

**What’s going on in the marketplace?**

Fueled by an improved global economic outlook and optimism surrounding U.S. tax changes, the market saw a strong start to the new year; however, February ushered in strongly negative global equity markets. The market sell-off seemed to be the result of fears of higher inflation and increasing interest rates. The market did recover somewhat, but ultimately ended in the negative and was defined by heightened volatility. Fixed income markets also retreated due to the potential of higher interest rates even though there were significant flows into the asset class as investors searched for quality.

**U.S. Equities**

U.S. equity markets fell approximately -3.7% (Russell 3000) on the month. Large caps fell the least at -3.7%, while small and mid- caps lost approximately -3.9% and -4.4%, respectively. Growth outperformed value during the period, providing over 200 basis points of downside protection (R3000G -2.6%, R3000V -4.8%).

The KRS U.S. Equity portfolio trailed the Russell 3000 Index by 40 bps (-4.1% vs -3.7%) during the month. The portfolio’s relative performance was hampered by stock selection, primarily within the all cap value mandate (-5.9% vs -4.8%) and the mid-cap value strategy (-6.0% vs -4.9%). The overall portfolio is slightly smaller in terms of market cap and tilts slightly towards value which were headwinds in this market environment.

**Non-U.S. Equities**

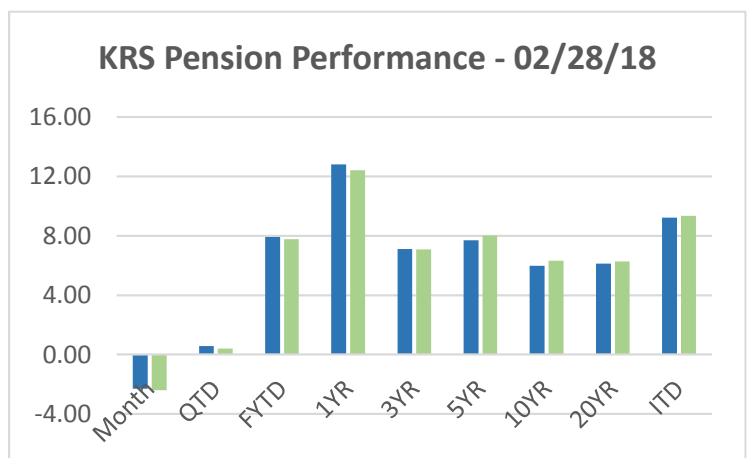
Non-U.S. equities were weak during the period, declining approximately -4.6%; developed and emerging market performance essentially matched one another. However, there was a significant style bias similar to US markets where growth outperformed value, providing roughly 160 basis points (ACWI Growth -3.4% vs ACWI Value -5.0%).

The KRS Non-U.S. Equity portfolio provided over 50 basis points of downside protection during the period, falling -4.1% versus the market return of -4.6%. Relative outperformance was driven primarily by stock selection, with all four active managers outperforming the index on average providing nearly 100 basis points of downside protection. In addition, the overweight to the allocation hampered the overall portfolio’s performance as Non-U.S. equities were the weakest performing asset class for the period.

**Fixed Income**

The fixed income market as a whole was negative for the month, with most segments within US markets performing within a 25 basis point range. The U.S. Aggregate fell 95 bps, the high yield market was down -0.85%, and intermediate credit lost nearly 75 bps. Leveraged loans bucked the trend gaining 0.2% during the period. The emerging market bond market tumbled nearly 2.0% during the month.

The KRS Fixed Income portfolio outperformed its benchmark for the month by over 40 bps (-0.5% vs -0.9%). Manager selection was the driving force behind the positive relative performance. While individual manager relative performance was mixed, one of the high yield and leveraged loan managers provided strong outsized performance.



## Alternative Assets

All four sub-asset classes posted negative absolute returns for the month; however, private equity and real estate (despite current valuation levels) held up fairly well in the down markets of February. The Real Return, Absolute Return, Private Equity, and Real Estate portfolios returned -2.2%, -1.4%, -0.2%, and -0.1%, respectively. This brought performance for the fiscal year for the Private Equity, Real Estate, Absolute Return, and Real Return portfolios to 8.1%, 5.8%, 5.0%, and 1.7%, respectively.

## Cash

The cash portfolio outperformed during the month (0.22% vs 0.11%). The cash allocation finished the period at 3.64%.

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### NOTES:

- 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.
- Individual plan allocation and performance (pg.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.
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|--|--|
| Private Equity Composite (Pension)               | Private Equity Composite (Insurance)             |
| Inception (07/01/02) to 06/30/11                 | Inception (07/01/02) to 06/30/11                 |
| 60.00% S&P 1500 Composite Index                  | 80.00% S&P 1500 Composite Index                  |
| 40.00% Barclays US Corporate High Yield Index    | 20.00% Barclays US Corporate High Yield Index    |
| 07/01/11 to 12/31/15                             | 07/01/11 to 12/31/15                             |
| 100.00% Russell 3000 Index + 4% (Qtr Lag)        | 100.00% Russell 3000 Index + 4% (Qtr Lag)        |
| <b>01/01/16 to Present</b>                       | <b>01/01/16 to Present</b>                       |
| <b>100.00% Russell 3000 Index + 3% (Qtr Lag)</b> | <b>100.00% Russell 3000 Index + 3% (Qtr Lag)</b> |
- 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.

#### Pension Benchmark Composite 01/01/16 to 08/31/17

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%)  
Pension Benchmark Composite 09/01/17 to Present  
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%)

#### Insurance Benchmark Composite 01/01/16 to 08/31/17

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%)  
Insurance Benchmark Composite 09/01/17 to Present  
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%)  
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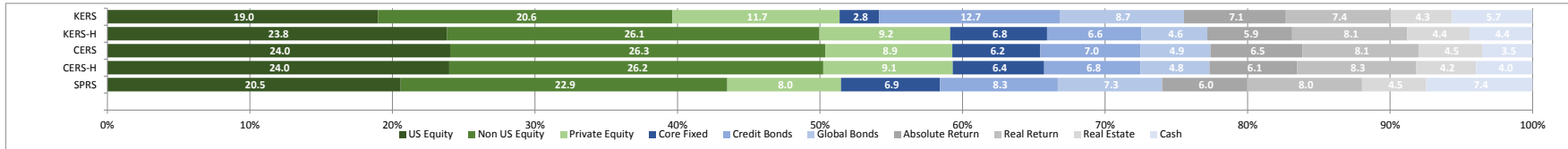
\*\*Fund composite benchmark is a roll-up of individual plans, which may differ from one another.

KENTUCKY RETIREMENT SYSTEMS - PENSION FUND - NET RETURNS - 02/28/18

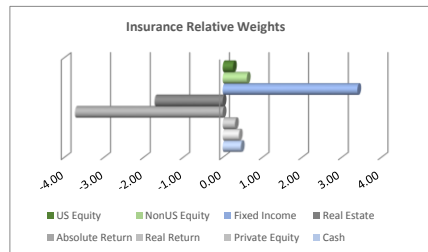
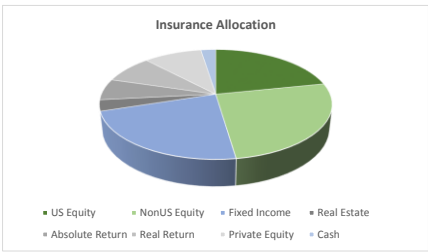
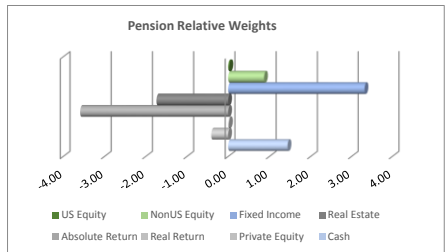
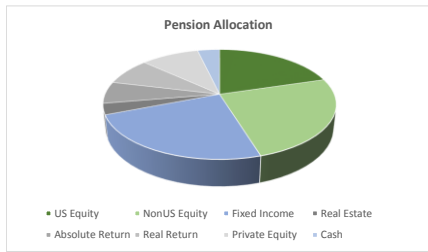
Structure	Benchmark	Inception	Market Value	% of Total	Month		QTD		Fiscal YTD		1 Year		3 Years		5 Years		10 Years		20 Years		ITD	
					KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark	KRS	Benchmark
TOTAL FUND	KY Ret. Blended Index	4/1/1984	12,384,594,271.91	100.00	-2.30	-2.40	0.58	0.41	7.91	7.77	12.81	12.41	7.10	7.07	7.69	8.01	5.97	6.31	6.13	6.27	9.21	9.34
US PUBLIC	KY Domestic Equity Blend	4/1/1984	2,518,136,229.88	20.33	-4.09	-3.69	0.56	1.39	11.28	12.74	14.28	16.22	9.66	10.59	13.41	14.37	9.44	9.91	7.18	7.31	11.39	11.45
EQUITY NON US	KY Ret.Int'l Eq. Blended Index	7/1/2000	3,080,305,513.19	24.87	-4.08	-4.60	1.58	0.62	14.47	12.61	25.11	22.48	7.88	6.84	7.73	6.85	3.88	3.39			3.51	3.86
PUBLIC EQUITY	Global Equity Blended Index	4/1/1984	5,598,441,743.07	45.20	-4.08	-4.14	1.08	1.01	12.92	12.69	19.64	19.32	8.54	8.36	10.10	9.95	6.61	6.31	6.09	5.88	10.72	10.57
FIXED INCOME	KY Ret.Fixed Blended Index	4/1/1984	2,949,726,158.36	23.82	-0.47	-0.90	-0.33	-1.08	1.35	0.84	3.08	2.57	4.01	4.62	3.75	3.86	4.79	4.70	5.59	5.59	7.57	7.38
REAL RETURN	PENSION REAL RETURN CUSTOM BM	7/1/2011	992,787,371.75	8.02	-2.21	-2.21	-0.51	-0.51	1.74	1.74	3.84	3.84	3.00	3.00	1.88	1.88					3.86	2.61
ABSOLUTE RETUR	HFRF Fund of Funds Diversified Index - 1 Month Ar	4/1/2010	794,375,106.41	6.41	-0.73	-1.15	1.59	1.23	4.95	5.77	5.66	6.44	2.84	2.83	4.23	3.78					4.26	3.27
REAL ESTATE	NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^	7/1/1984	403,688,791.38	3.26	-0.05	0.00	0.04	0.00	5.83	3.14	11.28	6.70	9.89	9.84	9.26	10.57	7.82	4.08	6.18	8.04	6.01	6.40
PRIVATE EQUITY	Russell 3000 + 3%(Qtr Lag)	7/1/2002	1,188,208,848.76	9.59	-0.15	-0.15	0.09	0.09	8.08	8.08	17.33	17.33	11.28	11.28	12.60	12.60	8.30	13.10			11.01	11.44
CASH ACCOUNT	Citigroup Treasury Bill-3 Month	1/1/1988	450,569,356.86	3.64	0.22	0.11	0.39	0.22	1.30	0.75	1.60	0.98	0.94	0.45	0.72	0.29	0.83	0.32	2.41	1.94	3.61	3.16

KENTUCKY RETIREMENT SYSTEMS - PENSION FUND - PLAN NET RETURNS - 02/28/18

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		2,059,681,224.52	100.00	-1.97	-2.10	1.76	1.52	7.01	6.83	11.57	11.17	6.39	6.70	7.28	7.64	5.77	6.13	6.03	6.18	9.15	9.28
KERS-H	KY Ret. KERS Haz Plan Index		646,609,738.58	100.00	-2.36	-2.48	1.96	1.88	8.02	8.11	13.02	12.85	7.25	7.10	7.76	7.97	6.00	6.29	6.15	6.26	9.22	9.33
CERS	KY Ret. CERS Plan Index		7,065,177,991.72	100.00	-2.38	-2.48	1.99	1.88	8.08	8.11	13.05	12.81	7.24	7.06	7.77	7.97	6.01	6.29	6.15	6.26	9.23	9.33
CERS-H	KY Ret. CERS Haz Plan Index		2,353,311,901.13	100.00	-2.38	-2.48	1.97	1.88	8.04	8.11	13.01	12.83	7.27	7.06	7.78	7.96	6.01	6.29	6.15	6.26	9.23	9.33
SPRS	KY Ret. SPRS Plan Index		259,813,416.74	100.00	-2.11	-2.24	1.72	1.65	7.20	7.27	11.74	11.61	6.20	6.63	7.14	7.67	5.70	6.15	6.00	6.19	9.13	9.29



Note: The above chart displays the average monthly allocation.

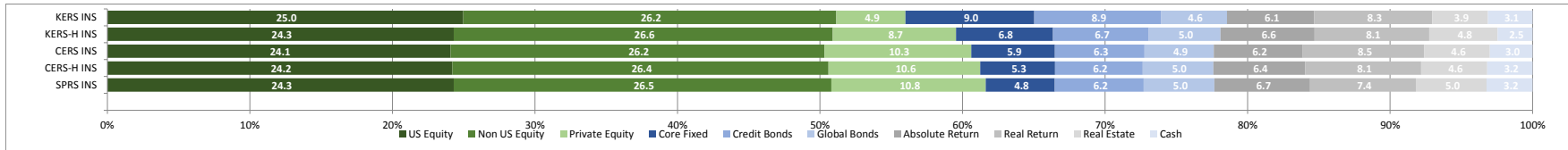


KENTUCKY RETIREMENT SYSTEMS - INSURANCE FUND - NET RETURNS - 02/28/18

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	5,109,448,960.68	100.00	-2.36	-2.46	0.60	0.47	8.15	8.08	13.10	12.92	7.35	7.46	7.62	8.26	5.27	5.80	5.49	5.77	7.52	7.90
US PUBLIC	KY Domestic Equity Blend	7/1/1992	1,111,631,968.23	21.76	-4.09	-3.69	0.55	1.39	11.25	12.74	14.31	16.22	10.03	10.59	13.56	14.37	9.30	9.73	6.98	6.74	9.76	9.67
EQUITY NON US	KRS Ins.Int'l Eq Blend	4/1/2000	1,323,952,718.48	25.91	-4.06	-4.60	1.58	0.62	14.46	12.61	25.01	22.48	7.82	6.84	7.59	6.85	3.53	3.04			3.51	2.99
PUBLIC EQUITY	Global Equity Blended Index	7/1/1992	2,435,584,686.71	47.67	-4.07	-4.14	1.07	1.01	12.89	12.69	19.54	19.35	8.75	8.40	10.22	9.93	6.36	6.08	5.92	5.54	8.91	8.71
FIXED INCOME	KRS Ins. Fixed Blended Index	7/1/1992	1,144,364,195.63	22.40	-0.37	-0.90	-0.30	-1.08	1.29	0.84	2.93	2.57	3.87	4.62	3.29	3.86	4.39	4.42	5.99	5.96	6.41	6.37
REAL RETURN	INSURANCE REAL RET CUSTOM BM	7/1/2011	424,837,524.28	8.31	-1.93	-1.93	-0.42	-0.42	1.69	1.69	3.71	3.71	2.81	2.81	1.61	1.61					3.57	2.70
ABSOLUTE RETUR	HFRF Fund of Funds Diversified Index - 1 Month Ar	4/1/2010	320,323,341.37	6.27	-0.80	-1.15	1.56	1.23	4.96	5.77	5.63	6.44	2.85	2.83	4.22	3.78					4.19	3.27
REAL ESTATE	NCREIF NFI-ODCE Net 1 Qtr in Arrears Index^	5/1/2009	167,586,688.52	3.28	-0.05	0.00	0.03	0.00	5.83	3.14	11.42	6.70	9.92	9.84	9.11	10.57					8.98	5.75
PRIVATE EQUITY	Russell 3000 + 3% (Qtr Lag)	7/1/2002	491,164,693.07	9.61	-0.14	-0.14	0.11	0.11	8.48	8.48	18.13	18.13	14.27	14.27	14.77	14.77	10.17	12.43			9.88	10.85
CASH ACCOUNT	Citigroup Treasury Bill-3 Month	7/1/1992	125,916,245.75	2.46	0.11	0.11	0.23	0.22	0.97	0.75	1.27	0.98	0.66	0.45	0.49	0.29	0.52	0.32	2.11	1.94	2.65	2.52

KENTUCKY RETIREMENT SYSTEMS - INSURANCE FUND - PLAN NET RETURNS - 02/28/18

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		831,976,589.30	100.00	-2.37	-2.46	1.78	1.91	7.70	8.16	12.24	12.60	6.96	7.12	7.27	8.04	5.09	5.70	5.41	5.71	7.46	7.87
KERS-H INS	KY Ins. KERS Haz Plan Index		513,461,158.14	100.00	-2.37	-2.46	1.98	1.91	8.08	8.17	12.96	12.83	7.27	7.19	7.62	8.08	5.27	5.72	5.49	5.72	7.52	7.87
CERS INS	KY Ins. CERS Plan Index		2,315,890,563.31	100.00	-2.36	-2.46	2.05	1.91	8.19	8.17	13.22	12.96	7.40	7.24	7.68	8.11	5.29	5.73	5.51	5.73	7.53	7.88
CERS-H INS	KY Ins. CERS Haz Plan Index		1,259,221,759.16	100.00	-2.35	-2.46	2.07	1.91	8.24	8.17	13.31	12.97	7.48	7.25	7.72	8.11	5.31	5.73	5.52	5.73	7.54	7.88
SPRS INS	KY Ins. SPRS Plan Index		188,898,890.91	100.00	-2.34	-2.46	2.10	1.91	8.29	8.17	13.38	12.97	7.46	7.27	7.70	8.12	5.31	5.74	5.51	5.73	7.54	7.88



Note: The above chart displays the average monthly allocation.