Wilshire Consulting
Total Fund – Universe Comparison

California Public Employees Retirement Performance Comparison
Total Returns of Public Funds > $10 Billion
Cumulative Periods Ending: March 31, 2020

Percentile Rankings

<table>
<thead>
<tr>
<th>Percentile</th>
<th>1 Qtr</th>
<th>2 Qtrs</th>
<th>3 Qtrs</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
<th>4 Years</th>
<th>5 Years</th>
<th>7 Years</th>
<th>10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th</td>
<td>-5.54</td>
<td>-1.73</td>
<td>-0.06</td>
<td>3.83</td>
<td>4.85</td>
<td>7.53</td>
<td>7.96</td>
<td>6.40</td>
<td>8.07</td>
<td>8.60</td>
</tr>
<tr>
<td>25th</td>
<td>-8.60</td>
<td>-4.78</td>
<td>-3.54</td>
<td>-0.44</td>
<td>1.90</td>
<td>5.00</td>
<td>6.69</td>
<td>5.24</td>
<td>6.77</td>
<td>7.98</td>
</tr>
<tr>
<td>50th</td>
<td>-9.06</td>
<td>-6.89</td>
<td>-4.78</td>
<td>-1.86</td>
<td>1.23</td>
<td>4.47</td>
<td>6.15</td>
<td>4.69</td>
<td>6.83</td>
<td>7.51</td>
</tr>
<tr>
<td>75th</td>
<td>-11.72</td>
<td>-6.94</td>
<td>-6.14</td>
<td>-3.19</td>
<td>0.72</td>
<td>3.85</td>
<td>5.64</td>
<td>4.33</td>
<td>5.69</td>
<td>6.96</td>
</tr>
<tr>
<td>95th</td>
<td>-14.00</td>
<td>-9.18</td>
<td>-8.12</td>
<td>-5.02</td>
<td>-0.97</td>
<td>3.13</td>
<td>5.03</td>
<td>3.89</td>
<td>5.14</td>
<td>6.43</td>
</tr>
</tbody>
</table>

No. Of Obs. 46 47 46 48 45 45 45 45 45 45

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California Public Employees Retirement
Risk vs Total Returns of Public Funds > $10 Billion
3 Years Ending March 31, 2020

More Return, Less Risk

Less Return, Less Risk

Median Return

More Return, More Risk

Less Return, More Risk

Risk Value | Risk Rank | Return Value | Return Rank
---|---|---|---
Total Plan - Composites | 8.60 | 56 | 4.68 | 45
Wilshire 5000 | 19.66 | 1 | 4.08 | 65
Barclays Aggregate | 2.82 | 100 | 4.62 | 40
Median | 0.18 | | 4.47 |
California Public Employees Retirement
Risk vs Total Returns of Public Funds > $10 Billion
5 Years Ending March 31, 2020

Median Return

Median Risk

More Return, More Risk

Less Return, More Risk

Risk (Historical Standard Deviation of Return)

Alpha: 7.25
Beta: -0.31
R-Squared: 0.24

<table>
<thead>
<tr>
<th>Risk Value</th>
<th>Risk Rank</th>
<th>Return Value</th>
<th>Return Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Plan - Composites</td>
<td>7.58</td>
<td>58</td>
<td>4.84</td>
</tr>
<tr>
<td>Wilshire 5000</td>
<td>7.86</td>
<td>1</td>
<td>5.09</td>
</tr>
<tr>
<td>Barclays Aggregate</td>
<td>3.33</td>
<td>100</td>
<td>3.38</td>
</tr>
<tr>
<td>Median</td>
<td>7.86</td>
<td>4.80</td>
<td></td>
</tr>
</tbody>
</table>
Asset Allocation Ranking of Public Funds > $10 Billion

Percentiles: 5, 25, 50, 75, 95

<table>
<thead>
<tr>
<th>Percentile Rankings</th>
<th>US Equity</th>
<th>Int'l Equity</th>
<th>Global Fixed</th>
<th>Liquidity/Cash</th>
<th>Real Estate</th>
<th>Priv Equity</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th</td>
<td>56.91%</td>
<td>25.84%</td>
<td>37.96%</td>
<td>16.13%</td>
<td>12.95%</td>
<td>36.41%</td>
<td>19.29%</td>
</tr>
<tr>
<td>25th</td>
<td>40.36%</td>
<td>19.12%</td>
<td>27.77%</td>
<td>7.88%</td>
<td>9.57%</td>
<td>28.52%</td>
<td>0.97%</td>
</tr>
<tr>
<td>50th</td>
<td>28.18%</td>
<td>14.34%</td>
<td>22.67%</td>
<td>3.78%</td>
<td>5.39%</td>
<td>18.41%</td>
<td>0.00%</td>
</tr>
<tr>
<td>75th</td>
<td>18.65%</td>
<td>10.40%</td>
<td>18.02%</td>
<td>2.15%</td>
<td>0.62%</td>
<td>9.46%</td>
<td>0.00%</td>
</tr>
<tr>
<td>95th</td>
<td>15.05%</td>
<td>0.01%</td>
<td>9.85%</td>
<td>0.59%</td>
<td>0.00%</td>
<td>5.90%</td>
<td>0.00%</td>
</tr>
<tr>
<td>CalPERS</td>
<td>27.20% (53)</td>
<td>21.87% (9)</td>
<td>29.53% (15)</td>
<td>1.00% (79)</td>
<td>10.56% (13)</td>
<td>7.66% (79)</td>
<td>2.14% (12)</td>
</tr>
</tbody>
</table>
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Growth: Public Equity – Universe Comparison

California Public Employees Retirement
Performance Comparison
Total Equity Returns of Public Funds > $10 Billion
Cumulative Periods Ending: March 31, 2020

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### California Public Employees Retirement Performance Comparison

#### Total Private Equity Returns of Public Funds > $10 Billion

**Cumulative Periods Ending: March 31, 2020**

<table>
<thead>
<tr>
<th>Percentile Rankings</th>
<th>1 Qtr</th>
<th>2 Qtrs</th>
<th>3 Qtrs</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
<th>4 Years</th>
<th>5 Years</th>
<th>7 Years</th>
<th>10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th</td>
<td>4.92</td>
<td>7.33</td>
<td>11.84</td>
<td>14.48</td>
<td>13.64</td>
<td>16.01</td>
<td>11.52</td>
<td>13.37</td>
<td>13.79</td>
<td>13.72</td>
</tr>
<tr>
<td>25th</td>
<td>2.05</td>
<td>4.06</td>
<td>6.54</td>
<td>11.84</td>
<td>10.89</td>
<td>12.37</td>
<td>12.24</td>
<td>11.09</td>
<td>11.58</td>
<td>12.72</td>
</tr>
<tr>
<td>50th</td>
<td>1.46</td>
<td>2.82</td>
<td>4.37</td>
<td>8.15</td>
<td>8.80</td>
<td>11.77</td>
<td>11.29</td>
<td>8.93</td>
<td>10.74</td>
<td>11.64</td>
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<tr>
<td>75th</td>
<td>0.10</td>
<td>0.00</td>
<td>2.10</td>
<td>7.55</td>
<td>8.62</td>
<td>9.56</td>
<td>8.37</td>
<td>8.15</td>
<td>8.87</td>
<td>8.82</td>
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<tr>
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<td>-3.65</td>
<td>-0.74</td>
<td>0.00</td>
<td>0.00</td>
<td>2.42</td>
<td>3.10</td>
<td>8.51</td>
<td>8.55</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>No. Of Obs.</th>
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<th>26</th>
<th>23</th>
<th>22</th>
<th>22</th>
<th>20</th>
<th>20</th>
<th>19</th>
<th>17</th>
<th>15</th>
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</thead>
</table>

**Total Plan - Composite**

<table>
<thead>
<tr>
<th>Period</th>
<th>1 Qtr</th>
<th>2 Qtrs</th>
<th>3 Qtrs</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
<th>4 Years</th>
<th>5 Years</th>
<th>7 Years</th>
<th>10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4.08</td>
<td>4.27</td>
<td>5.73</td>
<td>8.45</td>
<td>8.42</td>
<td>11.22</td>
<td>10.65</td>
<td>8.85</td>
<td>11.22</td>
<td>12.13</td>
</tr>
</tbody>
</table>

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Growth: Private Equity – Risk and Return

California Public Employees Retirement
Risk vs Total Private Equity Returns of Public Funds > $10 Billion
5 Years Ending March 31, 2020

Median Risk

More Return, Less Risk

Median Return

Less Return, More Risk

Less Return, Less Risk

Alpha: 0.56
Beta: 0.01
R-Squared: 0

<table>
<thead>
<tr>
<th>Risk Value</th>
<th>Risk Rank</th>
<th>Return Value</th>
<th>Return Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Plan - Composites</td>
<td>4.08</td>
<td>25</td>
<td>9.65</td>
</tr>
<tr>
<td>Median</td>
<td>3.67</td>
<td>9.80</td>
<td></td>
</tr>
</tbody>
</table>

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Income – Universe Comparison

California Public Employees Retirement Performance Comparison
Total Fixed Income Returns of Public Funds > $10 Billion
Cumulative Periods Ending: March 31, 2020

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California Public Employees Retirement
Risk vs Total Fixed Income Returns of Public Funds > $10 Billion
5 Years Ending March 31, 2020

Alpha: 2.89
Beta: 0
R-Squared: 0

Risk Value | Risk Rank | Return Value | Return Rank
--- | --- | --- | ---
Total Plan - Composites | 5.43 | 25 | 4.69 | 12
Barclays Govt/Credit | 3.79 | 55 | 3.54 | 40
Median | 3.86 | 3.47 | 

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Real Estate – Universe Comparison

California Public Employees Retirement
Performance Comparison

Total Real Estate Returns of Public Funds > $10 Billion
Cumulative Periods Ending: March 31, 2020

Percentile Rankings 1 Qtr 2 Qtrs 3 Qtrs 1 Year 2 Years 3 Years 4 Years 5 Years 7 Years 10 Years
25th 2.00 4.26 7.60 8.94 10.55 10.37 11.45 12.42 12.97
50th 0.96 2.63 3.66 5.79 6.77 7.79 7.76 8.21 10.76 12.96
75th -0.04 0.01 0.11 0.01 0.10 0.14 0.23 0.32 0.62 0.92
95th -3.75 -8.95 -4.43 -2.59 0.49 2.23 4.32 4.34 8.96

No. Of Obs 26 24 22 21 21 21 21 21 18 14

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California Public Employees Retirement
Risk vs Total Real Estate Returns of Public Funds > $10 Billion
5 Years Ending March 31, 2020

Median Return

Ann. Rate of Return (%)

Risk (Historical Standard Deviation of Return)

Median Risk

More Return, More Risk

Less Return, Less Risk

Alphas: 7.97
Betas: 0.22
R-Squared: 0.29

<table>
<thead>
<tr>
<th>Risk Value</th>
<th>Risk Rank</th>
<th>Return Value</th>
<th>Return Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Plan - Composites</td>
<td>4.60</td>
<td>25</td>
<td>9.10</td>
</tr>
<tr>
<td>+ NCREIF Property Index</td>
<td>1.15</td>
<td>98</td>
<td>7.65</td>
</tr>
<tr>
<td>Wilshire RESI</td>
<td>18.83</td>
<td>12</td>
<td>0.08</td>
</tr>
<tr>
<td>Median</td>
<td>3.41</td>
<td></td>
<td>0.21</td>
</tr>
</tbody>
</table>

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