



**TEACHER'S RETIREMENT FUND**

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

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Three Month	Fiscal YTD	Calendar YTD	One Year	Compound, annualized returns				
										Three Year	Five Year	Seven Year	Ten Year	
<b>Teacher's Retirement Fund</b> <i>Policy Benchmark</i> <i>Dynamic Benchmark</i>	<b>100.0%</b>				<b>\$18,276.4</b>	<b>-0.90</b> -0.59 -0.96	<b>3.43</b> 4.47 4.27	<b>-0.66</b> -0.27 -0.63	<b>10.03</b> 9.49 9.44	<b>3.14</b> 4.83 3.76	<b>7.49</b> 7.90 7.58	<b>5.57</b> 5.81 5.57	<b>7.64</b> 7.73 7.20	<b>7.95</b> 8.08 N/A
<b>Domestic Equity</b> <i>Russell 3000</i>	<b>21.7%</b>	<b>20.0</b>	15.0	25.0	<b>\$3,965.4</b>	<b>-1.90</b> -2.04	<b>6.29</b> 6.40	<b>-0.50</b> -0.58	<b>18.04</b> 18.02	<b>0.93</b> 1.31	<b>12.17</b> 12.24	<b>9.55</b> 9.60	<b>13.11</b> 13.14	<b>13.04</b> 13.35
<b>Developed Markets ISF</b> <i>MSCI EAFE IMI Net</i>	<b>16.9%</b>	<b>11.0</b>	6.0	16.0	<b>\$3,090.0</b>	<b>-2.77</b> -2.57	<b>1.70</b> 2.19	<b>-3.43</b> -2.68	<b>10.44</b> 11.31	<b>-3.82</b> -1.73	<b>6.87</b> 7.53	<b>4.03</b> 4.49	<b>8.29</b> 8.41	<b>6.95</b> 6.69
<b>Emerging Markets ISF</b> <i>MSCI Emerging Markets IMI</i>	<b>8.9%</b>	<b>9.0</b>	4.0	14.0	<b>\$1,631.7</b>	<b>-3.54</b> -4.89	<b>2.57</b> -0.46	<b>-4.00</b> -6.08	<b>8.33</b> 3.44	<b>-0.28</b> -5.06	<b>5.90</b> 5.19	<b>1.07</b> 0.17	<b>3.16</b> 2.93	<b>4.66</b> 4.05
<b>Core Fixed Income</b> <i>Barclays U.S. Aggregate Bond Index</i>	<b>9.8%</b>	<b>16.0</b>	11.0	21.0	<b>\$1,793.4</b>	<b>2.50</b> 2.59	<b>4.07</b> 4.11	<b>2.78</b> 2.82	<b>8.32</b> 9.10	<b>9.03</b> 10.17	<b>3.13</b> 3.09	<b>2.95</b> 3.35	<b>2.56</b> 2.82	<b>3.90</b> 3.91
<b>Emerging Market Debt</b> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	<b>5.9%</b>	<b>5.0</b>	0.0	10.0	<b>\$1,071.4</b>	<b>-2.90</b> -0.95	<b>2.35</b> 4.57	<b>-2.12</b> 0.11	<b>8.13</b> 10.16	<b>9.76</b> 12.90	<b>3.92</b> 4.22	<b>2.56</b> 2.41	<b>2.39</b> 2.50	<b>5.61</b> 5.69
<b>High Yield</b> <i>FTSE High Yield Market Capped Index</i>	<b>6.2%</b>	<b>6.0</b>	1.0	11.0	<b>\$1,126.6</b>	<b>-0.01</b> 0.28	<b>2.38</b> 3.08	<b>0.29</b> 0.68	<b>9.52</b> 10.62	<b>4.37</b> 5.99	<b>5.47</b> 5.87	<b>3.77</b> 4.40	<b>5.27</b> 5.60	<b>7.71</b> 8.08
<b>Inflation Linked Bonds</b> <i>Barclays World Gov't Inflation Linked Bond Index</i>	<b>5.1%</b>	<b>5.0</b>	0.0	10.0	<b>\$925.2</b>	<b>1.94</b> 2.40	<b>3.54</b> 4.08	<b>1.80</b> 2.58	<b>8.03</b> 9.04	<b>6.02</b> 7.25	<b>2.20</b> 2.46	<b>1.59</b> 1.87	<b>0.92</b> 1.09	<b>3.56</b> 3.64
<b>Liquidity Fund</b> <i>One Month Libor</i>	<b>3.5%</b>	<b>1.0</b>	0.0	3.0	<b>\$637.4</b>	<b>0.19</b> 0.19	<b>0.62</b> 0.58	<b>0.42</b> 0.38	<b>1.72</b> 1.62	<b>2.51</b> 2.38	<b>1.75</b> 1.63	<b>1.01</b> 1.08	<b>0.81</b> 0.82	<b>0.78</b> 0.65
<b>Real Estate<sup>(1)</sup></b> <i>ODCE Index 1Q in Arrears^</i>	<b>6.7%</b>	<b>10.0</b>	5.0	15.0	<b>\$1,215.4</b>	<b>N/A</b> N/A	<b>1.85</b> 1.42	<b>1.01</b> 0.00	<b>4.72</b> 2.81	<b>6.80</b> 6.43	<b>7.20</b> 6.94	<b>8.78</b> 9.04	<b>9.67</b> 9.56	<b>7.51</b> 8.46
<b>Private Investment<sup>(1)</sup></b> <i>Russell 3000 + 250 basis points 1Q in Arrears^</i>	<b>7.2%</b>	<b>10.0</b>	5.0	15.0	<b>\$1,320.3</b>	<b>N/A</b> N/A	<b>3.23</b> 14.48	<b>1.16</b> 0.00	<b>7.90</b> -0.99	<b>14.27</b> 11.27	<b>13.62</b> 13.05	<b>12.85</b> 10.32	<b>12.72</b> 13.52	<b>13.20</b> 13.55
<b>Alternative Investment Fund</b> <i>90-Day T-Bill + 300 basis points</i>	<b>8.2%</b>	<b>7.0</b>	2.0	12.0	<b>\$1,499.6</b>	<b>0.17</b> 0.45	<b>1.22</b> 1.34	<b>0.23</b> 0.87	<b>2.42</b> 3.61	<b>3.19</b> 5.36	<b>5.47</b> 2.65	<b>2.56</b> 1.63	<b>4.25</b> 1.18	<b>N/A</b> N/A

<sup>(1)</sup> Reported on a quarterly basis with a 90 day lag



**STATE EMPLOYEES' RETIREMENT FUND**

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

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Three Month	Fiscal YTD	Calendar YTD	One Year	Compound, annualized returns				
										Three Year	Five Year	Seven Year	Ten Year	
<b>State Employees' Retirement Fund</b> <i>Policy Benchmark</i> <i>Dynamic Benchmark</i>	<b>100.0%</b>				<b>\$13,146.2</b>	<b>-0.90</b> -0.59 -0.95	<b>3.36</b> 4.47 4.22	<b>-0.66</b> -0.27 -0.61	<b>10.02</b> 9.53 9.47	<b>3.18</b> 4.80 3.83	<b>7.57</b> 7.87 7.71	<b>5.62</b> 5.82 5.67	<b>7.67</b> 7.73 7.29	<b>8.02</b> 8.16 N/A
<b>Domestic Equity</b> <i>Russell 3000</i>	<b>21.2%</b>	<b>20.0</b>	15.0	25.0	<b>\$2,790.2</b>	<b>-1.90</b> -2.04	<b>6.29</b> 6.40	<b>-0.50</b> -0.58	<b>18.05</b> 18.02	<b>0.93</b> 1.31	<b>12.17</b> 12.24	<b>9.55</b> 9.60	<b>13.10</b> 13.14	<b>13.04</b> 13.35
<b>Developed Markets ISF</b> <i>MSCI EAFE IMI Net</i>	<b>16.5%</b>	<b>11.0</b>	6.0	16.0	<b>\$2,169.2</b>	<b>-2.77</b> -2.57	<b>1.70</b> 2.19	<b>-3.43</b> -2.68	<b>10.44</b> 11.31	<b>-3.82</b> -1.73	<b>6.87</b> 7.53	<b>4.03</b> 4.49	<b>8.29</b> 8.41	<b>6.95</b> 6.69
<b>Emerging Markets ISF</b> <i>MSCI Emerging Markets IMI</i>	<b>8.6%</b>	<b>9.0</b>	4.0	14.0	<b>\$1,135.1</b>	<b>-3.54</b> -4.89	<b>2.57</b> -0.46	<b>-4.00</b> -6.08	<b>8.33</b> 3.44	<b>-0.28</b> -5.06	<b>5.91</b> 5.19	<b>1.07</b> 0.17	<b>3.16</b> 2.93	<b>4.66</b> 4.05
<b>Core Fixed Income</b> <i>Barclays U.S. Aggregate Bond Index</i>	<b>9.9%</b>	<b>16.0</b>	11.0	21.0	<b>\$1,299.3</b>	<b>2.50</b> 2.59	<b>4.07</b> 4.11	<b>2.78</b> 2.82	<b>8.32</b> 9.10	<b>9.03</b> 10.17	<b>3.13</b> 3.09	<b>2.95</b> 3.35	<b>2.56</b> 2.82	<b>3.90</b> 3.91
<b>Emerging Market Debt</b> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	<b>6.5%</b>	<b>5.0</b>	0.0	10.0	<b>\$852.2</b>	<b>-2.90</b> -0.95	<b>2.35</b> 4.57	<b>-2.12</b> 0.11	<b>8.13</b> 10.16	<b>9.76</b> 12.90	<b>3.92</b> 4.22	<b>2.56</b> 2.41	<b>2.39</b> 2.50	<b>5.61</b> 5.69
<b>High Yield</b> <i>FTSE High Yield Market Capped Index</i>	<b>6.9%</b>	<b>6.0</b>	1.0	11.0	<b>\$902.6</b>	<b>-0.01</b> 0.28	<b>2.39</b> 3.08	<b>0.29</b> 0.68	<b>9.52</b> 10.62	<b>4.37</b> 5.99	<b>5.47</b> 5.87	<b>3.77</b> 4.40	<b>5.27</b> 5.60	<b>7.72</b> 8.08
<b>Inflation Linked Bonds</b> <i>Barclays World Gov't Inflation Linked Bond Index</i>	<b>4.9%</b>	<b>5.0</b>	0.0	10.0	<b>\$647.3</b>	<b>1.94</b> 2.40	<b>3.54</b> 4.08	<b>1.80</b> 2.58	<b>8.03</b> 9.04	<b>6.02</b> 7.25	<b>2.20</b> 2.46	<b>1.59</b> 1.87	<b>0.92</b> 1.09	<b>3.56</b> 3.64
<b>Liquidity Fund</b> <i>One Month Libor</i>	<b>3.7%</b>	<b>1.0</b>	0.0	3.0	<b>\$483.3</b>	<b>0.19</b> 0.19	<b>0.62</b> 0.58	<b>0.41</b> 0.38	<b>1.72</b> 1.62	<b>2.52</b> 2.38	<b>1.76</b> 1.63	<b>1.01</b> 1.08	<b>0.82</b> 0.82	<b>0.79</b> 0.65
<b>Real Estate<sup>(1)</sup></b> <i>ODCE Index 1Q in Arrears^</i>	<b>6.5%</b>	<b>10.0</b>	5.0	15.0	<b>\$856.3</b>	<b>N/A</b> N/A	<b>1.85</b> 1.42	<b>1.01</b> 0.00	<b>4.72</b> 2.81	<b>6.80</b> 6.43	<b>7.20</b> 6.94	<b>8.78</b> 9.04	<b>9.67</b> 9.56	<b>7.52</b> 8.46
<b>Private Investment<sup>(1)</sup></b> <i>Russell 3000 + 250 basis points 1Q in Arrears^</i>	<b>7.2%</b>	<b>10.0</b>	5.0	15.0	<b>\$940.6</b>	<b>N/A</b> N/A	<b>3.23</b> 14.48	<b>1.16</b> 0.00	<b>7.90</b> -0.99	<b>14.27</b> 11.27	<b>13.62</b> 13.05	<b>12.85</b> 10.32	<b>12.72</b> 13.52	<b>13.20</b> 13.55
<b>Alternative Investment Fund</b> <i>90-Day T-Bill + 300 basis points</i>	<b>8.1%</b>	<b>7.0</b>	2.0	12.0	<b>\$1,070.0</b>	<b>0.17</b> 0.45	<b>1.22</b> 1.34	<b>0.23</b> 0.87	<b>2.42</b> 3.61	<b>3.19</b> 5.36	<b>5.47</b> 2.65	<b>2.56</b> 1.63	<b>4.25</b> 1.18	<b>N/A</b> N/A

<sup>(1)</sup> Reported on a quarterly basis with a 90 day lag



**MUNICIPAL EMPLOYEES RETIREMENT FUND**

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

Funds <i>Benchmark</i>	Percent Holdings	Policy Weights	Lower Range	Upper Range	Market Value (mil.)	Three Month	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>	<b>100.0%</b>				<b>\$2,676.4</b>	<b>-0.86</b> -0.59 -0.96	<b>3.03</b> 4.47 3.83	<b>-0.57</b> -0.27 -0.60	<b>9.39</b> 8.95 8.82	<b>3.89</b> 5.28 4.51	<b>7.00</b> 7.21 7.01	<b>5.37</b> 5.41 5.32	<b>6.93</b> 7.05 6.41	<b>7.41</b> 7.67 N/A
<b>Domestic Equity</b> <i>Russell 3000</i>	<b>25.2%</b>	<b>20.0</b>	15.0	25.0	<b>\$674.9</b>	<b>-1.90</b> -2.04	<b>6.29</b> 6.40	<b>-0.50</b> -0.58	<b>18.04</b> 18.02	<b>0.93</b> 1.31	<b>12.17</b> 12.24	<b>9.55</b> 9.60	<b>13.10</b> 13.14	<b>13.04</b> 13.35
<b>Developed Markets ISF</b> <i>MSCI EAFE IMI Net</i>	<b>14.8%</b>	<b>11.0</b>	6.0	16.0	<b>\$395.5</b>	<b>-2.77</b> -2.57	<b>1.70</b> 2.19	<b>-3.43</b> -2.68	<b>10.44</b> 11.31	<b>-3.81</b> -1.73	<b>6.88</b> 7.53	<b>4.03</b> 4.49	<b>8.29</b> 8.41	<b>6.95</b> 6.69
<b>Emerging Markets ISF</b> <i>MSCI Emerging Markets IMI</i>	<b>9.8%</b>	<b>9.0</b>	4.0	14.0	<b>\$261.5</b>	<b>-3.54</b> -4.89	<b>2.57</b> -0.46	<b>-4.00</b> -6.08	<b>8.33</b> 3.44	<b>-0.28</b> -5.06	<b>5.90</b> 5.19	<b>1.07</b> 0.17	<b>3.17</b> 2.93	<b>4.67</b> 4.05
<b>Core Fixed Income</b> <i>Barclays U.S. Aggregate Bond Index</i>	<b>12.9%</b>	<b>16.0</b>	11.0	21.0	<b>\$344.0</b>	<b>2.50</b> 2.59	<b>4.07</b> 4.11	<b>2.78</b> 2.82	<b>8.32</b> 9.10	<b>9.03</b> 10.17	<b>3.13</b> 3.09	<b>2.95</b> 3.35	<b>2.56</b> 2.82	<b>3.91</b> 3.91
<b>Emerging Market Debt</b> <i>50% JPM EMBI Global Div / 50% JPM GBI EM Global Div</i>	<b>5.4%</b>	<b>5.0</b>	0.0	10.0	<b>\$143.9</b>	<b>-2.90</b> -0.95	<b>2.35</b> 4.57	<b>-2.12</b> 0.11	<b>8.13</b> 10.16	<b>9.76</b> 12.90	<b>3.92</b> 4.22	<b>2.56</b> 2.41	<b>2.39</b> 2.50	<b>5.61</b> 5.69
<b>High Yield</b> <i>FTSE High Yield Market Capped Index</i>	<b>2.5%</b>	<b>6.0</b>	1.0	11.0	<b>\$66.7</b>	<b>-0.01</b> 0.28	<b>2.38</b> 3.08	<b>0.29</b> 0.68	<b>9.51</b> 10.62	<b>4.37</b> 5.99	<b>5.46</b> 5.87	<b>3.77</b> 4.40	<b>5.27</b> 5.60	<b>7.71</b> 8.08
<b>Inflation Linked Bonds</b> <i>Barclays World Gov't Inflation Linked Bond Index</i>	<b>5.2%</b>	<b>5.0</b>	0.0	10.0	<b>\$138.4</b>	<b>1.94</b> 2.40	<b>3.54</b> 4.08	<b>1.80</b> 2.58	<b>8.03</b> 9.04	<b>6.02</b> 7.25	<b>2.20</b> 2.46	<b>1.59</b> 1.87	<b>0.92</b> 1.09	<b>3.56</b> 3.64
<b>Liquidity Fund</b> <i>One Month Libor</i>	<b>2.4%</b>	<b>1.0</b>	0.0	3.0	<b>\$64.1</b>	<b>0.19</b> 0.19	<b>0.62</b> 0.58	<b>0.41</b> 0.38	<b>1.71</b> 1.62	<b>2.51</b> 2.38	<b>1.76</b> 1.63	<b>1.01</b> 1.08	<b>0.81</b> 0.82	<b>0.80</b> 0.65
<b>Real Estate<sup>(1)</sup></b> <i>ODCE Index 1Q in Arrears^</i>	<b>6.5%</b>	<b>10.0</b>	5.0	15.0	<b>\$175.2</b>	<b>N/A</b> N/A	<b>1.85</b> 1.42	<b>1.01</b> 0.00	<b>4.72</b> 2.81	<b>6.80</b> 6.43	<b>7.20</b> 6.94	<b>8.77</b> 9.04	<b>9.67</b> 9.56	<b>7.50</b> 8.46
<b>Private Investment<sup>(1)</sup></b> <i>Russell 3000 + 250 basis points 1Q in Arrears^</i>	<b>7.2%</b>	<b>10.0</b>	5.0	15.0	<b>\$193.3</b>	<b>N/A</b> N/A	<b>3.23</b> 14.48	<b>1.16</b> 0.00	<b>7.90</b> -0.99	<b>14.27</b> 11.27	<b>13.62</b> 13.05	<b>12.85</b> 10.32	<b>12.72</b> 13.52	<b>13.20</b> 13.55
<b>Alternative Investment Fund</b> <i>90-Day T-Bill + 300 basis points</i>	<b>8.2%</b>	<b>7.0</b>	2.0	12.0	<b>\$219.0</b>	<b>0.17</b> 0.45	<b>1.22</b> 1.34	<b>0.23</b> 0.87	<b>2.42</b> 3.61	<b>3.19</b> 5.36	<b>5.47</b> 2.65	<b>2.56</b> 1.63	<b>4.25</b> 1.18	<b>N/A</b> N/A

<sup>(1)</sup> Reported on a quarterly basis with a 90 day lag