



TEACHERS' RETIREMENT SYSTEM

of the State of Kentucky

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Quarterly Meeting of the TRS Board of Trustees

A G E N D A

Monday, December 20, 2021, 12:30 p.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 20, 2021
 - 1.1.2. Special Meeting, Board of Trustees, November 22, 2021
 - 1.1.3. Special Meeting, Insurance Committee, September 20, 2021
 - 1.1.4. Special Meeting, Governance & Audit Committee, September 20, 2021
 - 1.1.5. Special Meeting, Legislative Committee, September 20, 2021
 - 1.1.6. Special Meeting, Governance & Audit Committee, November 15, 2021
 - 1.1.7. Special Meeting, Personnel Committee, November 22, 2021
 - 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 Scholarship Committee
 6. TRS 4 Matters
 7. Executive Secretary's Observations and Comments
- General Discussion
- Adjournment

The meeting will be conducted by live video teleconference.
Information on accessing the meeting will be provided on TRS's website at:
<https://trs.ky.gov/administration>

Teachers' Retirement System of Kentucky
Initial Applications for Retirement and Annuity
2021

	September	October	November	Total	Same Period 2020
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>10</i> \$27,459.87	<i>8</i> \$22,815.89	<i>2</i> \$5,607.52	<i>20</i> \$55,883.28	<i>28</i> \$70,811.94
Service Retirement	<i>135</i> \$437,966.12	<i>123</i> \$364,515.59	<i>91</i> \$276,651.08	<i>349</i> \$1,079,132.79	<i>418</i> \$1,172,327.98
Beneficiary of Member Eligible to Retire	<i>0</i> \$0.00	<i>3</i> \$9,549.66	<i>2</i> \$13,525.95	<i>5</i> \$23,075.61	<i>1</i> \$3,040.14
TOTALS	<i>145</i> \$465,425.99	<i>134</i> \$396,881.14	<i>95</i> \$295,784.55	<i>374</i> \$1,158,091.68	<i>447</i> \$1,246,180.06

Reports for Consent
Member Account Refunds
For the period July 2021 - September 2021

Active Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	165	1,017,370.99	254,040.16	941,092.64	2,212,503.79
August	164	1,084,157.11	271,039.29	919,979.60	2,275,176.00
September	129	600,941.56	150,235.37	1,106,616.40	1,857,793.33
Total	458				6,345,473.12

Deceased Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	13	54,843.76	13,981.23	341,816.71	410,641.70
August	6	187,494.97	30,019.36	51,161.98	268,676.31
September	7	35,204.23	3,821.35	64,850.03	103,875.61
Total	26				783,193.62

Total Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
July	178	1,072,214.75	268,021.39	1,282,909.35	2,623,145.49
August	170	1,271,652.08	301,058.65	971,141.58	2,543,852.31
September	136	636,145.79	154,056.72	1,171,466.43	1,961,668.94
Total	484				7,128,666.74

TEACHERS' RETIREMENT SYSTEM

OF THE STATE OF KENTUCKY



INTERIM FINANCIAL STATEMENTS

QUARTER ENDED SEPTEMBER 30, 2021

(FAIR VALUE - UNAUDITED)

Statements of Plan Net Assets
as of September 30, 2021 and 2020
(Fair Value - Unadjusted & Unaudited)

	Retirement Annuity Trust		Health Insurance Trust		Life Insurance Trust		Other Funds		TOTAL	
	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021
ASSETS										
Cash	\$ 114,220,440	\$ 108,255,318	\$ 40,988,525	\$ 37,331,743	\$ 139,511	\$ 379,098	\$ 217,931	\$ 140,585	\$ 155,566,407	\$ 146,106,744
Receivables										
Contributions	49,630,590	53,939,286	10,344,680	25,205,437	47,267	13,058			60,022,537	79,157,781
State of Kentucky	-	-	-	-	37,040	148,031			37,040	148,031
Investment Income	45,254,996	42,747,821	3,441,069	2,942,288	263,725	273,122	2,645	2,682	48,962,435	45,965,913
Investment Sales Receivable	44,120,299	35,912,307	3,188,763	1,538,304	3,943	8,569			47,313,005	37,459,180
Installment Account Receivable	76,248	78,885							76,248	78,885
Other Receivables	33,756	42,072	37,951,111	31,410,332					37,984,867	31,452,404
Due from Other Funds	3,848,217	2,084,771							3,848,217	2,084,771
Total Receivables	142,964,106	134,805,142	54,925,623	61,096,361	351,975	442,780	2,645	2,682	198,244,349	196,346,965
Investments at Market Value										
Short Term Investments	903,800,280	953,227,892	192,364,974	81,260,599	9,344,101	10,764,421	351,128	354,660	1,105,860,483	1,045,607,572
Bonds and Mortgages	3,570,864,779	3,078,386,449	155,342,696	129,868,315	18,837,715	18,166,843	277,462	312,782	3,745,322,652	3,226,734,389
Stocks	15,724,938,808	13,266,052,059	1,253,577,203	1,000,193,534	66,558,718	57,680,770	482,458	378,079	17,045,557,187	14,324,304,442
Alternative Investments	1,833,188,837	1,529,183,066	180,739,732	119,967,663	1,772,233	457,022			2,015,700,802	1,649,607,751
Real Estate	1,474,861,621	1,218,832,116	122,070,115	82,880,676	5,760,371	2,422,625			1,602,692,107	1,304,135,417
Additional Categories	1,958,971,905	1,600,821,190	381,564,822	277,490,320	2,706,935	2,102,759			2,343,243,662	1,880,414,269
Total Investments	25,466,626,230	21,646,502,772	2,285,659,542	1,691,661,107	104,980,073	91,594,440	1,111,048	1,045,521	27,858,376,893	23,430,803,840
Capital Assets	10,255,925	12,072,094							10,255,925	12,072,094
(net of accumulated depreciation)										
Total Assets	25,734,066,701	21,901,635,326	2,381,573,690	1,790,089,211	105,471,559	92,416,318	1,331,624	1,188,788	28,222,443,574	23,785,329,643
LIABILITIES										
Liabilities										
Accrued Expenses and Other Liabilities	13,142,177	6,845,479	4,353,358	9,039,424					17,495,535	15,884,903
State of Kentucky			19,050,964	14,969,569					19,050,964	14,969,569
Investment Purchases Payable	87,837,010	47,762,082	11,149,003	4,372,812	19,272	38,807	-	-	99,005,285	52,173,701
Investment Fees Payable	18,620,079	16,422,249	1,643,815	2,859,798	52,158	27,685	-	-	20,316,052	19,309,732
Due to Other Funds	-	-	3,775,247	2,047,237	70,478	35,980	2,492	1,554	3,848,217	2,084,771
Total Liabilities	119,599,266	71,029,810	39,972,387	33,288,840	141,908	102,472	2,492	1,554	159,716,053	104,422,676
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	\$ 25,614,467,435	\$ 21,830,605,516	\$ 2,341,601,303	\$ 1,756,800,371	\$ 105,329,651	\$ 92,313,846	\$ 1,329,132	\$ 1,187,234	\$ 28,062,727,521	\$ 23,680,906,967

Statements of Changes in Plan Net Assets
For the Three Months Ended September 30, 2021 and 2020
(Fair Value - Unadjusted & Unaudited)

	Retirement Annuity Trust		Health Insurance Trust		Life Insurance Trust		Other Funds		TOTAL	
	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021
ADDITIONS										
Contributions										
Employer- State Paid	\$ 256,578,579	\$ 254,176,491	\$ 9,098,404	\$ 20,575,739	\$ 417,371	\$ 346,873	\$ -	\$ -	\$ 266,094,354	\$ 275,099,103
Employer- LSD, Other	26,169,755	17,458,820	23,283,421	24,328,350	130,877	65,533	2,281	144,494	49,586,334	41,997,197
Member- Active	70,826,446	74,896,069	28,510,294	29,982,198					99,336,740	104,878,267
Member- Retired			14,884,624	15,534,019					14,884,624	15,534,019
Recovery Income			22,657,038	21,588,241					22,657,038	21,588,241
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Total Contribution	353,574,780	346,531,380	98,433,781	112,008,547	548,248	412,406	2,281	144,494	452,559,090	459,096,827
Investment Income/(Loss)										
Net Appreciation/(Depreciation) in Fair Value of Investments	(137,326,791)	1,265,923,952	12,692,586	104,739,139	(1,356,334)	5,655,962	(2,128)	26,696	(125,992,667)	1,376,345,749
Interest	7,864,536	25,283,311	(1,902,586)	1,319,833	114,640	122,633	165	164	6,076,755	26,725,941
Dividends	55,862,005	53,305,699	3,021,553	2,466,723	152,283	173,033	1,445	1,435	59,037,286	55,946,890
Rental Income, Net	4,901,725	6,748,849							4,901,725	6,748,849
Securities Lending, Net	952,109	628,999			14,663	13,570	140	196	966,912	642,765
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Gross Investment Income	(67,746,416)	1,351,890,810	13,811,553	108,525,695	(1,074,748)	5,965,198	(378)	28,491	(55,009,989)	1,466,410,194
Less Investment Expense	(20,240,140)	(16,558,135)	(1,775,836)	(1,467,822)	(62,765)	(20,649)	-	-	(22,078,741)	(18,046,606)
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Net Investment Income	(87,986,556)	1,335,332,675	12,035,717	107,057,873	(1,137,513)	5,944,549	(378)	28,491	(77,088,730)	1,448,363,588
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Total Additions	265,588,224	1,681,864,055	110,469,498	219,066,420	(589,265)	6,356,955	1,903	172,985	375,470,360	1,907,460,415
DEDUCTIONS										
Benefits	576,383,767	558,561,844			1,508,000	1,411,000	38,139	38,139	577,929,906	560,010,983
Refunds of Contributions	7,368,837	6,677,754							7,368,837	6,677,754
Under 65 Insurance Expenses			25,738,497	26,158,345					25,738,497	26,158,345
Over 65 Insurance Expenses			43,634,114	52,782,964					43,634,114	52,782,964
Administrative Expense	3,147,391	3,019,265	-	-	-	-	-	-	3,147,391	3,019,265
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Total Deductions	586,899,995	568,258,863	69,372,611	78,941,309	1,508,000	1,411,000	38,139	38,139	657,818,745	648,649,311
Net Increase (Decrease)										
Net Increase (Decrease)	(321,311,771)	1,113,605,192	41,096,887	140,125,111	(2,097,265)	4,945,955	(36,236)	134,846	(282,348,385)	1,258,811,104
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS										
Beginning of year	25,935,779,206	20,717,000,324	2,300,504,416	1,616,675,260	107,426,916	87,367,891	1,365,368	1,052,388	28,345,075,906	22,422,095,863
Ending of period	\$ 25,614,467,435	\$ 21,830,605,516	\$ 2,341,601,303	\$ 1,756,800,371	\$ 105,329,651	\$ 92,313,846	\$ 1,329,132	\$ 1,187,234	\$ 28,062,727,521	\$ 23,680,906,967
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TO: Board of Trustees of the Teachers' Retirement System of the State of Kentucky

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 20, 2021

RE: Report of the Investment Committee

1. Investment Committee Meeting and Actions: New investments presented at the November 18, 2021 Investment Committee meeting were a commitment 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 to Fort Washington Private Equity Investors XI; and a commitment 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 Fort Washington Private Equity Small Market Investors II. Representatives of outside manager Baillie Gifford presented on its portfolios.

2. Purchases and Disposals: The Report of the Investment Committee for the quarter ended September 30, 2021, is presented for review and approval. During this quarter, 1,989 purchases amounted to \$2,400,761,721.56 and 2,295 disposals amounted to \$2,301,236,806.06. The disposals consisted of 1,930 sales, 315 principal payments and 50 redemptions. While TRS investment staff members initiate 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 \$17,786,142,332.66 and a market value of \$25,466,931,721.57.

3. Staff's Comments on Economic and Market Conditions: The economic recovery slowed in the quarter ended September 30, compared to the rapid pace experienced in the first half of calendar 2021. The recovery was impeded by a surge in COVID-19 infections as the delta variant spread around the world. The surge of infections, and resulting return to cautionary behaviors in developed markets, maintained the trend of consumers focusing on goods, rather than services and experiences, further straining global supply chains. With this as a backdrop, risk assets posted uneven returns in the quarter, with a bias toward the downside. The relative strength of the dollar aided U.S. assets compared to developed non-U.S. and emerging markets, as the S&P 500 finished with a gain of 0.6%, though returns were negative outside of the large-cap space. Developed non-U.S. markets finished the quarter down 0.4%, while emerging markets suffered a more severe drawdown, dropping 8.1%. A similar pattern played out among credit assets, with U.S. corporates outperforming emerging market corporates. Higher quality fixed income struggled as well, particularly as markets gained clarity around the Federal Reserve's likely tapering schedule. Chinese equity markets, now firmly in bear market territory, led emerging market returns lower as the Chinese Communist Party increased its regulatory oversight for several industries. The aggressive regulatory tactics caught market participants off guard, and Chinese equities declined considerably as a result.

Economic conditions in the United States remained solid, though labor market frictions continued to weigh on job growth relative to expectations. Only 194,000 jobs were added in September — far below the average pace of 607,000 jobs added over the first eight months of 2021. Enhanced unemployment benefits that were a response to the pandemic expired, and the unemployment rate fell to 4.8% in September from 5.9% in June. Leading economic indicators continued to point to a robust expansion. Supply constraints remained, contributing to a higher-than-desired level of inflation at 5.4% to end the quarter. The Fed recently acknowledged inflationary forces have been more persistent than initially thought, and at least half of the Federal Open Market Committee (FOMC) members at the September meeting projected a rate hike as soon as 2022. Prior to June, the FOMC consensus was no rate hikes until 2024. With rate hikes largely off the table in the near term, investor focus remained on the tapering of the Fed's \$120 billion monthly asset purchase program.

U.S. equity markets cooled off in the quarter, compared to recent quarters, as the S&P 500 finished relatively flat and smaller cap stocks generated negative returns. The spread of the delta variant throughout the country slowed consumer spending, although the overall recovery remained on course. Concerns over high inflation, due to supply chain disruptions, continue to be a major theme in the United States that contributed to moderated investor sentiment. These concerns were balanced with generally positive earnings results released during the quarter. Large-cap growth turned in modestly positive returns in the quarter while small-cap and value stocks generally struggled. Active management performed well in the quarter, except for large-cap managers, as a majority of small- and mid-cap managers outpaced their benchmarks.

Like the U.S. equity markets, developed international market returns were muted in the quarter. The MSCI EAFE Index was slightly negative with growth stocks outperforming value, although value stocks are still ahead calendar year-to-date. Small-cap stocks outperformed their larger counterparts. As reopening efforts have continued, improved consumer spending has lifted the Eurozone economy. Inflation in September was the highest in a decade, and according to the European Central Bank, the economy will be back to prepandemic levels by year end. On the other hand, Japan continues to struggle as the delta variant curbed consumer spending and supply chain disruptions impacted progress. Unlike developed markets, emerging markets experienced significant negative returns in the quarter driven by market volatility in China due to its regulatory crackdown. Prior performance from China had contributed to the outperformance of growth and mega-cap stocks. Subsequently, due to this latest volatility in the quarter, value stocks outperformed growth and small-cap stocks outperformed large.

Returns in the fixed income markets were positive overall for the quarter. The Bloomberg U.S. Aggregate Index was flat, finishing with returns of 0.1% in the quarter, while remaining down 1.6% calendar year-to-date. Treasury yields rose in the quarter considering inflation concerns sparked by supply chain constraints and sustained economic growth. Speculation over the timing of Fed tapering also was a contributing factor to the slight move in rates. The 10-year Treasury yield marginally rose to 1.52% as of September 30 from 1.45% as of June 30. Low-rated debt remained a source of outperformance in a market starved for yield. The Bloomberg U.S. Credit Index was flat for the quarter with BBB-rated debt marginally outperforming higher-rated debt. In contrast, the Bloomberg U.S. High Yield Index returned 0.9% in the quarter while the Credit Suisse Leveraged Loan Index returned 1.1%. Below-investment grade debt has outperformed

other segments meaningfully calendar year-to-date, with high yield and bank loans returning 4.7% and 4%, respectively.

Core private real estate generated a 6.6% return in the quarter, as reported by the NFI-ODCE Index, with the total return comprising of 1% income and 5.6% price appreciation. While the income return continues to trend in line with historical levels, price appreciation exceeded expectations and previous levels, such as the 2.6% return recorded in the prior quarter. Real estate continues to recover from the impact brought on by the pandemic. All four primary sectors of real estate – industrial, multifamily, office and retail – contributed to the quarter’s strong returns, with industrial and multifamily continuing to lead. While managers in this asset class continue to focus on longer-term real estate trends, it is worth highlighting that on a trailing one-year basis, the NFI -OFCE returned 14.6%.

4. Performance: Investment performance was mixed for the quarter ending September 30, 2021, with private assets doing very well while public assets remained flat. The Retirement Annuity Trust Fund’s portfolio declined 0.28% while returning 21.66% for the 12-month period, both in line with the Policy Index that gained 0.23% and 21.89% in the same timeframes. TRS’s domestic equities declined 0.84%, underperforming the S&P 1500 Stock that increased 0.35% for the quarter. TRS’s international stocks fell 4.25% and trailed the MSCI All Country ex-U.S. index, which declined 2.88% for the quarter. Alternatives and additional categories made strong contributions in the quarter as private equity was up 8.51% while additional categories returned 2.89%. TRS’s fixed income declined 0.07%, underperforming the Bloomberg Barclays Gov/Credit Bond index that returned 0.04% for the quarter. Real estate was up 4.88% 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, 2021

FINAL

	Market Value	Last Qtr	FYTD	1-Year	3-Year*	5-Year*	10-Year*	20-Year*
TOTAL PLAN	\$ 25,466,931,721.57	-0.28	-0.28	21.66	12.12	12.19	11.45	7.81
<i>Policy Benchmark</i>		<i>0.23</i>	<i>0.23</i>	<i>21.89</i>	<i>11.65</i>	<i>11.62</i>	<i>10.99</i>	-
Total Equity	\$ 15,812,669,937.96	-1.98	-1.98	29.90	14.67	15.44	14.72	8.79
Domestic Equity	\$ 10,623,358,275.39	-0.84	-0.84	34.11	16.19	16.99	16.68	9.78
<i>S&P 1500 Index</i>		<i>0.35</i>	<i>0.35</i>	<i>31.38</i>	<i>15.50</i>	<i>16.55</i>	<i>16.50</i>	<i>9.49</i>
All-Cap Equities	\$ 565,945,007.83	1.26	1.26	37.41	19.32	-	-	-
<i>Russell 3000 Index</i>		<i>-0.10</i>	<i>-0.10</i>	<i>31.88</i>	<i>16.00</i>	-	-	-
Large-Cap Equities	\$ 8,659,040,342.57	-0.74	-0.74	32.72	16.72	17.32	16.73	-
<i>S&P 500 Index</i>		<i>0.58</i>	<i>0.58</i>	<i>30.00</i>	<i>15.99</i>	<i>16.90</i>	<i>16.63</i>	-
Mid-Cap Equities	\$ 845,804,766.86	-2.63	-2.63	37.37	12.37	14.92	16.10	-
<i>S&P 400 Index</i>		<i>-1.76</i>	<i>-1.76</i>	<i>43.69</i>	<i>11.08</i>	<i>12.97</i>	<i>14.72</i>	-
Small-Cap Equities	\$ 552,568,158.13	-1.73	-1.73	50.98	10.87	14.01	16.13	-
<i>S&P 600 Index</i>		<i>-2.84</i>	<i>-2.84</i>	<i>57.65</i>	<i>9.44</i>	<i>13.57</i>	<i>15.69</i>	-
International Equity	\$ 5,189,311,662.57	-4.25	-4.25	21.91	11.75	12.50	10.27	-
<i>MSCI AC World Ex US</i>		<i>-2.88</i>	<i>-2.88</i>	<i>24.45</i>	<i>8.52</i>	<i>9.44</i>	<i>7.97</i>	-
Fixed Income	\$ 3,921,951,845.15	-0.07	-0.07	-1.31	6.17	3.59	3.81	5.07
<i>Bloomberg Barclays Govt/Credit Index</i>		<i>0.04</i>	<i>0.04</i>	<i>-1.12</i>	<i>5.95</i>	<i>3.24</i>	<i>3.24</i>	<i>4.48</i>
Real Estate	\$ 1,474,861,620.81	4.88	4.88	11.80	7.56	8.90	9.75	9.18
In House Real Estate Equity	\$ 402,420,071.66	1.23	1.23	4.82	4.64	7.53	7.80	8.28
<i>CPI plus 2%</i>		<i>1.67</i>	<i>1.67</i>	<i>7.48</i>	<i>4.88</i>	<i>4.65</i>	<i>3.96</i>	<i>9.48</i>
Core Real Estate	\$ 651,220,883.16	4.76	4.76	10.01	7.31	7.68	10.13	-
<i>NCREIF ODCE (VW) Index</i>		<i>6.63</i>	<i>6.63</i>	<i>14.61</i>	<i>7.06</i>	<i>7.50</i>	<i>9.93</i>	-
Non-Core Real Estate	\$ 421,220,665.99	8.96	8.96	22.65	11.33	11.96	16.49	-
<i>NCREIF Property Index</i>		<i>5.23</i>	<i>5.23</i>	<i>12.16</i>	<i>6.72</i>	<i>6.84</i>	<i>8.99</i>	-
Private Equity	\$ 1,625,852,006.76	8.51	8.51	42.02	17.40	17.51	13.94	-
Mature Private Equity	\$ 815,995,516.75	7.13	7.13	40.22	14.37	14.59	10.76	-
<i>S&P 500 Index plus 3%</i>		<i>1.33</i>	<i>1.33</i>	<i>33.91</i>	<i>19.47</i>	<i>20.40</i>	<i>20.13</i>	-
Private Equity < 5 Years	\$ 809,856,490.01	10.15	10.15	46.07	20.77	20.71	-	-
Timberland	\$ 207,336,830.36	0.88	0.88	-6.80	0.42	0.43	2.81	-
<i>NCREIF Timberland Index</i>		<i>1.89</i>	<i>1.89</i>	<i>5.02</i>	<i>2.49</i>	<i>2.95</i>	<i>4.91</i>	-
Additional Categories	\$ 1,995,149,959.59	2.89	2.89	14.05	6.87	6.90	7.15	-
<i>B of A Merrill Lynch U.S. High Yield Master II Index</i>		<i>0.94</i>	<i>0.94</i>	<i>11.45</i>	<i>6.61</i>	<i>6.35</i>	<i>7.29</i>	-
Cash (Unallocated)	\$ 429,109,520.94	0.01	0.01	0.03	1.02	1.10	0.62	1.44
<i>90 Day T-Bill</i>		<i>0.02</i>	<i>0.02</i>	<i>0.07</i>	<i>1.18</i>	<i>1.15</i>	<i>0.61</i>	<i>1.27</i>

Total Trust Gross Return for 30-year period*

8.42

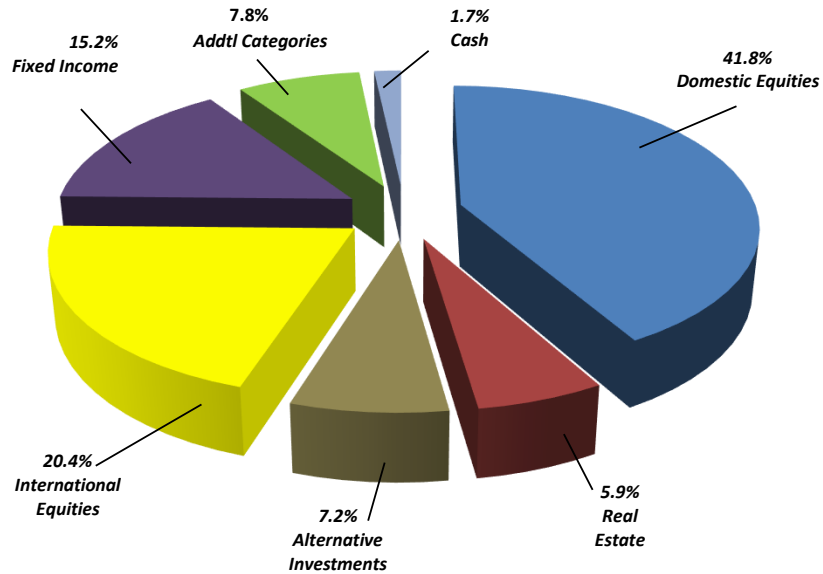
*Returns are annualized for periods longer than one year

** 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.

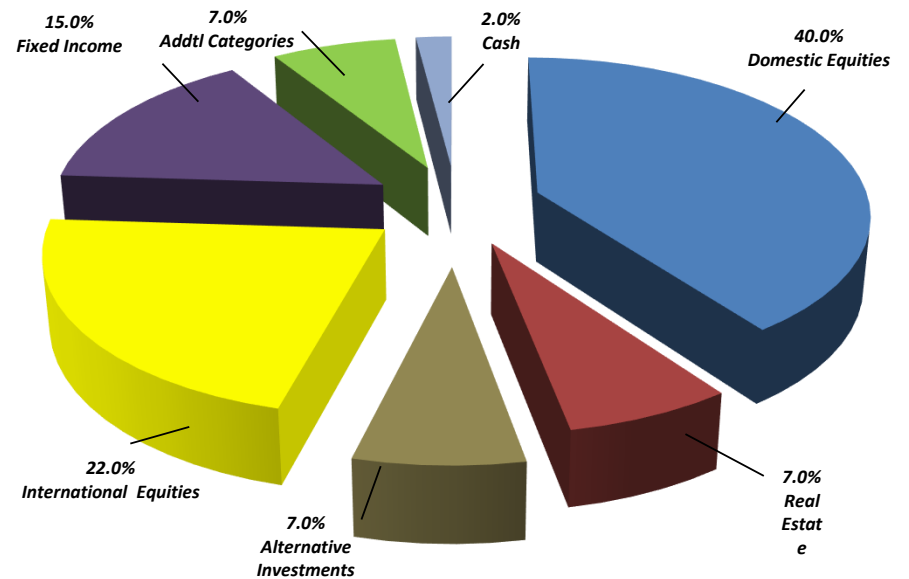
Teachers' Retirement System of Kentucky
Quarterly Investment Update
For the period ended September 30, 2021

(\$ in millions)	\$'s	9/30/2021 Actual %	6/30/2021 Actual %	Target %	Strategic Ranges
Domestic Equities	\$10,623.3	41.8%	41.7%	40.0%	34.0 - 48.0%
Real Estate	1,474.9	5.9%	5.5%	7.0%	4.0 - 10.0%
Alternative Inv.	1,833.2	7.2%	6.8%	7.0%	4.0 - 10.0%
International Equities	5,189.3	20.4%	21.1%	22.0%	18.0 - 25.0%
Fixed Income	3,922.0	15.2%	15.3%	15.0%	8.0 - 22.0%
Addtl Categories	1,995.1	7.8%	7.2%	7.0%	4.0 - 15.0%
Cash	429.1	1.7%	2.4%	2.0%	1.0 - 5.0%
Total	\$25,466.9	100.0%	100.0%	100.0%	

ACTUAL %



TARGET %



Teachers' Retirement System of the State of Kentucky
Health Insurance Trust
Quarterly Investment Performance
Gross Returns
For the Period Ended September 30, 2021

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>10-Year*</u>
<u>TOTAL PLAN</u>	\$ 2,285,659,542.23	0.62	0.62	23.74	11.93	11.63	9.42
<i>Policy Benchmark</i>		0.47	0.47	24.34	11.74	11.41	-
<u>Total Equity</u>	\$ 1,256,030,326.65	-1.58	-1.58	29.73	13.88		
<u>Domestic Equity</u>	\$ 163,530,555.04	-4.86	-4.86	32.42	22.70	-	-
<i>S&P 500 Index</i>		0.58	0.58	30.00	15.99	-	-
<i>Russell 3000</i>		-0.10	-0.10	31.88	16.00		
<u>Global Equities</u>	\$ 1,092,499,771.61	-1.07	-1.07	29.40	12.73	13.43	12.39
<i>MSCI AC World IMI (Net)</i>		-1.11	-1.11	28.92	12.38	13.06	11.96
<u>Fixed Income</u>	\$ 191,704,997.45	-0.10	-0.10	-1.30	5.81	3.27	2.44
<i>Barclays Government Credit</i>		0.04	0.04	-1.13	5.94	3.24	3.24
<u>Real Estate:</u>	\$ 122,070,115.37	7.96	7.96	19.67	11.02	11.08	-
<u>Core Real Estate</u>	\$ 58,433,474.78	5.64	5.64	12.52	8.48	8.40	-
<i>NCREIF ODCE (VW)</i>		6.63	6.63	14.63	7.06	7.51	-
<u>Non-Core Real Estate</u>	\$ 63,636,640.59	10.21	10.21	26.36	13.32	13.18	-
<i>NCREIF Property Index</i>		5.23	5.23	12.15	6.72	6.84	-
<u>Private Equity</u>	\$ 180,739,731.44	9.37	9.37	50.33	18.27	18.78	-
<u>Mature Private Equity</u>	\$ 72,253,770.43	9.20	9.20	50.17	16.99	17.09	-
<i>S&P 500 plus 3%</i>		1.33	1.33	33.91	19.47	20.40	-
<u>Private Equity < 5 Years</u>	\$ 108,485,961.01	5.80	5.80	48.25	18.21	18.88	-
			-				
<u>Additional Categories:</u>	\$ 392,503,878.50	2.57	2.57	13.38	6.89	6.82	6.89
<i>B of A Merrill Lynch High Yield Master II</i>		0.94	0.94	11.46	6.62	6.35	7.29
			-				
<u>Cash (Unallocated):</u>	\$ 142,610,492.82	0.01	0.01	0.03	1.10	1.13	0.64
<i>90 Day T-Bill</i>		0.02	0.02	0.07	1.18	1.15	0.61

*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 app for the various asset classes weighted by the mid point of the strategic range for the current fiscal year.

Teachers' Retirement System of Kentucky

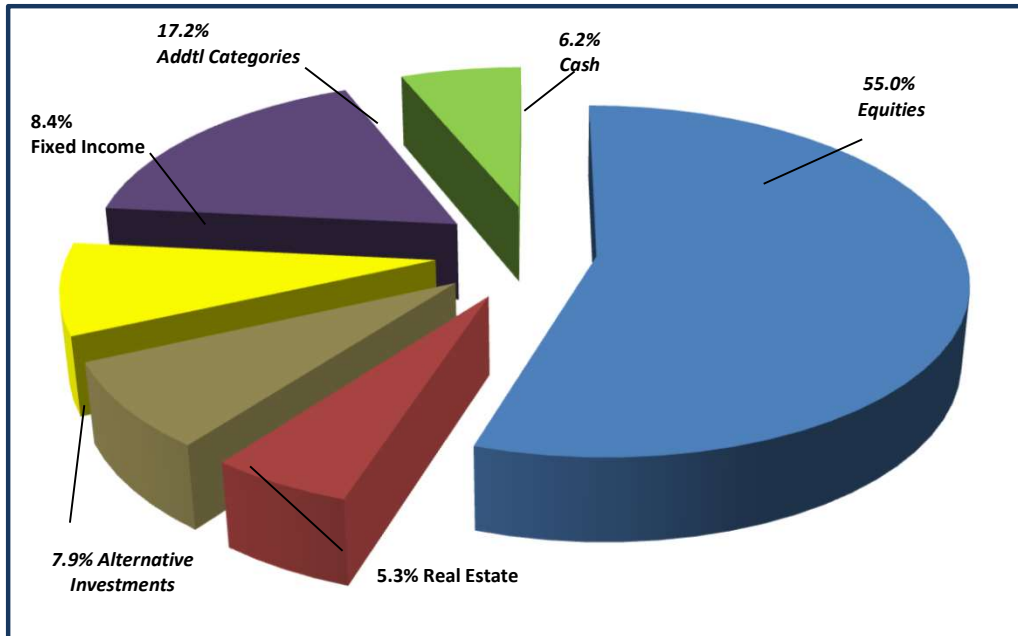
Insurance Trust Fund

Quarterly Investment Update

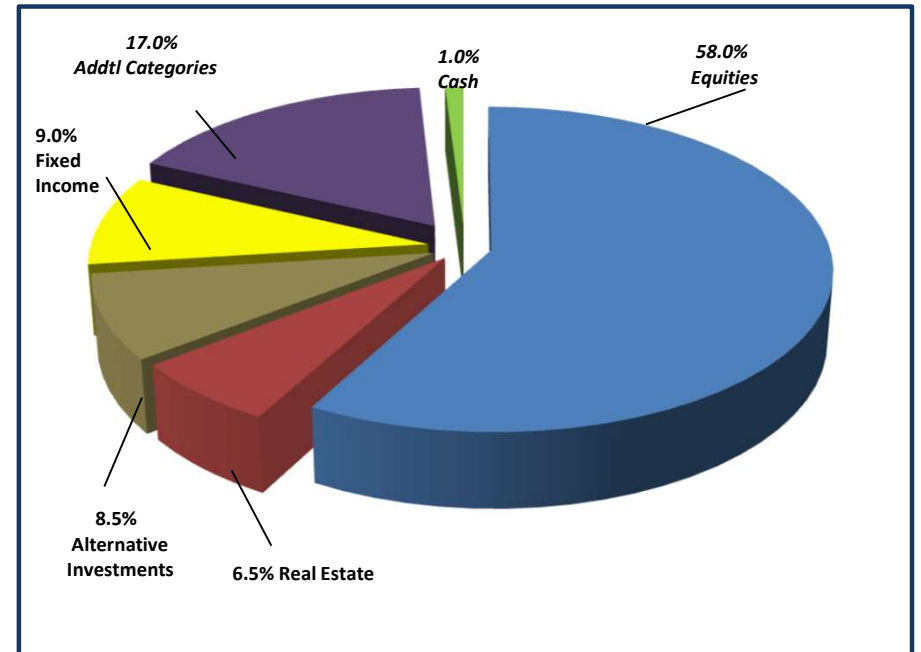
For the period ended September 30, 2021

(\$ in thousands)	\$'s	9/30/2021 Actual %	6/30/2021 Actual %	Target %	Strategic Ranges
Equities	\$1,256,030.3	55.0%	57.5%	58.0%	51.0 - 64.0%
Real Estate	\$122,070.1	5.3%	5.0%	6.5%	4.0 - 12.0%
Alternative Inv.	\$180,739.7	7.9%	7.7%	8.5%	5.0 - 12.0%
Fixed Income	\$191,705.0	8.4%	8.7%	9.0%	6.0 - 12.0%
Addtl Categories	\$392,503.9	17.2%	16.2%	17.0%	14.0 - 21.0%
Cash	\$142,610.5	6.2%	4.9%	1.0%	0.0 - 4.0%
Total	<u>\$2,285,659.5</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	

ACTUAL %



TARGET %



TOTAL BV INVESTED AT 06/30/21

\$ 17,686,617,417.16

July Activity

Purchases	635,614,158.19	
Disposals	(528,498,294.35)	
Paydowns	(10,153,895.43)	
Redemptions	(21,039,947.23)	
Short-Term Pool Net	<u>187,201,915.73</u>	263,123,936.91

August Activity

Purchases	443,767,550.46	
Disposals	(293,097,917.27)	
Paydowns	(3,079,345.68)	
Redemptions	(33,197,241.94)	
Short-Term Pool Net	<u>(213,342,235.31)</u>	(98,949,189.74)

September Activity

Purchases	545,659,740.11	
Disposals	(426,854,720.73)	
Paydowns	(4,237,605.22)	
Redemptions	(35,112,919.81)	
Short-Term Pool Net	<u>(144,104,326.02)</u>	(64,649,831.67)

TOTAL BV INVESTED AT 09/30/21

\$ 17,786,142,332.66

* 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, (\$43,716,705.80) 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	904,105,772
- Pending Payable	<u>43,716,706</u>
Net	<u><u>860,389,066</u></u>

INVESTMENT ACTIVITY

July 1, 2021 -- September 30, 2021

Total Book Value Invested @ 07/1/21 \$ 17,686,617,417.16

Purchases:

399	Cash Equivalents	\$ 775,720,272.79	
131	Fixed Income Securities	428,022,506.36	
1	Principal Paydowns	0.01	
0	Redemptions / Maturities	-	
1142	Equity Securities	692,332,279.38	
26	Real Estate	48,609,258.65	
84	Alternative Investments	86,186,576.58	
206	Additional Categories	369,890,827.79	
1989	Total Purchases		\$ 2,400,761,721.56

Disposals:

317	Cash Equivalents	\$ 945,964,918.39	
89	Fixed Income Securities	349,326,928.69	
315	Principal Paydowns	17,470,846.34	
41	Redemptions / Maturities	82,387,154.35	
1112	Equity Securities	482,707,804.64	
48	Real Estate	39,722,208.91	
166	Alternative Investments	133,438,090.19	
198	Additional Categories	243,255,899.92	
0	Additional Principal Paydowns	-	
9	Additional Redemptions / Maturities	6,962,954.63	
2295	Total Disposals		\$ 2,301,236,806.06

Total Book Value Invested @ 09/30/21 \$ 17,786,142,332.66

Total Par Value Invested @ 09/30/21 \$ 17,778,565,158.70

Total Market Value Invested @ 09/30/21 \$ 25,466,931,721.57

* 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, (\$43,716,705.80 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	904,105,772
- Pending Payable	43,716,706
Net	860,389,066

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

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 20, 2021

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 actions taken by the committee.

1. Independent Actuary's Valuations: Cavanaugh Macdonald Consulting presented the pension and OPEB valuations as of June 30, 2021.

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

2. External Audit Report: Blue & Co. reported to the committee on the audit of the financial statements for the fiscal years ended June 30, 2021 and 2020. The auditor also reported to the committee concerning internal controls and compliance at TRS.

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

3. Proposed Administrative Regulation: Mr. Harbin reported an administrative regulation on disability retirement for TRS 4 needs to be developed and presented at the December quarterly meeting of the Board of Trustees.

Committee Action: The committee voted unanimously to accept staff's recommendation to develop an administrative regulation on disability retirement for TRS 4 to be presented at the December quarterly board meeting.

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 20, 2021

SUBJECT: Report of the Personnel Committee

The Personnel Committee met Nov. 22 to review the performance of the executive secretary.

Recommendation: The Personnel Committee recommends that the board provide the executive secretary the same salary increase available to other TRS employees.

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

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 20, 2021

SUBJECT: Report of the Scholarship Committee

The Scholarship Committee will meet on Monday, December 20, 2021, prior to the board meeting to consider scholarship awards for school year 2022-2023.

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

Recommendation: This report is for the information of the board, and any recommendations by the committee will be communicated to the board at the time of the board's meeting.

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

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 20, 2021

SUBJECT: TRS 4 Matters

Emergency Administrative Regulation

KRS 161.661(19), as established by House Bill 258 (2021 RS) provides that individuals who become members on or after January 1, 2022, shall be eligible for a disability benefit as prescribed in administrative regulations promulgated by the board. The disability plan and benefits may be adjusted by the board according to law.

For the start of TRS 4, an administrative regulation is being proposed to provide benefits complying with the mandate of KRS 161.661(19) through the provisions of KRS 61.621 (the Fred Capps Memorial Act) for members with less than five years of service credit.

The regulation will specify benefits are limited to those in the Fred Capps act. The act will provide a TRS 4 member with eligibility for minimum benefits if the member dies or becomes totally and permanently disabled to engage in any occupation for remuneration or profit as a result of a duty-related injury. Generally, if a member dies, the act provides a minimum benefit of a \$10,000 lump-sum payment and 75% of salary to a surviving spouse for the spouse's lifetime. For disability, the act provides a minimum benefit of 25% of salary to the member. These benefits would be in lieu of any disability benefits provided by KRS 161.663.

A regulation will be brought to the board later regarding disability benefits for members with five or more years of service.

Recommendation: The executive secretary recommends that the board approve and authorize the filing of an emergency administrative regulation for implementation January 1, 2022, to provide disability benefits to TRS 4 members with less than five years of service credit through KRS 61.621 (the Fred Capps Memorial Act).

Tax Matters

The creation of TRS 4 by HB 258 requires TRS to be able to accept voluntary contributions for the supplemental benefit from members and employers. To accomplish this, TRS's outside tax counsel Ice Miller has recommended that the 403(b) plan be restated and authorized by the board consistent with the enabling legislation and federal law.

Ice Miller has reviewed TRS 4 for federal tax compliance throughout the development of this new benefits tier – from the point when ideas for a bill were being circulated, continuing through when HB 258 was pending and since it has become law. Ice Miller, with the assistance of TRS staff, is preparing the 403(b) restatement and a request for a private letter ruling to be filed with

the Internal Revenue Service. The IRS charges a user fee – currently \$38,000 – for a private letter ruling, which in this case would be paid by TRS. IRS rulings typically take up to a year.

Recommendation: The executive secretary recommends that the board authorize the restatement of the 403(b) plan and further authorize staff to file a private letter ruling request with the IRS.

STATEMENT OF EMERGENCY 102 KAR 1:XXE

This emergency administrative regulation is being promulgated pursuant to KRS 13A.190(1)(a)(3) to meet the requirements of House Bill 258 (2021 RS) to provide individuals who become members on or after January 1, 2022, with a disability benefit. The passage of the act and the start of the new benefits on January 1, 2022, necessitate the filing of this regulation as an emergency. This emergency administrative regulation pursuant to KRS 13A.190(1)(b)(2) will be replaced by an ordinary administrative regulation to be developed by the Teachers' Retirement System of the State of Kentucky (TRS). The emergency regulation is necessary because a member may become disabled as early as January 1, 2022, and be entitled to benefits that would be ongoing. TRS will file an ordinary administrative regulation also to address such members who have five or more years of service.

Alison Wright, Chair
Board of Trustees, Teachers' Retirement System of the State of Kentucky

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF KENTUCKY

(New Emergency Administrative Regulation) 102 KAR 1:XXE. Disability benefits for members who enter TRS on after January 1, 2022.

EFFECTIVE: January 1, 2022 RELATES TO: KRS 161.661(19)

STATUTORY AUTHORITY: KRS 161.310, 161.661(19)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 161.661(19) provides that individuals who become members on or after January 1, 2022, shall be eligible for a disability benefit as prescribed by the board of trustees in an administrative regulation promulgated by the board. The disability plan and benefits may be adjusted by the board according to law.

Section 1. For members who enter TRS on or after January 1, 2022, who have less than five years of service, the disability plan and benefits shall be those provided under KRS 61.621 (the Fred Capps Memorial Act).

Section 2. The members defined in Section 1 are not eligible for benefits provided by KRS 161.663.

Alison Wright, Chair
Board of Trustees, Teachers' Retirement System of the State of Kentucky

APPROVED BY AGENCY: December 20, 2021

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

FROM: Gary L. Harbin, CPA
Executive Secretary

DATE: December 20, 2021

SUBJECT: Executive Secretary's Observations and Comments

1. 2021 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 2021 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 Trust. 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: TRS, for the 33rd consecutive year, has received an Award for Financial Reporting Achievement for its Annual Comprehensive Financial Report. 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 24, 2021	NCTR Planning Meeting
September 27, 2021	Meeting with Molpus Group
October 13, 2021	Attended NCTR annual conference
November 1-3, 2021	Attended PSHCR annual conference
November 5, 2021	Meeting with Todd Asset Management

November 9, 2021	Attended NIRS Conference
November 19, 2021	Meeting with Lord, Abbett & Co.
November 29, 2021	Meeting with KPPA staff
December 6, 2021	Meeting with former trustees
December 7, 2021	Attended Know Your Rx Coalition Board Meeting

4. 2022 Board Meeting Dates: Dates for the board meetings for 2022 are listed below. The meetings will begin at 12:30 p.m. ET, unless otherwise announced, and will be conducted by live video conference.

Monday, March 21

Monday, June 20

Monday, September 19

Monday, December 19



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2021***

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

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Teachers' Retirement System
of the State of Kentucky**

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2020

Christopher P. Morill

Executive Director/CEO