



TEACHER'S RETIREMENT FUND

Net of All Fees and Expenses
Periods Ending May 31, 2019

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
Teacher's Retirement Fund	100.0%				\$17,858.4	-2.73	0.27	1.72	6.43	1.34	7.63	5.38	7.95	8.43
<i>Policy Benchmark</i>						-2.13	1.10	3.03	8.26	2.74	8.04	5.62	8.06	8.59
<i>Dynamic Benchmark</i>						-2.89	0.35	2.46	7.56	2.13	8.07	5.80	N/A	N/A
Domestic Equity	22.7%	20.0	15.0	25.0	\$4,054.9	-6.51	-1.28	1.56	11.16	2.26	11.58	9.24	13.30	13.62
<i>Russell 3000</i>						-6.47	-1.32	1.83	10.92	2.50	11.55	9.25	13.32	13.93
Developed Markets ISF	19.9%	11.0	6.0	16.0	\$3,562.2	-4.58	-1.15	-4.71	8.61	-6.42	6.88	3.66	9.38	8.10
<i>MSCI EAFE IMI 50% Hedged</i>						-4.68	-0.61	-3.06	8.93	-3.81	7.27	4.04	9.42	7.85
<i>MSCI EAFE IMI Net</i>						-4.87	-1.62	-5.42	7.69	-6.68	5.79	1.61	7.77	6.61
Emerging Markets ISF	9.1%	9.0	4.0	14.0	\$1,633.0	-5.72	-2.99	-3.67	5.65	-7.18	9.00	1.88	3.74	5.40
<i>MSCI Emerging Markets IMI</i>						-7.01	-4.44	-5.20	3.92	-9.41	9.25	1.58	3.78	5.08
Core Fixed Income	7.9%	16.0	11.0	21.0	\$1,406.1	1.51	3.09	5.43	4.15	5.38	2.68	2.36	2.26	4.04
<i>Barclays U.S. Aggregate Bond Index</i>						1.78	3.76	6.53	4.80	6.40	2.50	2.70	2.45	3.83
Emerging Market Debt	6.0%	5.0	0.0	10.0	\$1,075.5	0.11	0.12	5.33	5.66	2.70	5.53	2.16	3.18	6.23
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						0.35	0.44	6.05	5.34	3.90	4.97	1.71	3.11	5.88
High Yield	5.5%	6.0	1.0	11.0	\$983.0	-1.22	1.13	3.84	7.15	3.96	6.64	3.59	5.62	8.58
<i>FTSE High Yield Market Capped Index</i>						-1.38	0.91	4.61	7.32	5.00	6.81	3.98	5.89	8.93
Inflation Linked Bonds	3.3%	5.0	0.0	10.0	\$598.0	0.59	2.26	1.82	4.42	1.68	2.49	1.06	0.58	3.36
<i>Barclays World Gov't Inflation Linked Bond Index</i>						1.09	2.95	2.21	4.77	2.14	2.78	1.21	0.66	3.38
Liquidity Fund	3.3%	1.0	0.0	3.0	\$586.0	0.21	0.66	2.25	1.09	2.41	1.70	0.90	0.85	0.75
<i>One Month Libor</i>						0.20	0.62	2.14	1.03	2.31	1.47	0.97	0.75	0.60
Real Estate	6.8%	10.0	5.0	15.0	\$1,210.4	0.14	1.27	5.50	2.82	6.78	7.05	9.08	9.57	6.45
<i>ODCE Index 1Q in Arrears⁽¹⁾</i>						0.00	1.37	4.93	1.37	6.72	7.21	9.33	9.74	7.49
Private Investment	7.2%	10.0	5.0	15.0	\$1,279.1	2.73	4.81	13.22	4.53	16.77	12.96	12.87	12.69	12.95
<i>Russell 3000 + 250 basis points 1Q in Arrears⁽¹⁾</i>						0.00	6.07	10.15	18.25	10.83	14.19	11.11	14.60	14.70
Alternative Investment Fund	8.2%	7.0	2.0	12.0	\$1,470.0	-0.23	3.26	2.71	1.18	3.28	5.72	2.67	3.83	N/A
<i>90-Day T-Bill + 300 basis points</i>						0.47	0.88	2.33	1.26	2.50	1.40	0.88	0.65	N/A

⁽¹⁾ Calculated on a quarterly basis



STATE EMPLOYEES' RETIREMENT FUND

Net of All Fees and Expenses
Periods Ending May 31, 2019

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
State Employees' Retirement Fund <i>Policy Benchmark</i> <i>Dynamic Benchmark</i>	100.0%				\$12,784.6	-2.70 -2.13 -2.81	0.36 1.15 0.48	1.82 3.01 2.66	6.50 8.30 7.65	1.50 2.73 2.34	7.74 8.03 8.23	5.45 5.63 5.93	8.01 8.08 N/A	8.52 8.69 N/A
Domestic Equity <i>Russell 3000</i>	22.9%	20.0	15.0	25.0	\$2,924.1	-6.51 -6.47	-1.28 -1.32	1.57 1.83	11.16 10.92	2.26 2.50	11.58 11.55	9.24 9.25	13.29 13.32	13.62 13.93
Developed Markets ISF <i>MSCI EAFE IMI 50% Hedged</i> <i>MSCI EAFE IMI Net</i>	19.3%	11.0	6.0	16.0	\$2,464.9	-4.58 -4.68 -4.87	-1.15 -0.61 -1.62	-4.71 -3.06 -5.42	8.61 8.93 7.69	-6.43 -3.81 -6.68	6.88 7.27 5.79	3.66 4.04 1.61	9.38 9.42 7.77	8.10 7.85 6.61
Emerging Markets ISF <i>MSCI Emerging Markets IMI</i>	9.0%	9.0	4.0	14.0	\$1,149.3	-5.72 -7.01	-2.99 -4.44	-3.66 -5.20	5.66 3.92	-7.17 -9.41	9.00 9.25	1.88 1.58	3.74 3.78	5.40 5.08
Core Fixed Income <i>Barclays U.S. Aggregate Bond Index</i>	9.8%	16.0	11.0	21.0	\$1,249.1	1.51 1.78	3.09 3.76	5.43 6.53	4.15 4.80	5.38 6.40	2.68 2.50	2.36 2.70	2.26 2.45	4.04 3.83
Emerging Market Debt <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	4.9%	5.0	0.0	10.0	\$631.9	0.11 0.35	0.12 0.44	5.33 6.05	5.66 5.34	2.70 3.90	5.53 4.97	2.16 1.71	3.18 3.11	6.23 5.88
High Yield <i>FTSE High Yield Market Capped Index</i>	5.2%	6.0	1.0	11.0	\$659.0	-1.22 -1.38	1.13 0.91	3.84 4.61	7.15 7.32	3.96 5.00	6.64 6.81	3.59 3.98	5.62 5.89	8.58 8.93
Inflation Linked Bonds <i>Barclays World Gov't Inflation Linked Bond Index</i>	4.9%	5.0	0.0	10.0	\$624.3	0.59 1.09	2.26 2.95	1.82 2.21	4.42 4.77	1.68 2.14	2.49 2.78	1.06 1.21	0.59 0.66	3.36 3.38
Liquidity Fund <i>One Month Libor</i>	2.2%	1.0	0.0	3.0	\$275.3	0.21 0.20	0.66 0.62	2.25 2.14	1.09 1.03	2.42 2.31	1.72 1.47	0.90 0.97	0.86 0.75	0.76 0.60
Real Estate <i>ODCE Index 1Q in Arrears⁽¹⁾</i>	6.7%	10.0	5.0	15.0	\$857.1	0.14 0.00	1.27 1.37	5.50 4.93	2.82 1.37	6.78 6.72	7.05 7.21	9.08 9.33	9.57 9.74	6.46 7.49
Private Investment <i>Russell 3000 + 250 basis points 1Q in Arrears⁽¹⁾</i>	7.1%	10.0	5.0	15.0	\$906.7	2.73 0.00	4.81 6.07	13.22 10.15	4.53 18.25	16.78 10.83	12.96 14.19	12.87 11.11	12.70 14.60	12.95 14.70
Alternative Investment Fund <i>90-Day T-Bill + 300 basis points</i>	8.2%	7.0	2.0	12.0	\$1,042.9	-0.23 0.47	3.26 0.88	2.71 2.33	1.18 1.26	3.28 2.50	5.72 1.40	2.67 0.88	3.83 0.65	N/A N/A

⁽¹⁾ Calculated on a quarterly basis



MUNICIPAL EMPLOYEES RETIREMENT FUND

Net of All Fees and Expenses
Periods Ending May 31, 2019

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
Municipal Employees' Retirement Fund	100.0%				\$2,615.3	-2.12	0.64	2.58	6.24	2.35	7.35	5.23	7.21	7.84
<i>Policy Benchmark</i>						-2.13	0.80	3.10	7.40	2.85	7.42	5.15	7.29	8.05
<i>Dynamic Benchmark</i>						-2.23	0.72	3.36	7.38	3.12	7.68	5.54	N/A	N/A
Domestic Equity	17.3%	20.0	15.0	25.0	\$452.0	-6.51	-1.28	1.57	11.16	2.26	11.58	9.24	13.29	13.62
<i>Russell 3000</i>						-6.47	-1.32	1.83	10.92	2.50	11.55	9.25	13.32	13.93
Developed Markets ISF	14.5%	11.0	6.0	16.0	\$378.3	-4.58	-1.15	-4.71	8.62	-6.42	6.89	3.66	9.38	8.10
<i>MSCI EAFE IMI 50% Hedged</i>						-4.68	-0.61	-3.06	8.93	-3.81	7.27	4.04	9.42	7.85
<i>MSCI EAFE IMI Net</i>						-4.87	-1.62	-5.42	7.69	-6.68	5.79	1.61	7.77	6.61
Emerging Markets ISF	7.4%	9.0	4.0	14.0	\$194.0	-5.72	-2.99	-3.67	5.65	-7.18	9.00	1.88	3.74	5.41
<i>MSCI Emerging Markets IMI</i>						-7.01	-4.44	-5.20	3.92	-9.41	9.25	1.58	3.78	5.08
Core Fixed Income	9.0%	16.0	11.0	21.0	\$236.3	1.51	3.09	5.44	4.15	5.38	2.68	2.36	2.26	4.04
<i>Barclays U.S. Aggregate Bond Index</i>						1.78	3.76	6.53	4.80	6.40	2.50	2.70	2.45	3.83
Emerging Market Debt	8.5%	5.0	0.0	10.0	\$222.3	0.11	0.12	5.33	5.66	2.70	5.53	2.16	3.18	6.23
<i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>						0.35	0.44	6.05	5.34	3.90	4.97	1.71	3.11	5.88
High Yield	14.2%	6.0	1.0	11.0	\$372.3	-1.22	1.13	3.84	7.15	3.96	6.63	3.59	5.62	8.58
<i>FTSE High Yield Market Capped Index</i>						-1.38	0.91	4.61	7.32	5.00	6.81	3.98	5.89	8.93
Inflation Linked Bonds	5.3%	5.0	0.0	10.0	\$138.3	0.59	2.26	1.82	4.42	1.68	2.49	1.06	0.58	3.36
<i>Barclays World Gov't Inflation Linked Bond Index</i>						1.09	2.95	2.21	4.77	2.14	2.78	1.21	0.66	3.38
Liquidity Fund	1.8%	1.0	0.0	3.0	\$46.8	0.21	0.65	2.25	1.08	2.41	1.71	0.90	0.86	0.77
<i>One Month Libor</i>						0.20	0.62	2.14	1.03	2.31	1.47	0.97	0.75	0.60
Real Estate	6.7%	10.0	5.0	15.0	\$176.2	0.14	1.27	5.50	2.82	6.78	7.05	9.08	9.57	6.44
<i>ODCE Index 1Q in Arrears⁽¹⁾</i>						0.00	1.37	4.93	1.37	6.72	7.21	9.33	9.74	7.49
Private Investment	7.1%	10.0	5.0	15.0	\$185.3	2.73	4.81	13.22	4.53	16.77	12.96	12.87	12.70	12.95
<i>Russell 3000 + 250 basis points 1Q in Arrears⁽¹⁾</i>						0.00	6.07	10.15	18.25	10.83	14.19	11.11	14.60	14.70
Alternative Investment Fund	8.2%	7.0	2.0	12.0	\$213.4	-0.23	3.26	2.71	1.18	3.28	5.72	2.67	3.83	N/A
<i>90-Day T-Bill + 300 basis points</i>						0.47	0.88	2.33	1.26	2.50	1.40	0.88	0.65	N/A

⁽¹⁾ Calculated on a quarterly basis