



## TEACHERS' RETIREMENT SYSTEM of the State of Kentucky

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**GARY L. HARBIN, CPA**  
Executive Secretary

Quarterly Meeting of the  
Board of Trustees

### A G E N D A

March 19, 2018, 12:30 p.m.

Board Called to Order  
Roll Call

1. Reports for Consent
  - 1.1. Consideration/Approval of Minutes
    - 1.1.1. Quarterly Meeting of the Board of Trustees, December 18, 2017
    - 1.1.2. Special Meeting of the Scholarship Committee, December 18, 2017
  - 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. Legislative Report
4. Executive Secretary's Observations and Comments

General Discussion  
Adjournment

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

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

FROM: Gary L. Harbin, CPA  
Executive Secretary

DATE: March 19, 2018

SUBJECT: Reports for Consent

1.1. Consideration/Approval of Minutes

1.1.1. Regular Quarterly Meeting of the Board of Trustees held December 18, 2017

1.1.2. Special Meeting of the Scholarship Committee held December 18, 2017

1.2. Applications for Retirement and Annuity

The lists of members who retired in December 2017, January and February 2018 will be available for examination at the meeting. Attached is a summary of the particular payments and a comparison to the same period last year. Initial retirements for the period included 343 retirees with monthly payments totaling \$952,091.85

Recommendation: The board is requested to approve the initial payments listed in the report.

During the same period last year, there were 282 retirements with monthly payments totaling \$783,906.32.

1.3. Survivor Benefits

The list of persons qualifying for survivor benefit payments for the quarter October 1, 2017 through December 31, 2017 will be available for examination at the meeting. During the period, there were 14 survivor benefits with a total monthly payment of \$6,015.87.

Recommendation: The board is requested to approve the survivor benefit payments for the period October 1, 2017 through December 31, 2017 as listed in the report.

1.4. Life Insurance Benefits

The list of payments of life insurance benefits due to death of active and retired teachers for the period October 1, 2017 through December 31, 2017 will be available for examination at the meeting. There were 4 payments to the estates or beneficiaries of active teachers and 210 payments to the estates or beneficiaries of retired teachers for total payments of \$1,058,000.

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

During the same quarter in 2016, there were 220 payments in the amount of \$1,082,000.

### 1.5. Refunds

The report of refunds for the quarter ended December 31, 2017 is attached. There were 1,045 refunds for the quarter October 1, 2017 through December 31, 2017, and the amount refunded was \$8,923,083.54. The refunds are for the following categories:

Regular withdrawals	1,012	\$8,583,631.04
Deaths	<u>33</u>	<u>\$ 339,452.50</u>
Totals	1,045	\$8,923,083.54

Recommendation: The board is requested to approve the payment of refunds as listed in the report.

During the same quarter in 2016 there were 831 refunds totaling \$7,174,644.10.

### 1.6. Interim Financial Statements

Attached are the Interim Financial Statements for the quarter ended December 31, 2017.

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**  
**2017-2018**

	December	January	February	Total	Same Period 2017
<b>Handicapped Child</b>	<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
<b>Disability Retirement</b>	<i>9</i> \$24,304.98	<i>7</i> \$21,111.82	<i>7</i> \$20,837.43	<i>23</i> \$66,254.23	<i>25</i> \$64,916.90
<b>Service Retirement</b>	<i>74</i> \$190,675.67	<i>178</i> \$513,408.31	<i>67</i> \$179,547.30	<i>319</i> \$883,631.28	<i>256</i> \$713,859.81
<b>Beneficiary of Member Eligible to Retire</b>	<i>0</i> \$0.00	<i>0</i> \$0.00	<i>1</i> \$2,206.34	<i>1</i> \$2,206.34	<i>1</i> \$5,129.61
<b>TOTALS</b>	<i>83</i> \$214,980.65	<i>185</i> \$534,520.13	<i>75</i> \$202,591.07	<i>343</i> \$952,091.85	<i>282</i> \$783,906.32

**Reports for Consent**  
**Member Account Refunds**  
**For the period October 2017 - December 2017**

Active Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
October	295	1,319,228.83	318,465.00	1,191,371.42	2,829,065.25
November	463	1,390,504.75	346,795.16	1,676,210.41	3,413,510.32
December	255	905,475.39	225,663.75	1,209,916.33	2,341,055.47
<b>Total</b>	<b>1,012</b>				<b>8,583,631.04</b>

Deceased Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
October	10	3,432.05	580.90	32,472.89	36,485.84
November	13	41,443.82	10,360.95	182,559.55	234,364.32
December	10	17,359.69	1,192.58	50,050.07	68,602.34
<b>Total</b>	<b>33</b>				<b>339,452.50</b>

Total Refunds	Count	Net Refund	Taxes Withheld	Rollovers	Total
October	305	1,322,660.88	319,045.90	1,223,844.31	2,865,551.09
November	476	1,431,948.57	357,156.11	1,858,769.96	3,647,874.64
December	265	922,835.08	226,856.33	1,259,966.40	2,409,657.81
<b>Total</b>	<b>1,045</b>				<b>8,923,083.54</b>

# **TEACHERS' RETIREMENT SYSTEM**

## **OF THE STATE OF KENTUCKY**



### ***INTERIM FINANCIAL STATEMENTS***

**QUARTER ENDED DECEMBER 31, 2017**  
**(UNAUDITED)**

**Statements of Plan Net Assets**  
**as of December 31, 2017 and 2016**  
 ( Book Basis - Unadjusted )

	Defined Benefit Plan		Health Insurance Plans		Life Insurance Plan		Other Funds		TOTAL	
	FY 2018	FY 2017	FY 2018	FY 2017	FY 2018	FY 2017	FY 2018	FY 2017	FY 2018	FY 2017
<b>ASSETS</b>										
Cash	\$ 94,717,039	\$ 91,281,431	\$ 32,998,774	\$ 40,494,351	\$ 147,887	\$ -	\$ 105,340	\$ 110,092	\$ 127,969,040	\$ 131,885,874
Receivables										
Contributions	28,779,827	34,664,070	18,456,779	21,525,457	105,264	95,285			47,341,870	56,284,812
State of Kentucky	13,640,427	16,272,123	5,580,025	1,359,808	32,617	54,392			19,253,069	17,686,323
Investment Income	40,623,372	39,619,872	1,685,597	1,333,953	1,036,228	1,090,402	2,693	2,417	43,347,890	42,046,644
Investment Sales Receivable	6,018,955	14,485,148	448,087	541,374	-	-			6,467,042	15,026,522
Installment Account Receivable	321,073	507,829							321,073	507,829
Other Receivables	86,960	81,004	18,035,797	33,476,310					18,122,757	33,557,314
Due from Other Funds	1,567,471	-							1,567,471	-
<b>Total Receivables</b>	<b>91,038,085</b>	<b>105,630,046</b>	<b>44,206,285</b>	<b>58,236,902</b>	<b>1,174,109</b>	<b>1,240,079</b>	<b>2,693</b>	<b>2,417</b>	<b>136,421,172</b>	<b>165,109,444</b>
Investments at Book Value										
Short Term Investments	585,367,057	470,805,612	52,455,106	21,262,041	3,401,231	4,856,602	401,217	411,801	641,624,611	497,336,056
Bonds and Mortgages	2,738,683,011	2,498,595,312	85,711,595	61,044,247	79,172,114	78,343,534	199,485	199,485	2,903,766,205	2,638,182,578
Stocks	8,134,132,884	8,202,697,396	380,377,269	312,634,713			185,574	185,574	8,514,695,727	8,515,517,683
Alternative Investments	969,577,403	814,364,491	56,336,557	29,002,571					1,025,913,960	843,367,062
Real Estate	928,932,985	837,411,418	48,881,165	26,691,926					977,814,150	864,103,344
Additional Categories	1,362,322,263	1,366,897,363	169,873,039	155,381,651					1,532,195,302	1,522,279,014
<b>Total Investments</b>	<b>14,719,015,603</b>	<b>14,190,771,592</b>	<b>793,634,731</b>	<b>606,017,149</b>	<b>82,573,345</b>	<b>83,200,136</b>	<b>786,276</b>	<b>796,860</b>	<b>15,596,009,955</b>	<b>14,880,785,737</b>
Capital Assets	18,046,639	16,973,670							18,046,639	16,973,670
( net of accumulated depreciation )										
<b>Total Assets</b>	<b>14,922,817,366</b>	<b>14,404,656,739</b>	<b>870,839,790</b>	<b>704,748,402</b>	<b>83,895,341</b>	<b>84,440,215</b>	<b>894,309</b>	<b>909,369</b>	<b>15,878,446,806</b>	<b>15,194,754,725</b>
<b>LIABILITIES</b>										
Liabilities										
Accounts Payable	2,201,644	1,166,764	-	19,811					2,201,644	1,186,575
Investment Purchases Payable	8,655,779	16,453,045	1,390,354	1,652,745			-	-	10,046,133	18,105,790
Investment Fees Payable	15,983,153	11,447,198	796,350	709,100			-	-	16,779,503	12,156,298
Due to Other Funds	-	-	1,538,573	-	27,690	-	1,208	-	1,567,471	-
Revenues Collected in Advance	-	-	3,422,483	2,044,472					3,422,483	2,044,472
<b>Total Liabilities</b>	<b>65,713,417</b>	<b>55,367,419</b>	<b>7,147,760</b>	<b>4,426,128</b>	<b>27,690</b>	<b>-</b>	<b>1,208</b>	<b>-</b>	<b>72,890,075</b>	<b>59,793,547</b>
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	\$ 14,857,103,949	\$ 14,349,289,320	\$ 863,692,030	\$ 700,322,274	\$ 83,867,651	\$ 84,440,215	\$ 893,101	\$ 909,369	\$ 15,805,556,731	\$ 15,134,961,178

**Statements of Changes in Plan Net Assets**  
**For the Six Months Ended December 31, 2017 and 2016**  
 ( Book Basis - Unadjusted )

	Defined Benefit Plan		Medical Insurance Plan		Life Insurance Plan		Other Funds		TOTAL	
	FY 2018	FY 2017	FY 2018	FY 2017	FY 2018	FY 2017	FY 2018	FY 2017	FY 2018	FY 2017
<b>ADDITIONS</b>										
Contributions										
Employer- State Paid	\$ 447,383,590	\$ 464,595,046	\$ 35,960,870	\$ 32,850,257	\$ 359,410	\$ 377,043	\$ -	\$ -	\$ 483,703,870	\$ 497,822,346
Employer- LSD, Other	36,727,370	37,936,026	42,867,912	45,689,398	74,927	81,077	162,975	220,001	79,833,184	83,926,502
Member- Active	129,093,620	137,072,087	52,459,759	55,933,876					181,553,379	193,005,963
Member- Retired			29,170,320	28,849,477					29,170,320	28,849,477
Recovery Income			45,239,731	9,801,480					45,239,731	9,801,480
Total Contribution	613,204,580	639,603,159	205,698,592	173,124,488	434,337	458,120	162,975	220,001	819,500,484	813,405,768
Investment Income (at book value)										
Net Gain/(Loss) on Investment Sales	332,923,892	276,995,646	233,665	9,892,587	53,119	(7,778)	-	-	333,210,676	286,880,455
Interest	71,924,086	75,072,975	2,415,589	2,253,980	1,367,062	1,508,806	6,317	5,167	75,713,054	78,840,928
Dividends	164,939,396	89,287,050	2,703,692	1,329,288			2,842	2,493	167,645,930	90,618,831
Rental Income, Net	15,062,675	15,026,522							15,062,675	15,026,522
Securities Lending, Net	2,002,481	731,948			1,075	1,001	158	14	2,003,714	732,963
Gross Investment Income	586,852,530	457,114,141	5,352,946	13,475,855	1,421,256	1,502,029	9,317	7,674	593,636,049	472,099,699
Less Investment Expense	(26,043,387)	(25,493,230)	(1,528,599)	(1,543,222)	-	-	-	-	(27,571,986)	(27,036,452)
Net Investment Income	560,809,143	431,620,911	3,824,347	11,932,633	1,421,256	1,502,029	9,317	7,674	566,064,063	445,063,247
Total Additions	1,174,013,723	1,071,224,070	209,522,939	185,057,121	1,855,593	1,960,149	172,292	227,675	1,385,564,547	1,258,469,015
<b>DEDUCTIONS</b>										
Benefits	1,000,458,660	957,968,429			2,449,106	2,549,120	87,681	116,194	1,002,995,447	960,633,743
Refunds of Contributions	18,442,280	16,110,806							18,442,280	16,110,806
Under 65 Insurance Expenses			59,282,507	62,248,427					59,282,507	62,248,427
Over 65 Insurance Expenses			99,124,495	86,440,817					99,124,495	86,440,817
Administrative Expense	6,910,060	7,265,814	-	-	-	-	-	-	6,910,060	7,265,814
Total Deductions	1,025,811,000	981,345,049	158,407,002	148,689,244	2,449,106	2,549,120	87,681	116,194	1,186,754,789	1,132,699,607
Net Increase ( Decrease )	148,202,723	89,879,021	51,115,937	36,367,877	(593,513)	(588,971)	84,611	111,481	198,809,758	125,769,408
<b>NET ASSETS HELD IN TRUST FOR PENSION BENEFITS</b>										
Beginning of year	14,708,901,226	14,259,410,299	812,576,093	663,954,397	84,461,164	85,029,186	808,490	797,888	15,606,746,973	15,009,191,770
Ending of period	\$ 14,857,103,949	\$ 14,349,289,320	\$ 863,692,030	\$ 700,322,274	\$ 83,867,651	\$ 84,440,215	\$ 893,101	\$ 909,369	\$ 15,805,556,731	\$ 15,134,961,178

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

FROM: Gary L. Harbin, CPA  
Executive Secretary

DATE: March 19, 2018

SUBJECT: Report of the Investment Committee

1. Investment Committee Meeting and Actions: The investments approved at the February 22, 2018, Investment Committee meeting are as follows: a \$50 million commitment from the Retirement Annuity Trust Fund and a \$10 million commitment from the Medical Insurance Trust Fund to Carlyle European Partners V LP; a \$50 million commitment from the Retirement Annuity Trust Fund to JPM Global Transport Income fund; a \$30 million commitment from the Retirement Annuity Trust Fund, a \$5 million commitment from the Medical Insurance Trust Fund and a \$1 million commitment from the Life Insurance Trust Fund to the Marathon Aviation Finance Fund LP; a \$50 million commitment from the Retirement Annuity Trust Fund, a \$10 million commitment from the Medical Insurance Trust Fund and a \$1 million commitment from the Life Insurance Trust Fund to the TA Realty Core Property fund. Additionally, outside managers Baillie Gifford and Landmark Partners reported to the committee on their respective portfolios.

2. Purchases and Disposals: During the quarter ended December 31, 2017, there were 1,883 purchases amounting to \$2,724,509,463.31 and 2,357 disposals amounting to \$2,590,271,970.81. The disposals consisted of 1,965 sales, 333 principal payments and 59 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, the System's invested securities had a book value of \$14,821,400,683.84 and a market value of \$19,879,133,236.61.

3. Staff's comments on economic and market conditions: Price action across global financial markets continued to be driven by expectations of ongoing economic growth and generally accommodative central bank policies, with equity markets trading at elevated valuation levels and government bond yields continuing to trade within recent ranges. The S&P 500 Index returned 6.6% during the fourth quarter, while the MSCI ACW Ex US Index rose 5.0%. For the year, the S&P 500 Index rose 21.8%, but was outpaced by the 27.2% gain of the MSCI ACW Ex US Index.

The nominal Treasury curve continued to flatten over the quarter. Market participants suggest that recent and expected monetary policy actions, as well as expectations for increased Treasury issuance amidst fiscal stimulus policies, are driving short-maturity and mid-maturity yields higher. Comparatively, longer-dated yields proved stable, and reportedly continue to be heavily influenced by relatively modest expectations for sustained US economic growth and building inflation expectations.

The Federal Open Market Committee (FOMC) increased policy rates during its December meeting, setting the new target range for the Federal Funds rate at 1.25% to 1.50%. This increase was the third in 2017, with the FOMC again highlighting an improving economy and healthy labor market as the chief rationale behind their decision to raise rates. The FOMC also began to unwind positions held in the System Open Market Account in October, as announced at the September FOMC meeting.

Finally, the US dollar continued to depreciate over the quarter, weakening by 1.0% against major currencies amidst continued economic improvements across developed international and emerging markets. The depreciation over the quarter contributed to a total dollar depreciation of nearly 10% for the year.

US equity markets delivered strong broad-based performance during the fourth quarter, with the S&P 500 Index posting its ninth consecutive positive calendar year dating back to 2009. US growth stocks led value stocks in the quarter, and large cap stocks similarly outpaced small cap stocks during this period. This quarter's trends were also representative of market performance as a whole during 2017, with the S&P 500 Growth Index outperforming its value counterpart by 12.1% for the year, and the S&P 500 Index outperforming its small cap counterpart by 8.6% over the same period. Despite this bifurcation, all market capitalizations and styles posted positive results for 2017.

Strong and narrow performance in technology drove growth equity index performance in large cap. Information technology broadly led all sectors during both Q4 and 2017, as the S&P 500 Information Technology Index returned 9.0% and 38.8% for the quarter and year, respectively. A small subset of companies particularly dominated broad market returns in 2017, with FAANG (Facebook, Amazon, Apple, Netflix, and Google), averaging returns of nearly 50% during 2017. As a result, many active managers with light or absent exposure to this lineup of companies experienced difficulty in keeping pace with their respective benchmarks.

Developed international markets had a strong quarter, and though they lagged the US market, they outpaced the domestic market for 2017. Emerging markets outperformed domestic and developed international markets for both the quarter and year. Tencent and Alibaba make up about one fifth of the MSCI Emerging Markets Growth Index, and consequently, relative overweight or underweight positions to these stocks strongly influenced the performance of many active managers during 2017.

The Bloomberg Barclays US Government/Credit Index returned 0.5% for the quarter and ended the year with a return of 4.0%. The flattening yield curve during the quarter and year detracted from the performance of short duration bonds, while contributing to the performance of long duration bonds. Investment grade and high yield credit spreads started the year below long-term averages and continued to grind tighter.

The core private real estate index, NCREIF-ODCE returned 2.1% (preliminary) in Q4, comprised of 1.1% income and 1.0% appreciation. This quarter caps off a year of substantial normalization of returns, reinforcing investor expectations of lower returns going forward as we enter the later stages of the recovery. Real estate valuations remain healthy and are supported by

continued strength in the overall economy with increases from personal consumption, business investment and state and local government spending.

4. Performance: Investment performance was positive for the quarter ending December 31, 2017. The Retirement Annuity Trust Fund's total assets returned 4.14% for the quarter, in line with the Policy Index which returned 4.34%. The System's domestic stocks gained 6.44%, as the S&P 1500 Stock index returned 6.53% for the quarter. The System's international stocks were up 4.16%, underperforming the MSCI All Country ex US index which had a return of 5.06% for the quarter. Alternatives and additional categories were positive contributors as Private Equity gained 5.48% while additional categories returned .75%. The System's bonds returned .64%, outperforming the Bloomberg Barclays Gov/Credit Bond index which returned .49% for the quarter. Real Estate provided strong returns for the quarter gaining over 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 December 31, 2017**

	Market Value	Last Qtr	FYTD	1-Year	3-Year*	5-Year*	10-Year*	20-Year*
<b>TOTAL PLAN</b>	\$ 19,879,133,236.61	4.14	8.86	18.66	8.58	10.56	7.12	6.68
<i>Policy Benchmark</i>		4.34	8.45	17.17	8.58	10.11	-	-
<b>Total Equity</b>	\$ 12,699,335,109.76	5.62	11.83	25.59	10.46	13.87	7.55	7.04
<b>Domestic Equity</b>	\$ 8,180,707,392.82	6.44	11.20	22.21	10.73	15.90	8.87	7.64
<i>S&amp;P 1500 Index</i>		6.53	11.26	21.13	11.41	15.74	8.69	-
<b>All-Cap Equities</b>	\$ 252,834,217.01	5.09	8.54	16.06	-	-	-	-
<i>Russell 3000</i>		6.34	11.20	21.13	-	-	-	-
<b>Large-Cap Equities</b>	\$ 6,745,575,769.88	6.62	11.49	23.12	10.60	15.87	8.69	-
<i>S&amp;P 500 Index</i>		6.64	11.42	21.83	11.41	15.79	8.50	7.18
<b>Mid-Cap Equities</b>	\$ 716,765,526.72	7.02	10.60	20.96	12.18	16.36	9.56	-
<i>S&amp;P 400 Index</i>		6.25	9.68	16.24	11.14	15.01	9.97	-
<b>Small-Cap Equities</b>	\$ 465,531,879.21	3.64	9.47	14.70	11.90	16.38	10.84	-
<i>S&amp;P 600 Index</i>		3.96	10.16	13.23	12.00	15.99	10.43	-
<b>International Equity</b>	\$ 4,518,627,716.94	4.16	13.08	32.95	9.75	8.83	3.51	-
<i>MSCI AC World Ex US</i>		5.06	11.63	27.77	8.33	7.28	2.31	-
<b>Fixed Income</b>	\$ 3,012,610,866.01	0.64	1.51	4.07	2.90	2.60	5.01	5.58
<i>Barclay's Govt./Credit Index</i>		0.49	1.30	4.00	2.38	2.13	4.08	5.05
<b>Real Estate</b>								
<b>Inhouse Triple Net Lease</b>	\$ 411,440,000.99	1.83	8.78	13.14	10.49	9.19	8.79	8.98
<i>CPI plus 2%</i>		1.14	2.72	4.16	3.65	3.44	3.64	4.15
<b>Core Real Estate:</b>	\$ 375,917,451.90	2.22	3.79	7.82	11.11	11.85	-	-
<i>NCREIF ODCE (VW)</i>		2.07	3.97	7.62	10.42	11.53	-	-
<b>Non-Core Real Estate:</b>	\$ 314,941,377.15	5.77	9.12	14.50	16.93	16.47	-	-
<i>NCREIF Property Index</i>		1.80	3.52	6.96	9.38	10.19	-	-
<b>Alternative Investments</b>								
<b>Private Equity</b>	\$ 1,050,436,534.17	5.48	12.84	21.54	10.50	13.18	8.75	-
<b>Mature Private Equity</b>	\$ 353,746,507.41	4.68	12.43	18.59	8.51	10.64	-	-
<i>S&amp;P 500 plus 3%</i>		7.44	13.08	25.49	14.75	19.26	-	-
<b>Private Equity &lt; 5 Years</b>	\$ 696,690,026.76	6.70	14.03	24.50	12.11	14.52	-	-
<b>Timberland:</b>	\$ 206,870,163.24	0.40	2.02	6.92	6.61	5.82	-	-
<i>NCREIF Timberland Index</i>		1.52	2.13	3.63	3.73	6.22	-	-
<b>Additional Categories:</b>	\$ 1,433,353,140.77	0.75	2.37	6.36	4.30	5.14	-	-
<i>B of A Merrill Lynch High Yield Master II</i>		0.41	2.45	7.48	6.39	5.80	-	-
<b>Cash (Unallocated)</b>	\$ 374,228,592.62	0.28	0.56	0.90	0.47	0.31	0.47	2.26
<i>90 Day T-Bill</i>		0.28	0.55	0.86	0.38	0.25	0.38	1.94

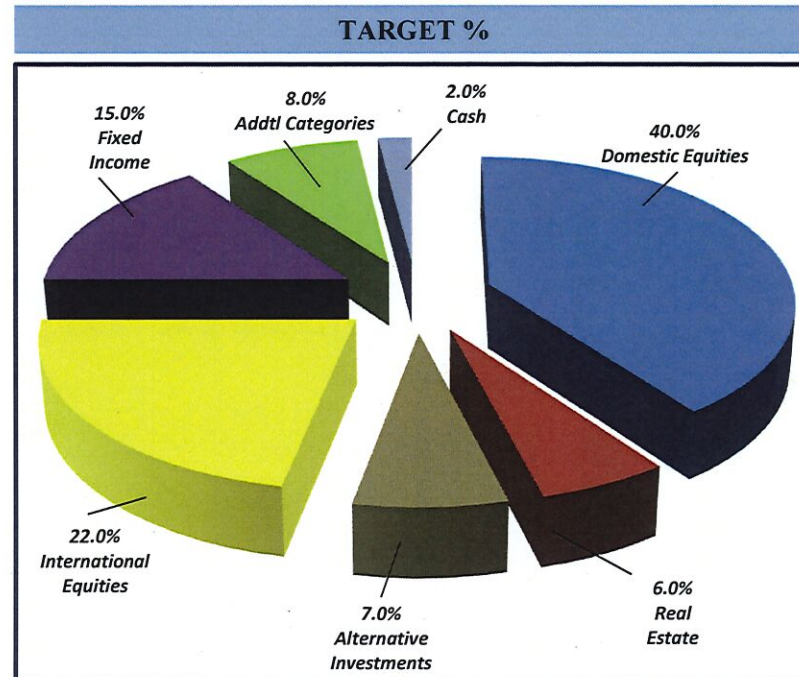
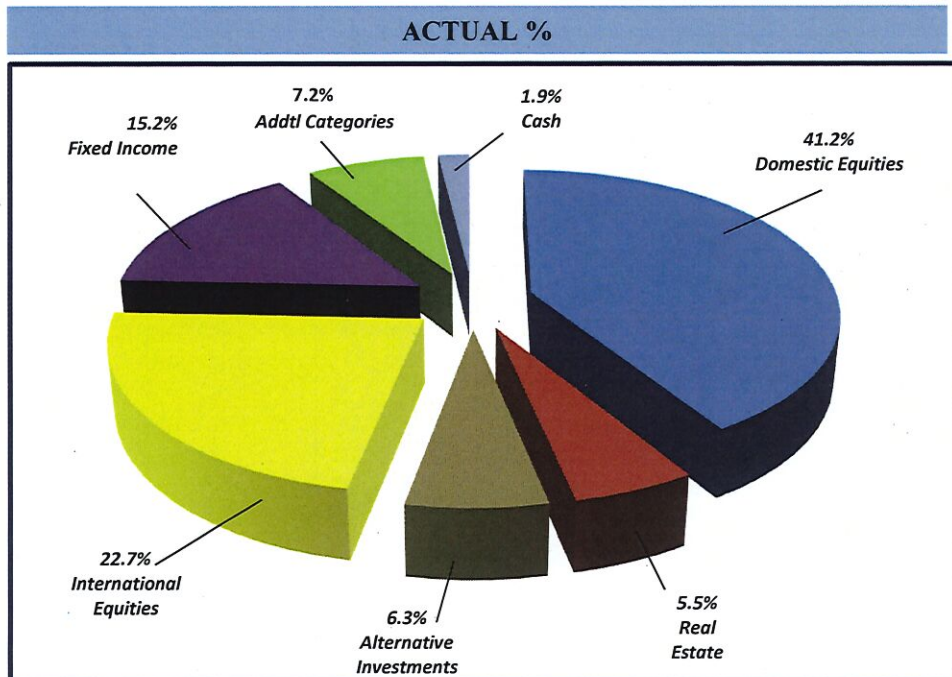
**Total Plan Gross Return for 30-year period\* 8.54**

\*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 December 31, 2017*

(\$ in millions)	\$'s	Actual %	Target %	Strategic Ranges
Domestic Equities	\$8,180.7	41.2%	40.0%	34.0 - 48.0%
Real Estate	1,102.3	5.5%	6.0%	4.0 - 8.0%
Alternative Inv.	1,257.3	6.3%	7.0%	4.0 - 10.0%
International Equities	4,518.6	22.7%	22.0%	18.0 - 25.0%
Fixed Income	3,012.6	15.2%	15.0%	12.0 - 19.0%
Addtl Categories	1,433.4	7.2%	8.0%	5.0 - 11.0%
Cash	\$374.2	1.9%	2.0%	1.0 - 3.0%
<b>Total</b>	<b><u>\$19,879.1</u></b>	<b><u>100.0%</u></b>	<b><u>100.0%</u></b>	



*Teachers' Retirement System of the State of Kentucky*  
*Health Insurance Trust*  
*Quarterly Investment Performance*  
*Gross Returns*  
*For the Period Ended December 31, 2017*

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>20-Year*</u>
<b><u>TOTAL PLAN</u></b>	\$ 983,085,186.36	3.88	7.79	16.58	7.84	8.09	-	-
<i>Policy Benchmark</i>		3.88	8.09	17.30	-	-	-	-
<b><u>Total Equity</u></b>	\$ 567,969,123.23	5.76	11.34	23.73	9.73	11.35	-	-
<b><u>All Cap Equities</u></b>	\$ 34,456,025.34	5.07	8.52	16.00	-	-	-	-
<i>Russell 3000</i>		6.34	11.20	21.13	-	-	-	-
<b><u>Global Equities</u></b>	\$ 533,513,097.89	5.80	11.54	24.33	9.95	11.48	-	-
<i>MSCI AC World IMI (Net)</i>		5.72	11.34	23.95	9.52	11.00	-	-
<b><u>Fixed Income</u></b>	\$ 93,348,423.18	0.31	0.83	2.57	2.16	1.50	-	-
<i>Barclays Government Credit</i>		0.49	1.30	4.00	2.38	2.13	-	-
<b><u>Core Real Estate</u></b>	\$ 21,921,466.12	2.24	3.49	7.23	-	-	-	-
<i>NCREIF ODCE (VW)</i>		2.07	3.97	7.62	-	-	-	-
<b><u>Non-Core Real Estate</u></b>	\$ 33,504,746.61	5.99	8.94	14.58	19.18	-	-	-
<i>NCREIF Property Index</i>		1.80	3.52	6.96	9.38	-	-	-
<b><u>Private Equity</u></b>	\$ 69,498,397.73	4.19	10.98	21.86	15.80	18.15	-	-
<b><u>Mature Private Equity</u></b>	\$ 4,102,771.00	3.65	7.63	12.55	14.52	13.65	-	-
<i>S&amp;P 500 plus 3%</i>		7.44	13.08	25.49	14.75	19.26	-	-
<b><u>Private Equity &lt; 5 Years</u></b>	\$ 65,395,626.73	4.63	11.67	22.79	16.10	18.33	-	-
<b><u>Additional Categories:</u></b>	\$ 176,665,983.54	0.38	2.04	6.15	4.67	4.65	-	-
<i>B of A Merrill Lynch High Yield Master II</i>		0.41	2.45	7.48	6.39	5.80	-	-
<b><u>Cash (Unallocated)</u></b>	\$ 20,177,045.95	0.28	0.54	0.87	0.45	0.30	-	-
<i>90 Day T-Bill</i>		0.28	0.55	0.86	0.38	0.25	-	-

\*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

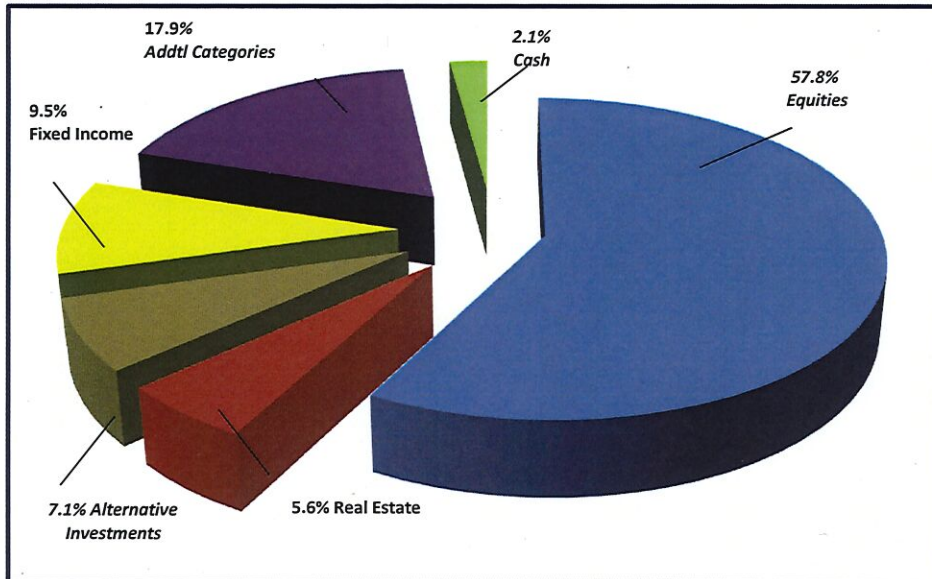
## Insurance Trust Fund

### Quarterly Investment Update

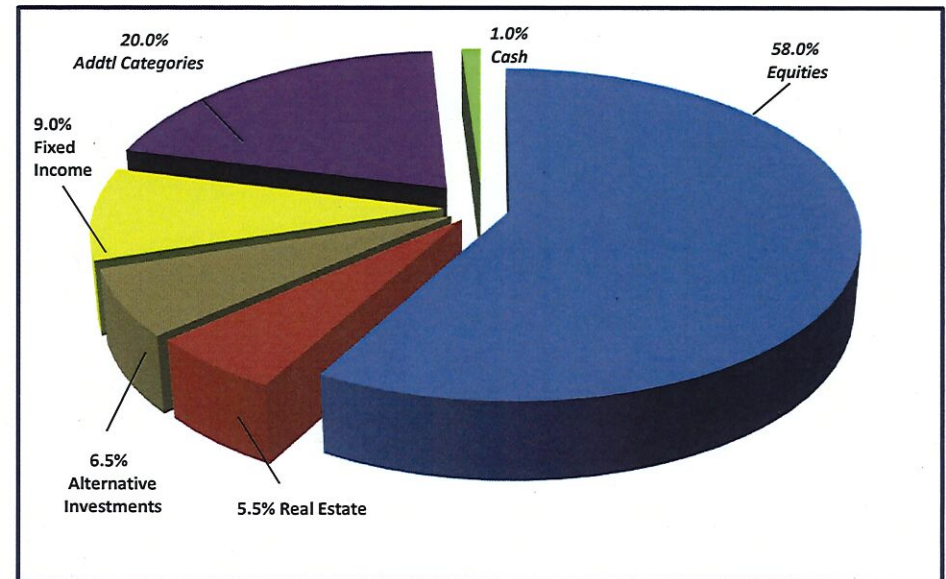
For the period ended December 31, 2017

(\$ in millions)	\$'s	Actual %	Target %	Strategic Ranges
Equities	\$567,969.1	57.8%	58.0%	51.0 - 64.0%
Real Estate	55,426.2	5.6%	5.5%	3.0 - 10.0%
Alternative Inv.	69,498.4	7.1%	6.5%	3.0 - 11.0%
Fixed Income	93,348.4	9.5%	9.0%	6.0 - 12.0%
Addtl Categories	176,666.0	17.9%	20.0%	16.0 - 25.0%
Cash	\$20,177.1	2.1%	1.0%	0.0 - 4.0%
<b>Total</b>	<b>\$983,085.2</b>	<b>100.0%</b>	<b>100.0%</b>	

**ACTUAL %**



**TARGET %**



TOTAL BV INVESTED AT 9/30/17 \$ 14,687,163,191.34

October Activity

Purchases	754,904,821.74	
Disposals	(870,549,664.10)	
Paydowns	(5,655,838.52)	
Redemptions	(25,027,899.81)	
Short-Term Pool Net	<u>378,333,522.06</u>	
		232,004,941.37

November Activity

Purchases	470,896,399.41	
Disposals	(395,574,302.43)	
Paydowns	(3,291,025.43)	
Redemptions	(18,572,008.99)	
Short-Term Pool Net	<u>(139,150,636.86)</u>	
		(85,691,574.30)

December Activity

Purchases	422,067,779.51	
Disposals	(340,078,276.07)	
Paydowns	(2,249,893.51)	
Redemptions	(26,509,160.62)	
Short-Term Pool Net	<u>(65,306,323.88)</u>	
		(12,075,874.57)

TOTAL BV INVESTED AT 12/31/17 \$ 14,821,400,683.84

\* 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, (\$2,636,818.88) 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	608,580,024
- Pending Payable	<u>(2,636,819)</u>
Net	<u>605,943,205</u>

## INVESTMENT ACTIVITY

### October 1, 2017 -- December 31, 2017

**Total Book Value Invested @ 10/1/17** \$ 14,687,163,191.34

**Purchases:**

0	Cash Equivalents	\$ 1,071,681,451.65
121	Fixed Income Securities	654,432,413.37
1529	Equity Securities	653,759,299.54
28	Real Estate	51,594,221.31
81	Alternative Investments	132,788,119.07
124	Additional Categories	160,253,958.37
1883	Total Purchases	\$ 2,724,509,463.31

**Disposals:**

1	Cash Equivalents	\$ 899,632,916.33
103	Fixed Income Securities	595,454,399.90
333	Principal Paydowns	11,196,757.46
40	Redemptions / Maturities	63,741,231.62
1566	Equity Securities	730,500,196.37
34	Real Estate	38,132,759.69
124	Alternative Investments	77,893,708.80
137	Additional Categories	164,221,177.84
0	Additional Principal Paydowns	-
19	Additional Redemptions / Maturities	9,498,822.80
2357	Total Disposals	\$ 2,590,271,970.81

**Total Book Value Invested @ 12/31/17** \$ 14,821,400,683.84

**Total Par Value Invested @ 12/31/17** \$ 14,809,848,767.04

**Total Market Value Invested @ 12/31/17** \$ 19,879,133,236.61

\* 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, (\$2,636,818.88) 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	608,580,024
- Pending Payable	(2,636,819)
Net	<u>605,943,205</u>

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

FROM: Gary L. Harbin, CPA  
Executive Secretary

DATE: March 19, 2018

SUBJECT: Legislative Report

During the meeting, staff will report on the 2018 Regular Session of the Kentucky General Assembly.

Recommendation: This report is provided for informational purposes.

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

FROM: Gary L. Harbin, CPA  
Executive Secretary

DATE: March 19, 2018

SUBJECT: Executive Secretary's Observations and Comments

1. Statement of Financial Disclosure Due Sunday, April 15, 2018: Each member of the Board of Trustees must file a Statement of Financial Disclosure with the Executive Branch Ethics Commission by Sunday, April 15, 2018.

2. Nominating Committee for Board of Trustees Positions: The Nominating Committee, consisting of representatives from the 12 KEA districts and one representative from KRTA, met at TRS on Saturday, February 24, 2018. The committee met to nominate candidates for the active teacher trustee and the lay member trustee positions on the Board of Trustees for the terms expiring on June 30, 2018.

Dr. Lynn Patterson, Murray, Kentucky, was nominated for the first position on the ballot for the active teacher trustee position. Dr. Nicola Mason, Richmond, Kentucky, was nominated for the second position on the ballot. Mary Adams was nominated as the alternate.

Current trustee Hollis Gritton was nominated for the first position on the ballot for the lay member trustee position. Wendell Lyons, Louisville, Kentucky, will fill the second position on the ballot.

Ballots will be mailed to all active and retired members of TRS during the first week of May 2018. Ballots will be returned to the Commissioner of Education where they will be tallied. The results of the election will be announced at the June 18, 2018, regular quarterly meeting of the board.

3. KEA Delegate Assembly: TRS staff will be available at the annual KEA Delegate Assembly to provide retirement information to persons attending the conference. TRS employees are looking forward to being available to assist our members at the conference on April 4-6, 2018. TRS has attended this meeting for the last several years, and the outreach efforts have been a success.

4. Junita Losey Scholarship Fund Update: Scholarship checks in the amount of \$2,000 have been sent to each of the eight public universities in Kentucky. TRS is expecting responses from the universities that the scholarship money has been received. Recipients may apply scholarship funds toward tuition, books or fees.

In addition, the Campbell County School System selects a student in May, who intends to enroll in one of Kentucky's public universities and major in education, to receive the Junita Losey Scholarship. The student must enroll in a Kentucky public university in the fall and then notify TRS regarding verification of their enrollment. At that time, a check in the amount of \$1,000 is

sent to the university that the student selected to attend. Upon completing their first university semester, the student is to inform TRS that they are still in compliance with the scholarship criteria, and TRS will then distribute another \$1,000 check to the university the student is attending.

5. Executive Secretary's Meetings: Staff has had meetings with several persons and groups recently. The board will receive reports concerning the following meetings:

January 9, 2018	Meeting with public relations consultant
January 11, 2018	Meeting with external auditor
January 23, 2018	Attended Public Sector Health Care Roundtable Board of Directors meeting
February 7, 2018	Meeting with potential investment manager
February 13, 2018	Meeting with public relations consultant
February 14, 2018	Meeting with public relations consultant
February 20, 2018	Conference call with investment experts
March 7, 2018	Meeting with real estate managers

6. Pharmacogenetics Pilot Project: In June 2017, the board approved contracting with Coriell Life Sciences to undertake a pilot pharmacogenomics project. The pilot is being conducted with a group of volunteers from the TRS Medicare Eligible Health Plan. Staff will be available at the meeting to update the board on recent activities in the program.

7. Next Meeting: The next regular quarterly meeting of the Board of Trustees will be on Monday, June 18, 2018.