

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

Global stocks tumbled during the month of October as fears and uncertainty increased. Concerns surrounding increased trade barriers weighed on markets, along with questions regarding the potential of slowing global growth, particularly in the Eurozone and China. The potential of additional rate hikes caused U.S. Treasury yields to increase, thus pushing bond prices down. Heightened volatility to the downside was felt most outside of the U.S., especially within emerging markets, which not only had to deal with the above concerns but also political uncertainty.

**U.S. Equities**

U.S. equity markets tumbled during the month; the Russell 3000 Index fell -7.9%. No market cap was spared; however, large caps provided the most downside protection, falling -6.8%. Mid-caps and small caps lost -9.6% and -10.9%, respectively. The month was marked by a style rotation, where value outperformed growth by 377 basis points as evidenced by the Russell 3000 style indices (R3000V -5.5%, R3000G -9.2%).

The KRS U.S. Equity portfolio underperformed the Russell 3000 by 18 bps during the month (-7.5% vs -7.4%). The portfolio’s relative performance was driven by both stock selection and allocation. From a stock selection perspective, the relative performance of the individual strategies was mixed, with the mid cap value and all cap growth mandates trailing their respective benchmarks. From an allocation perspective, the smaller cap positioning was a headwind during the period.

**Non-U.S. Equities**

Non-U.S. equities were weaker than the U.S. markets during the period, falling -8.36%. Developed markets outperformed their emerging market counterparts. Non-U.S. markets experienced the same style rotation of that of the U.S.

The KRS Non-U.S. Equity portfolio slightly trailed the index by 6 basis points during the month (-8.4% vs -8.4%). Stock selection was mixed as two of the four active large cap managers and the portfolio’s small cap mandate outperformed their associated indices, meaning two of the active large cap managers trailed the index. As all four active mandates are marked against a core benchmark, it is not surprising that the value managers outperformed and the growth managers underperformed given the market environment. Allocation decisions had little impact on relative performance.

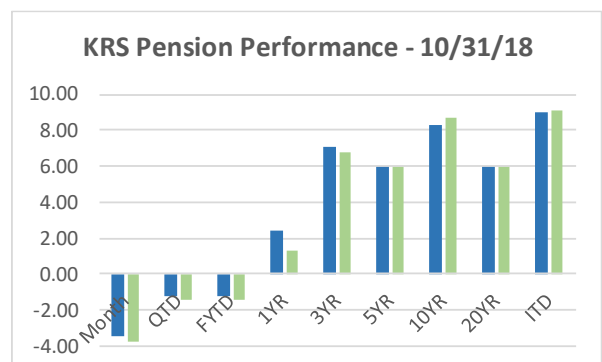
**Fixed Income**

Fixed income market segments were negative in terms of performance during the month; however, they held up much better than the equity markets. The corporate high yield market fell -1.60%, the core space as defined by the U.S. Aggregate lost 79 bps, intermediate credit dropped 42 bps, and leveraged loans were relatively flat during the period.

The specialty credit portion of the KRS portfolio dropped 39 bps on the month, while the core fixed income piece of the portfolio fell 35 bps. Within the specialty credit bucket, relative outperformance was provided by strong selection within some of the lending, leveraged loan, and opportunistic mandates. Within the core portion of the portfolio, the intermediate corporate credit held up better than the market.

**Alternative Assets**

The diversifying strategy group fell -1.2% during the period. The Opportunistic, Absolute Return, and Real Estate portions of the



portfolio gained 1.2%, 0.6%, and 0.4%, respectively. The Real Return portion of the portfolio declined -2.8%. The Private Equity portion of the portfolio fell 17 bps during the month.

## Cash

The cash portfolio performed inline during the month (0.19% vs 0.18%). The cash allocation finished the period slightly above target due to transitioning assets while continuing to move toward the newly approved asset allocation.

### 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.4).
- 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.

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

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 05/31/18 -

Transition Period w/Sliding Targets

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%)

Pension Benchmark Composite 06/01/18 to Present

US Equity: Russell 3000 (17.0%)  
 Non US Equity: MSCI AXCI Ex-US IMI (21.0%)  
 Global Fixed Income: Barclays Universal Index (13.0%)  
 Credit Fixed Income: Barclays US High Yield (12.4%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return<5yrs: Actual Performance  
 Real Return>5yrs: CPI+3% (10.0%)  
 Private Equity<5Yrs: Actual Performance  
 Private Equity>5Yrs: Russell 3000 Index+3% (9.4%)  
 Cash: Cit Grp 3-mos Treasury Bill (2.2%)

\*\*Fund composite benchmark is a roll-up of individual plans, which may differ from one another.

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 05/31/18 -

Transition Period w/Sliding Targets

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%)

Insurance Benchmark Composite 06/01/18 to Present

US Equity: Russell 3000 (17.9%)  
 Non US Equity: MSCI AXCI Ex-US IMI (21.9%)  
 Global Fixed Income: Barclays Universal Index (13.0%)  
 Credit Fixed Income: Barclays US High Yield (11.0%)  
 Real Estate: NCREIF ODCE (5.0%)  
 Absolute Return: HFRI Diversified FOF (10.0%)  
 Real Return<5yrs: Actual Performance  
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