

*Teachers' Retirement System of the State of Kentucky*  
*Retirement Annuity Trust*  
*Quarterly Investment Performance*  
*Net of Management Fee Returns*  
*For the Period Ended March 31, 2019*

FINAL

	<u>Market Value</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1-Year</u>	<u>3-Year*</u>	<u>5-Year*</u>	<u>10-Year*</u>	<u>20-Year*</u>
<b>TOTAL PLAN</b>	\$ 19,674,608,730.36	9.28	2.15	3.43	9.54	6.93	10.77	5.91
<i>Policy Benchmark</i>		9.24	3.88	5.26	9.79	7.16	11.03	-
<b><u>Total Equity</u></b>	\$ 12,315,648,340.67	14.13	0.00	1.55	11.79	7.92	-	-
<b><u>Domestic Equity</u></b>	\$ 7,904,622,404.02	14.36	2.27	5.63	12.88	9.77	-	-
<i>S&amp;P 1500 Index</i>		13.64	4.95	8.79	13.34	10.64	-	-
<b><u>All-Cap Equities</u></b>	\$ 326,140,332.87	12.37	4.02	6.36	-	-	-	-
<i>Russell 3000</i>		14.04	4.70	8.77	-	-	-	-
Fort Washington Focused Equity	\$ 326,140,332.87	12.37	4.02	6.36	-	-	-	-
<b><u>Large-Cap Equities</u></b>	\$ 6,500,915,229.24	14.19	2.90	5.96	12.93	9.90	-	-
<i>S&amp;P 500 Index</i>		13.65	5.86	9.50	13.51	10.91	-	-
Todd Asset Large Cap Intrinsic Value (Stocks)	\$ 1,174,525,807.17	11.76	-2.52	-3.16	11.75	7.85	-	-
S&P 500 Stock Index Fund	\$ 2,442,247,548.06	13.62	6.02	9.64	13.78	11.17	-	-
UBS Value Oriented (Global)	\$ 882,260,944.45	18.66	0.48	4.06	12.91	9.15	-	-
State Street US Premier Growth Equity	\$ 666,566,094.57	14.41	5.74	10.65	15.39	12.06	-	-
Todd Asset Intrinsic Value Opportunity (Alpha)	\$ 451,606,972.92	12.39	-0.86	3.70	5.37	3.76	-	-
UBS Alpha Equity	\$ 267,812,185.78	18.58	1.03	4.14	12.94	9.64	-	-
Wellington Large Cap Equity	\$ 615,895,676.29	14.66	5.90	10.09	14.51	11.82	-	-
<b><u>Mid-Cap Equities</u></b>	\$ 668,937,149.26	17.28	1.14	5.21	13.55	9.77	-	-
<i>S&amp;P 400 Index</i>		14.49	-1.63	2.59	11.24	8.29	-	-
S&P 400 Stock Index Fund	\$ 317,010,675.53	14.19	-1.74	2.42	11.33	8.34	-	-
Wellington Mid Cap Equity	\$ 351,926,473.73	20.22	3.93	7.88	15.86	11.27	-	-
<b><u>Small-Cap Equities</u></b>	\$ 408,629,692.65	14.25	-5.53	1.21	12.30	8.30	-	-
<i>S&amp;P 600 Index</i>		11.61	-6.63	1.57	12.55	8.45	-	-
Wellington Small Cap Equity	\$ 185,670,004.93	17.81	-4.09	1.72	12.63	8.38	-	-
S&P 600 Stock Index Fund	\$ 222,959,687.72	11.46	-6.72	0.75	12.04	8.24	-	-

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<b><u>International Equity</u></b>	\$ 4,411,025,936.65	13.70	-3.99	-5.36	9.80	3.96	-	-
<i>MSCI AC World Ex US</i>		10.44	-1.38	-3.74	8.61	3.05	-	-
Todd Asset International Intrinsic Value	\$ 808,593,716.59	13.33	-5.25	-7.44	5.71	1.72	-	-
Baillie Gifford EAFE Fund	\$ 1,127,658,925.86	19.51	-6.37	-6.49	14.66	5.84	-	-
UBS All Country World Ex US Equity	\$ 938,622,860.21	11.28	-2.41	-4.91	10.32	3.93	-	-
Barings All Country World Ex US	\$ 673,644,059.00	12.51	-2.08	-1.33	9.76	5.39	-	-
Black Rock MSCI ACWI Ex US IMI Index	\$ 776,405,627.17	10.35	-2.29	-4.54	8.25	3.10	-	-
Todd Asset International Intrinsic Value Opportunity	\$ 86,100,747.82	10.89	-5.69	-12.17	3.38	-	-	-
<b><u>Fixed Income</u></b>	\$ 3,130,752,453.12	3.26	5.02	4.93	2.62	3.21	-	-
<i>Barclay's Govt./Credit Index</i>		3.26	4.83	4.48	2.12	2.78	-	-
<b><u>Intermediate</u></b>								
<i>Barclay's Intermediate Govt/Credit Index</i>		2.32	4.23	4.24	1.66	2.12	-	-
Intermediate Bond Fund	\$ 548,080,947.81	2.30	4.07	4.17	1.71	2.10	-	-
<b><u>Broad</u></b>								
<i>Barclay's Govt./Credit Index</i>		3.26	4.83	4.48	2.12	2.78	-	-
Fort Washington Core Fixed Income	\$ 528,766,733.96	4.39	5.08	4.74	2.91	3.23	-	-
Broad Market Bond Fund	\$ 682,295,332.72	2.88	5.11	5.07	2.71	3.28	-	-
Galliard Capital Management Core Fixed Income	\$ 502,047,320.64	3.51	5.33	5.11	2.76	3.66	-	-
Internal Bond Fund	\$ 172,538,934.16	2.86	5.36	5.42	3.23	3.89	-	-
Tax Shelter Fund	\$ 312,757.65	0.57	1.57	1.98	1.11	0.71	-	-
<b><u>Long</u></b>								
<i>Hybrid Index</i>								
Long Term Bond Fund	\$ 696,710,426.18	3.53	5.39	5.27	3.06	4.10	-	-

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<b><u>Real Estate:</u></b>								
<b>In House Real Estate Equity</b>	\$ 424,559,554.26	1.75	6.22	8.15	10.82	9.99	-	-
<i>CPI plus 2%</i>		1.06	2.71	3.90	4.25	3.52	-	-
<b><u>Core Real Estate:</u></b>	\$ 466,347,036.70	1.68	6.24	8.26	7.56	9.96	-	-
<i>NCREIF ODCE (VW)</i>		1.42	5.36	7.52	7.97	10.18	-	-
Prudential PRISA Fund	\$ 355,243,291.91	1.64	5.77	7.91	7.52	9.94	-	-
Carlyle Property Investors	\$ 57,245,347.12	1.80	6.17	8.35	-	-	-	-
TA Realty Core Property Fund	\$ 53,858,397.67	1.80	12.32	12.11	-	-	-	-
<b><u>Non-Core Real Estate:</u></b>	\$ 324,747,299.09	1.21	6.33	8.13	9.85	13.50	-	-
<i>NCREIF Property Index</i>		1.80	4.93	6.83	7.07	9.13	-	-
Carlyle Realty Partners VI	\$ 6,786,826.00	-3.37	-2.98	-2.04	2.72	12.63	-	-
Blackstone Partners VII	\$ 31,834,426.22	-3.30	-0.46	2.24	8.40	12.85	-	-
Rockwood Capital Real Estate Partners IX	\$ 17,668,740.07	0.80	3.41	0.81	11.57	14.69	-	-
The Realty Associates Fund X	\$ 25,766,239.00	2.91	10.36	12.41	12.48	13.24	-	-
Angelo Gordon Net Lease Realty Fund III	\$ 48,215,455.00	2.71	6.87	8.31	7.77	7.11	-	-
Carlyle Realty Partners VII	\$ 30,495,155.00	2.76	13.89	18.77	14.37	-	-	-
Landmark Real Estate Partners VII	\$ 27,397,186.00	0.58	2.99	4.23	7.44	-	-	-
Blackstone Partners VIII	\$ 40,392,523.19	2.85	9.89	13.12	16.57	-	-	-
The Realty Associates Fund XI	\$ 52,021,241.00	2.54	8.56	10.10	-	-	-	-
Rockwood Capital Real Estate Partners Fund X	\$ 29,967,461.61	-0.45	7.98	8.43	-	-	-	-
Landmark Real Estate Partners VIII	\$ 10,104,863.00	2.26	-9.41	-5.45	-	-	-	-
Carlyle Realty Partners VIII	\$ 4,097,183.00	-5.31	-35.98	-	-	-	-	-

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<b><u>Alternative Investments</u></b>								
<b><u>Private Equity</u></b>	\$ 1,168,962,152.35	-1.45	6.68	9.00	11.58	10.94	-	-
<b><u>Mature Private Equity</u></b>	\$ 371,792,180.39	-4.22	5.08	7.13	7.91	9.16	-	-
<i>S&amp;P 500 plus 3%</i>		<i>14.49</i>	<i>8.23</i>	<i>12.78</i>	<i>16.91</i>	<i>14.24</i>	-	-
KKR & Co Fund 2006	\$ 5,757,489.00	-22.42	4.66	6.62	8.29	9.75	-	-
Chrysalis Ventures Fund III	\$ 9,092,614.00	-26.78	-34.57	-37.27	-20.12	-11.54	-	-
Fort Washington Fund V	\$ 6,470,709.00	2.96	10.17	11.06	8.02	10.41	-	-
KKR European III	\$ 7,221,114.00	-1.71	23.58	33.74	23.17	20.39	-	-
Fort Washington Fund VI	\$ 17,971,119.00	8.34	21.48	25.76	14.28	18.71	-	-
Riverstone/Carlyle E&P Fund IV	\$ 19,704,150.00	-18.94	-12.85	-9.64	-1.13	-8.34	-	-
Alinda Infrastructure Fund II	\$ 22,806,529.00	-6.20	-8.95	-14.03	-7.99	1.72	-	-
Capital South Partners III	\$ 818,333.00	0.00	-9.27	-3.39	0.47	3.42	-	-
Landmark Equity Partners XIV	\$ 5,631,357.00	3.88	5.44	3.48	0.35	3.16	-	-
Lexington Capital Partners VII	\$ 8,610,944.00	0.00	4.60	12.04	8.33	12.30	-	-
Stepstone Pioneer Capital III	\$ 13,447,672.00	0.00	12.16	24.76	10.38	14.11	-	-
Oaktree Mezzanine Fund III	\$ 1,070,929.00	6.80	11.56	51.80	23.58	19.27	-	-
JP Morgan Maritime Fund	\$ 33,573,750.91	1.51	4.22	5.51	-8.51	-6.09	-	-
Audax Mezzanine Fund III	\$ 4,915,973.25	0.00	3.89	-1.22	8.38	9.47	-	-
Hellman & Friedman VII	\$ 65,454,996.00	4.17	17.98	26.97	36.77	32.03	-	-
Oaktree European Principal Fund III	\$ 18,060,356.00	-3.04	1.29	5.21	12.61	11.03	-	-
NGP Natural Resources X	\$ 18,304,907.00	-21.66	-14.86	-16.00	7.77	1.50	-	-
Riverstone E&P Fund V	\$ 18,299,099.00	-13.90	-4.62	-5.95	5.78	0.16	-	-
APAX VIII	\$ 34,707,269.00	-0.87	9.74	12.14	12.06	14.94	-	-
Actis Global Fund IV	\$ 44,961,658.00	-5.33	14.07	8.68	3.89	13.33	-	-
Audax Private Equity Fund IV	\$ 14,911,212.23	0.00	6.15	8.28	11.80	15.36	-	-

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<b>Private Equity &lt; 5 Years</b>	\$ 797,169,971.96	0.16	7.72	10.32	14.42	12.03	-	-
Landmark Equity Partners XV	\$ 11,733,253.00	0.54	11.14	17.24	14.94	-	-	-
Fort Washington Fund VIII	\$ 25,288,272.00	4.38	10.76	13.98	13.30	-	-	-
Carlyle Global Financial Service Partners II	\$ 26,390,592.00	0.47	4.99	9.23	13.68	-	-	-
Public Pension Capital LLC	\$ 83,978,856.93	6.56	29.76	34.77	17.49	-	-	-
NGP Natural Resources XI	\$ 47,639,543.00	-8.11	-0.06	1.69	16.15	-	-	-
Gavea Investments Fund V	\$ 9,232,985.15	23.20	2.65	2.77	19.72	-	-	-
Oaktree Mezzanine Fund IV	\$ 17,824,624.00	1.68	6.15	7.85	7.86	-	-	-
Lexington Capital Partners VIII	\$ 27,555,841.96	0.00	5.75	23.42	17.30	-	-	-
KKR European Fund IV	\$ 47,369,002.00	1.27	6.89	14.65	11.73	-	-	-
IFM Global Infrastructure	\$ 128,136,525.84	5.07	12.64	15.66	15.33	-	-	-
Carlyle Europe Partners IV	\$ 52,881,826.00	-2.65	-3.64	6.42	9.24	-	-	-
Audax Private Equity Fund V	\$ 18,990,181.95	0.00	0.35	0.05	13.59	-	-	-
Fort Washington Fund IX	\$ 13,066,097.00	-0.37	10.10	11.71	-	-	-	-
Fort Washington Fund IX-K	\$ 14,743,220.00	-0.86	7.01	4.52	-	-	-	-
Hellman & Friedman Fund VIII	\$ 41,951,317.00	-1.43	2.96	5.27	-	-	-	-
Riverstone E&P Fund VI	\$ 34,875,348.00	-16.36	-13.99	-13.46	-	-	-	-
Audax Mezzanine Fund IV	\$ 9,651,162.35	0.00	5.19	5.20	-	-	-	-
JP Morgan Maritime Fund II	\$ 14,424,166.48	0.18	6.79	13.87	-	-	-	-
APAX IX	\$ 26,471,339.00	-1.83	13.30	13.58	-	-	-	-
Oaktree European Principal Fund IV	\$ 36,948,031.00	0.96	15.12	-3.76	-	-	-	-
KKR Americas Fund XII	\$ 19,388,894.00	-4.17	6.38	4.94	-	-	-	-
NGP Natural Resources XII	\$ 14,788,731.00	-3.30	8.06	3.36	-	-	-	-
Carlyle Global Financial Service Partners III	\$ 7,272,346.00	2.17	6.56	-	-	-	-	-
JP Morgan Global Transport Income Fund	\$ 49,082,571.08	0.00	0.33	-	-	-	-	-
APAX Digital Fund	\$ 6,335,544.22	-12.78	-	-	-	-	-	-
Landmark Equity Partners XVI	\$ 3,834,672.00	56.82	-	-	-	-	-	-
Carlyle Asia V	\$ 3,440,899.00	-8.15	-	-	-	-	-	-
Carlyle Europe V	\$ 3,874,130.00	-	-	-	-	-	-	-

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<b><u>Timberland:</u></b>	\$ 183,355,497.96	1.34	2.75	4.18	0.63	3.50	-	-
<i>NCREIF Timberland Index</i>		<i>0.11</i>	<i>1.89</i>	<i>2.38</i>	<i>3.27</i>	<i>4.63</i>	-	-
Hancock Bluegrass LLC - Oregon	\$ 29,911,400.00	0.00	1.31	7.79	8.86	6.88	-	-
Molpus Lake Superior Timberlands (Michigan)	\$ 91,361,498.96	-0.05	1.21	1.16	-2.44	0.22	-	-
Molpus Lake Superior Timberlands (Hiwassee)	\$ 8,412,595.69	8.11	8.50	8.75	-0.42	1.48	-	-
Molpus Seven States	\$ 53,670,003.31	3.55	5.47	6.56	1.69	8.04	-	-
<b><u>Additional Categories:</u></b>	\$ 1,425,067,101.73	3.63	4.47	5.04	6.71	3.60	-	-
<i>B of A Merrill Lynch High Yield Master II</i>		<i>7.40</i>	<i>4.89</i>	<i>5.93</i>	<i>8.69</i>	<i>4.70</i>	-	-
<b><u>Evergreen Funds:</u></b>								
Fort Washington High Yield Bond Fund	\$ 320,555,694.07	7.96	5.86	6.53	7.73	4.10	-	-
Marathon/TRS Credit Fund	\$ 356,640,438.00	-1.11	1.02	0.34	7.44	1.21	-	-
Shenkman Capital Management	\$ 256,680,531.88	4.28	3.65	4.27	5.54	3.28	-	-
Barings Capital European Loan Fund	\$ 100,810,000.00	3.43	4.69	5.04	6.31	-	-	-
Columbia High Yield Bond Fund	\$ 174,954,067.15	7.90	5.91	6.01	6.30	-	-	-
<b><u>Non-Evergreen Funds:</u></b>								
Avenue Special Situations Fund VI	\$ 7,934,795.00	-0.50	0.80	11.82	-4.72	-4.23	-	-
Oaktree Opportunities Fund IX	\$ 34,655,790.00	-1.76	2.88	2.02	7.08	3.42	-	-
Highbridge Principal Strategies III	\$ 12,654,971.10	0.76	3.91	4.05	5.30	6.27	-	-
Oaktree European Dislocation Fund	\$ 1,938,938.00	-5.03	-20.55	-13.14	5.45	7.62	-	-
Marathon European Credit Opportunities Fund II	\$ 43,541,619.01	2.72	9.56	13.26	13.02	9.09	-	-
Oaktree Opportunities Fund X	\$ 24,582,213.00	-1.28	8.24	9.28	25.31	-	-	-
Oaktree European Capital Solutions Fund	\$ 22,126,752.00	2.36	2.91	6.91	11.36	-	-	-
Marathon European Credit Opportunities Fund III	\$ 62,112,438.52	5.14	17.65	18.40	12.66	-	-	-
Oaktree Opportunities Fund X(b)	\$ 5,878,854.00	-5.22	-6.94	-	-	-	-	-
<b><u>Short Term:</u></b>								
<b>Cash (Unallocated)</b>	\$ 235,169,294.48	0.59	1.66	2.17	1.25	0.80	-	-
<i>90 Day T-Bill</i>		<i>0.60</i>	<i>1.66</i>	<i>2.12</i>	<i>1.17</i>	<i>0.73</i>	-	-

\*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.