



TEACHER'S RETIREMENT FUND

Net of All Fees and Expenses

Periods Ending October 31, 2020

Funds	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
Benchmark														
Teacher's Retirement Fund	100.0%				\$18,985.9	-0.56	1.04	4.73	1.11	4.54	4.80	6.96	6.28	7.10
Policy Benchmark						-0.10	1.74	6.27	2.46	5.63	5.85	7.37	6.55	7.39
Dynamic Benchmark						-0.31	1.10	5.31	2.18	5.58	5.57	7.22	6.51	N/A
Domestic Equity	20.6%	20.0	15.0	25.0	\$3,906.7	-2.18	0.80	6.85	3.36	10.37	9.83	11.45	11.06	12.70
Russell 3000						-2.16	1.11	6.85	3.14	10.15	10.04	11.48	11.09	12.80
Developed Markets ISF	10.9%	11.0	6.0	16.0	\$2,074.7	-3.71	-1.40	1.74	-9.20	-5.24	-1.25	4.11	3.84	5.60
MSCI EAFE IMI Net						-3.92	-1.03	1.42	-10.34	-6.09	0.05	4.07	4.08	5.64
Emerging Markets ISF	10.4%	9.0	4.0	14.0	\$1,981.6	2.36	4.54	15.51	6.98	14.74	4.51	9.63	4.22	3.26
MSCI Emerging Markets IMI						1.80	2.57	11.77	0.49	7.63	1.47	7.36	3.14	2.21
Core Fixed Income	17.5%	13.0	8.0	18.0	\$3,329.2	-0.46	-1.15	0.43	6.58	6.52	4.70	3.92	3.52	3.48
Barclays U.S. Aggregate Bond Index						-0.45	-1.30	0.17	6.32	6.19	5.07	4.08	3.78	3.55
Emerging Market Debt	5.1%	5.0	0.0	10.0	\$970.1	0.07	-1.82	2.34	-5.35	-3.11	0.81	4.44	2.27	2.93
50% JPM EMBI Global Div / 50% JPM GBI EM Global Div						0.20	-1.65	1.66	-3.22	-1.39	2.38	4.82	2.46	3.51
High Yield	6.0%	3.0	0.0	8.0	\$1,136.2	0.39	0.91	5.72	1.49	4.08	3.61	5.54	4.36	5.68
Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index						0.49	0.42	5.09	0.33	2.97	3.87	5.92	4.57	5.92
Liquidity Fund	2.6%	2.0	0.0	3.0	\$490.4	0.01	0.05	0.07	0.62	0.93	1.75	1.53	0.90	0.77
50% U.S. 3-Month T-Bill / 50% Bloomberg Barclays US Government Treasury 1 to 3 Year Index						-0.02	-0.01	0.04	1.49	1.78	1.98	1.47	1.09	0.83
Real Assets⁽¹⁾	11.7%	19.0	10.0	25.0	\$2,227.0	N/A	-0.03	0.81	0.50	1.00	4.90	6.60	8.16	9.12
Blended Custom Benchmark 1Q in Arrears ⁽²⁾						N/A	-0.76	0.17	2.75	4.09	5.61	6.87	8.34	9.75
Private Investment⁽¹⁾	7.9%	10.0	5.0	15.0	\$1,505.6	N/A	9.66	10.91	8.45	11.40	13.56	12.26	13.28	12.90
Russell 3000 + 250 basis points 1Q in Arrears ⁽²⁾						N/A	14.23	29.24	13.34	15.32	12.83	13.16	12.56	13.75
Private Credit⁽¹⁾	0.4%	5.0	0.0	10.0	\$84.0	N/A	3.16	7.47	N/A	N/A	N/A	N/A	N/A	N/A
S&P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears ⁽²⁾						N/A	7.40	12.37	N/A	N/A	N/A	N/A	N/A	N/A
Alternative Investment Fund	6.7%	3.0	0.0	10.0	\$1,280.3	-0.17	1.24	2.47	-4.10	-2.93	1.74	2.22	2.73	N/A
Absolute Return Strategy blended benchmark ⁽³⁾						-0.14	0.07	0.46	3.25	4.03	4.03	2.61	1.86	N/A

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

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

⁽³⁾ 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.



STATE EMPLOYEES' RETIREMENT FUND

Net of All Fees and Expenses

Periods Ending October 31, 2020

Funds Benchmark	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
State Employees' Retirement Fund	100.0%				\$13,765.1	-0.56	1.05	4.78	1.18	4.61	4.89	7.02	6.34	7.16
Policy Benchmark						-0.10	1.74	6.27	2.46	5.63	5.85	7.37	6.56	7.43
Dynamic Benchmark						-0.31	1.12	5.38	2.28	5.68	5.67	7.33	6.61	N/A
Domestic Equity	20.6%	20.0	15.0	25.0	\$2,837.4	-2.18	0.80	6.85	3.36	10.37	9.83	11.45	11.06	12.70
Russell 3000						-2.16	1.11	6.85	3.14	10.15	10.04	11.48	11.09	12.80
Developed Markets ISF	10.9%	11.0	6.0	16.0	\$1,500.5	-3.71	-1.40	1.74	-9.20	-5.24	-1.25	4.11	3.83	5.60
MSCI EAFE IMI Net						-3.92	-1.03	1.42	-10.34	-6.09	0.05	4.07	4.08	5.64
Emerging Markets ISF	10.5%	9.0	4.0	14.0	\$1,442.1	2.36	4.54	15.51	6.98	14.74	4.51	9.63	4.22	3.26
MSCI Emerging Markets IMI						1.80	2.57	11.77	0.49	7.63	1.47	7.36	3.14	2.21
Core Fixed Income	17.4%	13.0	8.0	18.0	\$2,399.0	-0.46	-1.15	0.43	6.58	6.52	4.70	3.92	3.52	3.48
Barclays U.S. Aggregate Bond Index						-0.45	-1.30	0.17	6.32	6.19	5.07	4.08	3.78	3.55
Emerging Market Debt	5.1%	5.0	0.0	10.0	\$702.7	0.07	-1.82	2.34	-5.35	-3.11	0.81	4.44	2.27	2.93
50% JPM EMBI Global Div / 50% JPM GBI EM Global Div						0.20	-1.65	1.66	-3.22	-1.39	2.38	4.82	2.46	3.51
High Yield	5.9%	3.0	0.0	8.0	\$815.6	0.39	0.91	5.72	1.49	4.08	3.61	5.54	4.36	5.69
Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index						0.49	0.42	5.09	0.33	2.97	3.87	5.92	4.57	5.92
Liquidity Fund	2.7%	2.0	0.0	3.0	\$372.8	0.01	0.05	0.08	0.62	0.93	1.75	1.53	0.90	0.78
50% U.S. 3-Month T-Bill / 50% Bloomberg Barclays US Government Treasury 1 to 3 Year Index						-0.02	-0.01	0.04	1.49	1.78	1.98	1.47	1.09	0.83
Real Assets⁽¹⁾	11.7%	19.0	10.0	25.0	\$1,608.6	N/A	-0.03	0.81	0.50	1.00	4.90	6.60	8.16	9.12
Blended Custom Benchmark 1Q in Arrears ⁽²⁾						N/A	-0.76	0.17	2.75	4.09	5.61	6.87	8.34	9.75
Private Investment⁽¹⁾	7.9%	10.0	5.0	15.0	\$1,090.1	N/A	9.66	10.91	8.45	11.40	13.56	12.26	13.28	12.90
Russell 3000 + 250 basis points 1Q in Arrears ⁽²⁾						N/A	14.23	29.24	13.34	15.32	12.83	13.16	12.56	13.75
Private Credit⁽¹⁾	0.5%	5.0	0.0	10.0	\$61.9	N/A	3.16	7.47	N/A	N/A	N/A	N/A	N/A	N/A
S&P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears ⁽²⁾						N/A	7.40	12.37	N/A	N/A	N/A	N/A	N/A	N/A
Alternative Investment Fund	6.8%	3.0	0.0	8.0	\$934.4	-0.17	1.24	2.47	-4.10	-2.93	1.74	2.22	2.73	N/A
Absolute Return Strategy blended benchmark ⁽³⁾						-0.14	0.07	0.46	3.25	4.03	4.03	2.61	1.86	N/A

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

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

⁽³⁾ 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.



MUNICIPAL EMPLOYEES RETIREMENT FUND

Net of All Fees and Expenses
Periods Ending October 31, 2020

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
Municipal Employees' Retirement Fund	100.0%				\$2,802.3	-0.56	1.04	4.75	1.18	4.72	4.91	6.81	6.11	6.64
<i>Policy Benchmark</i>						-0.10	1.74	6.27	2.46	5.63	5.73	7.13	6.19	7.02
<i>Dynamic Benchmark</i>						-0.31	1.10	5.34	2.29	5.79	5.63	7.08	6.23	N/A
Domestic Equity	20.7%	20.0	15.0	25.0	\$579.6	-2.18	0.80	6.85	3.36	10.37	9.83	11.45	11.06	12.70
<i>Russell 3000</i>						-2.16	1.11	6.85	3.14	10.15	10.04	11.48	11.09	12.80
Developed Markets ISF	11.0%	11.0	6.0	16.0	\$307.2	-3.71	-1.40	1.74	-9.20	-5.24	-1.25	4.11	3.84	5.60
<i>MSCI EAFE IMI Net</i>						-3.92	-1.03	1.42	-10.34	-6.09	0.05	4.07	4.08	5.64
Emerging Markets ISF	10.5%	9.0	4.0	14.0	\$294.2	2.36	4.54	15.51	6.98	14.74	4.51	9.63	4.23	3.26
<i>MSCI Emerging Markets IMI</i>						1.80	2.57	11.77	0.49	7.63	1.47	7.36	3.14	2.21
Core Fixed Income	17.6%	13.0	8.0	18.0	\$492.5	-0.46	-1.15	0.43	6.58	6.52	4.70	3.92	3.52	3.49
<i>Barclays U.S. Aggregate Bond Index</i>						-0.45	-1.30	0.17	6.32	6.19	5.07	4.08	3.78	3.55
Emerging Market Debt	5.1%	5.0	0.0	10.0	\$143.3	0.07	-1.82	2.34	-5.35	-3.11	0.81	4.44	2.27	2.93
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						0.20	-1.65	1.66	-3.22	-1.39	2.38	4.82	2.46	3.51
High Yield	6.0%	3.0	0.0	8.0	\$168.0	0.39	0.91	5.72	1.49	4.08	3.61	5.54	4.36	5.68
<i>Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index</i>						0.49	0.42	5.09	0.33	2.97	3.87	5.92	4.57	5.92
Liquidity Fund	2.2%	2.0	0.0	3.0	\$63.0	0.01	0.05	0.08	0.62	0.93	1.75	1.53	0.90	0.79
<i>50% U.S. 3-Month T-Bill / 50% Bloomberg Barclays US Government Treasury 1 to 3 Year Index</i>						-0.02	-0.01	0.04	1.49	1.78	1.98	1.47	1.09	0.83
Real Assets⁽¹⁾	11.7%	19.0	15.0	25.0	\$328.9	N/A	-0.03	0.81	0.50	1.00	4.90	6.60	8.16	9.12
<i>Blended Custom Benchmark 1Q in Arrears⁽²⁾</i>						N/A	-0.76	0.17	2.75	4.09	5.61	6.87	8.34	9.75
Private Investment⁽¹⁾	7.9%	10.0	5.0	15.0	\$222.8	N/A	9.66	10.91	8.45	11.40	13.56	12.26	13.28	12.90
<i>Russell 3000 + 250 basis points 1Q in Arrears⁽²⁾</i>						N/A	14.23	29.24	13.34	15.32	12.83	13.16	12.56	13.75
Private Credit⁽¹⁾	0.5%	5.0	0.0	10.0	\$12.9	N/A	3.16	7.47	N/A	N/A	N/A	N/A	N/A	N/A
<i>S&P / LSTA Leveraged Loan Index + 150 basis points 1Q in Arrears⁽²⁾</i>						N/A	7.40	12.37	N/A	N/A	N/A	N/A	N/A	N/A
Alternative Investment Fund	6.8%	3.0	0.0	10.0	\$190.0	-0.17	1.24	2.47	-4.10	-2.93	1.74	2.22	2.73	N/A
<i>Absolute Return Strategy blended benchmark⁽³⁾</i>						-0.14	0.07	0.46	3.25	4.03	4.03	2.61	1.86	N/A

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

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

⁽³⁾ 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.