



**TEACHER'S RETIREMENT FUND**

Net of All Fees and Expenses

4/30/2023

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>					\$22,732.6	0.86	0.84	5.78	4.86	1.27	8.92	5.49	7.08	6.46
<i>Policy Benchmark</i>						2.02	1.54	4.41	6.11	1.09	7.35	5.83	7.22	6.52
<i>Dynamic Benchmark</i>						1.72	1.13	5.53	6.27	1.67	7.37	5.53	7.06	6.26
<b>Global Equities</b>	46.6%	37.0	23.0	52.0	\$10,589.0	1.69	1.69	11.92	9.13	3.04	N/A	N/A	N/A	N/A
<i>MSCI All Country World IMI Index</i>						1.27	0.88	10.86	8.31	1.63	N/A	N/A	N/A	N/A
<b>Domestic Equity</b>	27.5%				\$6,249.5	1.50	1.87	11.91	8.83	2.62	14.17	10.62	12.13	11.74
<i>MSCI USA IMI Index</i>						0.98	1.24	10.75	8.27	1.35	14.01	10.57	12.03	11.65
<b>Developed Markets Equity</b>	12.3%				\$2,805.5	2.88	3.64	19.96	12.38	9.28	12.80	4.26	7.23	6.36
<i>MSCI EAFE + Canada Index</i>						2.84	2.67	16.90	11.09	6.31	11.07	4.01	6.87	6.01
<b>Emerging Markets Equity</b>	6.8%				\$1,534.0	0.13	-2.61	2.14	4.77	-3.68	7.12	1.44	5.97	2.60
<i>MSCI Emerging Markets IMI</i>						-0.90	-4.30	0.63	3.01	-6.40	5.57	-0.68	4.77	1.95
<b>Core Fixed Income</b>	15.0%	13.0	8.0	18.0	\$3,402.4	0.65	0.76	0.85	3.35	-0.40	-2.77	1.00	1.09	1.16
<i>50% Barclays U.S. Aggregate Bond / 50% Intermediate Treasury</i>						0.57	0.85	-0.27	3.21	-1.20	-3.40	1.02	0.80	1.24
<b>Emerging Market Debt <sup>(3)</sup></b>	2.3%	0.0	0.0	0.0	\$528.8	0.64	-0.53	8.42	3.79	2.13	1.50	-1.19	1.27	0.22
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						0.70	0.48	7.64	4.23	2.81	-0.32	-0.87	0.94	0.01
<b>Non-Core Fixed Income</b>	5.6%	2.0	0.0	7.0	\$1,265.8	1.00	1.11	8.83	5.01	1.76	6.14	3.47	4.84	3.87
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						1.01	0.77	8.27	4.61	1.21	4.68	3.03	4.44	3.68
<b>Liquidity Fund</b>	1.3%	1.0	0.0	3.0	\$288.6	0.08	1.41	2.81	1.56	2.98	1.50	1.77	1.59	1.04
<i>U.S. 3-Month T-Bill</i>						0.31	1.08	1.69	1.39	1.71	0.03	1.03	1.02	0.77
<b>Real Estate <sup>(1)</sup></b>	8.0%	10.0	5.0	15.0	\$1,813.0	N/A	-2.75	-1.41	-3.51	-0.96	10.36	7.19	7.42	8.74
<i>Open End Diversified Core Equity (NFI-ODCE Index) 1Q in Arrears^</i>						N/A	-5.17	-0.55	-5.17	6.55	8.97	7.72	7.57	9.11
<b>Infrastructure and Natural Resources <sup>(1)</sup></b>	2.2%	7.0	2.0	12.0	\$505.6	N/A	2.51	7.90	3.59	9.14	N/A	N/A	N/A	N/A
<i>U.S. CPI + 400 basis points 1Q in Arrears^</i>						N/A	1.38	7.50	2.12	10.64	N/A	N/A	N/A	N/A
<b>Private Investment <sup>(1)</sup></b>	11.3%	15.0	10.0	20.0	\$2,564.1	N/A	1.04	-3.52	1.20	-1.69	28.05	17.91	15.78	15.17
<i>Russell 3000 + 250 basis points 1Q in Arrears^</i>						N/A	6.53	-6.91	15.48	-5.93	12.00	13.44	14.05	13.20
<b>Private Credit <sup>(1)</sup></b>	3.4%	10.0	5.0	15.0	\$769.2	N/A	1.47	1.37	1.09	1.99	N/A	N/A	N/A	N/A
<i>S&amp;P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears^</i>						N/A	4.71	3.25	5.88	3.03	N/A	N/A	N/A	N/A
<b>Absolute Return</b>	4.4%	5.0	0.0	10.0	\$1,006.1	-1.70	-1.54	-1.84	-1.86	-3.08	2.95	1.25	2.97	2.49
<i>Dynamic weighted HFRX benchmark <sup>(2)</sup></i>						0.56	-0.51	-0.17	-1.10	-1.63	0.35	2.22	1.81	1.28

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

<sup>(2)</sup> A blended dynamic benchmark comprised of the weightings of each of the investments utilized within the strategy

<sup>(3)</sup> Legacy asset class



**STATE EMPLOYEES' RETIREMENT FUND**

Net of All Fees and Expenses

4/30/2023

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>\$19,625.8</b>	<b>0.94</b>	<b>0.96</b>	<b>6.25</b>	<b>5.20</b>	<b>1.67</b>	<b>9.09</b>	<b>5.61</b>	<b>7.18</b>	<b>6.53</b>
<i>Policy Benchmark</i>						2.02	1.54	4.41	6.11	1.09	7.35	5.83	7.22	6.52
<i>Dynamic Benchmark</i>						1.66	1.09	5.74	6.31	1.89	7.50	5.63	7.17	6.37
<b>Global Equities</b>	<b>50.2%</b>	<b>37.0</b>	<b>23.0</b>	<b>52.0</b>	<b>\$9,848.4</b>	<b>1.73</b>	<b>1.82</b>	<b>11.67</b>	<b>9.10</b>	<b>2.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<i>MSCI All Country World IMI Index</i>						1.27	0.88	10.86	8.31	1.63	N/A	N/A	N/A	N/A
<b>Domestic Equity</b>	<b>32.4%</b>				<b>\$6,348.6</b>	<b>1.50</b>	<b>1.87</b>	<b>12.02</b>	<b>8.77</b>	<b>2.72</b>	<b>14.21</b>	<b>10.64</b>	<b>12.15</b>	<b>11.75</b>
<i>MSCI USA IMI Index</i>						0.98	1.24	10.75	8.27	1.35	14.01	10.57	12.03	11.65
<b>Developed Markets Equity</b>	<b>12.1%</b>				<b>\$2,365.0</b>	<b>2.94</b>	<b>3.73</b>	<b>20.05</b>	<b>12.47</b>	<b>9.36</b>	<b>12.83</b>	<b>4.27</b>	<b>7.25</b>	<b>6.37</b>
<i>MSCI EAFE + Canada Index</i>						2.84	2.67	16.90	11.09	6.31	11.07	4.01	6.87	6.01
<b>Emerging Markets Equity</b>	<b>5.8%</b>				<b>\$1,134.8</b>	<b>0.13</b>	<b>-2.60</b>	<b>2.14</b>	<b>4.77</b>	<b>-3.68</b>	<b>7.13</b>	<b>1.45</b>	<b>5.97</b>	<b>2.60</b>
<i>MSCI Emerging Markets IMI</i>						-0.90	-4.30	0.63	3.01	-6.40	5.57	-0.68	4.77	1.95
<b>Core Fixed Income</b>	<b>14.7%</b>	<b>13.0</b>	<b>8.0</b>	<b>18.0</b>	<b>\$2,875.5</b>	<b>0.65</b>	<b>0.72</b>	<b>0.81</b>	<b>3.31</b>	<b>-0.44</b>	<b>-2.79</b>	<b>0.99</b>	<b>1.08</b>	<b>1.16</b>
<i>50% Barclays U.S. Aggregate Bond / 50% Intermediate Treasury</i>						0.57	0.85	-0.27	3.21	-1.20	-3.40	1.02	0.80	1.24
<b>Emerging Market Debt <sup>(3)</sup></b>	<b>1.8%</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>\$361.0</b>	<b>0.53</b>	<b>-0.75</b>	<b>8.17</b>	<b>3.56</b>	<b>1.91</b>	<b>1.42</b>	<b>-1.24</b>	<b>1.24</b>	<b>0.20</b>
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						0.70	0.48	7.64	4.23	2.81	-0.32	-0.87	0.94	0.01
<b>Non-Core Fixed Income</b>	<b>5.1%</b>	<b>2.0</b>	<b>0.0</b>	<b>7.0</b>	<b>\$1,007.2</b>	<b>1.00</b>	<b>1.10</b>	<b>8.82</b>	<b>5.00</b>	<b>1.75</b>	<b>6.14</b>	<b>3.47</b>	<b>4.84</b>	<b>3.87</b>
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						1.01	0.77	8.27	4.61	1.21	4.68	3.03	4.44	3.68
<b>Liquidity Fund</b>	<b>0.9%</b>	<b>1.0</b>	<b>0.0</b>	<b>3.0</b>	<b>\$181.7</b>	<b>0.27</b>	<b>1.28</b>	<b>3.09</b>	<b>1.76</b>	<b>3.27</b>	<b>1.18</b>	<b>1.58</b>	<b>1.45</b>	<b>0.94</b>
<i>U.S. 3-Month T-Bill</i>						0.31	1.08	1.69	1.39	1.71	0.03	1.03	1.02	0.77
<b>Real Estate <sup>(1)</sup></b>	<b>7.4%</b>	<b>10.0</b>	<b>5.0</b>	<b>15.0</b>	<b>\$1,443.8</b>	<b>N/A</b>	<b>-2.75</b>	<b>-1.41</b>	<b>-3.51</b>	<b>-0.96</b>	<b>10.36</b>	<b>7.19</b>	<b>7.42</b>	<b>8.74</b>
<i>Open End Diversified Core Equity (NFI-ODCE Index) 1Q in Arrears<sup>^</sup></i>						N/A	-5.17	-0.55	-5.17	6.55	8.97	7.72	7.57	9.11
<b>Infrastructure and Natural Resources <sup>(1)</sup></b>	<b>2.2%</b>	<b>7.0</b>	<b>2.0</b>	<b>12.0</b>	<b>\$432.4</b>	<b>N/A</b>	<b>2.51</b>	<b>7.89</b>	<b>3.59</b>	<b>9.14</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<i>U.S. CPI + 400 basis points 1Q in Arrears<sup>^</sup></i>						N/A	1.38	7.50	2.12	10.64	N/A	N/A	N/A	N/A
<b>Private Investment <sup>(1)</sup></b>	<b>10.1%</b>	<b>15.0</b>	<b>10.0</b>	<b>20.0</b>	<b>\$1,973.8</b>	<b>N/A</b>	<b>1.04</b>	<b>-3.52</b>	<b>1.20</b>	<b>-1.69</b>	<b>28.04</b>	<b>17.91</b>	<b>15.78</b>	<b>15.17</b>
<i>Russell 3000 + 250 basis points 1Q in Arrears<sup>^</sup></i>						N/A	6.53	-6.91	15.48	-5.93	12.00	13.44	14.05	13.20
<b>Private Credit <sup>(1)</sup></b>	<b>3.4%</b>	<b>10.0</b>	<b>5.0</b>	<b>15.0</b>	<b>\$675.0</b>	<b>N/A</b>	<b>1.47</b>	<b>1.34</b>	<b>1.08</b>	<b>1.96</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>^</sup></i>						N/A	4.71	3.25	5.88	3.03	N/A	N/A	N/A	N/A
<b>Absolute Return</b>	<b>4.2%</b>	<b>5.0</b>	<b>0.0</b>	<b>10.0</b>	<b>\$827.1</b>	<b>-1.70</b>	<b>-1.54</b>	<b>-1.84</b>	<b>-1.86</b>	<b>-3.08</b>	<b>2.95</b>	<b>1.25</b>	<b>2.97</b>	<b>2.50</b>
<i>Dynamic weighted HFRX benchmark <sup>(2)</sup></i>						0.56	-0.51	-0.17	-1.10	-1.63	0.35	2.22	1.81	1.28

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

<sup>(2)</sup> A blended dynamic benchmark comprised of the weightings of each of the investments utilized within the strategy

<sup>(3)</sup> Legacy asset class



**MUNICIPAL EMPLOYEES RETIREMENT FUND**

Net of All Fees and Expenses

4/30/2023

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Three 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> <i>Policy Benchmark</i> <i>Dynamic Benchmark</i>					\$3,107.0	0.84 2.02 1.71	0.77 1.54 1.09	5.77 4.41 5.35	4.78 6.11 6.12	1.27 1.09 1.38	8.90 7.35 7.27	5.59 5.84 5.59	6.87 6.96 6.79	6.15 6.14 5.86
<b>Global Equities</b> <i>MSCI All Country World IMI Index</i>	45.3%	37.0	23.0	52.0	\$1,405.8	1.68 1.27	1.65 0.88	12.08 10.86	9.14 8.31	3.19 1.63	N/A N/A	N/A N/A	N/A N/A	N/A N/A
<b>Domestic Equity</b> <i>MSCI USA IMI Index</i>	26.0%				\$806.6	1.50 0.98	1.87 1.24	11.91 10.75	8.83 8.27	2.62 1.35	14.17 14.01	10.62 10.57	12.13 12.03	11.74 11.65
<b>Developed Markets Equity</b> <i>MSCI EAFE + Canada Index</i>	12.3%				\$380.8	2.89 2.84	3.67 2.67	20.03 16.90	12.41 11.09	9.34 6.31	12.82 11.07	4.27 4.01	7.24 6.87	6.37 6.01
<b>Emerging Markets Equity</b> <i>MSCI Emerging Markets IMI</i>	7.0%				\$218.4	0.13 -0.90	-2.63 -4.30	2.11 0.63	4.74 3.01	-3.71 -6.40	7.11 5.57	1.44 -0.68	5.97 4.77	2.61 1.95
<b>Core Fixed Income</b> <i>50% Barclays U.S. Aggregate Bond / 50% Intermediate Treasury</i>	14.9%	13.0	8.0	18.0	\$461.9	0.65 0.57	0.75 0.85	0.86 -0.27	3.33 3.21	-0.39 -1.20	-2.77 -3.40	1.00 1.02	1.09 0.80	1.16 1.24
<b>Emerging Market Debt</b> <sup>(3)</sup> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	2.3%	0.0	0.0	0.0	\$70.3	0.65 0.70	-0.48 0.48	8.47 7.64	3.84 4.23	2.18 2.81	1.52 -0.32	-1.19 -0.87	1.28 0.94	0.23 0.01
<b>Non-Core Fixed Income</b> <i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>	5.7%	2.0	0.0	7.0	\$176.7	1.00 1.01	1.11 0.77	8.84 8.27	5.02 4.61	1.77 1.21	6.15 4.68	3.47 3.03	4.84 4.44	3.87 3.68
<b>Liquidity Fund</b> <i>U.S. 3-Month T-Bill</i>	2.0%	1.0	0.0	3.0	\$63.0	0.22 0.31	0.94 1.08	2.37 1.69	1.33 1.39	2.53 1.71	0.93 0.03	1.42 1.03	1.34 1.02	0.88 0.77
<b>Real Estate</b> <sup>(1)</sup> <i>Open End Diversified Core Equity (NFI-ODCE Index) 1Q in Arrears^</i>	8.3%	10.0	5.0	15.0	\$256.2	N/A N/A	-2.75 -5.17	-1.42 -0.55	-3.52 -5.17	-0.96 6.55	10.36 8.97	7.19 7.72	7.42 7.57	8.74 9.11
<b>Infrastructure and Natural Resources</b> <sup>(1)</sup> <i>U.S. CPI + 400 basis points 1Q in Arrears^ (2)</i>	2.2%	7.0	2.0	12.0	\$67.6	N/A N/A	2.52 1.38	7.88 7.50	3.60 2.12	9.13 10.64	N/A N/A	N/A N/A	N/A N/A	N/A N/A
<b>Private Investment</b> <sup>(1)</sup> <i>Russell 3000 + 250 basis points 1Q in Arrears^</i>	11.3%	15.0	10.0	20.0	\$352.2	N/A N/A	1.04 6.53	-3.52 -6.91	1.20 15.48	-1.69 -5.93	28.04 12.00	17.91 13.44	15.78 14.05	15.17 13.20
<b>Private Credit</b> <sup>(1)</sup> <i>S&amp;P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears^</i>	3.8%	10.0	5.0	15.0	\$118.7	N/A N/A	1.55 4.71	1.41 3.25	1.16 5.88	2.02 3.03	N/A N/A	N/A N/A	N/A N/A	N/A N/A
<b>Absolute Return</b> <i>Dynamic weighted HFRX benchmark (3)</i>	4.3%	5.0	0.0	10.0	\$134.5	-1.70 0.56	-1.54 -0.51	-1.84 -0.17	-1.86 -1.10	-3.08 -1.63	2.95 0.35	1.25 2.22	2.97 1.81	2.50 1.28

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

<sup>(2)</sup> A blended dynamic benchmark comprised of the weightings of each of the investments utilized within the strategy

<sup>(3)</sup> Legacy asset class