



**TEACHER'S RETIREMENT FUND**

Net of All Fees and Expenses  
Periods Ending November 30, 2018

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> <i>Custom Benchmark</i>	100.0%				\$17,512.3	0.91	-3.14	-1.25	-1.31	-0.33	7.01	5.79	7.93	8.80
						1.06	-3.26	-0.96	-0.84	0.39	7.06	5.77	7.94	9.36
<b>Mutual Equity</b> <i>Russell 3000</i>	22.7%	21.0	17.0	25.0	\$3,983.9	2.00	-5.63	0.85	4.18	5.06	11.71	10.53	14.12	14.08
						2.00	-5.35	1.22	4.48	5.53	11.80	10.62	14.18	14.51
<b>Developed Markets ISF</b> <i>MSCI EAFE IMI 50% Hedged</i> <i>MSCI EAFE IMI Net</i>	20.1%	18.0	14.0	22.0	\$3,526.5	-0.23	-7.95	-7.27	-9.61	-8.60	5.38	4.19	8.66	9.02
						-0.16	-6.58	-5.83	-6.90	-5.36	5.00	4.42	8.68	8.96
						-0.21	-7.82	-7.47	-9.82	-8.23	4.42	2.24	6.77	8.00
<b>Emerging Markets ISF</b> <i>MSCI Emerging Markets IMI</i>	8.7%	9.0	7.0	11.0	\$1,530.1	3.73	-5.44	-6.34	-13.46	-10.17	8.67	1.42	3.09	9.04
						4.27	-5.83	-6.41	-12.83	-9.69	8.74	1.81	3.49	9.40
<b>Core Fixed Income</b> <i>Barclays U.S. Aggregate Bond Index</i>	7.3%	7.0	6.0	8.0	\$1,274.2	0.37	-0.45	0.12	-1.68	-1.23	1.51	1.91	2.09	4.27
						0.60	-0.84	-0.18	-1.79	-1.34	1.33	2.03	1.99	3.67
<b>Emerging Market Debt</b> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	5.8%	5.0	4.0	6.0	\$1,016.3	0.73	0.74	-1.06	-6.93	-5.56	4.93	2.17	2.84	7.63
						1.19	1.14	-0.65	-6.39	-5.10	4.51	1.68	2.86	7.29
<b>High Yield</b> <i>FTSE High Yield Market Capped Index</i> <i>Formerly "Citigroup US High Yield Market Capped"</i>	5.5%	5.0	4.0	6.0	\$968.7	-1.00	-2.11	-0.46	-0.87	-0.15	6.30	3.81	6.18	10.59
						-0.90	-1.91	-0.21	0.10	0.43	6.94	4.03	6.28	11.22
<b>Inflation Linked Bonds</b> <i>Barclays World Gov't Inflation Linked Bond Index</i>	3.2%	3.0	2.0	4.0	\$565.3	-0.79	-3.14	-3.76	-5.17	-4.28	1.75	0.64	0.44	3.85
						-0.80	-2.79	-3.59	-5.19	-4.04	1.68	0.82	0.48	3.85
<b>Liquidity Fund <sup>(1)</sup></b> <i>One Month Libor</i>	4.0%	6.0	5.0	7.0	\$693.1	0.20	0.57	0.94	1.78	1.87	1.51	0.68	0.72	0.66
						0.19	0.55	0.90	1.79	1.90	1.12	0.74	0.59	0.51
<b>Real Estate</b> <i>NCREIF Property <sup>(2)</sup></i>	6.7%	7.0	5.0	9.0	\$1,173.6	0.48	1.75	2.38	7.40	7.26	7.75	9.61	9.72	3.31
						N/A	1.81	1.81	5.40	7.19	8.25	9.77	10.23	6.22
<b>Private Investment <sup>(3)</sup></b> <i>S&amp;P 500</i>	7.6%	11.0	8.0	14.0	\$1,322.5	1.80	3.24	5.59	14.68	14.91	11.39	12.87	12.46	10.58
						2.04	-4.40	2.39	5.11	6.27	12.16	11.12	14.40	14.32
<b>Alternative Investment Fund</b> <i>90-Day T-Bill</i>	8.3%	8.0	6.0	10.0	\$1,458.1	0.34	0.75	1.51	3.62	3.73	4.26	3.41	4.29	N/A
						0.21	0.53	0.87	1.69	1.80	0.97	0.59	0.45	N/A

<sup>(1)</sup> Pending quarterly Plan Contribution

<sup>(2)</sup> Calculated on a quarterly basis

<sup>(3)</sup> Pending commitments to Private Investments.



**STATE EMPLOYEES' RETIREMENT FUND**

Net of All Fees and Expenses  
Periods Ending November 30, 2018

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> <i>Custom Benchmark</i>	100.0%				\$12,275.2	0.89	-3.20	-1.33	-1.24	-0.27	7.06	5.83	7.97	8.88
						1.04	-3.35	-1.04	-0.93	0.31	7.03	5.77	7.97	9.46
<b>Mutual Equity</b> <i>Russell 3000</i>	22.2%	21.0	17.0	25.0	\$2,724.0	2.00	-5.63	0.85	4.18	5.06	11.71	10.53	14.12	14.08
						2.00	-5.35	1.22	4.48	5.53	11.80	10.62	14.18	14.51
<b>Developed Markets ISF</b> <i>MSCI EAFE IMI 50% Hedged</i> <i>MSCI EAFE IMI Net</i>	20.0%	18.0	14.0	22.0	\$2,449.3	-0.23	-7.95	-7.27	-9.61	-8.60	5.37	4.19	8.66	9.02
						-0.16	-6.58	-5.83	-6.90	-5.36	5.00	4.42	8.68	8.96
						-0.21	-7.82	-7.47	-9.82	-8.23	4.42	2.24	6.77	8.00
<b>Emerging Markets ISF</b> <i>MSCI Emerging Markets IMI</i>	8.7%	9.0	7.0	11.0	\$1,064.6	3.73	-5.44	-6.34	-13.46	-10.17	8.67	1.42	3.09	9.04
						4.27	-5.83	-6.41	-12.83	-9.69	8.74	1.81	3.49	9.40
<b>Core Fixed Income</b> <i>Barclays U.S. Aggregate Bond Index</i>	8.1%	8.0	6.0	10.0	\$999.5	0.37	-0.45	0.12	-1.68	-1.23	1.51	1.91	2.09	4.27
						0.60	-0.84	-0.18	-1.79	-1.34	1.33	2.03	1.99	3.67
<b>Emerging Market Debt</b> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	4.8%	4.0	3.0	5.0	\$589.6	0.73	0.74	-1.06	-6.93	-5.56	4.93	2.17	2.84	7.63
						1.19	1.14	-0.65	-6.39	-5.10	4.51	1.68	2.86	7.29
<b>High Yield</b> <i>FTSE High Yield Market Capped Index</i> <i>Formerly "Citigroup US High Yield Market Capped"</i>	5.2%	5.0	4.0	6.0	\$633.4	-1.00	-2.11	-0.46	-0.87	-0.15	6.30	3.81	6.18	10.59
						-0.90	-1.91	-0.21	0.10	0.43	6.94	4.03	6.28	11.22
<b>Inflation Linked Bonds</b> <i>Barclays World Gov't Inflation Linked Bond Index</i>	4.8%	5.0	4.0	6.0	\$590.1	-0.79	-3.14	-3.76	-5.17	-4.28	1.75	0.65	0.44	3.85
						-0.80	-2.79	-3.59	-5.19	-4.04	1.68	0.82	0.48	3.85
<b>Liquidity Fund</b> <i>One Month Libor</i>	3.8%	4.0	3.0	5.0	\$465.9	0.20	0.57	0.94	1.77	1.87	1.52	0.68	0.72	0.67
						0.19	0.55	0.90	1.79	1.90	1.12	0.74	0.59	0.51
<b>Real Estate</b> <i>NCREIF Property <sup>(1)</sup></i>	6.7%	7.0	5.0	9.0	\$818.3	0.48	1.75	2.38	7.40	7.26	7.75	9.61	9.72	3.32
						N/A	1.81	1.81	5.40	7.19	8.25	9.77	10.23	6.22
<b>Private Investment <sup>(2)</sup></b> <i>S&amp;P 500</i>	7.5%	11.0	8.0	14.0	\$926.4	1.80	3.24	5.59	14.68	14.91	11.39	12.87	12.46	10.58
						2.04	-4.40	2.39	5.11	6.27	12.16	11.12	14.40	14.32
<b>Alternative Investment Fund</b> <i>90-Day T-Bill</i>	8.3%	8.0	6.0	10.0	\$1,014.0	0.34	0.75	1.51	3.62	3.73	4.26	3.41	4.29	N/A
						0.21	0.53	0.87	1.69	1.80	0.97	0.59	0.45	N/A

<sup>(1)</sup> Calculated on a quarterly basis

<sup>(2)</sup> Pending commitments to Private Investments.



**MUNICIPAL EMPLOYEES RETIREMENT FUND**

Net of All Fees and Expenses  
Periods Ending November 30, 2018

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>Custom Benchmark</i>	100.0%				\$2,561.6	0.67	-2.56	-0.94	-1.01	-0.12	6.74	5.56	7.16	8.17
						0.80	-2.79	-0.82	-0.92	0.20	6.74	5.33	7.24	8.78
<b>Mutual Equity</b> <i>Russell 3000</i>	17.2%	16.0	13.0	19.0	\$441.2	2.00	-5.63	0.85	4.18	5.06	11.71	10.53	14.12	14.08
						2.00	-5.35	1.22	4.48	5.53	11.80	10.62	14.18	14.51
<b>Developed Markets ISF</b> <i>MSCI EAFE IMI 50% Hedged</i> <i>MSCI EAFE IMI Net</i>	14.3%	14.0	11.0	17.0	\$367.2	-0.23	-7.95	-7.27	-9.61	-8.59	5.37	4.19	8.66	9.02
						-0.16	-6.58	-5.83	-6.90	-5.36	5.00	4.42	8.68	8.96
						-0.21	-7.82	-7.47	-9.82	-8.23	4.42	2.24	6.77	8.00
<b>Emerging Markets ISF</b> <i>MSCI Emerging Markets IMI</i>	7.1%	7.0	6.0	8.0	\$182.3	3.73	-5.44	-6.34	-13.46	-10.17	8.67	1.42	3.10	9.05
						4.27	-5.83	-6.41	-12.83	-9.69	8.74	1.81	3.49	9.40
<b>Core Fixed Income</b> <i>Barclays U.S. Aggregate Bond Index</i>	8.3%	8.0	6.0	10.0	\$211.4	0.37	-0.45	0.12	-1.68	-1.23	1.51	1.91	2.09	4.27
						0.60	-0.84	-0.18	-1.79	-1.34	1.33	2.03	1.99	3.67
<b>Emerging Market Debt</b> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	8.1%	8.0	6.0	10.0	\$207.8	0.73	0.74	-1.06	-6.93	-5.56	4.93	2.18	2.84	7.63
						1.19	1.14	-0.65	-6.39	-5.10	4.51	1.68	2.86	7.29
<b>High Yield</b> <i>FTSE High Yield Market Capped Index</i> <i>Formerly "Citigroup US High Yield Market Capped"</i>	14.5%	14.0	11.0	17.0	\$371.2	-1.00	-2.11	-0.46	-0.87	-0.16	6.30	3.81	6.18	10.58
						-0.90	-1.91	-0.21	0.10	0.43	6.94	4.03	6.28	11.22
<b>Inflation Linked Bonds</b> <i>Barclays World Gov't Inflation Linked Bond Index</i>	5.2%	5.0	4.0	6.0	\$132.6	-0.79	-3.14	-3.76	-5.17	-4.28	1.75	0.64	0.44	3.85
						-0.80	-2.79	-3.59	-5.19	-4.04	1.68	0.82	0.48	3.85
<b>Liquidity Fund</b> <i>One Month Libor</i>	2.9%	3.0	2.0	4.0	\$73.5	0.20	0.57	0.94	1.79	1.88	1.52	0.68	0.72	0.68
						0.19	0.55	0.90	1.79	1.90	1.12	0.74	0.59	0.51
<b>Real Estate</b> <i>NCREIF Property <sup>(1)</sup></i>	6.6%	7.0	5.0	9.0	\$170.0	0.48	1.75	2.38	7.40	7.26	7.75	9.61	9.72	3.30
						N/A	1.81	1.81	5.40	7.19	8.25	9.77	10.23	6.22
<b>Private Investment</b> <i>S&amp;P 500</i>	7.5%	10.0	7.0	13.0	\$193.3	1.80	3.24	5.59	14.68	14.91	11.39	12.87	12.46	10.58
						2.04	-4.40	2.39	5.11	6.27	12.16	11.12	14.40	14.32
<b>Alternative Investment Fund</b> <i>90-Day T-Bill</i>	8.2%	8.0	6.0	10.0	\$211.0	0.34	0.75	1.51	3.62	3.73	4.26	3.41	4.29	N/A
						0.21	0.53	0.87	1.69	1.80	0.97	0.59	0.45	N/A

<sup>(1)</sup> Calculated on a quarterly basis