



**TEACHER'S RETIREMENT FUND**

Net of All Fees and Expenses  
Periods Ending October 31, 2021

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Month	Three Months	Fiscal YTD	Calendar YTD	One Year	Compound, annualized returns			
											Three Year	Five Year	Seven Year	Ten Year
<b>Teacher's Retirement Fund</b>					\$23,475.4	2.30	2.26	2.53	10.86	21.67	11.97	10.17	8.23	8.83
<i>Policy Benchmark</i>						1.94	1.91	2.72	10.57	20.19	12.16	10.46	8.28	8.97
<i>Dynamic Benchmark</i>						2.04	1.72	2.23	10.13	20.36	12.09	10.36	8.18	N/A
<b>Domestic Equity</b>	22.3%	20.0	15.0	25.0	\$5,227.7	6.59	4.91	6.61	22.73	43.38	21.48	18.76	14.51	16.00
<i>Russell 3000</i>						6.76	4.88	6.65	22.77	43.90	21.62	18.91	14.56	16.10
<b>Developed Markets ISF</b>	12.6%	11.0	6.0	16.0	\$2,951.7	2.45	1.11	1.95	11.82	35.31	12.26	10.41	8.02	9.29
<i>MSCI EAFE IMI Net</i>						2.32	1.17	2.08	11.12	34.43	12.26	10.74	8.13	9.33
<b>Emerging Markets ISF</b>	11.1%	9.0	4.0	14.0	\$2,596.5	1.47	-1.27	-5.72	1.22	19.24	16.24	10.98	7.15	5.88
<i>MSCI Emerging Markets IMI</i>						0.89	-0.51	-6.57	1.60	19.71	12.88	9.47	5.68	5.03
<b>Global Equities<sup>(4)</sup></b>	45.9%	40.0	25.0	55.0	\$10,775.9	4.17	2.31	2.11	13.95	34.67	17.38	14.41	10.93	N/A
<i>MSCI All Country World Net Index</i>						5.10	3.28	4.00	16.79	37.28	17.47	14.72	10.62	N/A
<b>Core Fixed Income</b>	11.7%	13.0	8.0	18.0	\$2,738.2	0.02	-1.02	0.00	-1.27	0.10	5.33	3.14	2.95	2.99
<i>Barclays U.S. Aggregate Bond Index</i>						-0.03	-1.08	0.02	-1.58	-0.48	5.63	3.10	3.11	3.00
<b>Emerging Market Debt</b>	4.8%	5.0	0.0	10.0	\$1,125.7	-0.84	-2.40	-2.60	-3.97	4.80	4.49	3.12	2.69	3.06
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						-0.65	-2.54	-2.55	-4.51	2.64	5.20	3.10	2.44	3.37
<b>High Yield</b>	5.8%	3.0	0.0	8.0	\$1,367.0	0.05	0.83	1.04	5.35	12.03	7.30	6.34	5.21	6.39
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						-0.18	0.33	0.71	4.35	10.53	6.98	6.09	5.28	6.36
<b>Liquidity Fund</b>	4.7%	2.0	0.0	3.0	\$1,097.6	0.00	0.01	0.02	0.05	0.07	1.16	1.29	0.96	0.80
<i>50% U.S. 3-Month T-Bill / 50% Bloomberg Barclays US Government Treasury 1 to 3 Year Index</i>						-0.16	-0.21	-0.12	-0.16	-0.11	1.34	1.36	1.05	0.80
<b>Real Assets<sup>(1)</sup></b>	12.6%	19.0	10.0	25.0	\$2,947.9	N/A	3.45	4.91	9.59	10.81	6.00	6.84	8.06	8.67
<i>Blended Custom Benchmark 1Q in Arrears<sup>(2)</sup></i>						N/A	2.44	3.47	6.34	7.67	5.77	6.29	7.84	8.87
<b>Private Investment<sup>(1)</sup></b>	9.6%	10.0	5.0	15.0	\$2,253.6	N/A	9.97	10.20	36.21	45.11	23.05	19.26	17.14	15.14
<i>Russell 3000 + 250 basis points 1Q in Arrears<sup>(2)</sup></i>						N/A	5.15	10.60	36.22	41.23	21.99	20.19	15.59	16.83
<b>Private Credit<sup>(1)</sup></b>	1.2%	5.0	0.0	10.0	\$288.0	N/A	4.08	7.85	16.20	17.34	N/A	N/A	N/A	N/A
<i>S&amp;P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears<sup>(2)</sup></i>						N/A	1.37	2.06	8.42	10.99	N/A	N/A	N/A	N/A
<b>Alternative Investment Fund</b>	3.8%	3.0	0.0	10.0	\$881.5	-0.04	0.39	0.46	3.42	7.42	2.78	3.93	2.63	3.56
<i>Absolute Return Strategy blended benchmark<sup>(3)</sup></i>						0.59	0.52	0.56	1.62	2.73	4.05	3.10	2.25	1.59

<sup>(1)</sup> Actual performance, reported one quarter in arrears.

<sup>(2)</sup> A blended benchmark comprised of the weightings of Real Estate, Infrastructure / Natural Resources and U.S. TIPS as of April 2020.

<sup>(3)</sup> A blended benchmark comprised of the weightings of each of the investments utilized within the fund of funds vehicle multiplied by their respective benchmarks as of April 2020.

<sup>(4)</sup> Unofficial Benchmark, for comparison purposes only



**STATE EMPLOYEES' RETIREMENT FUND**

Net of All Fees and Expenses  
Periods Ending October 31, 2021

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Month	Three Months	Fiscal YTD	Calendar YTD	One Year	Compound, annualized returns			
											Three Year	Five Year	Seven Year	Ten Year
<b>State Employees' Retirement Fund</b>					<b>\$16,832.8</b>	<b>2.36</b>	<b>2.32</b>	<b>2.60</b>	<b>10.93</b>	<b>21.76</b>	<b>12.05</b>	<b>10.26</b>	<b>8.29</b>	<b>8.88</b>
<i>Policy Benchmark</i>						1.94	1.91	2.72	10.57	20.19	12.18	10.46	8.28	9.00
<i>Dynamic Benchmark</i>						2.11	1.78	2.30	10.20	20.46	12.19	10.48	8.29	N/A
<b>Domestic Equity</b>	<b>22.9%</b>	<b>20.0</b>	15.0	25.0	<b>\$3,861.0</b>	<b>6.59</b>	<b>4.91</b>	<b>6.61</b>	<b>22.73</b>	<b>43.38</b>	<b>21.48</b>	<b>18.76</b>	<b>14.51</b>	<b>16.00</b>
<i>Russell 3000</i>						6.76	4.88	6.65	22.77	43.90	21.62	18.91	14.56	16.10
<b>Developed Markets ISF</b>	<b>13.0%</b>	<b>11.0</b>	6.0	16.0	<b>\$2,184.5</b>	<b>2.45</b>	<b>1.11</b>	<b>1.95</b>	<b>11.82</b>	<b>35.31</b>	<b>12.26</b>	<b>10.41</b>	<b>8.02</b>	<b>9.29</b>
<i>MSCI EAFE IMI Net</i>						2.32	1.17	2.08	11.12	34.43	12.26	10.74	8.13	9.33
<b>Emerging Markets ISF</b>	<b>11.5%</b>	<b>9.0</b>	4.0	14.0	<b>\$1,927.4</b>	<b>1.47</b>	<b>-1.27</b>	<b>-5.72</b>	<b>1.22</b>	<b>19.24</b>	<b>16.24</b>	<b>10.98</b>	<b>7.15</b>	<b>5.88</b>
<i>MSCI Emerging Markets IMI</i>						0.89	-0.51	-6.57	1.60	19.71	12.88	9.47	5.68	5.03
<b>Global Equities<sup>(4)</sup></b>	<b>47.4%</b>	<b>40.0</b>	25.0	55.0	<b>\$7,972.8</b>	<b>4.17</b>	<b>2.31</b>	<b>2.11</b>	<b>13.95</b>	<b>34.67</b>	<b>17.38</b>	<b>14.41</b>	<b>10.93</b>	<b>N/A</b>
<i>MSCI All Country World Net Index</i>						5.10	3.28	4.00	16.79	37.28	17.47	14.72	10.62	N/A
<b>Core Fixed Income</b>	<b>11.9%</b>	<b>13.0</b>	8.0	18.0	<b>\$2,004.0</b>	<b>0.02</b>	<b>-1.02</b>	<b>0.00</b>	<b>-1.27</b>	<b>0.10</b>	<b>5.33</b>	<b>3.14</b>	<b>2.95</b>	<b>2.99</b>
<i>Barclays U.S. Aggregate Bond Index</i>						-0.03	-1.08	0.02	-1.58	-0.48	5.63	3.10	3.11	3.00
<b>Emerging Market Debt</b>	<b>4.9%</b>	<b>5.0</b>	0.0	10.0	<b>\$828.9</b>	<b>-0.84</b>	<b>-2.40</b>	<b>-2.60</b>	<b>-3.97</b>	<b>4.80</b>	<b>4.49</b>	<b>3.12</b>	<b>2.69</b>	<b>3.06</b>
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						-0.65	-2.54	-2.55	-4.51	2.64	5.20	3.10	2.44	3.37
<b>High Yield</b>	<b>6.0%</b>	<b>3.0</b>	0.0	8.0	<b>\$1,002.6</b>	<b>0.05</b>	<b>0.83</b>	<b>1.04</b>	<b>5.35</b>	<b>12.03</b>	<b>7.30</b>	<b>6.34</b>	<b>5.21</b>	<b>6.39</b>
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						-0.18	0.33	0.71	4.35	10.53	6.98	6.09	5.28	6.36
<b>Liquidity Fund</b>	<b>2.7%</b>	<b>2.0</b>	0.0	3.0	<b>\$451.8</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.07</b>	<b>1.16</b>	<b>1.30</b>	<b>0.97</b>	<b>0.80</b>
<i>50% U.S. 3-Month T-Bill / 50% Bloomberg Barclays US Government Treasury 1 to 3 Year Index</i>						-0.16	-0.21	-0.12	-0.16	-0.11	1.34	1.36	1.05	0.80
<b>Real Assets<sup>(1)</sup></b>	<b>12.5%</b>	<b>19.0</b>	10.0	25.0	<b>\$2,108.3</b>	<b>N/A</b>	<b>3.45</b>	<b>4.91</b>	<b>9.59</b>	<b>10.81</b>	<b>6.00</b>	<b>6.84</b>	<b>8.06</b>	<b>8.67</b>
<i>Blended Custom Benchmark 1Q in Arrears<sup>(2)</sup></i>						N/A	2.44	3.47	6.34	7.67	5.77	6.29	7.84	8.87
<b>Private Investment<sup>(1)</sup></b>	<b>9.6%</b>	<b>10.0</b>	5.0	15.0	<b>\$1,619.3</b>	<b>N/A</b>	<b>9.97</b>	<b>10.20</b>	<b>36.21</b>	<b>45.11</b>	<b>23.05</b>	<b>19.26</b>	<b>17.14</b>	<b>15.14</b>
<i>Russell 3000 + 250 basis points 1Q in Arrears<sup>(2)</sup></i>						N/A	5.15	10.60	36.22	41.23	21.99	20.19	15.59	16.83
<b>Private Credit<sup>(1)</sup></b>	<b>1.2%</b>	<b>5.0</b>	0.0	10.0	<b>\$200.0</b>	<b>N/A</b>	<b>4.08</b>	<b>7.85</b>	<b>16.20</b>	<b>17.34</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<i>S&amp;P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears<sup>(2)</sup></i>						N/A	1.37	2.06	8.42	10.99	N/A	N/A	N/A	N/A
<b>Alternative Investment Fund</b>	<b>3.8%</b>	<b>3.0</b>	0.0	8.0	<b>\$645.1</b>	<b>-0.04</b>	<b>0.39</b>	<b>0.46</b>	<b>3.42</b>	<b>7.42</b>	<b>2.78</b>	<b>3.93</b>	<b>2.63</b>	<b>3.56</b>
<i>Absolute Return Strategy blended benchmark<sup>(3)</sup></i>						0.59	0.52	0.56	1.62	2.73	4.05	3.10	2.25	1.59

<sup>(1)</sup> Actual performance, reported one quarter in arrears.

<sup>(2)</sup> A blended benchmark comprised of the weightings of Real Estate, Infrastructure / Natural Resources and U.S. TIPS as of April 2020.

<sup>(3)</sup> A blended benchmark comprised of the weightings of each of the investments utilized within the fund of funds vehicle multiplied by their respective benchmarks as of April 2020.

<sup>(4)</sup> Unofficial Benchmark, for comparison purposes only



**MUNICIPAL EMPLOYEES RETIREMENT FUND**

Net of All Fees and Expenses  
Periods Ending October 31, 2021

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Month	Three Months	Fiscal YTD	Calendar YTD	One Year	Compound, annualized returns			
											Three Year	Five Year	Seven Year	Ten Year
<b>Municipal Employees' Retirement Fund</b>					<b>\$3,356.8</b>	<b>2.35</b>	<b>2.31</b>	<b>2.58</b>	<b>10.95</b>	<b>21.82</b>	<b>12.01</b>	<b>9.88</b>	<b>8.10</b>	<b>8.35</b>
<i>Policy Benchmark</i>						1.94	1.91	2.72	10.57	20.19	12.09	10.02	7.98	8.50
<i>Dynamic Benchmark</i>						2.10	1.77	2.29	10.21	20.51	12.16	10.03	8.01	N/A
<b>Domestic Equity</b>	<b>22.8%</b>	<b>20.0</b>	15.0	25.0	<b>\$767.0</b>	<b>6.59</b>	<b>4.91</b>	<b>6.61</b>	<b>22.73</b>	<b>43.38</b>	<b>21.48</b>	<b>18.76</b>	<b>14.51</b>	<b>15.99</b>
<i>Russell 3000</i>						6.76	4.88	6.65	22.77	43.90	21.62	18.91	14.56	16.10
<b>Developed Markets ISF</b>	<b>12.9%</b>	<b>11.0</b>	6.0	16.0	<b>\$433.0</b>	<b>2.45</b>	<b>1.11</b>	<b>1.95</b>	<b>11.82</b>	<b>35.31</b>	<b>12.27</b>	<b>10.41</b>	<b>8.02</b>	<b>9.29</b>
<i>MSCI EAFE IMI Net</i>						2.32	1.17	2.08	11.12	34.43	12.26	10.74	8.13	9.33
<b>Emerging Markets ISF</b>	<b>11.4%</b>	<b>9.0</b>	4.0	14.0	<b>\$381.4</b>	<b>1.47</b>	<b>-1.27</b>	<b>-5.72</b>	<b>1.22</b>	<b>19.24</b>	<b>16.24</b>	<b>10.98</b>	<b>7.15</b>	<b>5.88</b>
<i>MSCI Emerging Markets IMI</i>						0.89	-0.51	-6.57	1.60	19.71	12.88	9.47	5.68	5.03
<b>Global Equities<sup>(4)</sup></b>	<b>47.1%</b>	<b>40.0</b>	25.0	55.0	<b>\$1,581.4</b>	<b>4.17</b>	<b>2.31</b>	<b>2.11</b>	<b>13.95</b>	<b>34.67</b>	<b>17.38</b>	<b>14.41</b>	<b>10.93</b>	<b>N/A</b>
<i>MSCI All Country World Net Index</i>						5.10	3.28	4.00	16.79	37.28	17.47	14.72	10.62	N/A
<b>Core Fixed Income</b>	<b>11.9%</b>	<b>13.0</b>	8.0	18.0	<b>\$398.3</b>	<b>0.02</b>	<b>-1.02</b>	<b>0.00</b>	<b>-1.27</b>	<b>0.10</b>	<b>5.33</b>	<b>3.14</b>	<b>2.95</b>	<b>3.00</b>
<i>Barclays U.S. Aggregate Bond Index</i>						-0.03	-1.08	0.02	-1.58	-0.48	5.63	3.10	3.11	3.00
<b>Emerging Market Debt</b>	<b>4.9%</b>	<b>5.0</b>	0.0	10.0	<b>\$164.5</b>	<b>-0.84</b>	<b>-2.40</b>	<b>-2.60</b>	<b>-3.97</b>	<b>4.80</b>	<b>4.49</b>	<b>3.12</b>	<b>2.69</b>	<b>3.06</b>
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						-0.65	-2.54	-2.55	-4.51	2.64	5.20	3.10	2.44	3.37
<b>High Yield</b>	<b>5.9%</b>	<b>3.0</b>	0.0	8.0	<b>\$197.8</b>	<b>0.05</b>	<b>0.83</b>	<b>1.04</b>	<b>5.35</b>	<b>12.03</b>	<b>7.29</b>	<b>6.34</b>	<b>5.21</b>	<b>6.39</b>
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						-0.18	0.33	0.71	4.35	10.53	6.98	6.09	5.28	6.36
<b>Liquidity Fund</b>	<b>3.0%</b>	<b>2.0</b>	0.0	3.0	<b>\$100.0</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.07</b>	<b>1.16</b>	<b>1.30</b>	<b>0.96</b>	<b>0.80</b>
<i>50% U.S. 3-Month T-Bill / 50% Bloomberg Barclays US Government Treasury 1 to 3 Year Index</i>						-0.16	-0.21	-0.12	-0.16	-0.11	1.34	1.36	1.05	0.80
<b>Real Assets<sup>(1)</sup></b>	<b>12.5%</b>	<b>19.0</b>	15.0	25.0	<b>\$419.4</b>	<b>N/A</b>	<b>3.45</b>	<b>4.91</b>	<b>9.59</b>	<b>10.81</b>	<b>6.00</b>	<b>6.84</b>	<b>8.06</b>	<b>8.67</b>
<i>Blended Custom Benchmark 1Q in Arrears<sup>(2)</sup></i>						N/A	2.44	3.47	6.34	7.67	5.77	6.29	7.84	8.87
<b>Private Investment<sup>(1)</sup></b>	<b>9.7%</b>	<b>10.0</b>	5.0	15.0	<b>\$325.1</b>	<b>N/A</b>	<b>9.97</b>	<b>10.20</b>	<b>36.21</b>	<b>45.11</b>	<b>23.05</b>	<b>19.26</b>	<b>17.14</b>	<b>15.14</b>
<i>Russell 3000 + 250 basis points 1Q in Arrears<sup>(2)</sup></i>						N/A	5.15	10.60	36.22	41.23	21.99	20.19	15.59	16.83
<b>Private Credit<sup>(1)</sup></b>	<b>1.2%</b>	<b>5.0</b>	0.0	10.0	<b>\$41.0</b>	<b>N/A</b>	<b>4.08</b>	<b>7.85</b>	<b>16.20</b>	<b>17.34</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<i>S&amp;P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears<sup>(2)</sup></i>						N/A	1.37	2.06	8.42	10.99	N/A	N/A	N/A	N/A
<b>Alternative Investment Fund</b>	<b>3.9%</b>	<b>3.0</b>	0.0	10.0	<b>\$129.4</b>	<b>-0.04</b>	<b>0.39</b>	<b>0.46</b>	<b>3.42</b>	<b>7.42</b>	<b>2.78</b>	<b>3.93</b>	<b>2.63</b>	<b>3.56</b>
<i>Absolute Return Strategy blended benchmark<sup>(3)</sup></i>						0.59	0.52	0.56	1.62	2.73	4.05	3.10	2.25	1.59

<sup>(1)</sup> Actual performance, reported one quarter in arrears.

<sup>(2)</sup> A blended benchmark comprised of the weightings of Real Estate, Infrastructure / Natural Resources and U.S. TIPS as of April 2020.

<sup>(3)</sup> A blended benchmark comprised of the weightings of each of the investments utilized within the fund of funds vehicle multiplied by their respective benchmarks as of April 2020.

<sup>(4)</sup> Unofficial Benchmark, for comparison purposes only