



Quarterly Investment Performance Analysis

North Dakota Board of University and School Lands

Period Ended: March 31, 2019

RVK Honored to Receive 2ND Greenwich *Quality Leader* Award

- In 2018, Greenwich Associates* conducted interviews with 1,128 senior professionals of large plan sponsors and ranked opinions of their investment consulting relationships on a series of key metrics, including, but not limited to:
 - Understanding of Client Goals and Objectives
 - Advice on Long-term Asset Allocation and Liability Issues
 - Proactive Advice and Innovative Ideas
 - Credibility with Boards and/or Investment Committees
 - Knowledge of Investment Managers
 - Advice on DC Plan Structure and Design
 - Client Satisfaction with Manager Recommendations
 - Responsiveness to Client Requests and Needs
 - Competitive Fees
- For a 2nd consecutive year, RVK is 1 of 3 firms among large US consultants to receive this award.



**As a valued client, we are humbled by your continued confidence and thankful for your support.
From all of us here at RVK, thank you for the opportunity to serve you!**

*Greenwich Associates is the leading provider of global market intelligence and advisory services to the financial services industry. They conduct an annual survey of institutional investors whereby approx. 1,100 respondents rank their respective investment consulting relationships on key metrics on a scale from 1 (poor) to 5 (excellent). The award is based upon Greenwich Associates' 2018 US Institutional Investors study.

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Capital Markets Review



First Quarter Economic Environment

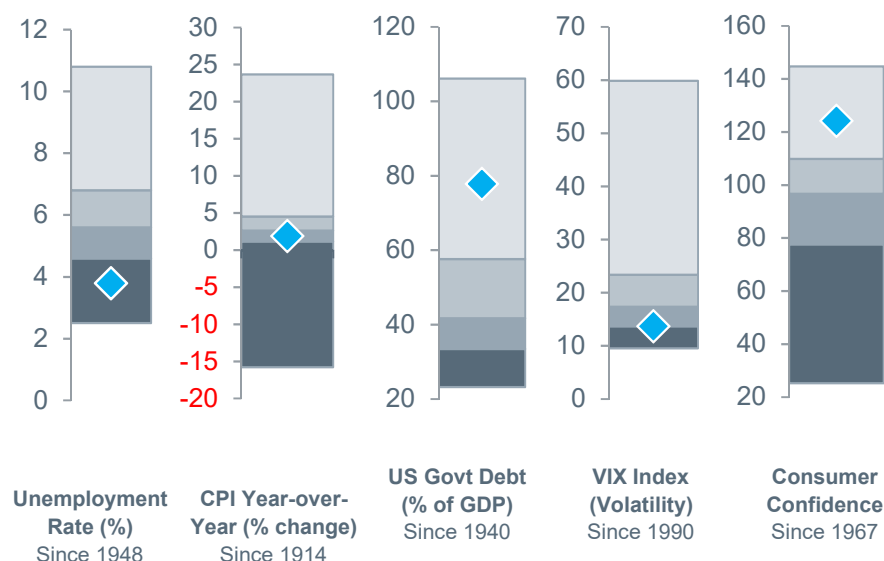
Key Economic Indicators

Risk assets and fixed income markets performed well over the first quarter, largely driven by a more accommodative stance by the Federal Open Market Committee ("FOMC"). The global equity market, as represented by the MSCI All Country World Index, rose over 12% during the quarter, while fixed income markets benefited from the shift in interest rate expectations. Volatility markets also declined back to record low levels on the message of greater accommodation by the FOMC. Positive returns were generated despite declining growth forecasts in Asia and Europe, weak global inflation, market uncertainty caused by geopolitical risks, such as Brexit, and global markets destabilized by ongoing trade wars. At its March meeting, the FOMC maintained policy rates in the range of 2.25% to 2.50%. Interest rates declined notably over the period amidst signs of weakness in economic growth and a continued lack of inflationary pressure. During the quarter, the 10-year nominal Treasury yield fell to 2.39%, a level not seen since 2017, while the yield curve continued to flatten and even invert across certain maturities. However, the labor market hasn't reflected recessionary fears as US employment remains at record levels.

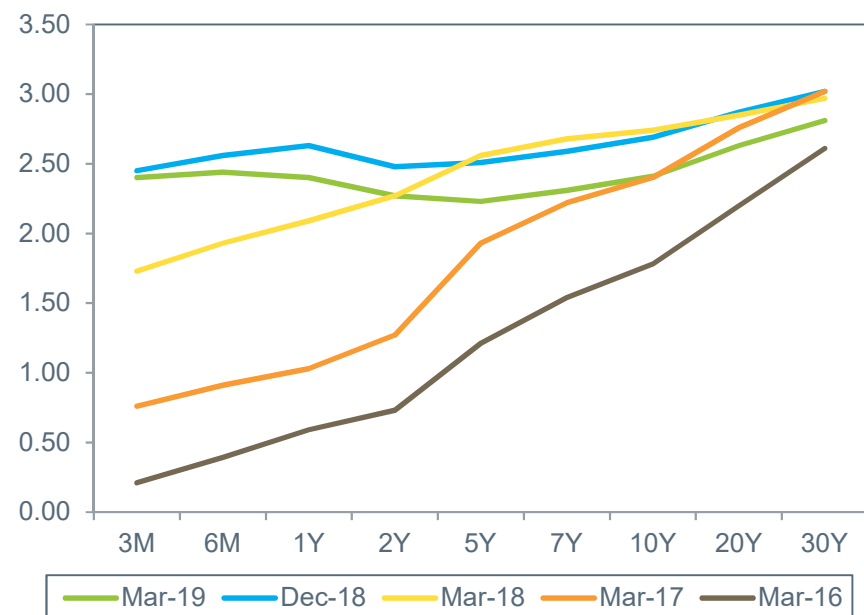
| Economic Indicators | Mar-19 | Dec-18 | Mar-18 | Mar-16 | 20 Yr |
|-------------------------------|---------|--------|--------|--------|-------|
| Federal Funds Rate (%) | 2.43 ▲ | 2.40 | 1.68 | 0.25 | 1.91 |
| Breakeven Infl. - 5 Yr (%) | 1.79 ▲ | 1.49 | 2.04 | 1.51 | 1.86 |
| Breakeven Infl. - 10 Yr (%) | 1.87 ▲ | 1.71 | 2.06 | 1.63 | 2.03 |
| CPI YoY (Headline) (%) | 1.9 — | 1.9 | 2.4 | 0.9 | 2.2 |
| Unemployment Rate (%) | 3.8 ▼ | 3.9 | 4.0 | 5.0 | 5.9 |
| Real GDP YoY (%) | 3.2 ▲ | 3.0 | 2.6 | 1.6 | 2.2 |
| PMI - Manufacturing | 55.3 ▲ | 54.3 | 59.3 | 51.2 | 52.8 |
| USD Total Wtd Idx | 92.07 ▲ | 91.79 | 86.37 | 89.72 | 86.26 |
| WTI Crude Oil per Barrel (\$) | 60.1 ▲ | 45.4 | 64.9 | 38.3 | 60.6 |
| Gold Spot per Oz (\$) | 1,292 ▲ | 1,282 | 1,326 | 1,233 | 892 |

| Market Performance (%) | QTD | CYTD | 1 Yr | 5 Yr | 10 Yr |
|---------------------------|-------|-------|-------|-------|-------|
| S&P 500 (Cap Wtd) | 13.65 | 13.65 | 9.50 | 10.91 | 15.92 |
| Russell 2000 | 14.58 | 14.58 | 2.05 | 7.05 | 15.36 |
| MSCI EAFE (Net) | 9.98 | 9.98 | -3.71 | 2.33 | 8.96 |
| MSCI EAFE SC (Net) | 10.65 | 10.65 | -9.36 | 4.47 | 12.76 |
| MSCI Emg Mkts (Net) | 9.93 | 9.93 | -7.41 | 3.68 | 8.95 |
| Bloomberg US Agg Bond | 2.94 | 2.94 | 4.48 | 2.74 | 3.77 |
| ICE BofAML 3 Mo US T-Bill | 0.60 | 0.60 | 2.12 | 0.74 | 0.43 |
| NCREIF ODCE (Gross) | 1.42 | 1.42 | 7.52 | 10.18 | 8.74 |
| FTSE NAREIT Eq REIT (TR) | 16.33 | 16.33 | 20.86 | 9.12 | 18.28 |
| HFRI FOF Comp | 4.62 | 4.62 | 0.15 | 2.20 | 3.55 |
| Bloomberg Cmtty (TR) | 6.32 | 6.32 | -5.25 | -8.92 | -2.56 |

Key Economic Indicators



Treasury Yield Curve (%)



First Quarter Review

Broad Market

US equity markets rebounded strongly during the first quarter, with all major indices across size and style finishing in positive territory. The S&P 500 Index returned 13.6% during the quarter, marking its best quarterly return since the third quarter of 2009, and the best first quarter return since 1998.

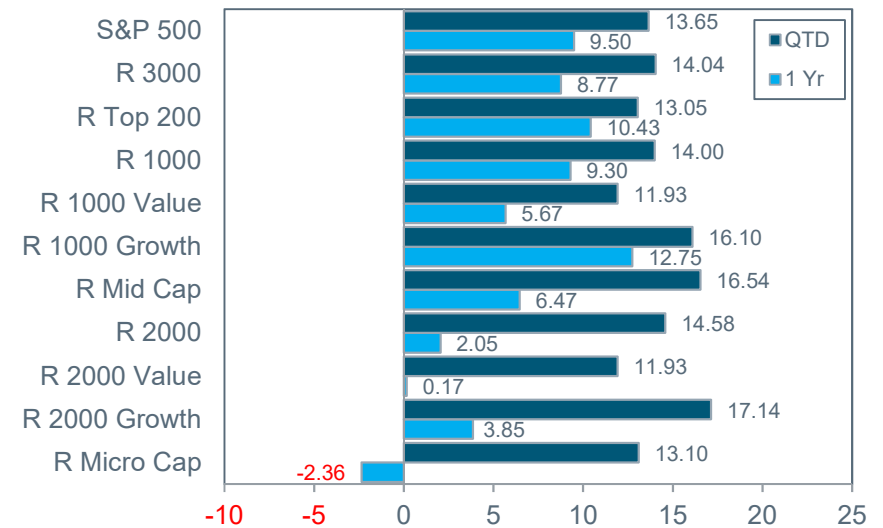
Market Cap

Smaller-capitalization stocks outpaced their large-cap counterparts, but the mid-cap segment provided the highest returns.

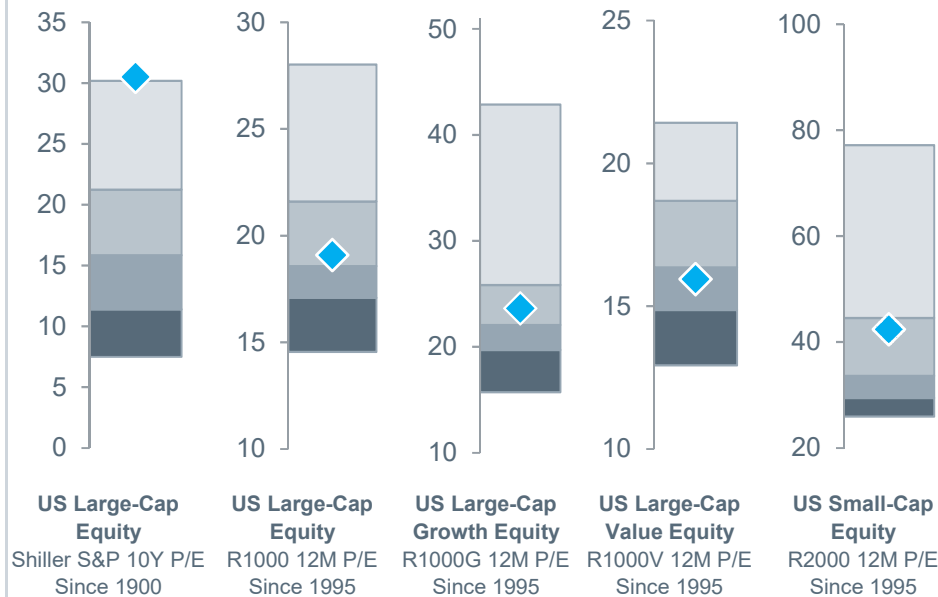
Style and Sector

Returns were positive across all sectors during the quarter, led by technology as the S&P 500 Information Technology Index returned 19.9%. Large- and small-cap growth managers fared moderately well, despite a rally in biotechnology, buoyed by strong performance across broad growth-focused sectors.

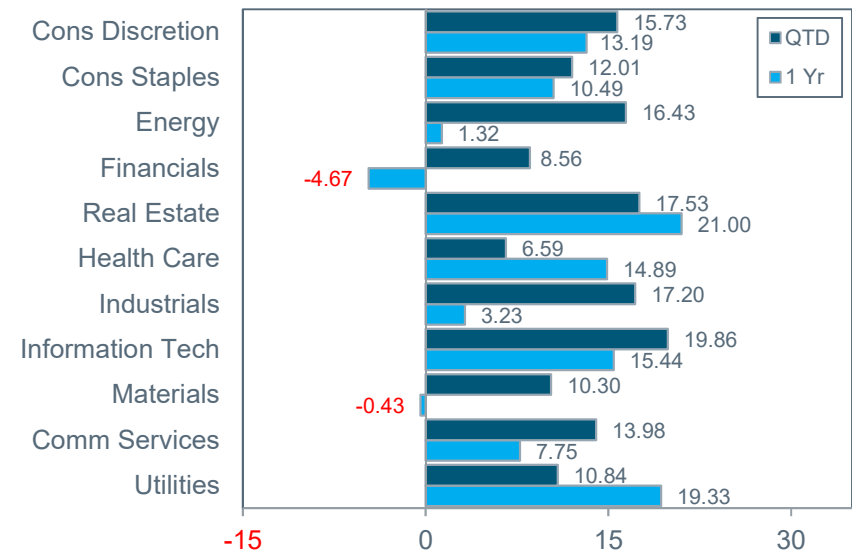
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



First Quarter Review

Developed Markets

Developed international markets generated positive returns during the quarter, but did not keep pace with the strong US equity returns. The positive returns from developed markets were generated despite the continued economic slowdown in Europe.

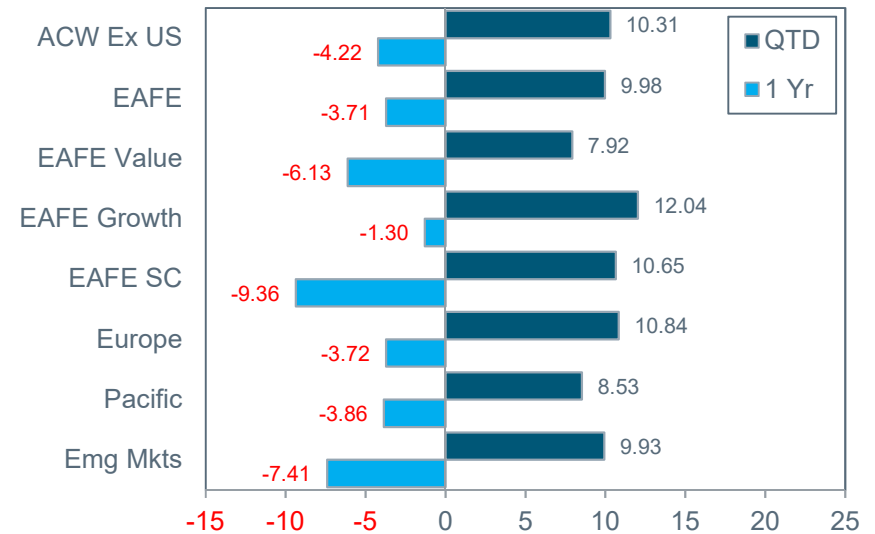
Emerging Markets

The emerging markets finished the quarter with similar returns as developed international markets. China was a key driver of emerging market equity returns as it generated the highest return among emerging market countries. This positive quarterly result occurred despite weakening economic growth in China and the ongoing trade dispute with the US.

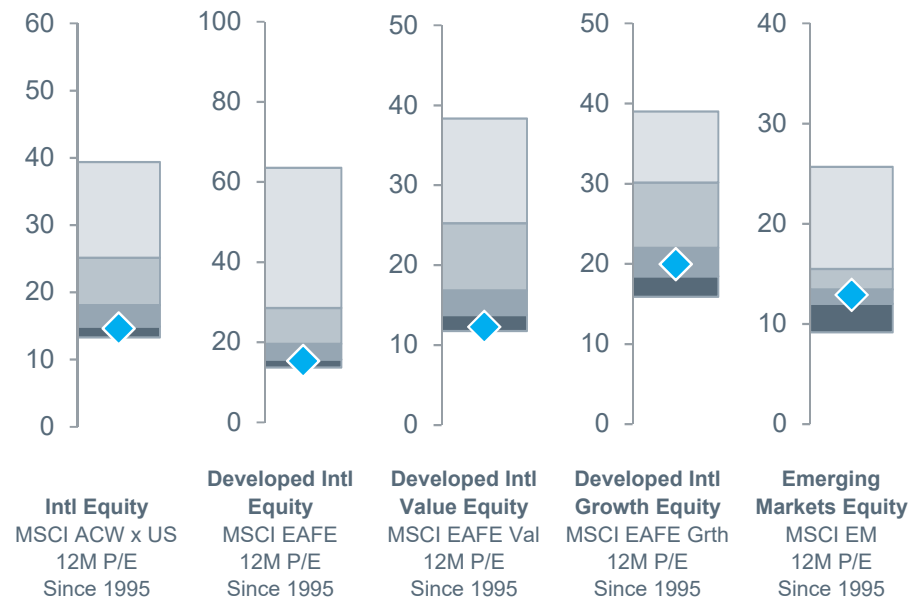
Market Cap & Style

Growth stocks significantly outperformed value stocks. Additionally, small cap outperformed large cap in developed international markets, but emerging markets large cap stocks broadly outperformed the stocks of smaller companies.

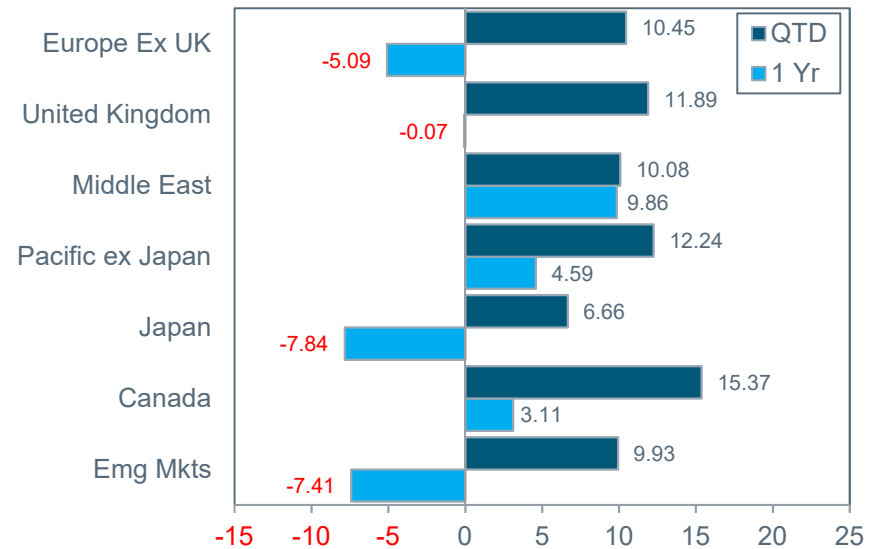
MSCI Style and Capitalization Market Performance (%)



Valuations



MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers. All returns are shown net of foreign taxes on dividends.

First Quarter Review

Broad Market

Aided by US Treasury rates declining across all maturities, the Bloomberg US Aggregate Index began the year strong, returning 2.9% for the quarter. While the rate decline was marginal at the shortest maturities, those dated one-year and longer fell between 0.21% and 0.28% in near-uniform fashion, exacerbating both the flattening and inverting trends of the yield curve. At quarter end, the one-month T-bill had a higher yield than Treasury securities between one- and ten-years.

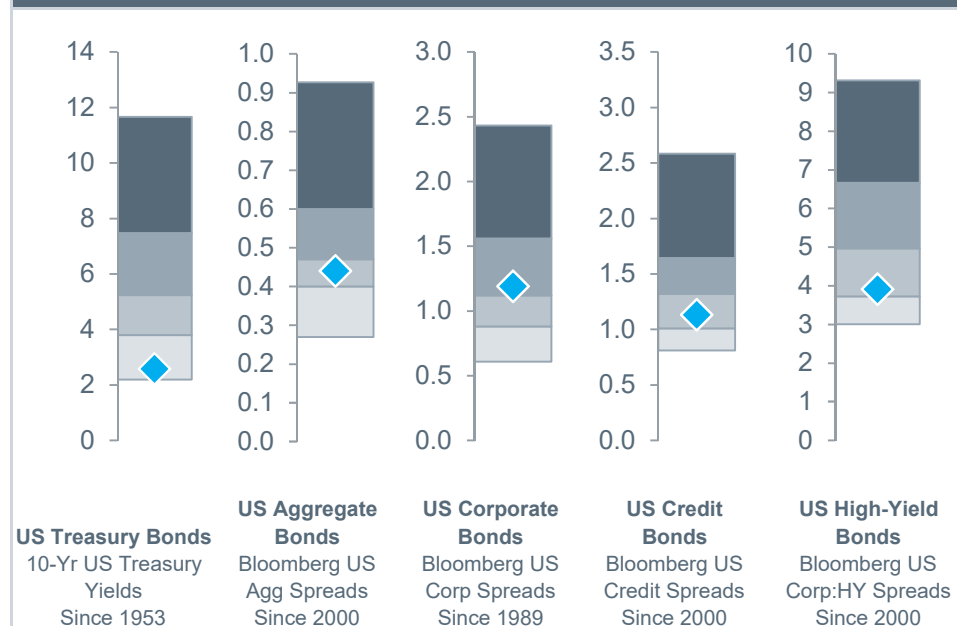
Credit Market

As investors returned to their risk-on sentiment, corporate spreads tightened after a brief widening in the fourth quarter to help boost returns in the sector. Lower-rated debt was particularly positive, with the ICE BofAML US High Yield Master II Index returning 7.4%.

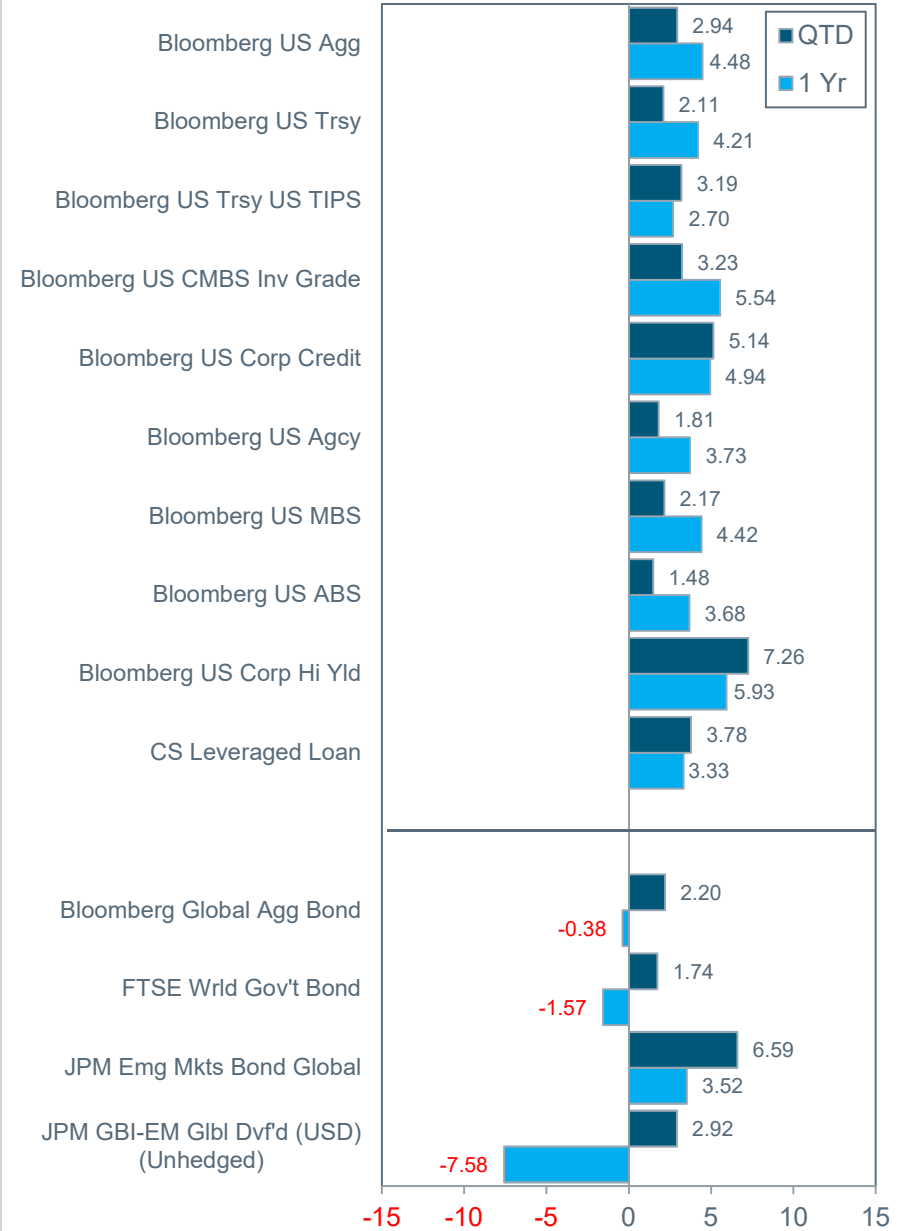
Emerging Market Debt

While a strengthening dollar dampened local currency returns, the JPM GBI-EM Global Diversified Index still managed a 2.9% return for the quarter.

Valuations



Fixed Income Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

First Quarter Review - Absolute Return

General Market - Hedge Funds

The first quarter of 2019 began on a positive note for the hedge fund industry, with each of the major strategy groups posting positive returns. The HFRI Fund Weighted Composite Index produced a return of 5.7%, its best result since the third quarter of 2009, largely driven by gains within the Long/Short Equity universe ("ELS"). The HFRI Asset Weighted Composite Index, which is more balanced across hedge fund strategies, realized a more muted return of 3.1%.

General Market - Global Tactical Asset Allocation (GTAA)

Most GTAA managers reported positive returns during the first quarter, though still underperformed a blend of 60% US equity and 40% US fixed income given the strong equity market returns. The positive absolute performance across managers is a reversal from the negative returns generated in 2018 and, more specifically, the fourth quarter. Performance across GTAA managers varied during the quarter, as the strongest performers held higher allocations to US equity and credit sensitive fixed income.

First Quarter Review - Real Assets

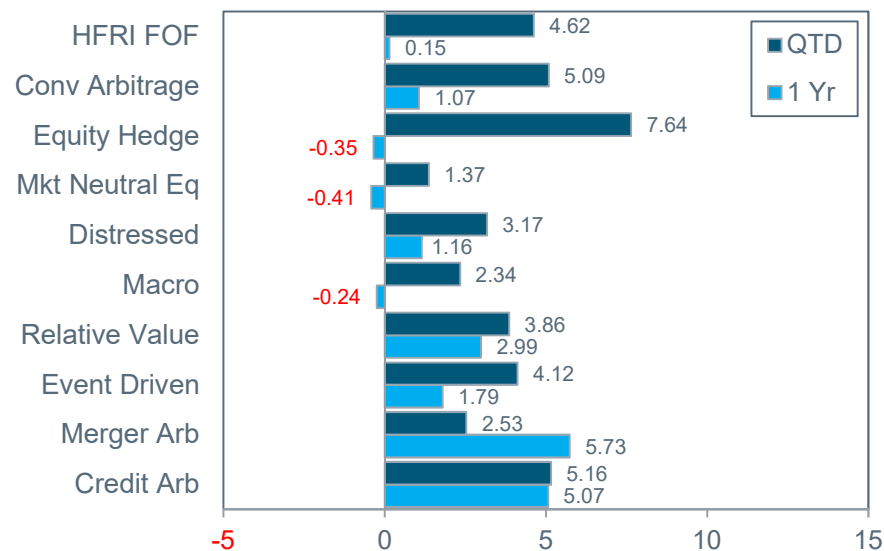
General Market - Diversified Inflation Strategies (DIS)

Most DIS managers provided strong returns during the first quarter. Performance across managers ranged widely and was bifurcated. The best performing DIS managers generally held significantly larger allocations to asset classes such as REITs, natural resource equities, global listed infrastructure, and commodities, which all rebounded during the first quarter. DIS managers that trailed peers, though still providing positive returns, held larger exposure to inflation linked securities such as TIPS.

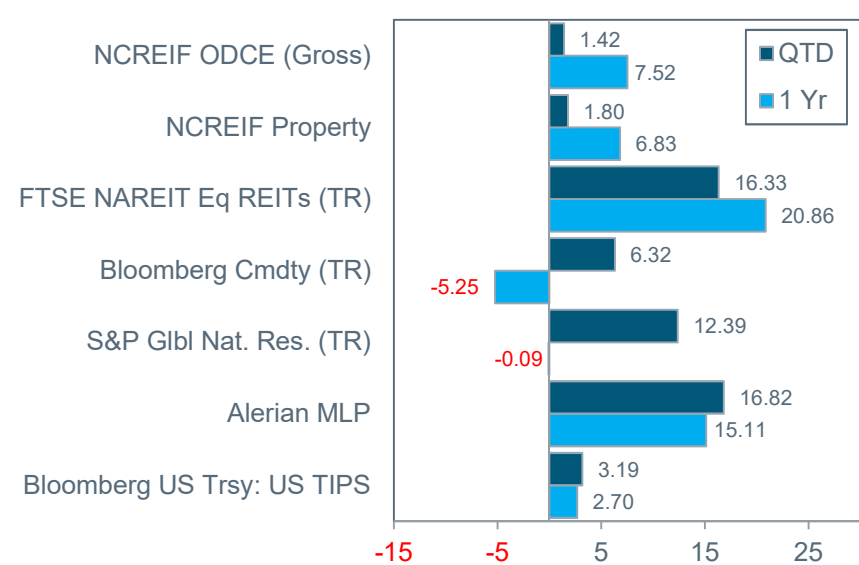
General Market - Real Estate

Core private real estate returned 1.4% during the first quarter, as tracked by the NCREIF-ODCE Index, with the total return comprised of 1.0% income and 0.4% price appreciation. Investors in publicly traded real estate significantly outperformed their private market counterparts during the first quarter. Publicly traded real estate experienced a snap-back from its negative performance in 2018. The first quarter total return was 16.7%, as measured by FTSE/NAREIT All REITs Index.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



Annual Asset Class Performance

As of March 31, 2019

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | YTD |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Best ↑ < | | | | | | | | | | | | | | | |

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

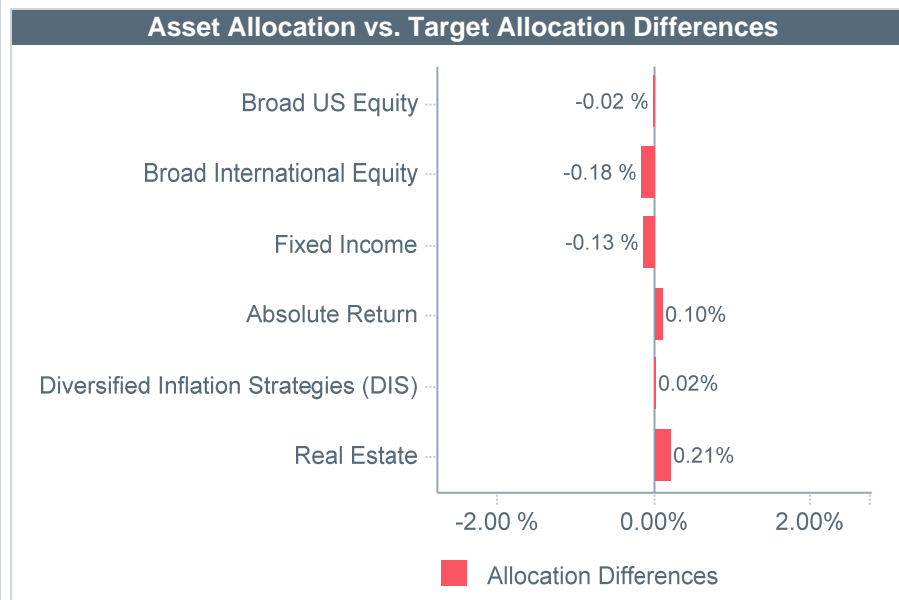
Total Fund



North Dakota Board of University and School Lands
AA by Manager, AA vs. Target, and Schedule of Investable Assets

As of March 31, 2019

| Asset Allocation by Manager | | | Asset Allocation vs. Target Allocation | | | |
|---|-------------------|----------------|--|-------------------|----------------|------------|
| | Market Value (\$) | Allocation (%) | | Market Value (\$) | Allocation (%) | Target (%) |
| <u>Broad US Equity</u> | | | Broad US Equity | 795,462,325 | 16.98 | 17.00 |
| State Street Russell 1000 Index SL (US Large Cap) | 623,989,566 | 13.32 | Broad International Equity | 788,293,885 | 16.82 | 17.00 |
| State Street Russell Mid Cap Index (US Mid Cap) | 79,324,636 | 1.69 | Fixed Income | 977,710,019 | 20.87 | 21.00 |
| NT Small Cap Core (US Small Cap) | 92,148,123 | 1.97 | Absolute Return | 941,899,511 | 20.10 | 20.00 |
| <u>Broad International Equity</u> | | | Diversified Inflation Strategies (DIS) | 469,332,719 | 10.02 | 10.00 |
| State Street World Ex US Index (International Equity) | 488,234,515 | 10.42 | Real Estate | 712,742,228 | 15.21 | 15.00 |
| QMA International Small Cap Equity (International Equity) | 118,365,702 | 2.53 | Total Fund | 4,685,440,688 | 100.00 | 100.00 |
| DFA Emg Mkts Core Eq;I (Emerging Markets Equity) | 90,217,117 | 1.93 | | | | |
| Harding Loevner:LEM;II (Emerging Markets Equity) | 91,476,551 | 1.95 | | | | |
| <u>Fixed Income</u> | | | | | | |
| Payden & Rygel Long Term (Investment Grade US FI) | 305,782,109 | 6.53 | | | | |
| JP Morgan FI Intermediate Bond (Investment Grade US FI) | 304,047,212 | 6.49 | | | | |
| FIA International Fixed Income (International FI) | 91,716 | 0.00 | | | | |
| Brandywine Gbl Opp FI (Global FI) | 147,648,789 | 3.15 | | | | |
| FLP (Loans) | 18,081,159 | 0.39 | | | | |
| ECLP (Loans) | 1,103,974 | 0.02 | | | | |
| Payden:Low Dur;Inv (Low Duration FI) | 48,146,736 | 1.03 | | | | |
| AG Direct Lending Fund III, L.P. | 55,937,736 | 1.19 | | | | |
| Schroders Securitized Credit (SA) | 96,263,276 | 2.05 | | | | |
| ND Land - PTF Cash (Cash) | 607,313 | 0.01 | | | | |
| <u>Absolute Return</u> | | | | | | |
| GMO:Bchmk-Fr All;IV (GTAA) | 311,173,036 | 6.64 | | | | |
| PIMCO:All Ast Ath;Inst (GTAA) | 314,600,908 | 6.71 | | | | |
| Westwood Income Opportunity (GTAA) | 316,125,566 | 6.75 | | | | |
| <u>Diversified Inflation Strategies (DIS)</u> | | | | | | |
| NT Common TIPS Index (TIPS) | 91,193,026 | 1.95 | | | | |
| Gresham Commodities (Commodities) | 140,885,081 | 3.01 | | | | |
| Harvest MLP (MLPs) | 143,158,072 | 3.06 | | | | |
| Van Eck NR Equities (Natural Resources) | 94,096,541 | 2.01 | | | | |
| <u>Real Estate</u> | | | | | | |
| Morgan Stanley Prime Property Fund (Core Real Estate) | 206,222,951 | 4.40 | | | | |
| UBS Trumbull Property Fund, L.P. (Core Real Estate) | 185,321,381 | 3.96 | | | | |
| Jamestown Premier Property Fund (Core Plus Real Estate) | 70,020,849 | 1.49 | | | | |
| Prologis USLH (CF) (Core Plus Real Estate) | 119,490,469 | 2.55 | | | | |
| JP Morgan US RE Inc and Grth, LP (CF) (Core Plus Real Estate) | 131,686,578 | 2.81 | | | | |



| Schedule of Investable Assets | | | | | |
|-------------------------------|-----------------------------|--------------------|----------------|--------------------------|----------|
| Periods Ending | Beginning Market Value (\$) | Net Cash Flow (\$) | Gain/Loss (\$) | Ending Market Value (\$) | % Return |
| QTD | 4,372,852,953 | 3,788,491 | 308,799,244 | 4,685,440,688 | 7.06 |

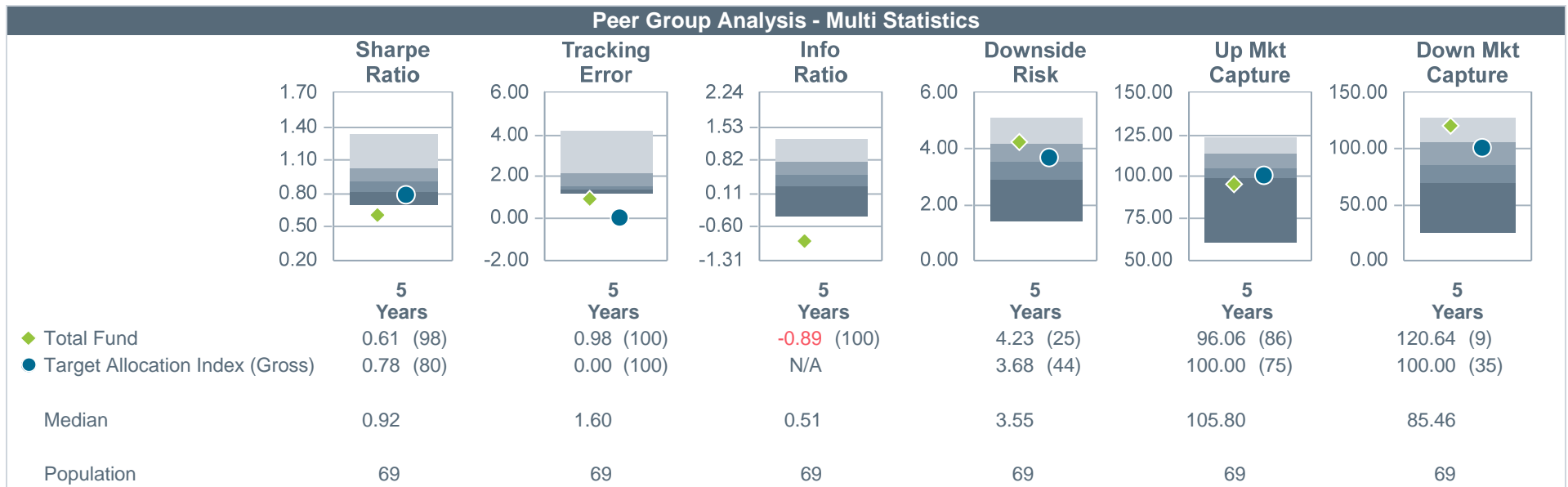
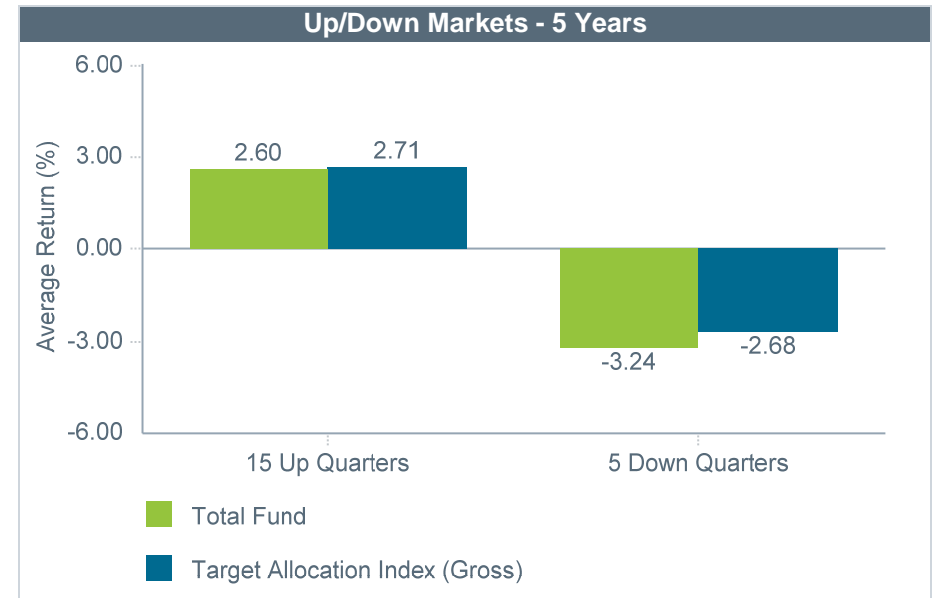
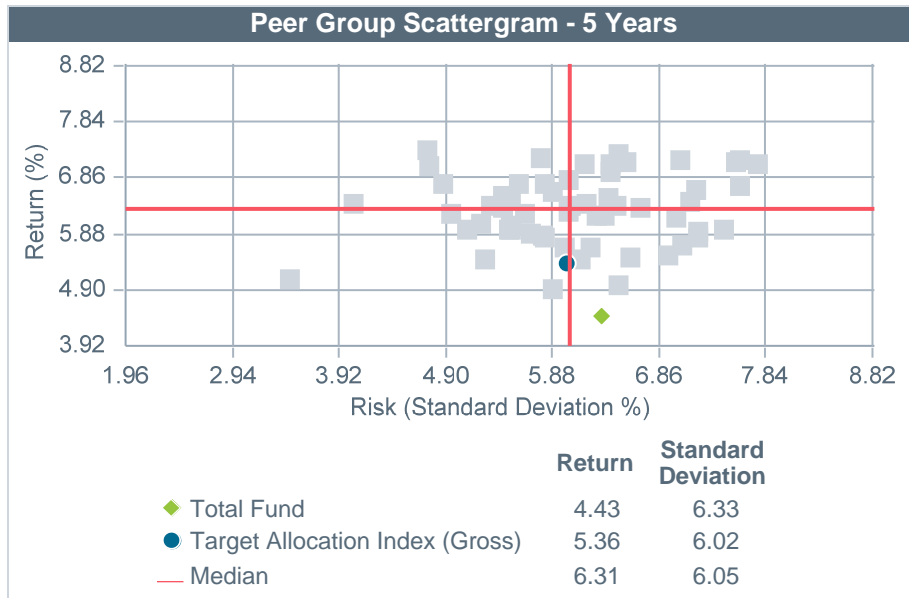
Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. Net cash flow includes fees, securities lending income and client directed flows. Gain/loss includes dividend and interest income and capital appreciation.

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|---------------|--------------|--------------|-----------------|-------------------|
| Total Fund (Net) | 6.95 | 6.95 | 1.52 | 2.02 | 6.84 | 3.96 | 5.65 | 8.48 | -5.11 | 12.62 | 8.65 | 6.58 | 08/01/1995 |
| Target Allocation Index (Net) | 7.61 | 7.61 | 2.87 | 3.65 | 7.17 | 5.22 | 6.66 | N/A | -4.51 | 13.14 | 7.85 | N/A | |
| Difference | -0.66 | -0.66 | -1.35 | -1.63 | -0.33 | -1.26 | -1.01 | N/A | -0.60 | -0.52 | 0.80 | N/A | |
| Total Fund | 7.06 | 7.06 | 1.86 | 2.49 | 7.38 | 4.43 | 6.06 | N/A | -4.63 | 13.24 | 9.17 | 8.05 | 07/01/2009 |
| Target Allocation Index (Gross) | 7.65 | 7.65 | 2.97 | 3.79 | 7.31 | 5.36 | 6.76 | N/A | -4.38 | 13.29 | 8.00 | 8.85 | |
| Difference | -0.59 | -0.59 | -1.11 | -1.30 | 0.07 | -0.93 | -0.70 | N/A | -0.25 | -0.05 | 1.17 | -0.80 | |
| All Public Plans > \$1B-Total Fund Median | 7.20 | 7.20 | 3.11 | 4.16 | 8.74 | 6.31 | 7.64 | 10.17 | -3.01 | 15.98 | 7.93 | 9.23 | |
| Rank | 55 | 55 | 90 | 90 | 89 | 94 | 94 | N/A | 77 | 86 | 9 | 90 | |
| Broad US Equity | 14.00 | 14.00 | 4.08 | 8.09 | 13.71 | 10.16 | 12.07 | N/A | -5.40 | 21.53 | 13.47 | 14.24 | 07/01/2009 |
| Russell 3000 Index | 14.04 | 14.04 | 4.70 | 8.77 | 13.49 | 10.36 | 12.63 | 16.00 | -5.24 | 21.13 | 12.74 | 14.60 | |
| Difference | -0.04 | -0.04 | -0.62 | -0.68 | 0.22 | -0.20 | -0.56 | N/A | -0.16 | 0.40 | 0.73 | -0.36 | |
| Broad International Equity | 10.81 | 10.81 | -3.11 | -6.09 | 7.33 | 1.86 | 5.88 | N/A | -16.27 | 26.75 | 5.02 | 6.56 | 07/01/2009 |
| MSCI ACW Ex US Index (USD) (Net) | 10.31 | 10.31 | -1.64 | -4.22 | 8.09 | 2.57 | 4.72 | 8.85 | -14.20 | 27.19 | 4.50 | 6.39 | |
| Difference | 0.50 | 0.50 | -1.47 | -1.87 | -0.76 | -0.71 | 1.16 | N/A | -2.07 | -0.44 | 0.52 | 0.17 | |
| Fixed Income | 2.49 | 2.49 | 3.61 | 2.68 | 2.79 | 2.96 | 3.07 | N/A | -0.01 | 5.01 | 4.13 | 4.61 | 07/01/2009 |
| Global Fixed Income Custom Index | 3.24 | 3.24 | 4.42 | 3.46 | 2.51 | 2.58 | 2.54 | 4.13 | -0.52 | 4.98 | 3.66 | 3.86 | |
| Difference | -0.75 | -0.75 | -0.81 | -0.78 | 0.28 | 0.38 | 0.53 | N/A | 0.51 | 0.03 | 0.47 | 0.75 | |
| Bloomberg US Agg Bond Index | 2.94 | 2.94 | 4.65 | 4.48 | 2.03 | 2.74 | 2.48 | 3.77 | 0.01 | 3.54 | 2.65 | 3.68 | |
| Difference | -0.45 | -0.45 | -1.04 | -1.80 | 0.76 | 0.22 | 0.59 | N/A | -0.02 | 1.47 | 1.48 | 0.93 | |
| Absolute Return | 5.79 | 5.79 | 2.75 | 1.33 | 6.56 | N/A | N/A | N/A | -4.41 | 12.99 | 8.45 | 2.74 | 07/01/2014 |
| Absolute Return Custom Index | 8.53 | 8.53 | 2.79 | 3.17 | 7.22 | 5.05 | 6.20 | 9.06 | -5.93 | 15.39 | 6.22 | 4.51 | |
| Difference | -2.74 | -2.74 | -0.04 | -1.84 | -0.66 | N/A | N/A | N/A | 1.52 | -2.40 | 2.23 | -1.77 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 3.37 | 3.37 | -1.89 | -5.63 | -0.75 | N/A | N/A | N/A | -11.42 | 5.78 | 1.27 | -3.69 | |
| Diversified Inflation Strategies (DIS) | 12.16 | 12.16 | -4.59 | 0.91 | 5.35 | 0.35 | N/A | N/A | -13.73 | 3.01 | 19.55 | 0.35 | 04/01/2014 |
| DIS Custom Index | 9.34 | 9.34 | -0.25 | 3.55 | 5.84 | 0.95 | 2.18 | 7.32 | -9.13 | 4.80 | 16.53 | 0.95 | |
| Difference | 2.82 | 2.82 | -4.34 | -2.64 | -0.49 | -0.60 | N/A | N/A | -4.60 | -1.79 | 3.02 | -0.60 | |
| Real Estate | 1.25 | 1.25 | 5.43 | 8.06 | 9.98 | N/A | N/A | N/A | 9.61 | 11.28 | 9.77 | 10.51 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Gross) | 1.42 | 1.42 | 5.36 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 8.93 | |
| Difference | -0.17 | -0.17 | 0.07 | 0.54 | 2.01 | N/A | N/A | N/A | 1.26 | 3.66 | 1.00 | 1.58 | |

Performance shown is gross of fees except where noted. Performance for plan sponsor peer groups are shown gross of fees. 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 06/30.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|--------------|--------------|--------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|-----------------|-------------------|
| Broad US Equity | | | | | | | | | | | | | |
| State Street Russell 1000 Index SL (CF) | 13.99 | 13.99 | 5.55 | 9.30 | N/A | N/A | N/A | N/A | -4.77 | N/A | N/A | 11.31 | 06/01/2017 |
| Russell 1000 Index | 14.00 | 14.00 | 5.54 | 9.30 | 13.52 | 10.63 | 12.79 | 16.05 | -4.78 | 21.69 | 12.05 | 11.32 | |
| Difference | -0.01 | -0.01 | 0.01 | 0.00 | N/A | N/A | N/A | N/A | 0.01 | N/A | N/A | -0.01 | |
| IM U.S. Large Cap Equity (SA+CF) Median | 13.29 | 13.29 | 4.69 | 7.99 | 12.91 | 10.32 | 12.62 | 15.84 | -5.16 | 21.67 | 10.99 | 10.72 | |
| Rank | 38 | 38 | 39 | 38 | N/A | N/A | N/A | N/A | 46 | N/A | N/A | 42 | |
| State Street Russell Mid Cap Index (SA) | | | | | | | | | | | | | |
| State Street Russell Mid Cap Index (SA) | 16.47 | 16.47 | 3.64 | 6.55 | N/A | N/A | N/A | N/A | -8.94 | N/A | N/A | 9.23 | 06/01/2017 |
| Russell Mid Cap Index | 16.54 | 16.54 | 3.55 | 6.47 | 11.82 | 8.81 | 11.99 | 16.88 | -9.06 | 18.52 | 13.80 | 9.18 | |
| Difference | -0.07 | -0.07 | 0.09 | 0.08 | N/A | N/A | N/A | N/A | 0.12 | N/A | N/A | 0.05 | |
| IM U.S. Mid Cap Equity (SA+CF) Median | 15.72 | 15.72 | 2.72 | 5.47 | 12.14 | 8.99 | 12.01 | 16.63 | -9.12 | 19.89 | 12.71 | 8.74 | |
| Rank | 44 | 44 | 43 | 45 | N/A | N/A | N/A | N/A | 49 | N/A | N/A | 48 | |
| NT Small Cap Core (CF) | | | | | | | | | | | | | |
| NT Small Cap Core (CF) | 11.96 | 11.96 | -4.89 | 1.35 | 14.91 | N/A | N/A | N/A | -6.97 | 22.66 | 19.02 | 7.83 | 07/01/2014 |
| Russell 2000 Index | 14.58 | 14.58 | -5.29 | 2.05 | 12.92 | 7.05 | 10.74 | 15.36 | -11.01 | 14.65 | 21.31 | 6.98 | |
| Difference | -2.62 | -2.62 | 0.40 | -0.70 | 1.99 | N/A | N/A | N/A | 4.04 | 8.01 | -2.29 | 0.85 | |
| IM U.S. Small Cap Core Equity (SA+CF) Median | 13.99 | 13.99 | -4.85 | 1.77 | 12.65 | 7.92 | 11.75 | 16.49 | -10.69 | 15.13 | 20.77 | 7.84 | |
| Rank | 83 | 83 | 51 | 53 | 22 | N/A | N/A | N/A | 24 | 9 | 74 | 51 | |
| NT Small/Smid Composite | | | | | | | | | | | | | |
| NT Small/Smid Composite | 11.96 | 11.96 | -4.89 | 1.35 | 14.91 | 7.79 | 11.46 | 15.77 | -6.97 | 22.66 | 19.02 | 10.45 | 03/01/1996 |
| Small/Smid Blended Index | 14.58 | 14.58 | -5.29 | 2.05 | 12.92 | 7.48 | 11.14 | 16.06 | -11.01 | 14.65 | 21.31 | 9.65 | |
| Difference | -2.62 | -2.62 | 0.40 | -0.70 | 1.99 | 0.31 | 0.32 | -0.29 | 4.04 | 8.01 | -2.29 | 0.80 | |
| IM U.S. SMID Cap Core Equity (SA+CF) Median | 15.02 | 15.02 | -1.13 | 3.58 | 12.50 | 8.48 | 12.00 | 16.52 | -9.84 | 18.01 | 16.93 | N/A | |
| Rank | 91 | 91 | 92 | 73 | 5 | 76 | 73 | 77 | 18 | 13 | 17 | N/A | |

Performance shown is gross of fees, except for FLP & ECLP Bank Loans which are shown net of fees. Manager inception dates shown represent the first full month following initial funding. 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 06/30.

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|---|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|---------------|--------------|--------------|-----------------|-------------------|
| Broad International Equity | | | | | | | | | | | | | |
| State Street World Ex US Index (CF) | 10.43 | 10.43 | -2.46 | -3.18 | 7.24 | N/A | N/A | N/A | -14.14 | 24.17 | 2.68 | 1.30 | 07/01/2014 |
| MSCI Wrld Ex US Index (USD) (Net) | 10.45 | 10.45 | -2.41 | -3.14 | 7.29 | 2.20 | 5.28 | 8.82 | -14.09 | 24.21 | 2.75 | 1.35 | |
| Difference | -0.02 | -0.02 | -0.05 | -0.04 | -0.05 | N/A | N/A | N/A | -0.05 | -0.04 | -0.07 | -0.05 | |
| IM International Large Cap Equity (SA+CF) Median | 10.85 | 10.85 | -2.72 | -4.32 | 7.81 | 3.46 | 6.50 | 10.43 | -14.38 | 27.67 | 1.70 | 2.77 | |
| Rank | 58 | 58 | 48 | 38 | 60 | N/A | N/A | N/A | 48 | 79 | 40 | 83 | |
| DFA Emg Mkts Core Eq;I (DFCEX) | | | | | | | | | | | | | |
| MSCI Emg Mkts Index (USD) (Net) | 9.93 | 9.93 | 0.60 | -7.41 | 10.68 | 3.68 | 2.69 | 8.95 | -14.58 | 37.28 | 11.19 | 2.49 | |
| Difference | -1.19 | -1.19 | 0.24 | -1.57 | -0.44 | N/A | N/A | N/A | -0.19 | 0.08 | 1.86 | 0.33 | |
| IM Emerging Markets Equity (SA+CF) Median | 10.09 | 10.09 | 0.00 | -7.94 | 10.45 | 4.28 | 4.31 | 10.56 | -15.23 | 36.84 | 10.12 | 3.04 | |
| Rank | 71 | 71 | 42 | 64 | 53 | N/A | N/A | N/A | 45 | 46 | 30 | 55 | |
| Harding Loevner: IEM;IZ (HLEZX) | | | | | | | | | | | | | |
| MSCI Emg Mkts Index (USD) (Net) | 9.93 | 9.93 | 0.60 | -7.41 | 10.68 | 3.68 | 2.69 | 8.95 | -14.58 | 37.28 | 11.19 | 2.49 | |
| Difference | 4.97 | 4.97 | -2.28 | -1.48 | 1.07 | N/A | N/A | N/A | -3.03 | 0.01 | 3.54 | 1.50 | |
| IM Emerging Markets Equity (SA+CF) Median | 10.09 | 10.09 | 0.00 | -7.94 | 10.45 | 4.28 | 4.31 | 10.56 | -15.23 | 36.84 | 10.12 | 3.04 | |
| Rank | 7 | 7 | 67 | 63 | 33 | N/A | N/A | N/A | 75 | 46 | 20 | 30 | |
| QMA International Small Cap Equity (CF) | | | | | | | | | | | | | |
| MSCI EAFE Sm Cap Index (USD) (Gross) | 10.76 | 10.76 | -7.74 | -9.01 | 7.90 | 4.84 | 8.59 | 13.14 | -17.58 | 33.50 | 2.55 | -11.39 | |
| Difference | 0.18 | 0.18 | -2.47 | -5.16 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -5.72 | |
| IM International Small Cap Core Equity (SA+CF) Median | 10.68 | 10.68 | -8.08 | -10.02 | 8.22 | 5.02 | 9.45 | 13.99 | -18.93 | 34.07 | 1.93 | -12.34 | |
| Rank | 45 | 45 | 82 | 97 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 100 | |

Performance shown is gross of fees, except for FLP & ECLP Bank Loans which are shown net of fees. Manager inception dates shown represent the first full month following initial funding. 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 06/30.

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-----------------|-------------------|
| Fixed Income | | | | | | | | | | | | | |
| Payden & Rygel Long Term (SA) | 3.26 | 3.26 | 4.82 | 4.76 | 3.40 | 3.51 | 3.50 | 5.32 | 0.36 | 5.20 | 4.03 | 5.93 | 08/01/1995 |
| Bloomberg US Agg Bond Index | 2.94 | 2.94 | 4.65 | 4.48 | 2.03 | 2.74 | 2.48 | 3.77 | 0.01 | 3.54 | 2.65 | 5.17 | |
| Difference | 0.32 | 0.32 | 0.17 | 0.28 | 1.37 | 0.77 | 1.02 | 1.55 | 0.35 | 1.66 | 1.38 | 0.76 | |
| IM U.S. Broad Market Core Fixed Income (SA+CF) Median | 3.23 | 3.23 | 4.79 | 4.70 | 2.54 | 3.10 | 2.94 | 4.65 | 0.07 | 4.06 | 3.11 | 5.55 | |
| Rank | 46 | 46 | 48 | 43 | 9 | 14 | 14 | 26 | 27 | 7 | 20 | 11 | |
| JP Morgan FI Intermediate Bond (SA) | 2.41 | 2.41 | 4.28 | 4.34 | 2.04 | 2.50 | N/A | N/A | 1.14 | 2.81 | 1.99 | 2.09 | 08/01/2012 |
| Bloomberg US Gov't Crdt Int Trm Bond Index | 2.32 | 2.32 | 4.23 | 4.24 | 1.66 | 2.12 | 2.00 | 3.14 | 0.88 | 2.14 | 2.08 | 1.72 | |
| Difference | 0.09 | 0.09 | 0.05 | 0.10 | 0.38 | 0.38 | N/A | N/A | 0.26 | 0.67 | -0.09 | 0.37 | |
| IM U.S. Intermediate Duration (SA+CF) Median | 2.45 | 2.45 | 4.27 | 4.36 | 2.04 | 2.43 | 2.36 | 3.66 | 0.96 | 2.55 | 2.39 | 2.08 | |
| Rank | 56 | 56 | 50 | 55 | 51 | 41 | N/A | N/A | 37 | 30 | 77 | 47 | |
| Brandywine Gbl Opp FI (CF) | 3.29 | 3.29 | 1.32 | -5.31 | 2.73 | N/A | N/A | N/A | -4.71 | 13.33 | 5.69 | 1.59 | 11/01/2014 |
| FTSE Wrld Gov't Bond Index | 1.74 | 1.74 | 1.85 | -1.57 | 0.95 | 0.59 | 0.52 | 2.20 | -0.84 | 7.49 | 1.60 | 1.09 | |
| Difference | 1.55 | 1.55 | -0.53 | -3.74 | 1.78 | N/A | N/A | N/A | -3.87 | 5.84 | 4.09 | 0.50 | |
| IM Global Fixed Income (SA+CF) Median | 3.84 | 3.84 | 3.16 | 1.89 | 3.78 | 2.53 | 3.34 | 5.14 | -1.86 | 7.62 | 5.77 | 2.66 | |
| Rank | 62 | 62 | 83 | 94 | 71 | N/A | N/A | N/A | 89 | 4 | 53 | 74 | |
| Payden:Low Dur;Inv (PYSBX) | 1.56 | 1.56 | 2.82 | 3.10 | 2.10 | 1.77 | 2.04 | 3.16 | 1.48 | 1.93 | 2.26 | 3.92 | 04/01/2002 |
| Bloomberg US Trsy 1-3 Yr Index | 0.99 | 0.99 | 2.51 | 2.73 | 0.98 | 0.98 | 0.84 | 1.04 | 1.56 | 0.42 | 0.86 | 2.26 | |
| Difference | 0.57 | 0.57 | 0.31 | 0.37 | 1.12 | 0.79 | 1.20 | 2.12 | -0.08 | 1.51 | 1.40 | 1.66 | |
| IM U.S. Short Duration Fixed Income (SA+CF) Median | 1.46 | 1.46 | 2.92 | 3.30 | 1.70 | 1.65 | 1.60 | 2.38 | 1.68 | 1.51 | 1.61 | 2.97 | |
| Rank | 33 | 33 | 59 | 72 | 25 | 37 | 22 | 20 | 82 | 25 | 25 | 3 | |
| AG Direct Lending Fund III, L.P. | 0.00 | 0.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 2.40 | 09/01/2018 |
| CS Lvg'd Loan Index | 0.00 | 0.00 | 1.93 | 2.73 | 5.66 | 3.71 | 4.54 | 7.89 | 4.36 | 4.25 | 9.88 | 0.68 | |
| Difference | 0.00 | 0.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1.72 | |
| IM U.S. Intermediate Duration Fixed Income (MF) Median | 2.08 | 2.08 | 3.83 | 4.09 | 2.08 | 2.36 | 2.43 | 3.49 | 1.32 | 2.54 | 2.61 | 3.23 | |
| Rank | 100 | 100 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 90 | |
| Schroders Securitized Credit (SA) | 1.50 | 1.50 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1.37 | 12/01/2018 |
| 3 Month LIBOR Index (USD)+1.75% | 1.16 | 1.16 | 3.21 | 4.27 | 3.25 | 2.76 | 2.57 | 2.47 | 3.86 | 2.88 | 2.42 | 1.53 | |
| Difference | 0.34 | 0.34 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -0.16 | |
| IM Global Fixed Income (MF) Median | 3.43 | 3.43 | 3.62 | 1.03 | 3.43 | 2.37 | 3.00 | 5.00 | -0.87 | 8.20 | 4.11 | 4.58 | |
| Rank | 98 | 98 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 100 | |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|---------------------------------|-------|-------|-------|-----------|------------|------------|------------|-------------|-------|------|------|-----------------|-------------------|
| ND Land - PTF Cash (SA) | 0.56 | 0.56 | 1.58 | 1.99 | N/A | N/A | N/A | N/A | 1.71 | N/A | N/A | 1.68 | 07/01/2017 |
| ICE BofAML 3 Mo US T-Bill Index | 0.60 | 0.60 | 1.66 | 2.12 | 1.19 | 0.74 | 0.56 | 0.43 | 1.87 | 0.86 | 0.33 | 1.73 | |
| Difference | -0.04 | -0.04 | -0.08 | -0.13 | N/A | N/A | N/A | N/A | -0.16 | N/A | N/A | -0.05 | |
| FLP (Loans) | 1.23 | 1.23 | 4.22 | 5.82 | 6.06 | 6.03 | 5.93 | 6.10 | 6.15 | 6.16 | 6.12 | 7.22 | 08/01/1995 |
| ECLP (Loans) | 1.06 | 1.06 | 3.34 | 4.51 | 4.51 | 4.74 | 4.89 | N/A | 4.58 | 4.25 | 4.89 | 5.07 | 11/01/2010 |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-----------------|-------------------|
| Absolute Return | | | | | | | | | | | | | |
| GMO:Bchmk-Fr All;IV (GBMBX) | 5.68 | 5.68 | 2.10 | -0.05 | 6.19 | N/A | N/A | N/A | -4.46 | 14.07 | 4.35 | 2.56 | 07/01/2014 |
| 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx | 8.14 | 8.14 | 2.46 | 1.64 | 7.04 | 4.40 | 5.62 | 8.54 | -6.00 | 17.09 | 5.69 | 3.78 | |
| Difference | -2.46 | -2.46 | -0.36 | -1.69 | -0.85 | N/A | N/A | N/A | 1.54 | -3.02 | -1.34 | -1.22 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 3.26 | 3.26 | -2.54 | -7.01 | -1.12 | N/A | N/A | N/A | -11.47 | 6.86 | -2.83 | -3.87 | |
| PIMCO:All Ast Ath;Inst (PAUIX) | | | | | | | | | | | | | |
| All Asset Custom Index (EqI Wtd) | 5.50 | 5.50 | 3.52 | 4.04 | 5.54 | 3.98 | 4.58 | 6.83 | -1.62 | 8.94 | 6.47 | 3.60 | |
| Difference | -1.56 | -1.56 | -2.38 | -5.88 | 0.98 | N/A | N/A | N/A | -3.60 | 4.15 | 8.33 | -2.53 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 1.52 | 1.52 | -3.50 | -8.80 | -0.79 | N/A | N/A | N/A | -12.23 | 5.88 | 7.62 | -5.36 | |
| Westwood Income Opportunity (SA) | | | | | | | | | | | | | |
| Westwood Custom Index | 7.81 | 7.81 | 5.03 | 5.98 | 6.92 | N/A | N/A | N/A | -3.64 | 11.83 | 6.47 | 4.56 | 07/01/2014 |
| Difference | -0.73 | -0.73 | -1.40 | -3.63 | 1.15 | N/A | N/A | N/A | -2.33 | 3.70 | 1.10 | -1.19 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 5.39 | 5.39 | 0.39 | -0.98 | -0.39 | N/A | N/A | N/A | -10.65 | 4.62 | -0.71 | -1.87 | |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|---------------|--------------|--------------|-----------------|-------------------|
| Diversified Inflation Strategies (DIS) | | | | | | | | | | | | | |
| NT Common TIPS Index (CF) | 3.25 | 3.25 | 1.94 | 2.71 | 1.79 | 2.00 | 1.27 | 3.57 | -1.25 | 3.14 | 4.82 | 4.03 | 06/01/2004 |
| Bloomberg US Trsy US TIPS Index | 3.19 | 3.19 | 1.92 | 2.70 | 1.70 | 1.94 | 1.21 | 3.41 | -1.26 | 3.01 | 4.68 | 3.93 | |
| Difference | 0.06 | 0.06 | 0.02 | 0.01 | 0.09 | 0.06 | 0.06 | 0.16 | 0.01 | 0.13 | 0.14 | 0.10 | |
| IM U.S. TIPS (SA+CF) Median | 3.20 | 3.20 | 1.97 | 2.73 | 1.77 | 1.95 | 1.25 | 3.49 | -1.22 | 3.10 | 4.66 | 3.99 | |
| Rank | 36 | 36 | 56 | 55 | 41 | 33 | 45 | 36 | 54 | 48 | 31 | 38 | |
| Gresham Commodities (SA) | | | | | | | | | | | | | |
| Bloomberg Cmdty Ex Energy Index (TR) | 2.34 | 2.34 | -3.53 | -7.61 | -0.34 | -6.03 | -5.88 | 0.40 | -10.95 | 5.36 | 7.77 | -3.06 | |
| Difference | 6.89 | 6.89 | -2.60 | 3.11 | 6.11 | N/A | N/A | N/A | -2.20 | 6.62 | 4.67 | 0.51 | |
| Gresham Custom Index | 7.83 | 7.83 | -6.49 | -6.58 | 2.76 | N/A | N/A | N/A | -14.04 | 5.89 | 12.56 | -3.90 | |
| Difference | 1.40 | 1.40 | 0.36 | 2.08 | 3.01 | N/A | N/A | N/A | 0.89 | 6.09 | -0.12 | 1.35 | |
| Harvest MLP (SA) | | | | | | | | | | | | | |
| S&P MLP Index (TR) | 20.92 | 20.92 | 1.91 | 15.95 | 8.46 | N/A | N/A | N/A | -12.98 | -4.81 | 20.10 | -2.78 | 07/01/2015 |
| S&P MLP Index (TR) | 18.75 | 18.75 | 3.84 | 17.50 | 8.84 | -3.86 | 1.74 | 11.01 | -11.67 | -5.58 | 21.95 | -4.13 | |
| Difference | 2.17 | 2.17 | -1.93 | -1.55 | -0.38 | N/A | N/A | N/A | -1.31 | 0.77 | -1.85 | 1.35 | |
| Van Eck NR Equities (SA) | | | | | | | | | | | | | |
| S&P Gbl Natural Res Sect Index (TR) | 12.39 | 12.39 | -5.24 | -0.09 | 13.42 | 1.83 | 1.53 | 4.86 | -12.57 | 22.66 | 32.28 | 5.97 | |
| Difference | 1.43 | 1.43 | -12.74 | -13.70 | -11.29 | N/A | N/A | N/A | -15.47 | -22.57 | 12.87 | -11.32 | |
| S&P N Amer Natural Res Index | 16.21 | 16.21 | -12.88 | -2.38 | 4.57 | -4.16 | -0.75 | 5.31 | -21.07 | 1.23 | 30.87 | -1.08 | |
| Difference | -2.39 | -2.39 | -5.10 | -11.41 | -2.44 | N/A | N/A | N/A | -6.97 | -1.14 | 14.28 | -4.27 | |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|--------------|--------------|--------------|--------------|--------------|------------|------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Real Estate | | | | | | | | | | | | | |
| Morgan Stanley Prime Property Fund (CF) | 1.57 | 1.57 | 6.14 | 8.32 | 9.56 | N/A | N/A | N/A | 9.05 | 9.86 | 10.43 | 10.29 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Gross) | 1.42 | 1.42 | 5.36 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 8.93 | |
| Difference | 0.15 | 0.15 | 0.78 | 0.80 | 1.59 | N/A | N/A | N/A | 0.70 | 2.24 | 1.66 | 1.36 | |
| UBS Trumbull Property Fund, L.P. (CF) | 0.69 | 0.69 | 3.88 | 5.72 | 6.34 | N/A | N/A | N/A | 6.98 | 6.30 | 7.21 | 7.42 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Gross) | 1.42 | 1.42 | 5.36 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 8.93 | |
| Difference | -0.73 | -0.73 | -1.48 | -1.80 | -1.63 | N/A | N/A | N/A | -1.37 | -1.32 | -1.56 | -1.51 | |
| Jamestown Premier Property Fund (CF) | -0.23 | -0.23 | 2.71 | 4.84 | 10.94 | N/A | N/A | N/A | 9.96 | 18.00 | 6.58 | 11.37 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Gross) | 1.42 | 1.42 | 5.36 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 8.93 | |
| Difference | -1.65 | -1.65 | -2.65 | -2.68 | 2.97 | N/A | N/A | N/A | 1.61 | 10.38 | -2.19 | 2.44 | |
| Prologis USLF (CF) | 3.06 | 3.06 | 10.73 | 17.26 | 19.87 | N/A | N/A | N/A | 18.22 | 24.39 | N/A | 19.87 | 04/01/2016 |
| NCREIF ODCE Index (AWA) (Gross) | 1.42 | 1.42 | 5.36 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 7.97 | |
| Difference | 1.64 | 1.64 | 5.37 | 9.74 | 11.90 | N/A | N/A | N/A | 9.87 | 16.77 | N/A | 11.90 | |
| JP Morgan US Real Estate Income and Growth, LP (CF) | 0.75 | 0.75 | 3.49 | 5.11 | N/A | N/A | N/A | N/A | 6.75 | 6.83 | N/A | 7.35 | 07/01/2016 |
| NCREIF ODCE Index (AWA) (Gross) | 1.42 | 1.42 | 5.36 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 7.90 | |
| Difference | -0.67 | -0.67 | -1.87 | -2.41 | N/A | N/A | N/A | N/A | -1.60 | -0.79 | N/A | -0.55 | |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|-------------------|
| Total Fund | 6.95 | 6.95 | 1.52 | 2.02 | 6.84 | 3.96 | 8.48 | -5.11 | 12.62 | 8.65 | 6.58 | 08/01/1995 |
| Target Allocation Index (Net) | 7.61 | 7.61 | 2.87 | 3.65 | 7.17 | 5.22 | N/A | -4.51 | 13.14 | 7.85 | N/A | |
| Difference | -0.66 | -0.66 | -1.35 | -1.63 | -0.33 | -1.26 | N/A | -0.60 | -0.52 | 0.80 | N/A | |
| Broad US Equity | 13.98 | 13.98 | 4.01 | 8.00 | 13.58 | 10.03 | N/A | -5.49 | 21.40 | 13.29 | 14.11 | 07/01/2009 |
| Russell 3000 Index | 14.04 | 14.04 | 4.70 | 8.77 | 13.49 | 10.36 | 16.00 | -5.24 | 21.13 | 12.74 | 14.60 | |
| Difference | -0.06 | -0.06 | -0.69 | -0.77 | 0.09 | -0.33 | N/A | -0.25 | 0.27 | 0.55 | -0.49 | |
| State Street Russell 1000 Index SL (CF) | 13.99 | 13.99 | 5.54 | 9.29 | N/A | N/A | N/A | -4.78 | N/A | N/A | 11.31 | 06/01/2017 |
| Russell 1000 Index | 14.00 | 14.00 | 5.54 | 9.30 | 13.52 | 10.63 | 16.05 | -4.78 | 21.69 | 12.05 | 11.32 | |
| Difference | -0.01 | -0.01 | 0.00 | -0.01 | N/A | N/A | N/A | 0.00 | N/A | N/A | -0.01 | |
| State Street Russell Mid Cap Index (SA) | 16.47 | 16.47 | 3.61 | 6.52 | N/A | N/A | N/A | -8.97 | N/A | N/A | 9.20 | 06/01/2017 |
| Russell Mid Cap Index | 16.54 | 16.54 | 3.55 | 6.47 | 11.82 | 8.81 | 16.88 | -9.06 | 18.52 | 13.80 | 9.18 | |
| Difference | -0.07 | -0.07 | 0.06 | 0.05 | N/A | N/A | N/A | 0.09 | N/A | N/A | 0.02 | |
| NT Small Cap Core (CF) | 11.77 | 11.77 | -5.39 | 0.65 | 14.11 | N/A | N/A | -7.63 | 21.82 | 18.20 | 7.08 | 07/01/2014 |
| Russell 2000 Index | 14.58 | 14.58 | -5.29 | 2.05 | 12.92 | 7.05 | 15.36 | -11.01 | 14.65 | 21.31 | 6.98 | |
| Difference | -2.81 | -2.81 | -0.10 | -1.40 | 1.19 | N/A | N/A | 3.38 | 7.17 | -3.11 | 0.10 | |
| NT Small/Smid Composite | 11.77 | 11.77 | -5.39 | 0.65 | 14.11 | 7.04 | 14.96 | -7.63 | 21.82 | 18.20 | 9.66 | 03/01/1996 |
| Small/Smid Blended Index | 14.58 | 14.58 | -5.29 | 2.05 | 12.92 | 7.48 | 16.06 | -11.01 | 14.65 | 21.31 | 9.65 | |
| Difference | -2.81 | -2.81 | -0.10 | -1.40 | 1.19 | -0.44 | -1.10 | 3.38 | 7.17 | -3.11 | 0.01 | |

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 06/30.

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|--------------|--------------|---------------|---------------|--------------|-------------|-------------|---------------|--------------|--------------|-----------------|-------------------|
| Broad International Equity | 10.74 | 10.74 | -3.32 | -6.35 | 7.09 | 1.65 | N/A | -16.49 | 26.51 | 4.82 | 6.11 | 07/01/2009 |
| MSCI ACW Ex US Index (USD) (Net) | 10.31 | 10.31 | -1.64 | -4.22 | 8.09 | 2.57 | 8.85 | -14.20 | 27.19 | 4.50 | 6.39 | |
| Difference | 0.43 | 0.43 | -1.68 | -2.13 | -1.00 | -0.92 | N/A | -2.29 | -0.68 | 0.32 | -0.28 | |
| State Street World Ex US Index (CF) | 10.43 | 10.43 | -2.46 | -3.19 | 7.23 | N/A | N/A | -14.15 | 24.15 | 2.66 | 1.28 | 07/01/2014 |
| MSCI Wrld Ex US Index (USD) (Net) | 10.45 | 10.45 | -2.41 | -3.14 | 7.29 | 2.20 | 8.82 | -14.09 | 24.21 | 2.75 | 1.35 | |
| Difference | -0.02 | -0.02 | -0.05 | -0.05 | -0.06 | N/A | N/A | -0.06 | -0.06 | -0.09 | -0.07 | |
| DFA Emg Mkts Core Eq;I (DFCEX) | 8.61 | 8.61 | 0.44 | -9.48 | 9.60 | N/A | N/A | -15.25 | 36.55 | 12.35 | 2.21 | 07/01/2014 |
| MSCI Emg Mkts Index (USD) (Net) | 9.93 | 9.93 | 0.60 | -7.41 | 10.68 | 3.68 | 8.95 | -14.58 | 37.28 | 11.19 | 2.49 | |
| Difference | -1.32 | -1.32 | -0.16 | -2.07 | -1.08 | N/A | N/A | -0.67 | -0.73 | 1.16 | -0.28 | |
| Harding Loevner:IEM;IZ (HLEZX) | 14.60 | 14.60 | -2.50 | -9.90 | 10.51 | N/A | N/A | -18.53 | 35.79 | 13.44 | 2.83 | 07/01/2014 |
| MSCI Emg Mkts Index (USD) (Net) | 9.93 | 9.93 | 0.60 | -7.41 | 10.68 | 3.68 | 8.95 | -14.58 | 37.28 | 11.19 | 2.49 | |
| Difference | 4.67 | 4.67 | -3.10 | -2.49 | -0.17 | N/A | N/A | -3.95 | -1.49 | 2.25 | 0.34 | |
| QMA International Small Cap Equity (CF) | 10.77 | 10.77 | -10.63 | -14.69 | N/A | N/A | N/A | N/A | N/A | N/A | -17.53 | 02/01/2018 |
| MSCI EAFE Sm Cap Index (USD) (Gross) | 10.76 | 10.76 | -7.74 | -9.01 | 7.90 | 4.84 | 13.14 | -17.58 | 33.50 | 2.55 | -11.39 | |
| Difference | 0.01 | 0.01 | -2.89 | -5.68 | N/A | N/A | N/A | N/A | N/A | N/A | -6.14 | |

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 06/30.

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|-------------|-------------|-------------|--------------|-------------|-------------|-------------|--------------|--------------|-------------|-----------------|-------------------|
| Fixed Income | 2.45 | 2.45 | 3.46 | 2.47 | 2.58 | 2.74 | 4.65 | -0.22 | 4.79 | 3.91 | 5.55 | 08/01/1995 |
| Global Fixed Income Custom Index | 3.24 | 3.24 | 4.42 | 3.46 | 2.51 | 2.58 | 4.13 | -0.52 | 4.98 | 3.66 | N/A | |
| Difference | -0.79 | -0.79 | -0.96 | -0.99 | 0.07 | 0.16 | 0.52 | 0.30 | -0.19 | 0.25 | N/A | |
| Bloomberg US Agg Bond Index | 2.94 | 2.94 | 4.65 | 4.48 | 2.03 | 2.74 | 3.77 | 0.01 | 3.54 | 2.65 | 5.17 | |
| Difference | -0.49 | -0.49 | -1.19 | -2.01 | 0.55 | 0.00 | 0.88 | -0.23 | 1.25 | 1.26 | 0.38 | |
| Payden & Rygel Long Term (SA) | 3.21 | 3.21 | 4.67 | 4.55 | 3.20 | 3.31 | 5.14 | 0.16 | 4.99 | 3.83 | 5.80 | 08/01/1995 |
| Bloomberg US Agg Bond Index | 2.94 | 2.94 | 4.65 | 4.48 | 2.03 | 2.74 | 3.77 | 0.01 | 3.54 | 2.65 | 5.17 | |
| Difference | 0.27 | 0.27 | 0.02 | 0.07 | 1.17 | 0.57 | 1.37 | 0.15 | 1.45 | 1.18 | 0.63 | |
| JP Morgan FI Intermediate Bond (SA) | 2.41 | 2.41 | 4.25 | 4.28 | 1.95 | 2.41 | N/A | 1.06 | 2.71 | 1.88 | 1.99 | 08/01/2012 |
| Bloomberg US Gov't Crdt Int Trm Bond Index | 2.32 | 2.32 | 4.23 | 4.24 | 1.66 | 2.12 | 3.14 | 0.88 | 2.14 | 2.08 | 1.72 | |
| Difference | 0.09 | 0.09 | 0.02 | 0.04 | 0.29 | 0.29 | N/A | 0.18 | 0.57 | -0.20 | 0.27 | |
| Brandywine Gbl Opp FI (CF) | 3.19 | 3.19 | 1.02 | -5.76 | 2.30 | N/A | N/A | -5.16 | 12.91 | 5.28 | 1.21 | 11/01/2014 |
| FTSE Wrld Gov't Bond Index | 1.74 | 1.74 | 1.85 | -1.57 | 0.95 | 0.59 | 2.20 | -0.84 | 7.49 | 1.60 | 1.09 | |
| Difference | 1.45 | 1.45 | -0.83 | -4.19 | 1.35 | N/A | N/A | -4.32 | 5.42 | 3.68 | 0.12 | |
| Payden:Low Dur;Inv (PYSBX) | 1.45 | 1.45 | 2.51 | 2.68 | 1.64 | 1.30 | 2.66 | 1.05 | 1.48 | 1.74 | 3.41 | 04/01/2002 |
| Bloomberg US Trsy 1-3 Yr Index | 0.99 | 0.99 | 2.51 | 2.73 | 0.98 | 0.98 | 1.04 | 1.56 | 0.42 | 0.86 | 2.26 | |
| Difference | 0.46 | 0.46 | 0.00 | -0.05 | 0.66 | 0.32 | 1.62 | -0.51 | 1.06 | 0.88 | 1.15 | |
| AG Direct Lending Fund III, L.P. | 0.00 | 0.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 2.35 | 09/01/2018 |
| CS Lvg'd Loan Index | 0.00 | 0.00 | 1.93 | 2.73 | 5.66 | 3.71 | 7.89 | 4.36 | 4.25 | 9.88 | 0.68 | |
| Difference | 0.00 | 0.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1.67 | |
| Schroders Securitized Credit (SA) | 1.42 | 1.42 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1.21 | 12/01/2018 |
| 3 Month LIBOR Index (USD)+1.75% | 1.16 | 1.16 | 3.21 | 4.27 | 3.25 | 2.76 | 2.47 | 3.86 | 2.88 | 2.42 | 1.53 | |
| Difference | 0.26 | 0.26 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | -0.32 | |
| ND Land - PTF Cash (SA) | 0.56 | 0.56 | 1.58 | 1.99 | N/A | N/A | N/A | 1.71 | N/A | N/A | 1.68 | 07/01/2017 |
| ICE BofAML 3 Mo US T-Bill Index | 0.60 | 0.60 | 1.66 | 2.12 | 1.19 | 0.74 | 0.43 | 1.87 | 0.86 | 0.33 | 1.73 | |
| Difference | -0.04 | -0.04 | -0.08 | -0.13 | N/A | N/A | N/A | -0.16 | N/A | N/A | -0.05 | |
| FLP (Loans) | 1.23 | 1.23 | 4.22 | 5.82 | 6.06 | 6.03 | 6.10 | 6.15 | 6.16 | 6.12 | 7.22 | 08/01/1995 |
| ECLP (Loans) | 1.06 | 1.06 | 3.34 | 4.51 | 4.51 | 4.74 | N/A | 4.58 | 4.25 | 4.89 | 5.07 | 11/01/2010 |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|---|-------------|-------------|-------------|--------------|-------------|------------|-------------|--------------|--------------|--------------|-----------------|-------------------|
| Absolute Return | 5.59 | 5.59 | 2.16 | 0.54 | 5.73 | N/A | N/A | -5.16 | 12.11 | 7.61 | 1.94 | 07/01/2014 |
| Absolute Return Custom Index | 8.53 | 8.53 | 2.79 | 3.17 | 7.22 | 5.05 | 9.06 | -5.93 | 15.39 | 6.22 | 4.51 | |
| Difference | -2.94 | -2.94 | -0.63 | -2.63 | -1.49 | N/A | N/A | 0.77 | -3.28 | 1.39 | -2.57 | |
| GMO:Bchmk-Fr All;IV (GBMBX) | 5.47 | 5.47 | 1.47 | -0.88 | 5.28 | N/A | N/A | -5.27 | 13.07 | 3.45 | 1.69 | 07/01/2014 |
| 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx | 8.14 | 8.14 | 2.46 | 1.64 | 7.04 | 4.40 | 8.54 | -6.00 | 17.09 | 5.69 | 3.78 | |
| Difference | -2.67 | -2.67 | -0.99 | -2.52 | -1.76 | N/A | N/A | 0.73 | -4.02 | -2.24 | -2.09 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 3.05 | 3.05 | -3.17 | -7.84 | -2.03 | N/A | N/A | -12.28 | 5.86 | -3.73 | -4.74 | |
| PIMCO:All Ast Ath;Inst (PAUIX) | 3.70 | 3.70 | 0.41 | -2.78 | 5.52 | N/A | N/A | -6.14 | 12.04 | 13.73 | 0.12 | 07/01/2014 |
| All Asset Custom Index (EqI Wtd) | 5.50 | 5.50 | 3.52 | 4.04 | 5.54 | 3.98 | 6.83 | -1.62 | 8.94 | 6.47 | 3.60 | |
| Difference | -1.80 | -1.80 | -3.11 | -6.82 | -0.02 | N/A | N/A | -4.52 | 3.10 | 7.26 | -3.48 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 1.28 | 1.28 | -4.23 | -9.74 | -1.79 | N/A | N/A | -13.15 | 4.83 | 6.55 | -6.31 | |
| Westwood Income Opportunity (SA) | 7.67 | 7.67 | 4.61 | 5.42 | 6.35 | N/A | N/A | -4.16 | 11.23 | 5.90 | 3.99 | 07/01/2014 |
| Westwood Custom Index | 8.54 | 8.54 | 6.43 | 9.61 | 5.77 | 6.23 | 9.67 | -1.31 | 8.13 | 5.37 | 5.75 | |
| Difference | -0.87 | -0.87 | -1.82 | -4.19 | 0.58 | N/A | N/A | -2.85 | 3.10 | 0.53 | -1.76 | |
| Consumer Price Index+5% | 2.42 | 2.42 | 4.64 | 6.96 | 7.31 | 6.55 | 6.89 | 7.01 | 7.21 | 7.18 | 6.43 | |
| Difference | 5.25 | 5.25 | -0.03 | -1.54 | -0.96 | N/A | N/A | -11.17 | 4.02 | -1.28 | -2.44 | |

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

As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|---|--------------|--------------|---------------|---------------|-------------|--------------|-------------|---------------|--------------|--------------|-----------------|-------------------|
| Diversified Inflation Strategies (DIS) | 12.07 | 12.07 | -4.93 | 0.41 | 4.80 | -0.14 | N/A | -14.20 | 2.45 | 18.91 | -0.14 | 04/01/2014 |
| DIS Custom Index | 9.34 | 9.34 | -0.25 | 3.55 | 5.84 | 0.95 | 7.32 | -9.13 | 4.80 | 16.53 | 0.95 | |
| Difference | 2.73 | 2.73 | -4.68 | -3.14 | -1.04 | -1.09 | N/A | -5.07 | -2.35 | 2.38 | -1.09 | |
| NT Common TIPS Index (CF) | 3.25 | 3.25 | 1.93 | 2.69 | 1.75 | 1.96 | 3.52 | -1.29 | 3.09 | 4.77 | 3.98 | 06/01/2004 |
| Bloomberg US Trsy US TIPS Index | 3.19 | 3.19 | 1.92 | 2.70 | 1.70 | 1.94 | 3.41 | -1.26 | 3.01 | 4.68 | 3.93 | |
| Difference | 0.06 | 0.06 | 0.01 | -0.01 | 0.05 | 0.02 | 0.11 | -0.03 | 0.08 | 0.09 | 0.05 | |
| Gresham Commodities (SA) | 9.23 | 9.23 | -6.41 | -4.93 | 5.19 | N/A | N/A | -13.67 | 11.31 | 11.76 | -3.09 | 07/01/2015 |
| Bloomberg Cmdty Ex Energy Index (TR) | 2.34 | 2.34 | -3.53 | -7.61 | -0.34 | -6.03 | 0.40 | -10.95 | 5.36 | 7.77 | -3.06 | |
| Difference | 6.89 | 6.89 | -2.88 | 2.68 | 5.53 | N/A | N/A | -2.72 | 5.95 | 3.99 | -0.03 | |
| Gresham Custom Index | 7.83 | 7.83 | -6.49 | -6.58 | 2.76 | N/A | N/A | -14.04 | 5.89 | 12.56 | -3.90 | |
| Difference | 1.40 | 1.40 | 0.08 | 1.65 | 2.43 | N/A | N/A | 0.37 | 5.42 | -0.80 | 0.81 | |
| Harvest MLP (SA) | 20.70 | 20.70 | 1.34 | 15.09 | 7.67 | N/A | N/A | -13.63 | -5.50 | 19.24 | -3.50 | 07/01/2015 |
| S&P MLP Index (TR) | 18.75 | 18.75 | 3.84 | 17.50 | 8.84 | -3.86 | 11.01 | -11.67 | -5.58 | 21.95 | -4.13 | |
| Difference | 1.95 | 1.95 | -2.50 | -2.41 | -1.17 | N/A | N/A | -1.96 | 0.08 | -2.71 | 0.63 | |
| Van Eck NR Equities (SA) | 13.65 | 13.65 | -18.39 | -14.35 | 1.47 | N/A | N/A | -28.52 | -0.55 | 44.23 | -5.98 | 07/01/2015 |
| S&P Gbl Natural Res Sect Index (TR) | 12.39 | 12.39 | -5.24 | -0.09 | 13.42 | 1.83 | 4.86 | -12.57 | 22.66 | 32.28 | 5.97 | |
| Difference | 1.26 | 1.26 | -13.15 | -14.26 | -11.95 | N/A | N/A | -15.95 | -23.21 | 11.95 | -11.95 | |
| S&P N Amer Natural Res Index | 16.21 | 16.21 | -12.88 | -2.38 | 4.57 | -4.16 | 5.31 | -21.07 | 1.23 | 30.87 | -1.08 | |
| Difference | -2.56 | -2.56 | -5.51 | -11.97 | -3.10 | N/A | N/A | -7.45 | -1.78 | 13.36 | -4.90 | |

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

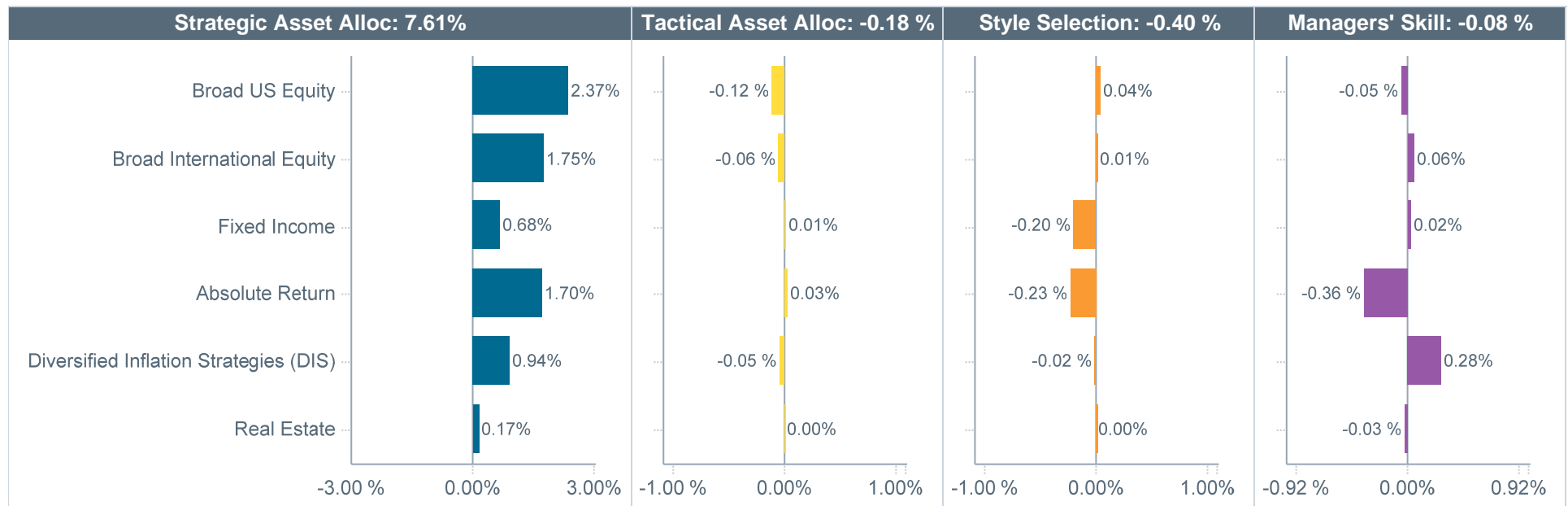
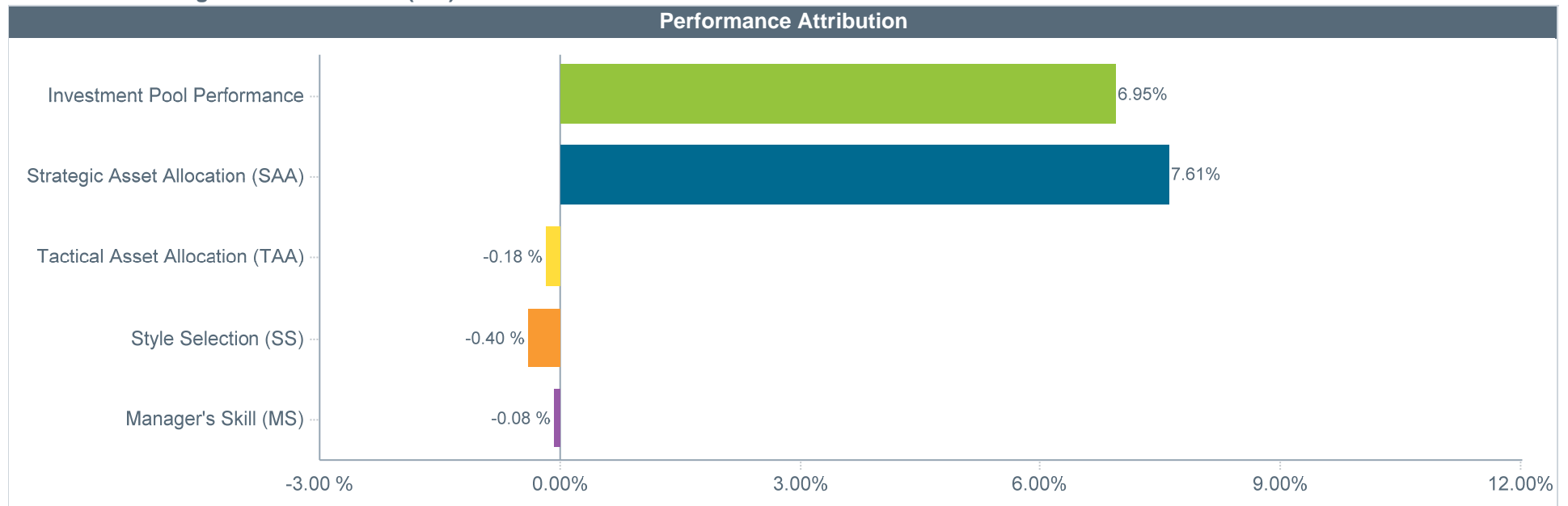
As of March 31, 2019

| | QTD | CYTD | FYTD | 1 Year | 3 Years | 5 Years | 10 Years | 2018 | 2017 | 2016 | Since Incep. | Inception Date |
|--|--------------|--------------|-------------|--------------|--------------|------------|-------------|--------------|--------------|-------------|-----------------|-------------------|
| Real Estate | 1.04 | 1.04 | 4.68 | 6.95 | 8.55 | N/A | N/A | 8.27 | 9.54 | 8.48 | 9.09 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.20 | 1.20 | 4.65 | 6.55 | 7.00 | 9.18 | 7.73 | 7.36 | 6.66 | 7.79 | 7.95 | |
| Difference | -0.16 | -0.16 | 0.03 | 0.40 | 1.55 | N/A | N/A | 0.91 | 2.88 | 0.69 | 1.14 | |
| Morgan Stanley Prime Property Fund (CF) | 1.27 | 1.27 | 5.28 | 7.19 | 8.43 | N/A | N/A | 7.96 | 8.75 | 9.23 | 9.11 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.20 | 1.20 | 4.65 | 6.55 | 7.00 | 9.18 | 7.73 | 7.36 | 6.66 | 7.79 | 7.95 | |
| Difference | 0.07 | 0.07 | 0.63 | 0.64 | 1.43 | N/A | N/A | 0.60 | 2.09 | 1.44 | 1.16 | |
| UBS Trumbull Property Fund, L.P. (CF) | 0.50 | 0.50 | 3.30 | 4.94 | 5.45 | N/A | N/A | 6.17 | 5.42 | 6.14 | 6.48 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.20 | 1.20 | 4.65 | 6.55 | 7.00 | 9.18 | 7.73 | 7.36 | 6.66 | 7.79 | 7.95 | |
| Difference | -0.70 | -0.70 | -1.35 | -1.61 | -1.55 | N/A | N/A | -1.19 | -1.24 | -1.65 | -1.47 | |
| Jamestown Premier Property Fund (CF) | -0.38 | -0.38 | 2.24 | 4.06 | 8.57 | N/A | N/A | 7.75 | 14.22 | 5.26 | 8.97 | 07/01/2015 |
| NCREIF ODCE Index (AWA) (Net) | 1.20 | 1.20 | 4.65 | 6.55 | 7.00 | 9.18 | 7.73 | 7.36 | 6.66 | 7.79 | 7.95 | |
| Difference | -1.58 | -1.58 | -2.41 | -2.49 | 1.57 | N/A | N/A | 0.39 | 7.56 | -2.53 | 1.02 | |
| Prologis USLF (CF) | 2.94 | 2.94 | 9.69 | 15.25 | 17.11 | N/A | N/A | 15.84 | 20.37 | N/A | 17.11 | 04/01/2016 |
| NCREIF ODCE Index (AWA) (Net) | 1.20 | 1.20 | 4.65 | 6.55 | 7.00 | 9.18 | 7.73 | 7.36 | 6.66 | 7.79 | 7.00 | |
| Difference | 1.74 | 1.74 | 5.04 | 8.70 | 10.11 | N/A | N/A | 8.48 | 13.71 | N/A | 10.11 | |
| JP Morgan US Real Estate Income and Growth, LP (CF) | 0.51 | 0.51 | 2.75 | 4.11 | N/A | N/A | N/A | 5.73 | 5.82 | N/A | 6.31 | 07/01/2016 |
| NCREIF ODCE Index (AWA) (Net) | 1.20 | 1.20 | 4.65 | 6.55 | 7.00 | 9.18 | 7.73 | 7.36 | 6.66 | 7.79 | 6.93 | |
| Difference | -0.69 | -0.69 | -1.90 | -2.44 | N/A | N/A | N/A | -1.63 | -0.84 | N/A | -0.62 | |

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North Dakota Board of University and School Lands
Total Fund Attribution - IDP
Total Fund vs. Target Allocation Index (Net)

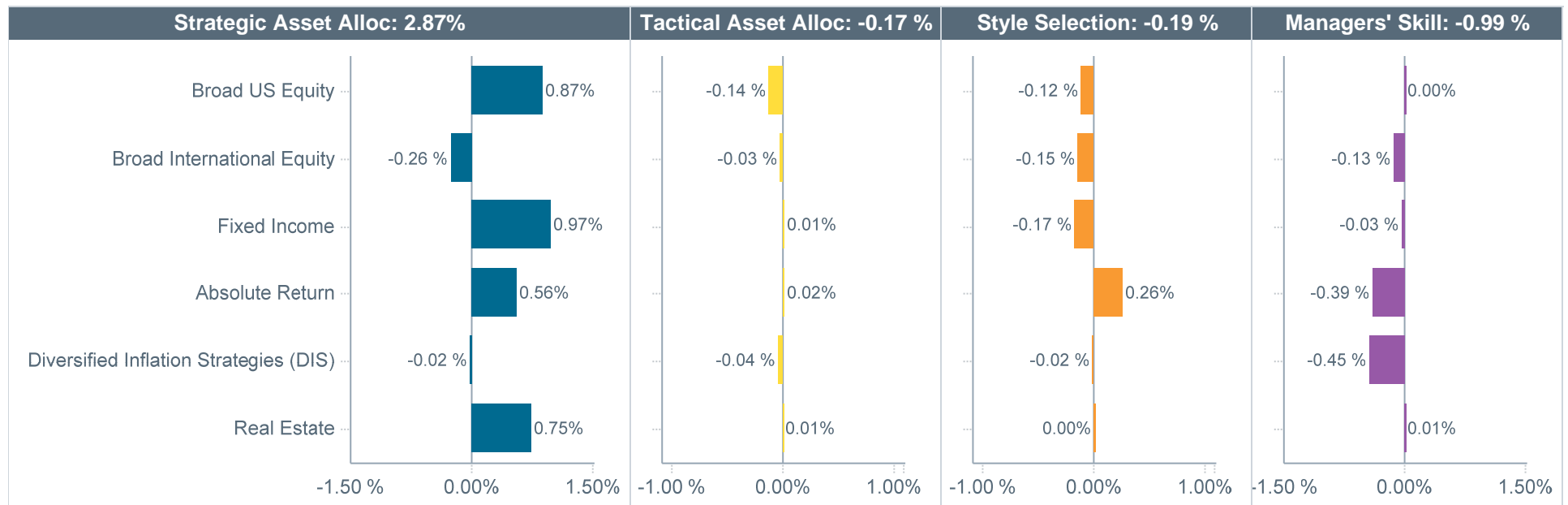
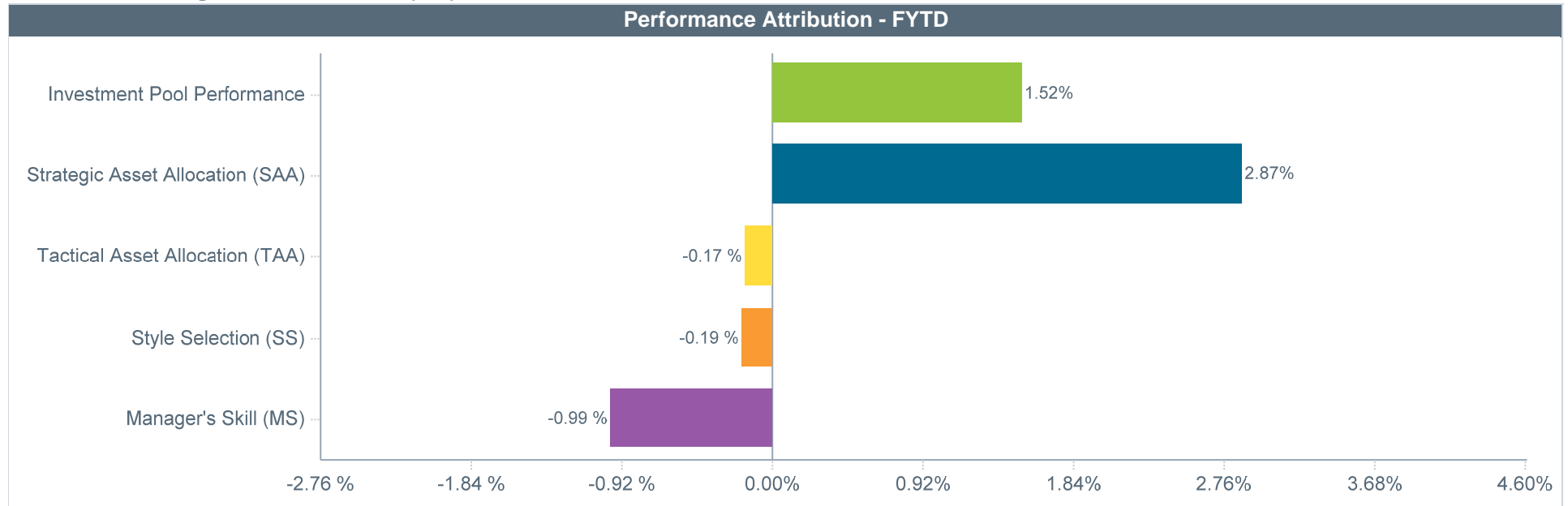
Quarter To Date Ending March 31, 2019



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

North Dakota Board of University and School Lands
Total Fund Attribution - IDP
Total Fund vs. Target Allocation Index (Net)

Fiscal Year To Date as of March 31, 2019



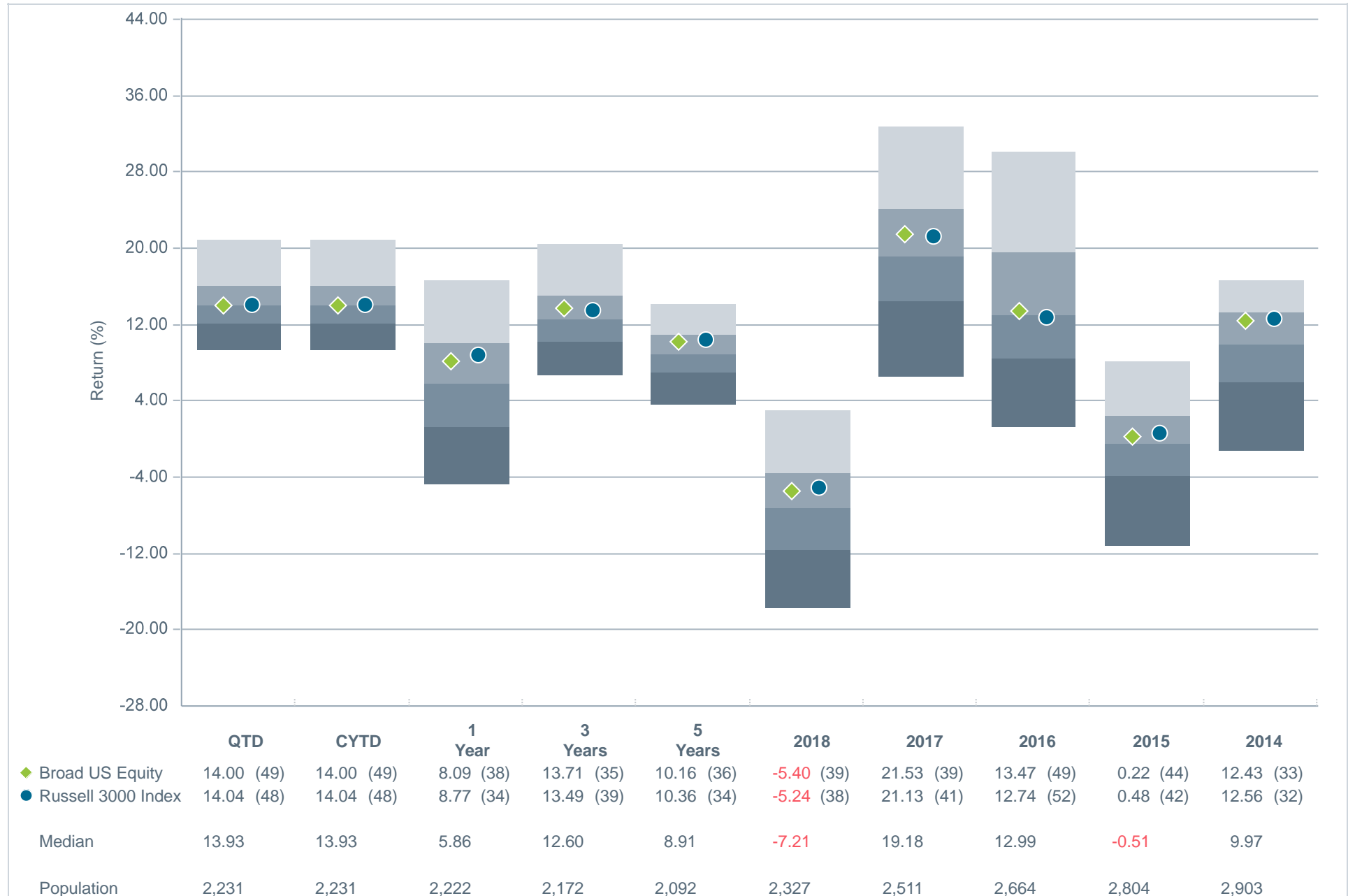
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation. Fiscal year ends 06/30.

Composite Profiles

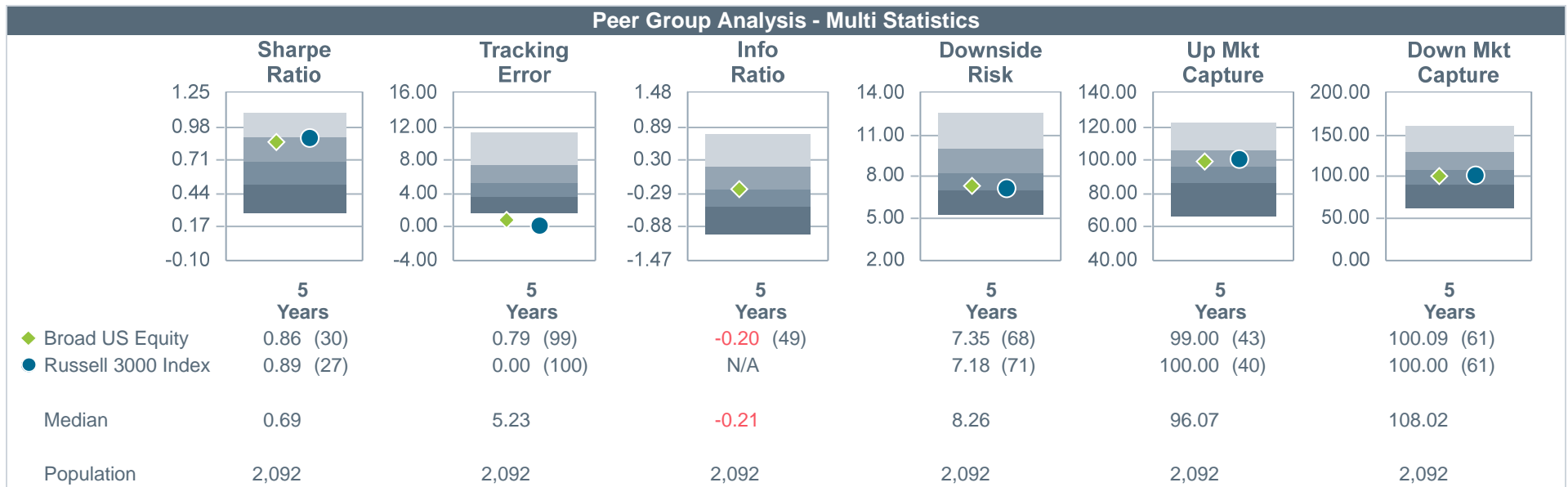
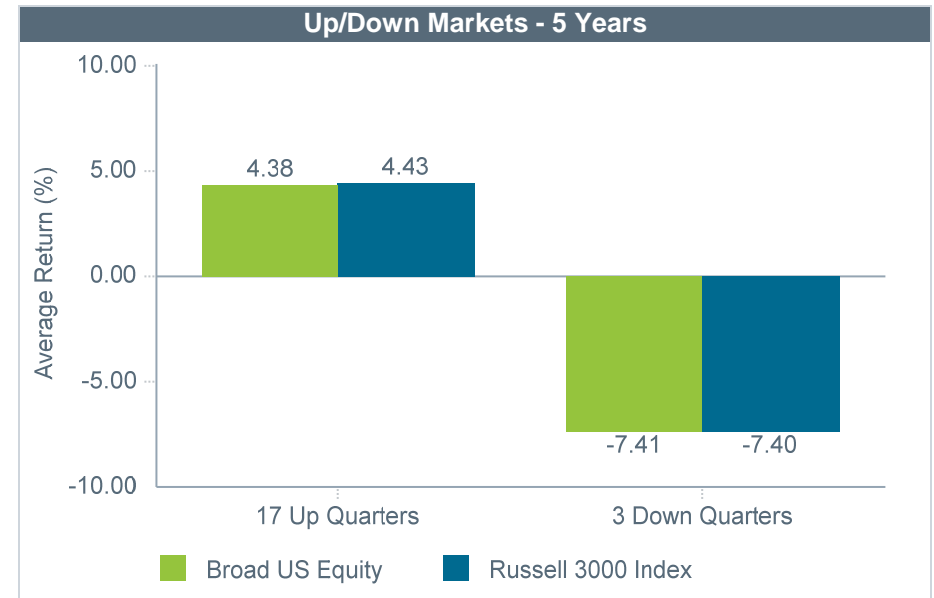
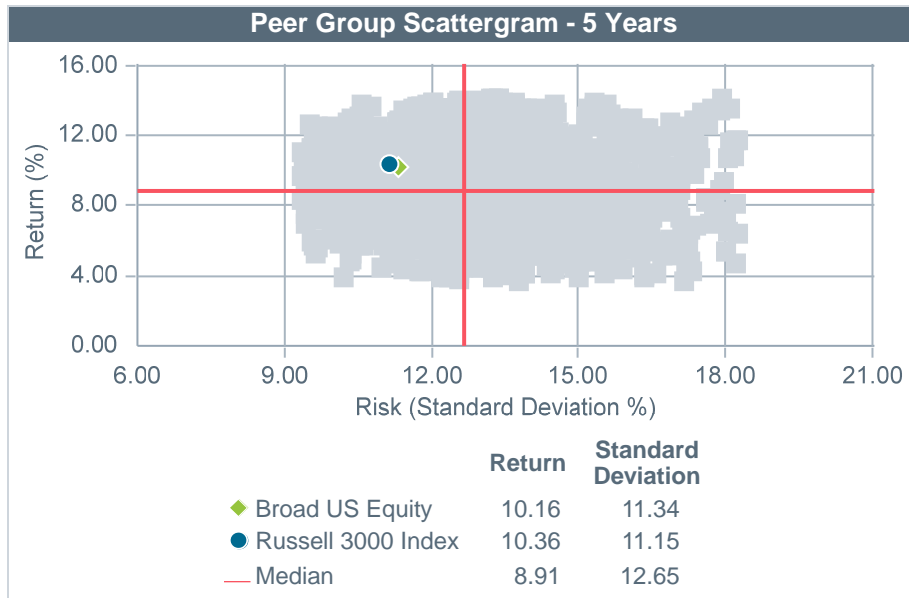


North Dakota Board of University and School Lands
IM U.S. Equity (SA+CF)
Peer Group Analysis

As of March 31, 2019



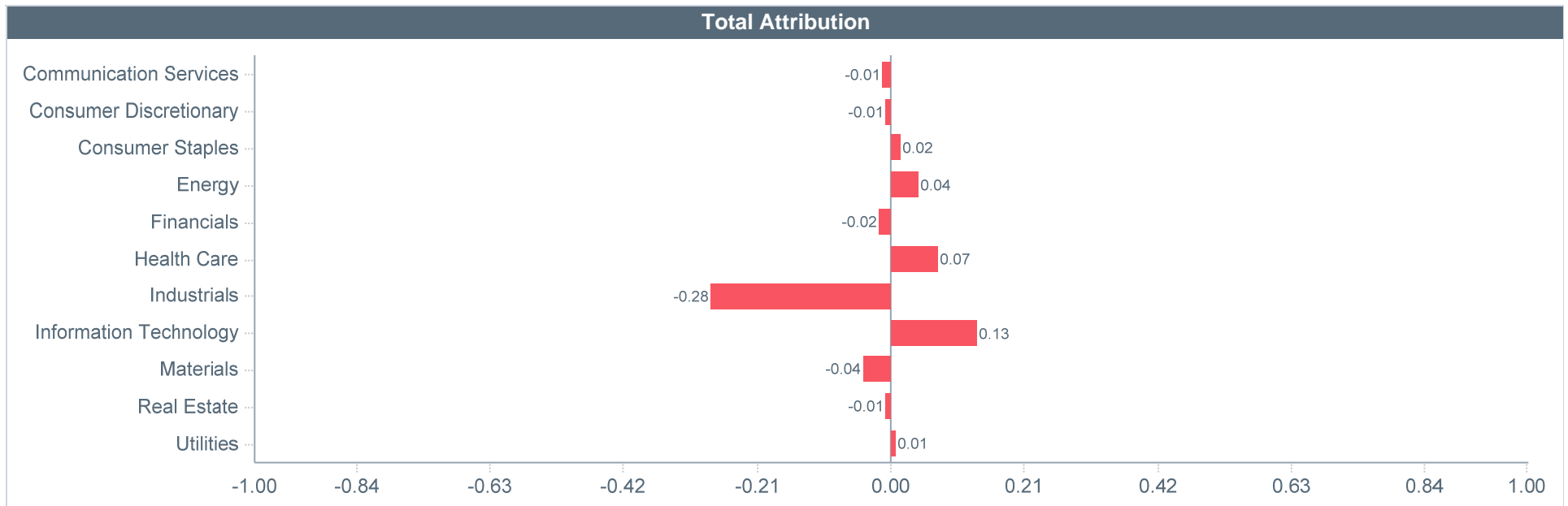
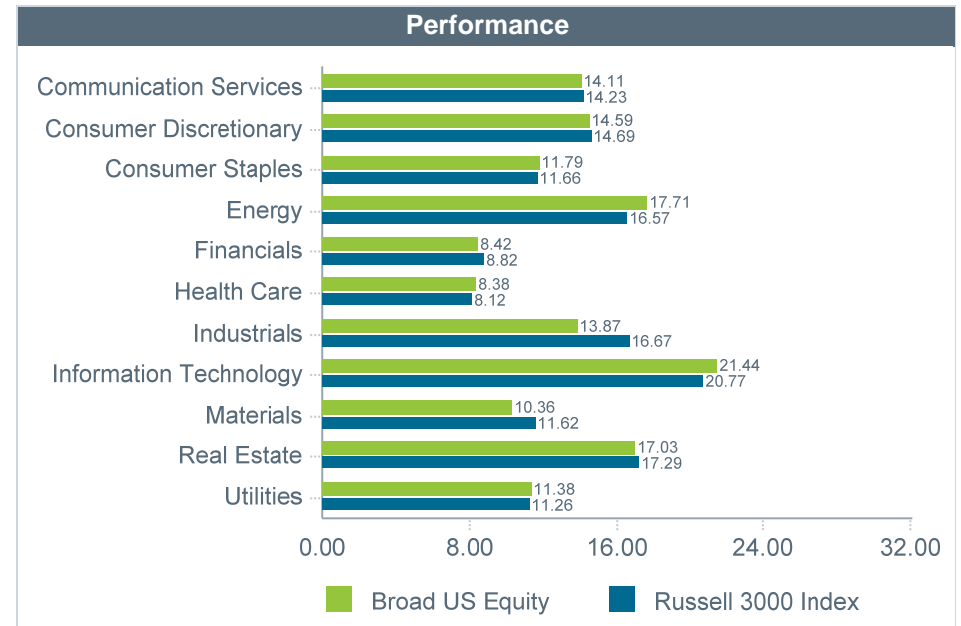
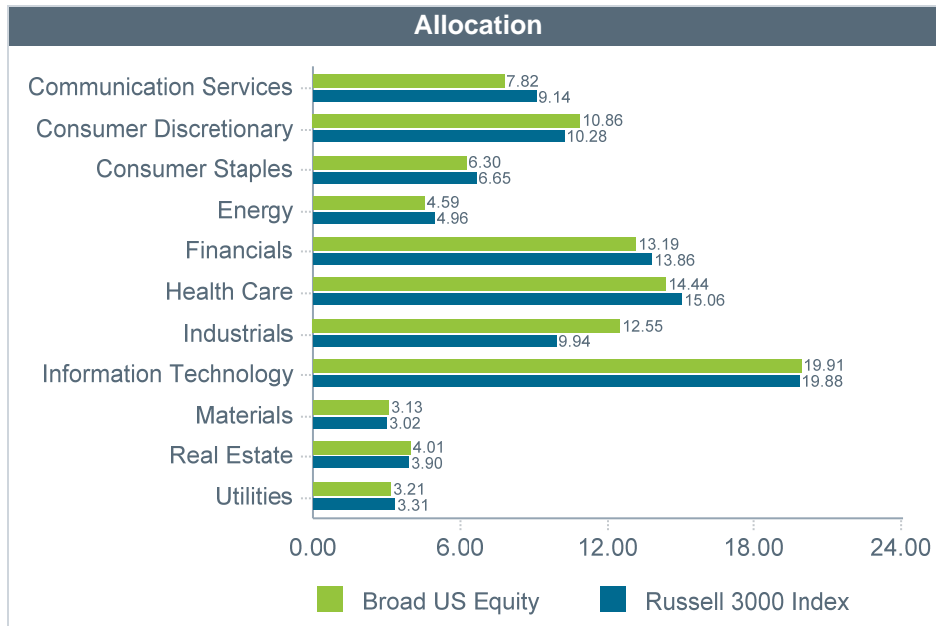
Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year ends 06/30.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

North Dakota Board of University and School Lands
Broad US Equity vs. Russell 3000 Index
Buy and Hold Sector Attribution Graph

1 Quarter Ending March 31, 2019

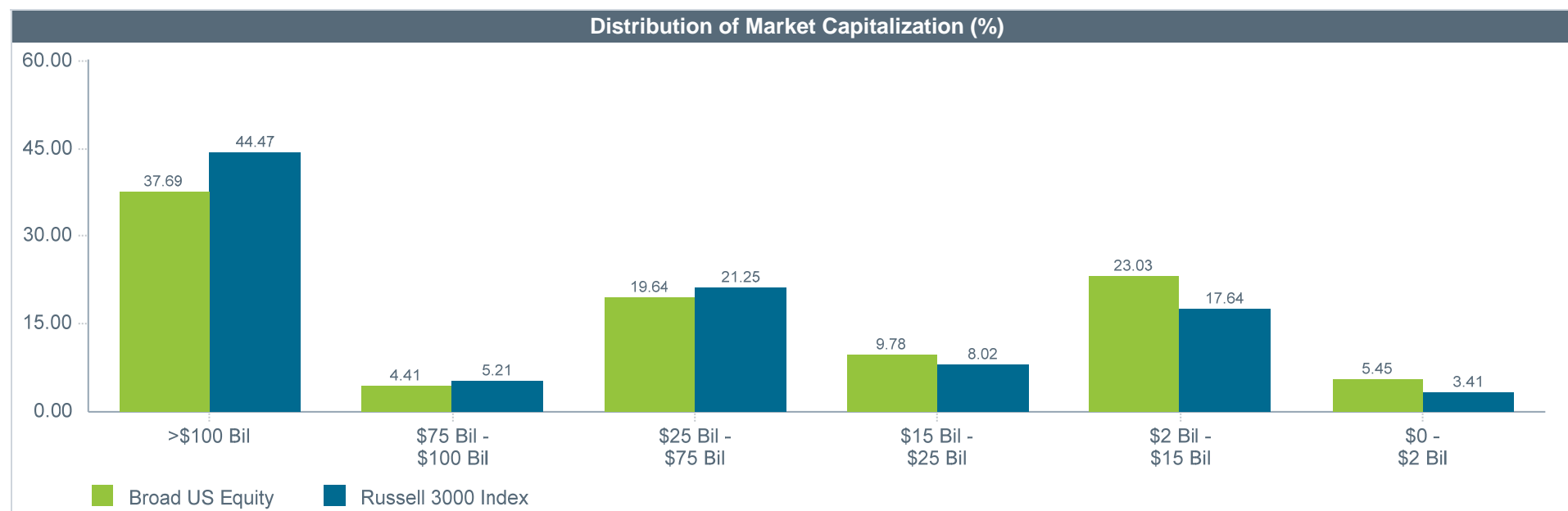


North Dakota Board of University and School Lands
Broad US Equity vs. Russell 3000 Index
Portfolio Characteristics

As of March 31, 2019

| Top Ten Equity Holdings | | | | |
|-------------------------|----------------------|----------------------|-------------------|----------------------|
| | Portfolio Weight (%) | Benchmark Weight (%) | Active Weight (%) | Quarterly Return (%) |
| Apple Inc | 2.69 | 3.18 | -0.49 | 20.94 |
| Microsoft Corp | 2.66 | 3.15 | -0.49 | 16.62 |
| Amazon.com Inc | 2.18 | 2.58 | -0.40 | 18.56 |
| Facebook Inc | 1.18 | 1.40 | -0.22 | 27.16 |
| Berkshire Hathaway Inc | 1.17 | 1.37 | -0.20 | -1.61 |
| Johnson & Johnson | 1.12 | 1.32 | -0.20 | 9.04 |
| Alphabet Inc | 1.06 | 1.26 | -0.20 | 13.30 |
| Alphabet Inc | 1.05 | 1.24 | -0.19 | 12.63 |
| Exxon Mobil Corp | 1.03 | 1.21 | -0.18 | 19.81 |
| JPMorgan Chase & Co | 1.01 | 1.18 | -0.17 | 4.55 |
| % of Portfolio | 15.15 | 17.89 | -2.74 | |

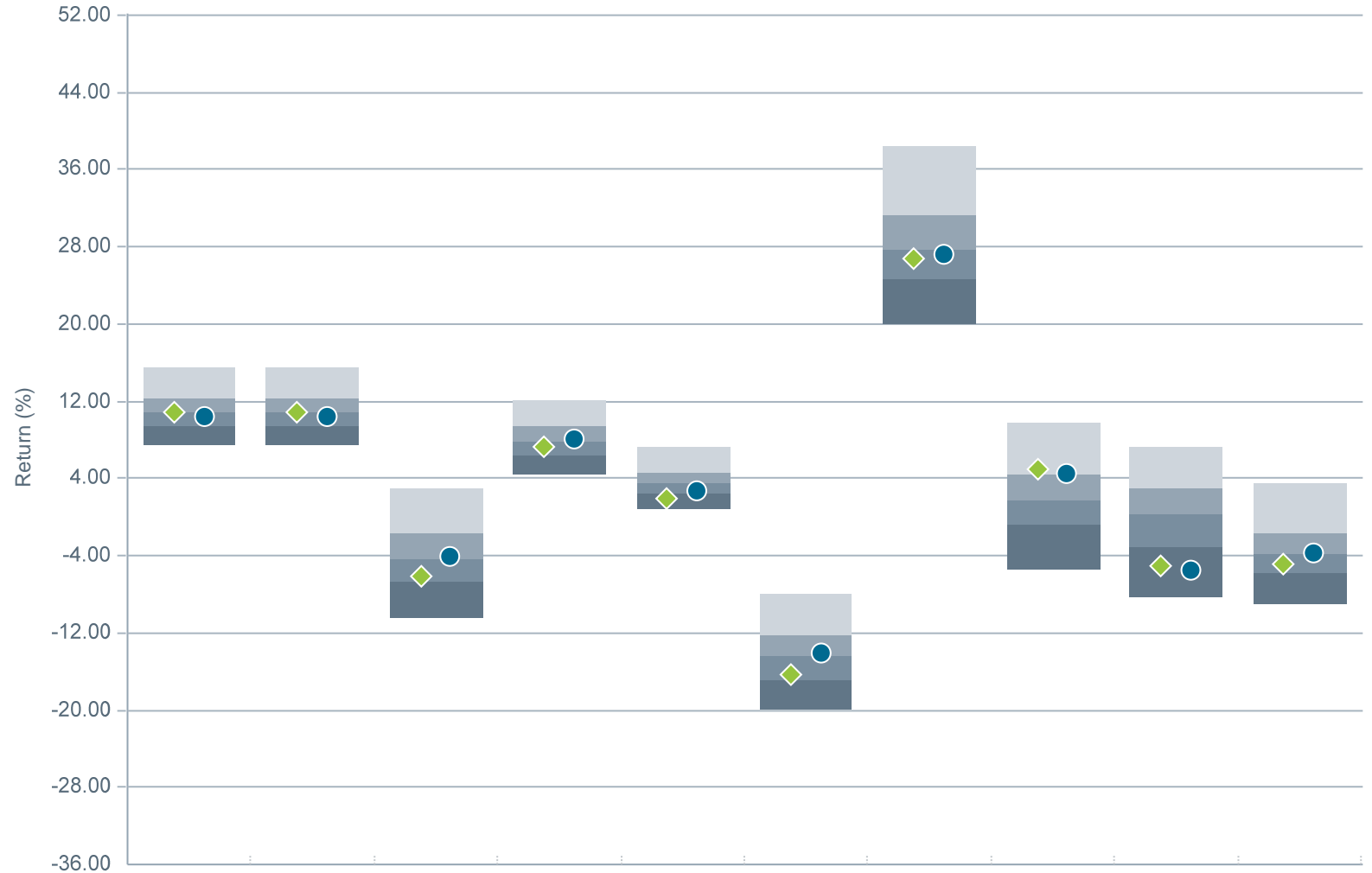
| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Wtd. Avg. Mkt. Cap (\$M) | 163,902 | 191,476 |
| Median Mkt. Cap (\$M) | 8,663 | 1,646 |
| Price/Earnings Ratio | 20.20 | 19.83 |
| Price/Book Ratio | 3.24 | 3.29 |
| 5 Yr. EPS Growth Rate (%) | 14.89 | 14.98 |
| Current Yield (%) | 1.84 | 1.92 |
| Beta (5 Years, Monthly) | 1.01 | 1.00 |
| Number of Securities | 1,101 | 2,977 |



Alphabet Inc. is shown twice in the Top Ten Equity Holdings, but represents two different exchanges: GOOG and GOOGL.

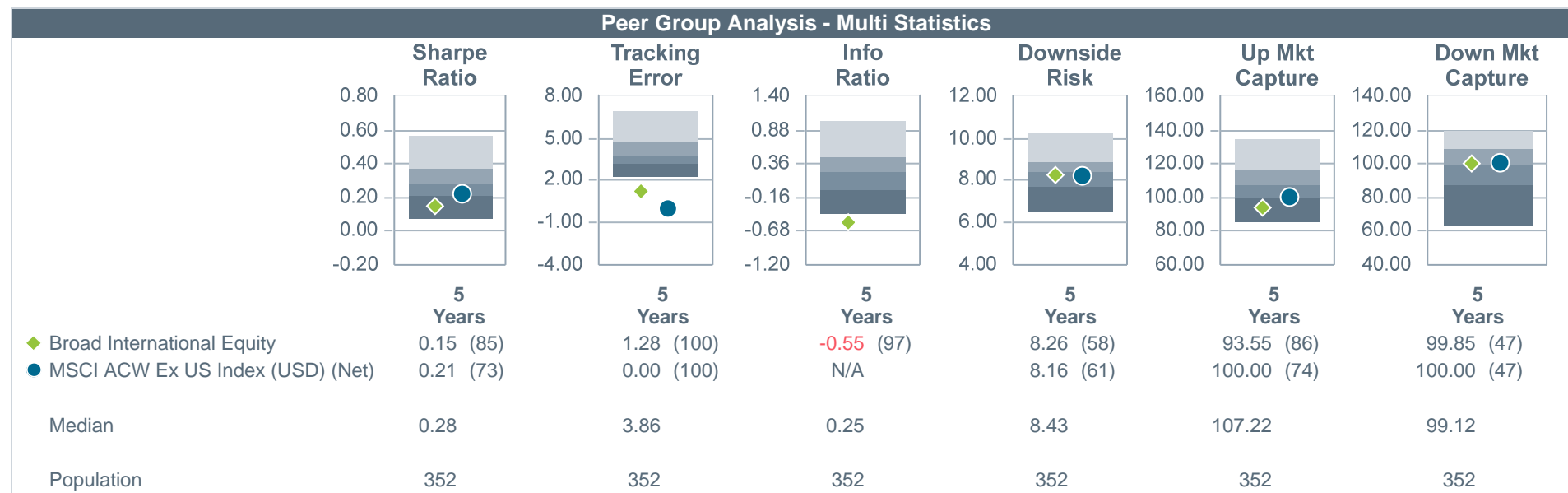
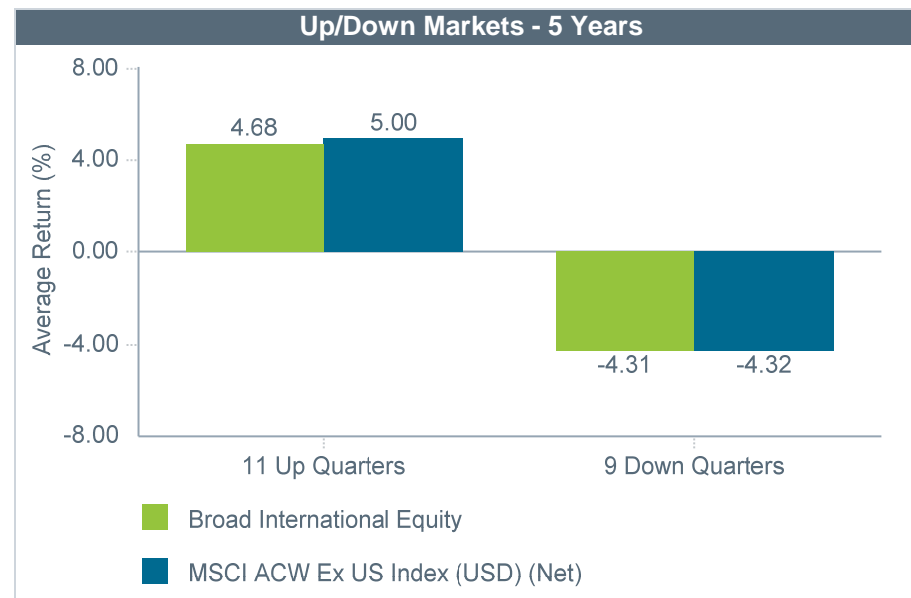
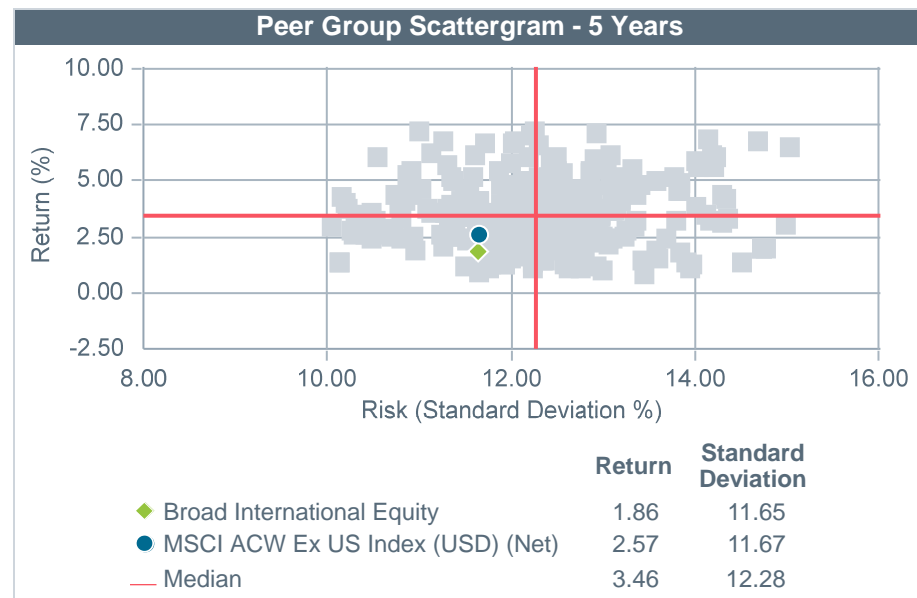
North Dakota Board of University and School Lands
IM International Large Cap Equity (SA+CF)
Peer Group Analysis

As of March 31, 2019



| | QTD | CYTD | 1 Year | 3 Years | 5 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
|------------------------------------|------------|------------|------------|-----------|-----------|-------------|------------|-----------|------------|------------|
| ◆ Broad International Equity | 10.81 (51) | 10.81 (51) | -6.09 (72) | 7.33 (59) | 1.86 (85) | -16.27 (70) | 26.75 (56) | 5.02 (21) | -5.06 (88) | -4.94 (64) |
| ● MSCI ACW Ex US Index (USD) (Net) | 10.31 (60) | 10.31 (60) | -4.22 (50) | 8.09 (44) | 2.57 (72) | -14.20 (49) | 27.19 (54) | 4.50 (24) | -5.66 (91) | -3.87 (52) |
| Median | 10.85 | 10.85 | -4.32 | 7.81 | 3.46 | -14.38 | 27.67 | 1.70 | 0.34 | -3.74 |
| Population | 397 | 397 | 395 | 378 | 352 | 405 | 431 | 445 | 465 | 470 |

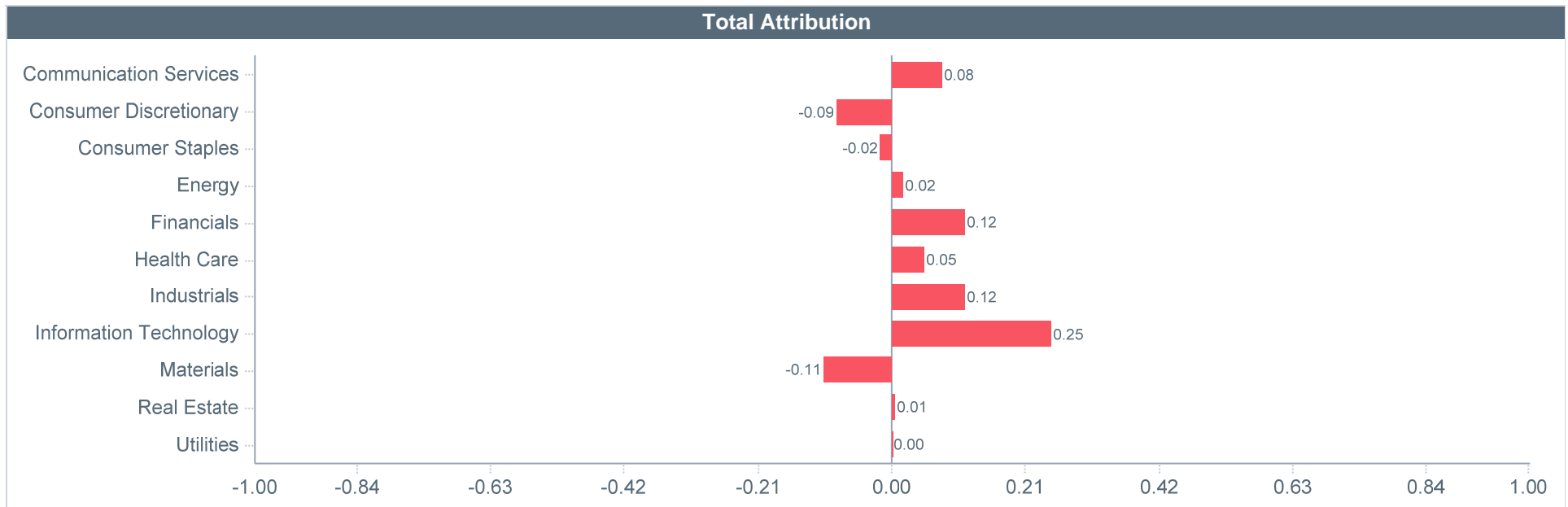
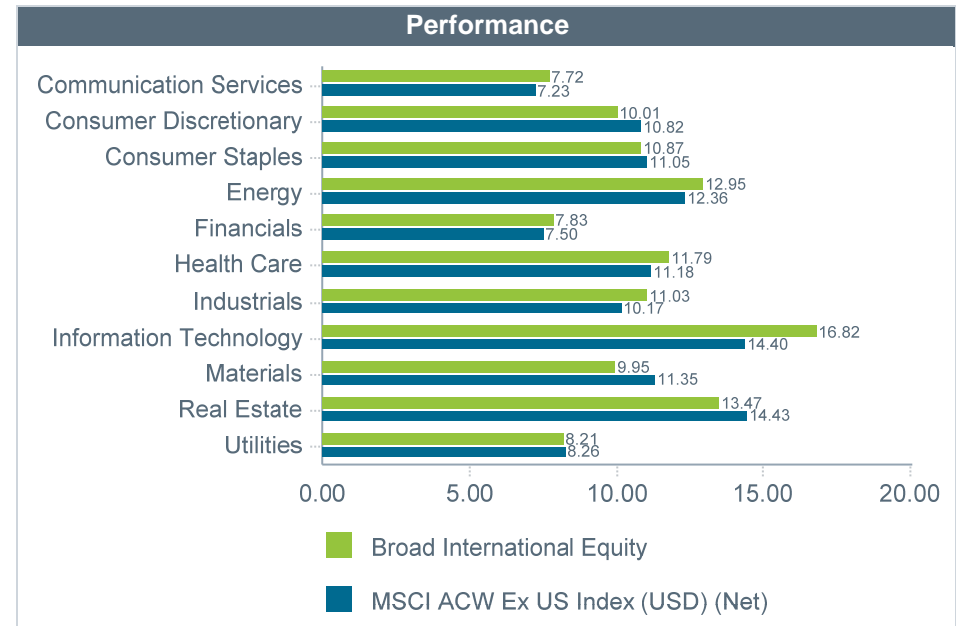
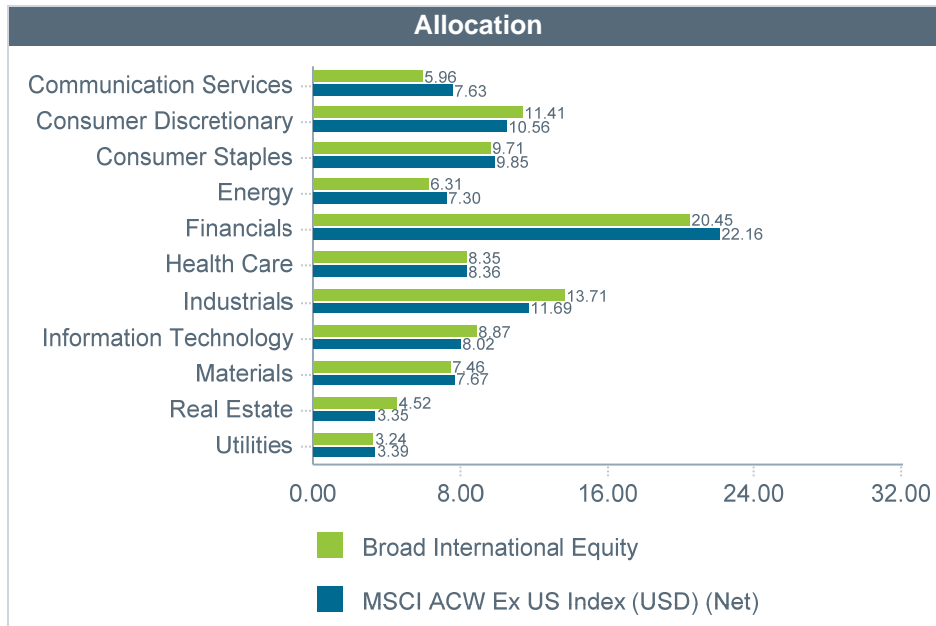
Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year ends 06/30.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

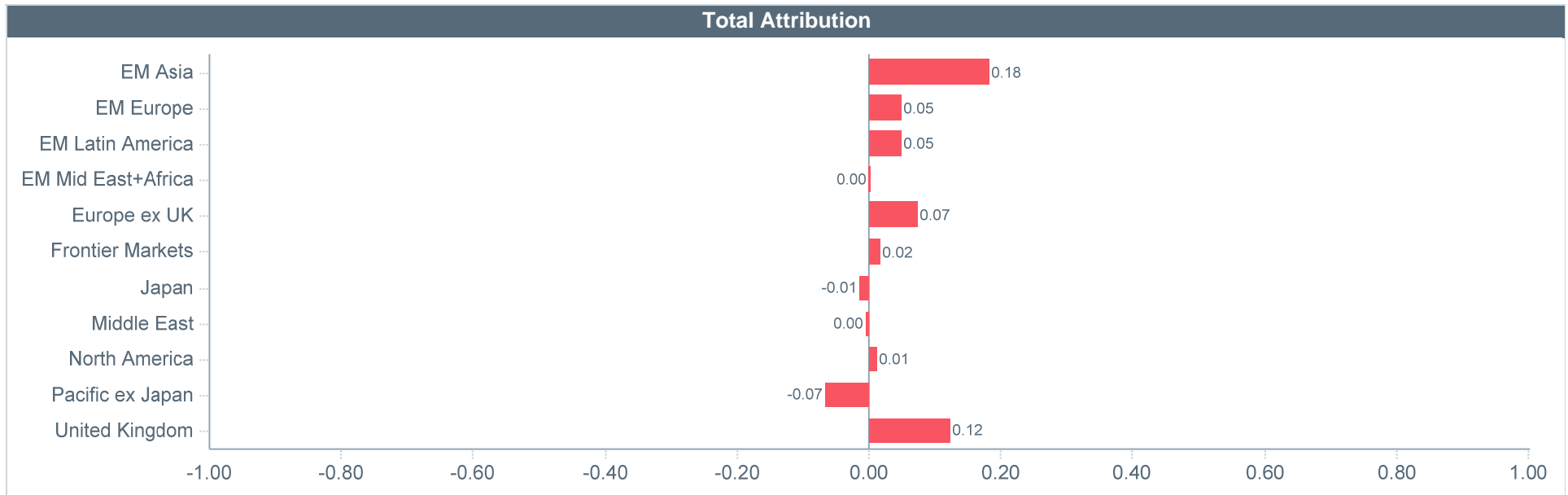
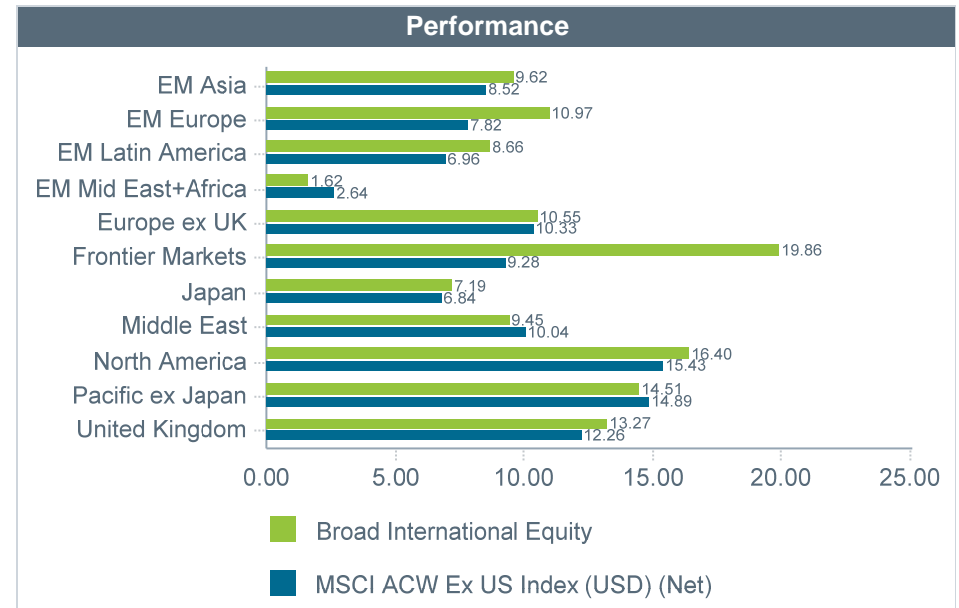
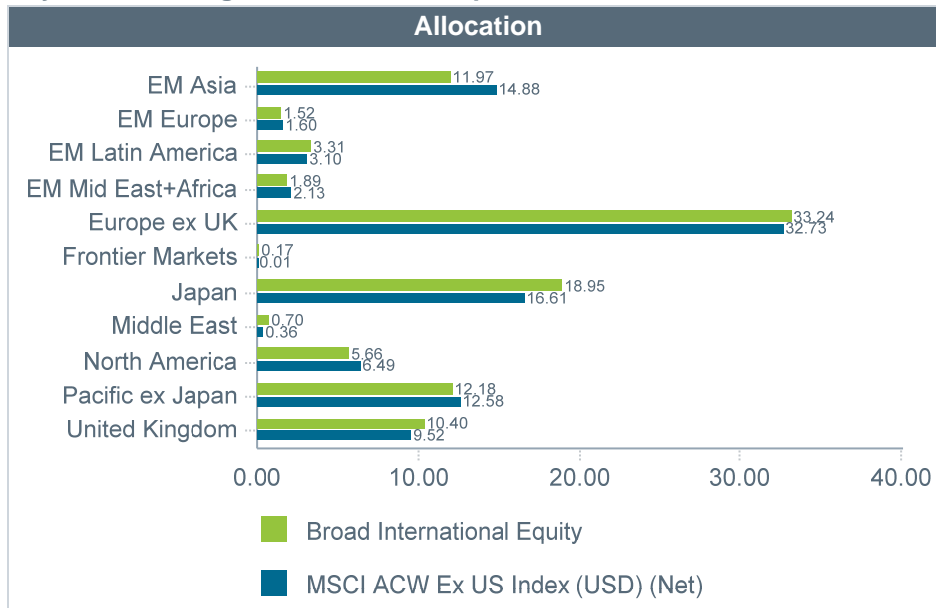
North Dakota Board of University and School Lands
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)
Buy and Hold Sector Attribution Graph

1 Quarter Ending March 31, 2019



North Dakota Board of University and School Lands
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)
Buy and Hold Region Attribution Graph

1 Quarter Ending March 31, 2019

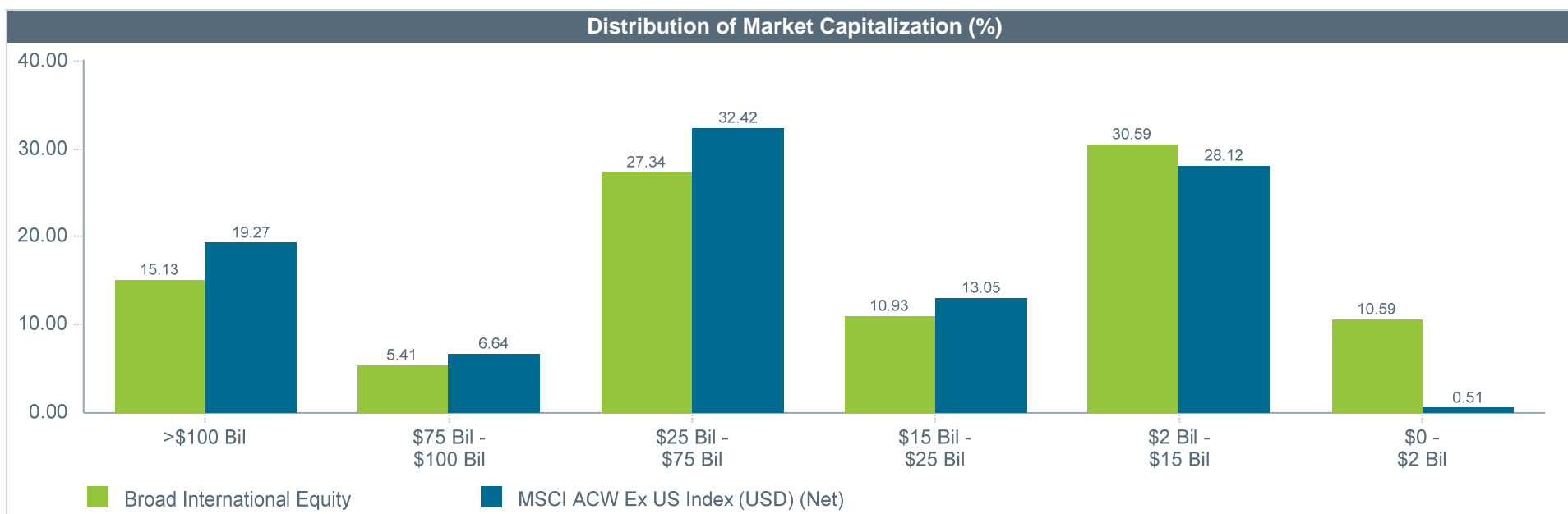


North Dakota Board of University and School Lands
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)
Portfolio Characteristics

As of March 31, 2019

| Top Ten Equity Holdings | | | | |
|---------------------------|----------------------|----------------------|-------------------|----------------------|
| | Portfolio Weight (%) | Benchmark Weight (%) | Active Weight (%) | Quarterly Return (%) |
| Nestle SA, Cham Und Vevey | 1.23 | 1.44 | -0.21 | 17.54 |
| Novartis AG | 0.88 | 1.03 | -0.15 | 16.25 |
| Roche Holding AG | 0.82 | 0.95 | -0.13 | 14.98 |
| AIA Group Ltd | 0.81 | 0.59 | 0.22 | 19.95 |
| Tencent Holdings LTD | 0.70 | 1.29 | -0.59 | 14.70 |
| Taiwan Semiconductor Mfg | 0.67 | 0.97 | -0.30 | 7.96 |
| HSBC Holdings PLC | 0.67 | 0.80 | -0.13 | 1.00 |
| BP PLC | 0.60 | 0.72 | -0.12 | 16.77 |
| Royal Dutch Shell PLC | 0.58 | 0.70 | -0.12 | 8.49 |
| Alibaba Group Holding Ltd | 0.56 | 1.17 | -0.61 | 33.11 |
| % of Portfolio | 7.52 | 9.66 | -2.14 | |

| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Wtd. Avg. Mkt. Cap (\$M) | 52,093 | 66,550 |
| Median Mkt. Cap (\$M) | 706 | 7,841 |
| Price/Earnings Ratio | 13.64 | 13.72 |
| Price/Book Ratio | 2.23 | 2.20 |
| 5 Yr. EPS Growth Rate (%) | 10.98 | 10.02 |
| Current Yield (%) | 3.29 | 3.37 |
| Beta (5 Years, Monthly) | 0.98 | 1.00 |
| Number of Securities | 6,358 | 2,148 |

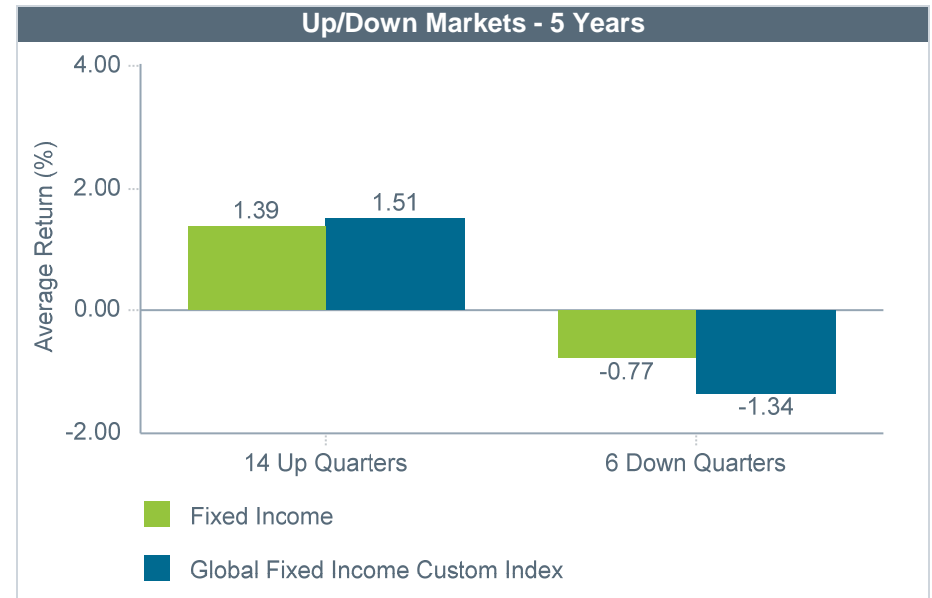
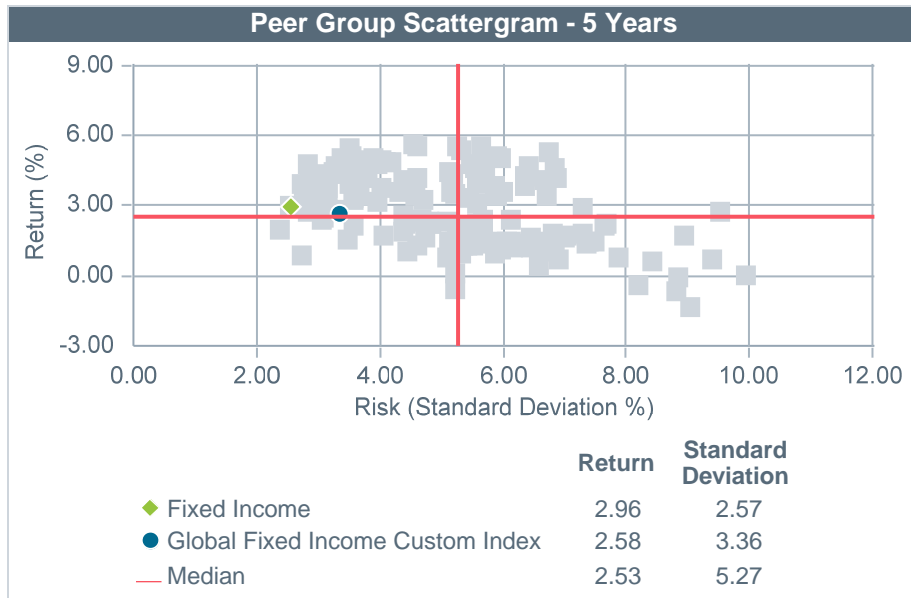


North Dakota Board of University and School Lands
IM Global Fixed Income (SA+CF)
Peer Group Analysis

As of March 31, 2019



Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year ends 06/30.

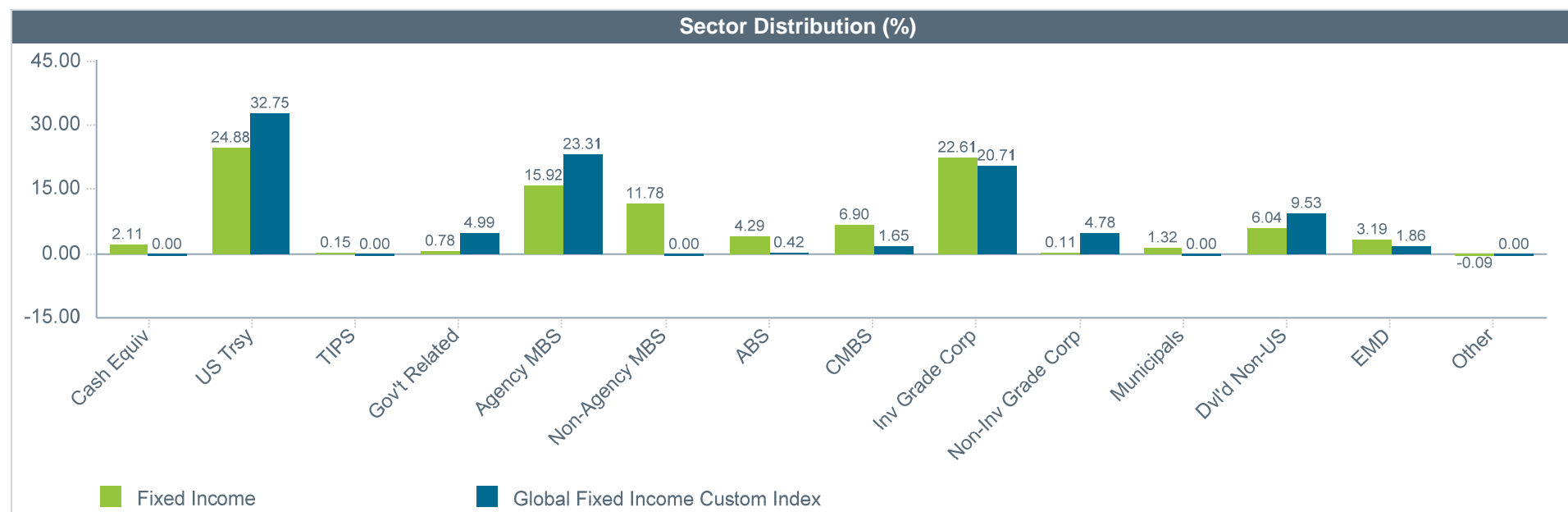


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

North Dakota Board of University and School Lands
Fixed Income vs. Global Fixed Income Custom Index
Portfolio Characteristics

As of March 31, 2019

| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Effective Duration | 4.56 | 5.63 |
| Avg. Maturity | N/A | 7.91 |
| Avg. Quality | A1 | N/A |
| Coupon Rate (%) | N/A | 3.55 |
| Yield To Worst (%) | 3.23 | 3.30 |
| Current Yield (%) | 3.68 | 0.20 |



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.
Allocation to "Other" consists of currency forwards.

Investment Manager Profiles

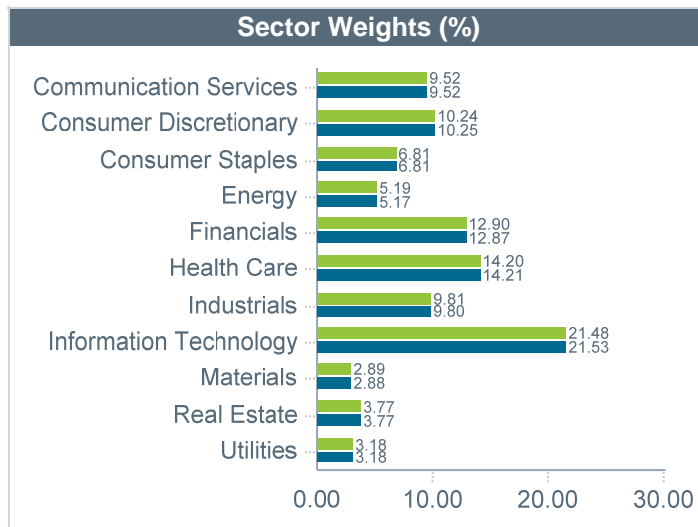
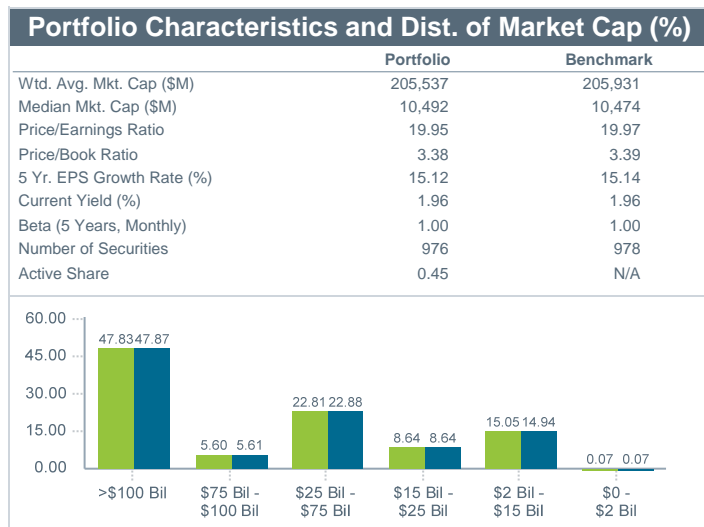
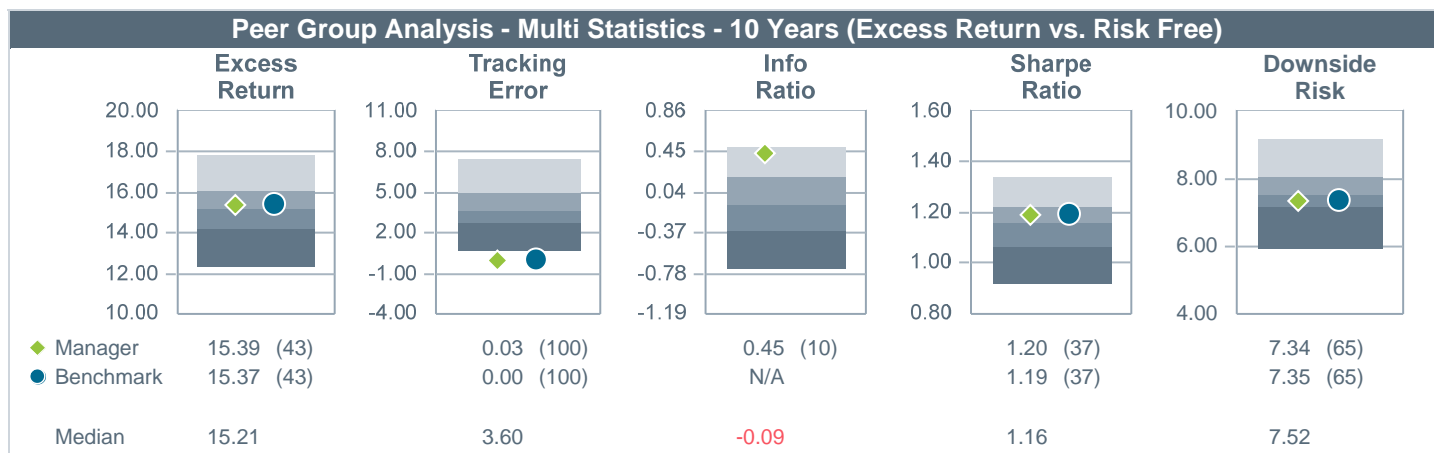
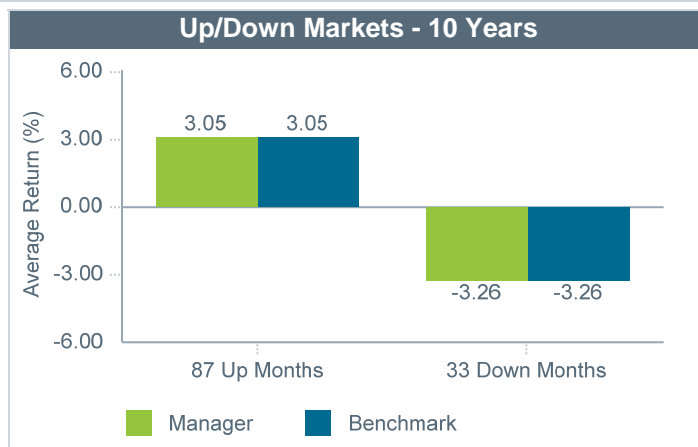
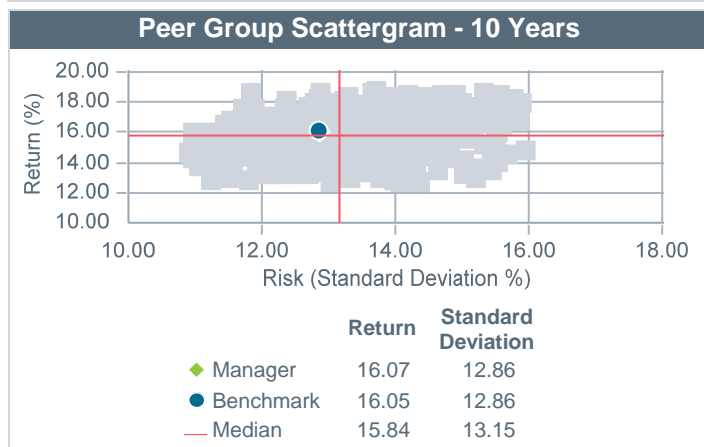
Manager: State Street Russell 1000 Index Lending (CF)

As of March 31, 2019

Benchmark: Russell 1000 Index

Peer Group: IM U.S. Large Cap Equity (SA+CF)

| Performance | | | | | | | | | | | |
|-------------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 13.99 | 9.30 | 13.52 | 10.65 | 12.78 | 16.07 | -4.77 | 21.70 | 12.03 | 0.96 | 13.23 |
| Benchmark | 14.00 | 9.30 | 13.52 | 10.63 | 12.79 | 16.05 | -4.78 | 21.69 | 12.05 | 0.92 | 13.24 |
| Difference | -0.01 | 0.00 | 0.00 | 0.02 | -0.01 | 0.02 | 0.01 | 0.01 | -0.02 | 0.04 | -0.01 |
| Peer Group Median | 13.29 | 7.99 | 12.91 | 10.32 | 12.62 | 15.84 | -5.16 | 21.67 | 10.99 | 0.95 | 12.91 |
| Rank | 38 | 38 | 39 | 43 | 44 | 42 | 46 | 50 | 40 | 50 | 45 |
| Population | 937 | 936 | 916 | 890 | 839 | 771 | 973 | 1,064 | 1,151 | 1,225 | 1,283 |



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: NT Small/Smid Composite

As of March 31, 2019

Benchmark: Small/Smid Blended Index

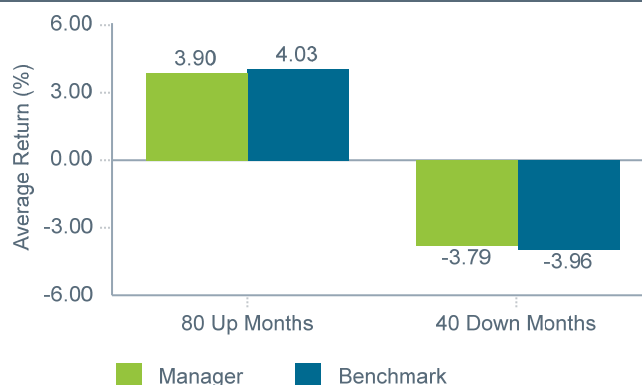
Peer Group: IM U.S. SMID Cap Core Equity (SA+CF)

| Performance | | | | | | | | | | | |
|-------------------|-------|--------|---------|---------|---------|----------|--------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 11.96 | 1.35 | 14.91 | 7.79 | 11.46 | 15.77 | -6.97 | 22.66 | 19.02 | -5.35 | 3.37 |
| Benchmark | 14.58 | 2.05 | 12.92 | 7.48 | 11.14 | 16.06 | -11.01 | 14.65 | 21.31 | -4.41 | 8.25 |
| Difference | -2.62 | -0.70 | 1.99 | 0.31 | 0.32 | -0.29 | 4.04 | 8.01 | -2.29 | -0.94 | -4.88 |
| Peer Group Median | 15.02 | 3.58 | 12.50 | 8.48 | 12.00 | 16.52 | -9.84 | 18.01 | 16.93 | 0.10 | 7.84 |
| Rank | 91 | 73 | 5 | 76 | 73 | 77 | 18 | 13 | 17 | 95 | 89 |
| Population | 45 | 45 | 43 | 43 | 40 | 37 | 45 | 47 | 47 | 47 | 49 |

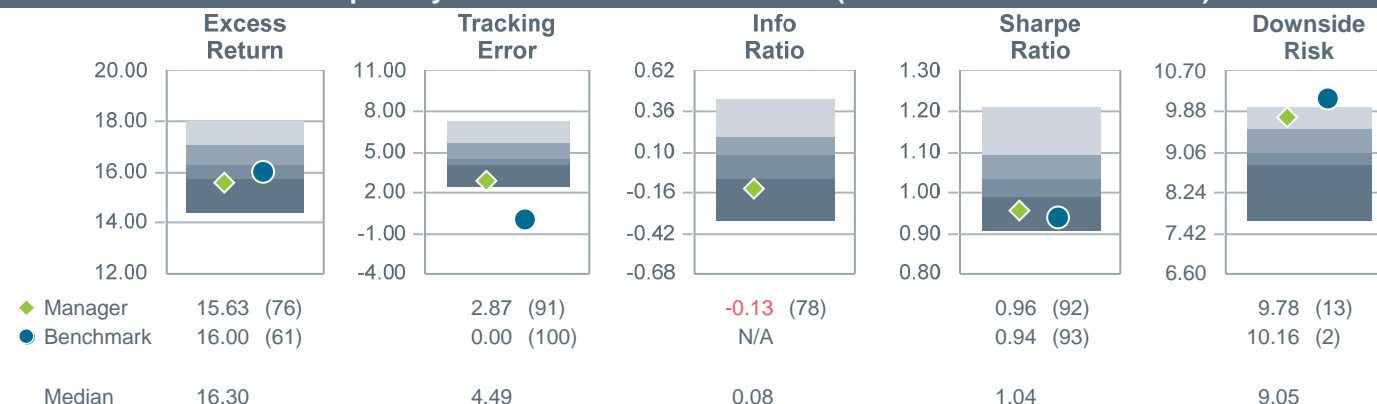
Peer Group Scattergram - 10 Years



Up/Down Markets - 10 Years

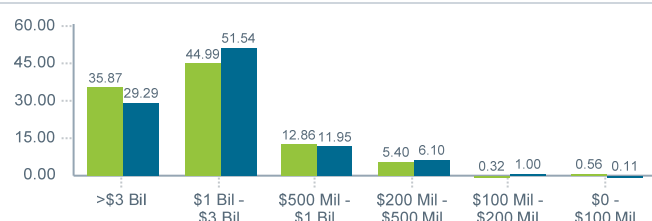


Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)

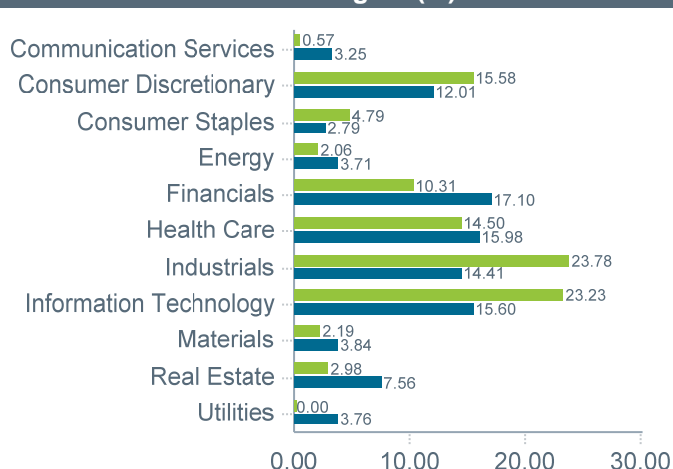


Portfolio Characteristics and Dist. of Market Cap (%)

| | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M) | 2,868 | 2,385 |
| Median Mkt. Cap (\$M) | 1,859 | 799 |
| Price/Earnings Ratio | 22.72 | 17.81 |
| Price/Book Ratio | 2.70 | 2.39 |
| 5 Yr. EPS Growth Rate (%) | 14.36 | 11.78 |
| Current Yield (%) | 1.04 | 1.44 |
| Beta (5 Years, Monthly) | 0.94 | 1.00 |
| Number of Securities | 157 | 1,999 |
| Active Share | 91.08 | N/A |



Sector Weights (%)

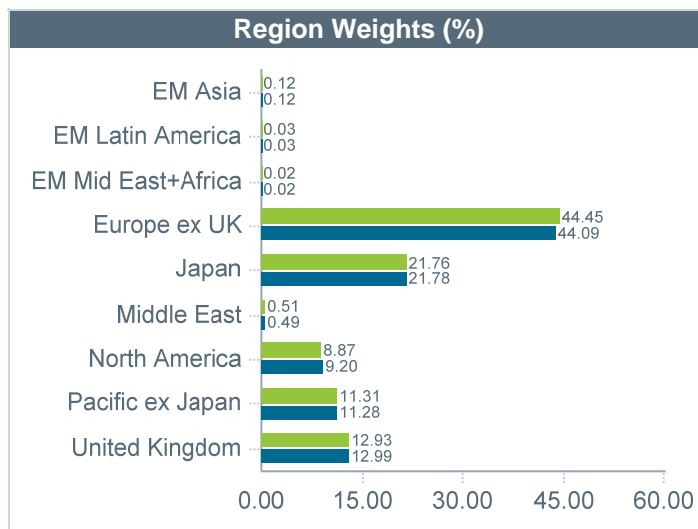
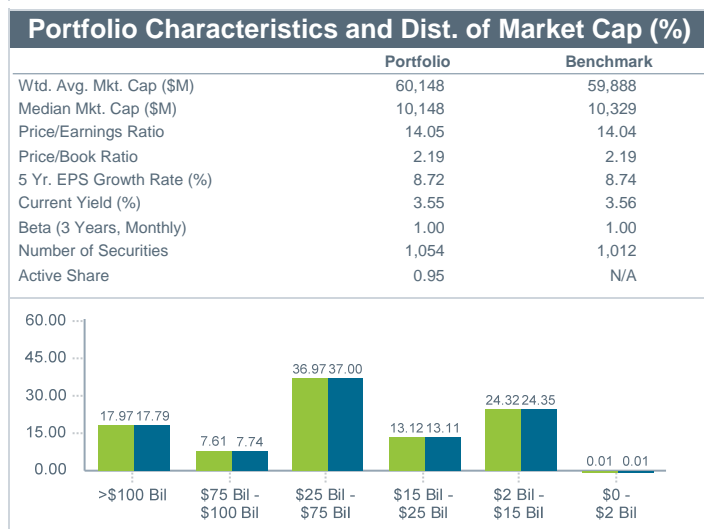
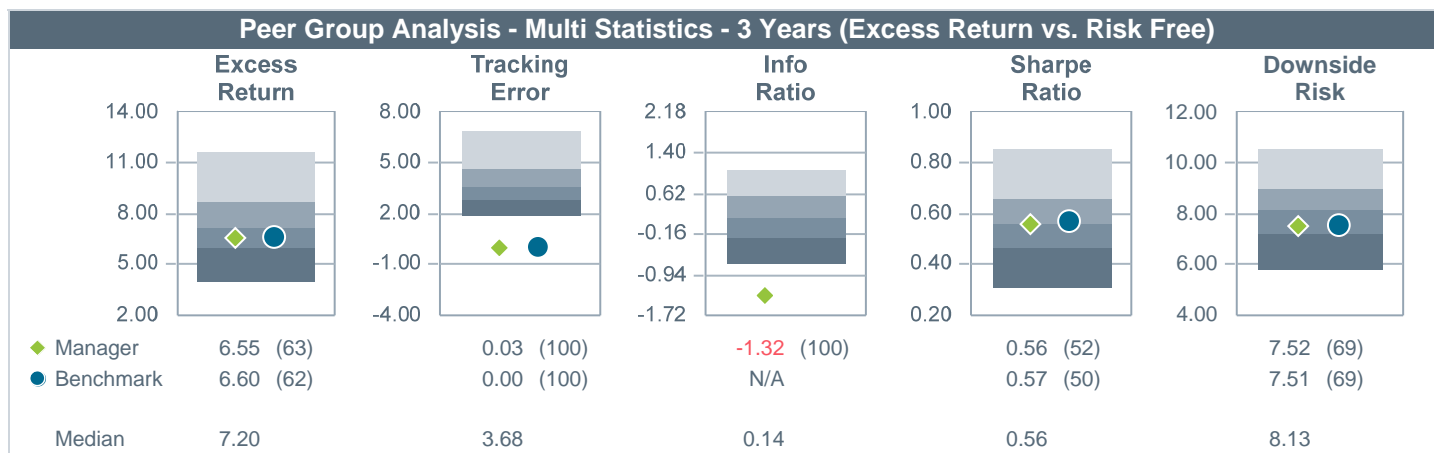
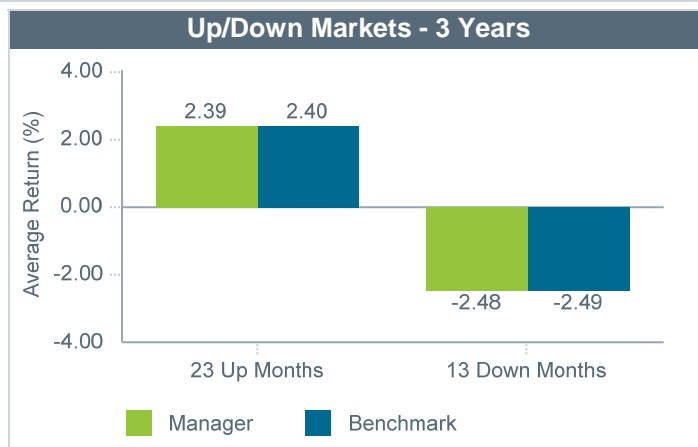
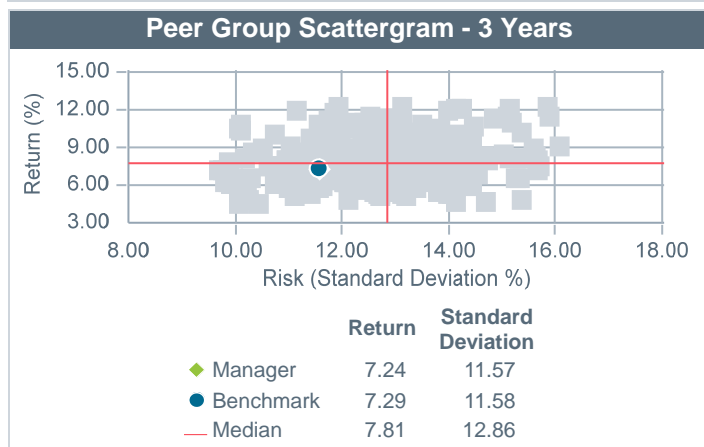


Performance shown is gross of fees and client specific. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. NT Small/Smid Composite changed mandate from small and mid cap to strictly small cap in 06/2014. Performance for NT Small/Smid Composite consists of blended history from the previous mandate. Benchmark holdings consists of the Russell 2000 index.

Manager: State Street World Ex US Index (CF)
Benchmark: MSCI Wrld Ex US Index (USD) (Net)
Peer Group: IM International Large Cap Equity (SA+CF)

As of March 31, 2019

| Performance | | | | | | | | | | | |
|-------------------|-------|--------|---------|---------|---------|----------|--------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 10.43 | -3.18 | 7.24 | N/A | N/A | N/A | -14.14 | 24.17 | 2.68 | -3.10 | N/A |
| Benchmark | 10.45 | -3.14 | 7.29 | 2.20 | 5.28 | 8.82 | -14.09 | 24.21 | 2.75 | -3.04 | -4.32 |
| Difference | -0.02 | -0.04 | -0.05 | N/A | N/A | N/A | -0.05 | -0.04 | -0.07 | -0.06 | N/A |
| Peer Group Median | 10.85 | -4.32 | 7.81 | 3.46 | 6.50 | 10.43 | -14.38 | 27.67 | 1.70 | 0.34 | -3.74 |
| Rank | 58 | 38 | 60 | N/A | N/A | N/A | 48 | 79 | 40 | 76 | N/A |
| Population | 397 | 395 | 378 | 352 | 323 | 288 | 405 | 431 | 445 | 465 | 470 |



Performance shown is gross of fees and client specific. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

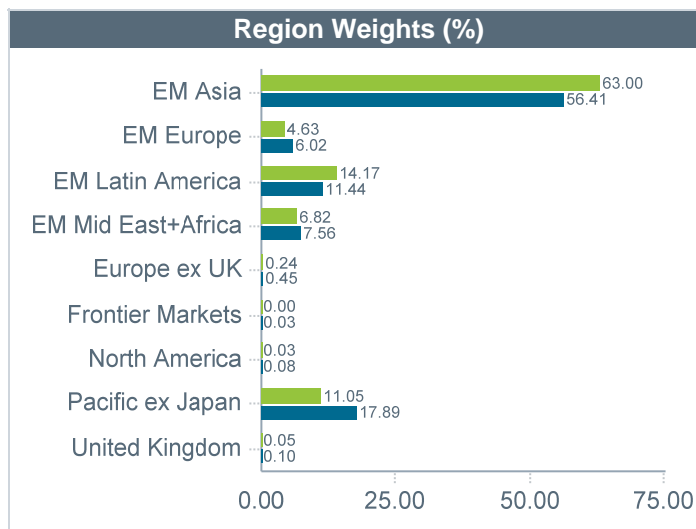
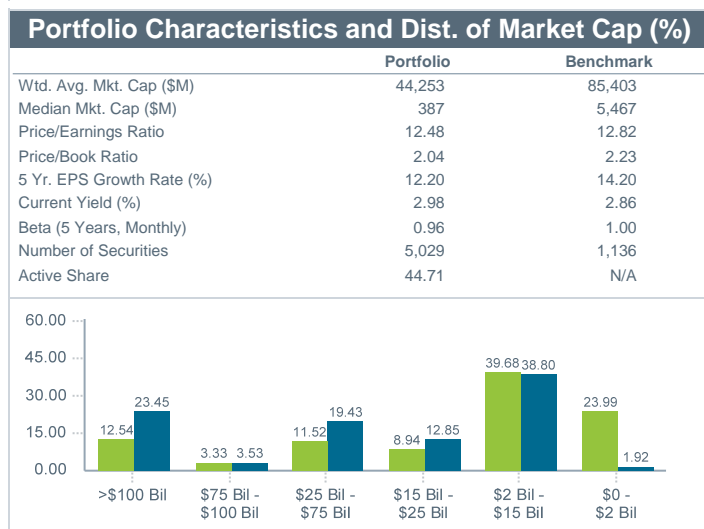
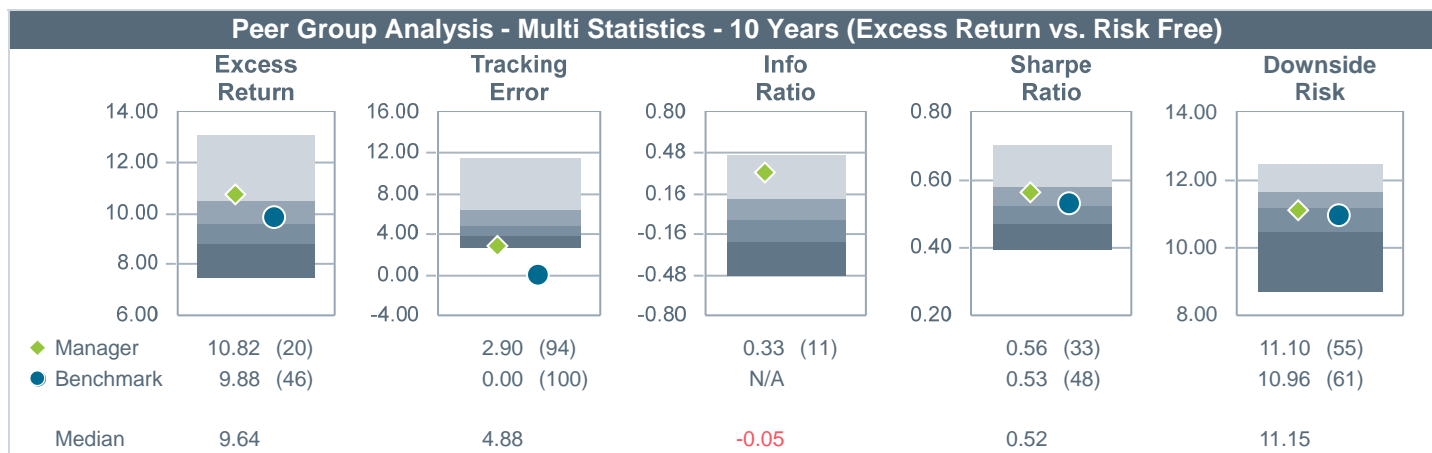
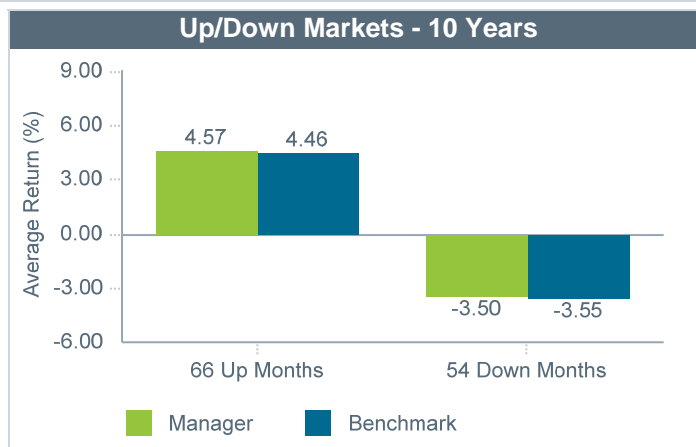
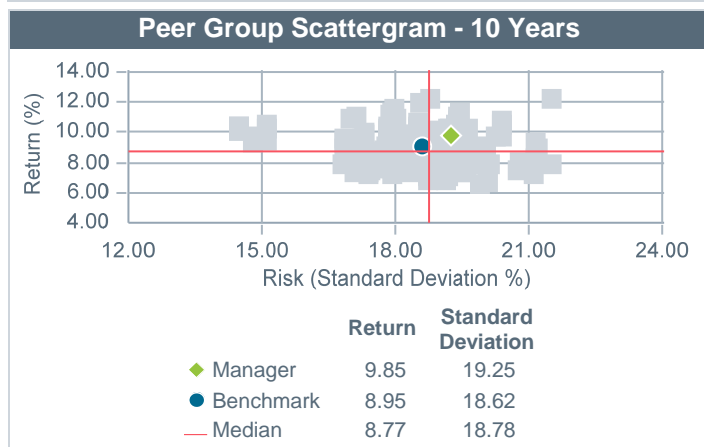
Manager: DFA Emg Mkts Core Eq;I (DFCEX)

As of March 31, 2019

Benchmark: MSCI Emg Mkts Index (USD) (Net)

Peer Group: IM Emerging Markets Equity (MF)

| Performance | | | | | | | | | | | |
|-------------------|-------|--------|---------|---------|---------|----------|--------|-------|-------|--------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 8.61 | -9.48 | 9.60 | 3.44 | 2.81 | 9.85 | -15.25 | 36.55 | 12.35 | -14.86 | -0.91 |
| Benchmark | 9.93 | -7.41 | 10.68 | 3.68 | 2.69 | 8.95 | -14.58 | 37.28 | 11.19 | -14.92 | -2.19 |
| Difference | -1.32 | -2.07 | -1.08 | -0.24 | 0.12 | 0.90 | -0.67 | -0.73 | 1.16 | 0.06 | 1.28 |
| Peer Group Median | 10.38 | -9.38 | 9.40 | 3.08 | 2.41 | 8.77 | -16.41 | 35.37 | 8.35 | -13.66 | -2.92 |
| Rank | 74 | 51 | 49 | 41 | 43 | 24 | 39 | 45 | 21 | 63 | 31 |
| Population | 898 | 841 | 723 | 563 | 398 | 247 | 841 | 813 | 750 | 656 | 724 |



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

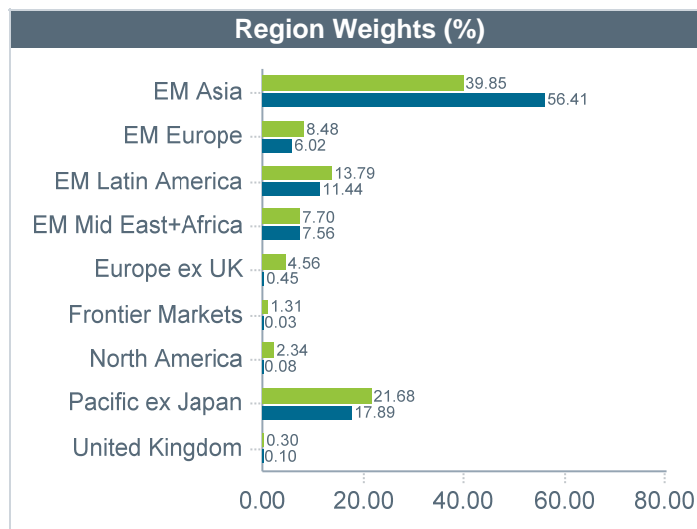
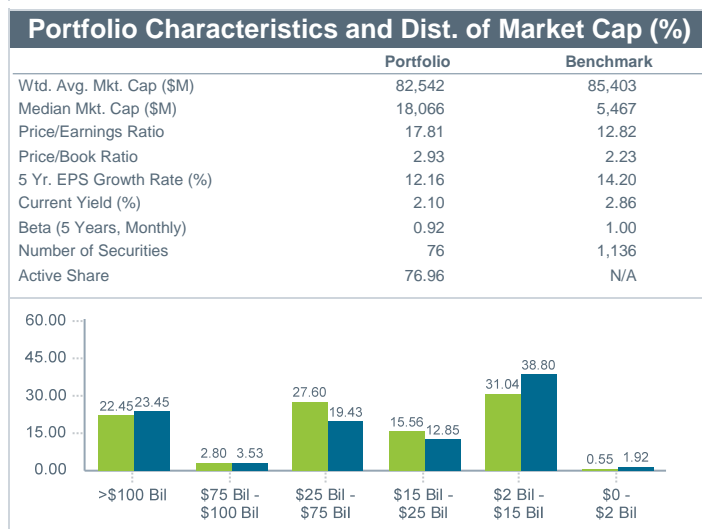
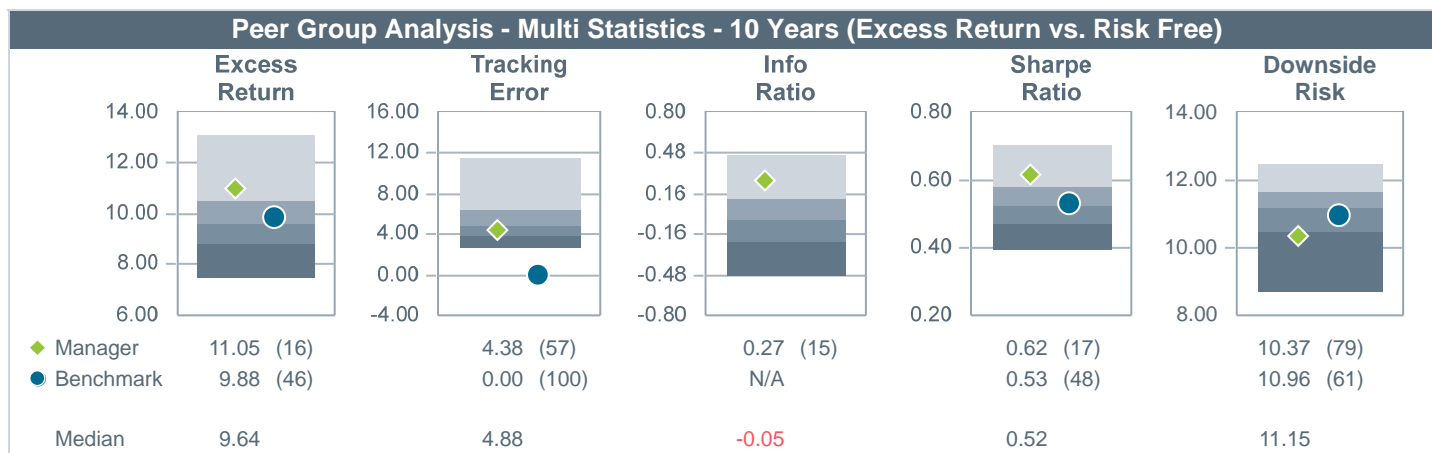
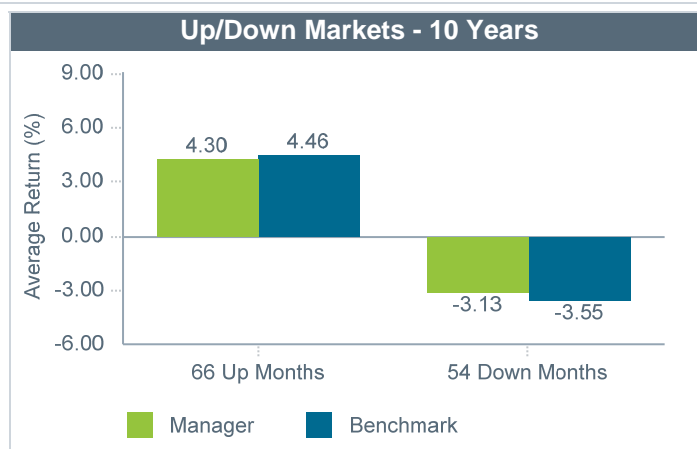
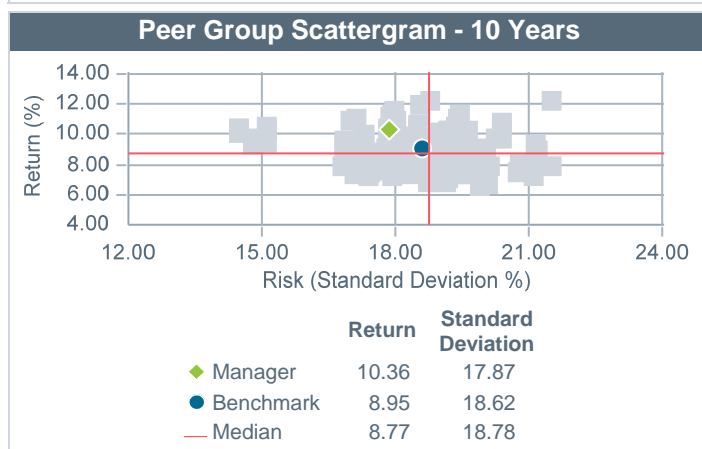
Manager: Harding Loevner: IEM; IZ (HLEZX)

As of March 31, 2019

Benchmark: MSCI Emg Mkts Index (USD) (Net)

Peer Group: IM Emerging Markets Equity (MF)

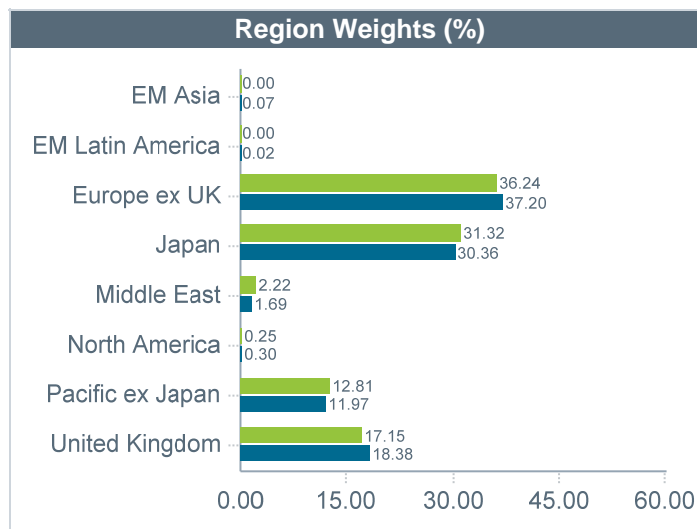
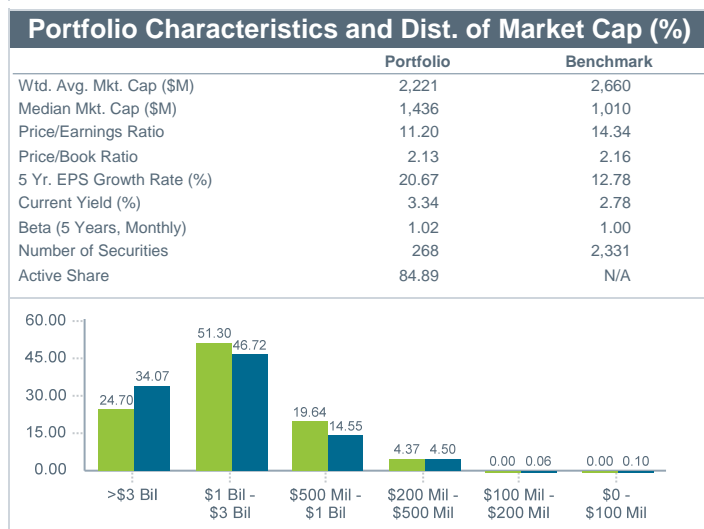
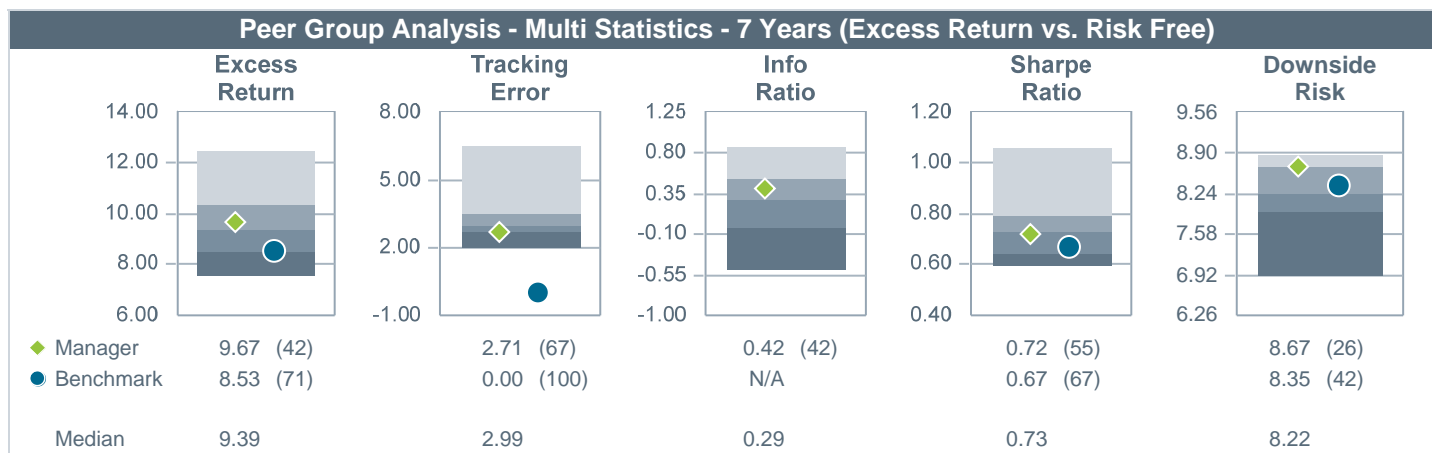
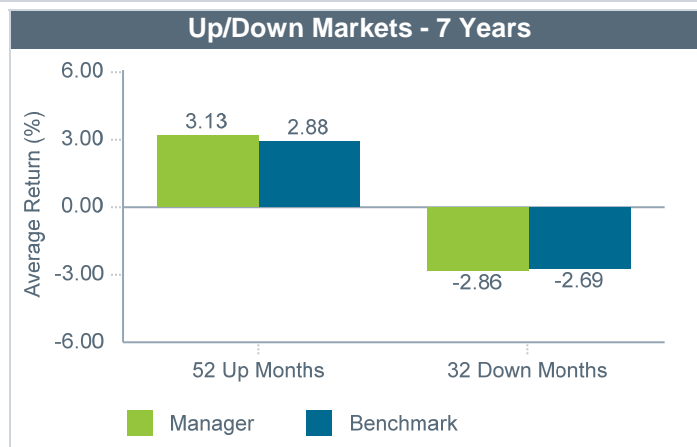
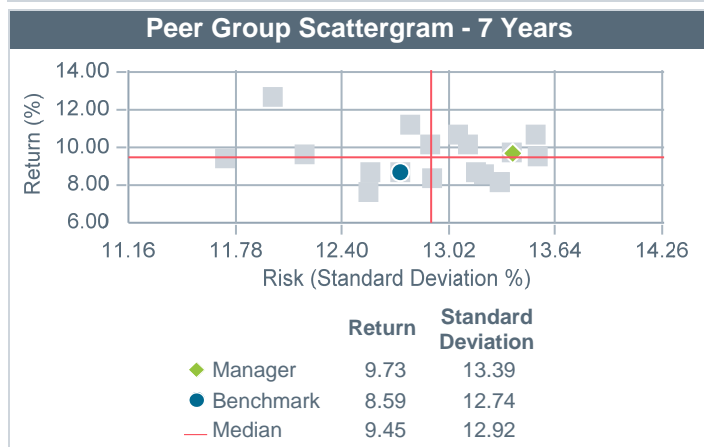
| Performance | | | | | | | | | | | |
|-------------------|-------|--------|---------|---------|---------|----------|--------|-------|-------|--------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 14.60 | -9.90 | 10.51 | 4.00 | 4.40 | 10.36 | -18.53 | 35.79 | 13.44 | -13.31 | -1.74 |
| Benchmark | 9.93 | -7.41 | 10.68 | 3.68 | 2.69 | 8.95 | -14.58 | 37.28 | 11.19 | -14.92 | -2.19 |
| Difference | 4.67 | -2.49 | -0.17 | 0.32 | 1.71 | 1.41 | -3.95 | -1.49 | 2.25 | 1.61 | 0.45 |
| Peer Group Median | 10.38 | -9.38 | 9.40 | 3.08 | 2.41 | 8.77 | -16.41 | 35.37 | 8.35 | -13.66 | -2.92 |
| Rank | 9 | 54 | 34 | 26 | 18 | 15 | 71 | 49 | 15 | 47 | 40 |
| Population | 898 | 841 | 723 | 563 | 398 | 247 | 841 | 813 | 750 | 656 | 724 |



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: QMA Int'l Sm Cap Equity (CF)
As of March 31, 2019
Benchmark: MSCI EAFE Sm Cap Index (USD) (Gross)
Peer Group: IM International Small Cap Core Equity (SA+CF)

| Performance | | | | | | | | | | | |
|-------------------|-------|--------|---------|---------|---------|----------|--------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 10.68 | -13.73 | 6.06 | 3.75 | 9.73 | N/A | -22.79 | 35.05 | -0.81 | 11.09 | 0.02 |
| Benchmark | 10.76 | -9.01 | 7.90 | 4.84 | 8.59 | 13.14 | -17.58 | 33.50 | 2.55 | 9.94 | -4.63 |
| Difference | -0.08 | -4.72 | -1.84 | -1.09 | 1.14 | N/A | -5.21 | 1.55 | -3.36 | 1.15 | 4.65 |
| Peer Group Median | 10.68 | -10.02 | 8.22 | 5.02 | 9.45 | 13.99 | -18.93 | 34.07 | 1.93 | 9.91 | -2.43 |
| Rank | 51 | 96 | 83 | 80 | 42 | N/A | 98 | 45 | 86 | 43 | 27 |
| Population | 43 | 42 | 40 | 31 | 25 | 19 | 42 | 44 | 42 | 39 | 35 |



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

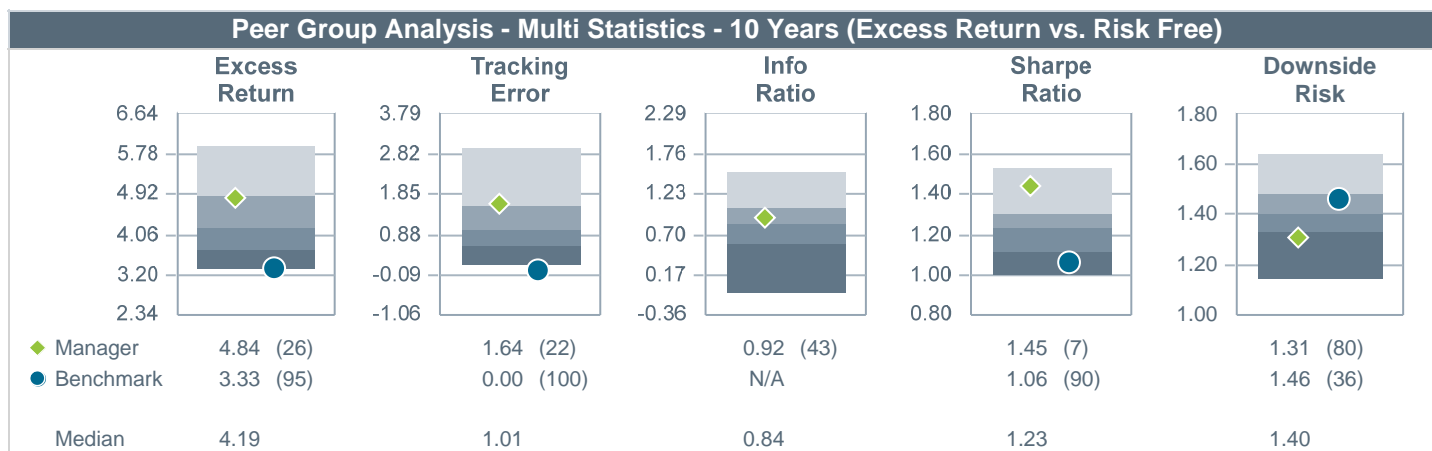
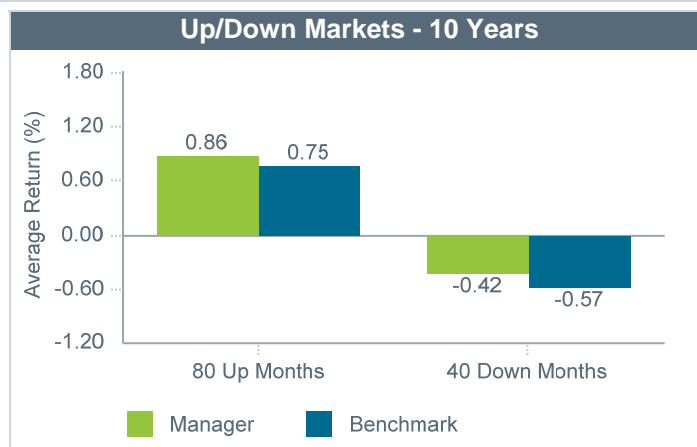
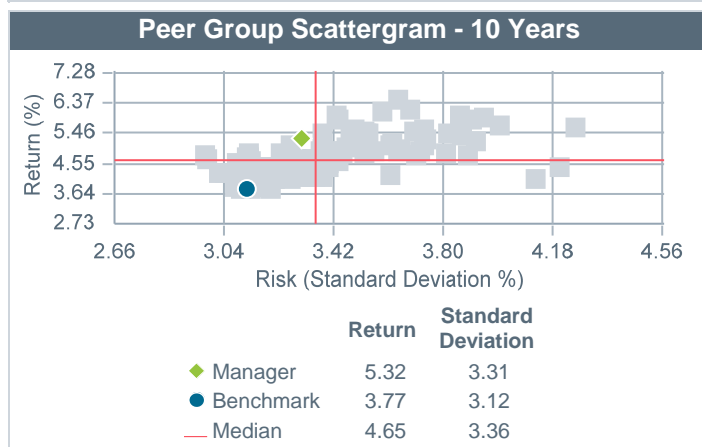
Manager: Payden & Rygel Long Term (SA)

As of March 31, 2019

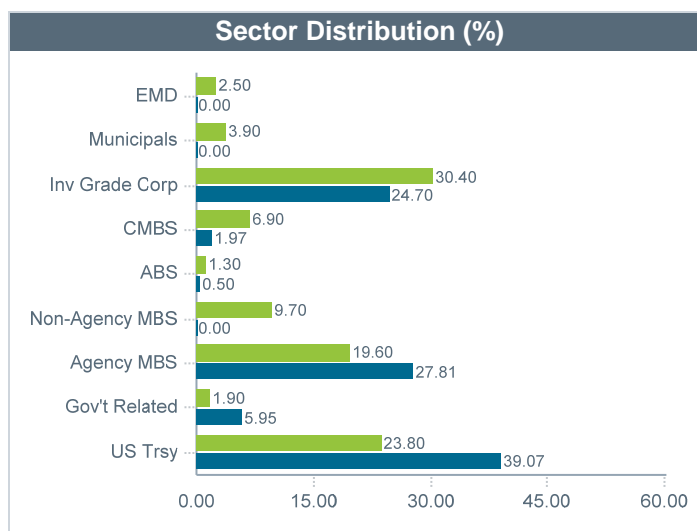
Benchmark: Bloomberg US Agg Bond Index

Peer Group: IM U.S. Broad Market Core Fixed Income (SA+CF)

| Performance | | | | | | | | | | | |
|-------------------|------|--------|---------|---------|---------|----------|------|------|------|------|------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 3.26 | 4.76 | 3.40 | 3.51 | 3.50 | 5.32 | 0.36 | 5.20 | 4.03 | 0.82 | 6.01 |
| Benchmark | 2.94 | 4.48 | 2.03 | 2.74 | 2.48 | 3.77 | 0.01 | 3.54 | 2.65 | 0.55 | 5.97 |
| Difference | 0.32 | 0.28 | 1.37 | 0.77 | 1.02 | 1.55 | 0.35 | 1.66 | 1.38 | 0.27 | 0.04 |
| Peer Group Median | 3.23 | 4.70 | 2.54 | 3.10 | 2.94 | 4.65 | 0.07 | 4.06 | 3.11 | 0.82 | 6.16 |
| Rank | 46 | 43 | 9 | 14 | 14 | 26 | 27 | 7 | 20 | 50 | 64 |
| Population | 140 | 139 | 137 | 134 | 129 | 123 | 146 | 153 | 162 | 167 | 181 |



| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Effective Duration | 5.55 | 5.82 |
| Spread Duration | 4.09 | 6.00 |
| Avg. Maturity | 8.31 | 8.07 |
| Avg. Quality | Aa3 | Aa1/Aa2 |
| Yield To Maturity (%) | 3.36 | 2.94 |
| Coupon Rate (%) | 4.05 | 3.23 |
| Current Yield (%) | 3.75 | N/A |
| Holdings Count | 236 | 10,374 |

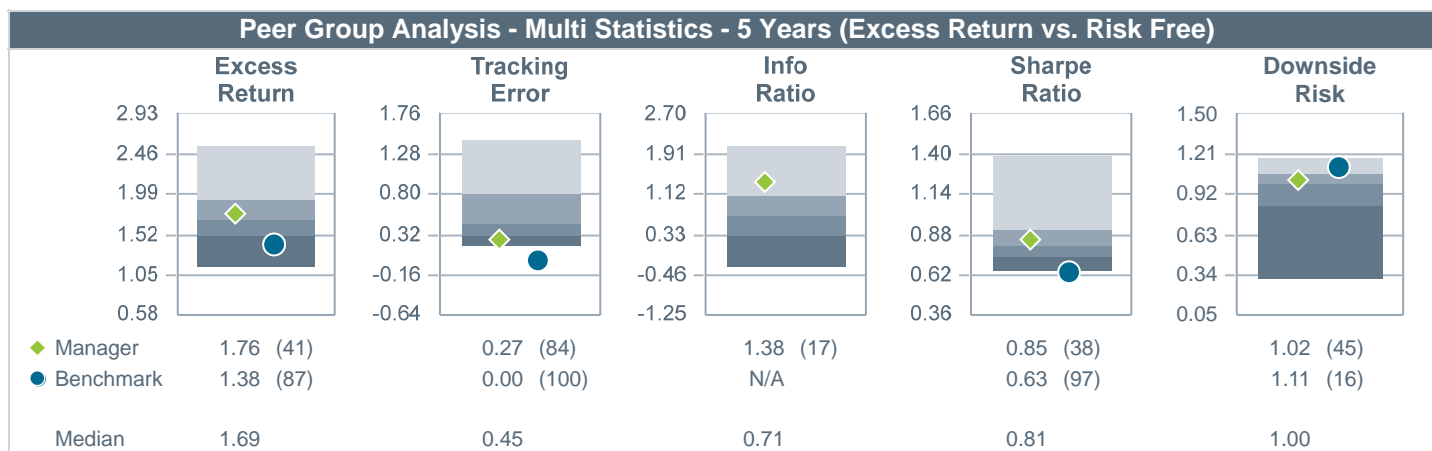
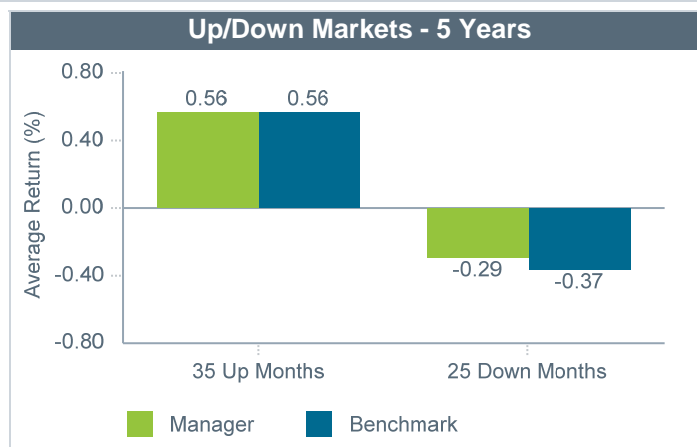
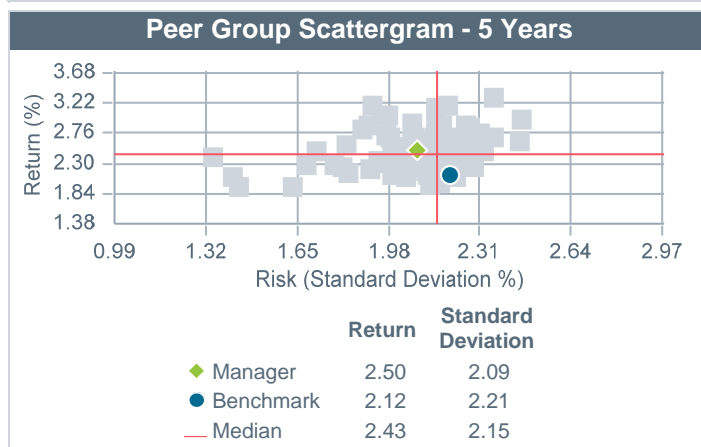


Performance shown is gross of fees and client specific. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

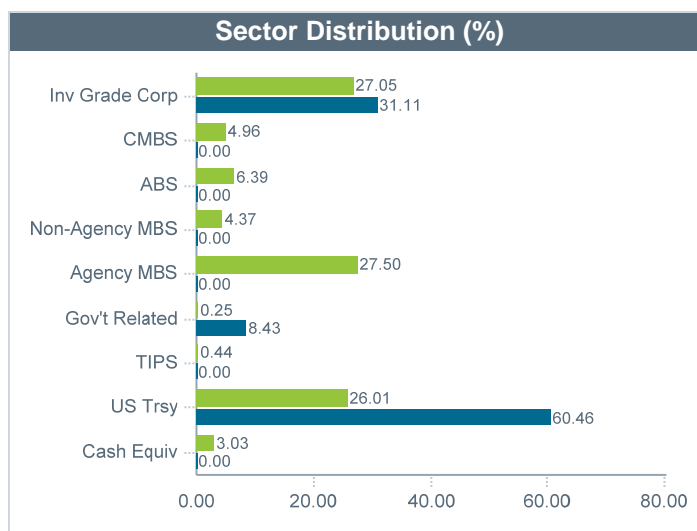
Manager: JP Morgan FI Intermediate Bond (SA)
Benchmark: Bloomberg US Gov't Crdt Int Trm Bond Index
Peer Group: IM U.S. Intermediate Duration (SA+CF)

As of March 31, 2019

| Performance | | | | | | | | | | | |
|-------------------|------|--------|---------|---------|---------|----------|------|------|-------|------|------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 2.41 | 4.34 | 2.04 | 2.50 | N/A | N/A | 1.14 | 2.81 | 1.99 | 1.53 | 3.97 |
| Benchmark | 2.32 | 4.24 | 1.66 | 2.12 | 2.00 | 3.14 | 0.88 | 2.14 | 2.08 | 1.07 | 3.13 |
| Difference | 0.09 | 0.10 | 0.38 | 0.38 | N/A | N/A | 0.26 | 0.67 | -0.09 | 0.46 | 0.84 |
| Peer Group Median | 2.45 | 4.36 | 2.04 | 2.43 | 2.36 | 3.66 | 0.96 | 2.55 | 2.39 | 1.31 | 3.56 |
| Rank | 56 | 55 | 51 | 41 | N/A | N/A | 37 | 30 | 77 | 32 | 35 |
| Population | 152 | 152 | 150 | 144 | 139 | 126 | 158 | 167 | 178 | 177 | 179 |



| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Effective Duration | 3.68 | 3.90 |
| Spread Duration | 2.85 | 3.92 |
| Avg. Maturity | 4.39 | 4.32 |
| Avg. Quality | Aa3 | Aa2/Aa3 |
| Yield To Maturity (%) | 2.95 | 2.63 |
| Coupon Rate (%) | 3.12 | 2.70 |
| Current Yield (%) | 3.21 | N/A |
| Holdings Count | N/A | 4,843 |



Performance shown is gross of fees and client specific. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

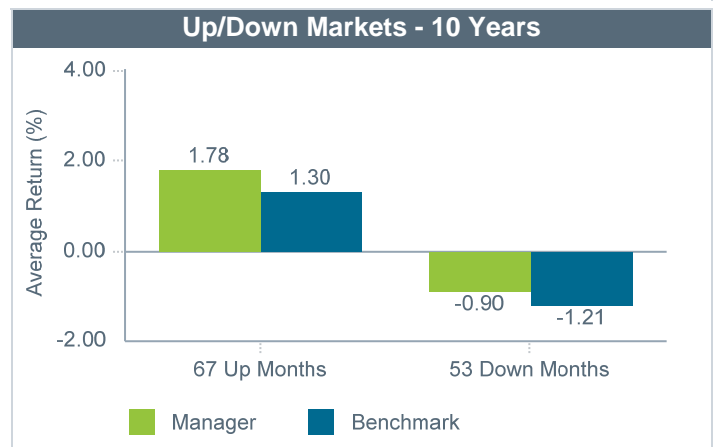
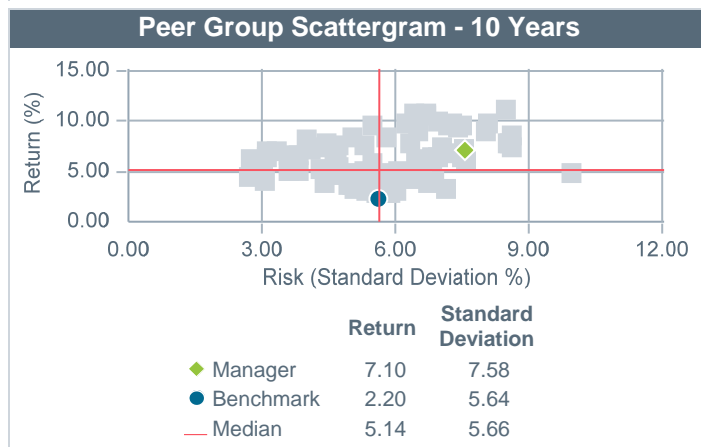
Manager: Brandywine Gbl Opp Fixed Income (CF)

As of March 31, 2019

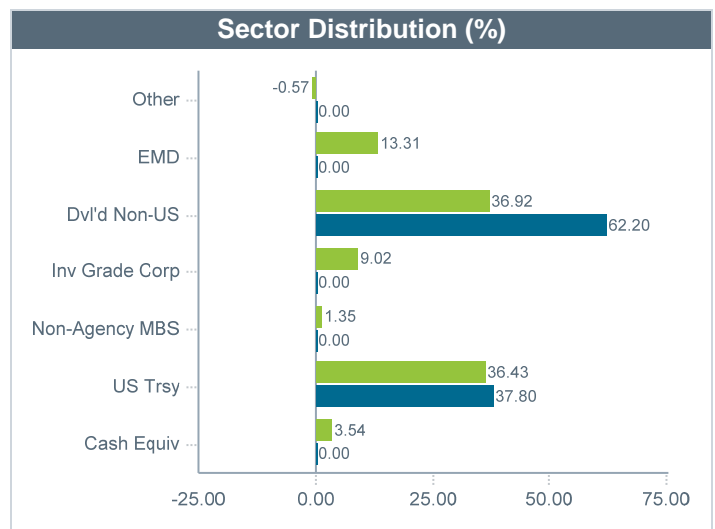
Benchmark: FTSE Wrld Gov't Bond Index

Peer Group: IM Global Fixed Income (SA+CF)

| Performance | | | | | | | | | | | |
|-------------------|------|-----------|------------|------------|------------|-------------|-------|-------|------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 3.29 | -5.38 | 2.77 | 2.15 | 3.23 | 7.10 | -4.66 | 13.39 | 5.75 | -8.02 | 6.91 |
| Benchmark | 1.74 | -1.57 | 0.95 | 0.59 | 0.52 | 2.20 | -0.84 | 7.49 | 1.60 | -3.57 | -0.48 |
| Difference | 1.55 | -3.81 | 1.82 | 1.56 | 2.71 | 4.90 | -3.82 | 5.90 | 4.15 | -4.45 | 7.39 |
| Peer Group Median | 3.84 | 1.89 | 3.78 | 2.53 | 3.34 | 5.14 | -1.86 | 7.62 | 5.77 | -2.30 | 2.61 |
| Rank | 63 | 95 | 70 | 58 | 53 | 30 | 88 | 4 | 51 | 92 | 17 |
| Population | 220 | 219 | 214 | 197 | 168 | 121 | 234 | 246 | 262 | 273 | 272 |



| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Effective Duration | 8.02 | 8.05 |
| Spread Duration | 0.46 | N/A |
| Avg. Maturity | 14.00 | 9.12 |
| Avg. Quality | A1 | Aa2 |
| Yield To Maturity (%) | 4.38 | 1.31 |
| Coupon Rate (%) | 4.88 | 2.36 |
| Current Yield (%) | 4.73 | N/A |
| Holdings Count | 47 | N/A |



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of currency forwards.

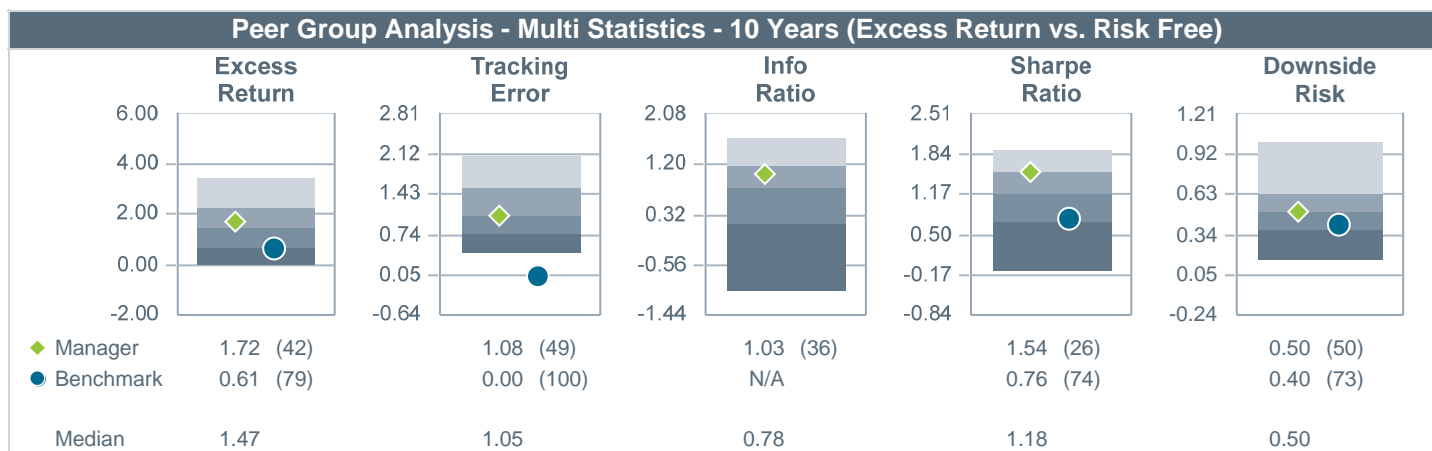
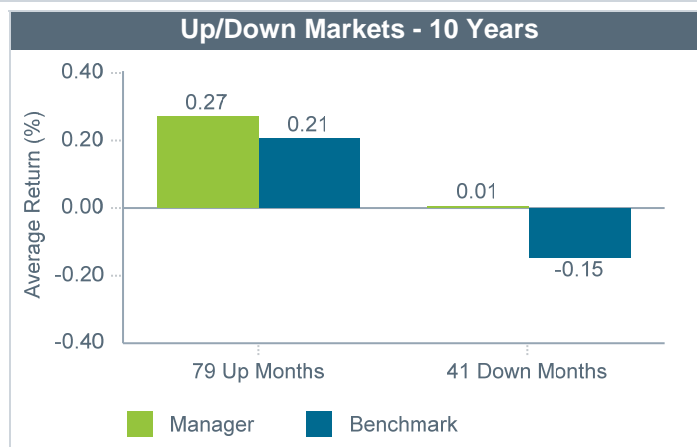
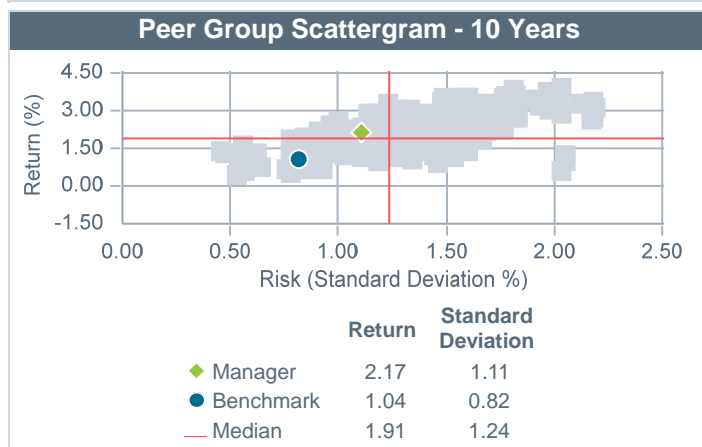
Manager: Payden:Low Dur;Inv (PYSBX)

As of March 31, 2019

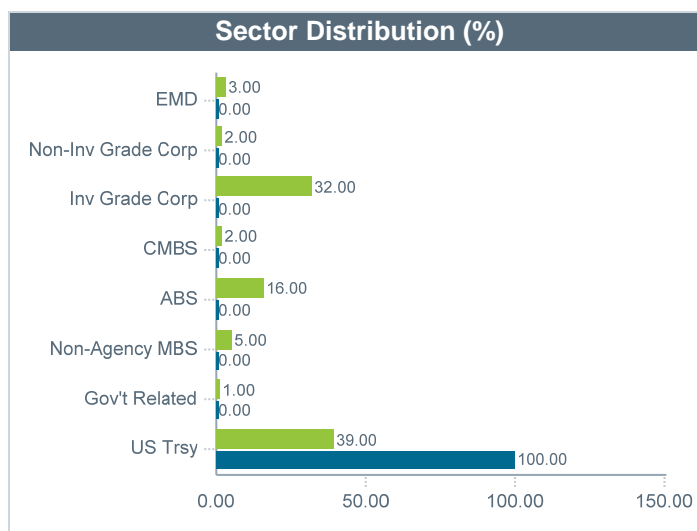
Benchmark: Bloomberg US Trsy 1-3 Yr Index

Peer Group: IM U.S. Short Duration Fixed Income (MF)

| Performance | | | | | | | | | | | |
|-------------------|------|--------|---------|---------|---------|----------|-------|------|------|-------|------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 1.45 | 2.67 | 1.66 | 1.31 | 1.46 | 2.17 | 1.01 | 1.47 | 1.85 | 0.43 | 0.71 |
| Benchmark | 0.99 | 2.73 | 0.98 | 0.98 | 0.84 | 1.04 | 1.56 | 0.42 | 0.86 | 0.56 | 0.63 |
| Difference | 0.46 | -0.06 | 0.68 | 0.33 | 0.62 | 1.13 | -0.55 | 1.05 | 0.99 | -0.13 | 0.08 |
| Peer Group Median | 1.32 | 2.67 | 1.59 | 1.20 | 1.13 | 1.91 | 1.20 | 1.33 | 1.46 | 0.27 | 0.64 |
| Rank | 40 | 50 | 46 | 39 | 32 | 42 | 65 | 41 | 33 | 36 | 46 |
| Population | 681 | 631 | 552 | 482 | 392 | 303 | 634 | 599 | 564 | 514 | 569 |



| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Effective Duration | 1.79 | 1.92 |
| Spread Duration | 1.25 | 1.93 |
| Avg. Maturity | 2.12 | 1.99 |
| Avg. Quality | Aa3 | Aaa |
| Yield To Maturity (%) | 2.67 | 2.31 |
| Coupon Rate (%) | 2.95 | 2.12 |
| Current Yield (%) | 3.05 | N/A |
| Holdings Count | 301 | 97 |

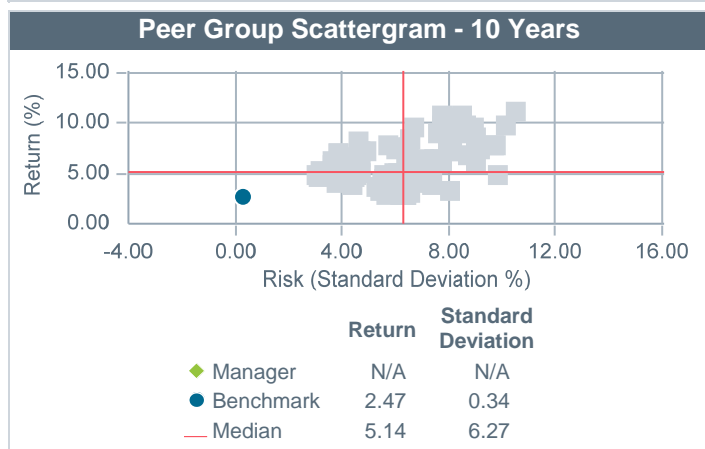


Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: Schroders Securitized Credit (SA)
Benchmark: 3 Month LIBOR Index (USD)+1.75%
Peer Group: IM Global Fixed Income (SA+CF)

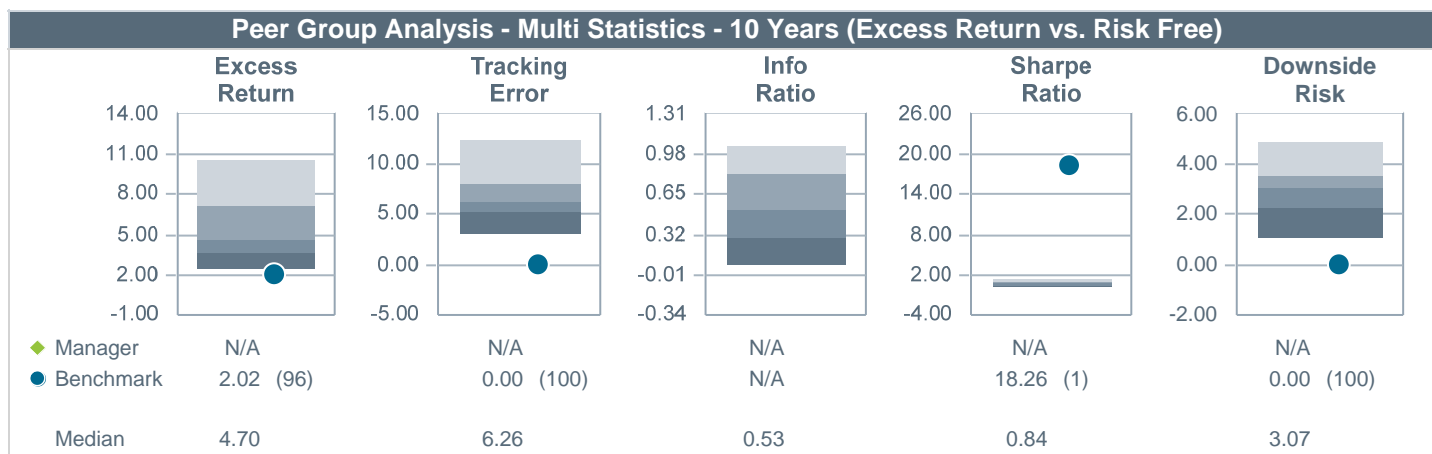
As of March 31, 2019

| Performance | | | | | | | | | | | |
|-------------------|------|--------|---------|---------|---------|----------|-------|------|------|-------|------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 1.50 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Benchmark | 1.16 | 4.27 | 3.25 | 2.76 | 2.57 | 2.47 | 3.86 | 2.88 | 2.42 | 1.99 | 1.99 |
| Difference | 0.34 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Peer Group Median | 3.84 | 1.89 | 3.78 | 2.53 | 3.34 | 5.14 | -1.86 | 7.62 | 5.77 | -2.30 | 2.61 |
| Rank | 96 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Population | 220 | 219 | 214 | 197 | 168 | 121 | 234 | 246 | 262 | 273 | 272 |

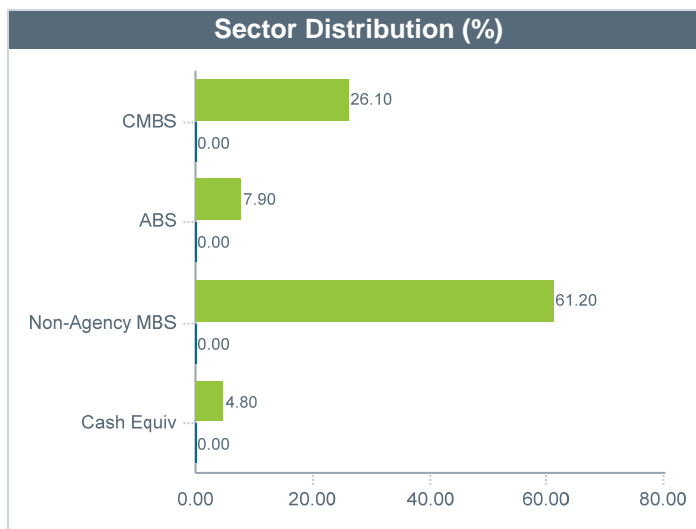


Up/Down Markets - 10 Years

Data is currently unavailable.

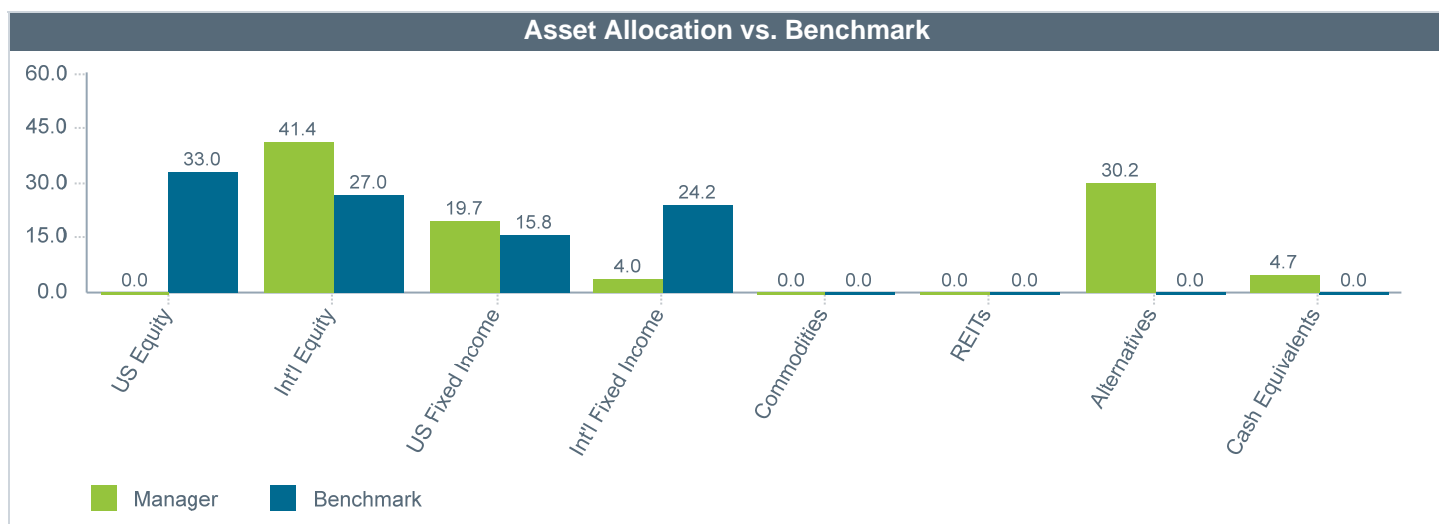
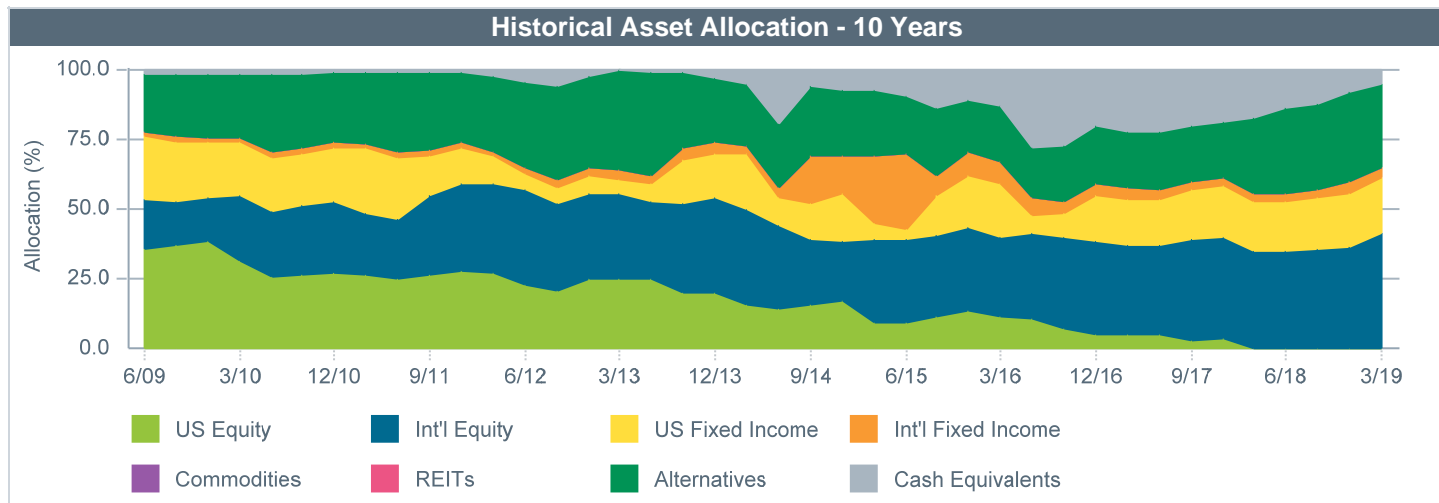


| Portfolio Characteristics | | |
|---------------------------|-----------|-----------|
| | Portfolio | Benchmark |
| Effective Duration | 0.24 | N/A |
| Spread Duration | 3.50 | N/A |
| Avg. Maturity | N/A | N/A |
| Avg. Quality | Aa3 | N/A |
| Yield To Maturity (%) | 3.65 | N/A |
| Coupon Rate (%) | N/A | N/A |
| Current Yield (%) | 3.65 | N/A |
| Holdings Count | 105 | N/A |



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Negative sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps. Allocation to "Other" consists of Agencies. The 3 Month LIBOR Index (USD)+1.75% is a returns-only benchmark.

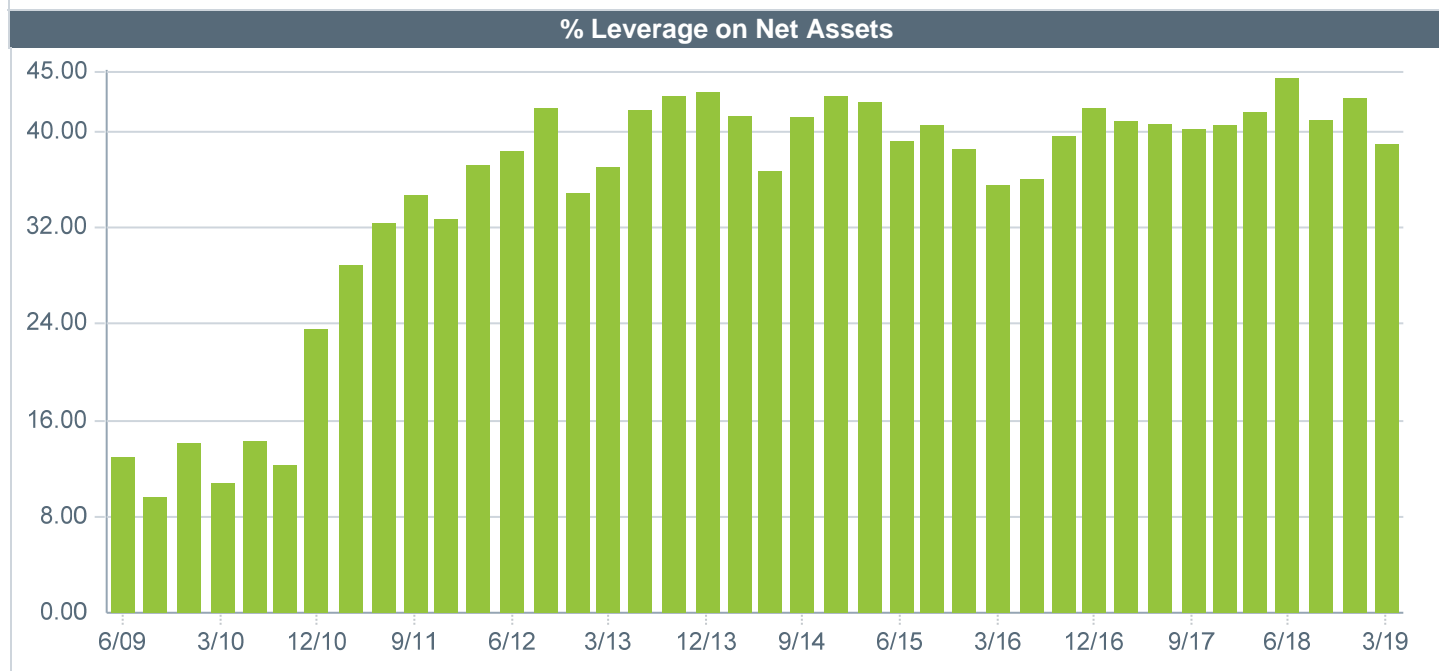
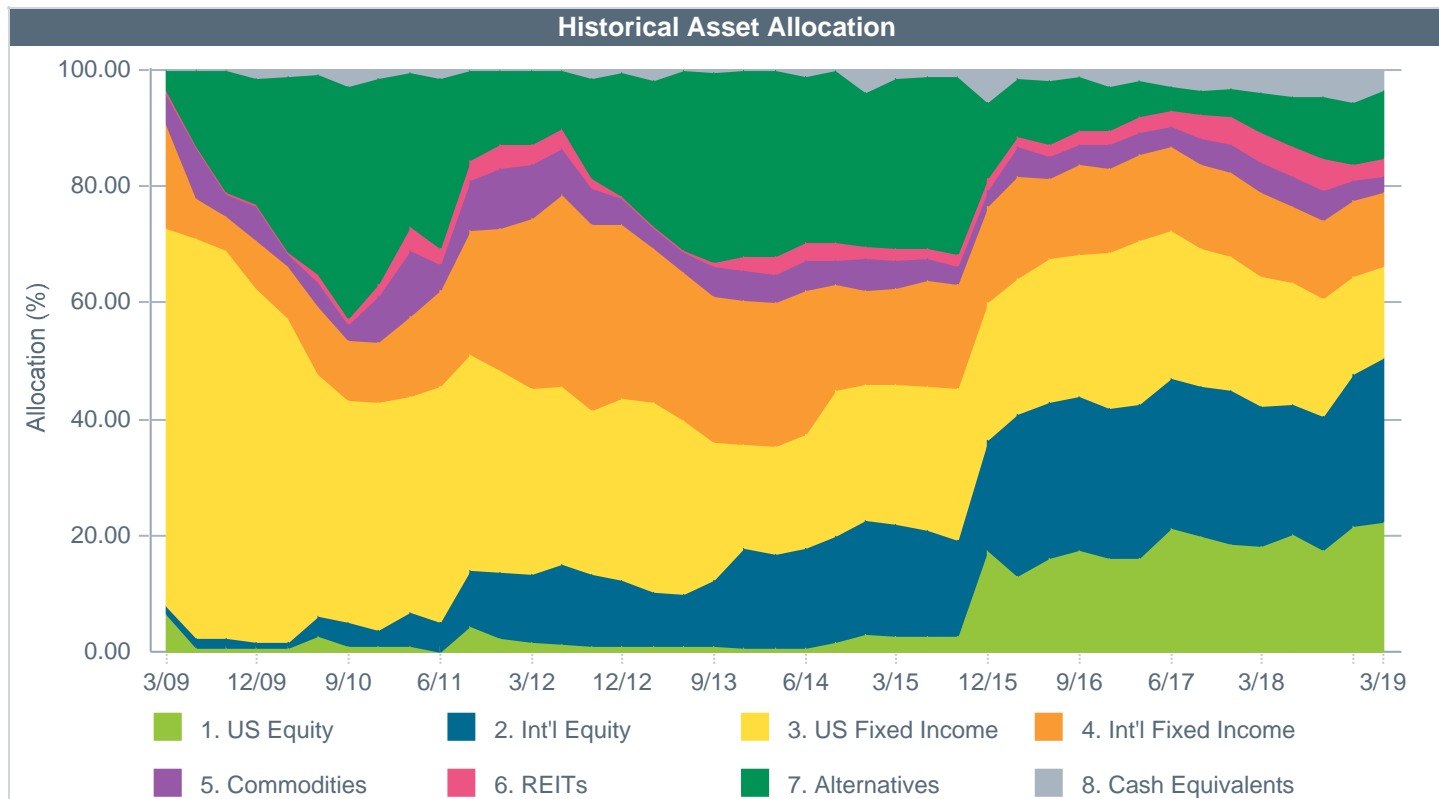
| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 5.47 | -0.88 | 5.28 | 2.28 | 3.87 | 6.37 | -5.27 | 13.07 | 3.45 | -4.23 | 1.25 |
| Benchmark | 8.14 | 1.64 | 7.04 | 4.40 | 5.62 | 8.54 | -6.00 | 17.09 | 5.69 | -2.47 | 2.78 |
| Difference | -2.67 | -2.52 | -1.76 | -2.12 | -1.75 | -2.17 | 0.73 | -4.02 | -2.24 | -1.76 | -1.53 |



| Historical Statistics - 10 Years | | | | | Actual Correlation - 10 Years | |
|----------------------------------|---------|-----------|-------------------------|-----------------------------|---|--------------------|
| | Manager | Benchmark | S&P 500 Index (Cap Wtd) | Bloomberg US Agg Bond Index | | Actual Correlation |
| Standard Deviation | 6.39 | 9.30 | 12.63 | 2.83 | 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx | 0.91 |
| Sharpe Ratio | 0.93 | 0.88 | 1.20 | 1.17 | S&P 500 Index (Cap Wtd) | 0.83 |
| Downside Risk | 3.73 | 5.25 | 7.19 | 1.56 | Russell 2000 Index | 0.65 |
| Excess Return | 5.97 | 8.22 | 15.23 | 3.31 | MSCI EAFE Index (USD) (Net) | 0.89 |
| | | | | | MSCI Emg Mkts Index (USD) (Net) | 0.85 |
| | | | | | Bloomberg US Agg Bond Index | 0.09 |
| | | | | | Bloomberg US Trsy US TIPS Index | 0.23 |
| | | | | | Wilshire US REIT Index | 0.50 |
| | | | | | HFRI FOF Comp Index | 0.81 |
| | | | | | Bloomberg Cmdty Index (TR) | 0.60 |
| | | | | | ICE BofAML 3 Mo US T-Bill Index | -0.04 |
| | | | | | Cons Price Index (Unadjusted) | 0.10 |

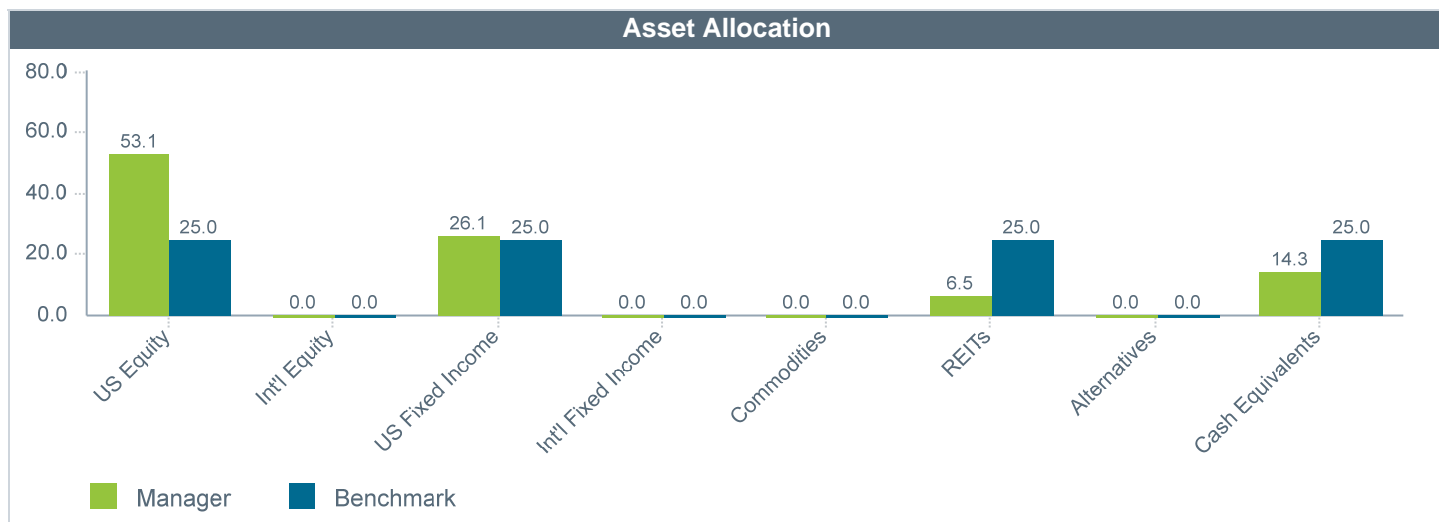
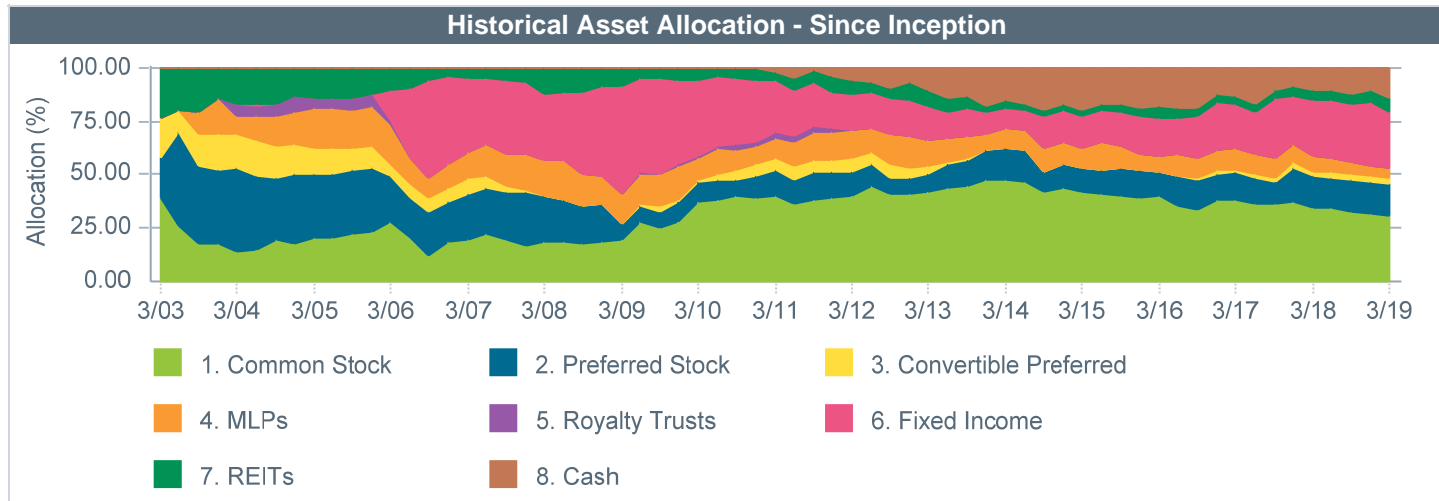
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Allocation to Int'l Eq includes Dev Ex-US, Emg Mkts, & ACWI Ex-US. Allocation to US Fixed Income includes ABS/Structured Products, Hi Yld/Distr'd Debt, & US TIPS. Allocation to Int'l Fixed Income includes Emg Debt. Allocation to Alternatives includes Merger Arbitrage, Special Opp, Systematic Global Macro, Relative Value Interest Rates & FX (Global), Quality vs. S&P 500, Put Selling, & EAFE Value (FX Hedged) vs. S&P 500.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|--------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 3.70 | -2.78 | 5.52 | 0.90 | 1.53 | 5.12 | -6.14 | 12.04 | 13.73 | -11.73 | -2.35 |
| Benchmark | 5.50 | 4.04 | 5.54 | 3.98 | 4.58 | 6.83 | -1.62 | 8.94 | 6.47 | -1.07 | 3.73 |
| Difference | -1.80 | -6.82 | -0.02 | -3.08 | -3.05 | -1.71 | -4.52 | 3.10 | 7.26 | -10.66 | -6.08 |



Performance shown is net of fees and product specific. The PIMCO All Asset All Authority Fund may use leverage up to one-half of net assets. This is accomplished through a line of credit from external banks, the proceeds of which are used to gain incremental exposure to the desired underlying fund(s). Current net allocations sum to 139.09%, due to the use of 39.09% leverage on net assets. Historical allocations shown for Commodities and REITs are available at a one-quarter lag due to the disclosure guidelines set by the investment manager for the underlying fund strategies. All other historical allocations shown above are as of the current quarter. Please see the Addendum for custom index definitions.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 7.81 | 5.98 | 6.92 | N/A | N/A | N/A | -3.64 | 11.83 | 6.47 | -2.07 | N/A |
| Benchmark | 8.54 | 9.61 | 5.77 | 6.23 | 6.50 | 9.67 | -1.31 | 8.13 | 5.37 | 1.61 | 12.88 |
| Difference | -0.73 | -3.63 | 1.15 | N/A | N/A | N/A | -2.33 | 3.70 | 1.10 | -3.68 | N/A |



| Historical Statistics - 10 Years | | | | | Actual Correlation - 10 Years | |
|----------------------------------|---------|-----------|-------------------------|-----------------------------|---------------------------------|--------------------|
| | Manager | Benchmark | S&P 500 Index (Cap Wtd) | Bloomberg US Agg Bond Index | | Actual Correlation |
| Standard Deviation | 6.26 | 6.95 | 12.63 | 2.83 | Westwood Custom Index | 0.78 |
| Sharpe Ratio | 1.32 | 1.31 | 1.20 | 1.17 | S&P 500 Index (Cap Wtd) | 0.88 |
| Downside Risk | 3.37 | 3.28 | 7.19 | 1.56 | Russell 2000 Index | 0.74 |
| Excess Return | 8.25 | 9.08 | 15.23 | 3.31 | MSCI EAFE Index (USD) (Net) | 0.78 |
| | | | | | MSCI Emg Mkts Index (USD) (Net) | 0.70 |
| | | | | | Bloomberg US Agg Bond Index | 0.09 |
| | | | | | Bloomberg US Trsy US TIPS Index | 0.19 |
| | | | | | Wilshire US REIT Index | 0.62 |
| | | | | | HFRI FOF Comp Index | 0.71 |
| | | | | | Bloomberg Cmtty Index (TR) | 0.54 |
| | | | | | ICE BofAML 3 Mo US T-Bill Index | -0.04 |
| | | | | | Cons Price Index (Unadjusted) | 0.09 |

Performance shown is gross of fees and client specific. Statistics are based on product-specific performance for Westwood Income Opp;Inst (WHGIX) prior to 7/01/2014. Calculation is based on monthly periodicity.

Manager: NT Common TIPS Index Lending (CF)

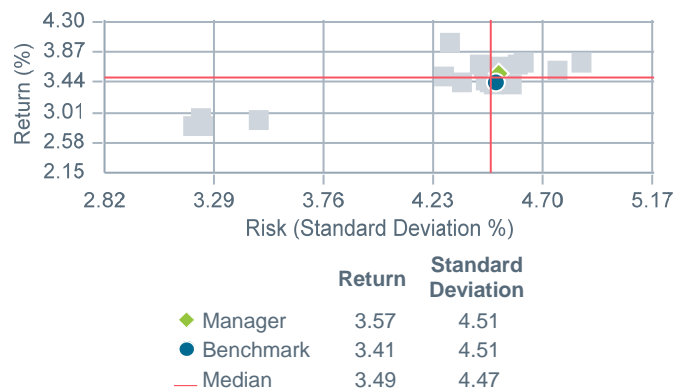
As of March 31, 2019

Benchmark: Bloomberg US Trsy US TIPS Index

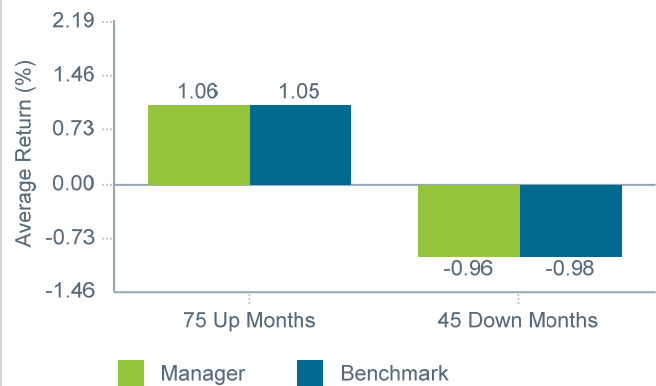
Peer Group: IM U.S. TIPS (SA+CF)

| Performance | | | | | | | | | | | |
|-------------------|------|--------|---------|---------|---------|----------|-------|------|------|-------|------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 3.25 | 2.72 | 1.79 | 2.01 | 1.28 | 3.57 | -1.25 | 3.14 | 4.82 | -1.47 | 3.71 |
| Benchmark | 3.19 | 2.70 | 1.70 | 1.94 | 1.21 | 3.41 | -1.26 | 3.01 | 4.68 | -1.44 | 3.64 |
| Difference | 0.06 | 0.02 | 0.09 | 0.07 | 0.07 | 0.16 | 0.01 | 0.13 | 0.14 | -0.03 | 0.07 |
| Peer Group Median | 3.20 | 2.73 | 1.77 | 1.95 | 1.25 | 3.49 | -1.22 | 3.10 | 4.66 | -1.40 | 3.60 |
| Rank | 33 | 52 | 40 | 33 | 44 | 36 | 54 | 48 | 31 | 66 | 37 |
| Population | 32 | 32 | 32 | 31 | 28 | 27 | 33 | 34 | 36 | 37 | 42 |

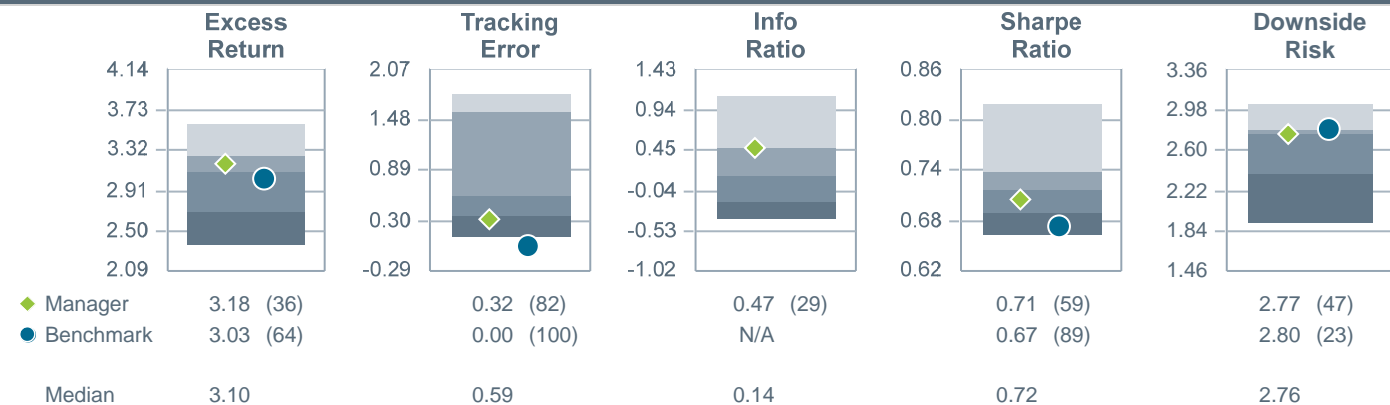
Peer Group Scattergram - 10 Years



Up/Down Markets - 10 Years



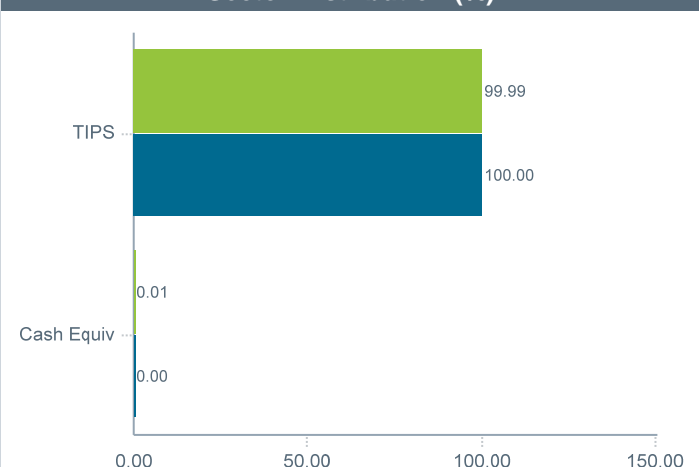
Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)



Portfolio Characteristics

| | Portfolio | Benchmark |
|-----------------------|-----------|-----------|
| Effective Duration | 5.33 | 5.16 |
| Spread Duration | 0.00 | 5.16 |
| Avg. Maturity | 8.09 | 8.07 |
| Avg. Quality | Aaa | Aaa |
| Yield To Maturity (%) | 2.36 | 2.60 |
| Coupon Rate (%) | 0.81 | 0.76 |
| Current Yield (%) | 0.74 | N/A |
| Holdings Count | 42 | 40 |

Sector Distribution (%)



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

| Performance | | | | | | | | | | | |
|-------------|------|--------|---------|---------|---------|----------|--------|-------|-------|--------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 9.23 | -4.50 | 5.77 | N/A | N/A | N/A | -13.15 | 11.98 | 12.44 | N/A | N/A |
| Benchmark | 2.34 | -7.61 | -0.34 | -6.03 | -5.88 | 0.40 | -10.95 | 5.36 | 7.77 | -17.74 | -6.47 |
| Difference | 6.89 | 3.11 | 6.11 | N/A | N/A | N/A | -2.20 | 6.62 | 4.67 | N/A | N/A |

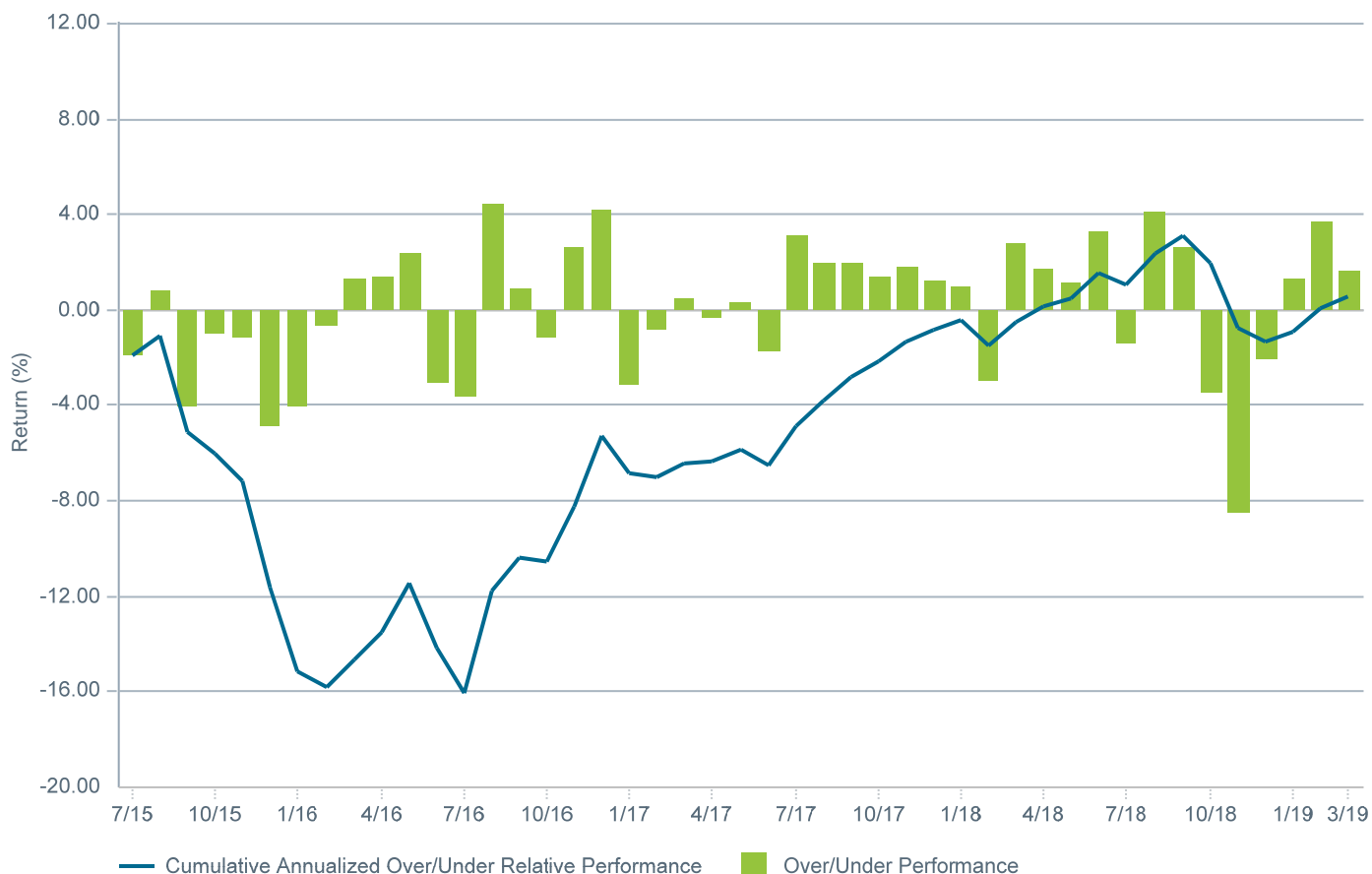
Historical Statistics - 3 Years (Excess Return vs. Risk Free)



Actual Correlation - 3 Years

| | Actual Correlation |
|--------------------------------------|--------------------|
| Bloomberg Cmdty Ex Energy Index (TR) | 0.55 |
| S&P 500 Index (Cap Wtd) | 0.32 |
| Russell 2000 Index | 0.30 |
| MSCI EAFE Index (USD) (Net) | 0.35 |
| MSCI Emg Mkts Index (USD) (Net) | 0.24 |
| Bloomberg US Agg Bond Index | -0.04 |
| Bloomberg US Trsy US TIPS Index | 0.12 |
| Wilshire US REIT Index | 0.06 |
| HFRI FOF Comp Index | 0.49 |
| Bloomberg Cmdty Index (TR) | 0.85 |
| ICE BofAML 3 Mo US T-Bill Index | -0.17 |
| Cons Price Index (Unadjusted) | 0.39 |

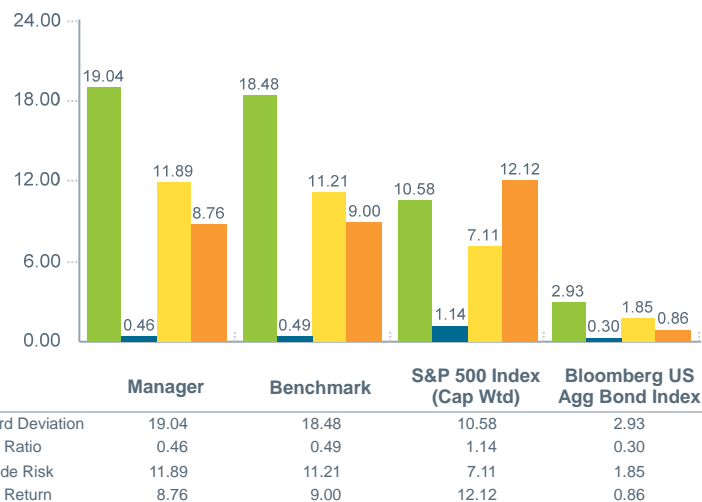
Relative Performance - Since Inception



Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|--------|-------|-------|--------|------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 20.92 | 15.95 | 8.46 | N/A | N/A | N/A | -12.98 | -4.81 | 20.10 | N/A | N/A |
| Benchmark | 18.75 | 17.50 | 8.84 | -3.86 | 1.74 | 11.01 | -11.67 | -5.58 | 21.95 | -35.07 | 7.66 |
| Difference | 2.17 | -1.55 | -0.38 | N/A | N/A | N/A | -1.31 | 0.77 | -1.85 | N/A | N/A |

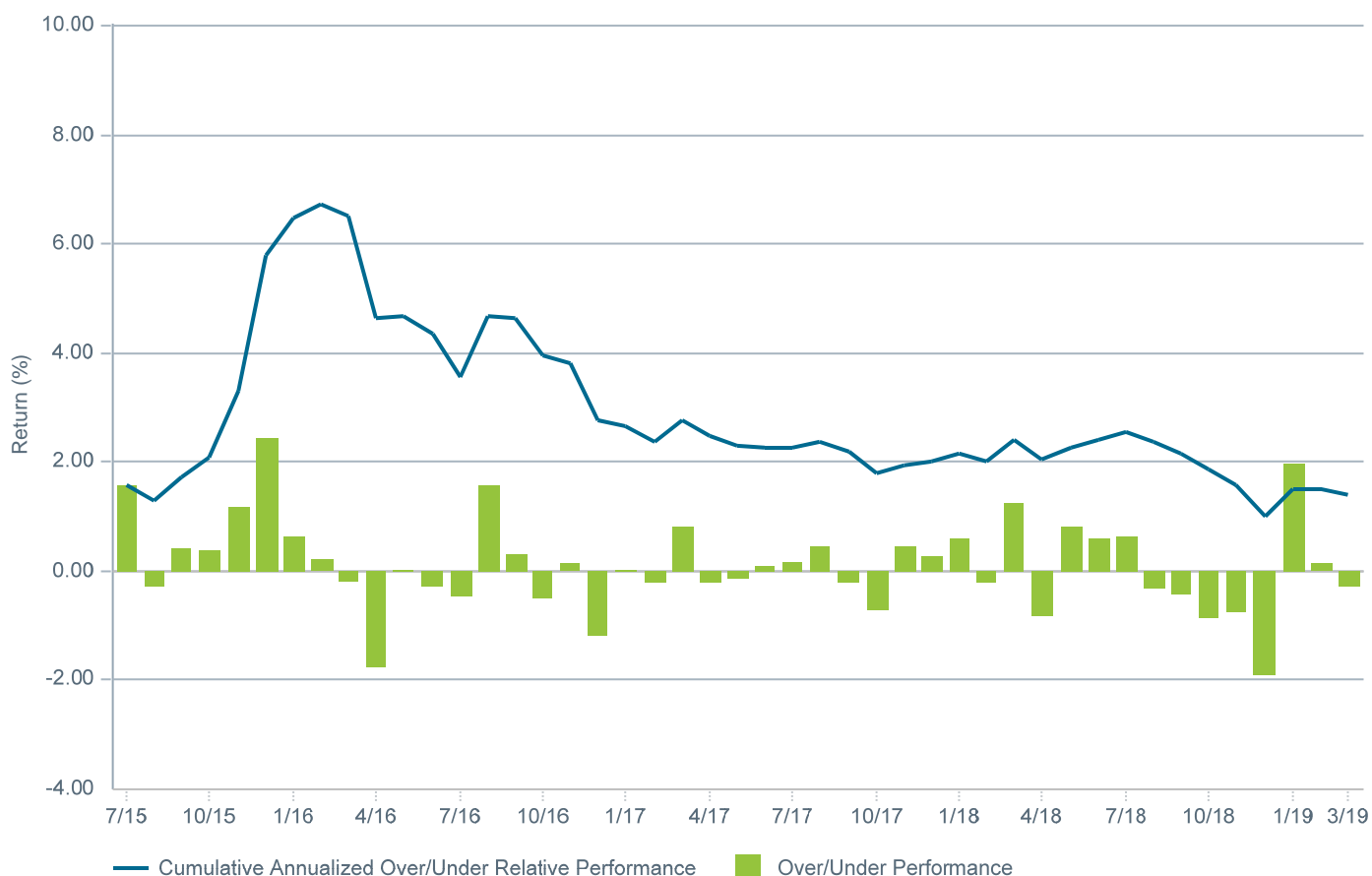
Historical Statistics - 3 Years (Excess Return vs. Risk Free)



Actual Correlation - 3 Years

| | Actual Correlation |
|---------------------------------|--------------------|
| S&P MLP Index (TR) | 0.99 |
| S&P 500 Index (Cap Wtd) | 0.71 |
| Russell 2000 Index | 0.66 |
| MSCI EAFE Index (USD) (Net) | 0.59 |
| MSCI Emg Mkts Index (USD) (Net) | 0.45 |
| Bloomberg US Agg Bond Index | 0.06 |
| Bloomberg US Trsy US TIPS Index | 0.24 |
| Wilshire US REIT Index | 0.52 |
| HFRI FOF Comp Index | 0.68 |
| Bloomberg Cmtty Index (TR) | 0.66 |
| ICE BofAML 3 Mo US T-Bill Index | -0.04 |
| Cons Price Index (Unadjusted) | 0.29 |

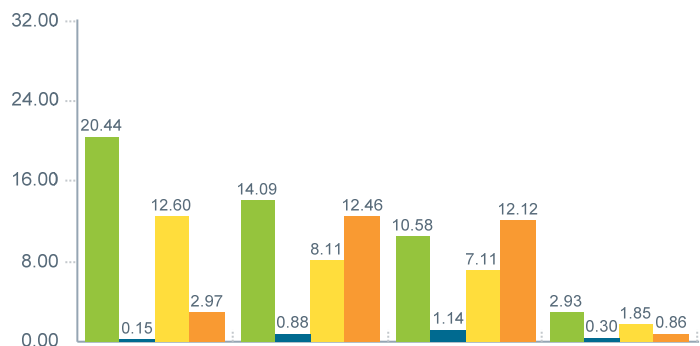
Relative Performance - Since Inception



Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|--------|--------|-------|--------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 13.82 | -13.79 | 2.13 | N/A | N/A | N/A | -28.04 | 0.09 | 45.15 | N/A | N/A |
| Benchmark | 12.39 | -0.09 | 13.42 | 1.83 | 1.53 | 4.86 | -12.57 | 22.66 | 32.28 | -24.00 | -9.66 |
| Difference | 1.43 | -13.70 | -11.29 | N/A | N/A | N/A | -15.47 | -22.57 | 12.87 | N/A | N/A |

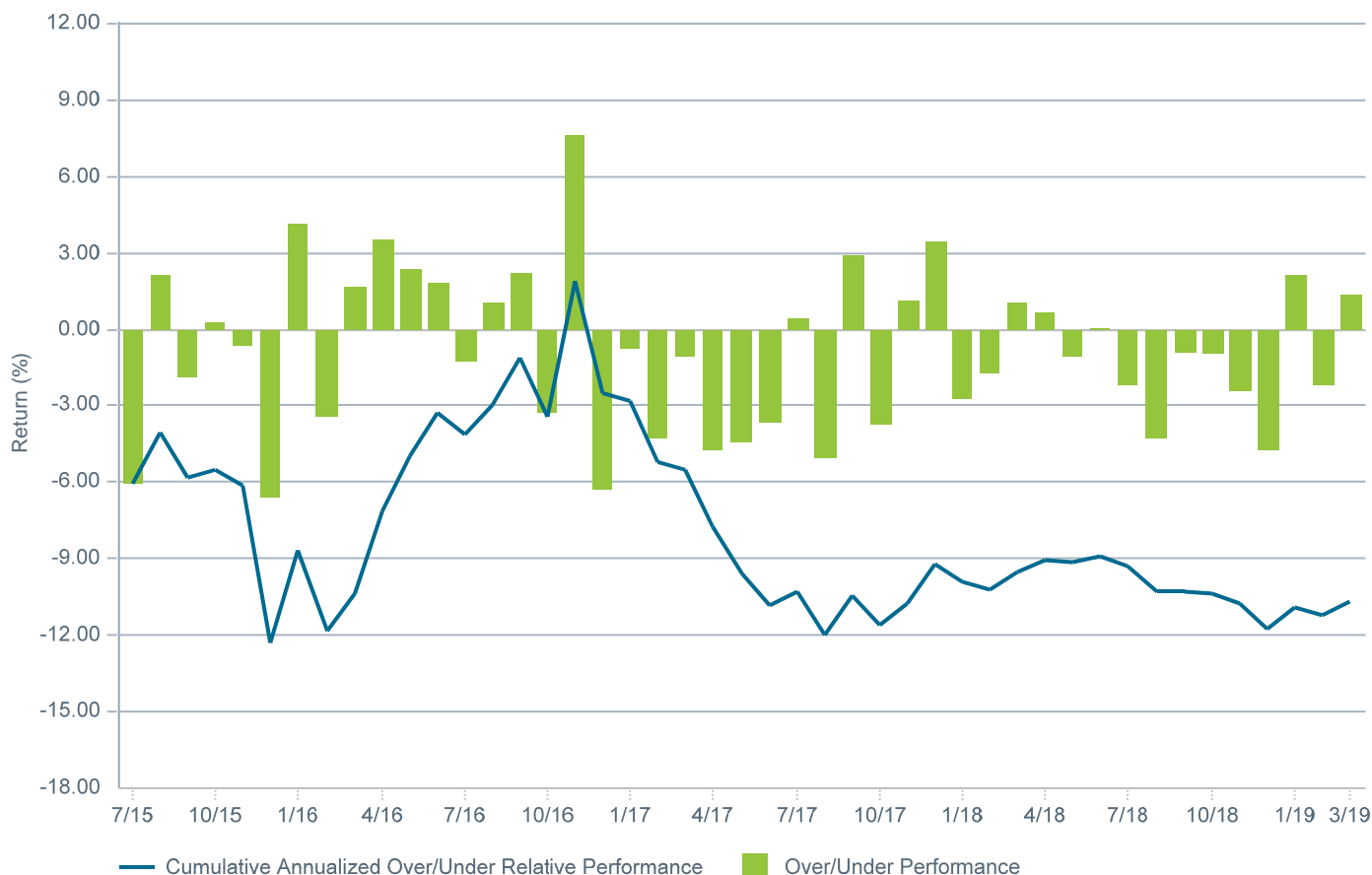
Historical Statistics - 3 Years (Excess Return vs. Risk Free)



Actual Correlation - 3 Years

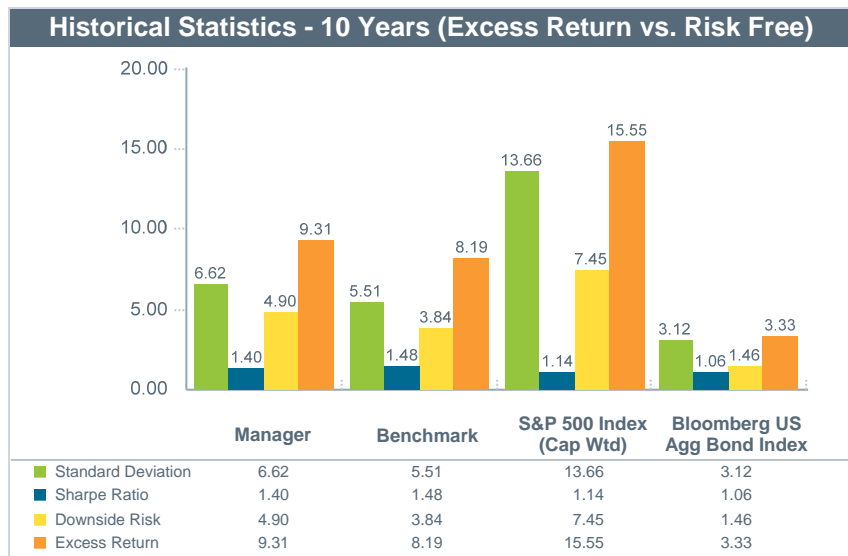
| | Actual Correlation |
|-------------------------------------|--------------------|
| S&P Gbl Natural Res Sect Index (TR) | 0.88 |
| S&P 500 Index (Cap Wtd) | 0.47 |
| Russell 2000 Index | 0.55 |
| MSCI EAFE Index (USD) (Net) | 0.49 |
| MSCI Emg Mkts Index (USD) (Net) | 0.36 |
| Bloomberg US Agg Bond Index | -0.14 |
| Bloomberg US Trsy US TIPS Index | 0.14 |
| Wilshire US REIT Index | 0.23 |
| HFRI FOF Comp Index | 0.52 |
| Bloomberg Cmtty Index (TR) | 0.69 |
| ICE BofAML 3 Mo US T-Bill Index | -0.18 |
| Cons Price Index (Unadjusted) | 0.18 |

Relative Performance - Since Inception



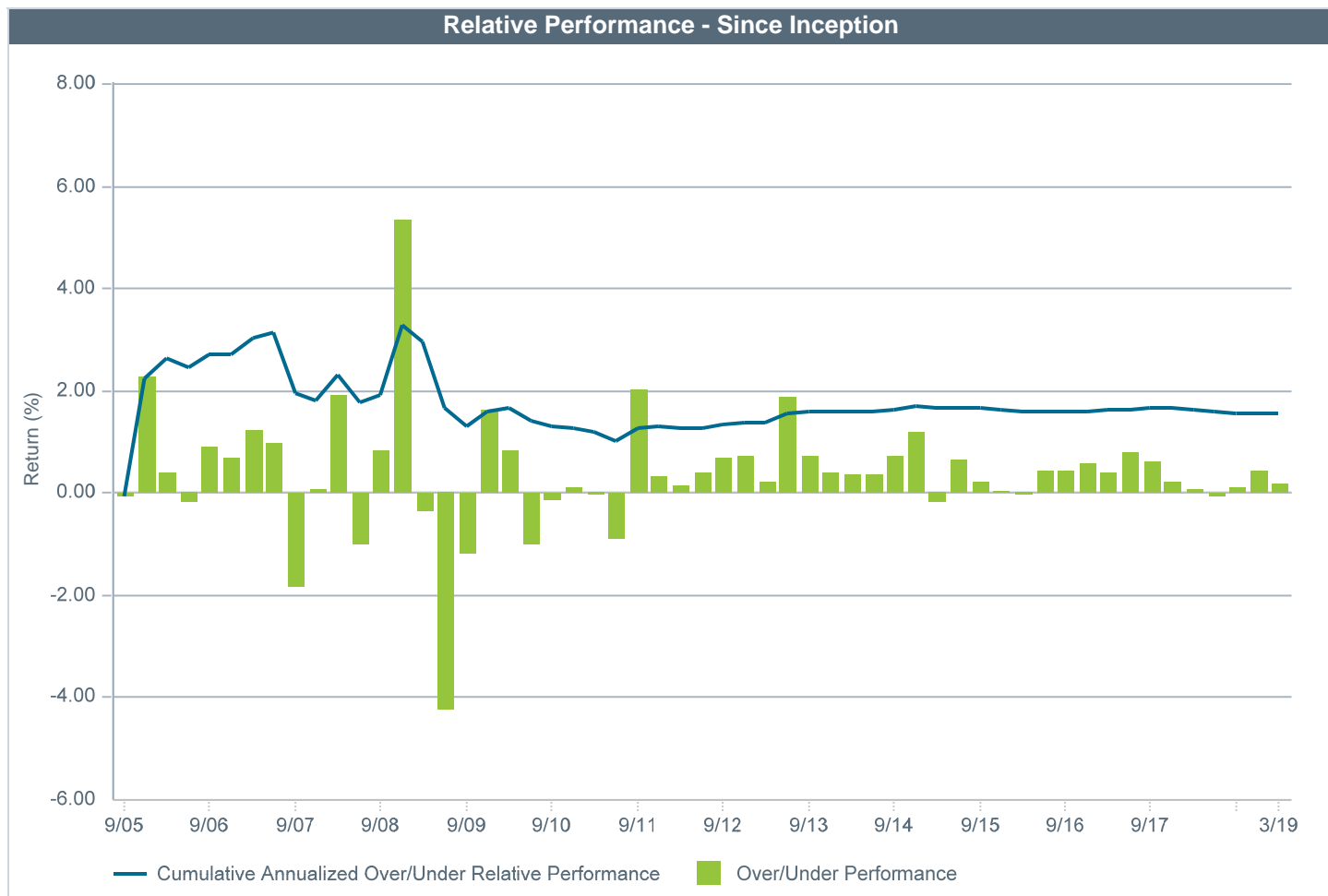
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity.

| Performance | | | | | | | | | | | |
|-------------|------|--------|---------|---------|---------|----------|------|------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 1.60 | 8.24 | 9.52 | 11.80 | 12.80 | 9.85 | 8.99 | 9.84 | 10.38 | 15.86 | 15.52 |
| Benchmark | 1.42 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 15.02 | 12.50 |
| Difference | 0.18 | 0.72 | 1.55 | 1.62 | 2.03 | 1.11 | 0.64 | 2.22 | 1.61 | 0.84 | 3.02 |



Actual Correlation - 10 Years

| | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.97 |
| S&P 500 Index (Cap Wtd) | -0.40 |
| Russell 2000 Index | -0.40 |
| MSCI EAFE Index (USD) (Net) | -0.53 |
| MSCI Emg Mkts Index (USD) (Net) | -0.64 |
| Bloomberg US Agg Bond Index | -0.24 |
| Bloomberg US Trsy US TIPS Index | -0.16 |
| Wilshire US REIT Index | -0.69 |
| HFRI FOF Comp Index | -0.37 |
| Bloomberg Cmtty Index (TR) | -0.33 |
| ICE BofAML 3 Mo US T-Bill Index | -0.09 |
| Cons Price Index (Unadjusted) | -0.16 |



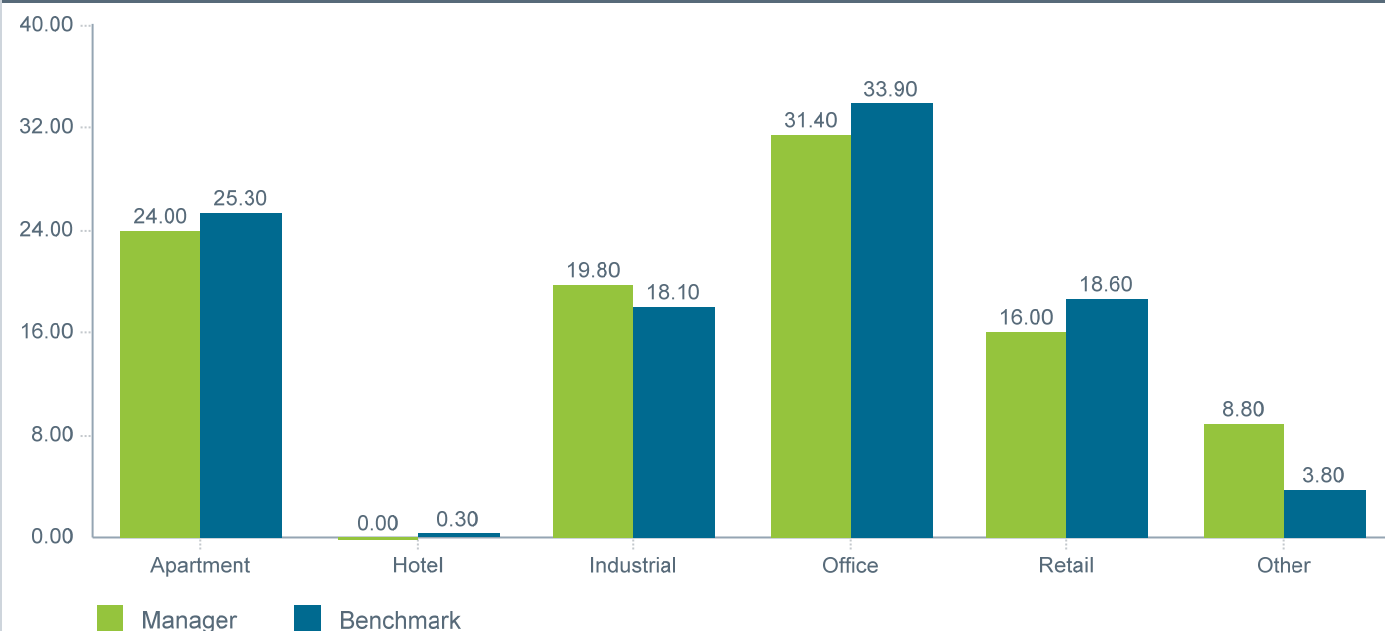
Investment Strategy

The Fund pursues a diversified core real estate strategy that invests in assets with stable, highly predictable cash flow returns. The Fund targets high quality office, Class A multifamily, warehouse distribution, and top-tier super regional malls in addition to storage facilities in targeted primary markets. The Fund favors investing in major metropolitan markets and secondary markets expected to achieve above-average economic performance and believes that those cities offer better liquidity, more diverse tenant bases, and stronger resilience to market cycles. It operates with leverage of 50% or less and may invest up to 15% of its gross assets in higher-risk, value-added real estate investment opportunities.

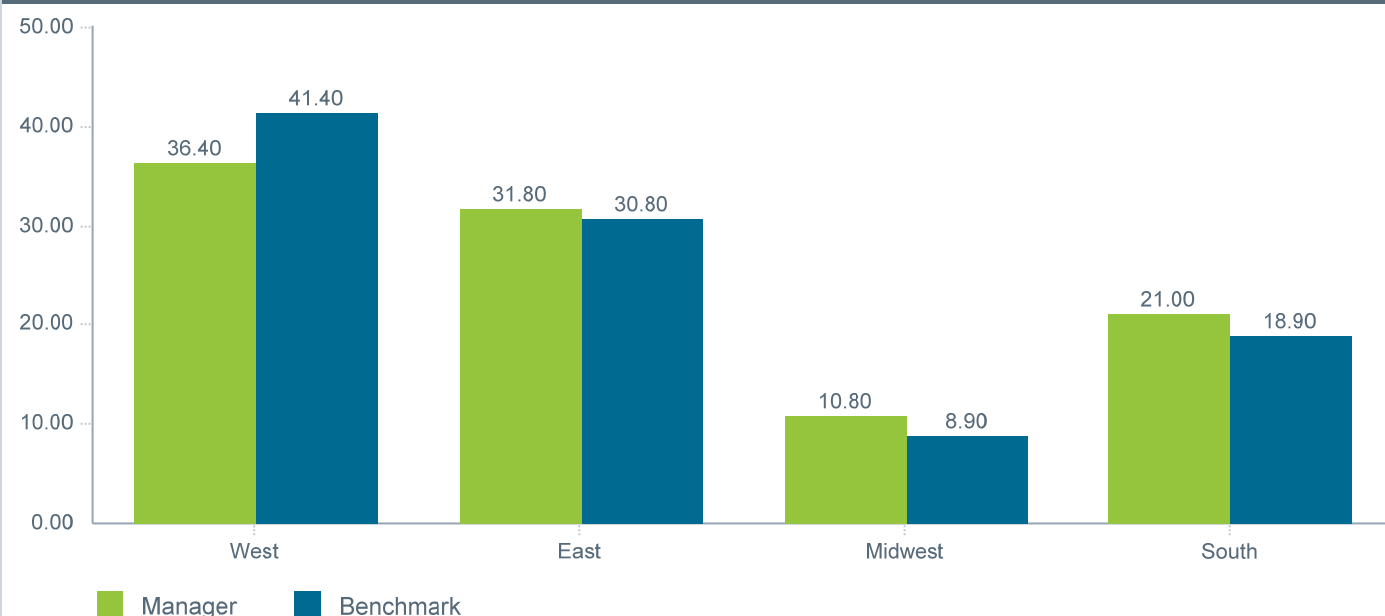
Investment Profile

| | |
|--------------------------------|----------|
| Fund Inception | 1973 |
| Legal Structure | LLC |
| Fund Structure | Open-End |
| Gross Real Estate Assets (\$M) | 28,316 |
| Fund Leverage % | 17.70 |
| Portfolio Occupancy % | 92.80 |
| Cash Reserve % | 0.70 |
| Number of Investments | 431 |
| Number of Limited Partners | 375 |

Property Type Allocation (%)

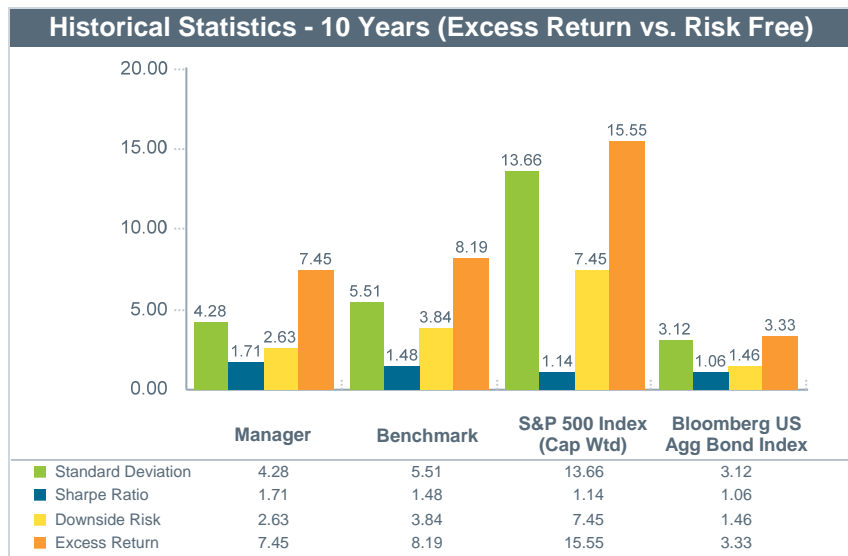


Geographic Allocation (%)



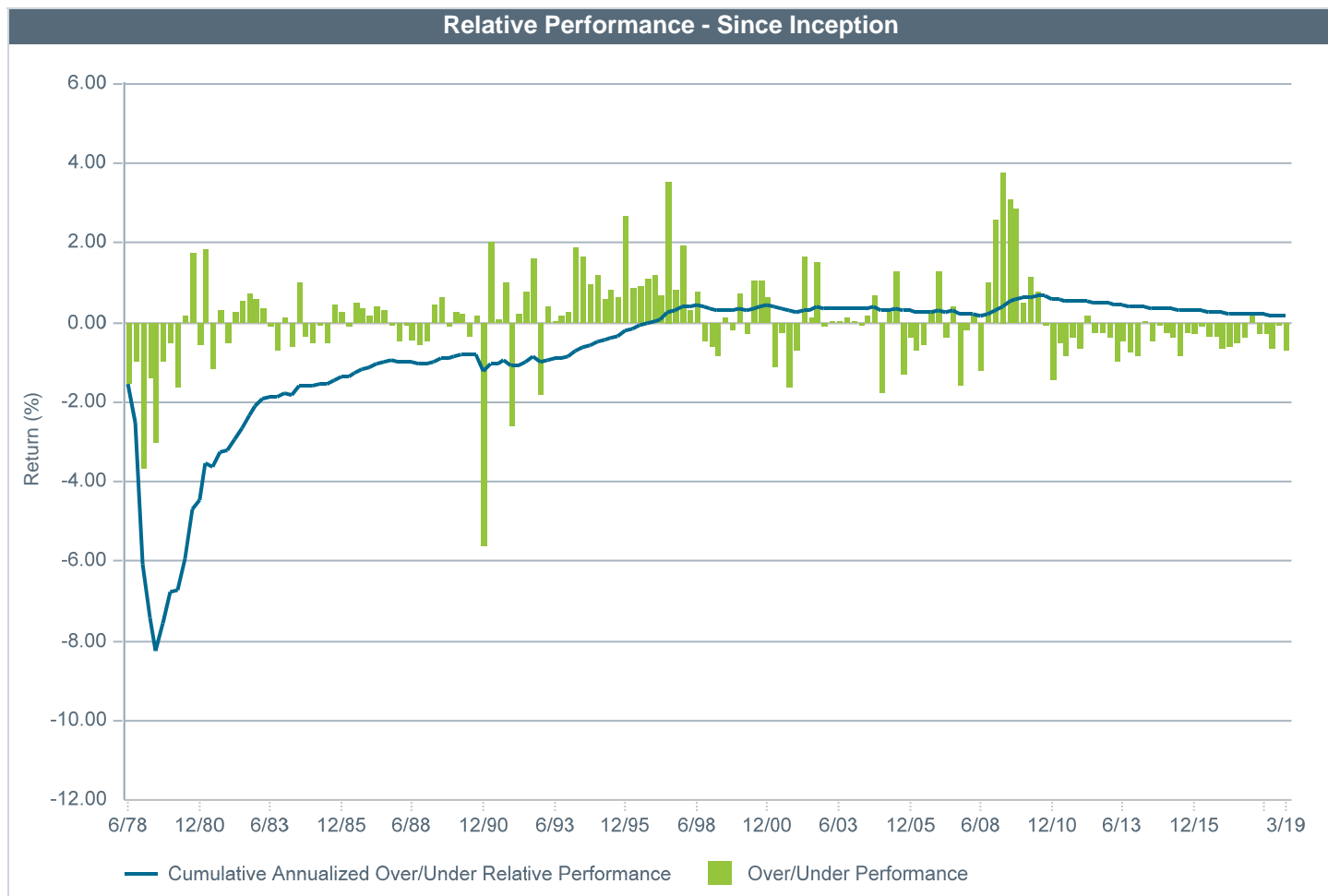
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of self-storage, land held for potential development, hotel and life sciences and/or medical office assets. 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.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 0.69 | 5.73 | 6.34 | 8.59 | 9.01 | 8.01 | 6.99 | 6.30 | 7.21 | 12.94 | 11.69 |
| Benchmark | 1.42 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 15.02 | 12.50 |
| Difference | -0.73 | -1.79 | -1.63 | -1.59 | -1.76 | -0.73 | -1.36 | -1.32 | -1.56 | -2.08 | -0.81 |



Actual Correlation - 10 Years

| | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.97 |
| S&P 500 Index (Cap Wtd) | -0.42 |
| Russell 2000 Index | -0.39 |
| MSCI EAFE Index (USD) (Net) | -0.49 |
| MSCI Emg Mkts Index (USD) (Net) | -0.57 |
| Bloomberg US Agg Bond Index | -0.10 |
| Bloomberg US Trsy US TIPS Index | -0.06 |
| Wilshire US REIT Index | -0.59 |
| HFRI FOF Comp Index | -0.38 |
| Bloomberg Cmtty Index (TR) | -0.32 |
| ICE BofAML 3 Mo US T-Bill Index | -0.15 |
| Cons Price Index (Unadjusted) | -0.11 |



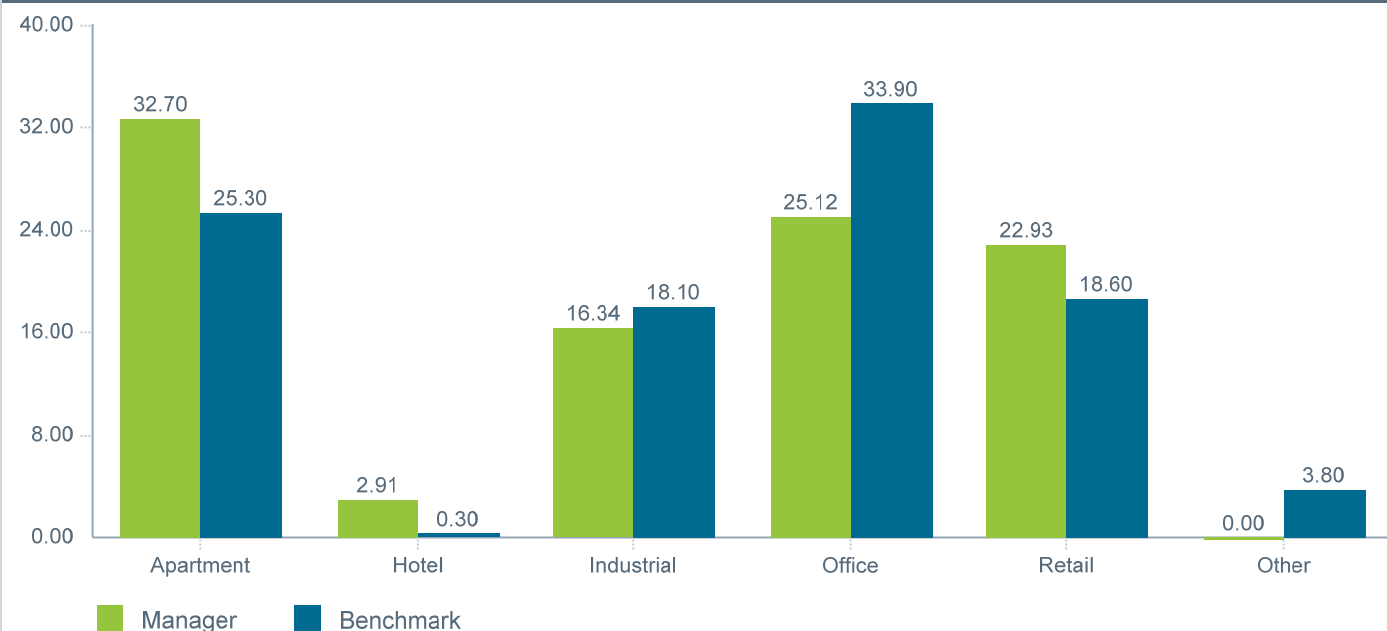
Investment Strategy

The Fund pursues a diversified core real estate strategy that seeks to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and asset management. The Fund invests in well-leased, stabilized assets in major US metropolitan markets and receives the majority of its return from the income component. Diversification for the Fund is consistently pursued on many levels, including geographic region, property type, and economic sector. The Fund has historically maintained a leverage ratio significantly lower than the NCREIF ODCE Index and invests 5-15% of its gross assets in value-added type real estate investment opportunities.

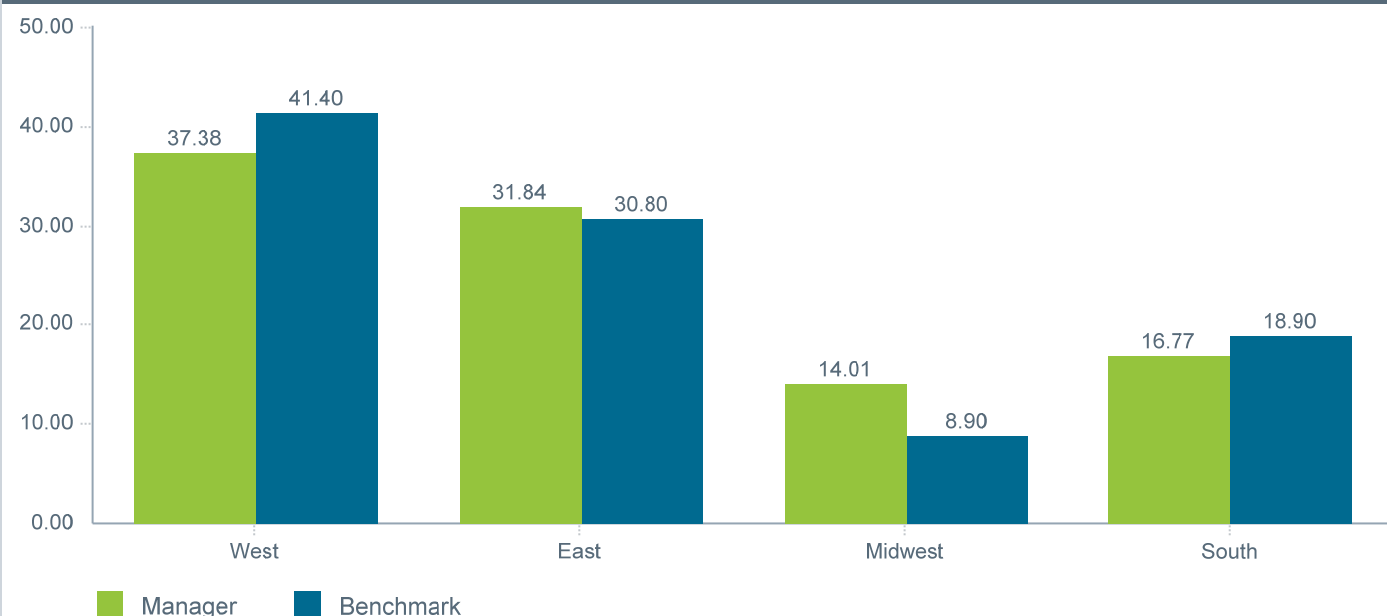
Investment Profile

| | |
|--------------------------------|----------|
| Fund Inception | 1978 |
| Legal Structure | LP |
| Fund Structure | Open-End |
| Gross Real Estate Assets (\$M) | 32,609 |
| Fund Leverage % | 17.50 |
| Portfolio Occupancy % | 93.30 |
| Cash Reserve % | 5.60 |
| Number of Investments | 202 |
| Number of Limited Partners | 437 |

Property Type Allocation (%)



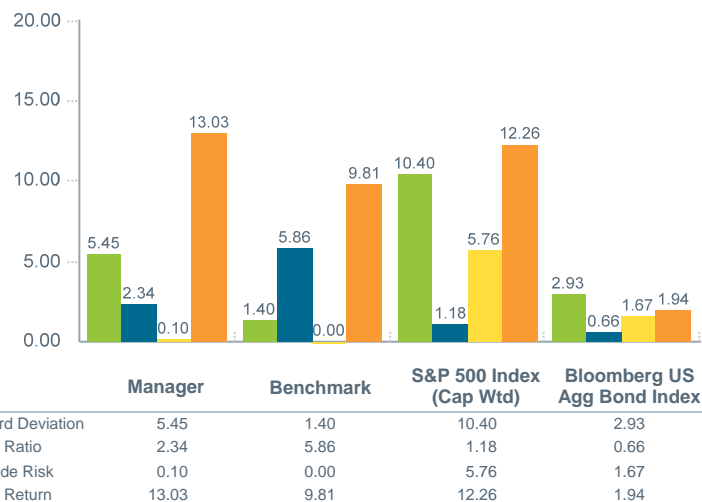
Geographic Allocation (%)



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. 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.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | -0.26 | 4.69 | 10.86 | 13.33 | 14.14 | N/A | 9.71 | 18.01 | 6.60 | 22.42 | 14.69 |
| Benchmark | 1.42 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 15.02 | 12.50 |
| Difference | -1.68 | -2.83 | 2.89 | 3.15 | 3.37 | N/A | 1.36 | 10.39 | -2.17 | 7.40 | 2.19 |

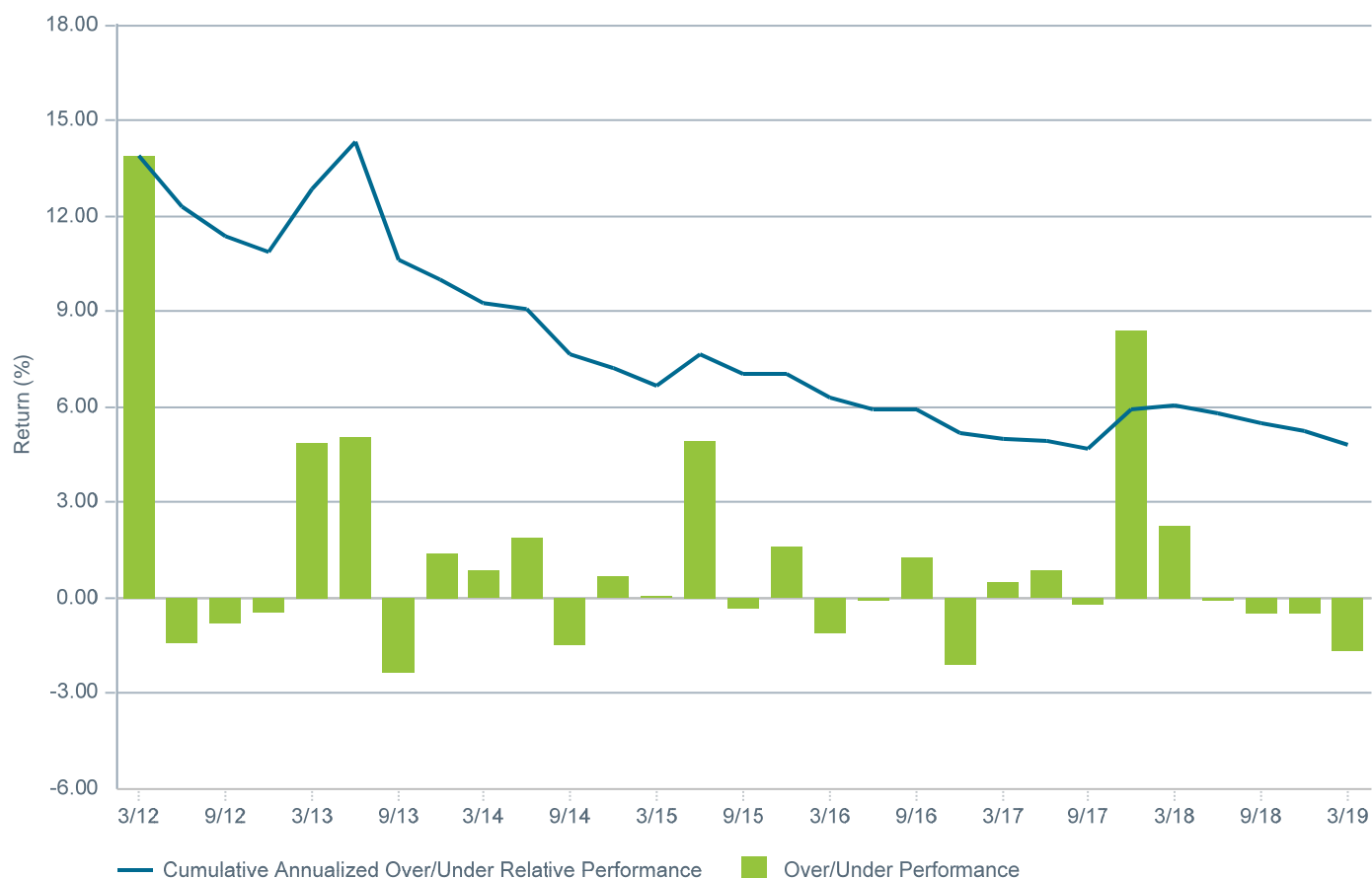
Historical Statistics - 7 Years (Excess Return vs. Risk Free)



Actual Correlation - 7 Years

| | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.44 |
| S&P 500 Index (Cap Wtd) | 0.14 |
| Russell 2000 Index | 0.07 |
| MSCI EAFE Index (USD) (Net) | 0.06 |
| MSCI Emg Mkts Index (USD) (Net) | -0.06 |
| Bloomberg US Agg Bond Index | -0.41 |
| Bloomberg US Trsy US TIPS Index | -0.38 |
| Wilshire US REIT Index | -0.15 |
| HFRI FOF Comp Index | 0.15 |
| Bloomberg Cmnty Index (TR) | -0.06 |
| ICE BofAML 3 Mo US T-Bill Index | -0.26 |
| Cons Price Index (Unadjusted) | 0.03 |

Relative Performance - Since Inception



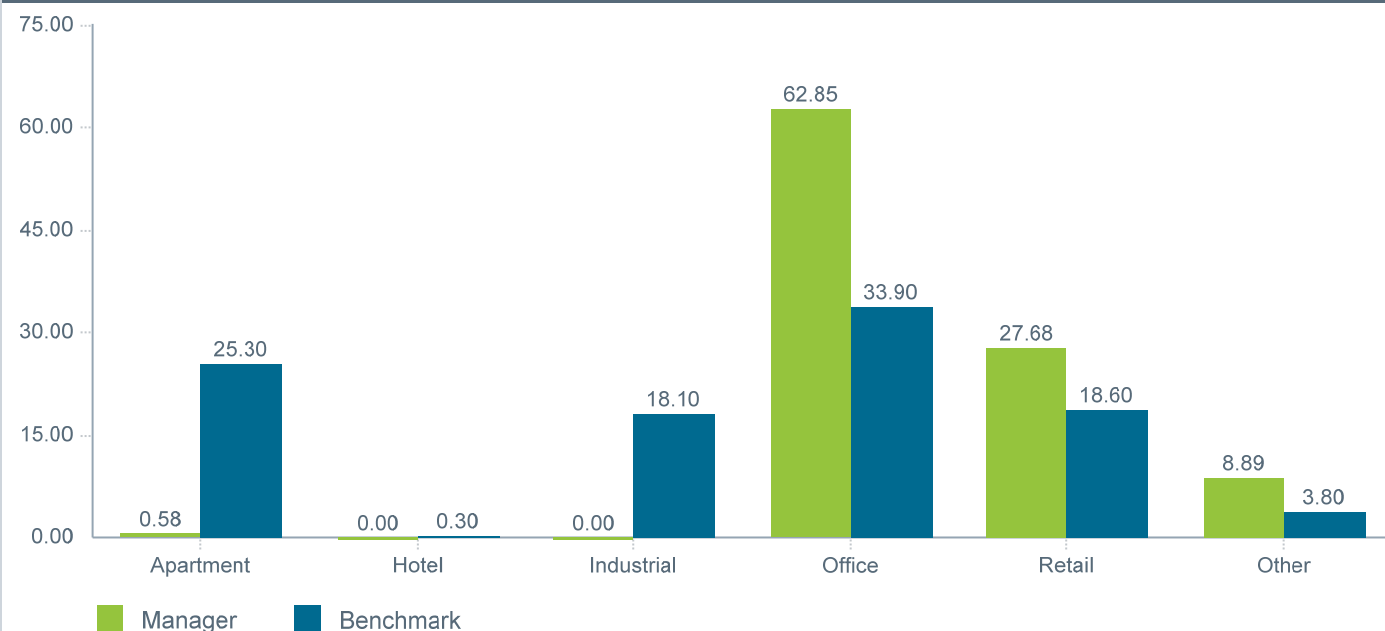
Investment Strategy

The Fund pursues a concentrated core-plus real estate strategy that acquires, manages and enhances the value of core and core-plus office, retail and mixed-used assets in major metropolitan markets. Target assets are stabilized or nearly stabilized core properties with high-quality, creditworthy and diversified tenant rosters producing predictable and growing income, with the potential for operational improvements to enhance NOI and drive capital appreciation. Additionally, the Fund also targets assets that are moderately- to substantially-leased but could benefit from repositioning. It operates with leverage of 50% or less and may invest up to 20% of its gross assets in higher-risk, non-core real estate investment opportunities.

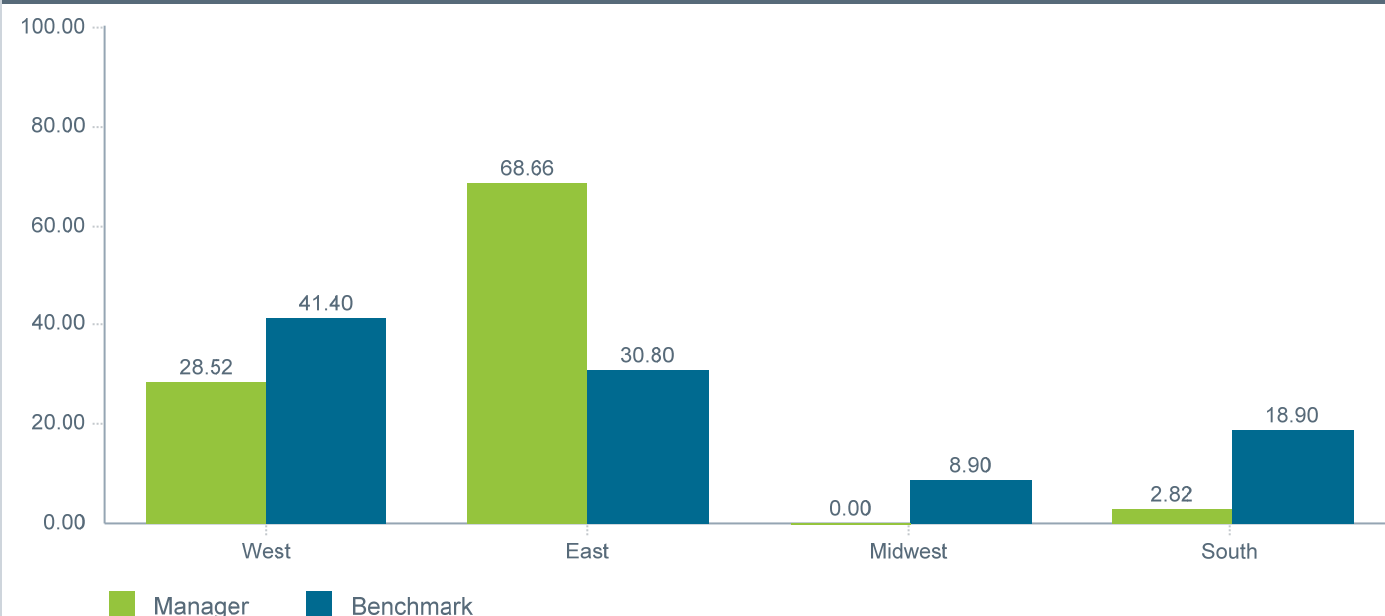
Investment Profile

| | |
|--------------------------------|----------|
| Fund Inception | 2011 |
| Legal Structure | REIT |
| Fund Structure | Open-End |
| Gross Real Estate Assets (\$M) | 3,632 |
| Fund Leverage % | 40.31 |
| Portfolio Occupancy % | 82.97 |
| Cash Reserve % | 5.61 |
| Number of Investments | 22 |
| Number of Limited Partners | 60 |

Property Type Allocation (%)

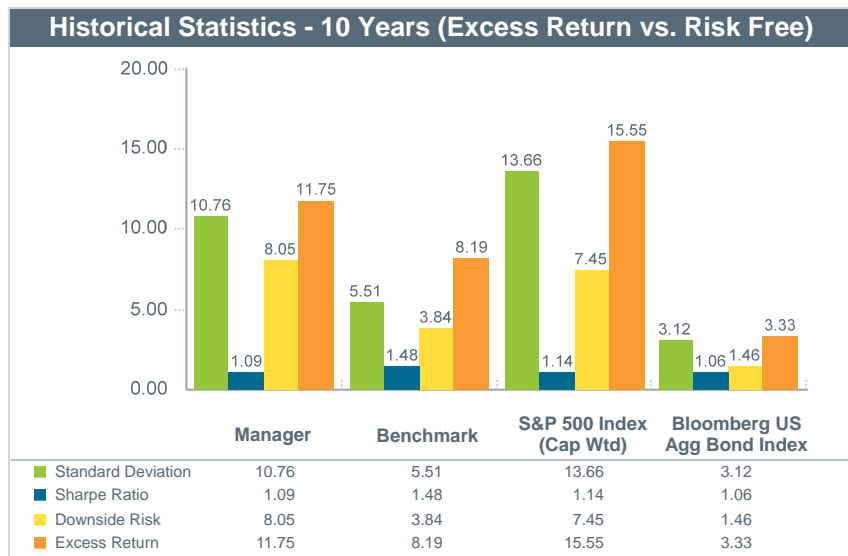


Geographic Allocation (%)



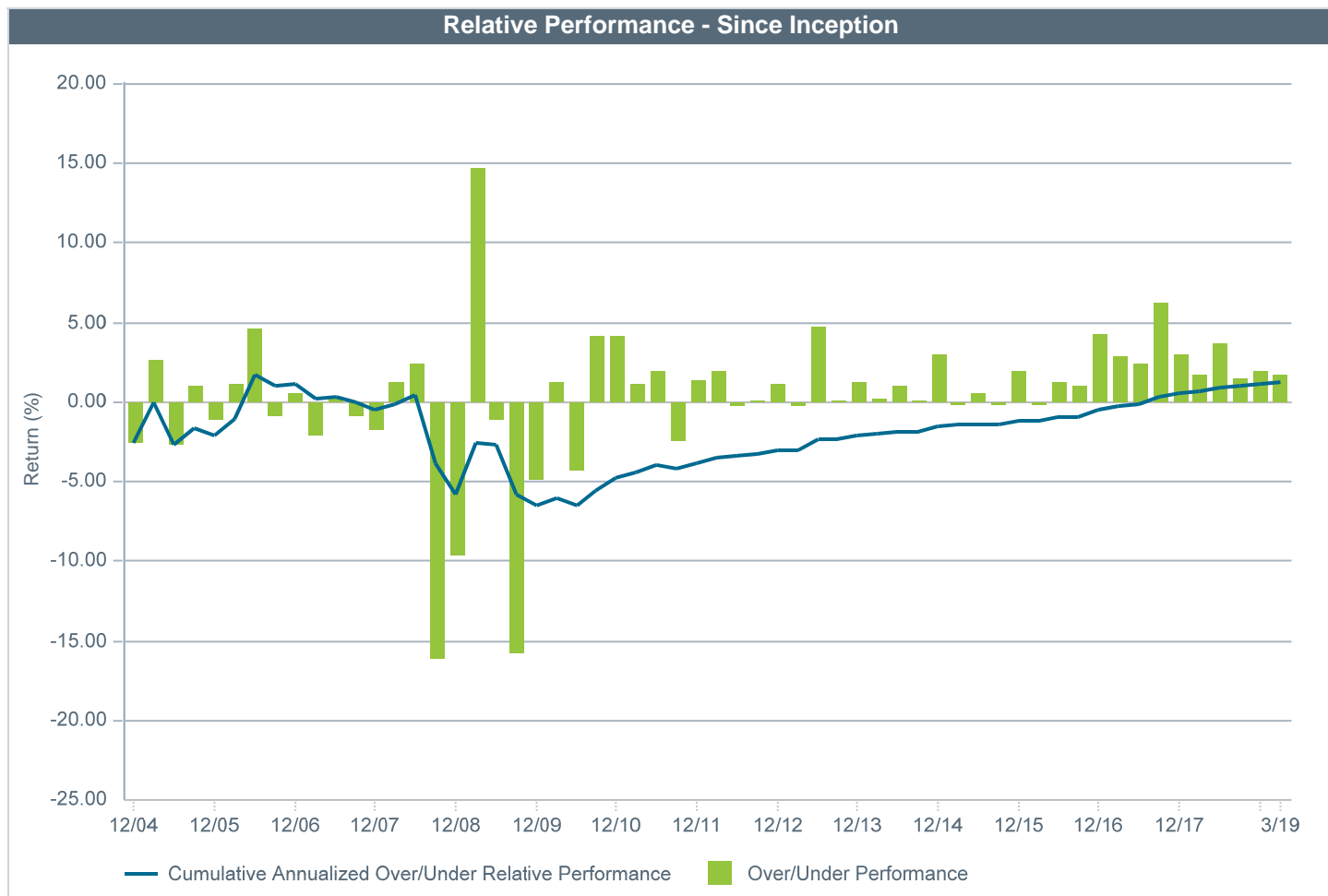
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of One Times Square. 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.

| Performance | | | | | | | | | | | |
|-------------|------|--------|---------|---------|---------|----------|-------|-------|-------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 3.12 | 17.31 | 19.82 | 18.79 | 18.05 | 12.06 | 18.19 | 24.16 | 16.08 | 17.76 | 17.45 |
| Benchmark | 1.42 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 15.02 | 12.50 |
| Difference | 1.70 | 9.79 | 11.85 | 8.61 | 7.28 | 3.32 | 9.84 | 16.54 | 7.31 | 2.74 | 4.95 |



Actual Correlation - 10 Years

| | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.86 |
| S&P 500 Index (Cap Wtd) | -0.19 |
| Russell 2000 Index | -0.17 |
| MSCI EAFE Index (USD) (Net) | -0.28 |
| MSCI Emg Mkts Index (USD) (Net) | -0.38 |
| Bloomberg US Agg Bond Index | -0.40 |
| Bloomberg US Trsy US TIPS Index | -0.30 |
| Wilshire US REIT Index | -0.54 |
| HFRI FOF Comp Index | -0.17 |
| Bloomberg Cmtty Index (TR) | -0.16 |
| ICE BofAML 3 Mo US T-Bill Index | 0.09 |
| Cons Price Index (Unadjusted) | -0.03 |



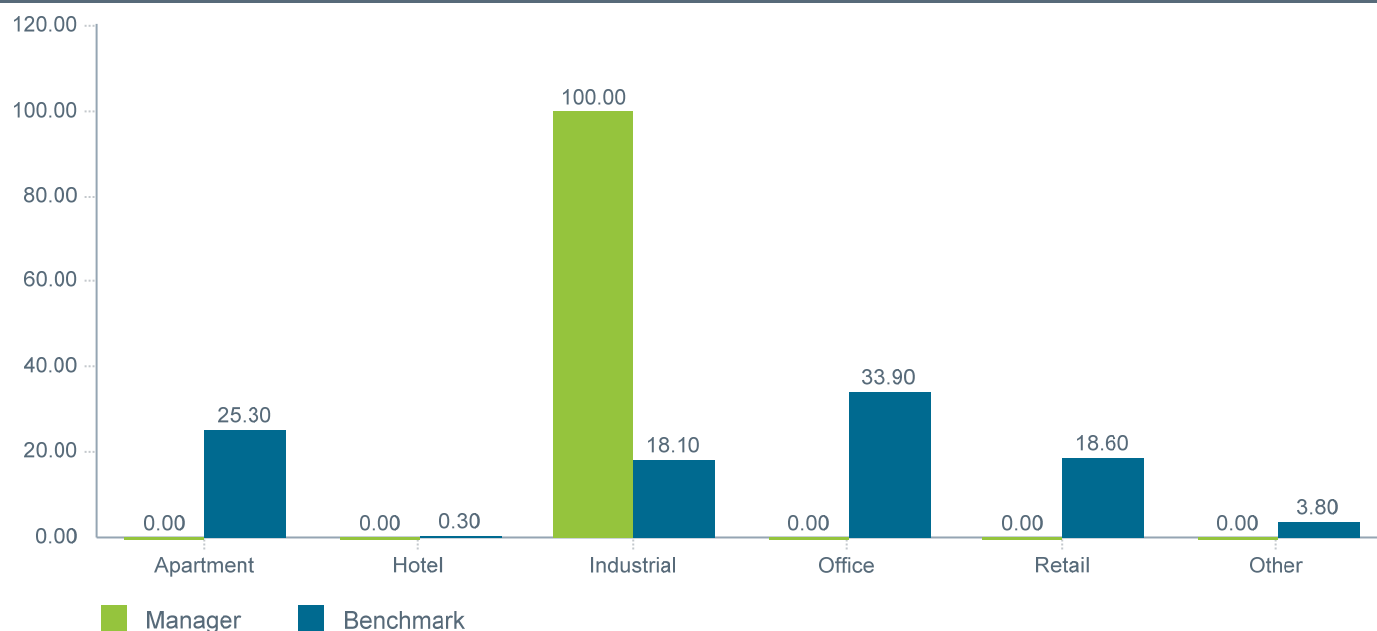
Investment Strategy

The Fund pursues a concentrated core-plus real estate investment strategy focusing on the industrial sector and seeks to combine attractive current income with long-term capital growth by acquiring, operating, renovating and disposing of assets located in the US. The Fund's investment activities focus on properties near key passenger and cargo airports, seaports, and ground transportation systems in major metropolitan areas. It operates with a leverage limit of 45% and does not invest in "value-added" real estate investment opportunities.

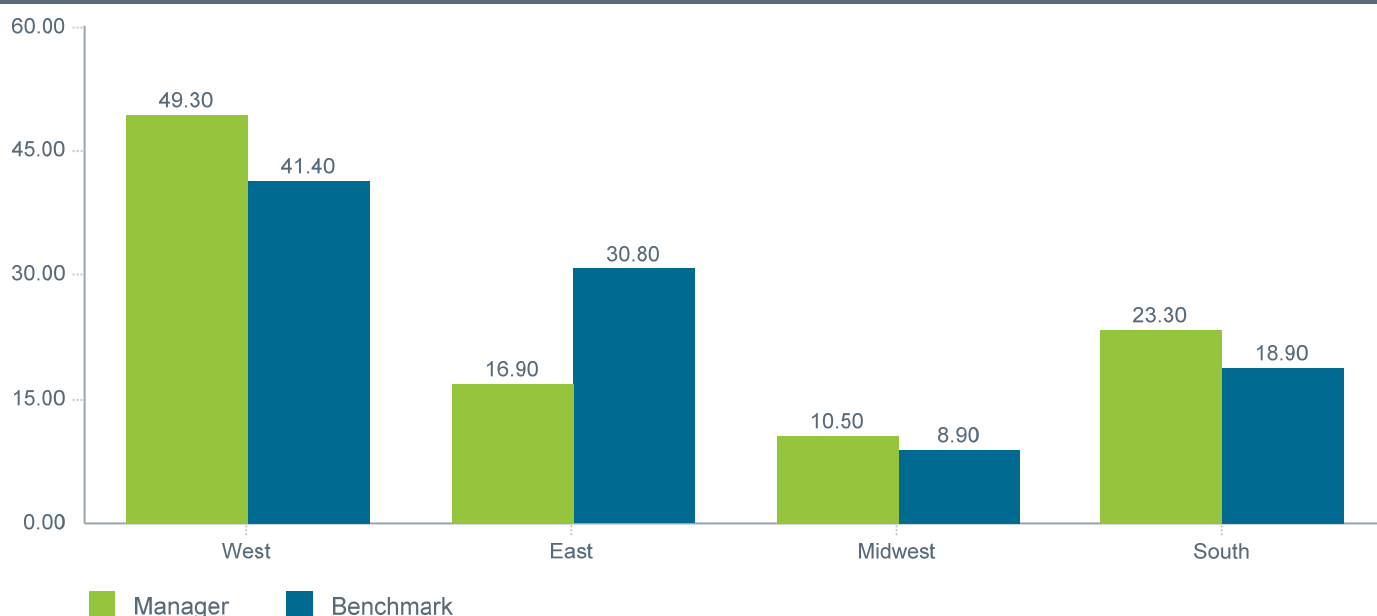
Investment Profile

| | |
|--------------------------------|----------|
| Fund Inception | 2004 |
| Legal Structure | LP |
| Fund Structure | Open-End |
| Gross Real Estate Assets (\$M) | 11,359 |
| Fund Leverage % | 19.40 |
| Portfolio Occupancy % | 97.80 |
| Cash Reserve % | 0.40 |
| Number of Investments | 325 |
| Number of Limited Partners | 73 |

Property Type Allocation (%)

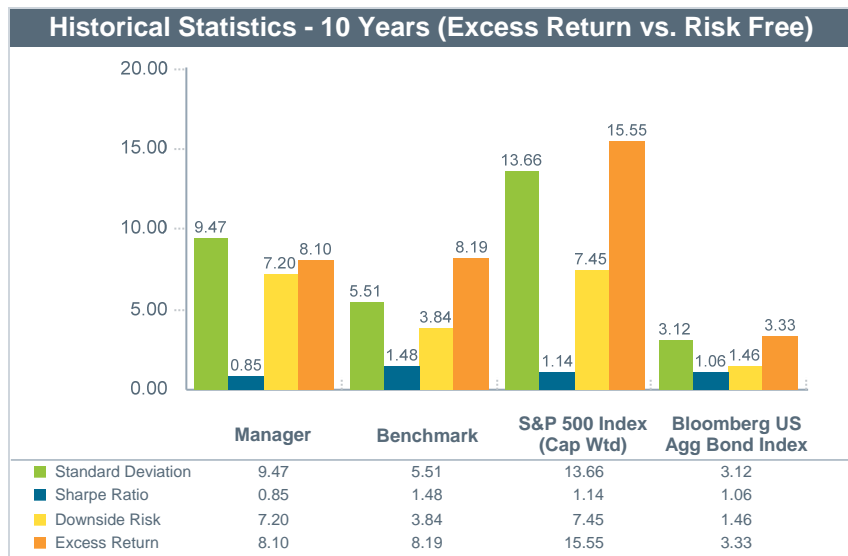


Geographic Allocation (%)



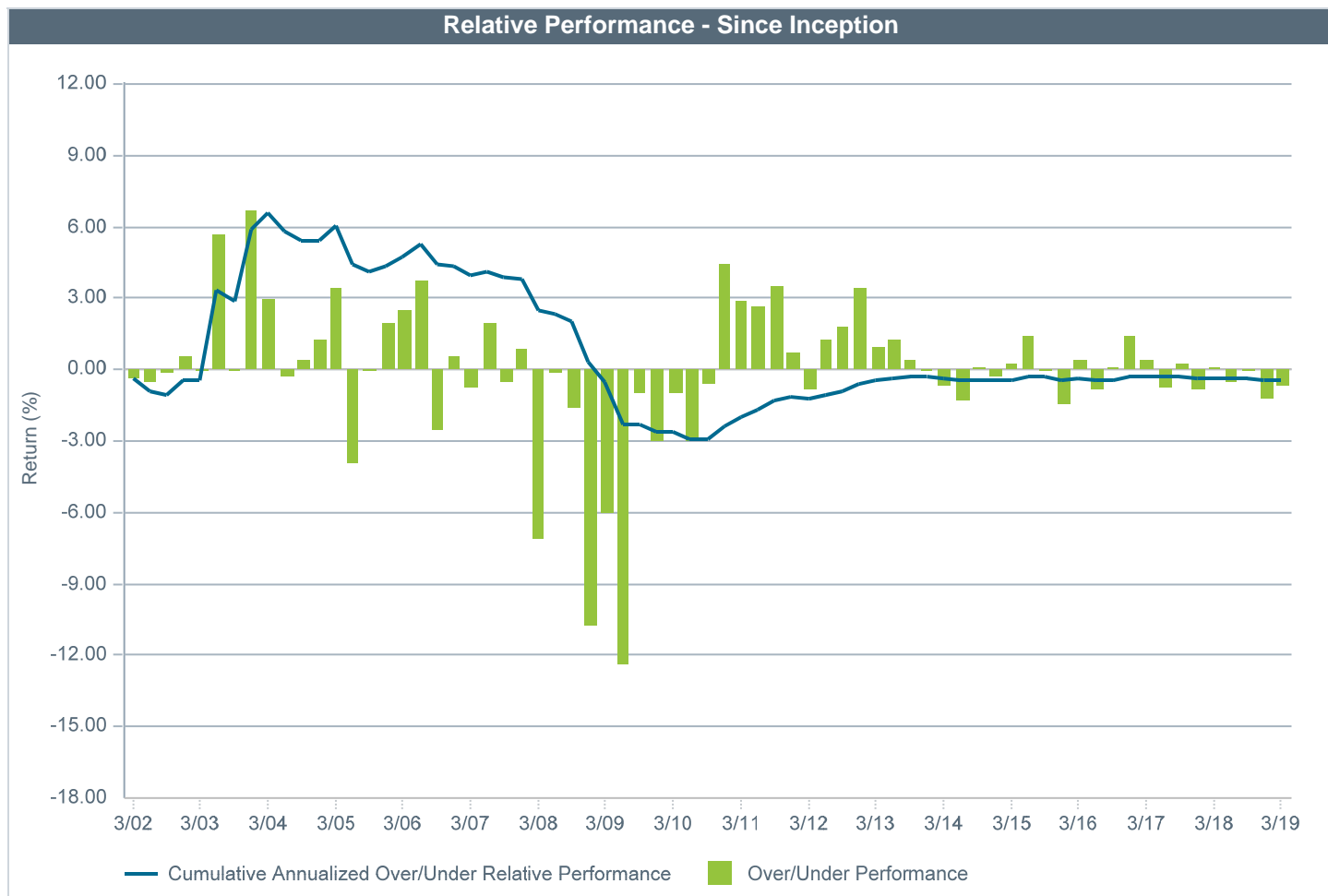
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

| Performance | | | | | | | | | | | |
|-------------|-------|--------|---------|---------|---------|----------|-------|-------|------|-------|-------|
| | QTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | 2018 | 2017 | 2016 | 2015 | 2014 |
| Manager | 0.70 | 4.97 | 6.98 | 9.39 | 11.50 | 8.29 | 6.59 | 6.50 | 9.90 | 15.34 | 10.08 |
| Benchmark | 1.42 | 7.52 | 7.97 | 10.18 | 10.77 | 8.74 | 8.35 | 7.62 | 8.77 | 15.02 | 12.50 |
| Difference | -0.72 | -2.55 | -0.99 | -0.79 | 0.73 | -0.45 | -1.76 | -1.12 | 1.13 | 0.32 | -2.42 |



Actual Correlation - 10 Years

| | Actual Correlation |
|---------------------------------|--------------------|
| NCREIF ODCE Index (AWA) (Gross) | 0.93 |
| S&P 500 Index (Cap Wtd) | -0.34 |
| Russell 2000 Index | -0.32 |
| MSCI EAFE Index (USD) (Net) | -0.45 |
| MSCI Emg Mkts Index (USD) (Net) | -0.59 |
| Bloomberg US Agg Bond Index | -0.23 |
| Bloomberg US Trsy US TIPS Index | -0.08 |
| Wilshire US REIT Index | -0.62 |
| HFRI FOF Comp Index | -0.32 |
| Bloomberg Cmtty Index (TR) | -0.26 |
| ICE BofAML 3 Mo US T-Bill Index | -0.11 |
| Cons Price Index (Unadjusted) | -0.10 |



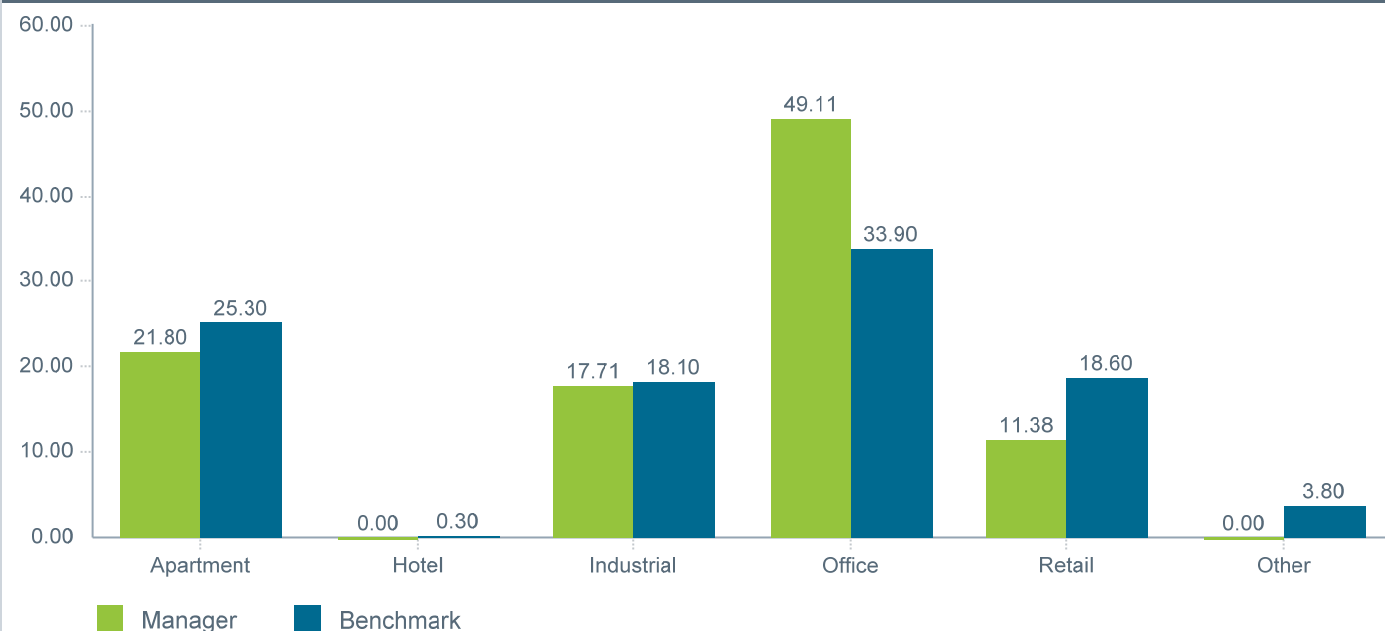
Investment Strategy

The Fund pursues a core-plus real estate strategy and focuses on producing high income returns with the potential for capital appreciation. The Fund's broad investment scope allows it to participate in market opportunities across private equity and debt markets, as well as all property sectors and US geographic regions. It invests primarily in leveraged direct core real estate and may dedicate up to 25% of its gross asset value to non-core investments, including up to 15% in mezzanine debt and up to 10% in build-to-core opportunities. Investments are concentrated in the four primary property types, while volatile and/or specialized sectors such as hotels and self-storage investments are avoided. The Fund operates with leverage of 40% or less.

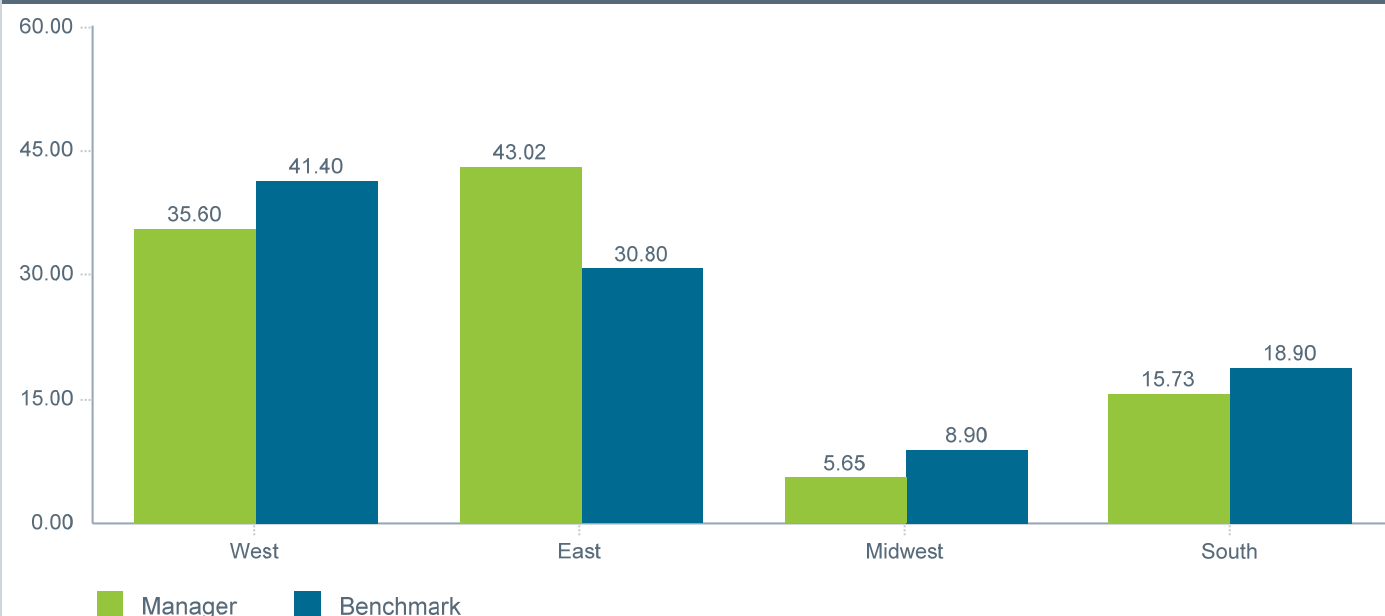
Investment Profile

| | |
|--------------------------------|----------|
| Fund Inception | 2002 |
| Legal Structure | LP |
| Fund Structure | Open-End |
| Gross Real Estate Assets (\$M) | 4,147 |
| Fund Leverage % | 33.96 |
| Portfolio Occupancy % | 94.00 |
| Cash Reserve % | 3.40 |
| Number of Investments | 76 |
| Number of Limited Partners | 60 |

Property Type Allocation (%)



Geographic Allocation (%)



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. 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.

Addendum & Glossary



| Asset Allocation | | | | | | | |
|--|------------------|----------------------|----|-------------|---------|--------|------|
| | | Within Target Range? | | | Targets | | |
| Asset Class | Market Value | Yes | No | Current (%) | Min. | Target | Max. |
| Broad US Equity | \$ 795,462,325 | ✓ | | 16.98% | 12% | 17% | 22% |
| Broad International Equity | \$ 788,293,885 | ✓ | | 16.82% | 12% | 17% | 22% |
| Fixed Income | \$ 977,710,019 | ✓ | | 20.87% | 16% | 21% | 26% |
| Absolute Return | \$ 941,899,511 | ✓ | | 20.10% | 15% | 20% | 25% |
| Diversified Inflation Strategies (DIS) | \$ 469,332,719 | ✓ | | 10.02% | 5% | 10% | 15% |
| Real Estate | \$ 712,742,228 | ✓ | | 15.21% | 10% | 15% | 20% |
| Total Fund | \$ 4,685,440,688 | | | 100.00% | | | |

| Monitoring Guideline (Over a Full Market Cycle of 5 Years) | | | | Explanation |
|---|--|------------|-----------|---|
| Total Fund (Gross) | | Yes | No | |
| Total Fund returns exceed the Target Allocation Index (Gross) over a 5-year period. | | | ✓ | The Total Fund Composite returned 4.43% vs. 5.36% for the index. |
| Broad US Equity | | Yes | No | |
| The composite returns exceed the Russell 3000 Index over a 5 year period. | | | ✓ | The composite returned 10.03% vs. 10.36% for the index. Includes managers which are no longer in the portfolio. |
| Rank above the IM U.S. Equity Median. | | ✓ | | The composite has a ranking of 36 (gross of fees). Includes managers which are no longer in the portfolio. |
| State Street Russell 1000 Index SL (CF) | | Yes | No | |
| The fund returns are in line with the Russell 1000 Index over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM U.S. Large Cap Equity Median. | | | | 5 year data is unavailable. |
| State Street Russell Mid Cap Index (SA) | | Yes | No | |
| The fund returns are in line with the Russell Mid Cap Index over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM U.S. Mid Cap Equity Median. | | | | 5 year data is unavailable. |
| NT Small/Smid Composite | | Yes | No | |
| The fund returns exceed the Small/Smid Blended Index over a 5 year period. | | | ✓ | The fund returned 7.04% vs. 7.48% for the index. Mandate was altered June 2014 to a more concentrated small cap strategy; continue to monitor. |
| Rank above the IM US SMID Cap Core Equity Median. | | | ✓ | The fund has a ranking of 76 (gross of fees). Mandate was altered June 2014 to a more concentrated small cap strategy; continue to monitor. |
| Broad International Equity | | Yes | No | |
| The composite returns exceed the MSCI ACW Ex US Index (USD) (Net) over a 5 year period. | | | ✓ | The composite returned 1.65% vs. 2.57% for the index. Includes managers which are no longer in the portfolio. Current managers added July 2014 and February 2018. |
| Rank above the IM International Large Cap Equity Median. | | | ✓ | The composite has a ranking of 85 (gross of fees). Includes managers which are no longer in the portfolio. Current managers added July 2014. |
| State Street World Ex US Index (CF) | | Yes | No | |
| The fund returns are in line with the MSCI Wrld Ex US Index (USD) (Net) over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM International Large Cap Equity Median. | | | | 5 year data is unavailable. |
| DFA Emg Mkts Core Eq:I (DFCEX) | | Yes | No | |
| The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM Emerging Markets Equity Median. | | | | 5 year data is unavailable. |
| Harding Loevner: IEM; II (HLEEX) | | Yes | No | |
| The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM Emerging Markets Equity Median. | | | | 5 year data is unavailable. |
| QMA International Small Cap Equity (CF) | | Yes | No | |
| The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM Emerging Markets Equity Median. | | | | 5 year data is unavailable. |
| Fixed Income | | Yes | No | |
| The composite returns exceed the Global Fixed Income Custom Index over a 5 year period. | | ✓ | | The composite returned 2.74% vs. 2.58% for the index. |
| Rank above the IM Global Fixed Income Median. | | ✓ | | The composite has a ranking of 47 (gross of fees). |
| Payden & Rygel Long Term (SA) | | Yes | No | |
| The fund returns exceed the Bloomberg US Agg Bond Index over a 5 year period. | | ✓ | | The fund returned 3.31% vs. 2.74% for the index. |
| Rank above the IM U.S. Broad Market Core Fixed Income Median. | | ✓ | | The fund has a ranking of 14 (gross of fees). |
| JP Morgan FI Intermediate Bond (SA) | | Yes | No | |
| The fund returns exceed the Bloomberg US Gov't Crdt Int Trm Bond Index over a 5 year period. | | ✓ | | The fund returned 2.41% vs. 2.12% for the index. |
| Rank above the IM U.S. Intermediate Duration Fixed Income Median. | | ✓ | | The fund has a ranking of 41 (gross of fees). |
| Brandywine Gbl Opp FI (CF) | | Yes | No | |
| The fund returns exceed the FTSE Wrld Gov't Bond Index over a 5 year period. | | | | 5 year data is unavailable. |
| Rank above the IM Global Fixed Income Median. | | | | 5 year data is unavailable. |

North Dakota Board of University and School Lands Long-Term Monitoring Tool

As of March 31, 2019

| Payden:Low Dur;Inv (PYSBX) | Yes | No | |
|--|-----|----|--|
| The fund returns exceed the Bloomberg US Trsy 1-3 Yr Index over a 5 year period. | ✓ | | The fund returned 1.30% vs. 0.98% for the index. |
| Rank above the IM U.S. Short Duration Fixed Income Median. | ✓ | | The fund has a ranking of 37 (gross of fees). |
| AG Direct Lending Fund III, L.P. | Yes | No | |
| The fund returns exceed the Bloomberg US Gov't Crdt Int Trm Bond Index over a 5 year period. | | | 5 year data is unavailable. |
| Rank above the IM U.S. Intermediate Duration (SA+CF) Median. | | | 5 year data is unavailable. |
| Schroders Securitized Credit (SA) | Yes | No | |
| The fund returns exceed the FTSE Wrld Gov't Bond Index over a 5 year period. | | | 5 year data is unavailable |
| Rank above the IM Global Fixed Income Median. | | | 5 year data is unavailable. |
| ND Land - PTF Cash (SA) | Yes | No | |
| The fund returns exceed the BofA ML 3 Mo US T-Bill Index over a 5 year period. | | | 5 year data is unavailable. |
| Absolute Return | Yes | No | |
| The composite returns exceed the Absolute Return Custom Index over a 5 year period. | | | 5 year data is unavailable. |
| GMO:Bchmk-Fr All;IV (GBMBX) | Yes | No | |
| The fund returns exceed the 60% MSCI ACWI (Net)/40% B Gbl Agg Idx over a 5 year period. | | | 5 year data is unavailable. |
| PIMCO:All Ast Ath;Inst (PAUIX) | Yes | No | |
| The fund returns exceed the All Asset Custom Index (EqI Wtd) over a 5 year period. | | | 5 year data is unavailable. |
| Westwood Income Opportunity (SA) | Yes | No | |
| The fund returns exceed the Westwood Custom Index over a 5 year period. | | | 5 year data is unavailable. |
| Diversified Inflation Strategies (DIS) | Yes | No | |
| The composite returns exceed the DIS Custom Index over a 5 year period. | | ✓ | The composite returned -0.14% vs. 0.95% for the index. |
| NT Common TIPS Index (CF) | Yes | No | |
| The fund returns are in line with the Bloomberg US Trsy US TIPS Index over a 5 year period. | ✓ | | The fund returned 1.96% vs. 1.94% for the index. |
| Rank above the IM U.S. TIPS Median. | ✓ | | The fund has a ranking of 33 (gross of fees). |
| Gresham Commodities (SA) | Yes | No | |
| The fund returns exceed the Bloomberg Cmdty Ex-Energy Index (TR) over a 5 year period. | | | 5 year data is unavailable. |
| Harvest MLP (SA) | Yes | No | |
| The fund returns exceed the S&P MLP Index Index (TR) over a 5 year period. | | | 5 year data is unavailable. |
| Van Eck NR Equities (SA) | Yes | No | |
| The fund returns exceed the S&P Gbl Natural Res Sect Index (TR) Index over a 5 year period. | | | 5 year data is unavailable. |
| Real Estate | Yes | No | |
| The composite returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period. | | | 5 year data is unavailable. |
| Morgan Stanley Prime Property Fund (CF) | Yes | No | |
| The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period. | | | 5 year data is unavailable. |
| UBS Trumbull Property Fund, L.P. (CF) | Yes | No | |
| The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period. | | | 5 year data is unavailable. |
| Jamestown Premier Property Fund (CF) | Yes | No | |
| The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period. | | | 5 year data is unavailable. |
| Prologis USLF (CF) | Yes | No | |
| The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period. | | | 5 year data is unavailable. |
| JP Morgan US Real Estate Income and Growth, LP (CF) | Yes | No | |
| The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period. | | | 5 year data is unavailable. |

| Color Key |
|---|
| Performance: |
| Green: Manager outperformed benchmark. |
| Yellow: Manager underperformed benchmark by 100 basis points or less. |
| Red: Manager underperformed benchmark by more than 100 basis points. |
| Peer Group Ranks: |
| Green: Manager ranks in the top 50th percentile compared to its peers. |
| Yellow: Manager ranks between the 51st and 64th percentile compared to its peers. |
| Red: Manager ranks in the 65th percentile or lower compared to its peers. |

Performance shown is net of fees except where noted.

**North Dakota Board of University and School Lands
Fee Schedule**

As of March 31, 2019

| | Fee Schedule | Market Value As of 03/31/2019 (\$) | Estimated Annual Fee (\$) | Estimated Annual Fee (%) |
|---|--|---|--|---|
| State Street Russell 1000 Index SL (CF) | 0.01 % of Assets | 623,989,566 | 62,399 | 0.01 |
| State Street Russell Mid Cap Index (SA) | 0.03 % of Assets | 79,324,636 | 23,797 | 0.03 |
| NT Small Cap Core (CF) | 0.70 % of Assets | 92,148,123 | 645,037 | 0.70 |
| State Street World Ex US Index (CF) | 0.02 % of Assets | 488,234,515 | 97,647 | 0.02 |
| DFA Emg Mkts Core Eq;l (DFCEX) | 0.52 % of Assets | 90,217,117 | 469,129 | 0.52 |
| Harding Loevner:IEM;lZ (HLEZX) | 1.11 % of Assets | 91,476,551 | 1,015,390 | 1.11 |
| QMA International Small Cap Equity (CF) | 0.68 % of Assets | 118,365,702 | 804,887 | 0.68 |
| Payden & Rygel Long Term (SA) | 0.20 % of Assets | 305,782,109 | 611,564 | 0.20 |
| JP Morgan FI Intermediate Bond (SA) | 0.20 % of First \$75 M 0.18 % Thereafter | 304,047,212 | 562,285 | 0.18 |
| Brandywine Gbl Opp FI (CF) | 0.45 % of First \$50 M 0.40 % of Next \$50 M 0.35 % Thereafter | 147,648,789 | 591,771 | 0.40 |
| Payden:Low Dur;Inv (PYSBX) | 0.43 % of Assets | 48,146,736 | 207,031 | 0.43 |
| AG Direct Lending Fund III, L.P. | 1.00 % of First \$50 M 0.85 % of Next \$50 M 0.80 % of Next \$50 M 0.75 % of Next \$100 M 0.60 % Thereafter | 55,937,736 | 550,471 | 0.98 |
| Schroders Securitized Credit (SA) | 0.35 % of First \$350 M 0.30 % of Next \$250 M 0.25 % Thereafter | 96,263,276 | 336,921 | 0.35 |
| ND Land - PTF Cash (SA) | 0.20 % of Assets | 607,313 | 1,215 | 0.20 |
| GMO:Bchmk-Fr All;IV (GBMBX) | 0.82 % of Assets | 311,173,036 | 2,551,619 | 0.82 |
| PIMCO:All Ast Ath;Inst (PAUIX) | 0.94 % of Assets | 314,600,908 | 2,957,249 | 0.94 |
| Westwood Income Opportunity (SA) | 0.80 % of First \$25 M 0.65 % of Next \$25 M 0.50 % Thereafter | 316,125,566 | 1,693,128 | 0.54 |
| NT Common TIPS Index (CF) | 0.06 % of First \$50 M 0.03 % Thereafter | 91,193,026 | 42,358 | 0.05 |
| Gresham Commodities (SA) | 0.67 % of First \$75 M 0.50 % of Next \$75 M 0.40 % Thereafter | 140,885,081 | 831,925 | 0.59 |
| Harvest MLP (SA) | 0.75 % of First \$100 M 0.70 % of Next \$50 M 0.65 % of Next \$50 M 0.60 % of Next \$50 M 0.50 % of Next \$50 M 0.50 % Thereafter | 143,158,072 | 1,052,107 | 0.73 |

Mutual Fund fees are sourced from Morningstar and/or the investment manager.

**North Dakota Board of University and School Lands
Fee Schedule**

As of March 31, 2019

| | Fee Schedule | Market Value As of 03/31/2019 (\$) | Estimated Annual Fee (\$) | Estimated Annual Fee (%) |
|---|--|---|--|---|
| Van Eck NR Equities (SA) | 0.75 % of First \$50 M 0.50 % of Next \$200 M 0.48 % Thereafter | 94,096,541 | 595,483 | 0.63 |
| Morgan Stanley Prime Property Fund (CF) | 0.84 % of Assets | 206,222,951 | 1,732,273 | 0.84 |
| UBS Trumbull Property Fund, L.P. (CF) | 0.96 % of First \$10 M 0.83 % of Next \$15 M 0.81 % of Next \$25 M 0.79 % of Next \$50 M 0.67 % of Next \$150 M 0.60 % Thereafter Minimum Fee: \$1,390,421 | 185,321,381 | 1,390,421 | 0.75 |
| Jamestown Premier Property Fund (CF) | 0.70 % of Assets | 70,020,849 | 490,146 | 0.70 |
| JP Morgan US Real Estate Income and Growth, LP (CF) | 1.05 % of First \$50 M 0.90 % of Next \$50 M 0.85 % of Next \$50 M 0.80 % of Next \$50 M 0.75 % Thereafter | 131,686,578 | 1,244,336 | 0.94 |
| Total Fund | | 4,685,440,688 | 21,062,315 | 0.45 |

- Morgan Stanley Prime Property Fund (CF) is also subject to an incentive fee of 5.0% * NAV * comparable property NOI growth (total capped at 0.35%).
- UBS Trumbull is also subject to a 0.15% incentive fee.
- 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).

Mutual Fund fees are sourced from Morningstar and/or the investment manager.

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.
 - 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 Global Fixed Income Custom Index consists of the Bloomberg US Unv Bond Index. Prior to 03/2019, the index consisted 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 Cmdty 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.

Index Comments (con't)

- 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 Yr 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 Index (TR).

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)

Glossary

Active Return - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

Active Share - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

Alpha Ratio - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

Average Quality - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

| <u>S&P</u> | <u>Moody's</u> | <u>Explanation</u> | <u>S&P</u> | <u>Moody's</u> | <u>Explanation</u> |
|---|----------------|------------------------------|--|----------------|---------------------------------|
| Higher Credit Quality – Investment Grade | | | Lower Credit Quality – Below Investment Grade | | |
| AAA | Aaa | Prime/Highest credit quality | BB+ | Ba1 | Speculative/Low credit quality |
| AA+ | Aa1 | High credit quality | BB | Ba2 | |
| AA | Aa2 | | BB- | Ba3 | |
| AA- | Aa3 | | B+ | B1 | Highly speculative |
| A+ | A1 | Upper-medium credit quality | B | B2 | |
| A | A2 | | B- | B3 | |
| A- | A3 | | CCC+ | Caa1 | Substantial credit/default risk |
| BBB+ | Baa1 | Lower-medium credit quality | CCC | Caa2 | Extremely speculative |
| BBB | Baa2 | | CCC- | Caa3 | |
| BBB- | Baa3 | | CC | Ca | Vulnerable to default |
| | | | C | Ca | |
| | | | D | C | In default |

Benchmark Effect - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

Box Plots - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1st quartile, 2nd quartile, 3rd quartile, and 4th quartile). The median observation is where the 2nd quartile and 3rd quartile meet.

Buy and Hold Attribution - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

Sector - Attribution is calculated using the Global Industry Classification Standard (GICS) which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector, as defined by S&P Capital IQ data.

Country/Region - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data.

Style - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

Capital Markets Review -

Breakeven Inflation - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

Consumer Confidence - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

Consumer Price Index (CPI) - Measures the change in the price level of consumer goods and services.

Federal Funds Rate - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

Option-Adjusted Spread - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.



Glossary

- Purchasing Managers Index (PMI)** - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.
- Real Gross Domestic Product (Real GDP)** - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.
- US Dollar Total Weighted Index** - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.
- Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.
- VIX** - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."
- Cash Flow Effect** - The composite's active return minus the sum of each managers' active return minus the benchmark effect.
- Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.
- Convexity** - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.
- Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.
- Coupon Rate** - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.
- Current Yield** - The annual income of a security divided by the security's current price.
- Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.
- Downside Risk** - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative monthly returns. The higher the factor, the riskier the product.
- Earnings Per Share** - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.
- Effective Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield.
- Excess Return vs. Market** - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.
- Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.
- Excess Risk** - A measure of the standard deviation of a portfolio's performance relative to the risk free return.
- Expense Ratios** - Morningstar is the source for mutual fund expense ratios.
- Gain/Loss** - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.
- Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.
- Information Ratio** - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.
- Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.
- Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.
- Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.
- Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.
- Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.
- Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.
- Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

Glossary

Mutual Fund Performance - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

Net Cash Flow - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

Peer Groups -

Plan Sponsor Peer Groups - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

Investment Manager Peer Groups - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees. For more information on Peer Groups, visit <https://www.invmetrics.com/style-peer-groups>.

Percentile Rankings - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value

100 - Lowest Statistical Value

Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4th percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.

Performance Methodology - RVK calculates performance for investment managers and composites using different methodologies.

Investment Managers - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of $\geq 10\%$ of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

Composites - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

Portfolio Characteristics - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

Price to Earnings Ratio - The ratio of a company's share price to its per-share earnings

Private Equity Quartile Ranks - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

Return - Compounded rate of return for the period.

% Return - The time-weighted rate of return of a portfolio for a given period.

R-Squared - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

Risk Free Benchmark - ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.

Glossary

RVK Liquidity Rating - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

| <u>Asset Class</u> | <u>RVK Liquidity Rating</u> | <u>Asset Class</u> | <u>RVK Liquidity Rating</u> |
|-------------------------------------|-----------------------------|--------------------------------------|-----------------------------|
| <u>Liquid Investments</u> | | <u>Less Liquid Investments</u> | |
| T-Bills and Treasuries | 100 | Fixed Income Plus Sector | 50 |
| Cash Equivalents | 98 | Bank Loans | 50 |
| TIPS | 95 | Stable Value (Plan Sponsor Directed) | 50 |
| US Large Cap Equity | 95 | Absolute Return Strategies | 35 |
| Diversified Real Return | 93 | | |
| Stable Value (Participant Directed) | 91 | | |
| Non-US Large Cap Equity | 90 | <u>Not Liquid Investments</u> | |
| Global Tactical Asset Allocation | 88 | Core Real Estate | 25 |
| US Small Cap Equity | 85 | Core Plus Real Estate | 15 |
| REITS | 85 | Non-Core Real Estate | 5 |
| Non-US Small Cap Equity | 85 | Private Equity Funds of Funds | 5 |
| Emerging Markets Equity | 85 | | |
| Core Fixed Income | 85 | | |
| Core Plus Fixed Income | 80 | | |

Sector Allocation - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

Simple Alpha - The difference between the manager's return and the benchmark's return.

Spread Duration - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

Standard Deviation - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

Time Period Abbreviations - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

Thematic Classification - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

| | | | |
|----------------------------|------------------------------|--------------------------------------|------------------|
| <u>Alpha</u> | <u>Capital Appreciation</u> | <u>Capital Preservation</u> | <u>Inflation</u> |
| Absolute Return Strategies | Public Equity | Core Fixed Income | TIPS |
| Currency Overlay | Private Equity | CMBS Fixed Income | Bank Loans |
| | Preferred Securities | Asset Backed Fixed Income | Core Real Estate |
| | High Yield | Domestic Core Plus Fixed Income | Real Return |
| | Convertible Fixed Income | Mortgage Backed Fixed Income | Inflation Hedges |
| | TALF Funds | International Developed Fixed Income | REITS |
| | Distressed Debt | Cash Equivalents | Commodities |
| | Emerging Market Fixed Income | Stable Value | |
| | Value Added Real Estate | | |
| | Opportunistic Real Estate | | |

Total Fund Attribution - The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

Strategic Asset Allocation (SAA) - The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

Tactical Asset Allocation (TAA) - The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

Style Selection (SS) - The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

Manager's Skill (MS) - The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

Total Fund Beta - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

Tracking Error - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

Glossary

Treynor Ratio - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

Unit Value - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

Up Market Capture - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

Yield to Maturity - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

Yield to Worst - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.

PORTLAND

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