



TEACHERS' RETIREMENT SYSTEM of the State of Kentucky

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Executive Secretary

Quarterly Meeting of the

TRS Board of Trustees

A G E N D A

December 17, 2018, 10 a.m.

- 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 17, 2018
 - 1.1.2. Special Meeting, Board of Trustees, November 19, 2018
 - 1.1.3. Special Meeting, Governance & Audit Committee, September 17, 2018
 - 1.1.4. Special Meeting, Governance & Audit Committee, November 13, 2018
 - 1.1.5. Special Meeting, Personnel Committee, November 19, 2018
 - 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.

479 Versailles Road • Frankfort, Kentucky 40601-3800
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 17, 2018

SUBJECT: Reports for Consent

1.1. Consideration/Approval of Minutes

1.1.1. Quarterly Meeting, Board of Trustees, September 17, 2018

1.1.2. Special Meeting, Board of Trustees, November 19, 2018

1.1.3. Special Meeting, Governance and Audit Committee, September 17, 2018

1.1.4. Special Meeting, Governance and Audit Committee, November 13, 2018

1.1.5. Special Meeting, Personnel Committee, November 19, 2018

1.2. Applications for Retirement and Annuity

For the period September, October and November 2018, initial retirements included 358 retirees with monthly payments totaling \$1,032,549.01. During the same period last year, there were 381 retirements with monthly payments totaling \$1,203,640.44.

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, 2018, there were 10 persons qualifying for survivor benefits with a total monthly payment of \$2,887.30.

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, 2018, there were 10 payments of life insurance benefits for active teachers and 224 payments for retired teachers for total payments of \$1,140,000. During the same quarter in 2017, there were 284 payments in the amount of \$1,402,000.

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 785 refunds during the period July 1 through September 30, 2018 totaling \$12,304,379.49. The refunds are for the following categories:

Regular withdrawals	756	\$11,382,900.78
Deaths	<u>29</u>	<u>\$ 921,478.71</u>
Totals	785	\$12,304,379.49

During the same period in 2017, there were 758 refunds totaling \$8,812,712.89.

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, 2018.

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
2018

	September	October	November	Total	Same Period 2017
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>17</i> \$44,214.24	<i>8</i> \$23,899.86	<i>8</i> \$21,296.89	<i>33</i> \$89,410.99	<i>27</i> \$77,743.63
Service Retirement	<i>130</i> \$398,725.37	<i>131</i> \$383,033.07	<i>64</i> \$161,379.58	<i>325</i> \$943,138.02	<i>353</i> \$1,124,645.76
Beneficiary of Member Eligible to Retire	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>1</i> \$1,251.05
TOTALS	<i>147</i> \$442,939.61	<i>139</i> \$406,932.93	<i>72</i> \$182,676.47	<i>358</i> \$1,032,549.01	<i>381</i> \$1,203,640.44

Reports for Consent
Member Account Refunds
For the period July 2018 - September 2018

Active Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	338	2,003,059.29	500,798.60	2,698,513.71	5,202,371.60
August	239	1,727,549.94	431,835.05	1,527,056.89	3,686,441.88
September	182	1,290,477.01	316,531.26	887,079.03	2,494,087.30
Total	756				11,382,900.78

Deceased Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	18	172,064.53	39,407.24	256,477.23	467,949.00
August	4	29,644.98	0.00	157,217.41	186,862.39
September	7	197,376.51	49,308.43	19,982.38	266,667.32
Total	29				921,478.71

Total Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	356	2,175,123.82	540,205.84	2,954,990.94	5,670,320.60
August	243	1,757,194.92	431,835.05	1,684,274.30	3,873,304.27
September	189	1,487,853.52	365,839.69	907,061.41	2,760,754.62
Total	785				12,304,379.49

TEACHERS' RETIREMENT SYSTEM

OF THE STATE OF KENTUCKY



INTERIM FINANCIAL STATEMENTS

QUARTER ENDED SEPTEMBER 30, 2018
(MARKET VALUE - UNAUDITED)

Statements of Changes in Plan Net Assets
For the Three Months Ended September 30, 2018 and 2017
(Market Value - Unaudited)

	Defined Benefit Plan		Medical Insurance Plan		Life Insurance Plan		Other Funds		TOTAL	
	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018
ADDITIONS										
Contributions										
Employer- State Paid	\$ 232,284,203	\$ 209,181,234	\$ 18,735,801	\$ 17,119,382	\$ 186,048	\$ 145,364	\$ -	\$ -	\$ 251,206,052	\$ 226,445,980
Employer- LSD, Other	17,274,360	16,620,793	20,130,423	17,914,615	43,118	33,384	-	162,975	37,447,901	34,731,767
Member- Active	61,855,681	54,690,818	24,663,927	21,906,826					86,519,608	76,597,644
Member- Retired			14,981,440	14,740,395					14,981,440	14,740,395
Recovery Income			12,726,428	13,778,385					12,726,428	13,778,385
Total Contribution	311,414,244	280,492,845	91,238,019	85,459,603	229,166	178,748	-	162,975	402,881,429	366,294,171
Investment Income/(Loss)										
Net Appreciation/(Depreciation) in										
Fair Value of Investments	494,104,350	706,954,198	32,550,708	29,752,302	1,351,482	(225,138)	12,719	10,839	528,019,259	736,492,201
Interest	37,484,778	38,353,098	1,318,234	987,816	510,098	693,595	4,100	887	39,317,210	40,035,396
Dividends	53,530,297	89,558,748	1,596,544	1,286,077	116,326		1,308	1,242	55,244,475	90,846,067
Rental Income, Net	7,756,204	7,618,833							7,756,204	7,618,833
Securities Lending, Net	808,370	1,037,428			5,572	642	112	84	814,054	1,038,154
Gross Investment Income	593,683,999	843,522,305	35,465,486	32,026,195	1,983,478	469,099	18,239	13,052	631,151,202	876,030,651
Less Investment Expense	(14,583,357)	(12,644,497)	(1,383,181)	(704,069)	(30,264)	-	(4,087)	-	(16,000,889)	(13,348,566)
Net Investment Income	579,100,642	830,877,808	34,082,305	31,322,126	1,953,214	469,099	14,152	13,052	615,150,313	862,682,085
Total Additions	890,514,886	1,111,370,653	125,320,324	116,781,729	2,182,380	647,847	14,152	176,027	1,018,031,742	1,228,976,256
DEDUCTIONS										
Benefits	522,805,738	499,478,370			1,125,000	1,401,106	43,858	44,341	523,974,596	500,923,817
Refunds of Contributions	12,301,665	9,219,051							12,301,665	9,219,051
Under 65 Insurance Expenses			29,456,347	30,030,197					29,456,347	30,030,197
Over 65 Insurance Expenses			52,919,980	52,069,011					52,919,980	52,069,011
Administrative Expense	2,214,149	2,666,446	-	-	-	-	-	-	2,214,149	2,666,446
Total Deductions	537,321,552	511,363,867	82,376,327	82,099,208	1,125,000	1,401,106	43,858	44,341	620,866,737	594,908,522
Net Increase (Decrease)	353,193,334	600,006,786	42,943,997	34,682,521	1,057,380	(753,259)	(29,706)	131,686	397,165,005	634,067,734
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS										
Beginning of year	19,981,633,096	18,707,699,025	1,190,280,808	958,389,673	84,462,256	87,777,405	1,122,318	962,496	21,257,498,478	19,754,828,599
Ending of period	\$ 20,334,826,430	\$ 19,307,705,811	\$ 1,233,224,805	\$ 993,072,194	\$ 85,519,636	\$ 87,024,146	\$ 1,092,612	\$ 1,094,182	\$ 21,654,663,483	\$ 20,388,896,333

Statements of Plan Net Assets
as of September 30, 2018 and 2017
 (Market Value - Unaudited)

	Defined Benefit Plan		Health Insurance Plans		Life Insurance Plan		Other Funds		TOTAL	
	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018	FY 2019	FY 2018
ASSETS										
Cash	\$ 104,036,359	\$ 111,082,913	\$ 29,170,835	\$ 29,185,370	\$ 266,798	\$ -	\$ 148,479	\$ 146,084	\$ 133,622,471	\$ 140,414,367
Receivables										
Contributions	30,237,329	28,779,827	18,012,814	18,456,779	13,374	105,264			48,263,517	47,341,870
State of Kentucky	11,386,321	13,640,427	10,277,791	5,580,025	35,965	32,617			21,700,077	19,253,069
Investment Income	44,151,888	40,623,372	2,061,568	1,685,597	732,657	1,036,228	3,043	2,693	46,949,156	43,347,890
Investment Sales Receivable	13,529,139	47,849,086	1,067,075	600,491	-	-			14,596,214	48,449,577
Installment Account Receivable	286,370	341,538							286,370	341,538
Other Receivables	33,752	81,058	25,145,499	17,965,103					25,179,251	18,046,161
Due from Other Funds	1,779,623	1,567,471							1,779,623	1,567,471
Total Receivables	101,404,422	132,882,779	56,564,747	44,287,995	781,996	1,174,109	3,043	2,693	158,754,208	178,347,576
Investments at Market Value										
Short Term Investments	430,383,762	411,996,035	94,620,204	49,917,836	5,530,459	2,970,525	369,527	396,708	530,903,952	465,281,104
Bonds and Mortgages	3,462,677,489	2,866,177,586	89,269,570	84,461,253	35,050,144	82,907,202	239,968	258,312	3,587,237,171	3,033,804,353
Stocks	12,451,704,268	12,216,302,727	630,176,953	518,033,067	42,009,907		332,678	291,593	13,124,223,806	12,734,627,387
Alternative Investments	1,329,962,327	1,165,147,858	85,451,996	55,582,750					1,415,414,323	1,220,730,608
Real Estate	1,164,105,558	1,078,487,300	65,233,378	48,974,445	587,090				1,229,926,026	1,127,461,745
Additional Categories	1,360,901,173	1,424,297,274	190,087,543	171,180,785	1,331,826				1,552,320,542	1,595,478,059
Total Investments	20,199,734,577	19,162,408,780	1,154,839,644	928,150,136	84,509,426	85,877,727	942,173	946,613	21,440,025,820	20,177,383,256
Capital Assets	16,324,647	18,046,639							16,324,647	18,046,639
(net of accumulated depreciation)										
Total Assets	20,421,500,005	19,424,421,111	1,240,575,226	1,001,623,501	85,558,220	87,051,836	1,093,695	1,095,390	21,748,727,146	20,514,191,838
LIABILITIES										
Liabilities										
Accounts Payable	1,189,081	1,272,405	-	-					1,189,081	1,272,405
Contributions Not Posted	33,427,314	34,838,254	-	-					33,427,314	34,838,254
Investment Purchases Payable	37,953,844	64,621,488	2,807,153	2,778,901			-	-	40,760,997	67,400,389
Investment Fees Payable	14,103,336	15,983,153	1,046,539	796,350	7,605		-	-	15,157,480	16,779,503
Due to Other Funds	-	-	1,747,561	1,538,573	30,979	27,690	1,083	1,208	1,779,623	1,567,471
Revenues Collected in Advance	-	-	1,749,168	3,437,483					1,749,168	3,437,483
Total Liabilities	86,673,575	116,715,300	7,350,421	8,551,307	38,584	27,690	1,083	1,208	94,063,663	125,295,505
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	\$ 20,334,826,430	\$ 19,307,705,811	\$ 1,233,224,805	\$ 993,072,194	\$ 85,519,636	\$ 87,024,146	\$ 1,092,612	\$ 1,094,182	\$ 21,654,663,483	\$ 20,388,896,333

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

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 17, 2018

SUBJECT: Report of the Investment Committee

1. Investment Committee Meeting and Actions: The investments approved at the November 27, 2018, Investment Committee meeting are as follows: Up to \$50 million from the TRS Retirement Annuity, up to \$5 million from the TRS Medical Trust and up to \$500,000 from the TRS Life Insurance account into Lexington Capital Partners IX; up to \$50 million from the TRS Retirement Annuity pension fund, up to \$10 million from the TRS Medical Trust and up to \$1 million from the TRS Life Insurance account into Angelo Gordon Net Lease Realty Fund IV; and up to \$50 million from the TRS Retirement Annuity fund, up to \$10 million from the TRS Medical Trust and up to \$500,000 from the TRS Life Insurance account into Blackstone Real Estate Partners IX. Additionally, outside managers State Street Global Advisors and Fort Washington Investment Advisors reported to the Committee on their respective portfolios.

2. Purchases and Disposals: The Report of the Investment Committee for the quarter ended September 30, 2018, is presented for review and approval. During this quarter, 2,331 purchases amounted to \$4,184,030,769.71 and 4,403 disposals amounted to \$3,900,404,665.53. The disposals consisted of 4,049 sales, 315 principal payments and 39 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.

3. Staff's Comments on Economic and Market conditions: Continued U.S. economic growth and monetary policy divergence from global trade partners drove domestic equity and interest rate markets higher during the third quarter of 2018, while international growth expectations broadly continued to slow. Geopolitical risks, particularly those driven by newly imposed trade tariffs, were cited as dampening near-term expectations for economic growth outside the United States. That said, near the end of the third quarter, it was announced that Canada had joined the agreement previously struck by the United States and Mexico, which renames and reforms NAFTA, and that announcement modestly eased regional economic tensions.

The U.S. Federal Open Market Committee (FOMC) continued to raise policy rates, increasing the target range for the federal funds rate to 2% - 2.25% at the September meeting. The committee again cited both realized and expected labor market inflation conditions as major drivers behind its decision. The rate increase largely was expected, as was the removal of the word "accommodative" from the FOMC statement language. The FOMC also increased its estimate for GDP growth in 2018 from 2.8% to 3.1%.

U.S. economic fundamentals broadly continued to strengthen over the third quarter. Hiring activity in August was revised higher, and hiring remained strong in September, resulting in a

decrease of the unemployment rate to 3.7% – the lowest level since 1969. In addition, hourly earnings increased 2.8% year-over-year, while the labor participation rate remained unchanged despite a 150,000-person increase in the labor force. U.S. equities experienced another strong quarter of returns while international equity returns were tepid by comparison. Global sovereign debt yields were mixed, with U.S. yields rising notably against those of its major trading partners, and the 10-year nominal Treasury rate ended the quarter above 3%. Market participants suggested that U.S. real yields were driven higher by both current economic growth and expectations for the continued increase of policy rates.

U.S. equity markets delivered broad-based gains across market capitalizations and styles during the third quarter. Despite lingering trade war tensions, the S&P 500 Index posted its best single quarter return since Q4 2013 amidst a period of strong corporate earnings and broad-based economic growth. The S&P 500 Index returned 7.7% during the third quarter, led by health care, industrials and the reclassified communication services sector. Growth continued to outpace value as the Russell 1000 Growth Index bested all other U.S. equity indices, returning 9.2% for the quarter. For the year-to-date period, the Russell 1000 Growth Index has outperformed its value counterpart by 13.2 percentage points as the two indices returned 17.1% and 3.9% respectively. FAANG stocks (Facebook, [Apple](#), Amazon, Netflix and Alphabet's Google), the primary drivers of large cap performance for the first half of 2018, faltered in September. The group posted tepid gains for the quarter, weighed down by reduced sentiment for Facebook and Netflix. Active management generally struggled in large-cap equity in the third quarter, though active small-cap managers fared better than their counterparts in the large-cap space. Market support for quality companies with positive earnings generally benefitted active small-cap stock pickers.

Developed international markets are still in negative territory year-to-date, despite large-cap stocks generating positive returns in Q3. Emerging markets were hit harder than their developed-market counterparts this quarter, ending the third quarter with losses. Across most emerging markets, weakening currencies took their toll on dollar-based equity returns. In contrast with other regions, value significantly outperformed growth within emerging markets equities. As with the rest of the world, small-cap stocks underperformed their large-cap counterparts during the quarter.

The Bloomberg U.S. Aggregate Index effectively was flat for the quarter. However, performance of the underlying sectors of the index varied widely. U.S. government bonds faced greater headwinds than their corporate counterparts, as a parallel increase in rates across the Treasury yield curve led to negative performance for Treasuries. The long end of the yield curve experienced the largest rate-driven losses, with the Bloomberg U.S. Long-Term Treasuries Index returning -2.9% for the quarter. Meanwhile, in a reversal of the first half of the year, investment-grade corporate spreads tightened from 1.3% to 1.1%, and the Bloomberg U.S. Corporate Investment Grade Index returned 1%. In general, low-quality bonds fared better than high-quality bonds during the third quarter. BBB bonds, the largest segment of the investment-grade corporate index, returned 1.4%, compared to AAA bond returns of just 0.1%. Non-investment grade bonds similarly experienced a spread tightening that was more pronounced in the lower quality portion of the market. The Bloomberg Corporate High-Yield Index returned 2.4%.

Core private real estate returned 2.1% during Q3, as tracked by the NCREIF-ODCE Index, with the total return comprised of 1% income and 1.1% appreciation. This represented a five-basis-point uptick over last quarter for the appreciation component of total return, while the income return component remains in line with historical levels. While real estate valuations remain elevated, many view real estate pricing as currently supported by strong and rising property income levels, which, in turn, are driven by a continued expansion in the overall economy.

4. Performance: Investment performance was positive for the quarter ended September 30, 2018. The Retirement Annuity Trust Fund's total assets returned 3% for the quarter, underperforming the Policy Index that returned 3.75% as active equity managers struggled on a relative basis. TRS's domestic stocks gained 6.02%, as the S&P 1500 Stock Index returned 7.35% for the quarter. TRS's international stocks were up 0.02%, underperforming the MSCI All Country ex US index which had a return of 0.8% for the quarter. Alternatives and additional categories were positive contributors as Private Equity gained 4.34% while additional categories returned 2.58%. TRS's Fixed Income returned 0.06%, equaling the Bloomberg Barclays Gov/Credit Bond Index for the quarter. Real Estate provided strong returns for the quarter gaining 2.3%.

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, 2018*

FINAL

	Market Value	Last Qtr	FYTD	1-Year	3-Year*	5-Year*	10-Year*	20-Year*
TOTAL PLAN	\$ 20,220,950,549.72	3.00	3.00	9.19	11.38	8.97	9.02	6.61
<i>Policy Benchmark</i>		3.75	3.75	9.09	11.53	8.77	8.65	-
Total Equity	\$ 12,567,293,340.26	3.85	3.85	11.90	15.03	11.09	10.47	7.13
<u>Domestic Equity</u>	\$ 8,070,384,758.49	6.02	6.02	16.44	16.29	13.35	11.96	7.89
<i>S&P 1500 Index</i>		7.35	7.35	17.69	17.26	13.77	12.05	-
<u>All-Cap Equities</u>	\$ 276,757,011.94	6.27	6.27	14.99	-	-	-	-
<i>Russell 3000</i>		7.12	7.12	17.58	-	-	-	-
<u>Large-Cap Equities</u>	\$ 6,638,589,028.16	6.33	6.33	16.39	16.21	13.43	11.80	-
<i>S&P 500 Index</i>		7.71	7.71	17.91	17.31	13.95	11.97	7.41
<u>Mid-Cap Equities</u>	\$ 694,589,632.80	4.35	4.35	17.86	16.83	13.36	12.71	-
<i>S&P 400 Index</i>		3.86	3.86	14.21	15.68	11.91	12.49	-
<u>Small-Cap Equities</u>	\$ 460,449,085.59	3.99	3.99	15.97	18.14	12.99	13.24	-
<i>S&P 600 Index</i>		4.71	4.71	19.08	19.41	13.32	12.86	-
<u>International Equity</u>	\$ 4,496,908,581.77	0.02	0.02	4.17	12.63	6.17	7.05	-
<i>MSCI AC World Ex US</i>		0.80	0.80	2.25	10.49	4.60	5.67	-
Fixed Income	\$ 3,519,641,876.15	0.06	0.06	-0.72	1.94	2.68	4.86	5.04
<i>Barclay's Govt./Credit Index</i>		0.06	0.06	-1.37	1.45	2.23	3.95	4.49
Real Estate								
<u>In-House Real Estate Equity</u>	\$ 420,779,551.13	1.91	1.91	10.00	11.14	9.59	8.85	9.04
<i>CPI plus 2%</i>		0.95	0.95	4.32	4.04	3.56	3.45	4.19
<u>Core Real Estate:</u>	\$ 426,689,420.68	2.37	2.37	8.96	9.72	11.39	4.47	-
<i>NCREIF ODCE (VW)</i>		2.09	2.09	8.68	8.80	10.72	5.58	-
<u>Non-Core Real Estate:</u>	\$ 316,636,585.74	2.75	2.75	14.24	14.05	16.48	-	-
<i>NCREIF Property Index</i>		1.67	1.67	7.16	7.75	9.57	-	-
Alternative Investments								
<u>Private Equity</u>	\$ 1,142,940,291.03	4.34	4.34	17.76	12.54	13.56	11.07	-
<u>Mature Private Equity</u>	\$ 416,959,634.35	5.13	5.13	16.05	9.61	12.09	-	-
<i>S&P 500 plus 3%</i>		8.51	8.51	21.45	20.83	17.37	-	-
<u>Private Equity < 5 Years</u>	\$ 725,980,656.68	3.96	3.96	19.80	15.22	14.65	-	-
<u>Timberland:</u>	\$ 187,022,035.96	1.22	1.22	-5.76	1.04	3.47	3.37	-
<i>NCREIF Timberland Index</i>		1.02	1.02	4.00	3.52	6.00	4.01	-
Additional Categories:	\$ 1,408,380,234.21	2.58	2.58	5.27	5.94	5.00	-	-
<i>B of A Merrill Lynch High Yield Master II</i>		2.44	2.44	2.94	8.19	5.54	-	-
Cash (Unallocated)	\$ 231,567,214.56	0.54	0.54	1.71	0.92	0.58	0.40	2.10
<i>90 Day T-Bill</i>		0.49	0.49	1.59	0.80	0.50	0.32	1.82

Total Plan Gross Return for 30-year period* 8.45

*Returns are annualized for periods longer than one year

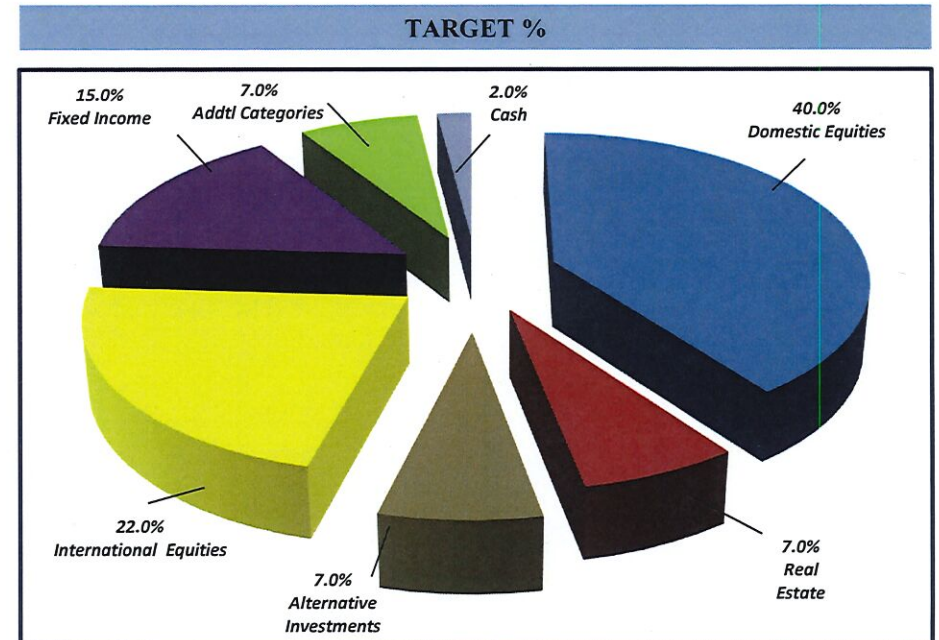
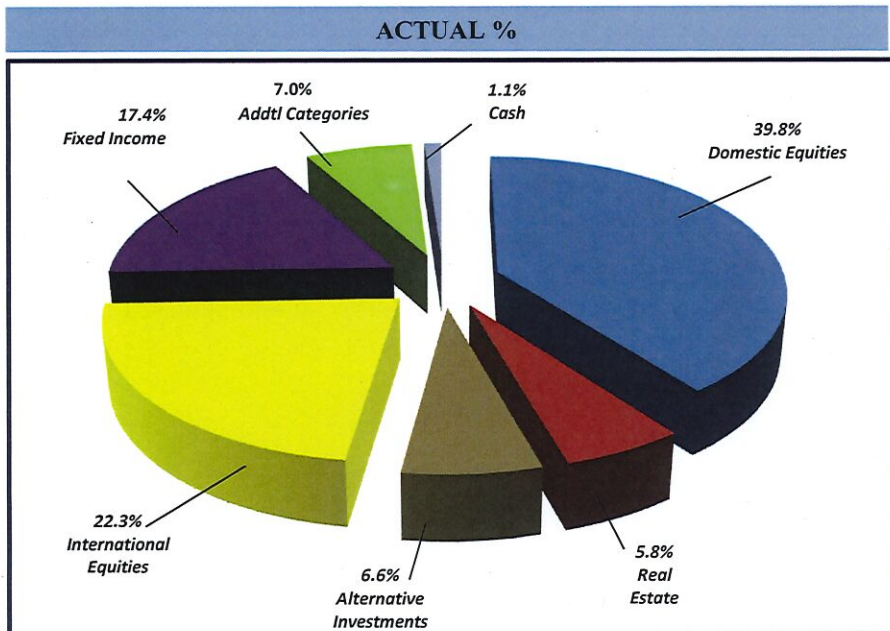
** Prior to July 1, 2008, TRS did not benchmark overall fund performance. Effective July 1, 2008, the Board of Trustees approved a Policy Index that represents the return of appropriate benchmarks for the various asset classes weighted by the mid-point of the strategic range for the current fiscal year.

Teachers' Retirement System of Kentucky

Quarterly Investment Update

For the period ended September 30, 2018

(\$ in millions)	\$'s	9/30/2018 Actual %	6/30/2018 Actual %	Target %	Strategic Ranges
Domestic Equities	\$8,070.4	39.8%	41.3%	40.0%	34.0 - 48.0%
Real Estate	1,164.1	5.8%	5.8%	7.0%	4.0 - 10.0%
Alternative Inv.	1,330.0	6.6%	6.5%	7.0%	4.0 - 10.0%
International Equities	4,496.9	22.3%	22.7%	22.0%	18.0 - 25.0%
Fixed Income	3,519.6	17.4%	15.3%	15.0%	12.0 - 19.0%
Addtl Categories	1,408.4	7.0%	7.2%	7.0%	4.0 - 10.0%
Cash	\$231.6	1.1%	1.2%	2.0%	1.0 - 3.0%
Total	\$20,221.0	100.0%	100.0%	100.0%	



Teachers' Retirement System of the State of Kentucky
Health Insurance Trust
Quarterly Investment Performance
Gross Returns
For the Period Ended September 30, 2018

FINAL

	<u>Market Value</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1-Year</u>	<u>3-Year*</u>	<u>5-Year*</u>
<u>TOTAL PLAN</u>	\$ 1,133,943,298.56	3.30	3.30	8.37	10.93	7.22
<i>Policy Benchmark</i>		3.08	3.08	7.68	11.04	-
<u>Total Equity</u>	\$ 632,051,683.08	4.11	4.11	10.28	13.79	9.07
<u>All Cap Equities</u>	\$ 37,687,626.26	6.25	6.25	14.87	-	-
<i>Russell 3000</i>		7.12	7.12	17.58	-	-
<u>Global Equities</u>	\$ 594,364,056.82	3.97	3.97	10.01	13.91	9.14
<i>MSCI AC World IMI (Net)</i>		3.88	3.88	9.63	13.47	8.69
<u>Fixed Income</u>	\$ 91,972,873.16	0.18	0.18	-0.93	1.29	1.24
<i>Barclays Government Credit</i>		0.06	0.06	-1.37	1.45	2.23
<u>Core Real Estate</u>	\$ 29,067,902.00	3.43	3.43	9.58	-	-
<i>NCREIF ODCE (VW)</i>		2.09	2.09	8.68	-	-
<u>Non-Core Real Estate</u>	\$ 36,165,475.88	3.18	3.18	14.39	16.85	-
<i>NCREIF Property Index</i>		1.67	1.67	7.16	7.75	-
<u>Private Equity</u>	\$ 85,451,995.58	3.77	3.77	16.68	16.49	16.51
<u>Mature Private Equity</u>	\$ 8,225,143.00	9.36	9.36	19.68	16.34	15.45
<i>S&P 500 plus 3%</i>		8.51	8.51	21.45	20.83	17.37
<u>Private Equity < 5 Years</u>	\$ 77,226,852.58	3.25	3.25	16.92	16.71	16.64
<u>Additional Categories:</u>	\$ 193,501,801.15	2.66	2.66	4.15	6.56	4.72
<i>B of A Merrill Lynch High Yield Master II</i>		2.44	2.44	2.94	8.19	5.54
<u>Cash (Unallocated)</u>	\$ 65,731,567.71	0.53	0.53	1.68	0.88	0.57
<i>90 Day T-Bill</i>		0.49	0.49	1.59	0.80	0.50

*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

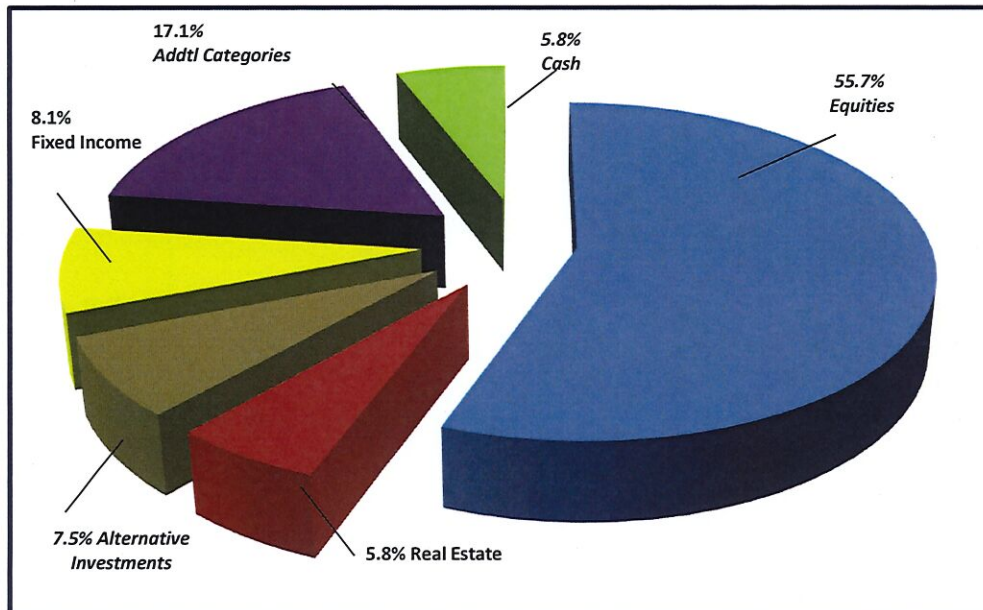
Insurance Trust Fund

Quarterly Investment Update

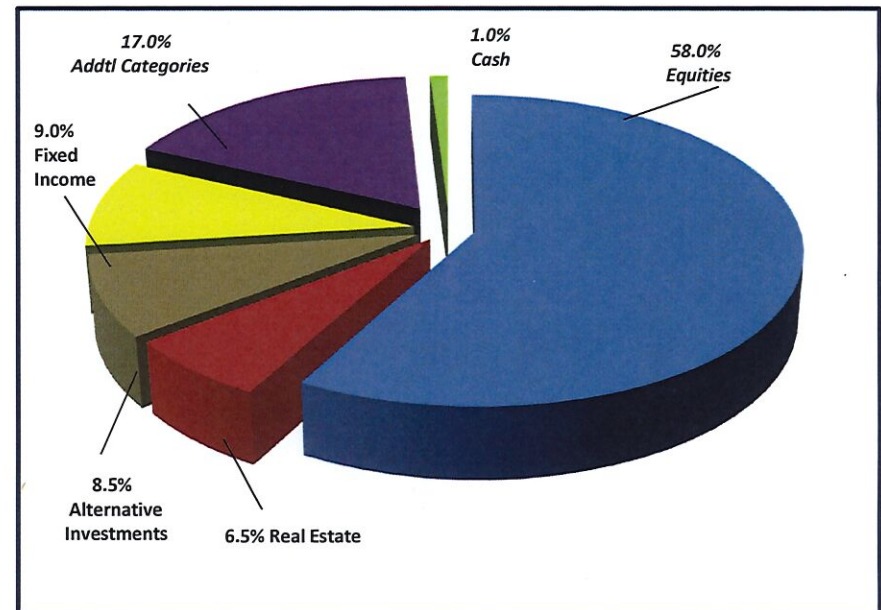
For the period ended September 30, 2018

(\$ in thousands)	\$'s	9/30/2018 Actual %	6/30/2018 Actual %	Target %	Strategic Ranges
Equities	\$632,051.7	55.7%	57.2%	58.0%	51.0 - 64.0%
Real Estate	\$65,233.4	5.8%	5.9%	6.5%	3.0 - 10.0%
Alternative Inv.	\$85,452.0	7.5%	7.7%	8.5%	3.0 - 11.0%
Fixed Income	\$91,972.9	8.1%	8.7%	9.0%	6.0 - 12.0%
Addtl Categories	\$193,501.8	17.1%	17.8%	17.0%	16.0 - 25.0%
Cash	\$65,731.6	5.8%	2.7%	1.0%	0.0 - 4.0%
Total	\$1,133,943.3	100.0%	100.0%	100.0%	

ACTUAL %



TARGET %



TOTAL BV INVESTED AT 6/30/18 \$ 15,052,243,660.95

July Activity

Purchases	981,771,018.65	
Disposals	(933,053,623.13)	
Paydowns	(1,122,770.72)	
Redemptions	(19,256,075.79)	
Short-Term Pool Net	<u>156,554,708.99</u>	184,893,258.00

August Activity

Purchases	505,992,531.78	
Disposals	(444,392,887.32)	
Paydowns	(1,648,152.50)	
Redemptions	(25,834,011.11)	
Short-Term Pool Net	<u>(69,113,925.12)</u>	(34,996,444.27)

September Activity

Purchases	672,337,709.94	
Disposals	(435,957,018.67)	
Paydowns	(2,462,400.40)	
Redemptions	(3,303,523.24)	
Short-Term Pool Net	<u>(96,885,477.18)</u>	133,729,290.45

TOTAL BV INVESTED AT 9/30/18 \$ 15,335,869,765.13

* 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, (\$24,424,699.82) 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	451,599,735
- Pending Payable	<u>24,424,700</u>
Net	<u><u>427,175,035</u></u>

INVESTMENT ACTIVITY
July 1, 2018 -- September 30, 2018

Total Book Value Invested @ 7/1/18 \$ 15,052,243,660.95

Purchases:

360	Cash Equivalents	\$ 2,023,929,509.34	
241	Fixed Income Securities	1,166,453,218.04	
1440	Equity Securities	643,882,658.89	
35	Real Estate	25,996,790.40	
80	Alternative Investments	113,806,971.39	
175	Additional Categories	209,961,621.65	
2331	Total Purchases		\$ 4,184,030,769.71

Disposals:

330	Cash Equivalents	\$ 2,033,374,202.65	
107	Fixed Income Securities	610,864,897.45	
315	Principal Paydowns	5,233,323.62	
31	Redemptions / Maturities	46,950,871.33	
3293	Equity Securities	859,446,956.35	
36	Real Estate	20,562,361.07	
126	Alternative Investments	86,270,293.37	
157	Additional Categories	236,259,020.88	
0	Additional Principal Paydowns	-	
8	Additional Redemptions / Maturities	1,442,738.81	
4403	Total Disposals		\$ 3,900,404,665.53

Total Book Value Invested @ 9/30/18 \$ 15,335,869,765.13

Total Par Value Invested @ 9/30/18 \$ 15,331,013,503.30

Total Market Value Invested @ 9/30/18 \$ 20,220,950,549.72

* 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, (\$24,424,699.82) 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	451,599,735
- Pending Payable	24,424,700
Net	<u>427,175,035</u>

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

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 17, 2018

SUBJECT: Report of the Governance and Audit Committee

The Governance and Audit Committee had a special meeting on Nov. 13. 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, 2018. Additionally, CavMac reviewed with the committee the reports on GASB Statements Nos. 67 and 74 as of June 30, 2018.

Pension: The pension plan's funded ratio improved to 57.7 percent as of June 30, 2018, from 56.4 percent a year earlier. The \$14.3 billion unfunded accrued liability decreased slightly from the prior fiscal year. TRS received 97 percent of the actuarially required contribution – thanks to a \$475 million additional contribution from the state budget.

Retiree Medical: The medical insurance fund improved to 36.3 percent funded compared to 26.7 percent the prior year. In 2010, when Shared Responsibility was enacted, the funded ratio was 7.5 percent.

Committee Action: The committee unanimously accepted the independent actuary's pension and OPEB valuations. The committee also accepted the independent actuary's reports on GASB Statements Nos. 67 and 74.

2. Independent External Audit Report: Blue & Co. (Blue), certified public accountants, reported to the committee on the independent audit of the financial statements for the fiscal years ended June 30, 2018 and 2017. Blue also reported to the committee concerning internal controls and compliance at TRS. In addition, Blue reviewed with the committee the auditor's communication.

Blue expressed the opinion that the financial statements "... present fairly, in all material respects, the fiduciary net position of the Teachers' Retirement System of the State of Kentucky ... and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America"

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

Committee Action: The committee unanimously accepted the independent 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 17, 2018

SUBJECT: Report of the Personnel Committee

The Personnel Committee met November 19, 2018, 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, 2019, through December 31, 2022. 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 17, 2018

SUBJECT: Report of the Legislative Committee

The Legislative Committee will have a special meeting on December 17, 2018, 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 17, 2018

SUBJECT: Scholarship Committee

The Scholarship Committee will meet on Monday, December 17, 2018, prior to the board meeting to consider scholarship awards for 2019-2020.

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 17, 2018

SUBJECT: Executive Secretary's Observations and Comments

1. 2018 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 2018 for implementing and maintaining high professional standards in 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 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 the past six 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 governor and 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 July 6, 2018, TRS received notice that, for the 30th 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 finance 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 19, 2018	Presentation to West KY Educational Cooperative
September 27, 2018	Meeting with prospective investment manager
October 9, 2018	Presentation to Alpha Delta Kappa
October 10, 2018	Meeting with public relations manager

October 24, 2018	Meeting with public relations manager
November 7-9, 2018	Attended Public Sector Health Care Roundtable Board of Directors meeting
December 4, 2018	Attended Know Your Rx Coalition board meeting
December 6, 2018	Presentation to Kentucky Education Association-Retired meeting

4. 2019 Board of Trustees Meeting Dates: Dates for the Board of Trustees meetings for 2019 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 18

Monday, June 17

Monday, September 16

Monday, December 16

Executive Secretary's Recommendation: The executive secretary's report is for the information of the board and requires no action.



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2018***

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 black ink, reading '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

RECEIVED

JUL 16 2018

BY TRS OF KY

July 6, 2018

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 2017 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,

A handwritten signature in black ink, reading "Michele Mark Levine". The signature is fluid and cursive.

Michele Mark Levine
Director, Technical Services Center