount equal to members' contributions. State appropriations during the year are based on estimates of members' salaries. At year-end when actual salaries are known, the required state matching is also realized by producing either a receivable from or a payable to the State of Kentucky.

Allowance Reserve Fund

This fund was established by KRS 161.420(4) as the Allowance Reserve Fund, the source for retirement, disability, and survivor benefits paid to members of the System. These benefits are paid from the retired members' contributions until they are exhausted, at which time state matching contributions are used to pay the benefits. After an individual member's contributions and the state matching contributions have been exhausted, retirement benefits are paid from monies transferred from the Guarantee Fund.

NOTE 3: CONTRIBUTIONS AND RESERVES (CONTINUED)

Guarantee Fund

This fund was established by KRS 161.420(6) as the Guarantee Fund, to collect income from investments, state matching contributions of members withdrawn from the System, and state matching contributions for cost of living adjustments (COLAs). In addition, it receives money for which disposition is not otherwise provided. This fund provides interest to the other funds, benefits in excess of both members' and state matching contributions, monies for administrative expenses of the System, and deficiencies not covered by the other funds.

Administrative Expense

This fund was established by KRS 161.420(1) as the Expense Fund. Investment income transferred to this fund from the Guarantee Fund is used to pay the administrative expenses of the System. Administrative expenses are allocated among the funds based on benefits paid.

NOTE 4: NET PENSION LIABILITY OF EMPLOYERS

A. NET PENSION LIABILITY OF EMPLOYERS

The net pension liability (i.e., the retirement system's liability determined in accordance with GASB No. 67 less the fiduciary net position) as of June 30, 2014 is shown below.

Net Pension Liability of Employers (In Thousands)

			Plan Fiduciary		Net Pension	
				Net Position		Liability
	Total	Plan	Employers	As a % of		As a % of
Fiscal	Pension	Fiduciary	Net Pension	Total Pension	Covered	Covered
Year Ending	Liability	Net Position	Liability	Liability	Payroll	Payroll
June 30	А	В	(A-B)	(B/A)	С	[A-B/C]
2014	\$39,684,776	\$ 18,092,571	\$21,592,205	45.6%	\$3,443,138	627.1%

B. SUMMARY OF ACTUARIAL ASSUMPTIONS

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below.

Valuation Date	6/30/2013
Actuarial cost method	Entry Age

NOTE 4: NET PENSION LIABILITY OF EMPLOYERS (CONTINUED)

Actuarial Assumptions:			
Investment rate of return	7.50%, net of pension plan		
	investment expense, including inflation.		
Projected salary increases	4.00 - 8.20%, including inflation		
Inflation rate	3.50%		
Municipal Bond Index Rate	4.35%		
Single Equivalent Interest Rate	5.23%		

Mortality rates were based on the RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on a projection of Scale AA to 2020 with a setback of 1 year for females. The last experience study was performed in 2011 and the next experience study is scheduled to be conducted in 2016.

C. TARGET ALLOCATIONS

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by KTRS's investment consultant, are summarized in the following table:

	Target	Long-Term Expected	
Asset Class	Allocation	Real Rate of Return	
U.S. Equity	45.0%	6.4%	
Non U.S. Equity	17.0%	6.5%	
Fixed Income	24.0%	1.6%	
High Yield Bonds	4.0%	3.1%	
Real Estate	4.0%	5.8%	
Alternatives	4.0%	6.8%	
Cash	2.0%	1.5%	
Total	100.0%		

D. DISCOUNT RATE

The discount rate used to measure the total pension liability was 5.23%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current

NOTE 4: NET PENSION LIABILITY OF EMPLOYERS (CONTINUED)

contribution rates and the Employer contributions will be made at statutorily required rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members until the 2036 plan year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments through 2035 and a municipal bond index rate of 4.35% was applied to all periods of projected benefit payments after 2035. The Single Equivalent Interest Rate (SEIR) that discounts the entire projected benefit stream to the same amount as the sum of the present values of the two separate benefit payments streams was used to determine the total pension liability.

The following table presents the net pension liability of the System, calculated using the discount rate of 5.23%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.23%) or 1-percentage-point higher (6.23%) than the current rate:

(in thousands)	1% Decrease	Current Discount	1% Increase
	(4.23%)	Rate (5.23%)	(6.23%)
Systems' net pension liability	\$ 27,122,640	\$ 21,592,157	\$ 17,027,992

June 30, 2013 is the actuarial valuation date upon which the TPL is based. The TPL as of June 30, 2013 was determined using a discount rate of 5.16% which was based on a municipal bond index rate as of that date equal to 4.27%. An expected TPL is determined as of June 30, 2014 using standard roll forward techniques. The roll forward calculation adds the annual normal cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year and then applies the assumed interest rate for the year. The final TPL as of June 30, 2014 reflects that the assumed municipal bond index rate increase from 4.27% to 4.35%, resulting in a change in the SEIR from 5.16% to 5.23%. The impact of this change in the discount rate is a change in assumptions that is added to the expected TPL to determine the final TPL as of June 30, 2014.

NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS (Including Repurchase Agreements)

A. LEGAL PROVISIONS FOR INVESTMENTS

The following disclosures are meant to help the users of KTRS' financial statements assess the risks KTRS takes in investing member funds. The Board of Trustees and the Investment Committee are guided by asset allocation parameters that the Board approves through its powers as defined in KRS 161.430.
<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

KTRS administers a retirement annuity trust fund and a health insurance trust fund in accordance with state and federal law. KTRS provides service and disability retirement benefits, death and survivor benefits, health insurance benefits, and life insurance benefits for Kentucky public education employees and their beneficiaries. The trust funds managed by KTRS shall be referred to collectively as the "retirement system" unless the context requires a specific reference to a particular fund.

The asset allocation parameters for the retirement annuity trust fund are set forth in Title 102, Chapter 1:175, Section 2 and Section 3 of the Kentucky Administrative Regulations as follows:

- There shall be no limit on the amount of investments owned by the retirement annuity trust fund if the investments are guaranteed by the United States government.
- Not more than thirty-five percent (35%) of the assets of the retirement annuity trust fund at fair value shall be invested in corporate debt obligations.
- Not more than ten percent (10%) of the assets of the retirement annuity trust fund at fair value shall be invested in foreign debt.
- Not more than sixty-five percent (65%) of the assets of the retirement annuity trust fund at fair value shall be invested in common stocks or preferred stocks.
- Not more than twenty-five percent (25%) of the assets of the retirement annuity trust fund at fair value shall be invested in a stock portfolio designed to replicate a general stock index.
- Not more than thirty percent (30%) of the assets of the retirement annuity trust fund at fair value shall be invested in the stocks of companies domiciled outside of the United States; any amounts so invested shall be included in the sixty-five percent (65%) limitation for total stocks.
- Not more than ten percent (10%) of the assets of the retirement annuity trust fund at fair value shall be invested in real estate. This would include real estate equity, real estate lease agreements, and shares in real estate investment trusts.
- Not more than ten percent (10%) of the assets of the retirement annuity trust fund at fair value shall be invested in alternative investments. This category may include private equity, venture capital, timberland, and infrastructure investments.
- Not more than fifteen percent (15%) of the assets of the retirement annuity trust fund at fair value shall be invested in any additional category or categories of investments. The Board of Trustees shall approve by resolution such additional category or categories of investments.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

The asset allocation parameters for the health insurance trust fund are set forth in Title 102, Chapter 1:178, Section 2 of the Kentucky Administrative Regulations as follows:

- In order to preserve the assets of the health insurance trust fund and produce the required rate of return while minimizing risk, assets shall be prudently diversified among various classes of investments.
- In determining asset allocation policy, the investment committee and the board shall be mindful of the health insurance trust fund's liquidity and its capability of meeting both short and long-term obligations.

B. CASH AND CASH EQUIVALENTS

For cash deposits and cash equivalents, custodial credit risk is the risk that, in the event of a bank failure, the retirement system's deposits may not be returned to the system. The retirement system's total cash balance held at J.P. Morgan Chase Bank in noninterest-bearing accounts on June 30, 2014 was \$64,193,257. In addition to these funds, an amount of \$4,612,451 represents funds transferred to and controlled by the Commonwealth of Kentucky.

On November 9, 2010, the FDIC issued a Final Rule implementing Section 343 of the Dodd-Frank Wall Street Reform and Consumer Protection Act that provides for unlimited insurance coverage of noninterest-bearing transaction accounts. Beginning December 31, 2010, through December 31, 2012, all noninterest-bearing transaction accounts are fully insured, regardless of the balance of the account, at all FDIC-insured institutions. Therefore, all cash balances were fully insured by the FDIC through December 31, 2012. Beginning January 1, 2013, all cash balances at J.P. Morgan Chase Bank were insured up to \$250,000 and the remaining balances fully collateralized with securities held by the Federal Reserve Bank of New York in the name of the Commonwealth of Kentucky-Teachers' Retirement.

Deposits are exposed to custodial credit risk if they are not covered by depository insurance and the deposits are:

- a. uncollateralized,
- b. collateralized with securities held by the pledging financial institution, or
- c. collateralized with securities held by the pledging financial institution's trust department or agent but not in the depositor-government's name.

As of June 30, 2014, the retirement system's cash balance in the amount of \$64,193,257 was not exposed to custodial credit risk since this amount was fully insured by the FDIC limit of \$250,000 and the remaining balances collateralized with securities valued at \$155,641,514.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

C. INVESTMENTS

All of the retirement system's assets are invested in short-term and long-term debt (bonds and mortgages) securities, equity (stock) securities, real estate, alternative investments, and additional categories as permitted by regulation. These assets are reported at fair value.

Investments are governed by the Board of Trustees' policies while the Board of Trustees and the Investment Committee shall execute their fiduciary responsibilities in accordance with the "prudent person rule", as identified in KRS 161.430 (2)(b). The prudent person rule establishes a standard for all fiduciaries, to act as a prudent person would be expected to act, with the "care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims."

The following chart represents the fair values of the investments of the Kentucky Teachers' Retirement System for June 30, 2014.

NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS (CONTINUED)

Schedule of Investments Comparison Retirement Annuity Trust

	Fair Value	Fair Value
	June 30, 2014	June 30, 2013
Money Market Fund	\$ 828,490,897	\$ 766,566,559
STIFF (BNYM)	965,082	2,284
Commercial Paper		34,560,147
Total Cash Equivalents	829,455,979	801,128,990
U. S. Government	754,145,490	650,217,435
Agency Bonds	97,373,643	146,127,074
Mortgage Backed Securities	126,831,928	180,378,637
Asset Backed Securities	84,761,591	41,175,017
Commercial Mtg Backed Securities	149,223,291	210,980,212
Collateralized Mtg Obligations	18,382,246	41,523,706
Municipal Bonds	472,846,382	460,132,862
Corporate Bonds	1,625,812,498	1,449,689,955
Total Fixed Income	3,329,377,069	3,180,224,898
	5,527,577,007	5,100,221,090
International Equity	3,868,325,879	* 2,676,211,485
U. S. Equity	7,398,068,417	7,426,461,692
Total Equities	11,266,394,296	10,102,673,177
Real Estate Equity	733,045,846	642,611,173
Total Real Estate Equity	733,045,846	642,611,173
Private Equity	457,408,593	343,259,092
Timberland	186,481,696	197,480,029
Total Alternative Investments	643,890,289	540,739,121
Opportunistic Credit	501,000,040	477,554,833
Corporate Bonds	336,434,902	307,715,989
Corporate Loans	295,017,173	
International Bonds	100,725,256	91,778,981
PPIP	33,158	4,859,928
U.S. Equity		1,060,054
Total Additional Categories	1,233,210,529	882,969,785
TOTAL INVESTMENTS	\$ 18,035,374,008	\$ 16,150,347,144

* FY 2014 reflects reclassification in the amount of \$335,347,004 in cross-listed equities from the FY 2013 U.S. Equity category to the International Equity category.

NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS (CONTINUED)

Schedule of Investments Comparison Health Insurance Trust

	Fair Value		Fair Value	
	J	une 30, 2014	J	une 30, 2013
Money Market Fund	\$	71,124,623	\$	54,722,377
STIFF (BNYM)		9,009	•	-)-)
Total Cash Equivalents		71,133,632		54,722,377
Agency Bonds		12,505,055		32,292,470
Asset Backed Securities		704,344		9,360,161
Corporate Bonds		8,025,190		23,075,629
Total Fixed Income		21,234,589		64,728,260
Global Equities		300,857,011		243,022,751
Total Equities		300,857,011		243,022,751
Private Equity		4,251,239		1,255,715
Total Alternative Investments		4,251,239		1,255,715
Opportunistic Credit		5,421,045		23,840,109
Corporate Bonds		64,614,031		59,360,240
Corporate Loans		24,421,678		0,000,210
U.S. Equity		,, . , . , .		286,705
Total Additional Categories		94,456,754		83,487,054
TOTAL INVESTMENTS	\$	491,933,225	\$	447,216,157

Custodial Credit Risk

Custodial Credit Risk for an investment is the risk that, in the event of the failure of counterparty, the retirement system will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the retirement system, and are held by either:

a. the counterparty or

b. the counterparty's trust department or agent, but not in the System's name.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

The cash reserve of the retirement system is primarily maintained in high quality short term investments through the Dreyfus Institutional Cash Advantage Fund. This Fund invests in a diversified portfolio of high quality, short-term debt securities and the Fund is rated AAA by S&P, Moody's, and Fitch, Inc. The Fund's portfolio is structured within the confines of Rule 2a-7 under the Investment Company Act of 1940, as amended. Commercial paper, U.S. Treasury and agency obligations, certificates of deposit, bankers' acceptances, repurchase agreements, time deposits, etc. are all permissible investments within this Fund.

Whenever repurchase agreements are ordered by KTRS under the terms of Master Repurchase Agreements with various brokers, the terms are dictated by KTRS. The repurchase agreements and their supporting collateral are held by the custodial agent's correspondent bank in an account identified by the custodian's name and KTRS' nominee name. This account is unique to KTRS. The Master Repurchase Agreements require that the supporting collateral have a fair value of at least 102 percent of the value of the repurchase agreements.

As of June 30, 2014, cash collateral reinvestment securities acquired through securities lending for the retirement annuity trust fund by KTRS's custodian, who is also the lending agent/counterparty, amounted to \$459,645,254 related to \$447,453,523 securities lent consistent with the lending agreement with the custodian. (Please refer to a following section entitled Securities Lending.)

Interest Rate Risk

Interest rate risk on investments is the possibility that changes in interest rates will reduce the fair value of the retirement system's investments. In general, the longer the period until an investment matures, the greater the risk of a negative impact on fair value resulting from changes in interest rates.

As of June 30, 2014, the retirement annuity trust and health insurance trusts had the following investment fair values and weighted average maturities:

Retirement Annuity Trust

Investment Type	Fixed Income	Addi	tional Categories	Average Maturity (Yrs)
U.S Government	\$ 754,145,490	\$	1,177,622	6.09
Agency	97,373,642			8.08
MBS	126,831,929		1,359,834	13.90
СМО	18,382,246			20.98
ABS	84,761,591			10.61
CMBS	149,223,291		412,772	22.62
Muni	472,846,382		51,342,159	12.40
Corporate Bonds	1,625,812,498		378,919,993	7.37
Corporate Loans			280,295,048	5.59
Total	\$3,329,377,069	\$	713,507,428	8.58

NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS (CONTINUED)

Health Insurance Trust

Investment Type	Fixed Income		Additional Categories		Average Maturity (Yrs)
Agency	\$ 1	2,505,055	\$		9.00
ABS		704,344			1.12
Corporate Bonds		8,025,190		64,614,031	6.15
Corporate Loans				24,421,678	5.75
Total	\$ 2	1,234,589	\$	89,035,709	6.35

In addition to the above securities, the System held short-term cash investments in the Dreyfus Institutional Cash Advantage Fund and STIF, held at the Bank of New York Mellon, with a total fair value of \$900,589,611 and had a weighted average maturity of forty-seven (47) days. Average maturity is used as a measure of a security's exposure to interest rate risk due to fluctuations in market interest rates. Mortgage-backed securities and collateralized mortgage obligations are typically amortizing investments with an average life and interest rate risk significantly less than suggested by the legal maturity. Mortgage-backed securities, which are generally pre-payable, and other callable bonds are subject to adverse changes in average life in response to market interest rate changes. The schedule above reflects only the legal maturity of all such bonds.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed by using the effective duration or option adjusted methodology to quantify the risk of interest rate changes. This methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending upon the degree of changes in rates and the slope of the yield curve. The control of interest rate risk is not set forth in a particular policy; however, the retirement system manages interest rate risk in practice by establishing appropriate benchmarks for its various portfolios.

Mortgage-backed securities are securities representing pass-through interests in the cash flows from pools of mortgage loans on single-family or multi-family residential properties. All of the mortgage-backed securities owned by the retirement system were securitized and are guaranteed by Fannie Mae, Freddie Mac, or GNMA. The average life of a mortgage-backed security depends upon the level of prepayments experienced in the underlying pool of loans. Market interest rates are a primary determinant of prepayment levels. Lower than anticipated market rates generally lead to higher than anticipated prepayments and a shorter average life; higher than anticipated market rates generally lead to lower than anticipated prepayments and a longer average life. The retirement system held \$126.8 million in mortgage-backed securities as of June 30, 2014. The retirement system also held \$1.36 million in mortgage backed securities under additional categories in which securities were held by a limited partnership fund.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

Collateralized mortgage obligations are bonds that are collateralized by whole loan mortgages, mortgage pass-through securities or stripped mortgage-backed securities. Income is derived from payments and prepayments of principal and interest generated from collateral mortgages. Cash flows are distributed to different investment classes in accordance with a collateralized mortgage obligations established payment order. The System held \$18.4 million in collateralized mortgage obligations as of June 30, 2014.

Asset-backed securities are bonds or notes backed by loan paper or accounts receivables originated by banks, credit card companies, or other credit providers, and are considered to be moderately sensitive to changes in interest rates. The originator of the loan or accounts receivable paper sells it to a specially created trust, which repackages it as securities. Asset-backed securities have been structured as pass-throughs and as structures with multiple bond classes. The retirement annuity trust held \$84.8 million, and the health insurance trust held \$0.7 million in asset backed securities as of June 30, 2014.

Commercial mortgage-backed securities are securities representing interests in the cash flows from pools of mortgage loans on commercial properties. The interests in a securitized pool of loans are generally divided into various tranches based upon planned payment order and level of seniority. The retirement system's commercial mortgage-backed securities investments consist of highly rated relatively senior tranches. The average maturity of the retirement system's commercial mortgage-backed securities the legal maturity of those holdings. Most of the tranches held are earlier in the planned payment order than the legal maturity suggests. The retirement system held \$149.2 million in commercial mortgage-backed securities investments as of June 30, 2014. The retirement system also held \$0.4 million in commercial mortgage-backed securities under additional categories in which securities were held by a limited partnership fund.

Credit Risk

Credit risk is the risk that an issuer or counterparty to an investment will not fulfill its obligations. The following schedules list the System's fixed income investment fair values (net of cash equivalents) according to credit ratings as of June 30, 2014:

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

Rating	Bonds & Mortgages		Additional Categories		Total		0⁄0
U.S. Government	\$	754,145,490	\$	1,177,622	\$	755,323,112	18.68%
AAA		408,865,144		19,179,372		428,044,516	10.59%
AA		836,708,356		28,449,417		865,157,773	21.40%
А		716,807,164		28,249,897		745,057,061	18.43%
BBB		592,306,613		27,997,543		620,304,156	15.34%
BB		12,201,750		225,581,496		237,783,246	5.88%
В		4,390,000		267,907,115		272,297,115	6.74%
CCC				16,663,956		16,663,956	0.41%
Not Rated		3,952,552		98,301,010		102,253,562	2.53%
Total	\$	3,329,377,069	\$	713,507,428	\$	4,042,884,497	100.0%

Retirement Annuity Trust

Health Insurance Trust

Rating	Bond	ls & Mortgages	Addit	ional Categories	 Total	%
AAA	\$	704,344	\$		\$ 704,344	0.64%
AA		17,528,705			17,528,705	15.90%
А		3,001,540			3,001,540	2.72%
BBB				2,981,562	2,981,562	2.70%
BB				39,598,778	39,598,778	35.91%
В				40,639,994	40,639,994	36.85%
CCC				1,285,017	1,285,017	1.17%
Not Rated				4,530,358	4,530,358	4.11%
Total	\$	21,234,589	\$	89,035,709	\$ 110,270,298	100.0%

Total fair value of the retirement annuity trust's fixed income portfolio was \$4,042,884,497 on June 30, 2014. The health insurance trust's fixed income portfolio was valued at \$110,270,298. The rating system used in the above charts is the Standard and Poor's rating system. For securities where a Standard and Poor's rating is not provided, another nationally recognized system is used and translated to the Standard and Poor's rating system.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

In addition to the above categories, the retirement annuity trust held \$829,455,979 in short term investments through the Dreyfus Institutional Cash Advantage Fund. The health insurance trust held \$71,133,632 in the Dreyfus Institutional Cash Advantage Fund. The credit risk associated with this Fund is minimal as the securities held are required to maintain the highest possible short-term credit ratings by Moody's and Standard & Poor's. In addition, investments in US Government and Agency securities are also highly rated securities since they are backed by the US Government. Notation is made that the ratings of securities is subject to change due to circumstances and thereby may have a lower rating than when first purchased.

The retirement annuity trust fund's policy on credit rating is set forth in 102 KAR 1:175 and reads as follows:

A fixed income investment shall be rated at the time of purchase as investment grade by at least one (1) of the major rating services. A private placement debt investment shall be subject to the same credit qualifications as each fixed income investment. The fixed income investment portfolio as a whole shall maintain an average rating of investment grade by at least one (1) of the major rating services.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Losses from credit risk are heightened if a significant portion of resources are invested with a single issuer. Per Administrative Regulation 102 KAR 1:175, the retirement annuity trust fund is subject to the following policies regarding single issuers of fixed income and equity securities:

Unless the issuer is the United States Government or a government sponsored enterprise (GSE), the amount invested in the securities of a single issuer shall not equal more than five (5) percent of the assets of the system.

The System's position in a single stock shall not exceed two and one-half (2.5) percent of the System's assets. The system's position in a single stock shall not exceed five (5) percent of the outstanding stock for that company unless the investment is part of a venture capital program."

KTRS has not invested greater than five percent (5%) of the retirement annuity trust fund's assets at fair value in any single issuer and is in compliance with investment policy.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. As of June 30, 2014, the retirement system's exposure to foreign currency risk consisted of \$4,480,096,776 and \$170,622,695 in the retirement annuity trust and health insurance trust funds respectively.

The following tables represent the fair values of investments that are subject to foreign currency as a result of cash contributions to each portfolio manager:

Retirement Annuity Trust

Commingled Funds

Commigleu Funds	
Rogge Global Int'l Fixed Income	\$ 110,758,215
Baillie Gifford Intrntl EAFE	847,561,410
Baring All Country World ex US	524,421,742
BlackRock ACWI EX-US IMI	492,783,364
UBS All Country World ex US	590,937,938
Alternative Funds	
KKR & Co. European Fund III	70,201,067
Oaktree European Principal Fund III	14,226,029
ADRs (Equities)	538,960,837
Cross-Listed Equities	810,401,671
Bonds (Fixed Income)	355,643,065
Additional Categories (Fixed Income)	85,848,897
Additional Categories (Opportunistic)	38,352,541
Total	\$ 4,480,096,776

Health Insurance Trust

Commingled Funds	
Medical Ins. Black Rock Fund B	\$ 152,151,446
Bonds (Fixed Income)	995,820
Additional Categories (Fixed Income)	15,226,662
Additional Categories (Opportunistic)	2,248,767
Total	\$ 170,622,695

NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS (CONTINUED)

The following tables reflect the fair values of the various foreign currencies associated with the System's investments in the categories outlined above:

Currency	Fair Value	Currency	Fair Value
Australian Dollar	\$ 136,454,041	Malaysian Ringgit	16,016,496
Bermudian Dollar	100,864,681	Mexican Peso	41,032,533
Brazilian Real	62,502,090	Netherlands Antillean Guilder	73,009,281
British Pound Sterling	591,287,332	New Zealand Dollar	4,849,666
Canadian Dollar	361,992,659	Norwegian Krone	28,744,042
Cayman Islands Dollar	94,019,482	Panamanian Balboa	30,071,768
Chilean Peso	10,213,576	Peruvian Nuevo Sol	7,784,546
Chinese Yuan	126,579,813	Philippine Peso	1,041,540
Colombian Peso	1,006,904	Polish Złoty	5,426,782
Czech Crown	227,828	Riyal	436,267
Danish Krone	64,451,325	Russian Ruble	32,148,567
Dominican Peso	316,624	Singapore Dollar	42,224,890
Egyptian Pound	292,968	South African Rand	20,022,097
Euro	1,204,979,461	South Korean Won	97,537,400
Hong Kong Dollar	96,422,178	Swedish Krona	159,537,086
Hungarian Forint	769,830	Swiss Franc	270,035,331
Indian Rupee	82,342,797	Taiwan Dollar	59,932,051
Indonesian Rupiah	8,371,568	Thai Baht	5,542,255
Israeli New Shekel	38,642,187	Turkish Lira	14,009,911
Japanese Yen	481,918,833	UAE Dirham	519,600
Jersey Pound	98,043,908	Uruguayan Peso	269,506
Jordanian Dinar	2,228,116	Various	4,713,475
Liberian Dollar	1,263,485	Total	\$4,480,096,776

Retirement Annuity Trust

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

Currency	Fair Value	Currency	Fair Value
Australian Dollar	\$ 8,606,643	Mexican Peso	1,550,954
Bermudian Dollar	272,301	New Zealand Dollar	269,100
Brazilian Real	3,290,956	Norwegian Krone	1,115,426
British Pound Sterling	23,901,098	Panamanian Balboa	4,030
Canadian Dollar	16,485,624	Peruvian Nuevo Sol	6,376
Cayman Islands Dollar	1,553,816	Philippine Peso	320,814
Chilean Peso	487,491	Polish Złoty	521,532
Chinese Yuan	83,740	Riyal	134,199
Colombian Peso	304,008	Russian Ruble	1,231,985
Czech Crown	76,529	Singapore Dollar	1,671,168
Danish Krone	1,674,370	South African Rand	2,415,831
Egyptian Pound	93,450	South Korean Won	5,235,194
Euro	42,259,571	Swedish Krona	3,568,456
Hong Kong Dollar	8,804,980	Swiss Franc	9,343,348
Hungarian Forint	66,462	Taiwan Dollar	4,298,631
Indian Rupee	2,210,388	Thai Baht	796,469
Indonesian Rupiah	832,314	Turkish Lira	558,149
Israeli New Shekel	664,515	UAE Dirham	163,205
Japanese Yen	22,717,105	Various	1,510,892
Liberian Dollar	234,150	1	
Malaysian Ringgit	1,287,425	Total	\$ 170,622,695

Health Insurance Trust

The majority of foreign investments are held in commingled funds managed by Rogge Global Partners, UBS Global Asset Management, Baillie Gifford, Baring Asset Management, and Black Rock. In addition to the commingled funds investing in foreign securities, the retirement annuity trust fund held \$538,960,837 associated with foreign interests in American Depositary Receipt investments. These American Depositary Receipts are securities that are issued by a U.S. bank in place of the foreign stock shares held in trust by that bank, thereby facilitating the trading of foreign shares in U.S. markets. American Depositary Receipts are denominated in U.S. currency. Also, the cross listed equities, in the amount of \$810,401,671, represent securities domiciled in foreign countries, but are listed and traded on U.S. exchanges. Other foreign securities and investments consisted of debt securities and alternative investment opportunities. Foreign holdings, including investment receivables/payables, that were not readably identifiable to a specific country were listed in the "various" category pertaining to currency type.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

The retirement annuity trust fund's policy regarding foreign equities is that not more than thirty percent (30%) of the assets of the retirement annuity trust fund at fair value shall be invested in the stocks of companies domiciled outside of the United States. Any amounts so invested shall be included in the sixty-five percent (65%) limitation for total stocks per 102 KAR 1:175 Section 2(e).

D. SECURITIES LENDING

Section 161.430 of the Kentucky Revised Statutes empowers the Board of Trustees with complete fiduciary responsibility for the funds of the retirement system. The retirement system operates a securities lending program in which it temporarily lends securities to qualified agents in exchange for a net fee and high quality collateral. U.S. Government and agency securities, selected domestic bonds, and domestic and international stocks are the types of securities that are lent. The retirement system's custodian, The Bank of New York Mellon, acts as lending agent in exchanging securities for collateral. The collateral has a value of not less than 102% of the fair value of the lent securities plus any accrued, unpaid distributions. The collateral may consist of cash, marketable U.S. Government system.

Securities lending transactions are accounted for in accordance with GASB Statement No. 28 Accounting and Financial Reporting for Securities Lending Transactions, which established standards of accounting and financial reporting for securities lending transactions. During the fiscal year ended June 30, 2014, only the retirement annuity trust fund had securities lending transactions. The following section details the net income earned in the retirement annuity trust fund from securities lending for the fiscal year ended June 30, 2014:

Item	2014 Earnings	2013 Earnings
Gross Earnings (Interest and Fees) Gross Borrower Rebates Bank Fees	\$ 285,931 2,422,568 (812,495)	\$ 600,782 2,476,727 (923,168)
Net Earnings	\$ 1,896,004	\$ 2,154,341

Cash collateral is invested in short-term obligations fully guaranteed by the United States Government or select Government agencies and Government Repurchase Agreements with qualified agents. The retirement system cannot pledge or sell collateral securities received unless the borrower defaults. The lending agent (Bank of New York Mellon) also indemnifies the retirement system from any financial loss associated with a borrower's default and collateral inadequacy.

<u>NOTE 5: DEPOSITS WITH FINANCIAL INSTITUTIONS AND INVESTMENTS</u> (CONTINUED)

As of June 30, 2014, the loan average days to maturity in the retirement annuity trust fund was one (1) days and the weighted average investment maturity of cash collateral investments was one (1) days. At fiscal year end, the retirement annuity trust fund had no credit risk exposure to borrowers, since the amounts the retirement annuity trust fund owes the borrowers exceeds the amounts the borrowers owe the retirement annuity trust fund and there were no losses resulting during the period.

Security lending programs can entail interest rate risk and credit risk. The retirement system minimizes interest rate risk by limiting the term of cash collateral investments to several days.

The credit risk is controlled by investing cash collateral in securities with qualities similar to the credit worthiness of lent securities.

The following table presents the fair values of the underlying securities, and the value of the collateral pledged at June 30, 2014:

Type of Securities Lent	Fair Value	sh and Non-cash ral Value Received
Fixed Income Equities	\$ 255,446,359 192,007,164	\$ 264,235,048 195,410,206
-	\$ 447,453,523	\$ 459,645,254

NOTE 6: RETIREMENT PLAN FOR EMPLOYEES OF THE SYSTEM

Full-time employees of Kentucky Teachers' Retirement System (KTRS) participate in either KTRS or Kentucky Employees Retirement System. Both plans are multiple-employer cost sharing defined benefit retirement annuity plans. All KTRS employees in positions requiring a four-year degree are covered under KTRS. The contribution rates and required employer matching are the same as state agency employers in the System. These rates, the plan description and funding policy are fully disclosed in the notes to the financial statements.

The System's annual required contributions for KTRS employee members for the fiscal years 2014, 2013 and 2012 were \$656,152, \$574,432, and \$533,378 respectively. KTRS contributed one hundred percent (100%) of the required contribution each year.

NOTE 6: RETIREMENT PLAN FOR EMPLOYEES OF THE SYSTEM (CONTINUED)

All other KTRS employees are covered under the Kentucky Employee Retirement System (KERS) in the Non-Hazardous Employees' Pension Plan. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Per KRS 61.565(3), contribution rates shall be determined by the Board on the basis of an annual actuarial valuation. Rates may be amended by the Board as needed. The System's administrative budget and employer contribution rates are subject to the approval of the Kentucky General Assembly. Employee contribution rates are set by the statute and may be changed only by the Kentucky General Assembly.

Members of KERS who joined prior to July 1, 2008, are required to contribute five percent (5%) of their annual creditable compensation for the fiscal years 2014, 2013, and 2012 and members who joined on or after July 1, 2008 contribute an additional one percent (1%). As the employer, KTRS is required to contribute the annual actuarially determined rate of the creditable compensation (or the rate approved by legislators). The approved rates for the fiscal years 2014, 2013 and 2012 were 26.79 percent, 23.61 percent, and 19.82 percent and the System's annual required contributions to KERS were \$365,610, \$331,989, and \$350,869 respectively. KTRS contributed one hundred percent (100%) of the required contributions for each year.

KERS issues a publicly available financial report that may be obtained by writing Kentucky Retirement System, 1260 Louisville Road, Frankfort, Kentucky 40601-6124.

NOTE 7: OTHER FUNDS

A. 403(B) TAX-SHELTERED ANNUITY PLAN

Plan Description

KTRS has, in prior years, administered a salary deferral program as permitted by section 403(b) of the Internal Revenue Code. Under this program members were able to voluntarily defer a portion of their compensation within the limits established by the applicable laws and regulations. However, the System's Board of Trustees determined that the cost of providing the necessary services to assure the System of continuing compliance with these laws and regulations was not economically feasible due to the limited participation in the program by the System's members. The Board decided, therefore, to discontinue offering the program as of April 30, 1997. Members who were not receiving annuities from their account as of April 30, 1997, were able to transfer their respective accounts directly into other tax-sheltered plans on a tax-free basis. As of June 30, 2014, the twelve members who are receiving annuities will continue to receive distributions according to the terms of their respective elections.

NOTE 7: OTHER FUNDS (CONTINUED)

B. SUMMARY OF SIGNIFICANT POLICIES

Basis of Accounting

The Tax-sheltered Annuity Plan financial statements are prepared using an accrual basis of accounting. Contributions are no longer being accepted into the plan; therefore, there are no receivables to be recognized.

Method Used to Value Investments

The short-term investments are reported at cost, which approximates fair value.

C. SUPPLEMENTAL BENEFIT FUND

The Supplemental Retirement Benefit Fund is a qualified governmental excess benefit arrangement as described in Section 415 of the Internal Revenue Code. In accordance with KRS 161.611 and KRS 161.420(8), KTRS is authorized to provide a supplemental retirement benefit fund for the sole purpose of enabling the employer to apply the same formula for determining benefits payable to all members of the retirement system employed by the employer, whose benefits under the retirement system are limited by Section 415 of the Internal Revenue Code of 1986, as amended from time to time. Funding of benefits payable under this fund are provided by the state, as employer, and are segregated from funds that are maintained by KTRS for payment of the regular benefits provided by the retirement system.

D. JUNITA LOSEY SCHOLARSHIP BEQUEST

Junita Losey, a retired teacher, designated KTRS as a residuary beneficiary of her estate and expressed a desire that KTRS establish a scholarship program for Kentucky students studying to be teachers. Ms. Losey died in 1997 and thereafter her estate provided a scholarship bequest to KTRS. The scholarship bequest has at all times been segregated from funds that are maintained by KTRS for payment of the regular benefits provided by the retirement system. The Scholarship Committee of the System's Board of Trustees meets each December to consider scholarship standards and administration of the scholarship bequest.

NOTE 8: MEDICAL INSURANCE PLAN AND POST-EMPLOYMENT BENEFITS

A. PLAN DESCRIPTION

In addition to the retirement annuity plan described in Note 1, Kentucky Revised Statute 161.675 requires KTRS to provide access to post-employment healthcare benefits for eligible members and dependents. The KTRS medical plan is funded by employer and member contributions. Changes made to the medical plan may be made by the KTRS Board of Trustees, the Kentucky Department of Employee Insurance and the General Assembly.

<u>NOTE 8: MEDICAL INSURANCE PLAN AND POST-EMPLOYMENT BENEFITS</u> (CONTINUED)

The KTRS medical plan is funded by employee contributions to an account established pursuant to 26 U.S.C. sec. 401(h). Additional funding is derived from the Kentucky Teachers' Retirement System insurance trust fund that went into effect on July 1, 2010. The insurance trust fund provides a trust separate from the account established pursuant to 26 U.S.C. sec. 401(h). The insurance trust fund includes employer and retired member contributions required under KRS 161.550 and KRS 161.675(4)(b).

To be eligible for medical benefits, the member must have retired either for service or disability. The KTRS medical plan offers coverage to members under the age of 65 through the Kentucky Employees Health Plan administered by the Kentucky Department of Employee Insurance. KTRS retired members are given a supplement to be used for payment of their health insurance premium. The amount of the member's supplement is based on a contribution supplement table approved by the KTRS Board of Trustees. The retired member pays premiums in excess of the monthly supplement. The Commonwealth of Kentucky bears risk for excess claims expenses that exceed the premium equivalents charged for the Kentucky Employees Health Plan. Once retired members and eligible spouses attain age 65 and are Medicare eligible, coverage is obtained through the KTRS Medicare Eligible Health Plan.

At June 30, 2014, KTRS insurance covered 37,275 retirees and 7,031 dependents. There are 208 participating employers and 73,407 active members contributing to the medical plan.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The KTRS medical plan financial statements are prepared using the accrual basis of accounting. Member contributions and employer matching are recognized in the fiscal year due.

Healthcare premiums charged to retired members are recognized when due and any premiums collected in advance are recognized as a liability.

Method Used to Value Investments

Since the investments are all short-term investments they are reported at cost, which approximates fair value.

C. CONTRIBUTIONS

The post-employment medical benefit provided by KTRS is financed on a pre-funded basis beginning July 1, 2010 with the implementation of the "Shared Responsibility" legislation. In order to fund medical benefits, active member contributions are matched by the state at .75% of members' gross salaries. Members contributed 1.75% of gross payroll to the KTRS medical plan and beginning July 1, 2010 the contribution increases incrementally to 3.75% by July 1, 2015 under the Shared

<u>NOTE 8: MEDICAL INSURANCE PLAN AND POST-EMPLOYMENT BENEFITS</u> (CONTINUED)

Responsibility Plan. Also, the premiums collected from retirees and investment income contributes to funding the plan. The KTRS medical plan received bond proceeds of \$152,400,000 in fiscal year 2013 in funding from the state, which was contributed to the insurance trust fund. This transitional funding and increased contributions are for the 2013 and 2014 fiscal years.

D. FUNDED STATUS AND FUNDING PROGRESS

The funded status of the KTRS medical plan as of the most recent actuarial valuation date is as follows:

			Unfunded Actuarial			UAAL
	Actuarial	Actuarial	Accrued			As a % of
Valuation	Value	Accrued	Liabilities	Funded	Covered	Covered
Year	Of Assets	Liabilities	(UAAL)	Ratio	Payroll	Payroll
June 30	А	В	B-A	(A/B)	С	[B-A/C]
2014	\$ 508,913	\$3,194,689	\$2,685,776	15.9%	\$3,486,327	77.0%

Schedule of Funding Progress (In Thousands)

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedules of funding progress, presented as required supplementary information following the notes to the financial statements, present multiyear trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The accompanying schedule of employer contributions present trend information about the amounts contributed to the plan by employers in comparison to the Annual Required Contribution, an amount that is actuarially determined in accordance with the parameters of GASB Statement 43. The Annual Required Contribution represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost for each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years.

<u>NOTE 8: MEDICAL INSURANCE PLAN AND POST-EMPLOYMENT BENEFITS</u> (CONTINUED)

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Significant actuarial methodologies and assumptions employed as of the June 30, 2014 valuation date include the following:

Actuarial cost method	Entry Age
Actuarial value of assets	Market value of assets
Assumed inflation rate	3.50%
Investment rate of return	8.00%
Amortization method	Level percent of pay, open
Remaining amortization period	30 years

Medical Trend Assumption	Pre-Medicare	Medicare
Fiscal Year Ending 6/30/2015	7.75%	5.75%
Fiscal Year Ending 6/30/2016	6.75%	5.50%
Ultimate Trend Rate	5.00%	5.00%
Year of Ultimate Trend Rate	2020	2018

NOTE 9: LIFE INSURANCE PLAN

A. PLAN DESCRIPTION

KTRS administers the Life Insurance Plan as provided by KRS 161.655 to provide life insurance benefits to retired and active members. This benefit is financed by actuarially determined contributions from the 208 participating employers. The benefit is \$5,000 for members who are retired for service or disability, and \$2,000 for active contributing members.

B. SUMMARY OF SIGNIFICANT POLICIES

Basis of Accounting

The Life Insurance Plan financial statements are prepared using the accrual basis of accounting. Employer contributions are recognized in the fiscal year due.

NOTE 9: LIFE INSURANCE PLAN (CONTINUED)

Method Used to Value Investments

Life Insurance Plan investments are reported at fair value. The short-term securities are carried at cost, which approximates fair value. Fixed income is generally valued based on published market prices and quotations from national security exchanges and securities pricing services.

C. CONTRIBUTIONS

To finance the life insurance benefit a portion of the employer contribution rate is directed to the plan as recommended by the KTRS's actuary. The contribution rate of active members' payroll recommended by the actuary was .03% for fiscal year 2014 and .05% for fiscal year 2013.

D. FUNDED STATUS AND FUNDING PROGRESS

The funded status of the Life Insurance Plan as of the most recent actuarial valuation date is as follows:

Schedule of Funding Progress

(In Thousands)									
			Actuarial			UAAL			
	Actuarial	Actuarial	Accrued			As a % of			
Valuation	Value	Accrued	Liabilities	Funded	Covered	Covered			
Year	Of Assets	Liabilities	(UAAL)	Ratio	Payroll	Payroll			
June 30	А	В	B-A	(A/B)	С	[B-A/C]			
2014	\$96,130	\$97,354	\$ 1,224	98.7%	\$3,486,327	0.04			

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. The required supplementary schedules following the notes to the financial section contain more actuarial information. Significant actuarial methodologies and assumptions employed as of the June 30, 2014 valuation date include the following:

Actuarial cost method	Entry Age
Actuarial value of assets	Market value of assets
Assumed inflation rate	3.50%
Investment rate of return	7.50%
Projected salary increases	4.00%
Amortization method	Level percent of pay, open
Remaining amortization period	30 years

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REQUIRED SUPPLEMENTARY INFORMATION

KENTUCKY TEACHERS' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION June 30, 2014

Schedule of Changes in the Net Pension Liability (In Thousands)

Change in the total pension liability	2014		
Total pension liability			
Service Cost	\$ 1,002,338		
Interest	1,956,610		
Benefit changes			
Difference between expected and actual experience			
Changes of assumptions	(353,043)		
Benefit payments	(1,654,376)		
Refunds of contributions	(25,462)		
Net change in total pension liability	 926,067		
Total pension liability - beginning	38,758,709		
Total pension liability - ending (a)	 39,684,776		
Plan Net Position			
Contributions - State of Kentucky	483,330		
Contributions - Other Employers	79,996		
Contributions - Members	304,982		
Net investment income	2,803,248		
Benefit payments	(1,654,375)		
Administrative expense	(7,956)		
Refunds of contributions	(25,462)		
Net change in plan net position	 1,983,763		
Plan net position - beginning	16,108,808		
Plan net position - ending (b)	 18,092,571		
Net pension liability - ending (a) - (b)	\$ 21,592,205		

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

NOTE 1 SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY

The total pension liability contained in this schedule was provided by the System's actuary, Cavanaugh Macdonald Consulting, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the System.

KENTUCKY TEACHERS' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION June 30, 2014

Changes of Benefit Terms. None

Changes of assumptions. In the 2011 valuation and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables rather than the 1994 Group Annuity Mortality Table, which was used prior to 2011. In the 2011 valuation, rates of withdrawal, retirement, disability and mortality were adjusted to more closely reflect actual experience. In the 2011 valuation, the Board adopted an interest smoothing methodology to calculate liabilities for purposes of determining the actuarially determined contributions.

Schedule of the Net Pension Liability (In Thousands)

	2014
Total pension liability	\$ 39,684,776
Plan net position	 18,092,571
Net pension liability	\$ 21,592,205
Ratio of plan net position to total pension liability	45.59%
Covered-employee payroll	\$ 3,443,138
Net pension liability as a percentage of covered-	
employee payroll	627.11%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Schedule of Employer Contributions (In Thousands)

Fiscal Year Ended June 30	Covered Payroll		Actual Employer Contributions		Actuarially Determined Employer Contributions		Annual Contribution Excess (Deficiency)		Actual Contributions as a Percentage of Covered Payroll
2005	\$	2,703,430	\$	383,777	\$	383,777	\$		14.20
2006		2,859,477		406,107		406,107			14.20
2007		2,975,289		434,890		494,565		(59,675)	14.62
2008		3,190,332		466,248		563,789		(97,541)	14.61
2009		3,253,077		442,550		600,283		(157,733)	13.60
2010		3,321,614		479,805		633,938		(154,133)	14.44
2011		3,283,749		1,037,936		678,741		359,195	31.61
2012		3,310,176		557,340		757,822		(200,482)	16.84
2013		3,310,710		568,233		802,985		(234,752)	17.16
2014		3,443,138		563,326		823,446		(260,120)	16.36

KENTUCKY TEACHERS' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION June 30, 2014 (Continued)

NOTE 2 SCHEDULE OF EMPLOYER CONTRIBUTIONS

The required employer contributions and percent of those contributions actually made are presented in the schedule.

NOTE 3 ACTUARIAL METHODS AND ASSUMPTIONS

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, three years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in the most recent year of the schedule:

Actuarial cost method	Entry age
Amortization period	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Inflation	3.50 percent
Salary increase	4.00 to 8.20 percent, including inflation
Ultimate Investment rate of return*	7.50 percent, net of pension plan investment expense, including inflation

*The actuarially determined contribution rates are determined using the interest smoothing Methodology adopted by the Board.

Schedule of Investment Returns

Annual money weighted rate of return, net of investment expense $\frac{2014}{17.95\%}$

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

KENTUCKY TEACHERS' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION June 30, 2014 (Continued)

Medical Insurance Plan Schedule of Funding Progress (In Millions)

			Unfunded			
			Actuarial			UAAL
	Actuarial	Actuarial	Accrued			As a % Of
Valuation	Value of	Accrued	Liabilities	Funded	Covered	Covered
Year	Assets	Liabilities	(UAAL)	Ratio	Payroll	Payroll
June 30	A	В	(B-A)	(A/B)	C	[(B-A)/C]
2008	\$ 185.9	\$ 6,434.5	\$ 6,248.6	2.9	\$3,190.3	195.9
2009	229.1	6,454.7	6,225.6	3.5	3,253.1	191.4
2010	241.2	3,206.8	2,965.6	7.5	3,321.6	89.3
2011	294.8	3,423.1	3,128.3	8.6	3,451.8	90.6
2012	338.7	3,594.5	3,255.8	9.4	3,479.6	93.6
2013	412.2	3,521.1	3,108.9	11.7	3,480.0	89.3
2014	508.9	3,194.7	2,685.8	15.9	3,486.3	77.0

The amounts reported in this schedule of funding progress do not include assets or liabilities for the defined benefit or life insurance plans, nor are the assets and liabilities of the tax-sheltered annuity plan included.

Medical Insurance Plan Schedule of Employer Contributions

		Annual		Actual		Retiree Drug			
Valuation		Required		Employer		Subsidy		Total	Percentage Of
Year	Cont	tributions(ARC)	(Contribution	Contribution		Contribution		ARC Contributed
June 30		(A)		(B)		(C)		(B) + (C)	[(B) + (C)/(A)]
2008	\$	395,282,164	\$	148,954,644	\$	11,911,565	\$	160,866,209	40.7
2009		467,312,904		164,480,119		13,611,748		178,091,867	38.1
2010		457,054,117		158,765,496		14,614,285		173,379,781	37.9
2011		477,723,070		188,453,929		280,585		188,734,514	39.5
2012		470,217,067		177,450,206		297,639		177,747,845	37.8
2013		186,725,823		166,611,420				166,611,420	89.2
2014		159,583,400		162,568,395				162,568,395	101.9

KENTUCKY TEACHERS' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION June 30, 2014 (Continued)

Life Insurance Plan Schedule of Funding Progress (In Thousands)

					Ur	funded			
					Ac	ctuarial			UAAL
	Α	ctuarial	Α	ctuarial	A	ccrued			As a % Of
Valuation	V	alue of	A	ccrued	Lia	bilities	Funded	Covered	Covered
Year		Assets	Li	Liabilities		JAAL)	Ratio	Payroll	Payroll
June 30		А		В		B-A)	(A/B)	 С	[(B-A)/C]
2008	\$	77,658	\$	84,265	\$	6,607	92.2	\$ 3,190,332	0.21
2009		84,703		90,334		5,631	93.8	3,253,077	0.17
2010		87,905		92,091		4,186	95.5	3,321,614	0.13
2011		88,527		88,088		(439)	100.5	3,451,756	(0.01)
2012		92,241		91,398		(843)	100.9	3,479,567	(0.02)
2013		94,863		94,325		(538)	100.6	3,480,066	(0.02)
2014		96,130		97,354		1,224	98.7	3,486,327	0.04

The amounts reported in this schedule of funding progress do not include assets or liabilities for the defined benefit or medical insurance plans, nor are the assets and liabilities of the tax-sheltered annuity plan included.

Life Insurance Plan Schedule of Employer Contributions

Fiscal		Annual		Actual		
Year	Required			Employer	Percentage Of	
Ended	d Contributions(ARC)		C	Contribution	ARC Contributed	
2008	\$	1,914,199	\$	5,411,249	282.7	
2009		1,498,076		5,455,473	364.2	
2010		1,992,969		1,966,826	98.7	
2011		1,725,878		1,668,822	96.7	
2012		1,732,831		1,684,711	97.2	
2013		1,739,908		1,680,495	96.6	
2014		1,044,959		1,006,091	96.3	

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ADDITIONAL SUPPORTING SCHEDULES

KENTUCKY TEACHERS' RETIREMENT SYSTEM ADDITIONAL SUPPORTING SCHEDULES For the Fiscal Year Ended June 30, 2014

Salaries	\$ 5,618,962
Other Personnel Costs	580,643
Professional Services and Contracts	454,940
Utilities	98,565
Rentals	26,001
Maintenance	117,847
Postage & Related Services	402,543
Printing	141,762
Insurance	171,229
Miscellaneous Services	117,450
Telecommunications	32,736
Computer Services	107,393
Supplies	63,561
Depreciation	857,066
Travel	43,963
Dues & Subscriptions	45,865
Miscellaneous Commodities	10,317
Furniture, Fixtures, & Equipment not Capitalized	107,743
Compensated Absences	79,423
Total Administrative Expenses	\$ 9,078,009

Schedule of Professional Services and Contracts

Professional	Nature of Service	Amount
Cavanaugh Macdonald Consulting	Actuarial Services	\$ 239,307
Mountjoy Chilton Medley	Auditing Services	39,000
Auditor of Public Accounts	Auditing Services	49,995
International Claim Specialist	Investigative Services	480
Ice Miller	Attorney Services	26,333
Reinhart, Boerner VanDeuren	Attorney Services	4,256
Stoll, Keenon, and Ogden	Attorney Services	112
Peritus	Communications	95,457
Total Professional Services and Contracts		\$ 454,940

KENTUCKY TEACHERS' RETIREMENT SYSTEM ADDITIONAL SUPPORTING SCHEDULES For the Fiscal Year Ended June 30, 2014 (Continued)

Schedule of Contracted Investment Management Expenses For the Fiscal Year Ended June 30, 2014

	Pension	Medical	Total
Equity Managers			
Baillie Gifford	\$2,946,160	\$	\$ 2,946,160
Baring Asset Management, Inc.	2,408,105		2,408,105
Black Rock	222,724	158,797	381,521
GE Asset Management	800,000		800,000
Todd-Veredus Asset Management LLC	1,358,058		1,358,058
UBS Global Asset Management	2,914,577		2,914,577
Wellington Management Company	3,063,448		3,063,448
Total Equity Managers	13,713,072	158,797	13,871,869
Fixed Income Managers			
Fort Washington Investment Advisors	175,713		175,713
Galliard Capital Management	266,027		266,027
Total Fixed Income Managers	441,740		441,740
Real Estate	4,198,106	11,507	4,209,613
Additional Categories	5,979,828	271,398	6,251,226
Alternative Investments	9,290,433	209,039	9,499,472
Custodian			
The Bank of New York Mellon	353,749	10,392	364,141
Consultants			
Hewitt Ennis Knupp, Inc.	358,850		358,850
Bevis Longstreth	54,553		54,553
George Philip	33,056		33,056
Total Consultants	446,459		446,459
Legal & Research			
Reinhart Boerner Van Deuren	2,237		2,237
Wolters Kluwer	8,254		8,254
Ice Miller	79,848		79,848
Total Legal & Research	90,339		90,339
Other			
Administrative and Operational (includes Personnel)	2,664,024	49,950	2,713,974
Total Contracted Investment Management Expenses	\$ 37,177,750	\$711,083	\$ 37,888,833

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


ADAM H. EDELEN AUDITOR OF PUBLIC ACCOUNTS

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*

Independent Auditor's Report

Board of Trustees Kentucky Teachers' Retirement System Frankfort, Kentucky

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Kentucky Teachers' Retirement System (KTRS) as of and for the year ended June 30, 2014, and the related notes to the financial statements, which collectively comprise the KTRS' basic financial statements, and have issued our report thereon dated December 15, 2014.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the KTRS' 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 financial statements, but not for the purpose of expressing an opinion on the effectiveness of the KTRS' internal control. Accordingly, we do not express an opinion on the effectiveness of the KTRS' 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 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 that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses.

209 St. Clair Street Frankfort, KY 40601-1817 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* (Continued)

We did identify certain deficiencies in internal control, described in the accompanying schedule of findings and recommendations that we consider to be significant deficiencies as items 2014-KTRS-1, 2014-KTRS-2, 2014-KTRS-3, 2014 KTRS-4, 2014-KTRS-5, and 2014-KTRS-6.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the KTRS' financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of 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*.

KTRS' Response to the Findings and Recommendations

KTRS' responses to the findings identified in our audit are described in the accompanying schedule of findings and recommendations. KTRS' responses were not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on them.

Additional Management Communication

We noted certain matters that we have reported to management of the KTRS' in a separate letter dated December 15, 2014.

Purpose of this Report

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

Respectfully Submitted

Adam H. Edelen Auditor of Public Accounts

December 15, 2014

SCHEDULE OF FINDINGS AND RECOMMENDATIONS

2014-KTRS-01: KTRS Did Not Properly Calculate and Post Compensatory Leave Time

During the FY14 audit of Kentucky Teachers' Retirement System (KTRS), employee timesheets were tested for proper posting of compensatory leave time earned. Employees accumulate compensatory leave at the rate of one and one half hours for every hour worked in excess of 40 hours per work week. The testing revealed compensatory leave was awarded incorrectly. Three issues were noted:

- 1. Employees using compensatory time during the work week did not receive compensatory time and a half if more than 40 hours were physically worked in total during the week. For example, based on the KTRS application of the policy, an employee using eight hour of compensatory time on one day and working 10 hours over during the rest of the work week only received 10 hours and should have received 11 hours. By not receiving comp time and a half, Federal policy is violated.
- 2. Employees using other types of leave, such as annual or sick, received compensatory time and a half if their hours totaled over 40, even if less than 40 hours were physically worked in total during the week. For example, an employee who used eight hours of annual time and then worked 10 hours over during the same work week received time and a half for the entire 10 hours worked over, or 15 hours, even though only 42 hours were physically worked. The employee should have only earned time and a half for any hours physically worked over 40, or 3 hours in this example, instead of 15 hours.
- 3. Compensatory time and a half was awarded based upon pay period instead of the seven day work week. For example, if an employee worked 2 hours overtime on Monday and the pay period ended on Wednesday, the employee received compensatory time and a half for those 2 hours, even if 2 hours compensatory leave was used on Friday. The employee would have earned 2 under KTRS' policy interpretation, when the employee should have earned zero hours since the same amount worked was taken off during the same work week.

Payroll for six of the 24 pay periods were tested during FY14 and errors were identified on each payroll for the calculation of compensatory time. The total difference between the compensatory time earned and the compensatory time awarded resulted in a net posting of 46.68 hours more than what should have been posted. The difference varied by individual so some employees received more compensatory time than they were due and others less.

Insufficient training of KTRS staff members responsible for payroll led to the miscalculation of compensatory hours earned causing employees hours earned or paid to be either over or understated for approximately the past two years.

In the case of overstating of compensatory leave time, employees may owe hours to KTRS. The employees could have already used that time and KTRS would be unable to recoup the excess in compensatory hours given to the employee. In the case of understating compensatory leave, Federal law

<u>2014-KTRS-01</u>: KTRS Did Not Properly Calculate and Post Compensatory Leave Time (Continued)

requires employers to pay time and a half to employees who work in excess of 40 hours in a seven day work week period therefore by incorrectly calculating compensatory leave; KTRS is not in compliance with federal regulations.

Excessive over- or under-payments of overtime could cause a misstatement of the financial statements, though no material misstatements were noted. Expenses for compensatory time are recorded in the financial statements when earned by the employees.

KTRS' misapplied the employee overtime compensation policy and this resulted in noncompliance with federal regulations. The KTRS' Employee Handbook states:

If you are paid by the hour or perform "non-exempt" duties, you will be paid for the hours worked up to and including forty (40) hours in the week. You will receive compensatory time for hours worked beyond forty (40) in a work week, and you will be entitled to either paid time at one and one-half time your regular rate of pay or you will receive compensatory leave at one and one-half hours for each hour worked over (40) hours.... When you use your compensatory leave time during the same week you earn it, it does not count as "hours worked" for figuring overtime compensation.

Code of Federal Regulations (CFR) §778.110 Hourly rate employee states:

Earnings at hourly rate exclusively. If the employee is employed solely on the basis of a single hourly rate, the hourly rate is the "regular rate." For overtime hours of work the employee must be paid, in addition to the straight time hourly earnings, a sum determined by multiplying one-half the hourly rate by the number of hours worked in excess of 40 in the week.

29 United States Code section 207 (o) Compensatory time states:

(1) Employees of a public agency which is a State, a political subdivision of a State, or an interstate governmental agency may receive, in accordance with this subsection and in lieu of overtime compensation, compensatory time off at a rate not less than one and one-half hours for each hour of employment for which overtime compensation is required by this section.

<u>2014-KTRS-01</u>: KTRS Did Not Properly Calculate and Post Compensatory Leave Time (Continued)

Recommendation

We recommend KTRS:

- Provide additional training to KTRS staff members responsible for payroll regarding computing compensatory leave correctly.
- Review compensatory balances for employees and determine if adjustments to an individual employee's time is necessary.

Management's Response and Corrective Action Plan

KTRS staff members responsible for payroll have received additional training regarding computing compensatory leave time. In November 2014, KTRS initiated adjustments to accruals of compensatory leave time for employees. The KTRS Executive Secretary reviewed and initiated adjustments to accruals of compensatory leave time for employees.

2014-KTRS-02: KTRS Did Not Adequately Segregate Duties For The Payroll Process

During the FY14 audit of Kentucky Teachers' Retirement System, the employee payroll process was reviewed. The payroll clerk prepares the payroll and submits hardcopies of the payroll reports to the executive secretary for approval. Once the payroll is approved by the executive secretary, the payroll reports are returned to the payroll clerk for submission into the electronic payroll system. There is no review or reconciliation after the clerk submits the payroll. A segregation of duties issue exists because the payroll clerk prepares and submits the payroll in the electronic system.

Without segregation of the preparation and submission duties for employee payroll, the amount of pay, overtime hours, or leave hours could intentionally or unintentionally be altered in the electronic payroll system after approval by the executive secretary.

The objective of segregation of duties is to ensure job duties are separated so no one employee is in a position both to commit and conceal errors while performing their job duties. Adequate segregation of duties reduces the likelihood that errors, either intentional or unintentional, will remain undetected. This is carried out by providing for separate processing by different individuals at various stages of a transaction and by independent reviews of the work performed.

Recommendation

We recommend KTRS consider:

- Segregating the duties of preparing payroll from the submission of payroll by requiring an independent manager to submit payroll in the electronic payroll system.
- Implementing a reconciliation to ensure the pay amounts, overtime hours, and leave hours approved are also the amounts submitted in the electronic payroll system.

Management's Response and Corrective Action Plan

KTRS employee payroll functions are administered through a web based electronic payroll system. The system includes rigorous security controls and an audit log of entries and adjustments to pay amounts, leave time used or accrued, and other transactions. Payroll reports approved by the Executive Secretary are reconciled monthly to the General Ledger. Additionally, beginning in November 2014, payroll reports approved by the Executive Secretary, including leave time used or accrued, and other transactions, will be reconciled to the electronic payroll system. Implementation of these enhanced reconciliation processes will provide adequate internal controls to ensure that correct data is maintained in the payroll system. The KTRS Executive Secretary will perform the reconciliation of payroll.

<u>2014-KTRS-03</u>: The Procurement Process Is Not Adequately Documented And Contracts Are Not Adequately Monitored

During the FY14 audit of Kentucky Teachers' Retirement System (KTRS), the procurement process was reviewed relating to KTRS' administrative expenses especially as it relates to contract awards and monitoring. For the purposes of this finding, the APA defines a contract as a signed written agreement between KTRS and one or more parties for the purchase of goods, supplies, or services. The procurement process had several internal control concerns:

- There are no written policies related to tracking and monitoring individual contracts, or for ensuring that contracts containing spending limits are not overspent. KTRS does not maintain a list or log of all contracts awarded, date awarded, contract period, dollar limit (if applicable), and the amount spent. Also, its accounting system does not have, as a compensating control, built-in functions to prevent expenditures from exceeding contract limits.
- Three of seven contracts reviewed were signed and executed by the Executive Director after each contract's effective date.

There are no written policies with regard to the process of contract awarding and monitoring the contract after the award. The contracts are not tracked and monitored through a central location. Although the majority of the contracts reviewed did not have a spending limit, there is no mechanism for determining if the contract terms were followed and/or if any contract limits were exceeded.

KRS 161.340(3) states:

The board shall contract for actuarial, auditing, legal, medical, investment counseling, and other professional or technical services, and commodities, as are required to carry out the obligation of the board in accordance with the provisions of this chapter without limitation, including KRS Chapters 12, 13B, 45, 45A, 56, and 57, and shall provide for legal counsel and other legal services as may be required in defense of trustees, officers, and employees of the system who may be subjected to civil action arising from the performance of their legally assigned duties if counsel and services are not provided by the Attorney General."

Good internal controls dictate KTRS establish written policies to issue, track, and monitor contracts. This ensures contracts are properly awarded, tracked, and monitored; thus, all contractual payments relate to valid contracts.

<u>2014-KTRS-03</u>: The Procurement Process Is Not Adequately Documented And Contracts Are Not Adequately Monitored (Continued)

Recommendation

We recommend KTRS:

- Document the procurement award process in the policy and procedure manual.
- Implement written procedures for tracking contracts, such as manually via an excel spreadsheet or using the capabilities in eMARs.

Management's Response and Corrective Action Plan

No contract is issued by KTRS unless authorized by the Board of Trustees directly or through the administrative budget process. No contract is paid by KTRS unless authorized by the KTRS Executive Secretary, the KTRS Deputy Executive Secretary of Operations, or the KTRS Deputy Executive Secretary of Finance and Administration. Contracts are tracked and monitored through the office of the KTRS Executive Secretary. Any contract limits or administrative budget limits on contracts are carefully monitored by the KTRS Deputy Executive Secretary of Finance and Administration. Contracts are reported to the Board of Trustees. Contracts are carefully monitored by the KTRS Deputy Executive Secretary of Finance and Administration. Any substantive changes in authorized contracts are reported to the Board of Trustees. Contracts are issued and paid subject to fiduciary duty, which is the highest obligation under law. However, consistent with the recommendation, KTRS will adopt a policy reflecting current procurement processes and monitoring procedures for contracts for fiscal year 2016 and thereafter. The KTRS Deputy Executive Secretary of Finance and Administration is responsible for documenting procurement processes and monitoring procedures for contracts.

<u>2014-KTRS-04</u>: The Employer Wages And Contributions In KTRS Computer System Were Not Reconciled To The Employer's Payroll Reporting System

Employers and employees make contributions to the Kentucky Teachers' Retirement System (KTRS) based on gross wages. Employers submit wage and contribution information to KTRS using the Pathway system, which was implemented at the beginning of FY14. The employers maintain separate payroll reporting systems for handling the employers' payroll information, including employee wages and employer contributions for each employee.

During the FY14 audit of KTRS, contributions from the employer's payroll reporting system for 22 employers were compared to KTRS' Pathway system to ensure accurate reporting of the employer and employee contributions. As of September 29, 2014, the employer gross wages, and employee and employer contributions from the employer's payroll reporting system did not agree to Pathway for 18 of the 22 employers. KTRS did not have a process in place and functioning to reconcile Pathway contribution information to the member employers' records at June 30, 2014. Throughout the audit, attempts were made to reconcile selected KTRS and the employer information. During this time, differences between employee contributions, employer contributions, and wages for the 22 employers selected for testing fluctuated in aggregate between \$285,809 and \$3,250,556. Reconciliations of Pathway and employer information would have identified the variances and provided KTRS the opportunity to resolve the variances and thus ensure the accuracy of contributions in a timely manner.

Prior to the implementation of Pathway, employers had been required to submit contributions within 15 days after the pay date with an annual reconciliation detailing the employees and their wages before August 1st following the fiscal year end. Thus, employers had the option to hold all reporting (not payments) until July, or report on a monthly basis or any other desired timeframe. When KTRS implemented Pathway which allowed for timelier reporting of member and employer contributions, employers could submit data files with each payroll. In FY14, KTRS did not initiate the annual reconciliation process until September 2014.

Due to the lack of timely reporting and reconciliation requirements, the participating employers have not reconciled payroll records to KTRS' system. Without reconciliation between employers and Pathway, a misstatement of contributions and contributions receivable on the financial statements could occur.

According to KRS 161.560:

(1) Each agency employing members of the retirement system shall deduct from the compensation of each member for each payroll period subsequent to the date the individual became a member, the percentage of his compensation due under the rates prescribed in KRS 161.540. No later than fifteen (15) days following the end of each payroll period, the agency shall forward all amounts deducted to the Teachers' Retirement System.

<u>2014-KTRS-04</u>: The Employer Wages And Contributions In KTRS Computer System Were Not Reconciled To The Employer's Payroll Reporting System (Continued)

According to KRS 161.643:

Each school district and agency employing annuitants of the retirement system shall maintain a record of the days employed and the compensation paid to each annuitant and submit an annual report on forms prescribed by the retirement system no later than August 1, following the completion of each fiscal year.

Recommendation

We recommend KTRS:

- Ensure Pathway records are reconciled to employer and employee contribution records by August 31st of each year. KTRS should consider performing a quarterly or monthly reconciliation. This could make an annual reconciliation easier.
- Review Kentucky Revised Statute for reporting of contributions in light of the capabilities of the new computer system.

Management's Response and Corrective Action Plan

Employer reporting through the KTRS Pathway System began in July 2013. Employers have overwhelmingly reported positive experiences using the KTRS Pathway System. Using the Pathway System, KTRS reconciled contributions for employers each pay period during the fiscal year. In September 2014, KTRS undertook additional reconciliation measures to confirm individual member service credit earned during the fiscal year. In future years, because of planned enhancements to the payroll systems of employers, and modifications to the KTRS Pathway System, additional reconciliation measures should be unnecessary.

During the 2015 regular session of the Kentucky General Assembly, KTRS will recommend appropriate amendments to KRS 161.560 and KRS 161.643 to reflect the enhanced capabilities of the Pathway System and particular needs of participating employers. The KTRS Executive Secretary is responsible for presenting the Board of Trustees legislative recommendations to the General Assembly.

<u>2014-KTRS-05</u>: The Kentucky Teachers' Retirement System Did Not Adequately Protect Sensitive And Confidential Data

Our fiscal year 2014 audit revealed weaknesses in the Kentucky Teachers' Retirement System (KTRS) internal controls involving the security of confidential and sensitive data. We are aware KTRS has taken steps to strengthen security over certain types of data and is evaluating risk analysis tools that will assist with data protection; however, discussions with the agency revealed not all KTRS member data was adequately protected from potential intentional or unintentional access or misuse of information.

Detailed information that could potentially increase the risk of agency security being compromised was intentionally omitted from this comment. However, the auditors thoroughly discussed this issue to KTRS staff.

KTRS has not established adequate procedures to classify and ensure the protection of sensitive and confidential data.

Failure to adequately protect data increases the risk that Personally Identifiable Information (PII) or other sensitive and confidential data could be accessed or made available to the general public, which could compromise information related to members, employees, or vendors. This control weakness could potentially be exploited either internally or externally.

Sensitive and confidential data should be protected from unauthorized internal or external users or from exposure to the general public. The National Institute of Standards and Technology Publication 800-111 states, "[m]any threats against end user devices could cause information stored on the devices to be accessed by unauthorized parties. To prevent such disclosures of information, particularly of personally identifiable information (PII) and other sensitive data, the information needs to be secured."

Kentucky Revised Statute 161.585 states:

(2) Each member's account shall be administered in a confidential manner and specific data regarding a member shall not be released for publication unless authorized by the member; however, the board of trustees may release member account information to the employer or to other state and federal agencies as it deems necessary or in response to a lawful subpoena or order issued by a court of law.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Security Rule, located within the Code of Federal Regulations (CFR) at 45 CFR Part 164 Subpart C states:

§ 164.308 Administrative safeguards.

- (a) A covered entity must, in accordance with § 164.306:
 - (1) (i) Standard: Security management process. Implement policies and procedures to prevent, detect, contain, and correct security violations.

<u>2014-KTRS-05</u>: The Kentucky Teachers' Retirement System Did Not Adequately Protect Sensitive And Confidential Data (Continued)

(ii) Implementation specifications:

(A) **Risk analysis** (Required). Conduct an accurate and thorough assessment of the potential risks and vulnerabilities to the confidentiality, integrity, and availability of electronic protected health information held by the covered entity.

(B) Risk management (Required). Implement security measures sufficient to reduce risks and vulnerabilities to a reasonable and appropriate level to comply with \S 164.306(a).

(C) Sanction policy (Required). Apply appropriate sanctions against workforce members who fail to comply with the security policies and procedures of the covered entity.

(D) Information system activity review (Required). Implement procedures to regularly review records of information system activity, such as audit logs, access reports, and security incident tracking reports.

Recommendation

We recommend KTRS ensure confidential and sensitive data is sufficiently protected. Management should ensure sufficient resources are dedicated to address this weakness in a timely manner and ensure the maintenance of confidential and sensitive data remains a top priority. Further, we recommend KTRS management create an agency policy regarding data protection to, at a minimum, comply with applicable statutes and HIPAA, and reflect the actions and tools implemented by the agency. Once developed, the policy should be distributed to all staff to ensure they are aware of their responsibility in relation to agency security requirements.

Management's Response and Corrective Action Plan

The KTRS Pathway System will be substantially completed by July 1, 2015. The Pathway System will include appropriate protection and segregation of confidential and sensitive data. Preparation, consolidation, and revision of policies concerning protection and segregation of confidential and sensitive data, which reflect the actions and tools included in the KTRS Pathway System, will be completed by July 1, 2015. KTRS will also conduct staff training on the policies by July 1, 2015.

Concerning the legacy system, KTRS's confidential and sensitive data will be maintained under existing security procedures until the system is decommissioned beginning in January 2015. Hard drives, back-up tapes, and other media will be destroyed as part of the decommissioning processes. The actions will be performed under the direction of the KTRS Chief Information Officer.

<u>2014-KTRS-06</u>: The Kentucky Teachers' Retirement System Did Not Provide Sufficient Segregation Of Duty Controls Over The Legacy System

Our Fiscal Year (FY) 2014 review of the Kentucky Teachers' Retirement System (KTRS) system controls revealed KTRS did not employ sufficient segregation of duties between the system security administration, operation, and programming functions in relation to their legacy system.

Out of 20 user accounts related to 11 users or groups tested to determine whether proper segregation of duties existed, four users had profiles associated with one or more of their accounts with functions that present segregation of duties issues. Specifically, the QPGMR, QSYSOPR, and QSECOFR profiles were established for the legacy system. The QPGMR profile grants the user programming functions whereas the QSYSOPR profile is used to perform system operation functions. Further, the QSECOFR profile allows the user to perform security administration functions. We found that these four users had concurrent and unlimited access to two or more of these profiles during the audit period. As such, security controls could potentially be circumvented without detection.

We are aware that KTRS anticipates completely replacing the legacy system in January 2015, which will alleviate our concerns associated with segregation of duties for this system.

In addition, after fieldwork was completed, KTRS implemented a review process to monitor the audit log of security-related activities on the legacy system. The audit log is reviewed weekly by the KTRS Deputy Secretary for Finance and Administration and the Chief Information Officer for anomalies or suspicious activity. Since the inception of the process, there has been no such activity detected in the audit logs. Furthermore, the legacy application development activities were formalized within the "AS400 Application Development-Deployment Overview" document. The document expands on the controls in place to provide for the separation of the development and deployment activities of the programming staff in the legacy system.

However, these corrective actions were not implemented until October 2014, after fieldwork was completed. Additionally, KTRS does not have an adequate review process in place as it is following an informal process to monitor the audit log. Therefore, while there are compensating controls in place, the access/security weaknesses are still present until the system is completely decommissioned.

The agency set up legacy system users with access to multiple profiles for specific reasons; however, the access currently allowed to the four users identified in testing is excessive and does not allow for proper segregation of duties.

Employing strong segregation of duty controls decreases the opportunity for unauthorized modification to files and programs, and decreases the likelihood of errors or losses occurring because of incorrect or unauthorized use of data, programs, and other resources.

<u>2014-KTRS-06</u>: The Kentucky Teachers' Retirement System Did Not Provide Sufficient Segregation Of Duty Controls Over The Legacy System (Continued)

An individual should not have concurrent access to a system as a programmer, as an operator, or as a security administrator. Any combination of these functions, at once, could allow, intentionally or unintentionally, the introduction of unauthorized or malicious source code into the production environment. Additionally, strong segregation of duties control will ensure an independent and objective testing environment without jeopardizing the integrity of production data. Smaller organizations that cannot easily segregate duties among servers should implement compensatory controls to supervise and monitor program change activities to ensure no simultaneous development and production activities are taking place.

Recommendation

We recommend KTRS ensure the newly implemented corrective actions, which include the weekly review of the audit log for legacy security related activities, are consistently performed and thoroughly documented until the legacy system is completely decommissioned. Documentation should be maintained by the agency to show when the review was performed, by whom, and the results of the review. This documentation should be readily available for audit purposes.

Management's Response and Corrective Action Plan

The KTRS legacy system, which has been in service since 1987, will be decommissioned beginning in January 2015. The legacy system was updated in 1990 to include an application and development/deployment system to track changes to the production environment. KTRS's security practices include compensatory controls to supervise and monitor program change activities to ensure no simultaneous development and production activities are taking place. These security practices, which are monitored by the KTRS Chief Information Officer, will continue until the legacy system is decommissioned.

Additionally, to mitigate the risk of unauthorized security activity in the legacy system, in October 2014, KTRS began monitoring the audit log of users performing the security administrator functions. The enhanced security monitoring is being performed by the KTRS Deputy Executive Secretary for Finance and Administration and the KTRS Chief Information Officer. These processes are performed and documented on a weekly basis and will continue until the legacy system is decommissioned.