



TEACHER'S RETIREMENT FUND

Net of All Fees and Expenses

10/31/2023

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Compound, annualized returns								
						Month	Three Months	Fiscal YTD	Calendar YTD	One Year	Three Year	Five Year	Seven Year	Ten Year
Teacher's Retirement Fund					\$22,518.6	-1.66	-5.03	-3.24	3.94	6.43	4.74	5.80	6.29	5.82
<i>Policy Benchmark</i>						-0.64	-2.30	-0.54	7.08	6.83	5.03	6.35	6.81	6.09
<i>Excess Return</i>						(1.02)	(2.73)	(2.69)	(3.14)	(0.40)	(0.29)	(0.54)	(0.51)	(0.27)
Global Equities	45.3%	37.0	23.0	52.0	\$10,191.9	-3.04	-9.50	-6.20	7.38	11.13	N/A	N/A	N/A	N/A
<i>MSCI All Country World IMI Index</i>						-3.33	-10.06	-6.62	5.75	9.43	N/A	N/A	N/A	N/A
Domestic Equity	27.9%				\$6,292.5	-2.65	-8.86	-5.70	9.92	9.10	9.36	10.33	11.59	10.54
<i>MSCI USA IMI Index</i>						-2.69	-9.20	-5.95	9.16	8.07	9.07	10.16	11.51	10.48
Developed Markets Equity	11.6%				\$2,621.4	-3.93	-10.32	-7.46	4.34	15.89	6.58	4.83	5.63	4.65
<i>MSCI EAFE + Canada Index</i>						-4.22	-11.03	-8.15	2.22	12.56	4.80	3.91	5.20	4.29
Emerging Markets Equity	5.7%				\$1,277.9	-3.16	-10.94	-6.10	2.42	12.14	-1.95	4.43	4.17	2.33
<i>MSCI Emerging Markets IMI</i>						-4.02	-11.60	-6.06	-0.77	11.68	-2.23	2.34	2.97	1.50
Core Fixed Income	15.0%	13.0	8.0	18.0	\$3,377.5	-1.26	-3.62	-3.57	-1.60	1.15	-5.03	0.00	-0.02	0.87
<i>50% Barclays U.S. Aggregate Bond / 50% Intermediate Treasury</i>						-0.96	-2.98	-2.97	-1.42	0.90	-5.26	0.14	-0.07	0.98
Emerging Market Debt ⁽³⁾	1.0%	0.0	0.0	0.0	\$233.3	0.82	-4.81	-2.21	2.26	11.04	-2.78	0.01	0.32	0.73
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						-0.94	-5.91	-3.66	2.07	10.93	-3.97	0.08	0.07	0.49
Non-Core Fixed Income	5.4%	2.0	0.0	7.0	\$1,205.1	-1.26	-2.04	-0.73	5.22	6.55	2.31	3.38	3.81	3.74
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						-1.17	-2.07	-0.72	4.63	6.23	1.19	2.79	3.36	3.54
Liquidity Fund	1.1%	1.0	0.0	3.0	\$254.6	0.49	1.30	1.75	4.83	5.59	2.22	2.01	1.86	1.29
<i>U.S. 3-Month T-Bill</i>						0.45	1.36	1.77	4.06	4.77	0.87	1.35	1.36	1.02
Real Estate ⁽¹⁾	7.8%	10.0	5.0	15.0	\$1,747.2	N/A	-1.72	-1.66	-6.46	-6.48	7.35	5.72	6.40	7.85
<i>Open End Diversified Core Equity (NFI-ODCE Index) 1Q in Arrears[^]</i>						N/A	-2.88	-2.88	-11.01	-10.73	7.04	5.56	6.02	7.77
Infrastructure and Natural Resources ⁽¹⁾	2.8%	7.0	2.0	12.0	\$632.9	N/A	0.81	0.73	7.64	9.41	7.54	N/A	N/A	N/A
<i>U.S. CPI + 400 basis points 1Q in Arrears[^]</i>						N/A	1.76	2.61	6.40	7.29	9.79	N/A	N/A	N/A
Private Investment ⁽¹⁾	12.2%	15.0	10.0	20.0	\$2,752.0	N/A	1.81	1.91	4.78	4.68	18.75	16.55	15.75	14.89
<i>Russell 3000 + 250 basis points 1Q in Arrears[^]</i>						N/A	11.75	13.17	31.59	15.44	15.67	14.75	15.54	13.48
Private Credit ⁽¹⁾	4.3%	10.0	5.0	15.0	\$957.4	N/A	2.32	2.66	5.82	7.36	9.04	N/A	N/A	N/A
<i>S&P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears[^]</i>						N/A	3.77	4.99	12.04	11.42	7.62	N/A	N/A	N/A
Absolute Return (Risk Mitigating)	5.2%	5.0	0.0	10.0	\$1,166.7	-0.46	-0.13	-0.14	-1.25	-1.89	1.36	1.02	2.33	2.32
<i>Dynamic weighted blend of HFRX and public indices ⁽²⁾</i>						-0.27	0.74	0.32	-0.99	-1.69	-0.03	1.84	1.80	1.29

⁽¹⁾ Actual performance, reported one quarter in arrears.

⁽²⁾ A blended benchmark comprised of the weightings of each of the investments utilized within the strategy

⁽³⁾ Legacy asset class



STATE EMPLOYEES' RETIREMENT FUND
 Net of All Fees and Expenses
 10/31/2023

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Compound, annualized returns								
						Month	Three Months	Fiscal YTD	Calendar YTD	One Year	Three Year	Five Year	Seven Year	Ten Year
State Employees' Retirement Fund					\$20,359.8	-1.75	-5.25	-3.39	4.37	6.70	4.91	5.93	6.41	5.91
<i>Policy Benchmark</i>						<i>-0.64</i>	<i>-2.30</i>	<i>-0.54</i>	<i>7.08</i>	<i>6.83</i>	<i>5.03</i>	<i>6.35</i>	<i>6.80</i>	<i>6.10</i>
<i>Excess Return</i>						<i>(1.10)</i>	<i>(2.96)</i>	<i>(2.85)</i>	<i>(2.71)</i>	<i>(0.13)</i>	<i>(0.12)</i>	<i>(0.42)</i>	<i>(0.39)</i>	<i>(0.19)</i>
Global Equities	47.3%	37.0	23.0	52.0	\$9,632.9	-3.06	-9.48	-6.20	7.60	10.89	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>MSCI All Country World IMI Index</i>						<i>-3.33</i>	<i>-10.06</i>	<i>-6.62</i>	<i>5.75</i>	<i>9.43</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Domestic Equity	29.6%				\$6,017.6	-2.65	-8.86	-5.70	9.86	9.21	9.39	10.35	11.61	10.55
<i>MSCI USA IMI Index</i>						<i>-2.69</i>	<i>-9.20</i>	<i>-5.95</i>	<i>9.16</i>	<i>8.07</i>	<i>9.07</i>	<i>10.16</i>	<i>11.51</i>	<i>10.48</i>
Developed Markets Equity	12.1%				\$2,462.8	-4.00	-10.25	-7.40	4.50	16.06	6.63	4.86	5.65	4.66
<i>MSCI EAFE + Canada Index</i>						<i>-4.22</i>	<i>-11.03</i>	<i>-8.15</i>	<i>2.22</i>	<i>12.56</i>	<i>4.80</i>	<i>3.91</i>	<i>5.20</i>	<i>4.29</i>
Emerging Markets Equity	5.7%				\$1,152.4	-3.09	-10.88	-6.04	2.50	12.23	-1.92	4.45	4.18	2.34
<i>MSCI Emerging Markets IMI</i>						<i>-4.02</i>	<i>-11.60</i>	<i>-6.06</i>	<i>-0.77</i>	<i>11.68</i>	<i>-2.23</i>	<i>2.34</i>	<i>2.97</i>	<i>1.50</i>
Core Fixed Income	14.8%	13.0	8.0	18.0	\$3,005.6	-1.25	-3.60	-3.55	-1.62	1.12	-5.04	-0.01	-0.02	0.87
<i>50% Barclays U.S. Aggregate Bond / 50% Intermediate Treasury</i>						<i>-0.96</i>	<i>-2.98</i>	<i>-2.97</i>	<i>-1.42</i>	<i>0.90</i>	<i>-5.26</i>	<i>0.14</i>	<i>-0.07</i>	<i>0.98</i>
Emerging Market Debt ⁽³⁾	1.0%	0.0	0.0	0.0	\$197.6	0.72	-4.97	-2.36	1.86	10.61	-2.90	-0.07	0.26	0.69
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						<i>-0.94</i>	<i>-5.91</i>	<i>-3.66</i>	<i>2.07</i>	<i>10.93</i>	<i>-3.97</i>	<i>0.08</i>	<i>0.07</i>	<i>0.49</i>
Non-Core Fixed Income	5.3%	2.0	0.0	7.0	\$1,068.3	-1.25	-2.03	-0.71	5.23	6.56	2.31	3.38	3.82	3.74
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						<i>-1.17</i>	<i>-2.07</i>	<i>-0.72</i>	<i>4.63</i>	<i>6.23</i>	<i>1.19</i>	<i>2.79</i>	<i>3.36</i>	<i>3.54</i>
Liquidity Fund	0.7%	1.0	0.0	3.0	\$133.1	0.37	1.41	1.86	4.93	5.57	2.18	1.99	1.85	1.28
<i>U.S. 3-Month T-Bill</i>						<i>0.45</i>	<i>1.36</i>	<i>1.77</i>	<i>4.06</i>	<i>4.77</i>	<i>0.87</i>	<i>1.35</i>	<i>1.36</i>	<i>1.02</i>
Real Estate ⁽¹⁾	7.5%	10.0	5.0	15.0	\$1,519.9	<i>N/A</i>	-1.72	-1.66	-6.46	-6.48	7.35	5.72	6.40	7.85
<i>Open End Diversified Core Equity (NFI-ODCE Index) 1Q in Arrears[^]</i>						<i>N/A</i>	<i>-2.88</i>	<i>-2.88</i>	<i>-11.01</i>	<i>-10.73</i>	<i>7.04</i>	<i>5.56</i>	<i>6.02</i>	<i>7.77</i>
Infrastructure and Natural Resources ⁽¹⁾	2.8%	7.0	2.0	12.0	\$571.0	<i>N/A</i>	0.81	0.73	7.64	9.40	7.54	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>U.S. CPI + 400 basis points 1Q in Arrears[^]</i>						<i>N/A</i>	<i>1.76</i>	<i>2.61</i>	<i>6.40</i>	<i>7.29</i>	<i>9.79</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Private Investment ⁽¹⁾	11.5%	15.0	10.0	20.0	\$2,342.3	<i>N/A</i>	1.80	1.90	4.77	4.68	18.75	16.54	15.75	14.89
<i>Russell 3000 + 250 basis points 1Q in Arrears[^]</i>						<i>N/A</i>	<i>11.75</i>	<i>13.17</i>	<i>31.59</i>	<i>15.44</i>	<i>15.67</i>	<i>14.75</i>	<i>15.54</i>	<i>13.48</i>
Private Credit ⁽¹⁾	4.2%	10.0	5.0	15.0	\$853.3	<i>N/A</i>	2.32	2.66	5.81	7.35	9.03	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
<i>S&P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears[^]</i>						<i>N/A</i>	<i>3.77</i>	<i>4.99</i>	<i>12.04</i>	<i>11.42</i>	<i>7.62</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Absolute Return (Risk Mitigating)	5.1%	5.0	0.0	10.0	\$1,035.7	-0.46	-0.12	-0.13	-1.24	-1.88	1.36	1.03	2.34	2.32
<i>Dynamic weighted blend of HFRX and public indices ⁽²⁾</i>						<i>-0.27</i>	<i>0.74</i>	<i>0.32</i>	<i>-0.99</i>	<i>-1.69</i>	<i>-0.03</i>	<i>1.84</i>	<i>1.80</i>	<i>1.29</i>

⁽¹⁾ Actual performance, reported one quarter in arrears.

⁽²⁾ A blended benchmark comprised of the weightings of each of the investments utilized within the strategy

⁽³⁾ Legacy asset class



MUNICIPAL EMPLOYEES RETIREMENT FUND

Net of All Fees and Expenses

10/31/2023

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Compound, annualized returns								
						Month	Three Months	Fiscal YTD	Calendar YTD	One Year	Three Year	Five Year	Seven Year	Ten Year
Municipal Employees' Retirement Fund <i>Policy Benchmark</i> <i>Excess Return</i>					\$3,053.2	-1.69	-5.02	-3.25	3.76	6.35	4.67	5.76	6.04	5.68
						-0.64	-2.30	-0.54	7.08	6.83	5.03	6.30	6.50	5.84
						(1.05)	(2.73)	(2.70)	(3.32)	(0.48)	(0.36)	(0.54)	(0.46)	(0.16)
Global Equities <i>MSCI All Country World IMI Index</i>	45.0%	37.0	23.0	52.0	\$1,374.6	-3.05	-9.53	-6.22	7.32	11.38	N/A	N/A	N/A	N/A
						-3.33	-10.06	-6.62	5.75	9.43	N/A	N/A	N/A	N/A
Domestic Equity <i>MSCI USA IMI Index</i>	27.8%				\$848.1	-2.65	-8.87	-5.71	9.90	9.08	9.35	10.33	11.59	10.54
						-2.69	-9.20	-5.95	9.16	8.07	9.07	10.16	11.51	10.48
Developed Markets Equity <i>MSCI EAFE + Canada Index</i>	11.5%				\$351.7	-3.95	-10.35	-7.50	4.32	15.91	6.58	4.83	5.64	4.65
						-4.22	-11.03	-8.15	2.22	12.56	4.80	3.91	5.20	4.29
Emerging Markets Equity <i>MSCI Emerging Markets IMI</i>	5.7%				\$174.8	-3.16	-10.98	-6.15	2.34	12.05	-1.97	4.41	4.16	2.33
						-4.02	-11.60	-6.06	-0.77	11.68	-2.23	2.34	2.97	1.50
Core Fixed Income <i>50% Barclays U.S. Aggregate Bond / 50% Intermediate Treasury</i>	14.9%	13.0	8.0	18.0	\$456.0	-1.27	-3.62	-3.57	-1.63	1.15	-5.03	0.00	-0.02	0.87
						-0.96	-2.98	-2.97	-1.42	0.90	-5.26	0.14	-0.07	0.98
Emerging Market Debt ⁽³⁾ <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	1.1%	0.0	0.0	0.0	\$32.9	0.76	-4.90	-2.29	2.19	10.96	-2.80	-0.01	0.31	0.72
						-0.94	-5.91	-3.66	2.07	10.93	-3.97	0.08	0.07	0.49
Non-Core Fixed Income <i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>	5.3%	2.0	0.0	7.0	\$160.1	-1.27	-2.06	-0.74	5.21	6.55	2.31	3.38	3.81	3.74
						-1.17	-2.07	-0.72	4.63	6.23	1.19	2.79	3.36	3.54
Liquidity Fund <i>U.S. 3-Month T-Bill</i>	1.5%	1.0	0.0	3.0	\$45.0	0.46	1.37	1.82	4.54	4.95	1.93	1.84	1.74	1.21
						0.45	1.36	1.77	4.06	4.77	0.87	1.35	1.36	1.02
Real Estate ⁽¹⁾ <i>Open End Diversified Core Equity (NFI-ODCE Index) 1Q in Arrears^</i>	7.9%	10.0	5.0	15.0	\$241.5	N/A	-1.72	-1.66	-6.46	-6.48	7.35	5.72	6.40	7.85
						N/A	-2.88	-2.88	-11.01	-10.73	7.04	5.56	6.02	7.77
Infrastructure and Natural Resources ⁽¹⁾ <i>U.S. CPI + 400 basis points 1Q in Arrears^</i>	2.8%	7.0	2.0	12.0	\$85.2	N/A	0.81	0.73	7.65	9.39	7.53	N/A	N/A	N/A
						N/A	1.76	2.61	6.40	7.29	9.79	N/A	N/A	N/A
Private Investment ⁽¹⁾ <i>Russell 3000 + 250 basis points 1Q in Arrears^</i>	12.4%	15.0	10.0	20.0	\$377.1	N/A	1.81	1.91	4.78	4.68	18.75	16.55	15.75	14.90
						N/A	11.75	13.17	31.59	15.44	15.67	14.75	15.54	13.48
Private Credit ⁽¹⁾ <i>S&P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears^</i>	4.1%	10.0	5.0	15.0	\$124.3	N/A	2.32	2.66	5.89	7.43	9.05	N/A	N/A	N/A
						N/A	3.77	4.99	12.04	11.42	7.62	N/A	N/A	N/A
Absolute Return (Risk Mitigating) <i>Dynamic weighted blend of HFRX and public indices</i> ⁽²⁾	5.1%	5.0	0.0	10.0	\$156.5	-0.46	-0.12	-0.13	-1.24	-1.88	1.36	1.03	2.34	2.32
						-0.27	0.74	0.32	-0.99	-1.69	-0.03	1.84	1.80	1.29

⁽¹⁾ Actual performance, reported one quarter in arrears.

⁽²⁾ A blended benchmark comprised of the weightings of each of the investments utilized within the strategy

⁽³⁾ Legacy asset class