

What's going on in the marketplace?

In general, the month of May saw slightly higher global equity markets. This was due in large part to strong markets within the U.S. International markets fell on concerns of slowing growth (primarily in Europe), trade tensions, and political uncertainty. Bond markets in the U.S. were generally higher as a flight to quality took hold in response to tariff tensions.

U.S. Equities

U.S. equity markets gained 2.8% (Russell 3000) on the month. The small cap segment returned over 6% per the Russell 2000 Index, followed by the midcap space that returned over 4.1%. Large caps returned roughly 2.4% during the period. Growth significantly outperformed value (R3000G 4.5%, R3000V 1.0%).

The KRS U.S. Equity portfolio outperformed the Russell 3000 Index by 8 bps during the month (2.9% vs 2.8%). The portfolio's relative performance was driven by stock selection with several of the strategies adding value over their respective indices. Because the overall portfolio allocation slightly smaller in terms of market cap, it served as a tailwind during the period. The FYTD return for the U.S. equity portfolio now stands at 13.7% versus the benchmark's 14.0% return.

Non-U.S. Equities

Non-U.S. equities fell over -2.1% during the period, as evidenced by the MSCI ACWI Ex-U.S. Developed markets outperformed emerging markets, and international markets echoed to a slightly greater degree the same style bias of domestic markets.

The KRS Non-U.S. Equity portfolio provided 120 bps of downside protection, falling just -0.9% in a market that was down just over -2.1%. Relative outperformance was driven primarily by stock selection, with three of the four active managers outperforming the index by an average of approximately 360 bps. After 11 months, the Non-U.S. equity portfolio has returned 13.1% versus the benchmark return of 10.4%.

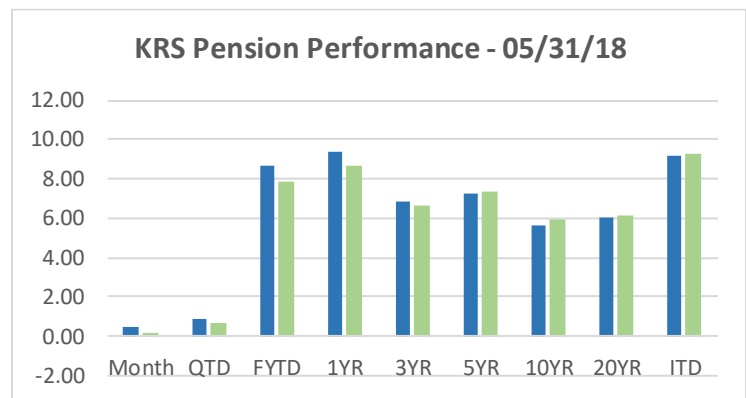
Fixed Income

Different segments of the fixed income market were mixed in terms of performance during the period. The U.S. aggregate, intermediate credit, and leverage loan gained 71 bps, 52 bps, and 17 bps, respectively. The U.S. high yield market was slightly negative on the month (-3 bps).

The KRS Fixed Income portfolio performed relatively in line with the benchmark, trailing by just 5 bps (0.2% vs 0.3%) in a fairly flat month. Manager selection was mixed with no real discernable trends. However, because the portfolio was heavily weighted to the intermediate credit space, performance was relatively good as this was one of the better performing sectors. For the fiscal year, the fixed income portfolio has returned 1.4% versus the benchmark return of 1.0%.

Alternative Assets

Three of the four sub-asset classes posted positive absolute returns for the month; with mixed relative performance. The Real Estate, Absolute Return, Real Return, and Private Equity portfolios returned 1.4%, 0.4%, 0.3%, and -0.2%, respectively. This brought performance for the fiscal year for the Private Equity, Real Estate, Absolute Return, and Real Return portfolios to 11.6%, 10.2%, 5.3%, and 2.5%, respectively.



Cash

The cash portfolio performed inline during the month and returned 0.2%. The cash allocation finished the period at 3.9%. The portfolio has provided a 1.7% return so far during the fiscal year.

NOTES:

- 1) Returns displayed are "net". For the purposes of this report, total fund return information is net of fees and expenses, with audited data beginning in July 2011. At the manager level returns are net of fees beginning with July 2011, and gross of fees for prior data.
- 2) Individual plan allocation and performance (pg.3).
- 3) Prior to January 1, 2014, the inception date for the Private Equity asset class was stated as 10/1/1990 for Pension Fund and 6/1/2001 for Insurance Fund. Prior to 07/01/02, the characteristics of the allocation, and the benchmark itself, were more closely aligned with Real Estate. As such, it is not appropriate to report this portion of the return stream within the Private Equity allocation, whose true inception date has been determined to be 07/01/02 based on funding the Systems' first private equity mandate. The portion of the original return streams that are no longer reported within the Private Equity allocation (Pension from 10/1/90 to 06/30/02; Insurance 06/01/01 to 06/30/02) are reported within the Fund Level performance figures.
- 4)

<p>Private Equity Composite (Pension) Inception (07/01/02) to 06/30/11 60.00% S&P 1500 Composite Index 40.00% Barclays US Corporate High Yield Index 07/01/11 to 12/31/15 100.00% Russell 3000 Index + 4% (Qtr Lag) 01/01/16 to Present 100.00% Russell 3000 Index + 3% (Qtr Lag)</p>	<p>Private Equity Composite (Insurance) Inception (07/01/02) to 06/30/11 80.00% S&P 1500 Composite Index 20.00% Barclays US Corporate High Yield Index 07/01/11 to 12/31/15 100.00% Russell 3000 Index + 4% (Qtr Lag) 01/01/16 to Present 100.00% Russell 3000 Index + 3% (Qtr Lag)</p>
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- 5) The Private Equity & Real Return Benchmarks, from one month returns up until five year returns, is equal to the performance of the associated KRS allocations. Given there is not appropriate benchmark to use for short term performance evaluation, this will allow greater focus on longer term returns, which is more appropriate given the long term nature of these investments.

<p><u>Pension Benchmark Composite 01/01/16 to 08/31/17</u> US Equity: Russell 3000 (25.6%) Non US Equity: MSCI AXCI Ex-US IMI (25.2%) Global Fixed Income: Barclays Universal Index (6.8%) Credit Fixed Income: Barclays US High Yield (7.2%) Real Estate: NCREIF ODCE (5.0%) Absolute Return: HFRI Diversified FOF (10.0%) Real Return: Allocation Specific (8.0%) Private Equity<5Yrs: Actual Performance Private Equity>5Yrs: Russell 3000 Index+3% (10.0%) Cash: Cit Grp 3-mos Treasury Bill (2.2%) <u>Pension Benchmark Composite 09/01/17 to Present</u> US Equity: Russell 3000 (23.6%) Non US Equity: MSCI AXCI Ex-US IMI (23.2%) Global Fixed Income: Barclays Universal Index (9.0%) Credit Fixed Income: Barclays US High Yield (9.0%) Real Estate: NCREIF ODCE (5.0%) Absolute Return: HFRI Diversified FOF (10.0%) Real Return<5Yrs: Actual Performance Real Return>5Yrs: CPI+3% (8%) Private Equity<5Yrs: Actual Performance Private Equity>5Yrs: Russell 3000 Index+3% (10.0%) Cash: Cit Grp 3-mos Treasury Bill (2.2%)</p>	<p><u>Insurance Benchmark Composite 01/01/16 to 08/31/17</u> US Equity: Russell 3000 (26.5%) Non US Equity: MSCI AXCI Ex-US IMI (26.5%) Global Fixed Income: Barclays Universal Index (6.0%) Credit Fixed Income: Barclays US High Yield (6.0%) Real Estate: NCREIF ODCE (5.0%) Absolute Return: HFRI Diversified FOF (10.0%) Real Return: Allocation Specific (8.0%) Private Equity<5Yrs: Actual Performance Private Equity>5Yrs: Russell 3000 Index+3% (10.0%) Cash: Cit Grp 3-mos Treasury Bill (2.0%) <u>Insurance Benchmark Composite 09/01/17 to Present</u> US Equity: Russell 3000 (24.5%) Non US Equity: MSCI AXCI Ex-US IMI (24.5%) Global Fixed Income: Barclays Universal Index (8.0%) Credit Fixed Income: Barclays US High Yield (8.0%) Real Estate: NCREIF ODCE (5.0%) Absolute Return: HFRI Diversified FOF (10.0%) Real Return<5Yrs: Actual Performance Real Return>5Yrs: CPI+3% (8%) Private Equity<5Yrs: Actual Performance Private Equity>5Yrs: Russell 3000 Index+3% (10.0%) Cash: Cit Grp 3-mos Treasury Bill (2.0%)</p>
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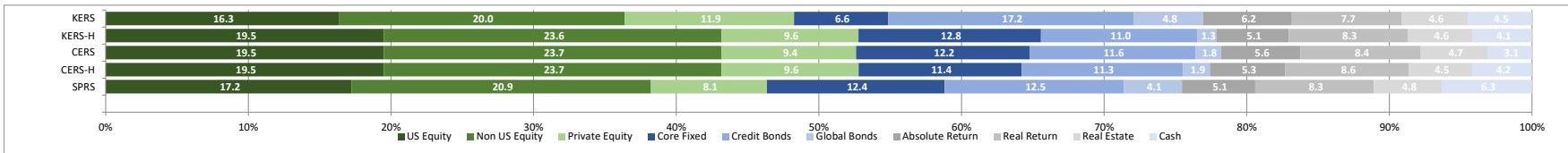
**Fund composite benchmark is a roll-up of individual plans, which may differ from one another.

KENTUCKY RETIREMENT SYSTEMS - PENSION FUND - NET RETURNS - 05/31/18

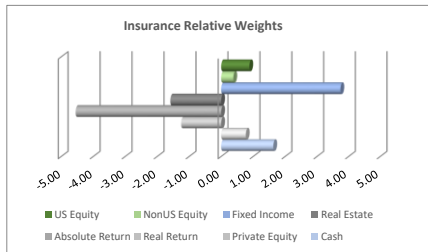
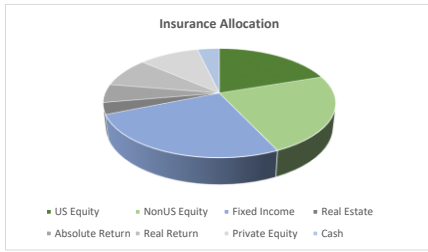
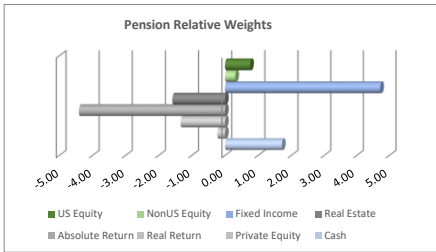
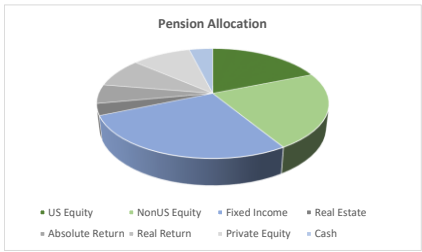
Structure	Benchmark	Inception	Market Value	% of Total	Month		QTD		Fiscal YTD		1 Year		3 Years		5 Years		10 Years		20 Years		ITD	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
TOTAL FUND	KY Ret. Blended Index	4/1/1984	12,328,637,222.38	100.00	0.46	0.17	0.84	0.69	8.63	7.89	9.42	8.67	6.81	6.63	7.25	7.36	5.68	5.96	6.02	6.12	9.16	9.27
US PUBLIC	KY Domestic Equity Blend	4/1/1984	2,325,323,342.11	18.86	2.90	2.82	3.48	3.21	13.71	14.03	14.95	15.06	10.17	10.72	12.20	12.85	9.01	9.32	7.12	7.18	11.37	11.40
EQUITY NON US	KY Ret.Int'l Eq. Blended Index	7/1/2000	2,763,146,997.67	22.41	-0.92	-2.12	0.15	-0.62	13.06	10.04	13.08	10.44	6.66	5.33	6.80	6.00	3.08	2.57			3.39	3.67
PUBLIC EQUITY	Global Equity Blended Index	4/1/1984	5,088,470,339.78	41.27	0.80	0.37	1.66	1.33	13.27	12.08	13.87	12.80	8.13	7.63	9.12	8.89	5.97	5.60	5.94	5.67	10.65	10.47
FIXED INCOME	KY Ret.Fixed Blended Index	4/1/1984	3,368,457,470.27	27.32	0.21	0.26	-0.03	0.25	1.41	1.04	1.54	1.07	3.90	4.65	3.72	4.01	4.96	4.82	5.48	5.50	7.52	7.33
REAL RETURN	PENSION REAL RETURN CUSTOM BM	7/1/2011	1,067,159,646.15	8.66	0.25	0.25	0.78	0.78	2.53	2.53	2.65	2.65	3.12	3.12	2.50	2.50					3.84	2.63
ABSOLUTE RETUR	HFRF Fund of Funds Diversified Index - 1 Month Ar	4/1/2010	689,032,645.61	5.59	0.35	0.58	0.38	0.82	5.34	5.39	5.29	5.12	1.75	1.89	3.79	3.28					4.17	3.12
REAL ESTATE	NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^	7/1/1984	420,603,730.21	3.41	1.44	0.00	1.37	0.00	10.21	5.04	12.39	6.66	10.48	9.42	9.40	10.52	8.25	4.07	6.31	7.93	6.09	6.41
PRIVATE EQUITY	Russell 3000 + 3%(Qtr Lag)	7/1/2002	1,204,445,122.58	9.77	-0.24	-0.24	-0.02	-0.02	11.61	11.61	15.63	15.63	11.56	11.56	12.33	12.33	8.17	12.86			11.05	11.49
CASH ACCOUNT	Citigroup Treasury Bill-3 Month	1/1/1988	483,678,060.14	3.92	0.15	0.15	0.29	0.28	1.74	1.17	1.82	1.24	1.07	0.59	0.80	0.37	0.79	0.31	2.36	1.89	3.60	3.14

KENTUCKY RETIREMENT SYSTEMS - PENSION FUND - PLAN NET RETURNS - 05/31/18

Plan	Benchmark	Inception	Market Value	% of Total	Month		3 Months		Fiscal YTD		1 Year		3 Years		5 Years		10 Years		20 Years		ITD	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
KERS	KY Ret. KERS Plan Index	2/24/1985	2,024,655,198.93	100.00	0.44	0.15	0.61	0.30	7.67	7.08	8.54	7.88	6.10	6.34	6.83	7.02	5.48	5.79	5.92	6.03	9.10	9.22
KERS-H	KY Ret. KERS Haz Plan Index	6/49/1984	649,390,630.75	100.00	0.46	0.17	0.67	0.15	8.74	8.20	9.53	8.97	6.94	6.67	7.31	7.32	5.72	5.94	6.04	6.11	9.17	9.26
CERS	KY Ret. CERS Plan Index	7/04/1985	7,045,157,509.98	100.00	0.47	0.17	0.66	0.15	8.79	8.20	9.57	8.95	6.94	6.64	7.33	7.32	5.72	5.94	6.04	6.10	9.18	9.26
CERS-H	KY Ret. CERS Haz Plan Index	2/35/1984	2,350,664,048.04	100.00	0.46	0.17	0.68	0.15	8.77	8.20	9.57	8.96	6.97	6.64	7.34	7.32	5.73	5.94	6.05	6.10	9.18	9.26
SPRS	KY Ret. SPRS Plan Index	258/1984	258,769,828.46	100.00	0.46	0.18	0.56	0.25	7.80	7.47	8.52	8.17	6.23	6.68	7.04	5.80	5.88	6.04	6.08	9.08	9.22	



Note: The above chart displays the average monthly allocation.

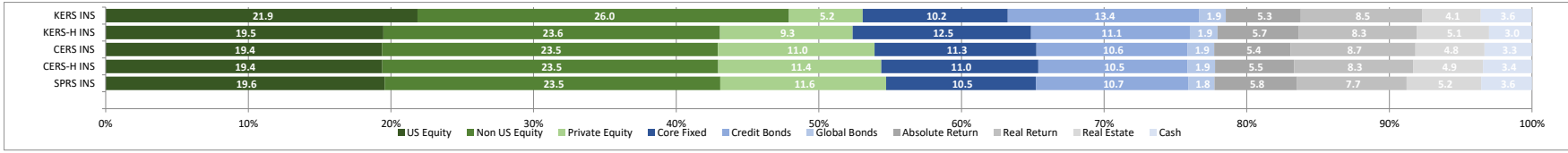


KENTUCKY RETIREMENT SYSTEMS - INSURANCE FUND - NET RETURNS - 05/31/18

Structure	Benchmark	Inception	Market Value	% of Total	Month		QTD		Fiscal YTD		1 Year		3 Years		5 Years		10 Years		20 Years		ITD	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
TOTAL FUND	KY Ins. Blended Index	4/1/1987	5,131,191,253.27	100.00	0.45	0.16	0.82	0.68	8.91	8.28	9.70	9.06	7.06	6.94	7.24	7.64	4.79	5.31	5.41	5.64	7.48	7.84
US PUBLIC	KY Domestic Equity Blend	7/1/1992	1,014,777,864.60	19.78	2.88	2.82	3.44	3.21	13.64	14.03	14.91	15.06	10.53	10.72	12.40	12.85	8.89	9.17	6.95	6.66	9.75	9.62
EQUITY NON US	KRS Ins.Int'l Eq Blend	4/1/2000	1,194,500,818.48	23.28	-1.02	-2.12	0.06	-0.62	12.84	10.04	12.90	10.44	6.56	5.33	6.66	6.00	2.65	2.22			3.38	2.81
PUBLIC EQUITY	Global Equity Blended Index	7/1/1992	2,209,278,683.08	43.06	0.75	0.35	1.59	1.31	13.11	12.07	13.76	12.78	8.33	7.67	9.25	8.92	5.70	5.40	5.80	5.37	8.83	8.59
FIXED INCOME	KRS Ins. Fixed Blended Index	7/1/1992	1,320,561,317.54	25.74	0.23	0.26	-0.03	0.25	1.37	1.04	1.48	1.07	3.81	4.65	3.29	4.01	4.60	4.64	5.88	5.87	6.35	6.31
REAL RETURN	INSURANCE REAL RET CUSTOM BM	7/1/2011	449,069,166.38	8.75	0.16	0.16	0.55	0.55	2.35	2.35	2.37	2.37	2.91	2.91	2.26	2.26					3.53	2.70
ABSOLUTE RETUR	HFRF Fund of Funds Diversified Index - 1 Month Ar	4/1/2010	279,725,173.86	5.45	0.37	0.58	0.39	0.82	5.39	5.39	5.36	5.12	1.77	1.89	3.79	3.28					4.11	3.12
REAL ESTATE	NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^	5/1/2009	175,068,876.86	3.41	1.44	0.00	1.38	0.00	10.17	5.04	12.46	6.66	10.44	9.42	9.50	10.52					9.21	5.80
PRIVATE EQUITY	Russell 3000 + 3% (Qtr Lag)	7/1/2002	511,671,218.84	9.97	-0.25	-0.25	-0.02	-0.02	13.12	13.12	17.10	17.10	14.12	14.12	14.60	14.60	10.13	12.15			10.00	10.91
CASH ACCOUNT	Citigroup Treasury Bill-3 Month	7/1/1992	186,145,418.50	3.63	0.15	0.15	0.30	0.28	1.41	1.17	1.50	1.24	0.79	0.59	0.56	0.37	0.50	0.31	2.07	1.89	2.64	2.51

KENTUCKY RETIREMENT SYSTEMS - INSURANCE FUND - PLAN NET RETURNS - 05/31/18

Plan	Benchmark	Inception	Market Value	% of Total	Month		3 Months		Fiscal YTD		1 Year		3 Years		5 Years		10 Years		20 Years		ITD	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
KERS INS	KY Ins. KERS Plan Index	836/2007	836,007,581.22	100.00	0.5	0.19	0.46	0.31	8.20	8.42	8.77	9.01	6.65	6.75	6.84	7.44	4.59	5.21	5.31	5.59	7.42	7.81
KERS-H INS	KY Ins. KERS Haz Plan Index	513/1983	513,131,863.78	100.00	0.45	0.16	0.64	0.24	8.78	8.35	9.54	9.05	6.96	6.78	7.23	7.47	4.78	5.22	5.40	5.60	7.48	7.81
CERS INS	KY Ins. CERS Plan Index	2329/1977	2,329,797,877.42	100.00	0.43	0.16	0.75	0.24	9.00	8.36	9.84	9.11	7.11	6.82	7.31	7.49	4.82	5.24	5.42	5.61	7.49	7.82
CERS-H INS	KY Ins. CERS Haz Plan Index	1263/141	1,263,141,511.18	100.00	0.43	0.16	0.76	0.24	9.07	8.36	9.92	9.12	7.19	6.82	7.35	7.49	4.84	5.24	5.43	5.61	7.50	7.82
SPRS INS	KY Ins. SPRS Plan Index	189/112	189,112,415.15	100.00	0.43	0.16	0.77	0.24	9.12	8.36	9.96	9.12	7.19	6.84	7.34	7.50	4.84	5.24	5.43	5.61	7.50	7.82



Note: The above chart displays the average monthly allocation.