

### What's going on in the marketplace?

Heightened volatility continued during the month of May. However, in sharp contrast to April and despite wide trading ranges, markets produced very modest positive returns during the month. Investors struggled to discern the market's direction while confronting persistently elevated inflation and rising rates. The markets were also confronted with tighter central bank policies globally and the potential impact on economic growth.

**The KPPA pension investment portfolio returned 0.6% during the month of May, outperforming its benchmark, which fell 14bps.** More specifically, both the CERS and CERS-H Pension portfolios returned 0.6%. Both plans outperformed their benchmarks, and experienced similar attribution drivers. Relative outperformance was driven by selection within their investments in the Specialty Credit and Real Estate allocations. Asset allocation was a detractor during the period, due to the combination of the overweight to Fixed Income and the underweight to the Real Return asset class.

**Global equity markets** were slightly positive, with the MSCI ACWI gaining 12bps on the month. International markets outperformed US markets.

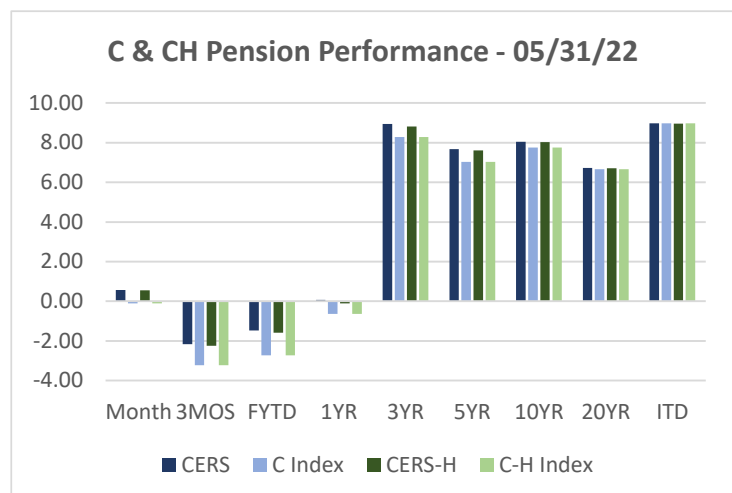
**US equity markets** declined 13bps during the month (Russell 3000), and the KPPA portfolio outperformed, gaining a modest 6bps during the month. Midcaps outperformed both large small caps (MC: 0.8%, LC: 0.2%, SC: 0.2%); value significantly outpace growth (R3000V: 1.9% vs R3000G: -2.3%). The KPPA portfolio's relative outperformance was driven by a combination of both stock selection and allocation. Most of the individual strategies outpaced their respective indices, and the slight value and midcap tilts were beneficial as factors performed best during the period.

**NonUS equity markets** outpaced their domestic counterparts, gaining 0.5% (MSCI ACWI Ex-US). Developed international markets outperformed emerging markets by 53bps (MSCI World Ex-US: 0.97% vs MSCI EM: 0.48%). Value also outperformed growth, while international small caps fell 0.9%. The KPPA portfolio was flat, trailing its index by -49bps due to continued weakness across the growth portion of the portfolio. This underperformance was partially offset by outperformance of the value-oriented mandates.

**The specialty credit portfolio** outperformed, adding 18bps compared to its index return of -1.2%. The high yield market performed well in general with the Bloomberg US Corporate High Yield returning 0.25% during the month; while the leveraged loan segment of the market struggled as evidenced by the S&P LSTA Leveraged Loan Index return of -2.6%.

**The core fixed income portfolio**, produced positive absolute performance during the month; however, it trailed its benchmark, the Bloomberg Aggregate Index (0.3% vs 0.6%). The portfolio's shorter duration profile and tactical allocation to front end investment grade credit hampered relative performance during the period.

**The private equity allocation** returned 2.8% during the month, bringing the fiscal year return to 24.3%. It should be noted that the asset class is reported on a quarter lag, so some of this volatile year is not yet reflected in these performance figures.



**The real return portfolio** gained 1.8% during the month, bringing the fiscal year return to 5.6%. Most of the individual mandates held up fairly well during the month, ranging anywhere from flat to 85bps. Driving performance for the asset class were those investments in the MLP space, which gained over 6% during the period.

**Real estate** has performed well for several quarters, and has been one of the best performing asset classes for the portfolio. The allocation returned 3.4% during the month, bringing the fiscal year performance to 26.0%, and has been driven by continued strength in industrial and multi-family properties.

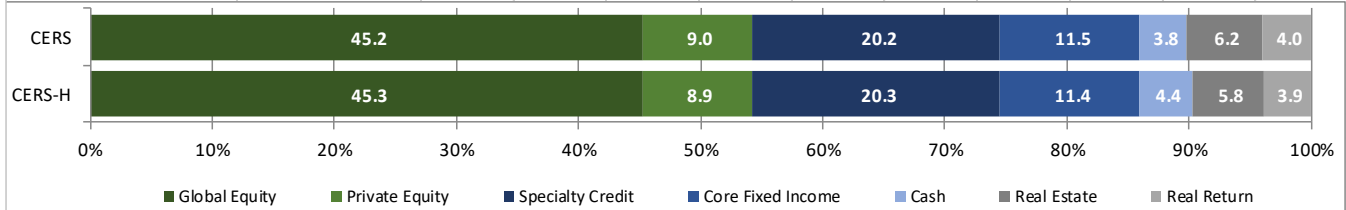
**The cash portfolio** performed in line with the 3-month T-bill for the month (0.06%). The overweight to cash had little effect on relative performance during the month.

**CERS & CERS-HAZ - PENSION FUND PLAN NET RETURNS - 05/31/22**

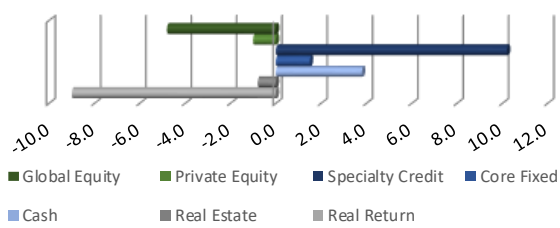
Plan	Market Value	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
<b>CERS</b>	<b>8,331,791,135.96</b>	<b>0.57</b>	<b>-2.17</b>	<b>-1.47</b>	<b>0.07</b>	<b>8.94</b>	<b>7.67</b>	<b>8.05</b>	<b>6.73</b>	<b>7.92</b>	<b>8.97</b>
KY Ret. CKERS Plan Index		-0.10	-3.22	-2.73	-0.64	8.29	7.03	7.76	6.66	7.81	8.98
<b>CERS- H</b>	<b>2,836,122,910.42</b>	<b>0.55</b>	<b>-2.24</b>	<b>-1.59</b>	<b>-0.10</b>	<b>8.81</b>	<b>7.61</b>	<b>8.02</b>	<b>6.71</b>	<b>7.91</b>	<b>8.96</b>
KY Ret. CERS Haz Plan Index		-0.10	-3.22	-2.73	-0.64	8.29	7.03	7.76	6.66	7.81	8.98

**KPPA PENSION FUND UNIT - NET RETURNS - 05/31/22 - PROXY PLAN ASSET PERFORMANCE**

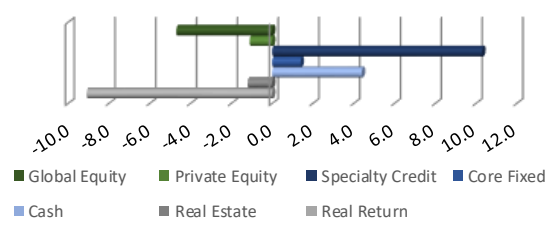
Structure	Month	QTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
<b>PUBLIC EQUITY</b>	<b>0.03</b>	<b>-7.86</b>	<b>-10.33</b>	<b>-9.89</b>	<b>11.04</b>	<b>8.61</b>	<b>10.09</b>	<b>7.04</b>	<b>8.82</b>	<b>10.30</b>
Global Equity Blended Index	0.12	-7.90	-9.34	-8.51	11.04	8.57	9.98	7.06	8.61	10.16
<b>PRIVATE EQUITY</b>	<b>2.81</b>	<b>3.02</b>	<b>24.30</b>	<b>38.97</b>	<b>22.22</b>	<b>18.55</b>	<b>15.04</b>			<b>12.66</b>
Russell 3000 + 3%(Qtr Lag)	2.81	3.02	24.30	38.97	22.22	18.55	17.57			12.63
<b>SPECIALTY CREDIT</b>	<b>0.18</b>	<b>-0.21</b>	<b>2.84</b>	<b>4.31</b>	<b>5.79</b>					<b>5.85</b>
Custom Benchmark	-1.16	-2.81	-3.58	-2.75	3.15					3.53
<b>CORE FIXED INCOME</b>	<b>0.29</b>	<b>-0.90</b>	<b>-4.32</b>	<b>-4.17</b>	<b>1.77</b>	<b>2.28</b>				<b>2.68</b>
Bloomberg Barclays US Aggregate	0.64	-3.17	-8.86	-8.22	0.00	1.18				1.99
<b>CASH</b>	<b>0.06</b>	<b>0.10</b>	<b>0.16</b>	<b>0.17</b>	<b>0.79</b>	<b>1.30</b>	<b>0.90</b>	<b>1.61</b>	<b>2.72</b>	<b>3.31</b>
Citigroup Treasury Bill-3 Month	0.05	0.08	0.13	0.13	0.65	1.09	0.61	1.19	2.32	2.90
<b>REAL ESTATE</b>	<b>3.41</b>	<b>4.88</b>	<b>25.95</b>	<b>29.49</b>	<b>15.42</b>	<b>13.44</b>	<b>11.21</b>	<b>7.80</b>	<b>6.58</b>	<b>6.87</b>
NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^	0.00	0.00	18.78	21.02	8.23	7.74	9.43	7.30	7.26	6.58
<b>REAL RETURN</b>	<b>1.78</b>	<b>1.33</b>	<b>5.56</b>	<b>7.43</b>	<b>6.77</b>	<b>4.95</b>	<b>3.72</b>			<b>4.45</b>
Pension Real Return Custom Benchmark	1.78	1.33	5.56	7.43	6.77	4.95	3.67			3.78



**CERS PEN Relative Weights**



**CERS-HAZ PEN Relative Weights**

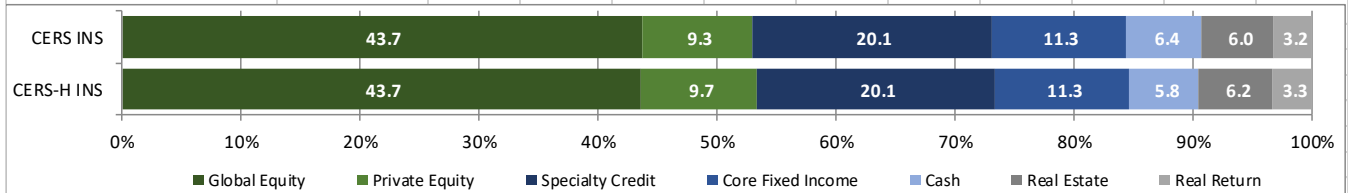


**CERS INS & CERS HAZ INS - INSURANCE FUND - PLAN NET RETURNS - 05/31/22**

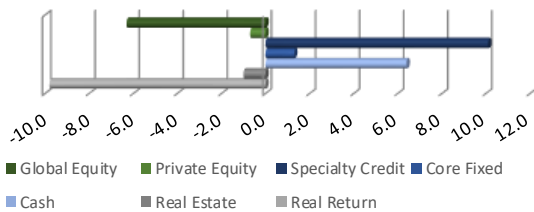
Plan	Market Value	Month	3 Months	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
<b>CERS INS</b>	<b>3,134,471,469.29</b>	<b>0.41</b>	<b>-2.25</b>	<b>-1.18</b>	<b>0.18</b>	<b>8.58</b>	<b>7.57</b>	<b>7.92</b>	<b>6.26</b>	<b>7.05</b>	<b>7.44</b>
KY Ins. CERS Plan Index		-0.10	-3.22	-2.53	-0.85	7.86	6.83	7.73	6.40	7.29	7.64
<b>CERS - H INS</b>	<b>1,576,461,694.64</b>	<b>0.44</b>	<b>-2.10</b>	<b>-0.80</b>	<b>0.63</b>	<b>8.76</b>	<b>7.70</b>	<b>8.00</b>	<b>6.30</b>	<b>7.07</b>	<b>7.46</b>
KY Ins. CERS Haz Plan Index		-0.10	-3.22	-2.53	-0.85	7.86	6.83	7.73	6.40	7.29	7.64

**KPPA INSURANCE FUND UNIT - NET RETURNS - 05/31/22 - PROXY PLAN ASSET PERFORMANCE**

Structure	Month	QTD	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	ITD
<b>PUBLIC EQUITY</b>	<b>0.04</b>	<b>-7.87</b>	<b>-10.25</b>	<b>-9.80</b>	<b>11.05</b>	<b>8.59</b>	<b>10.10</b>	<b>7.02</b>		<b>8.63</b>
Global Equity Blended Index	0.12	-7.90	-9.38	-8.55	11.00	8.54	9.94	6.71		8.45
<b>PRIVATE EQUITY</b>	<b>1.64</b>	<b>1.87</b>	<b>28.76</b>	<b>39.23</b>	<b>18.83</b>	<b>17.21</b>	<b>15.42</b>			<b>11.42</b>
Russell 3000 + 3%(Qtr Lag)	1.64	1.87	28.76	39.23	18.83	17.21	17.57			12.17
<b>SPECIALTY CREDIT</b>	<b>0.08</b>	<b>-0.22</b>	<b>2.84</b>	<b>4.29</b>	<b>5.59</b>					<b>5.61</b>
Custom Benchmark	-1.16	-2.81	-3.58	-2.75	3.15					3.53
<b>CORE FIXED INCOME</b>	<b>0.42</b>	<b>-1.01</b>	<b>-4.40</b>	<b>-4.22</b>	<b>1.59</b>	<b>2.19</b>				<b>2.39</b>
Bloomberg Barclays US Aggregate	0.64	-3.17	-8.86	-8.22	0.00	1.18				1.99
<b>CASH</b>	<b>0.06</b>	<b>0.09</b>	<b>0.14</b>	<b>0.15</b>	<b>0.63</b>	<b>1.13</b>	<b>0.74</b>	<b>1.44</b>		<b>2.43</b>
Citigroup Treasury Bill-3 Month	0.05	0.08	0.13	0.13	0.65	1.09	0.61	1.19		2.31
<b>REAL ESTATE</b>	<b>3.13</b>	<b>4.87</b>	<b>25.35</b>	<b>29.02</b>	<b>15.35</b>	<b>13.43</b>	<b>11.04</b>			<b>10.56</b>
NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^	0.00	0.00	18.78	21.02	8.23	7.74	9.43			6.47
<b>REAL RETURN</b>	<b>1.45</b>	<b>1.08</b>	<b>4.29</b>	<b>5.58</b>	<b>6.68</b>	<b>4.86</b>	<b>3.48</b>			<b>4.25</b>
Pension Real Return Custom Benchmark	1.45	1.08	4.29	5.58	6.68	4.86	3.73			3.83



CERS Insurance Relative Weights



CERS-HAZ Insurance Relative Weights

