



TEACHERS' RETIREMENT SYSTEM of the State of Kentucky

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GARY L. HARBIN, CPA
Executive Secretary

Quarterly Meeting of the
TRS Board of Trustees

A G E N D A

December 16, 2019, 10 a.m. ET

- Meeting Called to Order
- Roll Call
 1. Reports for Consent
 - 1.1. Consideration/Approval of Minutes
 - 1.1.1. Quarterly Meeting, Board of Trustees, September 16, 2019
 - 1.1.2. Special Meeting, Board of Trustees, November 25, 2019
 - 1.1.3. Special Meeting, Insurance Committee, September 16, 2019
 - 1.1.4. Special Meeting, Governance & Audit Committee, September 16, 2019
 - 1.1.5. Special Meeting, Legislative Committee, September 16, 2019
 - 1.1.6. Special Meeting, Governance & Audit Committee, November 15, 2019
 - 1.1.7. Special Meeting, Personnel Committee, November 25, 2019
 - 1.2. Applications for Retirement and Annuity
 - 1.3. Survivor Benefits
 - 1.4. Life Insurance Benefits
 - 1.5. Refunds
 - 1.6. Interim Financial Statements
 2. Report of the Investment Committee
 3. Report of the Governance and Audit Committee
 4. Report of the Personnel Committee
 5. Report of the Legislative Committee
 6. Report of the Scholarship Committee
 7. Executive Secretary's Observations and Comments
- General Discussion
- Adjournment

The meeting will take place in the boardroom of the
Teachers' Retirement System of the State of Kentucky
479 Versailles Road, Frankfort, Kentucky.

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800-618-1687 • <https://trs.ky.gov>

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Reports for Consent

1.1. Consideration/Approval of Minutes

- 1.1.1. Quarterly Meeting, Board of Trustees, September 16, 2019
- 1.1.2. Special Meeting, Board of Trustees, November 25, 2019
- 1.1.3. Special Meeting, Insurance Committee, September 16, 2019
- 1.1.4. Special Meeting, Governance and Audit Committee, September 16, 2019
- 1.1.5. Special Meeting, Legislative Committee, September 26, 2019
- 1.1.6. Special Meeting, Governance and Audit Committee, November 15, 2019
- 1.1.7. Special Meeting, Personnel Committee, November 25, 2019

1.2. Applications for Retirement and Annuity

For the period September, October and November 2019, initial retirements included 340 retirees with monthly payments totaling \$938,792.80. During the same period last year, there were 358 retirements with monthly payments totaling \$1,032,549.01.

Attached is a summary of initial applications for retirement and annuity and a comparison to the same period last year. The list of members retiring during the period will be available for examination at the meeting.

Recommendation: The board is requested to approve the initial retirement payments as reported.

1.3. Survivor Benefits

For the period July 1 through September 30, 2019, there were 8 persons qualifying for survivor benefits with a total monthly payment of \$5,443.56.

The list of persons qualifying for survivor benefit payments during the period will be available for examination at the meeting.

Recommendation: The board is requested to approve the survivor benefit payments as reported.

1.4. Life Insurance Benefits

For the period July 1 through September 30, 2019, there were 15 payments of life insurance benefits for active teachers and 263 payments for retired teachers for total payments of \$1,345,000. During the same quarter in 2018, there were 234 payments in the amount of \$1,140,000.

The list of payments of life insurance benefits due to death of active and retired teachers during the period will be available for examination at the meeting.

Recommendation: The board is requested to approve the payment of life insurance benefits as reported.

1.5. Refunds

There were 654 refunds during the period July 1 through September 30, 2019 totaling \$9,301,819.33. The refunds are for the following categories:

Regular withdrawals	623	\$8,786,969.32
Deaths	<u>31</u>	<u>\$ 514,850.01</u>
Totals	654	\$9,301,819.33

During the same period in 2018, there were 785 refunds totaling \$12,304,379.49.

The report of refunds for the period is attached.

Recommendation: The board is requested to approve the payment of refunds as reported.

1.6. Interim Financial Statements

Attached are the Interim Financial Statements for the quarter ended September 30, 2019.

Recommendation: The Interim Financial Statements are provided for informational purposes only and require no action by the board.

Teachers' Retirement System of Kentucky
Initial Applications for Retirement and Annuity
2019

	September	October	November	Total	Same Period 2018
Handicapped Child	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>0</i> \$0.00
Disability Retirement	<i>6</i> \$14,097.21	<i>12</i> \$32,704.45	<i>10</i> \$23,480.43	<i>28</i> \$70,282.09	<i>33</i> \$89,410.99
Service Retirement	<i>130</i> \$399,184.69	<i>106</i> \$268,651.22	<i>72</i> \$183,049.38	<i>308</i> \$850,885.29	<i>325</i> \$943,138.02
Beneficiary of Member Eligible to Retire	<i>2</i> \$7,090.95	<i>1</i> \$7,349.34	<i>1</i> \$3,185.13	<i>4</i> \$17,625.42	<i>0</i> \$0.00
TOTALS	<i>138</i> \$420,372.85	<i>119</i> \$308,705.01	<i>83</i> \$209,714.94	<i>340</i> \$938,792.80	<i>358</i> \$1,032,549.01

Reports for Consent
Member Account Refunds
For the period July 2019 - September 2019

Active Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	229	1,498,380.91	374,479.42	1,236,838.25	3,109,698.58
August	213	1,367,159.33	341,624.80	1,420,295.35	3,129,079.48
September	183	1,135,141.08	283,785.22	1,129,264.96	2,548,191.26
Total	623				8,786,969.32

Deceased Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	8	20,480.52	3,996.87	72,615.82	97,093.21
August	10	118,864.87	13,890.50	3,111.42	135,866.79
September	13	186,795.89	15,619.66	79,474.46	281,890.01
Total	31				514,850.01

Total Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	237	1,518,861.43	378,476.29	1,309,454.07	3,206,791.79
August	223	1,486,024.20	355,515.30	1,423,406.77	3,264,946.27
September	196	1,321,936.97	299,404.88	1,208,739.42	2,830,081.27
Total	654				9,301,819.33

TEACHERS' RETIREMENT SYSTEM

OF THE STATE OF KENTUCKY



INTERIM FINANCIAL STATEMENTS

QUARTER ENDED SEPTEMBER 30, 2019
(MARKET VALUE - UNAUDITED)

**Statements of Plan Net Assets
as of September 30, 2019 and 2018
(Market Value - Unaudited)**

	Defined Benefit Plan		Health Insurance Plans		Life Insurance Plan		Other Funds		TOTAL	
	FY 2020	FY 2019	FY 2020	FY 2019	FY 2020	FY 2019	FY 2020	FY 2019	FY 2020	FY 2019
ASSETS										
Cash	\$ 107,660,416	\$ 104,036,359	\$ 43,171,584	\$ 29,170,835	\$ 153,135	\$ 266,798	\$ 185,085	\$ 148,479	\$ 151,170,220	\$ 133,622,471
Receivables										
Contributions	38,277,522	30,237,329	22,738,889	18,012,814	19,353	13,374			61,035,764	48,263,517
State of Kentucky	-	11,386,321	826,203	10,277,791	120,308	35,965			946,511	21,700,077
Investment Income	51,446,307	44,151,888	2,420,395	2,061,568	325,174	732,657	3,345	3,043	54,195,221	46,949,156
Investment Sales Receivable	62,745,394	13,529,139	1,426,567	1,067,075	-	-			64,171,961	14,596,214
Installment Account Receivable	130,383	286,370							130,383	286,370
Other Receivables	26,869	33,752	27,670,667	28,391,744					27,697,536	28,425,496
Due from Other Funds	1,835,025	1,779,623							1,835,025	1,779,623
Total Receivables	154,461,500	101,404,422	55,082,721	59,810,992	464,835	781,996	3,345	3,043	210,012,401	162,000,453
Investments at Market Value										
Short Term Investments	515,645,822	430,383,762	49,482,287	94,620,204	15,952,943	5,530,459	357,244	369,527	581,438,296	530,903,952
Bonds and Mortgages	3,225,333,334	3,462,677,489	108,209,951	89,269,570	17,190,266	35,050,144	281,898	239,968	3,351,015,449	3,587,237,171
Stocks	12,334,920,534	12,451,704,268	866,402,551	630,176,953	48,274,749	42,009,907	338,087	332,678	13,249,935,921	13,124,223,806
Alternative Investments	1,390,262,833	1,329,962,327	107,155,094	85,451,996	97,786				1,497,515,713	1,415,414,323
Real Estate	1,222,703,029	1,164,105,558	79,880,072	65,233,378	2,248,463	587,090			1,304,831,564	1,229,926,026
Additional Categories	1,445,391,958	1,360,901,173	206,425,577	190,087,543	1,357,376	1,331,826			1,653,174,911	1,552,320,542
Total Investments	20,134,257,510	20,199,734,577	1,417,555,532	1,154,839,644	85,121,583	84,509,426	977,229	942,173	21,637,911,854	21,440,025,820
Capital Assets (net of accumulated depreciation)	14,087,302	16,324,647							14,087,302	16,324,647
Total Assets	20,410,466,728	20,421,500,005	1,515,809,837	1,243,821,471	85,739,553	85,558,220	1,165,659	1,093,695	22,013,181,777	21,751,973,391
LIABILITIES										
Liabilities										
Accrued Expenses and Other Liabilities	5,026,724	1,189,081	5,920,066	3,246,245					10,946,790	4,435,326
Contributions Not Posted	19,794,320	33,427,314	-	-					19,794,320	33,427,314
Investment Purchases Payable	84,828,681	37,953,844	2,993,505	2,807,153	-	-	-	-	87,822,186	40,760,997
Investment Fees Payable	14,728,037	14,103,336	1,304,530	1,046,539	19,654	7,605	-	-	16,052,221	15,157,480
Due to Other Funds	-	-	1,803,191	1,747,561	30,392	30,979	1,442	1,083	1,835,025	1,779,623
Revenues Collected in Advance	-	-	-	1,749,168					-	1,749,168
Total Liabilities	124,377,762	86,673,575	12,021,292	10,596,666	50,046	38,584	1,442	1,083	136,450,542	97,309,908
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	\$ 20,286,088,966	\$ 20,334,826,430	\$ 1,503,788,545	\$ 1,233,224,805	\$ 85,689,507	\$ 85,519,636	\$ 1,164,217	\$ 1,092,612	\$ 21,876,731,235	\$ 21,654,663,483

Statements of Changes in Plan Net Assets
For the Three Months Ended September 30, 2019 and 2018
 (Market Value - Unaudited)

	Defined Benefit Plan		Medical Insurance Plan		Life Insurance Plan		Other Funds		TOTAL	
	FY 2020	FY 2019	FY 2020	FY 2019	FY 2020	FY 2019	FY 2020	FY 2019	FY 2020	FY 2019
ADDITIONS										
Contributions										
Employer- State Paid	\$ 244,308,710	\$ 232,284,203	\$ 74,739,303	\$ 18,735,801	\$ 280,518	\$ 186,048	\$ -	\$ -	\$ 319,328,531	\$ 251,206,052
Employer- LSD, Other	16,194,196	17,274,360	22,182,863	20,130,423	53,595	43,118	-	-	38,430,654	37,447,901
Member- Active	66,673,053	61,855,681	27,272,907	24,663,927					93,945,960	86,519,608
Member- Retired			14,789,450	14,981,440					14,789,450	14,981,440
Recovery Income			21,247,264	12,726,428					21,247,264	12,726,428
Total Contribution	327,175,959	311,414,244	160,231,787	91,238,019	334,113	229,166	-	-	487,741,859	402,881,429
Investment Income/(Loss)										
Net Appreciation/(Depreciation) in										
Fair Value of Investments	43,824,804	494,104,350	4,125,663	32,550,708	533,112	1,351,482	16,776	12,719	48,500,355	528,019,259
Interest	46,017,872	37,484,778	2,386,214	1,318,234	250,322	510,098	2,874	4,100	48,657,282	39,317,210
Dividends	57,332,911	53,530,297	1,910,294	1,596,544	159,723	116,326	1,503	1,308	59,404,431	55,244,475
Rental Income, Net	7,118,817	7,756,204							7,118,817	7,756,204
Securities Lending, Net	564,185	808,370			6,680	5,572	80	112	570,945	814,054
Gross Investment Income	154,858,589	593,683,999	8,422,171	35,465,486	949,837	1,983,478	21,233	18,239	164,251,830	631,151,202
Less Investment Expense	(14,059,782)	(14,583,357)	(1,165,637)	(1,383,181)	(12,722)	(30,264)	-	(4,087)	(15,238,141)	(16,000,889)
Net Investment Income	140,798,807	579,100,642	7,256,534	34,082,305	937,115	1,953,214	21,233	14,152	149,013,689	615,150,313
Total Additions	467,974,766	890,514,886	167,488,321	125,320,324	1,271,228	2,182,380	21,233	14,152	636,755,548	1,018,031,742
DEDUCTIONS										
Benefits	541,234,671	522,805,738			1,340,000	1,125,000	57,044	43,858	542,631,715	523,974,596
Refunds of Contributions	9,798,149	12,301,665							9,798,149	12,301,665
Under 65 Insurance Expenses			27,811,332	29,456,347					27,811,332	29,456,347
Over 65 Insurance Expenses			49,908,500	52,919,980					49,908,500	52,919,980
Administrative Expense	2,762,885	2,214,149	-	-	-	-	-	-	2,762,885	2,214,149
Total Deductions	553,795,705	537,321,552	77,719,832	82,376,327	1,340,000	1,125,000	57,044	43,858	632,912,581	620,866,737
Net Increase (Decrease)	(85,820,939)	353,193,334	89,768,489	42,943,997	(68,772)	1,057,380	(35,811)	(29,706)	3,842,967	397,165,005
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS										
Beginning of year	20,371,909,905	19,981,633,096	1,414,020,056	1,190,280,808	85,758,279	84,462,256	1,200,028	1,122,318	21,872,888,268	21,257,498,478
Ending of period	\$ 20,286,088,966	\$ 20,334,826,430	\$ 1,503,788,545	\$ 1,233,224,805	\$ 85,689,507	\$ 85,519,636	\$ 1,164,217	\$ 1,092,612	\$ 21,876,731,235	\$ 21,654,663,483

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Report of the Investment Committee

1. Investment Committee Meeting and Actions: The investments approved at the November 21, 2019, Investment Committee meeting are as follows: Commitments of up to \$50 million from the TRS Retirement Annuity Trust, up to \$5 million from the TRS Health Insurance Trust and up to \$500,000 from the Life Insurance Trust into the Audax Mezzanine Fund V. A commitment of up to \$25 million from the Retirement Annuity Trust into the Audax Private Debt Strategic Equity Fund. Commitments of up to \$50 million from the Retirement Annuity Trust, up to \$10 million from the Health Insurance Trust and up to \$500,000 from the Life Insurance Trust to the AlpInvest Secondaries Fund VII. Commitments of up to \$50 million from the Retirement Annuity Trust, up to \$5 million from the Health Insurance Trust and up to \$500,000 from the Life Insurance Trust into the Oaktree European Fund V. Initial Commitments of up to \$300 million from the Retirement Annuity Trust, up to \$50 million from the Health Insurance Trust and up to \$4 million from the Life Insurance Trust to Baillie Gifford U. S. Equity Growth Strategy. Initial commitments of up to \$100 million from the Retirement Annuity Trust, up to \$5 million from the Health Insurance Trust and up to \$1 million from the Life Insurance Trust to Baillie Gifford Emerging Markets All Cap strategy. Additionally, outside managers Baillie Gifford and Co. and State Street Global Advisors presented on their respective portfolios.

2. Purchases and Disposals: The Report of the Investment Committee for the quarter ended September 30, 2019, is presented for review and approval. During this quarter, 2,448 purchases amounted to \$2,632,215,973.97 and 2,219 disposals amounted to \$2,656,509,004.65. The disposals consisted of 1,861 sales, 320 principal payments and 38 redemptions. While the TRS investment office initiates each of these transactions, the custodian of securities is responsible for handling and securing each stock, bond or other type of investment. At the end of the quarter, TRS's invested securities had a book value of \$15,670,795,244.76 and a market value of \$20,134,568,200.53.

3. Staff's Comments on Economic and Market Conditions: Financial markets experienced bouts of volatility during the first quarter of fiscal year 2020 as dominant market themes from the past few quarters persisted. Market participants noted that investor sentiment continued to be significantly influenced by geopolitical concerns largely stemming from ongoing tariffs and trade wars and expectations for central bank policy actions. Specifically, trade tensions were cited by the International Monetary Fund as a key reason for recently lowering its estimate for global growth in 2019 from 3.2% down to 3%.

The U.S. equity market ended the quarter 1.53% higher, as measured by the S&P 1500 Index, while economic headwinds and conflict escalations outside the U.S. led international equity

markets lower as the MSCI ACWI ex USA Index returned -1.7%. Yields on fixed income assets declined as growth and inflation expectations weakened.

Global central bank policy also captured investor attention during the period. The European Central Bank responded to euro area weakness by announcing its intention to restart its quantitative easing program in November 2019. While the Bank of Japan left policy rates unchanged, several other foreign central banks, including the People's Bank of China, delivered accommodative policy messages and introduced programs intended to support economic growth. The Federal Reserve also took steps to mitigate developing concerns of weakening inflation and growth expectations, primarily by cutting policy rates by 0.25% at the September Federal Open Market Committee meeting. While the interest rate cut was largely expected, market participants took note that two members favored rate cuts of 0.5% with another recommending no changes.

U.S. equity markets saw varied results during the quarter amid uncertainty surrounding U.S.-China trade negotiations, and political risks spurred by the recently announced impeachment proceedings. The month of September was positive for most indexes, as key economic fundamentals continued to be reported at better than expected levels. Large-cap stocks were the only size segment to experience positive returns across all styles, with the S&P 500 Index returning 1.7%. Conversely, small-cap markets saw negative returns across all styles, with the Russell 2000 Index returning -2.4%.

A significant rotation from growth into value stocks occurred in September. With the exception of the mega-cap segment, the September shift caused the quarterly return of value stocks to exceed the return of growth stocks for the first time since the quarter end December 31, 2018. The largest spread was seen in the small-cap universe, with the Russell 2000 Value Index outperforming the Russell 2000 Growth Index by almost 6% during the month of September. Despite positive performance across large-cap indexes, active management generally struggled in this segment during quarter. Like the April-to-June quarter, small-cap managers fared much better, relative to market benchmarks, than their larger-cap counterparts. In addition, core and value-tilted managers performed relatively better than growth managers.

In contrast to the U.S. market, developed international equity markets finished the quarter in negative territory. During the quarter, value stocks continued to underperform growth stocks, small-cap stocks outperformed their larger counterparts, and almost all developed market countries posted negative returns. Returns in emerging markets continue to be driven by trade tensions between the United States and China, and market trends reversed numerous times in reaction to new tariff announcements and indications of short-term postponement. Nearly all countries within emerging markets finished the quarter with negative returns except for Taiwan, where returns were influenced by strong results from Taiwan Semiconductor. South Africa trailed all other emerging market countries with a return of -12.6% due to increased concerns regarding political and economic instability.

Bonds registered another strong quarter, with the Bloomberg U.S. Government/Credit Bond Index returning 2.64% for the quarter. U.S. Treasury yields fell across the curve, most notably in the longer-dated maturities. This movement propelled the Bloomberg U.S. Government Long Duration Index, which finished with a strong return of 7.8% in the third quarter, increasing the

year-to-date return to 19.6%. U.S. investment-grade corporate spreads were volatile over the quarter, yet they ended exactly where they began. With assistance from the decline in Treasury rates, the Bloomberg U.S. Corporate Index returned 3.1%. U.S. high yield returns were more modest, with the Bank of America ML U.S. High Yield Index returning 1.2%. However, an interesting trend has developed, as the BB-rated portion of the index is outperforming the CCC-rated portion, despite the high yield index returning 11.5% calendar year-to-date. Should this trend continue, it will be the first time in the history of the index that the BB-rated segment has outperformed the CCC-rated segment when overall index returns are in the double digits.

Core private real estate returned 1.31% during the first quarter of the current fiscal year as reported by the NCREIF-ODCE Index, with the total gross return comprised of 1.1% income and 0.3% price appreciation. While the income component remained in-line with historical levels, price appreciation experienced a modest increase of 26 basis points compared to the relatively flat return for the April to June quarter. One recent industry trend is the weakness in the retail sector, which continued through the quarter as numerous large national retail chains announced store closures and bankruptcy filings. Consumer trends have been forcing retailers to move toward omni-channel formats, as opposed to solely brick-and-mortar or online business models. These issues in retail are occurring despite generally favorable conditions from a healthy U.S. economy, strong consumer spending and historically low unemployment.

4. Performance: Investment performance was positive for the quarter ending September 30, 2019. The Retirement Annuity Trust Fund's portfolio appreciated 0.73% for the quarter, underperforming the Policy Index which increased 0.99%. TRS's domestic equities gained 0.80%, trailing the S&P 1500 Stock index which gained 1.53% for the quarter. TRS's international stocks returned -1.95% trailing the MSCI All Country ex U.S. Index, which had a return of -1.7% for the quarter. Alternatives and real estate were positive contributors as private equity gained 3.06% while Real estate returned 1.35%. TRS's fixed income returned 2.67%, as the Bloomberg Barclays Gov/Credit Bond index returned 2.64% for the quarter.

Recommendation: The executive secretary recommends that the board accept and ratify the Report of the Investment Committee.

Teachers' Retirement System of the State of Kentucky
Retirement Annuity Trust
Quarterly Investment Performance
Gross Returns
For the Period Ended September 30, 2019

FINAL

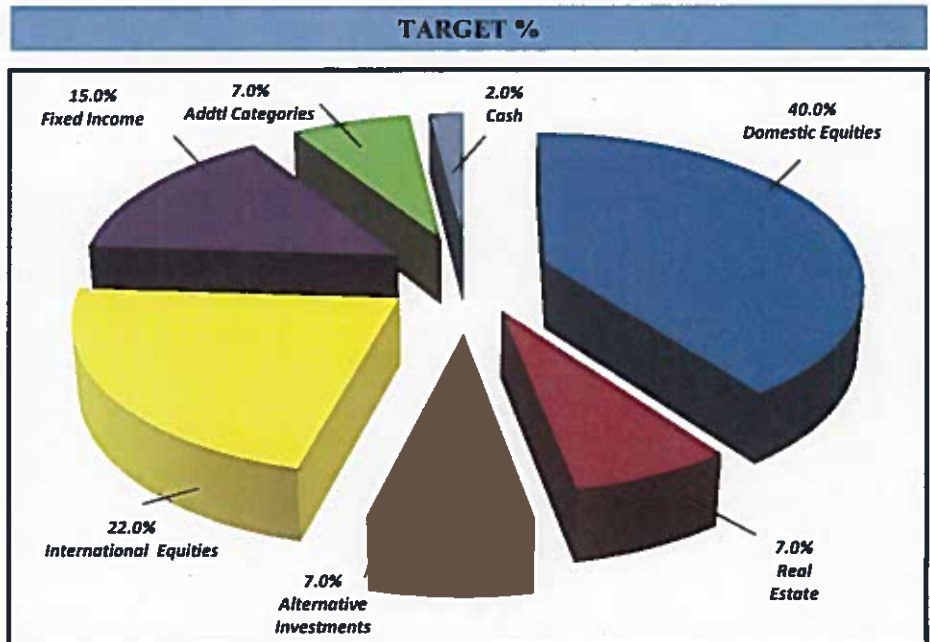
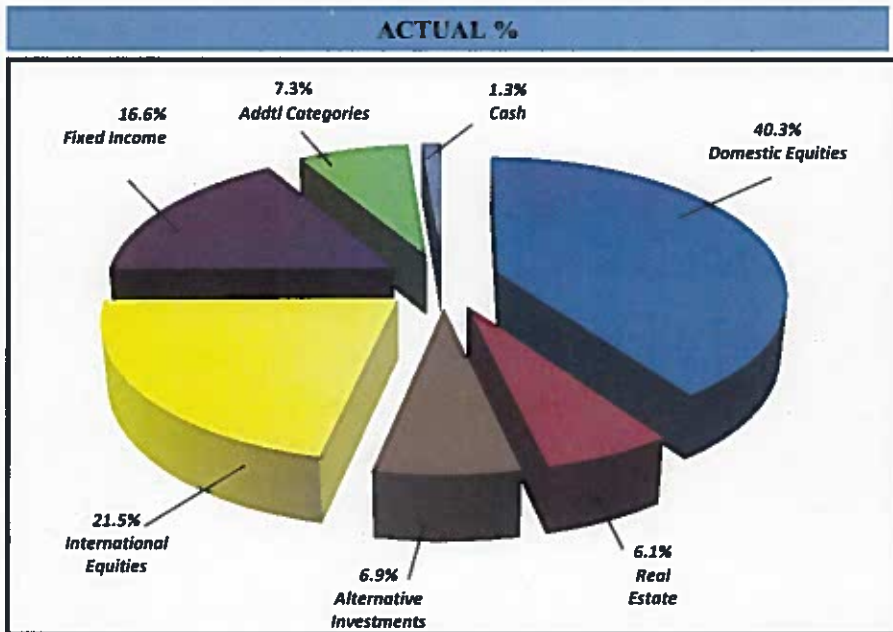
	Market Value	Last Qtr	FYTD	1-Year	3-Year*	5-Year*	10-Year*	20-Year*
TOTAL PLAN	\$ 20,134,568,200.53	0.73	0.73	3.56	9.30	7.33	9.20	6.21
<i>Policy Benchmark</i>		0.99	0.99	-4.59	9.19	7.38	9.04	-
Total Equity	\$ 12,444,868,475.65	-0.18	-0.18	-0.14	10.72	8.04	10.93	5.85
Domestic Equity	\$ 8,110,764,961.13	0.80	0.80	1.23	12.25	9.76	12.85	6.68
<i>S&P 1500 Index</i>		1.53	1.53	3.39	13.01	10.69	13.21	-
All-Cap Equities	\$ 332,780,092.64	-0.54	-0.54	0.10	-	-	-	-
<i>Russell 3000</i>		1.16	1.16	2.92	-	-	-	-
Large-Cap Equities	\$ 6,708,994,179.93	1.10	1.10	2.01	12.56	9.75	12.75	-
<i>S&P 500 Index</i>		1.70	1.70	-4.25	13.39	10.84	13.24	6.32
Mid-Cap Equities	\$ 661,002,541.20	-0.64	-0.64	0.39	12.36	10.54	13.55	-
<i>S&P 400 Index</i>		-0.09	-0.09	-2.49	9.38	8.88	12.56	-
Small-Cap Equities	\$ 407,988,147.36	-0.59	-0.59	-7.61	9.30	9.75	13.57	-
<i>S&P 600 Index</i>		-0.20	-0.20	-9.34	9.33	9.89	13.02	-
International Equity	\$ 4,334,103,514.52	-1.95	-1.95	-2.59	7.96	4.52	6.19	-
<i>MSCI AC World Ex US</i>		-1.70	-1.70	-0.72	6.85	3.39	-4.93	-
Fixed Income	\$ 3,352,936,268.89	2.67	2.67	11.44	3.57	3.99	4.63	5.71
<i>Bloomberg Barclays Govt/Credit Index</i>		2.64	2.64	11.32	3.16	3.61	3.94	5.14
Real Estate:	\$ 1,222,703,028.74	1.35	1.35	7.75	9.87	10.80	9.12	9.38
In House Real Estate Equity	\$ 413,765,065.62	-0.86	-0.86	5.02	9.64	9.24	8.51	8.79
<i>CPI plus 2%</i>		0.91	0.91	3.76	-4.11	3.57	3.77	-4.14
Core Real Estate:	\$ 481,324,218.33	1.67	1.67	7.89	8.12	10.23	10.97	-
<i>NCREIF ODCE (VW)</i>		1.31	1.31	5.60	7.31	9.35	10.86	-
Non-Core Real Estate:	\$ 327,613,744.79	3.82	3.82	11.20	12.33	14.77	-	-
<i>NCREIF Property Index</i>		1.41	1.41	6.23	6.76	8.57	-	-
Alternative Investments:								
Private Equity	\$ 1,208,879,120.63	3.06	3.06	10.63	15.28	11.37	13.56	-
Mature Private Equity	\$ 405,524,665.58	1.88	1.88	6.52	12.04	9.07	-	-
<i>S&P 500 plus 3%</i>		2.45	2.45	7.38	16.80	14.16	-	-
Private Equity < 5 Years	\$ 803,354,455.05	3.81	3.81	13.02	18.04	13.02	-	-
Timberland:	\$ 181,383,712.48	1.06	1.06	2.93	1.27	4.32	3.43	-
<i>NCREIF Timberland Index</i>		0.18	0.18	2.32	3.19	-4.40	3.99	-
Additional Categories:	\$ 1,471,277,504.06	1.34	1.34	6.27	6.72	4.40	7.77	-
<i>B of A Merrill Lynch U.S. High Yield Master II Index</i>		1.22	1.22	6.30	6.07	5.36	7.85	-
Cash (Unallocated)	\$ 252,520,090.08	0.54	0.54	2.25	1.56	1.02	0.57	1.97
<i>90 Day T-Bill</i>		0.56	0.56	2.38	1.54	0.96	0.52	1.72
Total Plan Gross Return for 30-year period*	8.03							

*Returns are annualized for periods longer than one year

** Prior to July 1, 2008, TRS did not benchmark overall fund performance. Effective July 1, 2008, the Board of Trustees approved a Policy Index that represents the returns of appropriate benchmarks for the various asset classes weighted by the mid-point of the strategic range for the current fiscal year.

Teachers' Retirement System of Kentucky
Quarterly Investment Update
For the period ended September 30, 2019

<i>(\$ in millions)</i>	<u>\$'s</u>	<u>9/30/2019 Actual %</u>	<u>6/30/2019 Actual %</u>	<u>Target %</u>	<u>Strategic Ranges</u>
Domestic Equities	\$8,110.8	40.3%	39.4%	40.0%	34.0 - 48.0%
Real Estate	1,222.7	6.1%	6.0%	7.0%	4.0 - 10.0%
Alternative Inv.	1,390.3	6.9%	6.7%	7.0%	4.0 - 10.0%
International Equities	4,334.1	21.5%	21.9%	22.0%	18.0 - 25.0%
Fixed Income	3,352.9	16.6%	17.0%	15.0%	12.0 - 19.0%
Addtl Categories	1,471.3	7.3%	7.2%	7.0%	4.0 - 10.0%
Cash	252.5	1.3%	1.8%	2.0%	1.0 - 3.0%
Total	<u>\$20,134.6</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	



Teachers' Retirement System of the State of Kentucky
Health Insurance Trust
Quarterly Investment Performance
Gross Returns
For the Period Ended September 30, 2019

FINAL

	<u>Market Value</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1-Year</u>	<u>3-Year*</u>	<u>5-Year*</u>
TOTAL PLAN	\$ 1,417,555,530.83	0.62	0.62	3.82	8.67	6.38
<i>Policy Benchmark</i>		0.65	0.65	3.69	8.46	-
Total Equity	\$ 867,654,540.43	-0.39	-0.39	0.25	9.42	6.86
All Cap Equities	\$ 37,057,211.09	-0.52	-0.52	-1.64	-	-
<i>Russell 3000</i>		1.16	1.16	2.92	-	-
Global Equities	\$ 830,597,329.34	-0.39	-0.39	0.36	9.57	6.95
<i>MSCI AC World IMI (Net)</i>		-0.18	-0.18	0.48	9.36	6.61
Fixed Income	\$ 121,973,937.45	2.19	2.19	10.10	2.96	3.06
<i>Barclays Government Credit</i>		2.64	2.64	11.32	3.16	3.61
Real Estate:	\$ 79,880,072.52					
Core Real Estate	\$ 36,048,325.16	1.95	1.95	7.95	8.17	-
<i>NCREIF ODCE (VW)</i>		1.31	1.31	5.60	7.31	-
Non-Core Real Estate	\$ 43,831,747.36	2.87	2.87	10.72	12.22	14.55
<i>NCREIF Property Index</i>		1.41	1.41	6.23	6.80	8.59
Private Equity	\$ 107,155,093.75	2.47	2.47	9.87	16.23	14.52
Mature Private Equity	\$ 17,819,037.00	1.50	1.50	12.87	15.76	14.36
<i>S&P 500 plus 3%</i>		2.45	2.45	7.38	16.80	14.16
Private Equity < 5 Years	\$ 89,336,056.75	2.70	2.70	9.49	16.31	-
Additional Categories:	\$ 210,709,482.95	1.47	1.47	6.61	6.67	4.63
<i>B of A Merrill Lynch High Yield Master II</i>		1.22	1.22	6.30	6.07	5.36
Cash (Unallocated)	\$ 30,182,403.73	0.53	0.53	2.49	1.61	1.05
<i>90 Day T-Bill</i>		0.56	0.56	2.38	1.54	0.96

*Returns are annualized for periods longer than one year

** Prior to July 1, 2015, TRS did not benchmark overall fund performance. Effective July 1, 2015, the Board of Trustees approved a Policy Index that represents the returns of appropriate benchmarks for the various asset classes weighted by the mid point of the strategic range for the current fiscal year.

Teachers' Retirement System of Kentucky

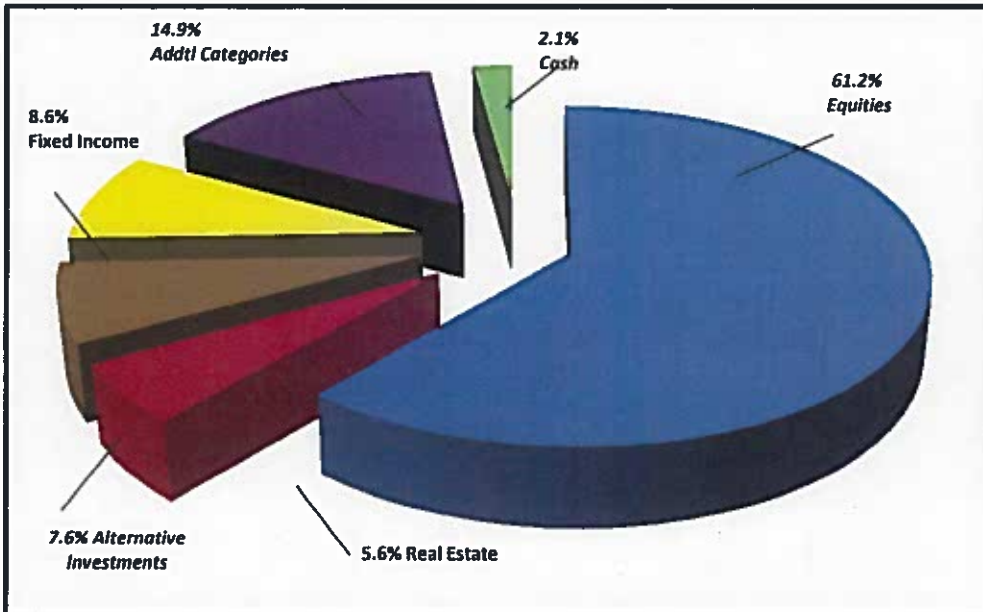
Insurance Trust Fund

Quarterly Investment Update

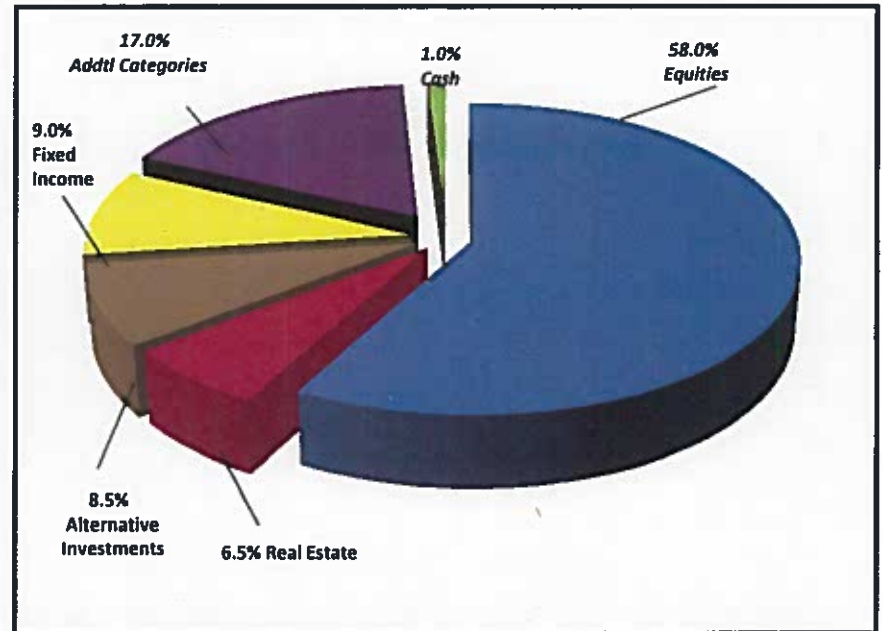
For the period ended September 30, 2019

<i>(\$ in thousands)</i>	<u>\$'s</u>	<u>9/30/2019 Actual %</u>	<u>6/30/2019 Actual %</u>	<u>Target %</u>	<u>Strategic Ranges</u>
Equities	\$867,654.5	61.2%	58.6%	58.0%	51.0 - 64.0%
Real Estate	\$79,880.1	5.6%	5.8%	6.5%	4.0 - 12.0%
Alternative Inv.	\$107,155.1	7.6%	7.8%	8.5%	5.0 - 12.0%
Fixed Income	\$121,973.9	8.6%	9.1%	9.0%	6.0 - 12.0%
Addtl Categories	\$210,709.5	14.9%	15.8%	17.0%	14.0 - 21.0%
Cash	\$30,182.4	2.1%	2.9%	1.0%	0.0 - 4.0%
Total	<u>\$1,417,555.5</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	

ACTUAL %



TARGET %



TOTAL BV INVESTED AT 06/30/19		\$ 15,695,088,275.44
<u>July Activity</u>		
	Purchases	780,185,587.98
	Disposals	(696,214,443.36)
	Paydowns	(2,600,794.90)
	Redemptions	(15,643,574.83)
	Short-Term Pool Net	<u>134,102,010.31</u>
		199,828,785.20
<u>August Activity</u>		
	Purchases	497,590,613.70
	Disposals	(348,334,589.83)
	Paydowns	(1,437,174.37)
	Redemptions	(7,011,655.64)
	Short-Term Pool Net	<u>(266,719,672.87)</u>
		(125,912,479.01)
<u>September Activity</u>		
	Purchases	386,098,601.33
	Disposals	(382,472,439.31)
	Paydowns	(3,177,221.12)
	Redemptions	(45,913,393.43)
	Short-Term Pool Net	<u>(52,744,884.34)</u>
		(98,209,336.87)
TOTAL BV INVESTED AT 09/30/19		<u><u>\$ 15,670,795,244.76</u></u>

* TRS recognizes investment transactions on the date they occur. Transaction settlements, generally, occur days following transactions. The interim period between transaction date and settlement date represents a "pending period". At the time this statement was produced, (\$22,083,281) in net transactions had occurred but had not settled. The statement does not include either expected cash receipts or disbursements associated with these pending trades. Upon settlement of these pending transactions, the net effect would be as follows:

Total Short Term	515,956,513
- Pending Payable	<u>(22,083,281)</u>
Net	<u><u>493,873,232</u></u>

INVESTMENT ACTIVITY

July 1, 2019 -- September 30, 2019

Total Book Value Invested @ 7/1/19 \$ 15,695,088,275.44

Purchases:

369	Cash Equivalents	\$	968,341,170.96	
118	Fixed Income Securities		476,586,676.66	
1709	Equity Securities		836,643,760.03	
28	Real Estate		39,519,162.56	
91	Alternative Investments		124,105,456.89	
133	Additional Categories		187,019,746.87	
<hr/>				
2448	Total Purchases			\$ 2,632,215,973.97

Disposals:

269	Cash Equivalents	\$	1,153,703,717.86	
114	Fixed Income Securities		459,084,133.77	
320	Principal Paydowns		7,215,190.39	
36	Redemptions / Maturities		68,022,006.76	
1113	Equity Securities		691,669,200.49	
45	Real Estate		43,159,972.68	
139	Alternative Investments		64,293,548.47	
181	Additional Categories		168,814,617.09	
0	Additional Principal Paydowns		-	
2	Additional Redemptions / Maturities		546,617.14	
<hr/>				
2219	Total Disposals			\$ 2,656,509,004.65

Total Book Value Invested @ 9/30/19 \$ 15,670,795,244.76

Total Par Value Invested @ 9/30/19 \$ 15,657,962,263.42

Total Market Value Invested @ 9/30/19 \$ 20,134,568,200.53

* TRS recognizes investment transactions on the date they occur. Transaction settlements, generally, occur days following transactions. The interim period between transaction date and settlement date represents a "pending period". At the time this statement was produced, (\$22,083,281) in net transactions had occurred but had not settled. The statement does not include either expected cash receipts or disbursements associated with these pending trades. Upon settlement of these pending transactions, the net effect would be as follows:

Total Short Term	515,956,513
- Pending Payable	(22,083,281)
Net	<u>493,873,232</u>

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Report of the Governance and Audit Committee

The Governance and Audit Committee had a special meeting on Nov. 15. The following is a summary of significant actions taken by the committee.

1. Independent Actuary's Valuations: Cavanaugh Macdonald Consulting (CavMac) presented the pension and OPEB valuations as of June 30, 2019.

Pension: The Retirement Annuity Trust's funded ratio improved to 58.1% as of June 30, 2019, from 57.7% a year earlier. The \$14.5 billion unfunded accrued liability increased slightly from the prior fiscal year. TRS received 100% of the actuarially required contribution for the fiscal year.

Retiree Medical: The Health Insurance Trust's funded ratio improved to 46% compared to 36.3% the prior year. In 2010, when Shared Responsibility was enacted, the funded ratio was 7.5%. Concerning the board's priority to fund over-65 health care, that group will be fully funded in three years.

Committee Action: The committee unanimously accepted the independent actuary's pension and OPEB valuations.

2. External Audit Report: The Kentucky Auditor of Public Accounts (APA) reported to the committee on the audit of the financial statements for the fiscal years ended June 30, 2019 and 2018. The APA also reported to the committee concerning internal controls and compliance at TRS.

The APA expressed the opinion that the financial statements "... present fairly, in all material respects, the fiduciary net position of TRS ... 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."

Additionally, concerning internal control and compliance, the APA reported "... during our audit we did not identify any deficiencies in internal control that we consider to be material weakness"

Committee Action: The committee unanimously accepted the external audit report.

Recommendation: The executive secretary recommends that the board accept and ratify the Report of the Governance and Audit Committee.

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Report of the Personnel Committee

The Personnel Committee met November 25, 2019, to review the performance of the executive secretary.

Recommendation: The Personnel Committee recommends that the full board amend the executive secretary's contract to replace the current four-year term with a four-year term from January 1, 2020, through December 31, 2023. Additionally, the executive secretary will receive the same salary increases as state employees.

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Report of the Legislative Committee

The Legislative Committee will have a special meeting on December 16, 2019, prior to the regular quarterly meeting of the board. The committee will present a report to the board during the regular quarterly meeting.

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Scholarship Committee

The Scholarship Committee will meet on Monday, December 16, 2019, prior to the board meeting to consider scholarship awards for school year 2020-2021.

Background: Ms. Junita Losey was a retired teacher from Northern Kentucky who taught for 30 years in the Campbell County school district. Ms. Losey passed away in 1997, but during her retired years she was most appreciative of the benefits she received from TRS and left more than \$400,000 to TRS in her will. The Board of Trustees used these funds to establish a scholarship fund in Ms. Losey's name.

In the past, the board awarded a \$2,000 scholarship to each of the eight public universities in Kentucky (for a total of \$16,000 per year). The universities select the recipient who is to be a student majoring in education who:

1. Is a graduate of a Kentucky public high school;
2. Is a junior or senior in college majoring in education;
3. Is a full-time student;
4. Maintains a GPA of 2.8 on a 4.0 scale

Additionally, the board has also awarded a \$2,000 scholarship for tuition, books and fees to a Campbell County High School senior who intends to major in education in a Kentucky public university. This student must have an average GPA in high school of 2.8 on a 4.0 scale.

The committee will also receive a report from investment staff concerning funds available for scholarship awards.

The committee will make a report and recommendations to the board concerning scholarships at the board meeting.

Recommendation: This report is for the information of the board.

TO: Board of Trustees of the
Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 16, 2019

SUBJECT: Executive Secretary's Observations and Comments

1. 2019 Award For Funding and Administration from the Public Pension Coordinating Council: The Public Pension Coordinating Council awarded the Certificate of Achievement to the Teachers' Retirement System (TRS) for 2019 for implementing and maintaining high professional standards for plan funding and administering the affairs of the system. The award is based on compliance with principles judged to underlie exemplary retirement system achievements in the areas of funding, investment, disclosure, actuarial valuation, financial reporting and benefits. These principles are widely acknowledged to be marks of excellence for retirement systems and represent the highest standards of excellence in the public pension industry.

This year, in addition to the certificate of achievement in administration, TRS was awarded the certificate of achievement for funding. For several years, TRS was not awarded the certificate of achievement for funding because the state's history of underfunding the retirement annuity fund. The renewed emphasis on funding by the legislature demonstrated in the current and past budgets qualified the plan for the funding award this year.

The Public Pension Coordinating Council is a confederation of the National Council on Teacher Retirement, the National Association of State Retirement System Administrators and the National Conference on Public Employee Retirement Systems.

2. Certificate of Achievement for Excellence in Financial Reporting: On August 22, 2019, TRS received notice that, for the 31st consecutive year, it received an Award for Financial Reporting Achievement for its Comprehensive Annual Financial Report (CAFR). This award, presented by the Government Finance Officers Association of the United States and Canada, is given to those governmental units and retirement systems that achieve the highest standards in government accounting and financial reporting. This certificate highlights the standards used in providing transparent information that is comparable to that information presented by other public plans.

3. Executive Secretary's Meetings: The executive secretary has had meetings with several groups recently and will report to the board concerning the following:

September 17, 2019	Conference call with Bellwether Enterprise
September 18, 2019	Meeting with public relations consultant and JCTA president
September 19, 2019	Meeting with KEA president and executive director
September 23, 2019	Meeting with PNC Bank regional president

September 24, 2019	Meeting with KRTA executive director
September 25, 2019	Meeting with KSBA executive director and legislative director
September 26, 2019	Meeting with KASS executive director and members
September 27, 2019	Meeting with KASA executive director and general counsel
September 30, 2019	Meeting with constituency groups
October 2, 2019	Meeting with Merl Hackbart, University of Kentucky
October 2, 2019	Meeting with Lucy Wells, Know Your Rx Coalition
October 3, 2019	Meeting with Know Your Rx Coalition members
October 7, 2019	Meeting with Kentucky Chamber of Commerce
October 8, 2019	Meeting with President Morgan, Morehead State University
October 9, 2019	Meeting with Todd Asset Management
October 10, 2019	Meeting with prospective investment manager
October 11, 2019	Meeting with Medicare Exchange program representatives
October 12-14, 2019	Attended NCTR
October 15, 2019	Attended national personalized medicine meeting
October 17, 2019	Meeting with Dr. Bob Jackson, President, Murray State University
October 24, 2019	Meeting with Dr. Michael Benson, President, Eastern KY University
October 25, 2019	Meeting with Fort Washington Investment Advisors
October 28, 2019	Meeting with KY Association of School Administrators
October 31, 2019	Meeting with KY Association of School Administrators
November 1, 2019	Conference call with WKU director of human resources
November 1, 2019	Meeting with KSU CFO and director of human resources
November 14, 2019	Meeting with Senator Christian McDaniel
November 18, 2019	Meeting with JCTA president
December 2, 2019	Meeting with KRTA executive committee
December 3, 2019	Attended Know Your Rx Coalition board meeting
December 3, 2019	Meeting with delegate from Japan's Ministry of Health, Labor and Welfare
December 5, 2019	Meeting with public relations consultant
December 6, 2019	Conference call with Coriell Life Sciences
December 9, 2019	Conference call with Fort Washington Investment Advisors
December 11, 2019	Attended KEA-R meeting and holiday lunch

4. 2020 Board of Trustees Meeting Dates: Dates for the Board of Trustees meetings for 2020 are listed below. The meetings will begin at 12:30 p.m., Eastern Time, unless otherwise announced, and will be held in the TRS Boardroom.

Monday, March 16
Monday, June 15
Monday, September 21
Monday, December 21

5. 10th Anniversary of Shared Responsibility: On April 1, 2010, the General Assembly unanimously enacted House Bill 540, which codified a solution of shared responsibility for the long-term funding of retiree health care for teachers. Thereafter, on April 13, at a public ceremony honoring teachers, legislators, education groups and others, Gov. Steve Beshear signed House Bill 540, which went into effect upon his signature.

The historic legislation and other cost saving measures eliminated more than \$5 billion in unfunded liability for retiree health care for teachers. Moreover, by implementing a plan to prefund retiree health care through the shared efforts of active and retired teachers, the state and school districts, the retiree health care plan has achieved a funded ratio of 46%--ahead of the schedule for full funding.

The diligence and commitment to funding retiree health care for teachers according to law is worthy of recognition.

Therefore, the executive secretary recommends that the board adopt a resolution commending teachers, legislators, education groups and others for their 10 years of shared sacrifice and implore them to stay the course to fully fund retiree health care for teachers. As directed by the board, the executive secretary will deliver the resolution to stakeholders and others.

Executive Secretary's Recommendation: The executive secretary's report is for the information of the board.



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2019***

Presented to

Teachers' Retirement System of the State of Kentucky

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator



Government Finance Officers Association
203 North LaSalle Street, Suite 2700
Chicago, Illinois 60601-1210
312.977.9700 fax: 312.977.4806

August 22, 2019

Gary Harbin
Executive Secretary
Teachers' Retirement System of the State of Kentucky
479 Versailles Road
Frankfort, KY 40601

Dear Mr. Harbin:

We are pleased to notify you that your comprehensive annual financial report (CAFR) for the fiscal year ended 2018 qualifies for GFOA's Certificate of Achievement for Excellence in Financial Reporting. The Certificate of Achievement is the highest form of recognition in governmental accounting and financial reporting, and its attainment represents a significant accomplishment by a government and its management.

When a Certificate of Achievement is awarded to a government, an Award of Financial Reporting Achievement (AFRA) is also presented to the individual(s) or department designated by the government as primarily responsible for its having earned the Certificate. This award has been sent to the submitter as designated on the application.

We hope that you will arrange for a formal presentation of the Certificate and Award of Financial Reporting Achievement, and that appropriate publicity will be given to this notable achievement. A sample news release is enclosed to assist with this effort.

We hope that your example will encourage other government officials in their efforts to achieve and maintain an appropriate standard of excellence in financial reporting.

Sincerely,

Michele Mark Levine
Director, Technical Services Center



GOVERNMENT FINANCE OFFICERS ASSOCIATION
NEWS RELEASE

FOR IMMEDIATE RELEASE

08/22/2019

For more information contact:
Michele Mark Levine, Director/TSC
Phone: (312) 977-9700
Fax: (312) 977-4806
E-mail: mlevine@gfoa.org

(Chicago, Illinois)--The Certificate of Achievement for Excellence in Financial Reporting has been awarded to **Teachers' Retirement System of the State of Kentucky** by Government Finance Officers Association of the United States and Canada (GFOA) for its comprehensive annual financial report (CAFR). The Certificate of Achievement is the highest form of recognition in the area of governmental accounting and financial reporting, and its attainment represents a significant accomplishment by a government and its management.

An Award of Financial Reporting Achievement has been awarded to the individual(s) or department designated by the government as primarily responsible for preparing the award-winning CAFR.

The CAFR has been judged by an impartial panel to meet the high standards of the program, which includes demonstrating a constructive "spirit of full disclosure" to clearly communicate its financial story and motivate potential users and user groups to read the CAFR.

Government Finance Officers Association is a major professional association servicing the needs of over 20,000 appointed and elected local, state, and provincial-level government officials and other finance practitioners. It provides top quality publications, training programs, services, and products designed to enhance the skills and performance of those responsible for government finance policy and management. The association is headquartered in Chicago, Illinois, with offices in Washington, D.C.