



Investment Performance Analysis

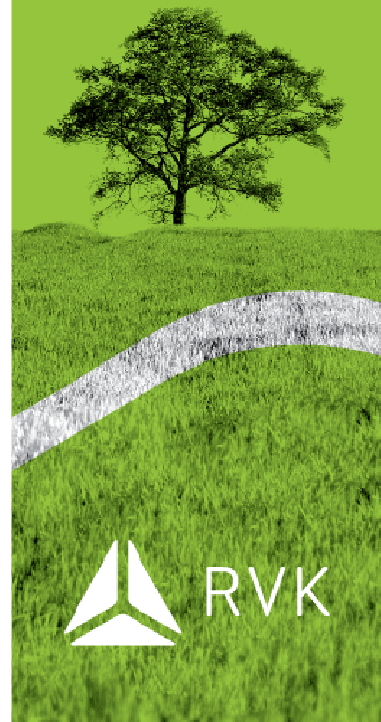
North Dakota Board of University and School Lands

Period Ended: December 31, 2018



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Capital Markets Review

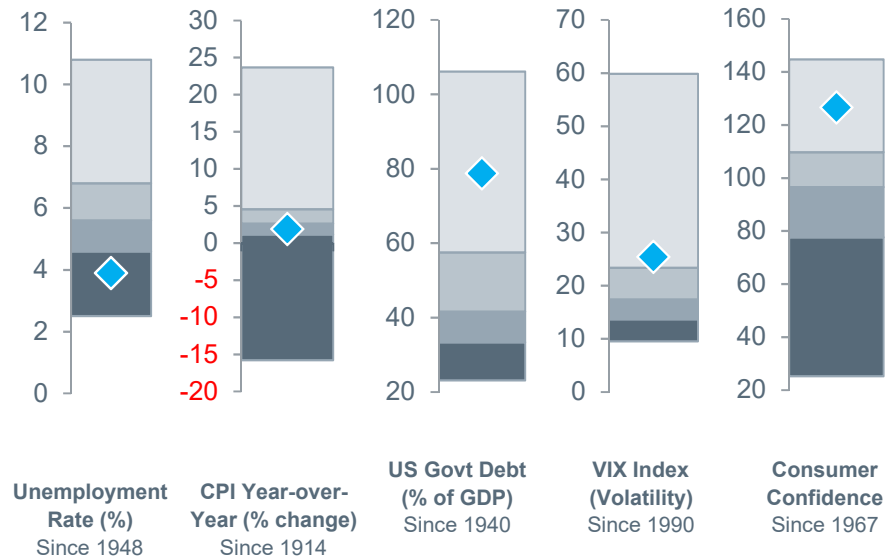


Fourth Quarter Economic Environment

Key Economic Indicators

The fourth quarter of 2018 was characterized by a heightened level of volatility and negative returns for the majority of risk assets. Though equity markets experienced an initial decline in October, the strongest risk-off environment emerged in December as global growth forecasts, inflation expectations, and corporate earnings expectations began to roll over in unison. During the quarter, the Federal Reserve, European Central Bank, and International Monetary Fund lowered 2019 GDP growth forecasts across regions, and the 5Y/5Y inflation expectation rate fell from nearly 2.3% at the start of the quarter to 1.9% at quarter-end. In a move that proved to be more controversial than many anticipated, the FOMC raised the target range for the federal funds rate by 0.25% for the fourth time in 2018 during its December meeting, resulting in a target range of 2.25% to 2.5%. US Economic data remained strong, with non-farm payrolls up 312,000 in December on a 3.9% unemployment rate. While the odds of a recession occurring in 2019 remain low, leading indicators such as falling oil prices, a flattening yield curve, declining consumer confidence and a subdued housing market contributed to negative investor sentiment at year-end.

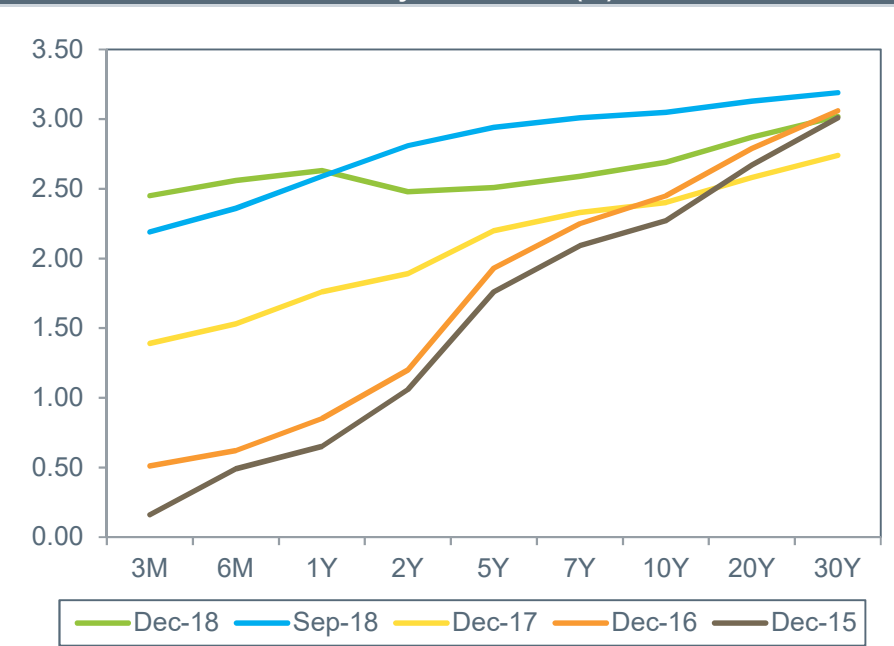
Key Economic Indicators



Economic Indicators

| | Dec-18 | Sep-18 | Dec-17 | Dec-15 | 20 Yr |
|-------------------------------|---------|--------|--------|--------|-------|
| Federal Funds Rate (%) | 2.40 ▲ | 2.18 | 1.33 | 0.20 | 1.94 |
| Breakeven Infl. - 1 Yr (%) | -2.84 ▼ | 1.18 | 0.85 | 0.85 | N/A |
| Breakeven Infl. - 10 Yr (%) | 1.71 ▼ | 2.14 | 1.98 | 1.58 | N/A |
| CPI YoY (Headline) (%) | 1.9 ▼ | 2.3 | 2.1 | 0.7 | 2.2 |
| Unemployment Rate (%) | 3.9 ▲ | 3.7 | 4.1 | 5.0 | 5.9 |
| Real GDP YoY (%) | N/A | 3.0 | 2.5 | 2.0 | 2.2 |
| PMI - Manufacturing | 54.3 ▼ | 59.5 | 59.4 | 48.4 | 52.8 |
| USD Total Wtd Idx | 91.79 ▲ | 90.11 | 87.47 | 94.25 | 86.32 |
| WTI Crude Oil per Barrel (\$) | 45.4 ▼ | 73.3 | 60.4 | 37.0 | 60.1 |
| Gold Spot per Oz (\$) | 1,282 ▲ | 1,193 | 1,303 | 1,061 | 879 |

Treasury Yield Curve (%)



Market Performance (%)

| | QTD | CYTD | 1 Yr | 5 Yr | 10 Yr |
|---------------------------|--------|--------|--------|-------|-------|
| S&P 500 (Cap Wtd) | -13.52 | -4.38 | -4.38 | 8.49 | 13.12 |
| Russell 2000 | -20.20 | -11.01 | -11.01 | 4.41 | 11.97 |
| MSCI EAFE (Net) | -12.54 | -13.79 | -13.79 | 0.53 | 6.32 |
| MSCI EAFE SC (Net) | -16.05 | -17.89 | -17.89 | 3.06 | 10.51 |
| MSCI Emg Mkts (Net) | -7.47 | -14.58 | -14.58 | 1.65 | 8.02 |
| Bloomberg US Agg Bond | 1.64 | 0.01 | 0.01 | 2.52 | 3.48 |
| ICE BofAML 3 Mo US T-Bill | 0.56 | 1.87 | 1.87 | 0.63 | 0.37 |
| NCREIF ODCE (Gross) | 1.76 | 8.35 | 8.35 | 10.41 | 7.00 |
| FTSE NAREIT Eq REIT (TR) | -6.73 | -4.62 | -4.62 | 7.90 | 12.12 |
| HFRI FOF Comp | -5.01 | -4.09 | -4.09 | 1.38 | 3.11 |
| Bloomberg Cmdbt (TR) | -9.41 | -11.25 | -11.25 | -8.80 | -3.78 |

Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as N/A.

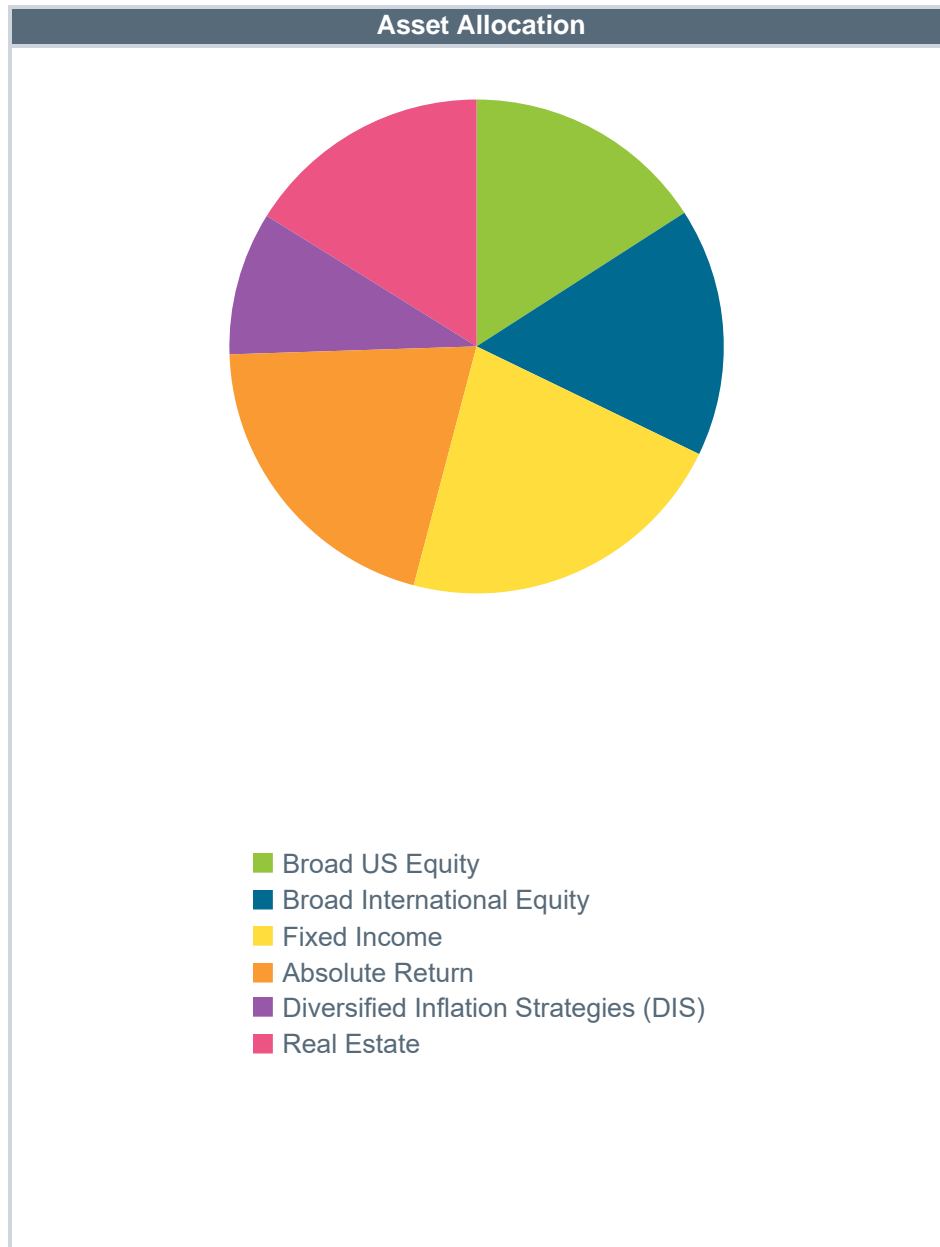
Total Fund



Quarterly Performance Commentary¹

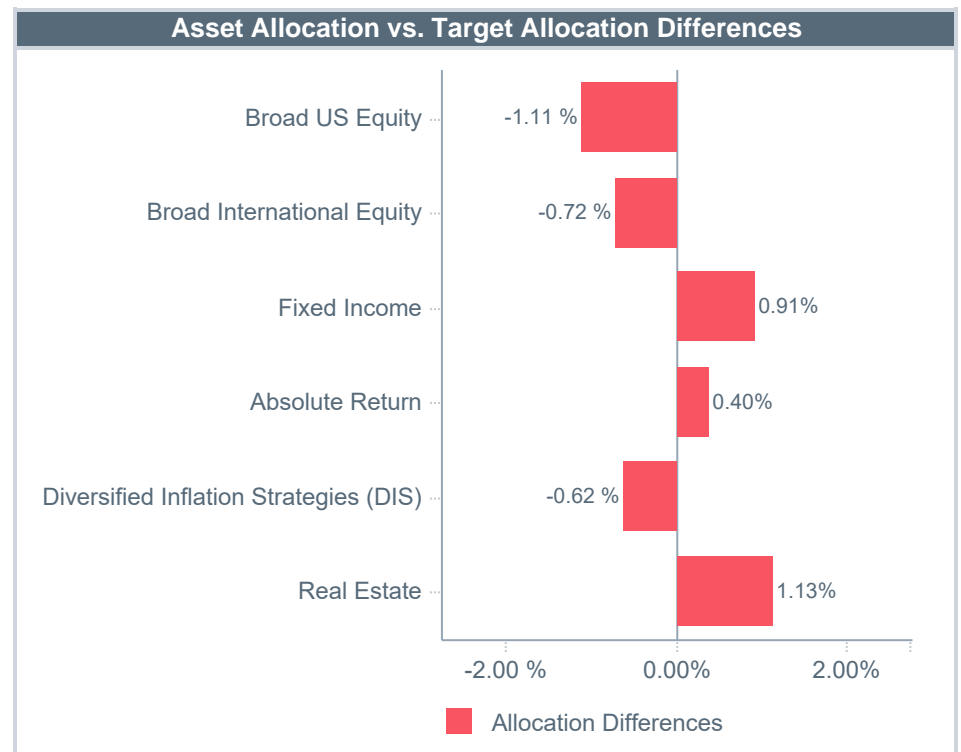
- The Total Fund declined 6.6% during the fourth quarter, underperforming the target allocation index by 19 basis. The Fund's US equity, international equity, fixed income, and diversified inflation strategies portfolios underperformed their respective benchmarks, while the absolute return and real estate portfolios outperformed.
- The fourth quarter was characterized by a heightened level of volatility and significant negative returns for the majority of risk assets, with equity indices experiencing the worst quarter performance in nearly a decade. Concerns over faster-than-expected increases in the Federal Fund rate, significant declines in oil prices, ongoing tensions between US and China, and the partial U.S. government shutdown weighed on markets. The US equity portfolio's bias toward small cap and mid cap stocks detracted from relative performance as these stocks experienced greater losses than large cap stocks. The portfolio's sole active manager (Northern Trust Small Cap Core) outperformed the Russell 2000 Index and maintains strong relative performance.
- Developed international equities declined 12.5% during the quarter and emerging markets returned -7.5%. The international equity sell-off was partially induced by volatility in the US market, but also driven by international economic tensions including the Brexit-driven uncertainty and rioting in France in response to President Macron's fiscal agenda. The international equity portfolio underperformed for the quarter due to active manager positioning within emerging markets and non-US small cap.
- US fixed income markets, as measured by the Bloomberg US Aggregate Bond Index, gained 1.6% during the quarter. In December, the Federal Reserve increased the Federal Fund rate for the fourth time in 2018 to the current rate of 2.50%. The fixed income portfolio gained 0.6% and trailed its benchmark by 53 basis points largely due to Brandywine's currency positioning and lack of exposure to European and Japanese bonds. Funding for Schrodgers Securitized Credit Fund was completed during the quarter. The remaining committed capital for Angelo Gordon is expected to be completed over the next couple of quarters.
- The Fund's absolute return portfolio declined 3.8%, but outperformed its respective benchmark by 368 basis points. Westwood's overweight allocation to US equity and stock selection hurt performance, while GMO and PIMCO benefited from underweight allocations to US equity and overweight allocation to emerging market equities.
- The Total Fund's diversified inflation strategies portfolio returned -15.4% during the quarter and underperformed its benchmark. In contrast to the prior quarter, MLPs experienced significant losses (-17.8% as measured by the S&P MLP Index) due to declining oil price and weakening investor demand. Harvest MLP's performance was further hurt by its overweight allocation to large-cap, high-liquidity partnerships as the Index experienced four rebalances during the quarter that favored small index names. Van Eck's stock selection and allocation to Permian basin focused oil and gas exploration and production companies continued to detract from performance.
- The real estate portfolio was the Fund's strongest performing asset class during the fourth quarter, returning 1.9%. Performance continued to be led by the industrial sector and strong returns from Prologis which gained 3.1% compared to the NCREIF ODCE Index return of 1.5%.

¹Performance referenced is gross of fees.



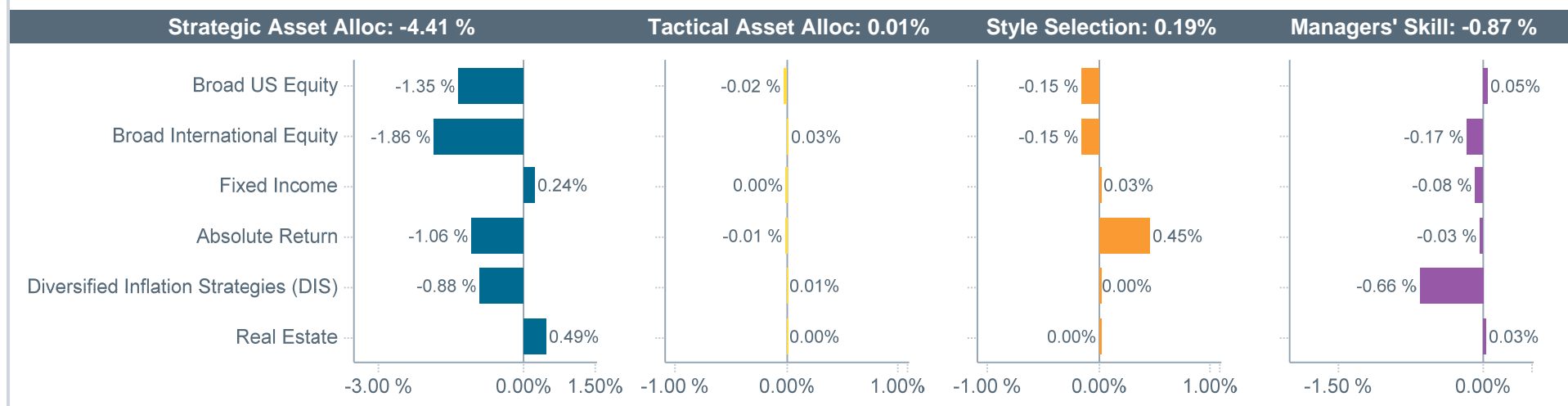
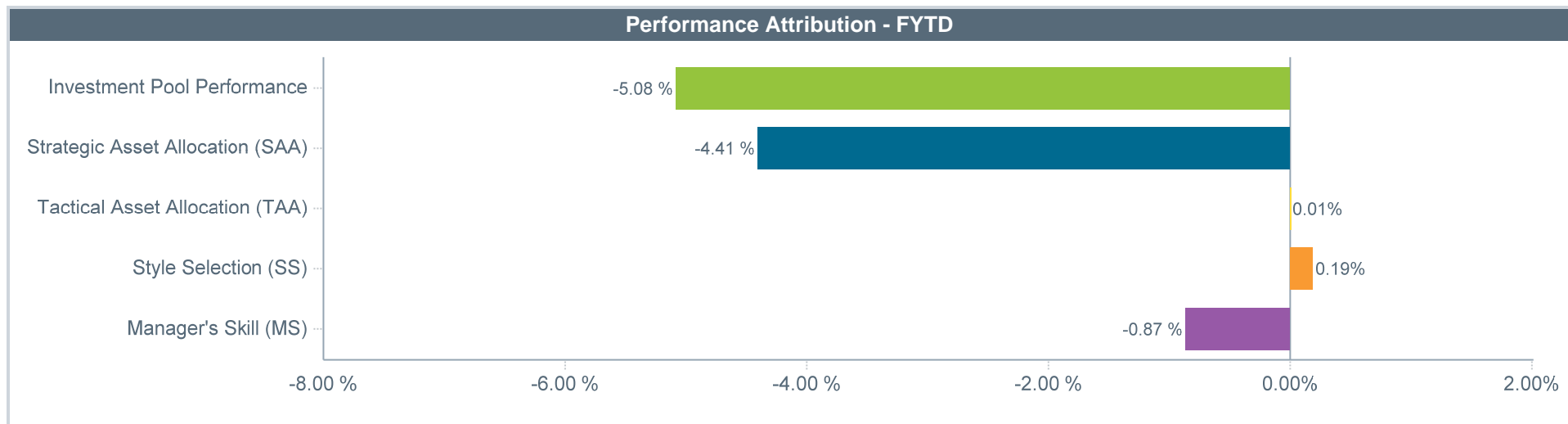
Asset Allocation vs. Target Allocation

| | Market Value (\$) | Allocation (%) | Target (%) |
|--|----------------------|----------------|---------------|
| Broad US Equity | 694,810,745 | 15.89 | 17.00 |
| Broad International Equity | 711,863,964 | 16.28 | 17.00 |
| Fixed Income | 958,036,909 | 21.91 | 21.00 |
| Absolute Return | 891,628,820 | 20.40 | 20.00 |
| Diversified Inflation Strategies (DIS) | 410,164,281 | 9.38 | 10.00 |
| Real Estate | 705,165,225 | 16.13 | 15.00 |
| Total Fund | 4,371,669,944 | 100.00 | 100.00 |



RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding.

| Comparative Performance | | | | | | | | | |
|---------------------------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------------|
| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
| Total Fund | -6.65 | -5.08 | -5.12 | -5.12 | 5.10 | 3.03 | 7.41 | 6.34 | 08/01/1995 |
| Target Allocation Index (Net) | -6.39 | -4.41 | -4.51 | -4.51 | 5.23 | 4.22 | N/A | N/A | |
| Difference | -0.26 | -0.67 | -0.61 | -0.61 | -0.13 | -1.19 | N/A | N/A | |
| Total Fund (Gross) | -6.55 | -4.87 | -4.66 | -4.66 | 5.63 | 3.49 | N/A | 7.50 | 07/01/2009 |
| Target Allocation Index (Gross) | -6.36 | -4.34 | -4.38 | -4.38 | 5.37 | 4.35 | N/A | 8.25 | |



Performance shown is net of fees except where noted. Attribution shown is calculated using the Investment Decision Process (IDP). RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Please see the Addendum for custom index definitions. Fiscal year ends 6/30.



North Dakota Board of University and School Lands
Comparative Performance - Gross

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | Since Incep. | Inception Date |
|---|---------------|---------------|---------------|---------------|--------------|-------------|--------------|-------------|-----------------|-------------------|
| Total Fund (Net) | -6.65 | -5.08 | -5.12 | -5.12 | 5.10 | 3.03 | 5.58 | 7.41 | 6.34 | 08/01/1995 |
| Target Allocation Index (Net) | -6.39 | -4.41 | -4.51 | -4.51 | 5.23 | 4.22 | 6.53 | N/A | N/A | |
| Difference | -0.26 | -0.67 | -0.61 | -0.61 | -0.13 | -1.19 | -0.95 | N/A | N/A | |
| Total Fund | -6.55 | -4.87 | -4.66 | -4.66 | 5.63 | 3.49 | 5.99 | N/A | 7.50 | 07/01/2009 |
| Target Allocation Index (Gross) | -6.36 | -4.34 | -4.38 | -4.38 | 5.37 | 4.35 | 6.62 | N/A | 8.25 | |
| Difference | -0.19 | -0.53 | -0.28 | -0.28 | 0.26 | -0.86 | -0.63 | N/A | -0.75 | |
| Broad US Equity | -14.62 | -8.71 | -5.40 | -5.40 | 9.27 | 8.01 | 11.64 | N/A | 13.07 | 07/01/2009 |
| Russell 3000 Index | -14.30 | -8.20 | -5.24 | -5.24 | 8.97 | 7.91 | 12.46 | 13.18 | 13.43 | |
| Difference | -0.32 | -0.51 | -0.16 | -0.16 | 0.30 | 0.10 | -0.82 | N/A | -0.36 | |
| Broad International Equity | -12.39 | -12.57 | -16.27 | -16.27 | 3.68 | 0.12 | 5.94 | N/A | 5.59 | 07/01/2009 |
| MSCI ACW Ex US Index (USD) (Net) | -11.46 | -10.84 | -14.20 | -14.20 | 4.48 | 0.68 | 4.85 | 6.57 | 5.47 | |
| Difference | -0.93 | -1.73 | -2.07 | -2.07 | -0.80 | -0.56 | 1.09 | N/A | 0.12 | |
| Fixed Income | 0.60 | 0.96 | -0.13 | -0.13 | 2.98 | 2.78 | 2.97 | N/A | 4.45 | 07/01/2009 |
| Global Fixed Income Custom Index | 1.13 | 1.14 | -0.52 | -0.52 | 2.68 | 2.35 | 2.21 | 3.75 | 3.62 | |
| Difference | -0.53 | -0.18 | 0.39 | 0.39 | 0.30 | 0.43 | 0.76 | N/A | 0.83 | |
| Bloomberg US Agg Bond Index | 1.64 | 1.66 | 0.01 | 0.01 | 2.06 | 2.52 | 2.10 | 3.48 | 3.46 | |
| Difference | -1.04 | -0.70 | -0.14 | -0.14 | 0.92 | 0.26 | 0.87 | N/A | 0.99 | |
| Absolute Return | -3.76 | -2.87 | -4.41 | -4.41 | 5.41 | N/A | N/A | N/A | 1.62 | 07/01/2014 |
| Absolute Return Custom Index | -7.44 | -5.29 | -5.93 | -5.93 | 4.86 | 3.67 | 6.03 | 7.49 | 2.88 | |
| Difference | 3.68 | 2.42 | 1.52 | 1.52 | 0.55 | N/A | N/A | N/A | -1.26 | |
| Consumer Price Index+5% | 0.74 | 2.16 | 7.01 | 7.01 | 7.13 | 6.59 | 6.62 | 6.89 | 6.24 | |
| Difference | -4.50 | -5.03 | -11.42 | -11.42 | -1.72 | N/A | N/A | N/A | -4.62 | |
| Diversified Inflation Strategies (DIS) | -15.39 | -14.93 | -13.73 | -13.73 | 2.04 | N/A | N/A | N/A | -2.03 | 04/01/2014 |
| DIS Custom Index | -9.17 | -8.77 | -9.13 | -9.13 | 3.53 | -0.25 | 1.84 | 5.40 | -0.88 | |
| Difference | -6.22 | -6.16 | -4.60 | -4.60 | -1.49 | N/A | N/A | N/A | -1.15 | |
| Real Estate | 1.92 | 4.14 | 9.61 | 9.61 | 10.22 | N/A | N/A | N/A | 10.91 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Gross) | 1.76 | 3.88 | 8.35 | 8.35 | 8.24 | 10.41 | 10.99 | 7.00 | 9.16 | |
| Difference | 0.16 | 0.26 | 1.26 | 1.26 | 1.98 | N/A | N/A | N/A | 1.75 | |

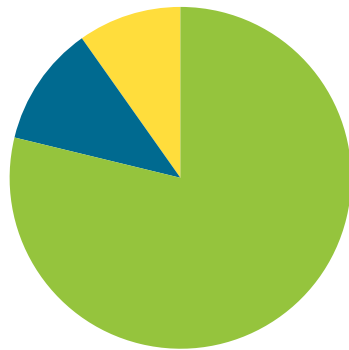
Performance shown is gross of fees except where noted. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

Comparative Performance

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|--------------------|--------|-------|-------|--------|---------|---------|----------|--------------|----------------|
| Broad US Equity | -14.62 | -8.71 | -5.40 | -5.40 | 9.27 | 8.01 | N/A | 13.07 | 07/01/2009 |
| Russell 3000 Index | -14.30 | -8.20 | -5.24 | -5.24 | 8.97 | 7.91 | 13.18 | 13.43 | |
| Difference | -0.32 | -0.51 | -0.16 | -0.16 | 0.30 | 0.10 | N/A | -0.36 | |

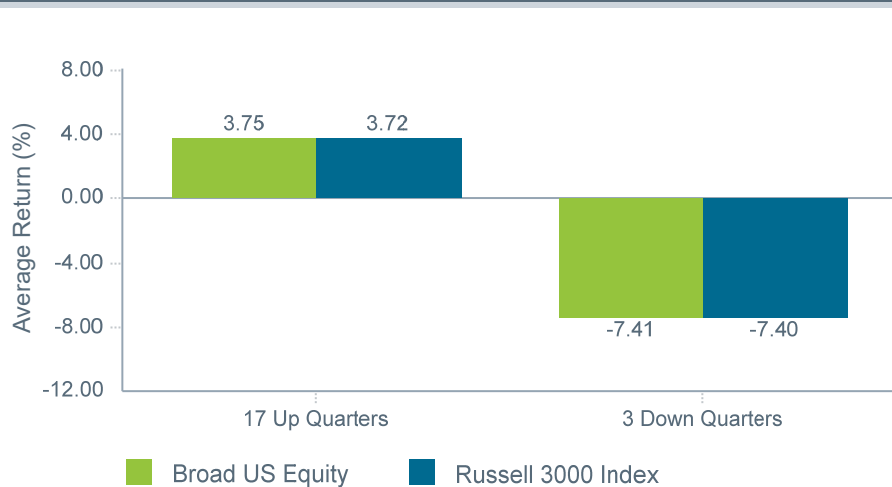
Asset Allocation by Manager

\$694,810,745

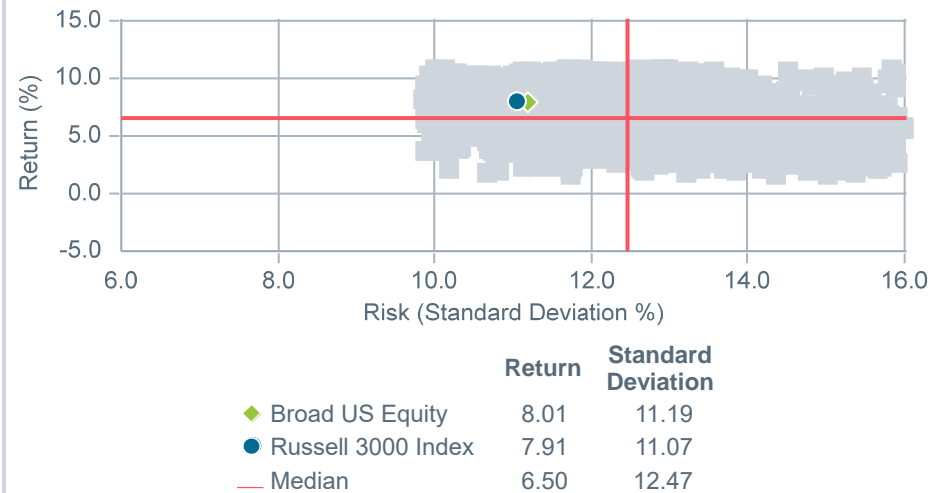


| | Market Value (\$) | Allocation (%) |
|---|-------------------|----------------|
| State Street Russell 1000 Index SL (CF) | 547,390,171 | 78.78 |
| NT Small Cap Core (CF) | 79,315,402 | 11.42 |
| State Street Russell Mid Cap Index (SA) | 68,105,171 | 9.80 |

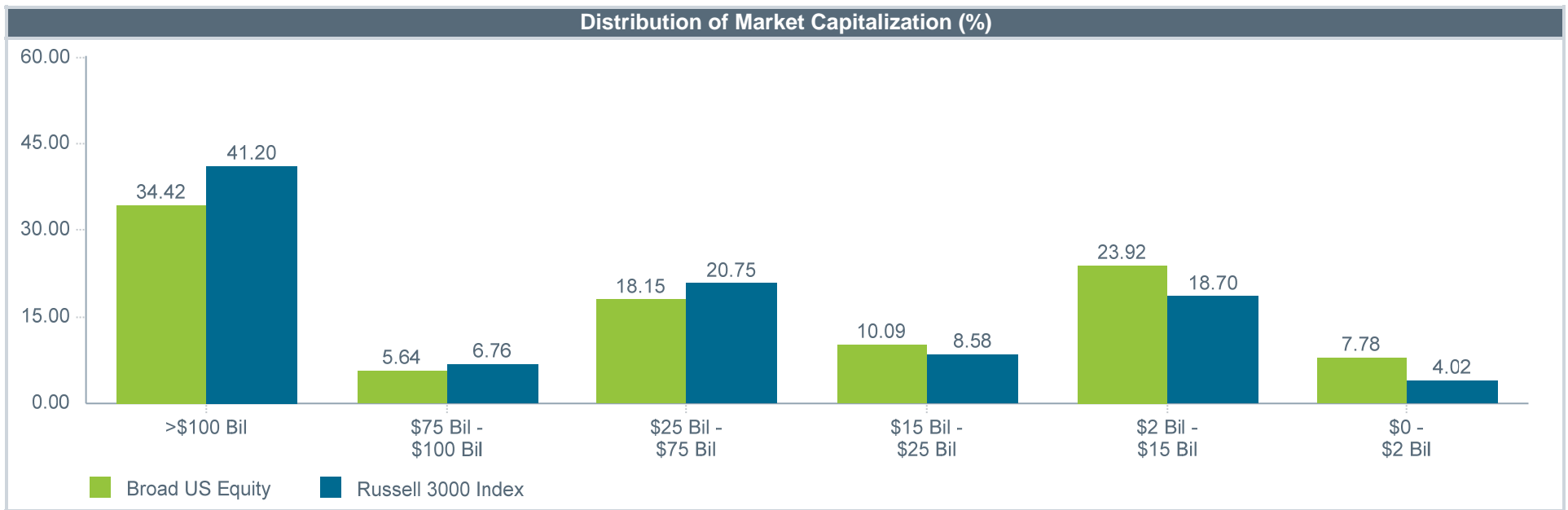
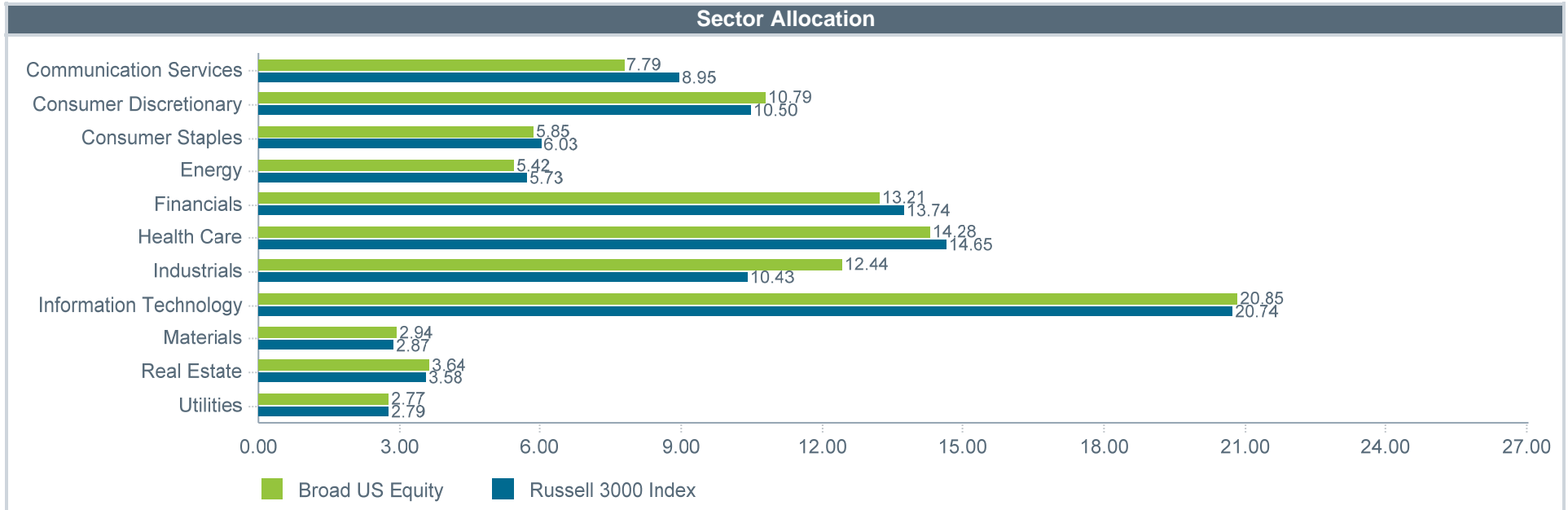
Up/Down Markets - 5 Years



Peer Group Scattergram - 5 Years



Performance shown is gross of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Please see Addendum for peer groups. Fiscal year ends 6/30.



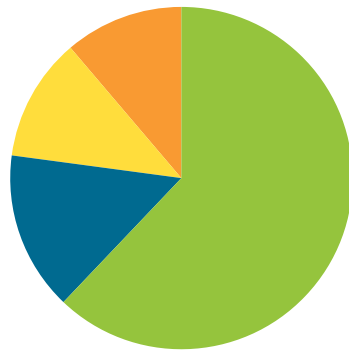
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Comparative Performance

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|----------------------------------|--------|--------|--------|--------|---------|---------|----------|--------------|----------------|
| Broad International Equity | -12.39 | -12.57 | -16.27 | -16.27 | 3.68 | 0.12 | N/A | 5.59 | 07/01/2009 |
| MSCI ACW Ex US Index (USD) (Net) | -11.46 | -10.84 | -14.20 | -14.20 | 4.48 | 0.68 | 6.57 | 5.47 | |
| Difference | -0.93 | -1.73 | -2.07 | -2.07 | -0.80 | -0.56 | N/A | 0.12 | |

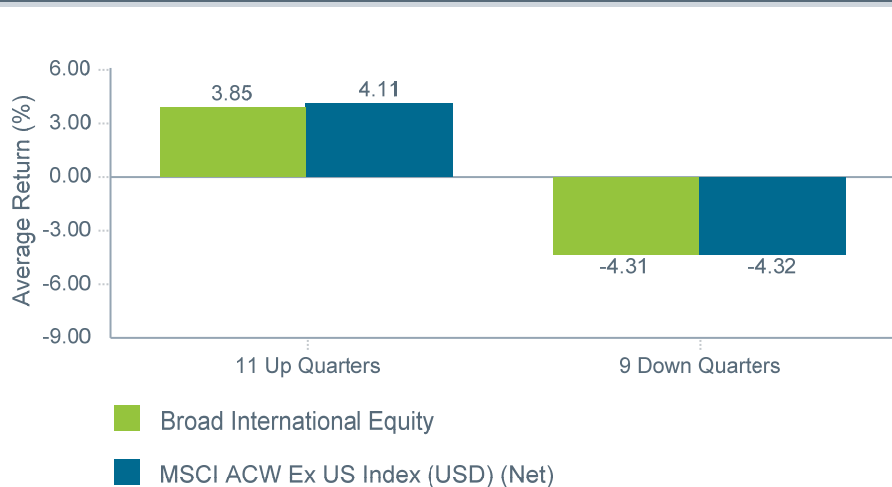
Asset Allocation by Manager

\$711,863,964



| | Market Value (\$) | Allocation (%) |
|---|-------------------|----------------|
| State Street World Ex US Index (CF) | 442,116,613 | 62.1 |
| QMA International Small Cap Equity (CF) | 106,856,521 | 15.0 |
| DFA Emg Mkts Core Eq;I (DFCEX) | 83,067,900 | 11.7 |
| Harding Loevner:IEM;II (HLEEX) | 79,822,929 | 11.2 |

Up/Down Markets - 5 Years

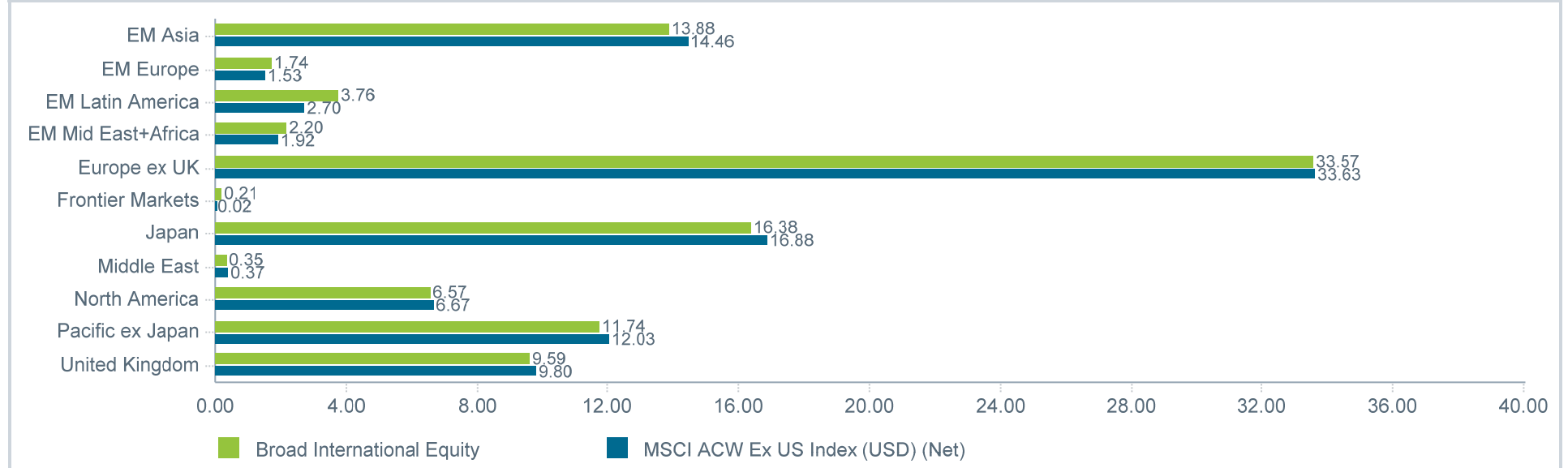


Peer Group Scattergram - 5 Years

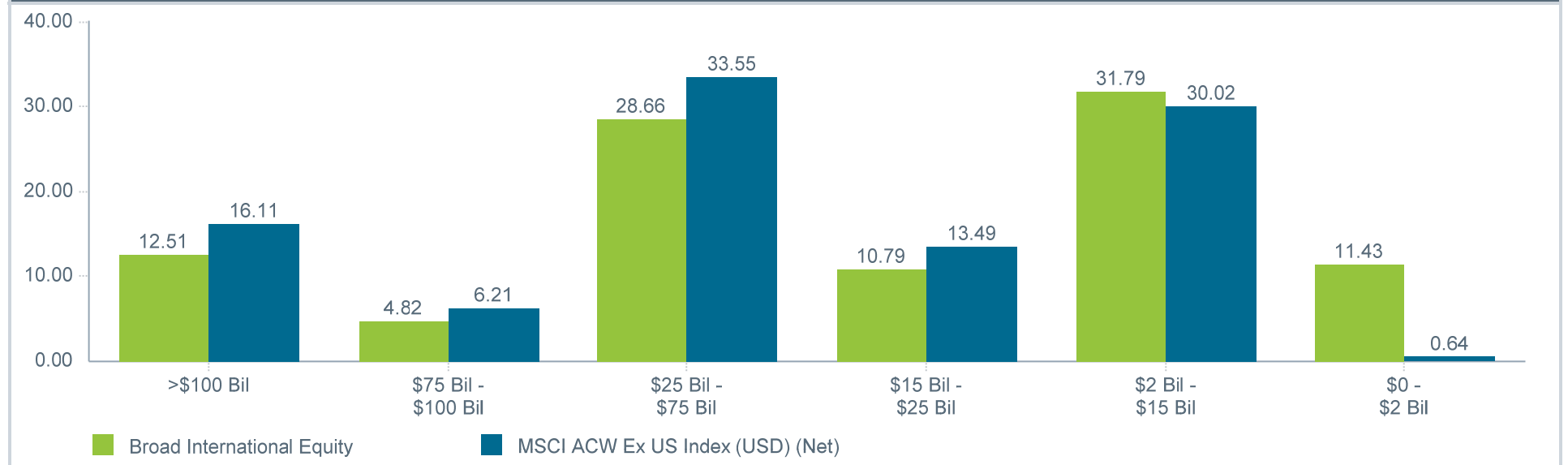


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Regional Allocation



Distribution of Market Capitalization



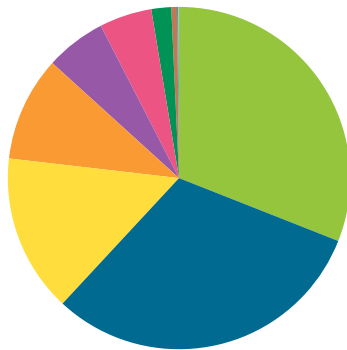
RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding.

Comparative Performance

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|----------------------------------|-------------|-------------|--------------|--------------|-------------|-------------|------------|--------------|-------------------|
| Fixed Income | 0.60 | 0.96 | -0.13 | -0.13 | 2.98 | 2.78 | N/A | 4.45 | 07/01/2009 |
| Global Fixed Income Custom Index | 1.13 | 1.14 | -0.52 | -0.52 | 2.68 | 2.35 | 3.75 | 3.62 | |
| Difference | -0.53 | -0.18 | 0.39 | 0.39 | 0.30 | 0.43 | N/A | 0.83 | |

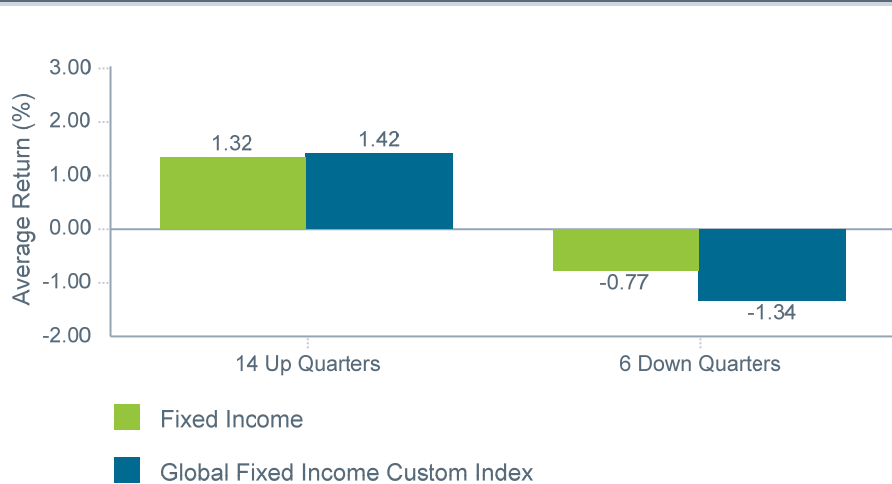
Asset Allocation by Manager

\$958,036,909

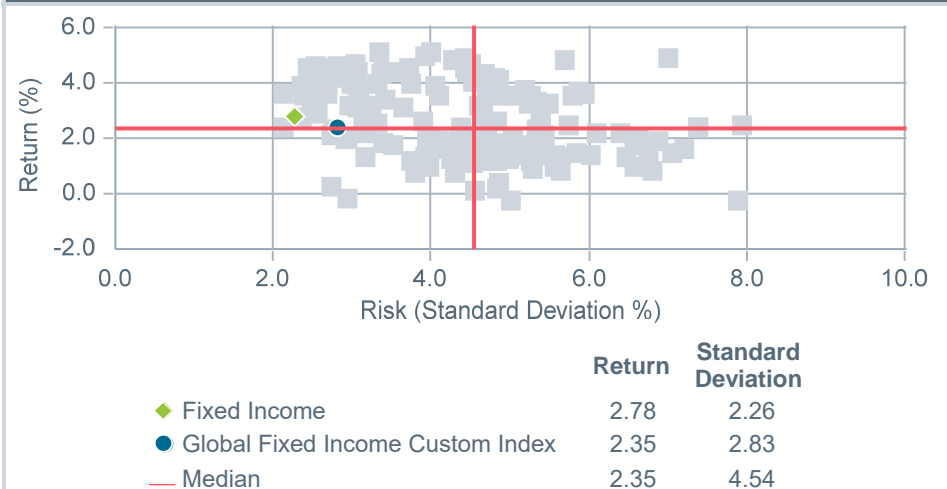


| | Market Value (\$) | Allocation (%) |
|-------------------------------------|-------------------|----------------|
| JP Morgan FI Intermediate Bond (SA) | 296,903,863 | 30.99 |
| Payden & Rygel Long Term (SA) | 296,130,105 | 30.91 |
| Brandywine Gbl Opp FI (CF) | 143,083,087 | 14.94 |
| Schroders Securitized Credit (SA) | 94,836,237 | 9.90 |
| AG Direct Lending Fund III, L.P. | 54,754,727 | 5.72 |
| Payden:Low Dur;Inv (PYSBX) | 47,459,029 | 4.95 |
| FLP (Loans) | 17,890,153 | 1.87 |
| ND Land - PTF Cash (SA) | 5,254,670 | 0.55 |
| ECLP (Loans) | 1,092,530 | 0.11 |

Up/Down Markets - 5 Years



Peer Group Scattergram - 5 Years

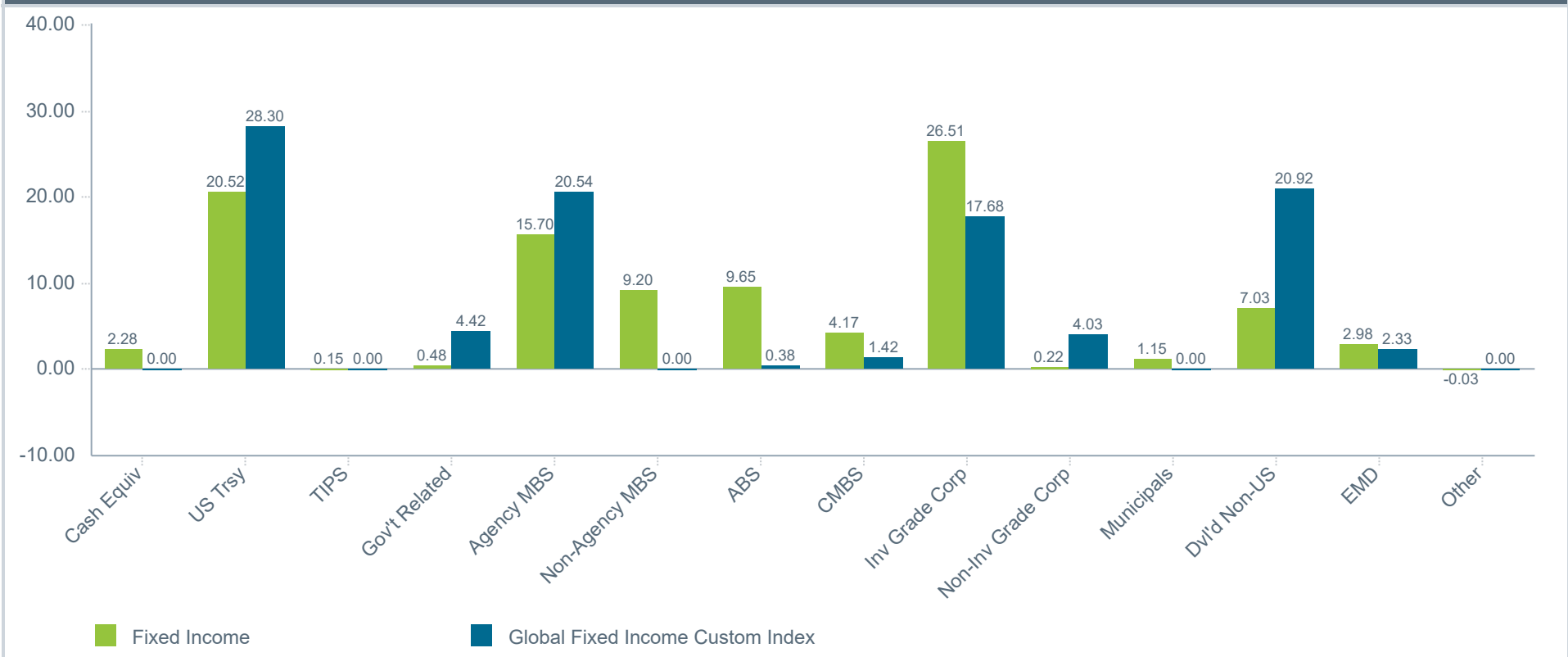


Performance shown is gross of fees. The Global Fixed Income Custom Index consists of 75% Bloomberg US Unv Bond Index and 25% Bloomberg Multiverse Index. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Please see Addendum for peer groups. Fiscal year ends 6/30.

Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration | 4.05 | 5.96 |
| Avg. Maturity | 6.51 | 8.18 |
| Avg. Quality | Aa3 | N/A |
| Yield To Maturity (%) | N/A | 3.38 |
| Coupon Rate (%) | 3.63 | 3.36 |
| Yield To Worst (%) | 3.55 | 3.38 |
| Current Yield (%) | 3.73 | 0.19 |

Sector Distribution



FLP & ECLP Bank Loans, AG Direct Lending Fund III, L.P. and ND Land - PTF Cash (SA) are excluded from portfolio characteristics and sector distribution. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Allocation to "Other" consists of currency forwards.

Comparative Performance

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|------------------------------|-------|-------|-------|--------|---------|---------|----------|--------------|----------------|
| Absolute Return | -3.76 | -2.87 | -4.41 | -4.41 | 5.41 | N/A | N/A | 1.62 | 07/01/2014 |
| Absolute Return Custom Index | -7.44 | -5.29 | -5.93 | -5.93 | 4.86 | 3.67 | 7.49 | 2.88 | |
| Difference | 3.68 | 2.42 | 1.52 | 1.52 | 0.55 | N/A | N/A | -1.26 | |

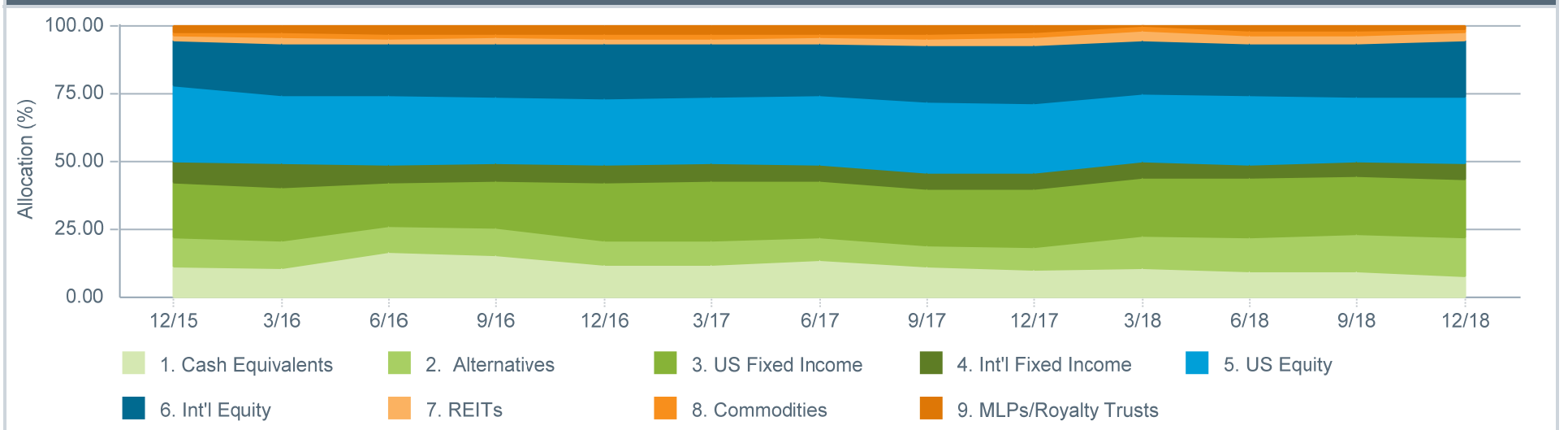
Asset Allocation by Manager

\$891,628,820



| | Market Value (\$) | Allocation (%) |
|----------------------------------|-------------------|----------------|
| PIMCO:All Ast Ath;Inst (PAUIX) | 303,377,747 | 34.03 |
| GMO:Bchmk-Fr All;IV (GBMBX) | 295,031,156 | 33.09 |
| Westwood Income Opportunity (SA) | 293,219,917 | 32.89 |

Historical Asset Allocation



Performance shown is gross of fees. The Absolute Return Custom Index consists of 60% MSCI ACW IM Index (USD) (Net) and 40% Bloomberg US Agg Bond Index. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Diversified Inflation Strategies (DIS)

As of December 31, 2018

Comparative Performance

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|--|--------|--------|--------|--------|---------|---------|----------|--------------|----------------|
| Diversified Inflation Strategies (DIS) | -15.39 | -14.93 | -13.73 | -13.73 | 2.04 | N/A | N/A | -2.03 | 04/01/2014 |
| DIS Custom Index | -9.17 | -8.77 | -9.13 | -9.13 | 3.53 | -0.25 | 5.40 | -0.88 | |
| Difference | -6.22 | -6.16 | -4.60 | -4.60 | -1.49 | N/A | N/A | -1.15 | |

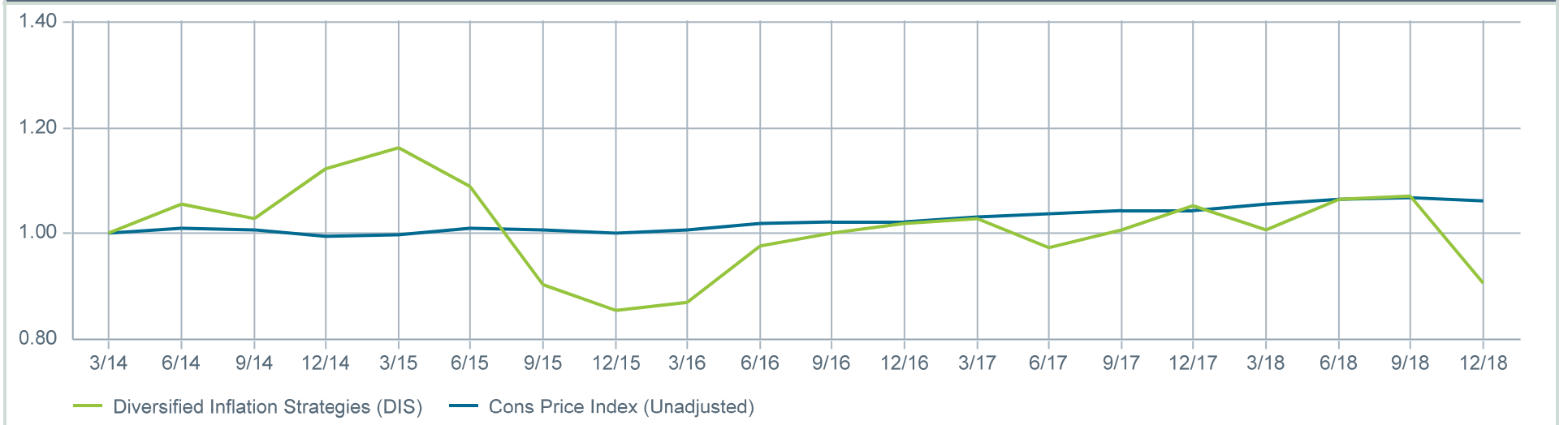
Asset Allocation by Manager

\$410,164,281



| | Market Value (\$) | Allocation (%) |
|---------------------------|-------------------|----------------|
| Gresham Commodities (SA) | 126,130,496 | 30.75 |
| Harvest MLP (SA) | 118,392,580 | 28.86 |
| NT Common TIPS Index (CF) | 88,326,014 | 21.53 |
| Van Eck NR Equities (SA) | 77,315,191 | 18.85 |

Growth of a Dollar - Since Inception



Performance shown is gross of fees. The DIS Custom Index consists of 50% Bloomberg US Trsy US TIPS Index and 50% FTSE EPRA/NAREIT Dvl'd Index (\$) (Gross) through 06/2015. It consists of 20% Bloomberg US Trsy US TIPS Index, 30% Bbrg Cmnty Ex Energy Index (TR), 30% S&P MLP Index (TR), and 20% S&P Gbl Natural Res Sect Index (TR) thereafter. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 6/30.

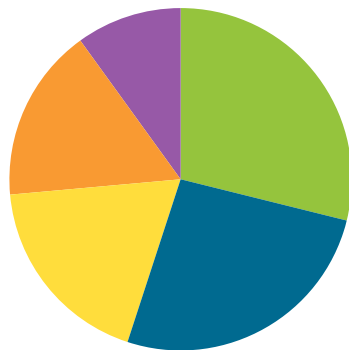


Comparative Performance

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|---------------------------------|------|------|------|--------|---------|---------|----------|--------------|----------------|
| Real Estate | 1.92 | 4.14 | 9.61 | 9.61 | 10.22 | N/A | N/A | 10.91 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Gross) | 1.76 | 3.88 | 8.35 | 8.35 | 8.24 | 10.41 | 7.00 | 9.16 | |
| Difference | 0.16 | 0.26 | 1.26 | 1.26 | 1.98 | N/A | N/A | 1.75 | |

Asset Allocation by Manager

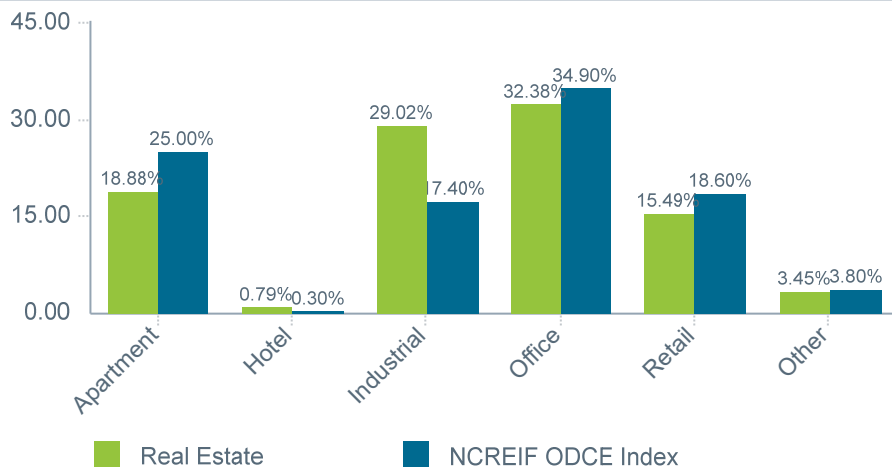
\$705,165,225



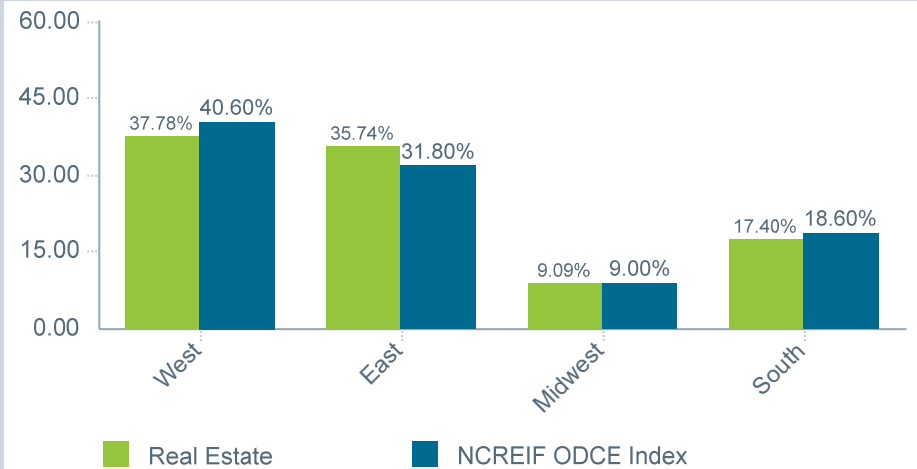
- Morgan Stanley Prime Property Fund (CF)
- UBS Trumbull Property Fund, L.P. (CF)
- JP Morgan US Real Estate Income and Growth, LP (CF)
- Prologis USLF (CF)
- Jamestown Premier Property Fund (CF)

| Market Value (\$) | Allocation (%) |
|-------------------|----------------|
| 203,638,397 | 28.88 |
| 184,402,228 | 26.15 |
| 130,754,176 | 18.54 |
| 116,079,651 | 16.46 |
| 70,290,773 | 9.97 |

Property Type Allocation



Geographic Allocation



Performance shown is gross of fees. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 6/30.

Addendum



North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|--|---------------|---------------|--------------|--------------|-------------|-------------|--------------|-----------------|-------------------|
| Total Fund | -6.65 | -5.08 | -5.12 | -5.12 | 5.10 | 3.03 | 7.41 | 6.34 | 08/01/1995 |
| Target Allocation Index (Net) | -6.39 | -4.41 | -4.51 | -4.51 | 5.23 | 4.22 | N/A | N/A | |
| Difference | -0.26 | -0.67 | -0.61 | -0.61 | -0.13 | -1.19 | N/A | N/A | |
| Broad US Equity | -14.64 | -8.75 | -5.49 | -5.49 | 9.14 | 7.87 | N/A | 12.94 | 07/01/2009 |
| Russell 3000 Index | -14.30 | -8.20 | -5.24 | -5.24 | 8.97 | 7.91 | 13.18 | 13.43 | |
| Difference | -0.34 | -0.55 | -0.25 | -0.25 | 0.17 | -0.04 | N/A | -0.49 | |
| State Street Russell 1000 Index SL (CF) | -13.80 | -7.41 | -4.78 | -4.78 | N/A | N/A | N/A | 4.22 | 06/01/2017 |
| Russell 1000 Index | -13.82 | -7.42 | -4.78 | -4.78 | 9.09 | 8.21 | 13.28 | 4.23 | |
| Difference | 0.02 | 0.01 | 0.00 | 0.00 | N/A | N/A | N/A | -0.01 | |
| State Street Russell Mid Cap Index (SA) | -15.23 | -11.03 | -8.96 | -8.96 | N/A | N/A | N/A | 0.57 | 06/01/2017 |
| Russell Mid Cap Index | -15.37 | -11.14 | -9.06 | -9.06 | 7.04 | 6.26 | 14.03 | 0.51 | |
| Difference | 0.14 | 0.11 | 0.10 | 0.10 | N/A | N/A | N/A | 0.06 | |
| NT Small Cap Core (CF) | -19.59 | -15.36 | -7.63 | -7.63 | 9.97 | N/A | N/A | 4.86 | 07/01/2014 |
| Russell 2000 Index | -20.20 | -17.35 | -11.01 | -11.01 | 7.36 | 4.41 | 11.97 | 4.18 | |
| Difference | 0.61 | 1.99 | 3.38 | 3.38 | 2.61 | N/A | N/A | 0.68 | |
| NT Small/Smid Composite | -19.59 | -15.36 | -7.63 | -7.63 | 9.97 | 5.11 | 12.67 | 9.24 | 03/01/1996 |
| Small/Smid Blended Index | -20.20 | -17.35 | -11.01 | -11.01 | 7.36 | 5.07 | 13.11 | 9.11 | |
| Difference | 0.61 | 1.99 | 3.38 | 3.38 | 2.61 | 0.04 | -0.44 | 0.13 | |

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|--|---------------|---------------|---------------|---------------|-------------|--------------|-------------|-----------------|-------------------|
| Broad International Equity | -12.45 | -12.69 | -16.49 | -16.49 | 3.46 | -0.12 | N/A | 5.14 | 07/01/2009 |
| MSCI ACW Ex US Index (USD) (Net) | -11.46 | -10.84 | -14.20 | -14.20 | 4.48 | 0.68 | 6.57 | 5.47 | |
| Difference | -0.99 | -1.85 | -2.29 | -2.29 | -1.02 | -0.80 | N/A | -0.33 | |
| State Street World Ex US Index (CF) | -12.80 | -11.67 | -14.15 | -14.15 | 3.04 | N/A | N/A | -0.86 | 07/01/2014 |
| MSCI Wrld Ex US Index (USD) (Net) | -12.78 | -11.64 | -14.09 | -14.09 | 3.11 | 0.34 | 6.24 | -0.79 | |
| Difference | -0.02 | -0.03 | -0.06 | -0.06 | -0.07 | N/A | N/A | -0.07 | |
| DFA Emg Mkts Core Eq;I (DFCEX) | -6.39 | -7.52 | -15.25 | -15.25 | 9.15 | N/A | N/A | 0.47 | 07/01/2014 |
| MSCI Emg Mkts Index (USD) (Net) | -7.47 | -8.49 | -14.58 | -14.58 | 9.25 | 1.65 | 8.02 | 0.49 | |
| Difference | 1.08 | 0.97 | -0.67 | -0.67 | -0.10 | N/A | N/A | -0.02 | |
| Harding Loevner:IEM;II (HLEEX) | -10.10 | -14.92 | -18.53 | -18.53 | 7.86 | N/A | N/A | -0.08 | 07/01/2014 |
| MSCI Emg Mkts Index (USD) (Net) | -7.47 | -8.49 | -14.58 | -14.58 | 9.25 | 1.65 | 8.02 | 0.49 | |
| Difference | -2.63 | -6.43 | -3.95 | -3.95 | -1.39 | N/A | N/A | -0.57 | |
| QMA International Small Cap Equity (CF) | -17.14 | -19.32 | N/A | N/A | N/A | N/A | N/A | -27.91 | 02/01/2018 |
| MSCI EAFE Sm Cap Index (USD) (Gross) | -16.02 | -16.70 | -17.58 | -17.58 | 4.11 | 3.42 | 10.88 | -21.60 | |
| Difference | -1.12 | -2.62 | N/A | N/A | N/A | N/A | N/A | -6.31 | |

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|--|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------------|
| Fixed Income | 0.56 | 0.87 | -0.34 | -0.34 | 2.76 | 2.56 | 4.68 | 5.49 | 08/01/1995 |
| Global Fixed Income Custom Index | 1.13 | 1.14 | -0.52 | -0.52 | 2.68 | 2.35 | 3.75 | N/A | |
| Difference | -0.57 | -0.27 | 0.18 | 0.18 | 0.08 | 0.21 | 0.93 | N/A | |
| Bloomberg US Agg Bond Index | 1.64 | 1.66 | 0.01 | 0.01 | 2.06 | 2.52 | 3.48 | 5.10 | |
| Difference | -1.08 | -0.79 | -0.35 | -0.35 | 0.70 | 0.04 | 1.20 | 0.39 | |
| Payden & Rygel Long Term (SA) | 1.05 | 1.41 | 0.16 | 0.16 | 2.97 | 3.05 | 5.02 | 5.72 | 08/01/1995 |
| Bloomberg US Agg Bond Index | 1.64 | 1.66 | 0.01 | 0.01 | 2.06 | 2.52 | 3.48 | 5.10 | |
| Difference | -0.59 | -0.25 | 0.15 | 0.15 | 0.91 | 0.53 | 1.54 | 0.62 | |
| JP Morgan FI Intermediate Bond (SA) | 1.48 | 1.80 | 1.06 | 1.06 | 1.88 | 2.18 | N/A | 1.69 | 08/01/2012 |
| Bloomberg US Gov't Crdt Int Trm Bond Index | 1.65 | 1.87 | 0.88 | 0.88 | 1.70 | 1.86 | 2.90 | 1.43 | |
| Difference | -0.17 | -0.07 | 0.18 | 0.18 | 0.18 | 0.32 | N/A | 0.26 | |
| Brandywine Gbl Opp FI (CF) | -1.23 | -2.10 | -5.16 | -5.16 | 4.07 | N/A | N/A | 0.52 | 11/01/2014 |
| FTSE Wrld Gov't Bond Index | 1.75 | 0.10 | -0.84 | -0.84 | 2.69 | 0.77 | 1.52 | 0.74 | |
| Difference | -2.98 | -2.20 | -4.32 | -4.32 | 1.38 | N/A | N/A | -0.22 | |
| Payden:Low Dur;Inv (PYSBX) | 0.46 | 1.05 | 1.05 | 1.05 | 1.42 | 1.08 | 2.69 | 3.37 | 04/01/2002 |
| Bloomberg US Trsy 1-3 Yr Index | 1.31 | 1.51 | 1.56 | 1.56 | 0.95 | 0.81 | 0.96 | 2.24 | |
| Difference | -0.85 | -0.46 | -0.51 | -0.51 | 0.47 | 0.27 | 1.73 | 1.13 | |
| AG Direct Lending Fund III, L.P. | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 09/01/2018 |
| CS Lvg'd Loan Index | 0.00 | 1.93 | 4.36 | 4.36 | 6.13 | 3.98 | 8.64 | 0.68 | |
| Difference | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Schroders Securitized Credit (SA) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -0.13 | 12/01/2018 |
| 3 Month LIBOR Index (USD)+1.75% | 1.01 | 2.03 | 3.86 | 3.86 | 3.05 | 2.63 | 2.43 | 0.37 | |
| Difference | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -0.50 | |
| ND Land - PTF Cash (SA) | 0.56 | 1.02 | 1.71 | 1.71 | N/A | N/A | N/A | 1.58 | 07/01/2017 |
| ICE BofAML 3 Mo US T-Bill Index | 0.56 | 1.06 | 1.87 | 1.87 | 1.02 | 0.63 | 0.37 | 1.62 | |
| Difference | 0.00 | -0.04 | -0.16 | -0.16 | N/A | N/A | N/A | -0.04 | |
| FLP (Loans) | 1.39 | 2.96 | 6.15 | 6.15 | 6.15 | 6.08 | 6.15 | 7.24 | 08/01/1995 |
| ECLP (Loans) | 1.11 | 2.26 | 4.58 | 4.58 | 4.57 | 4.77 | N/A | 5.10 | 11/01/2010 |

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|---|--------------|--------------|--------------|--------------|-------------|------------|-------------|-----------------|-------------------|
| Absolute Return | -3.91 | -3.21 | -5.11 | -5.11 | 4.61 | N/A | N/A | 0.84 | 07/01/2014 |
| Absolute Return Custom Index | -7.44 | -5.29 | -5.93 | -5.93 | 4.86 | 3.67 | 7.49 | 2.88 | |
| Difference | 3.53 | 2.08 | 0.82 | 0.82 | -0.25 | N/A | N/A | -2.04 | |
| GMO:Bchmk-Fr All;IV (GBMBX) | -4.27 | -3.79 | -5.27 | -5.27 | 3.48 | N/A | N/A | 0.58 | 07/01/2014 |
| 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx | -7.27 | -5.25 | -6.00 | -6.00 | 5.17 | 3.12 | 6.84 | 2.20 | |
| Difference | 3.00 | 1.46 | 0.73 | 0.73 | -1.69 | N/A | N/A | -1.62 | |
| Consumer Price Index+5% | 0.74 | 2.16 | 7.01 | 7.01 | 7.13 | 6.59 | 6.89 | 6.24 | |
| Difference | -5.01 | -5.95 | -12.28 | -12.28 | -3.65 | N/A | N/A | -5.66 | |
| PIMCO:All Ast Ath;Inst (PAUIX) | -1.86 | -3.18 | -6.14 | -6.14 | 6.15 | N/A | N/A | -0.68 | 07/01/2014 |
| All Asset Custom Index (EqI Wtd) | -3.53 | -1.87 | -1.62 | -1.62 | 4.50 | 3.21 | 6.10 | 2.58 | |
| Difference | 1.67 | -1.31 | -4.52 | -4.52 | 1.65 | N/A | N/A | -3.26 | |
| Consumer Price Index+5% | 0.74 | 2.16 | 7.01 | 7.01 | 7.13 | 6.59 | 6.89 | 6.24 | |
| Difference | -2.60 | -5.34 | -13.15 | -13.15 | -0.98 | N/A | N/A | -6.92 | |
| Westwood Income Opportunity (SA) | -5.58 | -2.71 | -4.03 | -4.03 | 4.17 | N/A | N/A | 2.55 | 07/01/2014 |
| Westwood Custom Index | -3.84 | -1.94 | -1.31 | -1.31 | 3.98 | 5.22 | 7.43 | 4.17 | |
| Difference | -1.74 | -0.77 | -2.72 | -2.72 | 0.19 | N/A | N/A | -1.62 | |
| Consumer Price Index+5% | 0.74 | 2.16 | 7.01 | 7.01 | 7.13 | 6.59 | 6.89 | 6.24 | |
| Difference | -6.32 | -4.87 | -11.04 | -11.04 | -2.96 | N/A | N/A | -3.69 | |

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|---|---------------|---------------|---------------|---------------|--------------|-------------|-------------|-----------------|-------------------|
| Diversified Inflation Strategies (DIS) | -15.45 | -15.12 | -14.15 | -14.15 | 1.51 | N/A | N/A | -2.50 | 04/01/2014 |
| DIS Custom Index | -9.17 | -8.77 | -9.13 | -9.13 | 3.53 | -0.25 | 5.40 | -0.88 | |
| Difference | -6.28 | -6.35 | -5.02 | -5.02 | -2.02 | N/A | N/A | -1.62 | |
| NT Common TIPS Index (CF) | -0.44 | -1.28 | -1.29 | -1.29 | 2.16 | 1.71 | 3.64 | 3.82 | 06/01/2004 |
| Bloomberg US Trsy US TIPS Index | -0.42 | -1.24 | -1.26 | -1.26 | 2.11 | 1.69 | 3.64 | 3.77 | |
| Difference | -0.02 | -0.04 | -0.03 | -0.03 | 0.05 | 0.02 | 0.00 | 0.05 | |
| Gresham Commodities (SA) | -14.04 | -14.32 | -13.67 | -13.67 | 2.41 | N/A | N/A | -5.72 | 07/01/2015 |
| Bloomberg Cmdty Ex Energy Index (TR) | -0.51 | -5.74 | -10.95 | -10.95 | 0.37 | -4.90 | 0.12 | -3.91 | |
| Difference | -13.53 | -8.58 | -2.72 | -2.72 | 2.04 | N/A | N/A | -1.81 | |
| Gresham Custom Index | -11.85 | -13.28 | -14.04 | -14.04 | 0.81 | N/A | N/A | -6.22 | |
| Difference | -2.19 | -1.04 | 0.37 | 0.37 | 1.60 | N/A | N/A | 0.50 | |
| Harvest MLP (SA) | -20.66 | -15.87 | -13.46 | -13.46 | -0.84 | N/A | N/A | -8.73 | 07/01/2015 |
| S&P MLP Index (TR) | -17.80 | -12.55 | -11.67 | -11.67 | 0.57 | -6.59 | 10.35 | -9.00 | |
| Difference | -2.86 | -3.32 | -1.79 | -1.79 | -1.41 | N/A | N/A | 0.27 | |
| Van Eck NR Equities (SA) | -23.51 | -28.19 | -28.52 | -28.52 | 0.84 | N/A | N/A | -9.75 | 07/01/2015 |
| S&P Gbl Natural Res Sect Index (TR) | -16.79 | -15.69 | -12.57 | -12.57 | 12.36 | -0.53 | 3.15 | 2.91 | |
| Difference | -6.72 | -12.50 | -15.95 | -15.95 | -11.52 | N/A | N/A | -12.66 | |
| S&P N Amer Natural Res Index | -23.47 | -25.03 | -21.07 | -21.07 | 1.50 | -6.50 | 2.99 | -5.31 | |
| Difference | -0.04 | -3.16 | -7.45 | -7.45 | -0.66 | N/A | N/A | -4.44 | |

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | QTD | FYTD | CYTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Incep. | Inception Date |
|--|-------------|-------------|--------------|--------------|-------------|------------|-------------|-----------------|-------------------|
| Real Estate | 1.66 | 3.61 | 8.28 | 8.28 | 8.77 | N/A | N/A | 9.45 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.52 | 3.42 | 7.36 | 7.36 | 7.27 | 9.41 | 6.01 | 8.17 | |
| Difference | 0.14 | 0.19 | 0.92 | 0.92 | 1.50 | N/A | N/A | 1.28 | |
| Morgan Stanley Prime Property Fund (CF) | 1.97 | 3.96 | 7.96 | 7.96 | 8.65 | N/A | N/A | 9.40 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.52 | 3.42 | 7.36 | 7.36 | 7.27 | 9.41 | 6.01 | 8.17 | |
| Difference | 0.45 | 0.54 | 0.60 | 0.60 | 1.38 | N/A | N/A | 1.23 | |
| UBS Trumbull Property Fund, L.P. (CF) | 1.54 | 2.79 | 6.17 | 6.17 | 5.91 | N/A | N/A | 6.80 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.52 | 3.42 | 7.36 | 7.36 | 7.27 | 9.41 | 6.01 | 8.17 | |
| Difference | 0.02 | -0.63 | -1.19 | -1.19 | -1.36 | N/A | N/A | -1.37 | |
| Jamestown Premier Property Fund (CF) | 1.21 | 2.63 | 7.75 | 7.75 | 9.01 | N/A | N/A | 9.76 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.52 | 3.42 | 7.36 | 7.36 | 7.27 | 9.41 | 6.01 | 8.17 | |
| Difference | -0.31 | -0.79 | 0.39 | 0.39 | 1.74 | N/A | N/A | 1.59 | |
| Prologis USLF (CF) | 3.10 | 6.56 | 15.84 | 15.84 | N/A | N/A | N/A | 17.56 | 04/01/2016 |
| NCREIF ODCE Index (AWA) (Net) | 1.52 | 3.42 | 7.36 | 7.36 | 7.27 | 9.41 | 6.01 | 7.20 | |
| Difference | 1.58 | 3.14 | 8.48 | 8.48 | N/A | N/A | N/A | 10.36 | |
| JP Morgan US Real Estate Income and Growth, LP (CF) | 0.35 | 2.25 | 5.75 | 5.75 | N/A | N/A | N/A | 6.75 | 07/01/2016 |
| NCREIF ODCE Index (AWA) (Net) | 1.52 | 3.42 | 7.36 | 7.36 | 7.27 | 9.41 | 6.01 | 7.14 | |
| Difference | -1.17 | -1.17 | -1.61 | -1.61 | N/A | N/A | N/A | -0.39 | |

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 6/30.

North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | FYTD | FY 18 | FY 17 | FY 16 | FY 15 | FY 14 | FY 13 | FY 12 | FY 11 | FY 10 | FY 09 | FY 08 |
|--|---------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| Total Fund | -5.08 | 6.50 | 9.50 | -0.64 | 0.42 | 13.85 | 10.58 | 2.42 | 18.01 | 14.50 | -13.75 | -4.22 |
| Target Allocation Index (Net) | -4.41 | 6.29 | 9.65 | 1.41 | 2.54 | 14.64 | 10.64 | 3.47 | 18.63 | 17.00 | N/A | N/A |
| Difference | -0.67 | 0.21 | -0.15 | -2.05 | -2.12 | -0.79 | -0.06 | -1.05 | -0.62 | -2.50 | N/A | N/A |
| Broad US Equity | -8.75 | 15.26 | 19.05 | 2.31 | 5.88 | 22.59 | 19.51 | 1.41 | 29.75 | 21.47 | N/A | N/A |
| Russell 3000 Index | -8.20 | 14.78 | 18.51 | 2.14 | 7.29 | 25.22 | 21.46 | 3.84 | 32.37 | 15.72 | -26.56 | -12.69 |
| Difference | -0.55 | 0.48 | 0.54 | 0.17 | -1.41 | -2.63 | -1.95 | -2.43 | -2.62 | 5.75 | N/A | N/A |
| State Street Russell 1000 Index SL (CF) | -7.41 | 14.51 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Russell 1000 Index | -7.42 | 14.54 | 18.03 | 2.93 | 7.37 | 25.35 | 21.24 | 4.37 | 31.93 | 15.24 | -26.69 | -12.36 |
| Difference | 0.01 | -0.03 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| State Street Russell Mid Cap Index (SA) | -11.03 | 12.26 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Russell Mid Cap Index | -11.14 | 12.33 | 16.48 | 0.56 | 6.63 | 26.85 | 25.41 | -1.65 | 38.47 | 25.13 | -30.36 | -11.19 |
| Difference | 0.11 | -0.07 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NT Small Cap Core (CF) | -15.36 | 22.43 | 24.04 | -4.77 | 1.14 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Russell 2000 Index | -17.35 | 17.57 | 24.60 | -6.73 | 6.49 | 23.64 | 24.21 | -2.08 | 37.41 | 21.48 | -25.01 | -16.19 |
| Difference | 1.99 | 4.86 | -0.56 | 1.96 | -5.35 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NT Small/Smid Composite | -15.36 | 22.43 | 24.04 | -4.77 | 1.14 | 23.49 | 25.20 | -4.03 | 34.54 | 21.04 | -25.82 | -15.32 |
| Small/Smid Blended Index | -17.35 | 17.57 | 24.60 | -6.73 | 6.49 | 26.22 | 25.61 | -2.29 | 39.28 | 24.03 | -26.72 | -14.28 |
| Difference | 1.99 | 4.86 | -0.56 | 1.96 | -5.35 | -2.73 | -0.41 | -1.74 | -4.74 | -2.99 | 0.90 | -1.04 |

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North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | FYTD | FY 18 | FY 17 | FY 16 | FY 15 | FY 14 | FY 13 | FY 12 | FY 11 | FY 10 | FY 09 | FY 08 |
|--|---------------|-------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|-------------|------------|------------|
| Broad International Equity | -12.69 | 6.07 | 20.03 | -9.09 | -5.49 | 24.42 | 21.42 | -18.55 | 30.64 | 4.91 | N/A | N/A |
| MSCI ACW Ex US Index (USD) (Net) | -10.84 | 7.28 | 20.45 | -10.24 | -5.26 | 21.75 | 13.63 | -14.56 | 29.73 | 10.43 | -30.92 | -6.64 |
| Difference | -1.85 | -1.21 | -0.42 | 1.15 | -0.23 | 2.67 | 7.79 | -3.99 | 0.91 | -5.52 | N/A | N/A |
| State Street World Ex US Index (CF) | -11.67 | 6.98 | 19.39 | -9.91 | -5.35 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| MSCI Wrld Ex US Index (USD) (Net) | -11.64 | 7.04 | 19.49 | -9.84 | -5.28 | 23.83 | 17.07 | -14.13 | 30.33 | 7.03 | -31.62 | -8.81 |
| Difference | -0.03 | -0.06 | -0.10 | -0.07 | -0.07 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| DFA Emg Mkts Core Eq;I (DFCEX) | -7.52 | 5.17 | 21.94 | -8.77 | -5.59 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| MSCI Emg Mkts Index (USD) (Net) | -8.49 | 8.20 | 23.75 | -12.05 | -5.12 | 14.31 | 2.87 | -15.94 | 27.80 | 23.15 | -28.07 | 4.63 |
| Difference | 0.97 | -3.03 | -1.81 | 3.28 | -0.47 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Harding Loevner:IEM;II (HLEEX) | -14.92 | 8.73 | 22.82 | -5.96 | -6.77 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| MSCI Emg Mkts Index (USD) (Net) | -8.49 | 8.20 | 23.75 | -12.05 | -5.12 | 14.31 | 2.87 | -15.94 | 27.80 | 23.15 | -28.07 | 4.63 |
| Difference | -6.43 | 0.53 | -0.93 | 6.09 | -1.65 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| QMA International Small Cap Equity (CF) | -19.32 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| MSCI EAFE Sm Cap Index (USD) (Gross) | -16.70 | 12.85 | 23.64 | -3.32 | -0.45 | 29.48 | 21.25 | -14.75 | 36.85 | 12.60 | -27.83 | -18.29 |
| Difference | -2.62 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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North Dakota Board of University and School Lands
Comparative Performance - Net

As of December 31, 2018

| | FYTD | FY 18 | FY 17 | FY 16 | FY 15 | FY 14 | FY 13 | FY 12 | FY 11 | FY 10 | FY 09 | FY 08 |
|--|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Fixed Income | 0.87 | 0.30 | 2.08 | 4.75 | 1.50 | 4.80 | 1.44 | 7.15 | 6.37 | 11.28 | 3.49 | 6.29 |
| Global Fixed Income Custom Index | 1.14 | 0.14 | 0.34 | 6.52 | -0.62 | 5.83 | -0.24 | 6.21 | 6.28 | 9.33 | 4.35 | 7.74 |
| Difference | -0.27 | 0.16 | 1.74 | -1.77 | 2.12 | -1.03 | 1.68 | 0.94 | 0.09 | 1.95 | -0.86 | -1.45 |
| Bloomberg US Agg Bond Index | 1.66 | -0.40 | -0.31 | 6.00 | 1.86 | 4.37 | -0.69 | 7.47 | 3.90 | 9.50 | 6.05 | 7.12 |
| Difference | -0.79 | 0.70 | 2.39 | -1.25 | -0.36 | 0.43 | 2.13 | -0.32 | 2.47 | 1.78 | -2.56 | -0.83 |
| Payden & Rygel Long Term (SA) | 1.41 | 0.64 | 1.81 | 5.67 | 1.61 | 5.65 | 1.16 | 7.34 | 5.35 | 13.97 | 4.79 | 3.67 |
| Bloomberg US Agg Bond Index | 1.66 | -0.40 | -0.31 | 6.00 | 1.86 | 4.37 | -0.69 | 7.47 | 3.90 | 9.50 | 6.05 | 7.12 |
| Difference | -0.25 | 1.04 | 2.12 | -0.33 | -0.25 | 1.28 | 1.85 | -0.13 | 1.45 | 4.47 | -1.26 | -3.45 |
| JP Morgan FI Intermediate Bond (SA) | 1.80 | 0.00 | 0.11 | 4.31 | 1.98 | 3.19 | N/A | N/A | N/A | N/A | N/A | N/A |
| Bloomberg US Gov't Crdt Int Trm Bond Index | 1.87 | -0.58 | -0.21 | 4.33 | 1.68 | 2.86 | 0.28 | 5.42 | 3.77 | 8.29 | 5.27 | 7.37 |
| Difference | -0.07 | 0.58 | 0.32 | -0.02 | 0.30 | 0.33 | N/A | N/A | N/A | N/A | N/A | N/A |
| Brandywine Gbl Opp FI (CF) | -2.10 | -0.44 | 4.84 | 4.97 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| FTSE Wrld Gov't Bond Index | 0.10 | 1.90 | -4.14 | 11.26 | -9.02 | 6.85 | -4.50 | 2.68 | 10.54 | 3.03 | 4.00 | 17.00 |
| Difference | -2.20 | -2.34 | 8.98 | -6.29 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Payden:Low Dur;Inv (PYSBX) | 1.05 | 0.48 | 1.32 | 0.89 | 0.90 | 1.54 | 2.10 | 4.79 | 4.07 | 6.72 | 5.95 | 6.45 |
| Bloomberg US Trsy 1-3 Yr Index | 1.51 | 0.01 | -0.11 | 1.31 | 0.90 | 0.76 | 0.33 | 0.81 | 1.34 | 2.74 | 4.50 | 7.28 |
| Difference | -0.46 | 0.47 | 1.43 | -0.42 | 0.00 | 0.78 | 1.77 | 3.98 | 2.73 | 3.98 | 1.45 | -0.83 |
| AG Direct Lending Fund III, L.P. | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| CS Lvg'd Loan Index | 1.93 | 4.67 | 7.49 | 0.93 | 2.15 | 6.11 | 7.64 | 3.33 | 9.70 | 17.69 | -7.83 | -3.39 |
| Difference | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Schroders Securitized Credit (SA) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 3 Month LIBOR Index (USD)+1.75% | 2.03 | 3.31 | 2.61 | 2.17 | 2.00 | 2.01 | 2.13 | 2.15 | 2.15 | 2.12 | 4.32 | 6.74 |
| Difference | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| ND Land - PTF Cash (SA) | 1.02 | 1.35 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| ICE BofAML 3 Mo US T-Bill Index | 1.06 | 1.36 | 0.49 | 0.19 | 0.02 | 0.06 | 0.11 | 0.05 | 0.16 | 0.16 | 0.95 | 3.63 |
| Difference | -0.04 | -0.01 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| FLP (Loans) | 2.96 | 6.35 | 6.09 | 6.09 | 5.96 | 6.22 | 5.12 | 6.19 | 6.32 | 6.77 | 7.11 | 7.54 |
| ECLP (Loans) | 2.26 | 4.53 | 4.35 | 5.14 | 5.10 | 5.06 | 5.33 | 5.79 | N/A | N/A | N/A | N/A |

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As of December 31, 2018

| | FYTD | FY 18 | FY 17 | FY 16 | FY 15 | FY 14 | FY 13 | FY 12 | FY 11 | FY 10 | FY 09 | FY 08 |
|---|--------------|-------------|--------------|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|
| Absolute Return | -3.21 | 3.10 | 8.93 | -1.28 | -3.26 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Absolute Return Custom Index | -5.29 | 6.48 | 10.93 | 0.24 | 1.33 | 15.53 | 9.70 | -0.79 | 19.79 | 12.05 | -15.47 | -3.04 |
| Difference | 2.08 | -3.38 | -2.00 | -1.52 | -4.59 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| GMO:Bchmk-Fr All;IV (GBMBX) | -3.79 | 3.43 | 10.23 | -4.28 | -2.23 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx | -5.25 | 6.97 | 9.98 | 1.40 | -2.42 | 16.59 | 8.75 | -2.48 | 22.12 | 9.34 | -17.08 | -0.56 |
| Difference | 1.46 | -3.54 | 0.25 | -5.68 | 0.19 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Consumer Price Index+5% | 2.16 | 8.01 | 6.71 | 6.05 | 5.13 | 7.18 | 6.84 | 6.75 | 8.74 | 6.11 | 3.50 | 10.27 |
| Difference | -5.95 | -4.58 | 3.52 | -10.33 | -7.36 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| PIMCO:All Ast Ath;Inst (PAUIX) | -3.18 | 2.11 | 9.62 | -2.06 | -8.63 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| All Asset Custom Index (EqI Wtd) | -1.87 | 4.47 | 6.59 | 2.47 | 0.17 | 9.74 | 5.51 | 3.63 | 13.07 | 10.69 | -5.94 | 2.72 |
| Difference | -1.31 | -2.36 | 3.03 | -4.53 | -8.80 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Consumer Price Index+5% | 2.16 | 8.01 | 6.71 | 6.05 | 5.13 | 7.18 | 6.84 | 6.75 | 8.74 | 6.11 | 3.50 | 10.27 |
| Difference | -5.34 | -5.90 | 2.91 | -8.11 | -13.76 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Westwood Income Opportunity (SA) | -2.71 | 3.73 | 6.94 | 2.52 | 1.24 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Westwood Custom Index | -1.94 | 4.50 | 3.04 | 9.35 | 4.08 | 9.95 | 6.44 | 9.45 | 16.04 | 18.44 | -14.84 | -2.76 |
| Difference | -0.77 | -0.77 | 3.90 | -6.83 | -2.84 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Consumer Price Index+5% | 2.16 | 8.01 | 6.71 | 6.05 | 5.13 | 7.18 | 6.84 | 6.75 | 8.74 | 6.11 | 3.50 | 10.27 |
| Difference | -4.87 | -4.28 | 0.23 | -3.53 | -3.89 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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| | FYTD | FY 18 | FY 17 | FY 16 | FY 15 | FY 14 | FY 13 | FY 12 | FY 11 | FY 10 | FY 09 | FY 08 |
|---|---------------|--------------|--------------|---------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|--------------|
| Diversified Inflation Strategies (DIS) | -15.12 | 8.95 | -0.96 | -10.67 | 2.68 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| DIS Custom Index | -8.77 | 3.88 | 2.93 | -6.58 | -0.58 | 9.38 | 4.44 | 7.63 | 20.23 | 17.60 | -18.44 | -3.16 |
| Difference | -6.35 | 5.07 | -3.89 | -4.09 | 3.26 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NT Common TIPS Index (CF) | -1.28 | 2.16 | -0.60 | 4.40 | -1.87 | 4.61 | -4.75 | 11.81 | 7.72 | 10.52 | -2.02 | 15.61 |
| Bloomberg US Trsy US TIPS Index | -1.24 | 2.11 | -0.63 | 4.35 | -1.73 | 4.44 | -4.78 | 11.66 | 7.74 | 9.52 | -1.11 | 15.09 |
| Difference | -0.04 | 0.05 | 0.03 | 0.05 | -0.14 | 0.17 | 0.03 | 0.15 | -0.02 | 1.00 | -0.91 | 0.52 |
| Gresham Commodities (SA) | -14.32 | 15.59 | -2.03 | -16.13 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Bloomberg Cmdty Ex Energy Index (TR) | -5.74 | -2.99 | -3.22 | -1.73 | -16.16 | 3.98 | -13.40 | -7.92 | 37.12 | 12.71 | -33.13 | 25.11 |
| Difference | -8.58 | 18.58 | 1.19 | -14.40 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Gresham Custom Index | -13.28 | 10.20 | -4.63 | -12.36 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Difference | -1.04 | 5.39 | 2.60 | -3.77 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Harvest MLP (SA) | -15.87 | 0.13 | 2.70 | -16.04 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| S&P MLP Index (TR) | -12.55 | -1.76 | 3.23 | -18.93 | -16.48 | 24.87 | 29.50 | 7.72 | 28.44 | 47.64 | -11.63 | -12.29 |
| Difference | -3.32 | 1.89 | -0.53 | 2.89 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Van Eck NR Equities (SA) | -28.19 | 18.01 | -5.92 | -12.41 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| S&P Gbl Natural Res Sect Index (TR) | -15.69 | 24.75 | 15.35 | -8.86 | -17.58 | 21.72 | -2.56 | -18.33 | 38.42 | 1.25 | -35.87 | 25.49 |
| Difference | -12.50 | -6.74 | -21.27 | -3.55 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| S&P N Amer Natural Res Index | -25.03 | 19.80 | -2.62 | -5.56 | -25.71 | 33.14 | 10.62 | -17.44 | 44.29 | 13.42 | -44.94 | 29.27 |
| Difference | -3.16 | -1.79 | -3.30 | -6.85 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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| | FYTD | FY 18 | FY 17 | FY 16 | FY 15 | FY 14 | FY 13 | FY 12 | FY 11 | FY 10 | FY 09 | FY 08 |
|--|-------------|--------------|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Real Estate | 3.61 | 10.37 | 8.39 | 10.66 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NCREIF ODCE Index (AWA) (Net) | 3.42 | 7.47 | 6.90 | 10.80 | 13.39 | 11.74 | 11.08 | 11.30 | 19.35 | -6.83 | -31.07 | 6.96 |
| Difference | 0.19 | 2.90 | 1.49 | -0.14 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Morgan Stanley Prime Property Fund (CF) | 3.96 | 8.39 | 9.12 | 11.38 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NCREIF ODCE Index (AWA) (Net) | 3.42 | 7.47 | 6.90 | 10.80 | 13.39 | 11.74 | 11.08 | 11.30 | 19.35 | -6.83 | -31.07 | 6.96 |
| Difference | 0.54 | 0.92 | 2.22 | 0.58 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| UBS Trumbull Property Fund, L.P. (CF) | 2.79 | 6.85 | 4.62 | 9.57 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NCREIF ODCE Index (AWA) (Net) | 3.42 | 7.47 | 6.90 | 10.80 | 13.39 | 11.74 | 11.08 | 11.30 | 19.35 | -6.83 | -31.07 | 6.96 |
| Difference | -0.63 | -0.62 | -2.28 | -1.23 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Jamestown Premier Property Fund (CF) | 2.63 | 15.35 | 6.61 | 9.75 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NCREIF ODCE Index (AWA) (Net) | 3.42 | 7.47 | 6.90 | 10.80 | 13.39 | 11.74 | 11.08 | 11.30 | 19.35 | -6.83 | -31.07 | 6.96 |
| Difference | -0.79 | 7.88 | -0.29 | -1.05 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Prologis USLF (CF) | 6.56 | 21.73 | 16.63 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NCREIF ODCE Index (AWA) (Net) | 3.42 | 7.47 | 6.90 | 10.80 | 13.39 | 11.74 | 11.08 | 11.30 | 19.35 | -6.83 | -31.07 | 6.96 |
| Difference | 3.14 | 14.26 | 9.73 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| JP Morgan US Real Estate Income and Growth, LP (CF) | 2.25 | 6.57 | 8.06 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NCREIF ODCE Index (AWA) (Net) | 3.42 | 7.47 | 6.90 | 10.80 | 13.39 | 11.74 | 11.08 | 11.30 | 19.35 | -6.83 | -31.07 | 6.96 |
| Difference | -1.17 | -0.90 | 1.16 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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Fee Schedules

| | |
|---|--|
| • State Street Russell 1000 Index SL (CF): | 0.01% on total market value |
| • State Street Russell Mid Cap Index (SA): | 0.03% on total market value |
| • NT Small Cap Core (CF): | 0.70% on total market value |
| • State Street World Ex US Index (CF): | 0.02% on total market value |
| • QMA International Small Cap Equity (CF) | 0.68% on total market value |
| • DFA Emg Mkts Core Eq;I (DFCEX): | 0.52% on total market value |
| • Harding Loevner:IEM;II (HLEEX): | 1.12% on total market value |
| • Payden & Rygel Long Term (SA): | 0.20% on total market value |
| • JP Morgan FI Intermediate Bond (SA): | 0.20% on the first \$75M, 0.18% thereafter |
| • FIA International Fixed Income (SA): | 0.35% on the first \$30M, 0.25% on the next \$20M, 0.20% over \$50M |
| • Brandywine Gbl Opp FI (CF): | 0.45% on the first \$50M, 0.40% on the next \$50M, 0.35% thereafter |
| • Lazard High Yield (SA): | 0.30% on total market value |
| • Payden:Low Dur;Inv (PYSBX): | 0.43% on total market value |
| • ND Land - PTF Cash (SA): | 0.20% on total market value (based on underlying Govt MM fund) |
| • GMO:Bchmk-Fr All;IV (GBMBX): | 0.82% on total market value |
| • PIMCO:All Ast Ath;Inst (PAUIX): | 0.94% on total market value |
| • Westwood Income Opportunity (SA): | 0.80% on the first \$25M, 0.65% on the next \$25M, 0.50% thereafter |
| • NT Common TIPS Index (CF): | 0.06% on the first \$50M, 0.03% thereafter |
| • Gresham Commodities (SA): | 0.67% on the first \$75M, 0.50% on the next \$75M, 0.40% thereafter |
| • Harvest MLP (SA): | 0.75% on the first \$100M, and a 0.05% discount on each \$50M thereafter until \$300M, where it's 0.50% |
| • Van Eck NR Equities (SA): | 0.75% on the first \$50M, 0.50% on the next \$200M, 0.475% thereafter |
| • Morgan Stanley Prime Property Fund (CF): | 0.84% on total market value; Incentive fee: 5.0% * NAV * comparable property NOI growth (total capped at 0.35%) |
| • UBS Trumbull Property Fund, L.P. (CF): | 0.955% on the first \$10M, 0.825% on the next \$15M, 0.805% on the next \$25M, 0.79% on the next \$50M, 0.67% on the next \$150M, and 0.6% thereafter, and a 0.15% incentive fee |
| • Jamestown Premier Property Fund (CF): | 0.70% on total market value, plus 20% of returns greater than 7% and 25% of returns greater than 10% |
| • Prologis USLF (CF): | Priority Distribution: 7.5% of net operating income; Acquisition Fee: 0.90% of total acquisition cost on fund acquisitions; Renovation Fee: 0.70% per annum of the acquisition cost of the capital expenditures made with respect to renovation properties during the applicable renovation period * Fees are subject to a quarterly cap of 0.30% of the fund's NAV. Incentive fee of 15% over a 9% net IRR and 20% over a 12% net IRR is payable at the end of each three-year incentive period (next period ends 06/30/2020) |
| • JP Morgan US Real Estate Income and Growth, LP (CF) | 1.25% on total market value * Beginning 10/01/2016, a reduced fee schedule will be implemented as follows: 1.05% on the first \$50M, 0.90% on the next \$50M, 0.85% on the next \$50M, 0.80% on the next \$50M, and 0.75% thereafter |

Performance Related Comments

- Manager inception dates shown represent the first full month following initial funding.
- RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Prior historical data was provided by North Dakota Board of University and School Lands.
- Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.
- Historical gross performance for composites was calculated by aggregating gross performance for each of the composites' underlying managers. Managers' gross performance was provided by North Dakota Board of University and School Lands. As of 07/2014, composite and manager performance is provided and calculated by RVK.
- NT Small Cap Core (CF) changed mandate from small and mid cap to strictly small cap in 06/2014. Performance for NT Small/Smid Composite consists of blended history from the previous mandate. From 07/2014 through present, performance consists of only the small cap mandate.
- Payden:Low Dur;Inv (PYSBX) performance prior to 08/2012 consists of blended Payden:Low Dur;Inv (PYSBX) and Payden:GNMA;Inv (PYGNX).

Index Comments

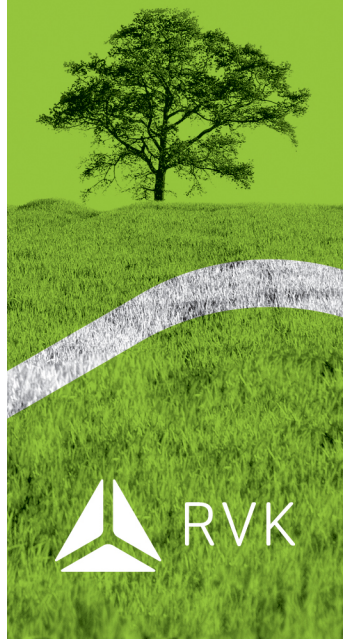
- The Target Allocation Index (Net) is a static custom index that is calculated monthly and consists of:
 - From 02/2018 through present: 17% Russell 3000 Index, 17% MSCI ACW Ex US Index (USD) (Net), 21% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
 - From 07/2014 through 01/2018: 17% Russell 3000 Index, 15% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
 - From 01/2013 through 06/2014: 18.7% Russell 1000 Index, 12.4% Russell 2500 Index, 7.5% FTSE EPRA/NAREIT US Index, 12.4% MSCI EAFE Index (USD) (Net), 33.3% Bloomberg US Agg Bond Index, 0.70% CS Lvg'd Loan Index, 10% Bloomberg US Corp Hi Yld Index, and 5% Bloomberg Gbl Agg Ex USD Index (Hedged).
 - From 07/2009 through 12/2012: 15% Russell 1000 Index, 10% Russell 2500 Index, 6% FTSE EPRA/NAREIT US Index, 10% MSCI EAFE Index (USD) (Net), 32.3% Bloomberg US Agg Bond Index, 1.70% CS Lvg'd Loan Index, 10% Bloomberg US Corp Hi Yld Index, 5% Bloomberg Gbl Agg Ex USD Index (Hedged), and 10% ICE BofAML Cnvt Bonds Index (All Qual).
- The Target Allocation Index (Gross) is a static custom index that is calculated monthly and consists of:
 - From 02/2018 through present: 17% Russell 3000 Index, 17% MSCI ACW Ex US Index (USD) (Net), 21% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Gross), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
 - From 07/2014 through 01/2018: 17% Russell 3000 Index, 15% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Gross), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
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- The Global Fixed Income Custom Index consists of 75% Bloomberg US Unv Bond Index and 25% Bloomberg Multiverse Index.
- The Absolute Return Custom Index consists of 60% MSCI ACW IM Index (USD) (Net) and 40% Bloomberg US Agg Bond Index.
- The DIS Custom Index consists of 50% Bloomberg US Trsy US TIPS Index and 50% FTSE EPRA/NAREIT Dvl'd Index (\$) (Gross) through 06/2015. It consists of 20% Bloomberg US Trsy US TIPS Index, 30% Bbrg Cmtdy Ex-Energy Index (TR), 30% S&P MLP Index (TR), and 20% S&P Gbl Natural Res Sect Index (TR) thereafter.
- The Gresham Custom Index consists of the Bloomberg Commodities Index excluding WTI, Brent and Natural Gas.
- The Small/Smid Blended Index consists of 100% Russell 2500 Index through 05/2014 and 100% Russell 2000 Index thereafter.
- The Westwood Custom Index consists of 25% S&P 500 Index (Cap Wtd), 25% FTSE NAREIT All Eq REITs TR Index, 25% FTSE 3 Mo T-Bill Index, and 25% FTSE 10 Yr Trsy OTR Index.
- The All Asset Custom Index (Eql Wtd) is an equal-weighted hybrid created independently by RVK specifically for PIMCO's All Asset strategies, and it consists of the following benchmarks:
 1. Short Term Strategies: ICE BofAML 1 Year T-Bill Index
 2. US Core and Long Maturity Bond Strategies: Bloomberg US Agg Bond Index
 3. EM and Gbl Bond Strategies: PIMCO GLADI Index*
 4. Crdt Strategies: ICE BofAML US Hi Yld Master II Index
 5. Inflation Related Strategies: Bloomberg US Trsy US TIPS Index
 6. US Equity Strategies: Russell 3000 Index
 7. Global Equity Strategies: MSCI ACW Index (USD) (Net)
 8. Alternative Strategies: ICE BofAML 3 Mo US T-Bill Index + 3%

* Performance for the PIMCO Gbl Advantage Bond Index (London Close) prior to 01/01/2004 consists of the JPM EMBI Gbl Dvf'd TR Index.

Peer Groups

- Total Fund - All Master Trust Universe
- US Equity - IM US Equity (SA+CF)
- International Equity - IM International Large Cap Equity (MF)
- Fixed Income - IM Global Fixed Income (SA+CF)

2018 Year in Review



Executive Summary

| <p>Preface: 2017</p> | <ul style="list-style-type: none"> • 2017 was a picturesque year for markets, characterized by low volatility and strong returns. • Many asset classes were bolstered by synchronized global growth, strong corporate profits, and prolonged accommodative monetary policy. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|-------------|----------|----------|---------|-------|-------|--------------|-------|--------|-----------|-------|--------|---------------------|-------|--------|-----------------------|-------|--------|-----------------------|------|------|-----------------------|------|------|------------------|------|-------|---------------------------|------|--------|
| <p>2018</p> | <ul style="list-style-type: none"> • A year later and there is a stark contrast. So what happened? <p style="text-align: center;">Year End Asset Class Performance</p> <table border="1"> <thead> <tr> <th>Asset Class</th> <th>2017 (%)</th> <th>2018 (%)</th> </tr> </thead> <tbody> <tr> <td>S&P 500</td> <td>21.8%</td> <td>-4.4%</td> </tr> <tr> <td>Russell 2000</td> <td>14.6%</td> <td>-11.0%</td> </tr> <tr> <td>MSCI EAFE</td> <td>25.0%</td> <td>-13.8%</td> </tr> <tr> <td>MSCI EAFE Small Cap</td> <td>33.0%</td> <td>-17.9%</td> </tr> <tr> <td>MSCI Emerging Markets</td> <td>37.3%</td> <td>-14.6%</td> </tr> <tr> <td>Bloomberg US Agg Bond</td> <td>3.5%</td> <td>0.0%</td> </tr> <tr> <td>BofA ML 3Mo US T-Bill</td> <td>0.9%</td> <td>1.9%</td> </tr> <tr> <td>Wilshire US REIT</td> <td>4.2%</td> <td>-4.6%</td> </tr> <tr> <td>Bloomberg Commodity Index</td> <td>1.7%</td> <td>-11.2%</td> </tr> </tbody> </table> | Asset Class | 2017 (%) | 2018 (%) | S&P 500 | 21.8% | -4.4% | Russell 2000 | 14.6% | -11.0% | MSCI EAFE | 25.0% | -13.8% | MSCI EAFE Small Cap | 33.0% | -17.9% | MSCI Emerging Markets | 37.3% | -14.6% | Bloomberg US Agg Bond | 3.5% | 0.0% | BofA ML 3Mo US T-Bill | 0.9% | 1.9% | Wilshire US REIT | 4.2% | -4.6% | Bloomberg Commodity Index | 1.7% | -11.2% |
| Asset Class | 2017 (%) | 2018 (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | 21.8% | -4.4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Russell 2000 | 14.6% | -11.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSCI EAFE | 25.0% | -13.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSCI EAFE Small Cap | 33.0% | -17.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSCI Emerging Markets | 37.3% | -14.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bloomberg US Agg Bond | 3.5% | 0.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BofA ML 3Mo US T-Bill | 0.9% | 1.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wilshire US REIT | 4.2% | -4.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bloomberg Commodity Index | 1.7% | -11.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Objective</p> | <ul style="list-style-type: none"> • The following presentation provides a holistic review of 2018, distilling major capital market themes that occurred throughout the year. • Specifically, we review broad economic conditions, market volatility, and take a deep-dive into the fourth quarter. We also highlight key themes for 2019. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

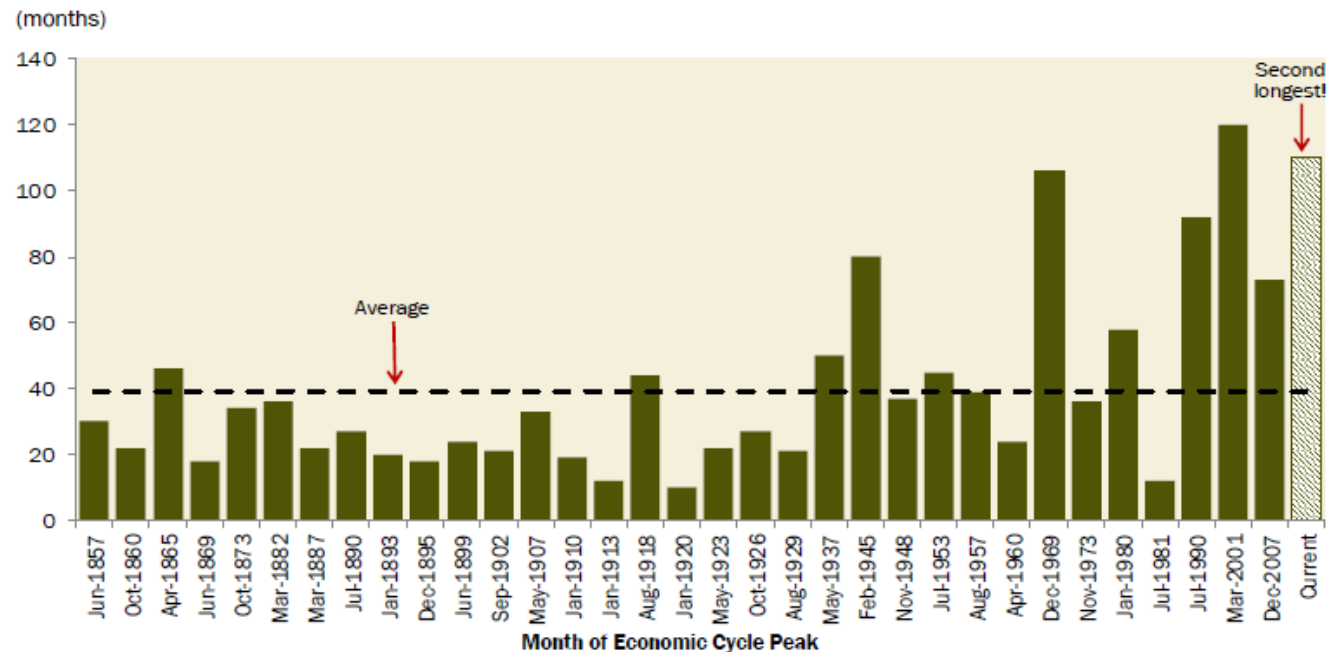
Macroeconomic Conditions

Economic Cycles

Current Cycle

- The general consensus is that the US economy (along with other developed nations) is finally decelerating, with growth expectations tapering off throughout the transition.

United States: Duration of Economic Expansions



Source: Gluskin Sheff + Associates Inc., based off of National Bureau of Economic Research data. As of November 30, 2018.

Key Takeaways

- A mature economy, combined with liquidity tightening as the Fed removes monetary stimulus, can lead to even slower growth and increase downside risk potential.
- Cyclical changes in the economy can create short-term friction for investors, but they should not take precedent over longer-term secular themes when focusing on portfolio construction.

2018 High Level Review

2018 – Overview

Notable Statistics: Year in Review

- Solid global GDP growth at 3.7%.
- Earning growth, propped up by the tax stimulus, was a key driver for US equity markets.
- First trillion dollar company (Apple).
- Federal Reserve: 4 rate hikes throughout the year.

Market Movements: Year in Review

- Aside from a hiccup in February, most markets were able to regain ground throughout the second and third quarters.
- US equity markets did well leading up to the fourth quarter. The rest of the world did not keep pace with the US, but international developed countries were able to post modest gains over the summer, while emerging countries felt more pressure from trade war tensions and unfavorable exchange rates.

Market Performance (%)

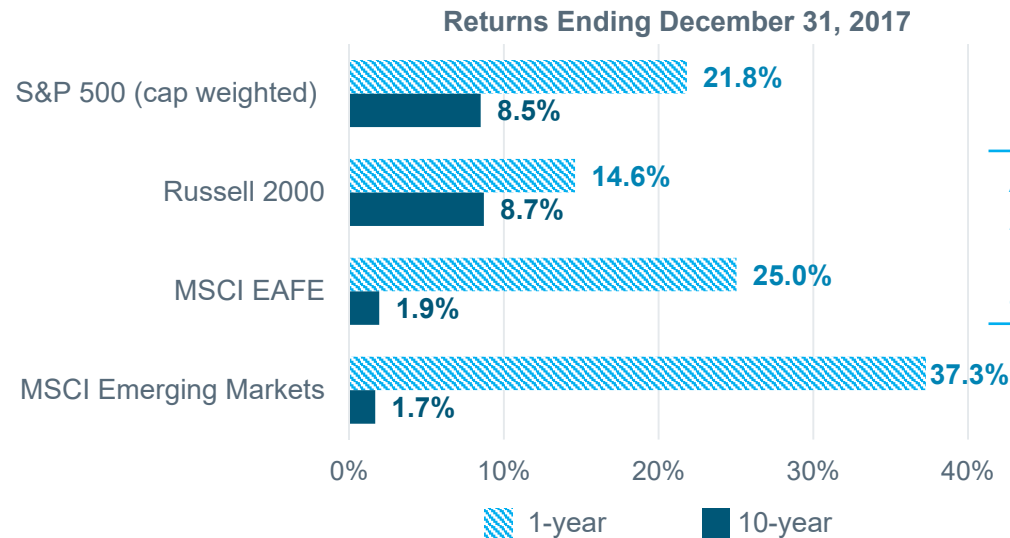
| | Dec 31 2017 YTD | Monthly Returns | | | | | Dec 31 2018 YTD |
|---------------------------|--------------------|-----------------|--------------------|----------|----------|----------|--------------------|
| | | Feb 2018 | Sep 30 2018 YTD | Oct 2018 | Nov 2018 | Dec 2018 | |
| S&P 500 (cap weighted) | 21.8 | -3.7 | 10.6 | -6.8 | 2.0 | -9.0 | -4.4 |
| Russell 2000 | 14.6 | -3.9 | 11.5 | -10.9 | 1.6 | -11.9 | -11.0 |
| MSCI EAFE | 25.0 | -4.5 | -1.4 | -8.0 | -0.1 | -4.9 | -13.8 |
| MSCI Emerging Markets | 37.3 | -4.6 | -7.7 | -8.7 | 4.1 | -2.7 | -14.6 |
| Bloomberg US Agg Bond | 3.5 | -0.9 | -1.6 | -0.8 | 0.6 | 1.8 | 0.0 |
| US 30 Yr Treasury | 2.7 | 3.1 | 3.2 | 3.4 | 3.3 | 3.0 | 3.0 |
| Bloomberg Commodity Index | 1.7 | -1.7 | -2.0 | -2.2 | -0.6 | -6.9 | -11.2 |

2018 High Level Review

2018 – A Year of Mean Reversion

Equity Markets: Long-Term Perspective

- For equity markets in particular, 2018 could be viewed as a year of mean reversion.
- 2017 market returns were well above historical norms. Even without headline events, the sustainability of this growth was bound to come under pressure.



Against this backdrop, 2018 year-end market performance may not seem as severe.

Economic Data: Can Good get Better?

- A healthy economy, strong job market, high corporate earnings, and relatively low interest rates may appear inconsistent with the negative stock market performance, particularly during the fourth quarter.
- However, economic data tends to be backward looking while capital markets are forward-looking.

Economic Indicators:

- The unemployment rate is at its lowest since 1969
- 115 consecutive months of manufacturing expansion

Concern for Future Outlook:

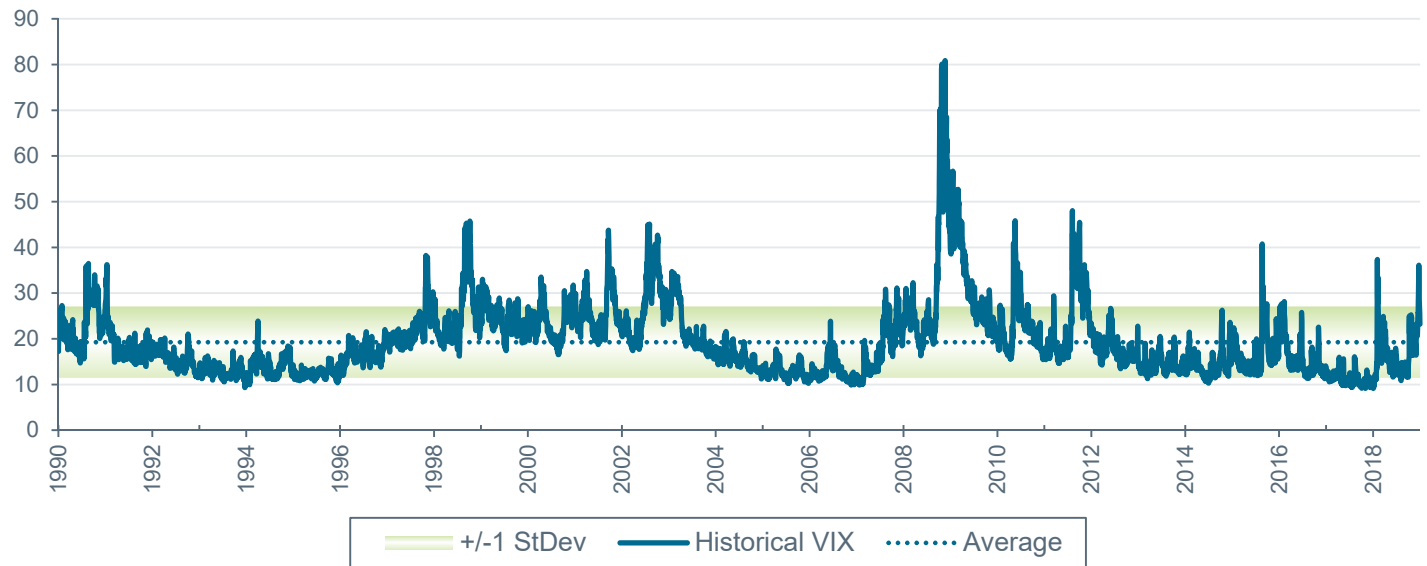
Is there still room for meaningful improvement?

Market Volatility

Historical Context

Long-Term Average of the VIX Index

- Volatility has been subdued since the Financial Crisis due to accommodative monetary policy.
- Prior to 2018, there were long periods of very low volatility compared to historical standards, with a handful of episodic occurrences largely influenced by macro events (e.g. China growth worries in 2015 and Brexit in 2016).



Volatility in Post-Crisis Bull Market

- While volatility was often lower than historical norms since 2009, price changes were not completely absent from the market.

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|------|------|------|------|------|------|
| Number of S&P 500 Price Changes Greater than 1% | 38 | 38 | 72 | 48 | 8 | 64 |

- From a historical volatility perspective, 2017 was more of an outlier than 2018.

Source: RVK calculations based on CBOE and Standard & Poor's data.

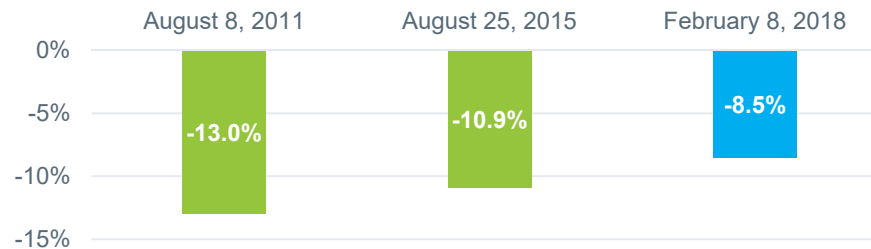
Market Volatility

February Deep Dive

February Market Volatility

- After a strong 2017, markets exhibited fragility in February 2018, with the S&P 500 Index dropping 10.2% by the close of February 8th.
- We noted in our memo that this was the largest 5-day market correction since 2015, coming after over 400 days without a 5% or greater correction.

Three Largest 5-day Corrections for the S&P 500 Index since market bottom in 2009



Note:

While the S&P 500 returned -3.7% for the month of February, it was up 2.7% year-to-date through June 30, 2018.

Source: RVK calculations based on Standard & Poor's data.

Drivers Behind Volatility

- At the beginning of the month, the Labor Department's job's report sparked concerns about wages and inflation, which was received poorly by the markets.
- The drawdown was further exacerbated by the trading mechanics of short volatility products.
[Short Volatility Refresh](#): Our February memo also discussed how short volatility strategies were another contributing factor to the correction. Short volatility products are inverse bets on market volatility, i.e. they profit when a volatility index, such as the VIX, goes down. In a low volatility environment, they can provide consistent positive returns.

However, they are very susceptible to volatility spikes and when the VIX increased 116% on February 5th, these strategies plummeted. Many of the available products were also concentrated in US equity volatility indices, further adding to the downward pressure during the month.
- With short volatility strategies, the market correction transitioned from an information-based trade surrounding economic data to a liquidity trade unrelated to asset or economic fundamentals.

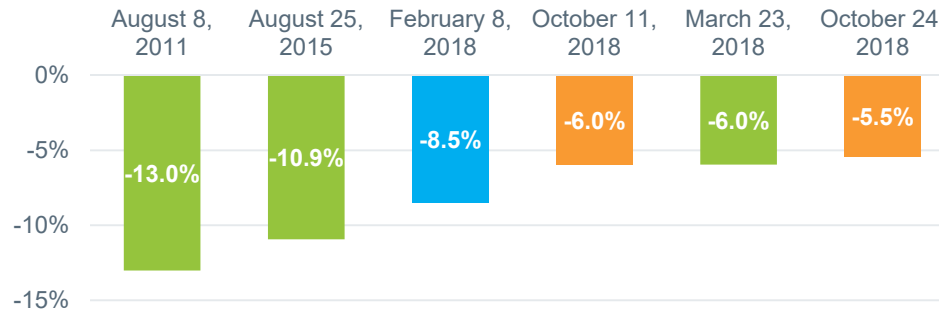
Market Volatility

October Deep Dive

October Market Volatility

- From a high on September 20th through October 26th, the S&P 500 index declined by more than 9%, and finished the month of October down -6.8% after enduring two large drawdowns about a week apart.

Largest 5-day Corrections for the S&P 500 Index since market bottom in 2009



Source: RVK calculations based on Standard & Poor's data.

Well Cited Drivers


- The US-China trade war is the most often cited source of negative pressure on the stock market.
 - As these are the two largest economies in the world, any disruption can have a ripple effect throughout the world.
- The yield curve has also been another source of dismay, with its continued flattening and anticipation of inversion.
 - Historically, recessions have been preceded by an inverted yield curve, although inversion does not guarantee a recession.

Key Takeaways

- China trade talks may have been the catalyst for the October market downturn.
- However, this then prompted the market to reprice future expectations of many factors that were already percolating:
 - Higher interest rates
 - Lower earning expectations for 2019
 - Maturing economic cycles around the globe

Market Volatility

Summary – 2018

| February vs October | Feb | Oct |
|--|---|--|
| <p>Reason(s):</p> <p>Execution:</p> <p>Outcome:</p> | <ul style="list-style-type: none"> • Immediate inflation concerns • More of a liquidity event than true price correction • Acute event | <ul style="list-style-type: none"> • Trade War, Fed, lower growth expectations • Started with news but transitioned to repricing event • Adjusting to lower growth world |
| <p>Key Takeaways</p> | <p><u>Historical Context:</u></p> <ul style="list-style-type: none"> • 2018 market volatility events were not abnormal. <p><u>Present:</u></p> <ul style="list-style-type: none"> • Decelerating growth can make the market more susceptible to adverse news. <ul style="list-style-type: none"> • For example, after the unexpected Brexit vote in June 2016, the market sell-off lasted only two days. At that time, however, there was greater upside potential for markets. | |
| <p>The equity market is susceptible to drawdowns but over the long-run has trended upward.</p> | <p>S&P 500 Index since 1927</p>  | |

Source: Macrotrends LLC. Based off of monthly returns, adjusted for inflation using headline CPI. As of 12/31/2018.

Fourth Quarter Highlights

2018 Q4 – The Fed

Central Bank Influence: Mixed Messages

- Against a backdrop of tweets and trade wars, it was the Federal Reserve that seemed to have an inordinate influence on the markets during the fourth quarter of 2018.
- While rate hikes were anticipated, the inconsistent messaging seemed to amplify other concerns that were already on the periphery.

| | Oct ¹ | Nov | Dec |
|------------------------------------|--|---|---|
| Tone | Hawkish | Dovish | ??? |
| FOMC Meeting Highlights | <p>“...we may go way past neutral. But we are a long way from neutral at this point”</p> <p>– Chairman Powell Oct 3rd</p> | <p>“Interest rates...remain just below the broad range of estimates of the level that would be neutral for the economy — that is, neither speeding up nor slowing down growth”</p> <p>– Chairman Powell Nov 28th</p> | <p>1. Fed lowered expected rate hikes in 2019 from 3 (announced in September 2018) down to 2</p> <p>2. Balance Sheet woes: “It will be substantially smaller than it is now”</p> <p>– Chairman Powell Dec 19th</p> |
| Federal Funds Rate (Target) | 2.25% (↑ 0.25%) | 2.25% (no change) | 2.50% (↑ 0.25%) |
| Market Reaction | Negative | Favorable | Negative |

- Growth concerns were a strong undercurrent throughout the fourth quarter, but the Fed also played a crucial role. Sequential FOMC meetings with somewhat contrasting messages spurred negative sentiment as the market struggled to interpret the Fed’s direction. Renewed interest in the balance sheet also gave the impression that the Fed was going to be less accommodative going forward.

Notes: “FOMC” stands for Federal Open Market Committee.

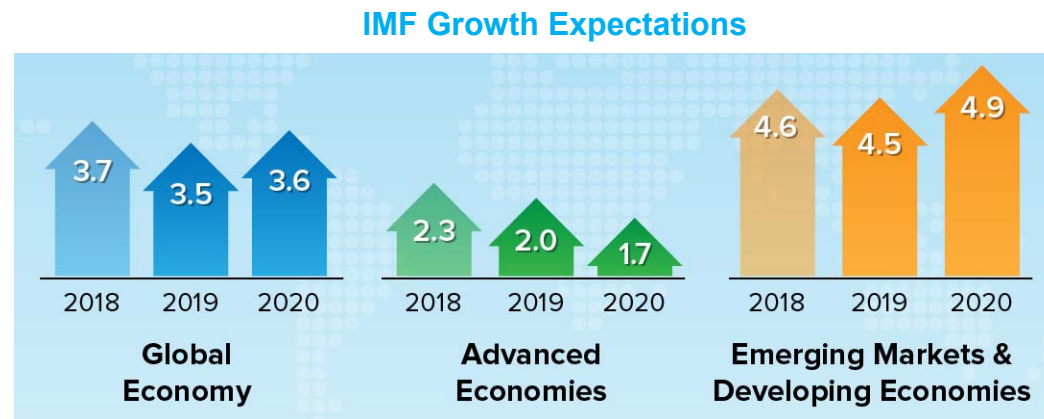
¹ Actual FOMC meeting was occurred between September 25-26.

2019 Market Outlook

Potential Themes

Global Growth Projections

- Global growth is expected to slow:



Notes from the International Monetary Fund's ("IMF") most recent Economic Outlook:

- Global growth forecasts were modestly reduced from the October Outlook due to "carry over from softer momentum in the second half of 2018."
- The report also indicated that "escalation of trade tensions beyond those already incorporated in the forecast remains a key source of risk."
- Other global risks on the horizon include: "no-deal" withdrawal of the United Kingdom from the European Union and a larger than expected slowdown in China's economy.

Source: IMF, World Economic Outlook Update, January 21, 2019.

Corporate Earnings (US)

- The corporate tax cut that helped lift stocks in 2018 will not be a significant contributor going forward. Corporate earnings will instead have to rely on profit margins and organic company growth, potentially making companies even more susceptible in an environment of uncertainty.

Recession Probability

- A recent Reuters poll of economists showed that the median predicted probability of a recession within the next year is 20%, while the probability of a recession within the next two years rose above 40%.

2019 Market Outlook

Potential Themes

The Fed: Major Factor for Markets in 2019

- The main concern is how the Fed will handle a two variable experiment involving short-term interest rates and balance sheet reduction.

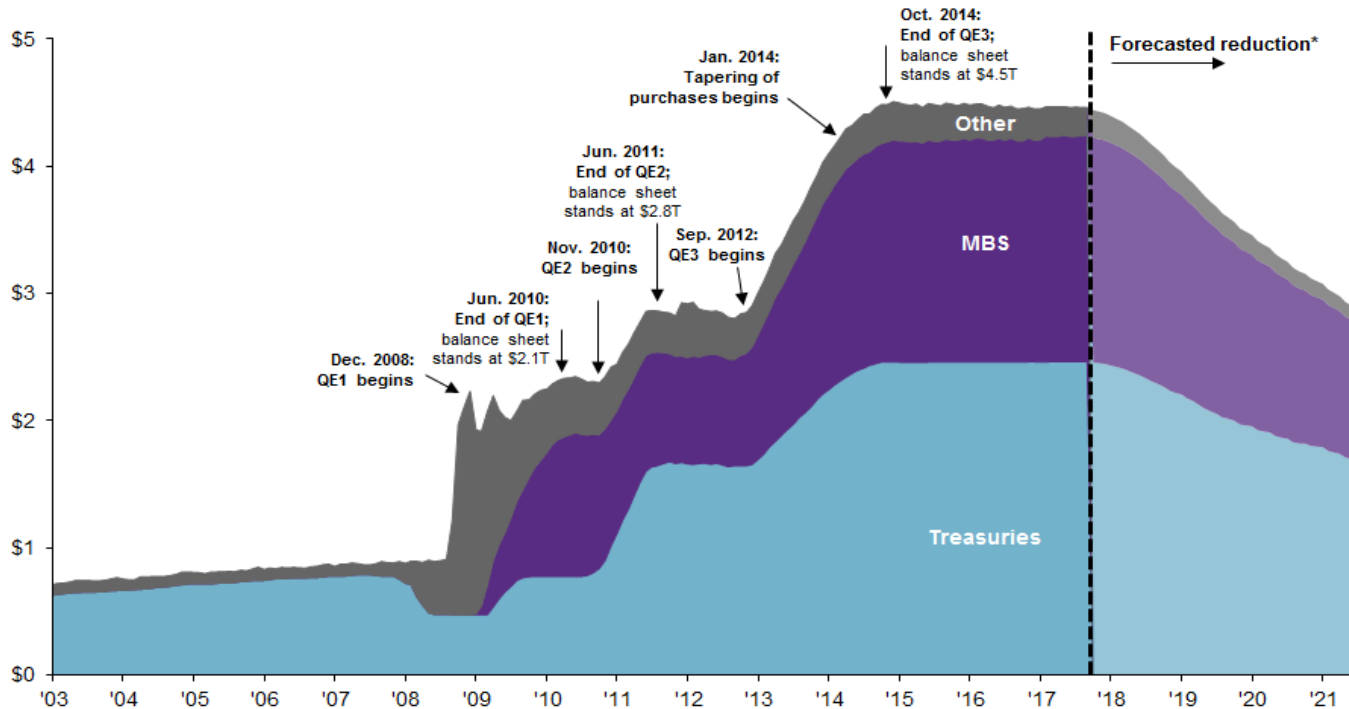
Quantitative Tightening Refresh:

Since the Financial Crisis, the Fed accumulated approximately \$4.5 trillion in assets, mainly composed of US Treasuries and mortgage-backed securities (“MBS”), from their large-scale asset purchasing program, Quantitative Easing.

In October 2017, the Fed began Quantitative Tightening to reduce the size of their balance sheet. Maturing securities were no longer being replaced to remain on the balance sheet, resulting in an “auto-pilot” roll-off of \$50 billion per month.

- Quantitative Easing was unprecedented monetary policy, and the unwinding of that policy, Quantitative Tightening, will be unprecedented as well.

Federal Reserve Balance Sheet



Source: JP Morgan *Guide to the Markets* 3Q 2017.

| Federal Funds Rate Expectations ¹ | | |
|--|-------|-------|
| | 2019 | 2020 |
| FOMC Yr-End Est. | 2.88% | 3.13% |
| Market Expectations ¹ | 2.53% | 2.39% |
| Federal Funds Rate (12/31/2018) 2.40% | | |
| FOMC Long-Run Projection 2.75% | | |

¹Per JP Morgan, data as of 12/19/18.
Source: JP Morgan *Guide to the Markets* 1Q 2019.

PORTLAND

CHICAGO

NEW YORK

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