



# Investment Performance Analysis

North Dakota Board of University and School Lands

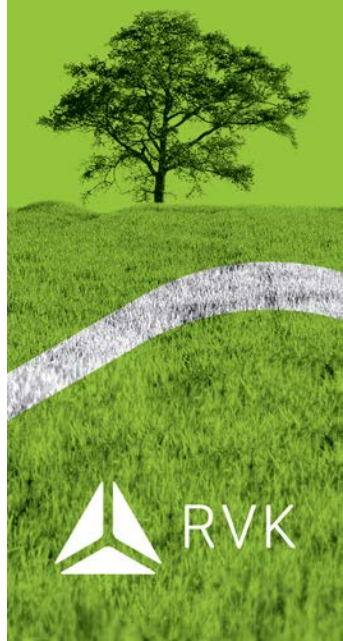
Period Ended: June 30, 2020



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# Capital Markets Review

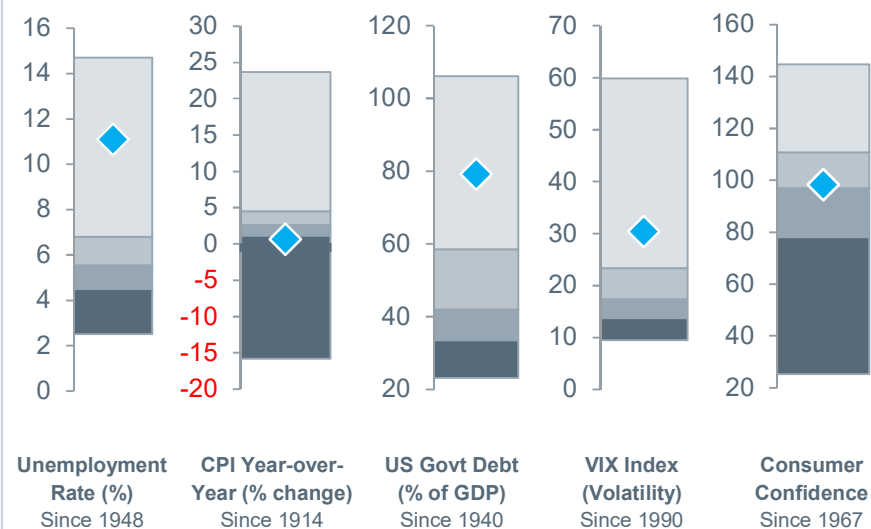


## Second Quarter Economic Environment

## Key Economic Indicators

The disconnect between investor risk appetite and on-the-ground economic conditions reached staggering levels during the second quarter, fueled in large part by a myriad of fiscal relief and liquidity reinforcing programs implemented by governments and global central banks. The S&P 500 returned 20.5%, bringing its YTD returns to -3.1%, as forward P/E ratios reached levels last seen during the dot-com era tech bubble. In general, the funding pressures markets experienced in the first quarter abated, as various programs enacted by the Federal Reserve proved successful in restoring normal capital markets activity amid the unprecedented economic shutdowns. While economic data generally pointed to a bottoming of global GDP growth during the month of April, the modest economic recoveries in May and June lagged significantly behind the "V" shaped recovery seen in the pricing of risk assets. The Atlanta Fed's popular GDPNow estimates for Q2-2020 growth in the US indicated a 36.8% annualized economic contraction. However, Q2 saw capital markets activity much more consistent with boom times. The NASDAQ and DJIA experienced their best quarters since 2001 and 1987, respectively, while US equity issuance hit a record of \$184 billion.

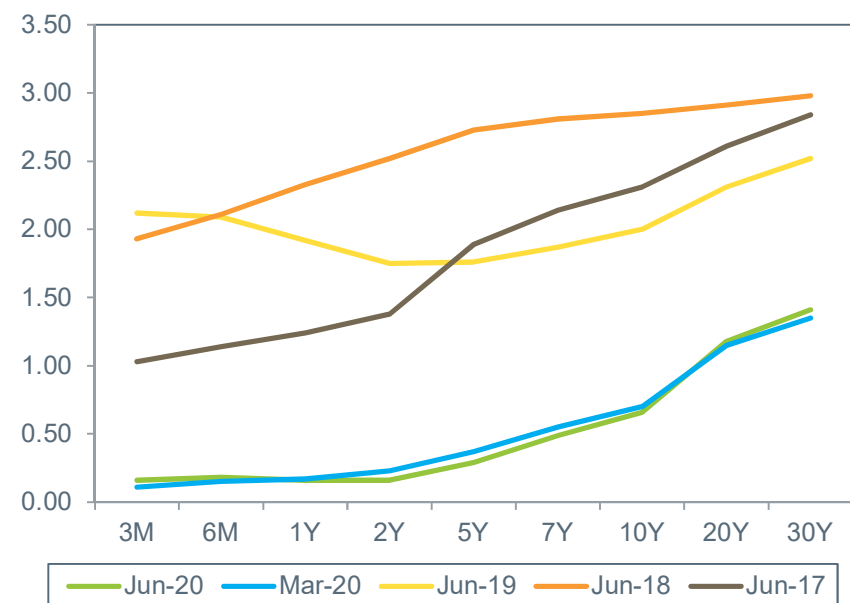
## Key Economic Indicators



Economic Indicators	Jun-20	Mar-20	Jun-19	Jun-17	20 Yr
Federal Funds Rate (%)	0.08	0.08	2.40	1.06	1.65
Breakeven Infl. - 5 Yr (%)	1.17 ▲	0.53	1.54	1.66	1.82
Breakeven Infl. - 10 Yr (%)	1.34 ▲	0.93	1.70	1.74	2.01
CPI YoY (Headline) (%)	0.6 ▼	1.5	1.6	1.6	2.1
Unemployment Rate (%)	11.1 ▲	4.4	3.7	4.3	6.0
Real GDP YoY (%)	-9.5 ▼	0.3	2.0	2.2	1.9
PMI - Manufacturing	52.6 ▲	49.1	51.6	56.4	52.5
USD Total Wtd Idx	120.86 ▼	122.82	114.56	111.97	103.13
WTI Crude Oil per Barrel (\$)	39.3 ▲	20.5	58.5	46.0	62.1
Gold Spot per Oz (\$)	1,781 ▲	1,577	1,410	1,242	969

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	20.54	-3.08	7.51	10.73	13.99
Russell 2000	25.42	-12.98	-6.63	4.29	10.50
MSCI EAFE (Net)	14.88	-11.34	-5.13	2.05	5.73
MSCI EAFE SC (Net)	19.88	-13.11	-3.52	3.81	8.02
MSCI Emg Mkts (Net)	18.08	-9.78	-3.39	2.86	3.27
Bloomberg US Agg Bond	2.90	6.14	8.74	4.30	3.82
ICE BofAML 3 Mo US T-Bill	0.02	0.60	1.63	1.19	0.64
NCREIF ODCE (Gross)	-1.56	-0.60	2.22	7.31	10.80
FTSE NAREIT Eq REIT (TR)	11.82	-18.71	-13.04	4.06	9.05
HFRI FOF Comp	7.90	-1.57	0.49	1.50	2.79
Bloomberg Cndty (TR)	5.08	-19.40	-17.38	-7.69	-5.82

## Treasury Yield Curve (%)



## Second Quarter Review

## Broad Market

US equity markets rebounded sharply in Q2 despite weakening economic conditions and uncertainty around upcoming earnings releases. Much of the optimism was driven by trial data for COVID-19 vaccines and treatments combined with the phased openings of states across the country. The swift rally saw the S&P 500 index turn positive YTD, with QTD returns as high as 25.0% in early June before finishing Q2 up 20.5% and down -3.1% YTD.

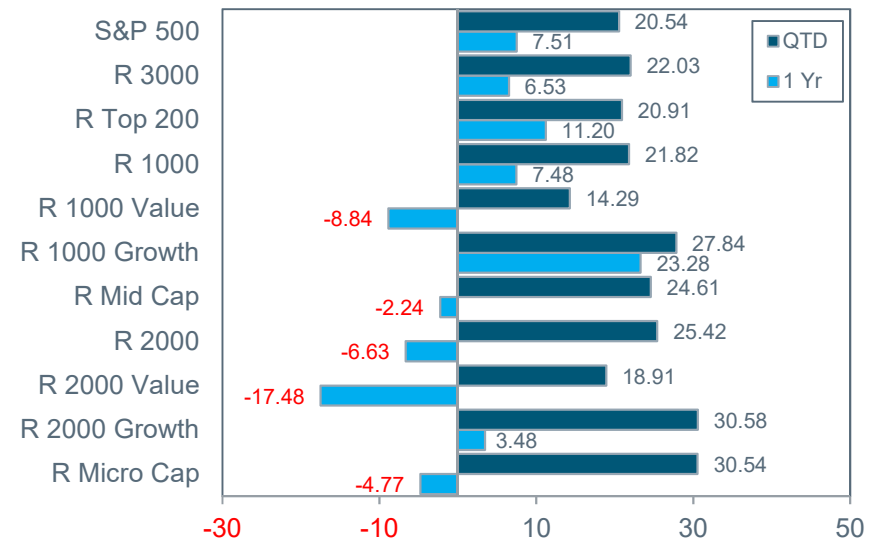
## Market Cap

The strong performance was realized across all market caps, with smaller stocks faring best. The Russell 2000 and Mid Cap indexes returned 25.4% and 24.6%, respectively, while the Russell 1000 lagged behind its smaller-cap counterparts, finishing Q2 up 21.8%.

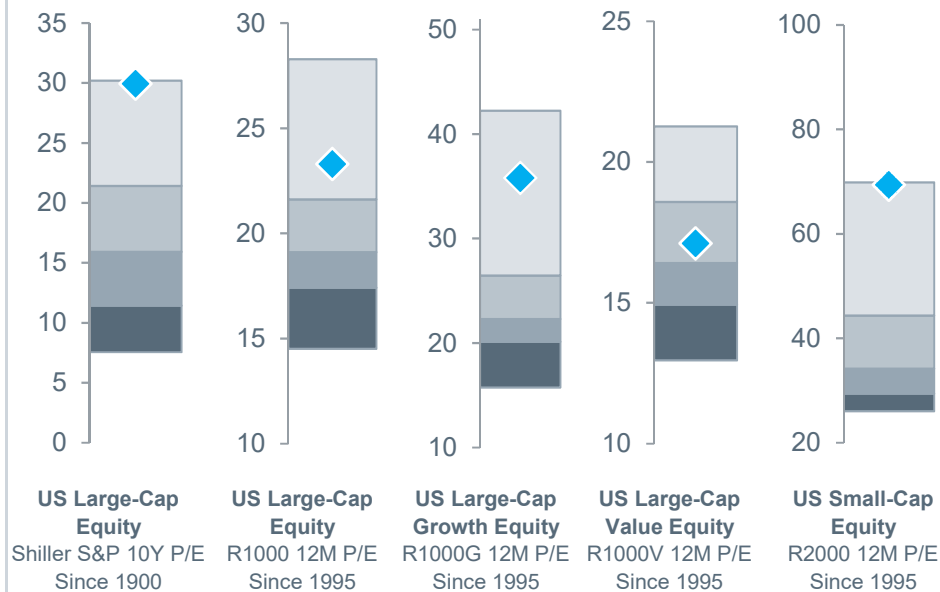
## Style and Sector

Growth continued to outperform value by a significant margin during Q2 across all market caps. In addition, active managers generally struggled to keep up with their respective benchmarks in Q2.

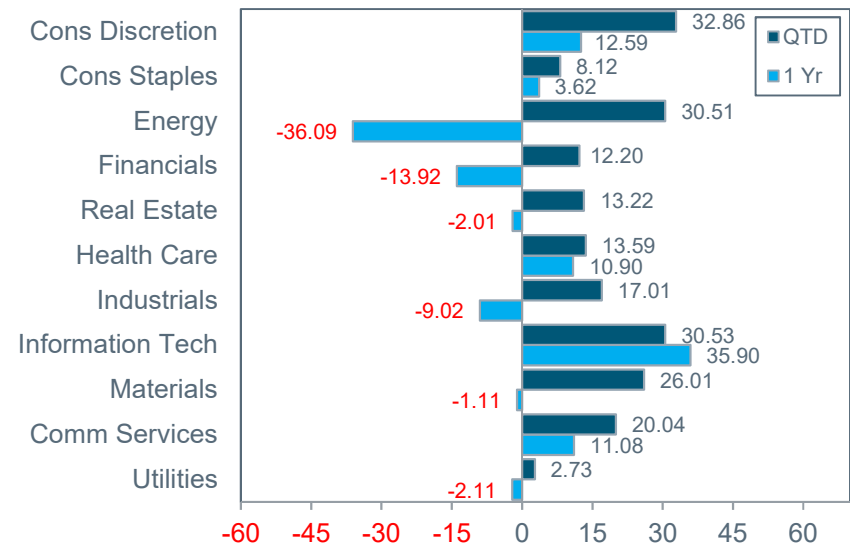
## Style and Capitalization Market Performance (%)



## Valuations



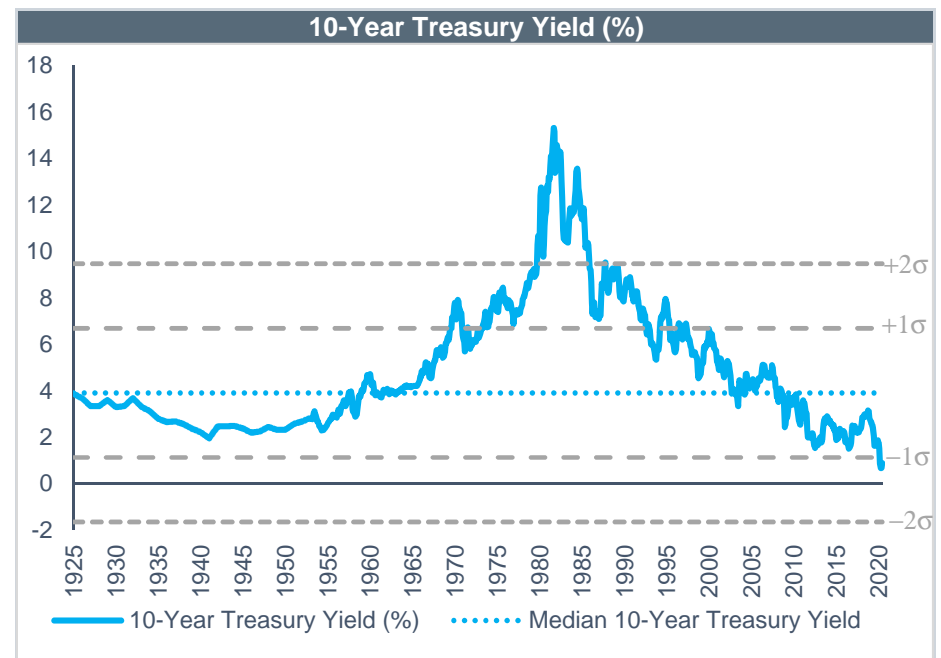
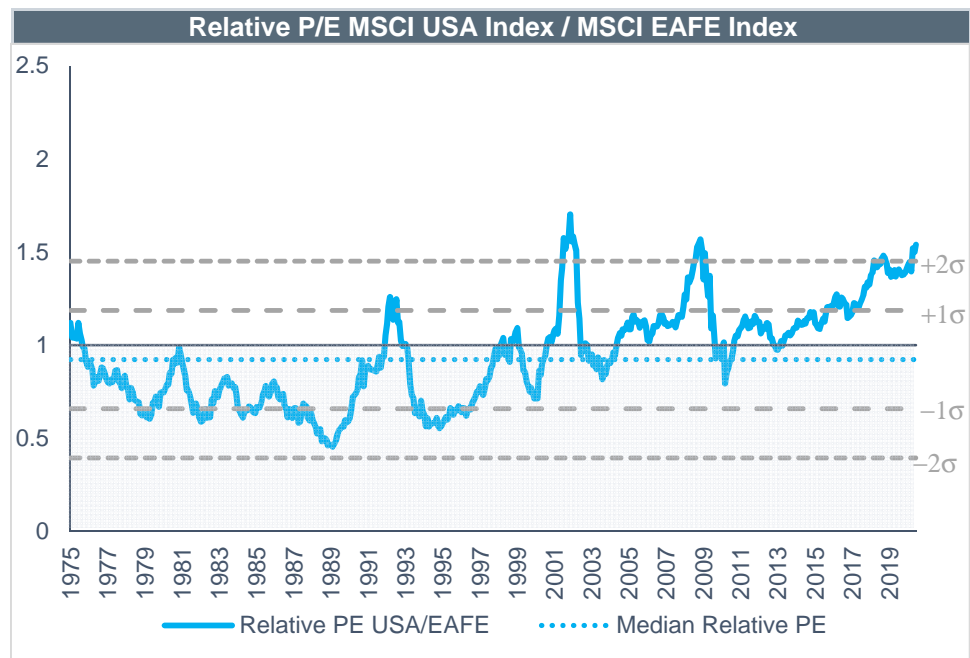
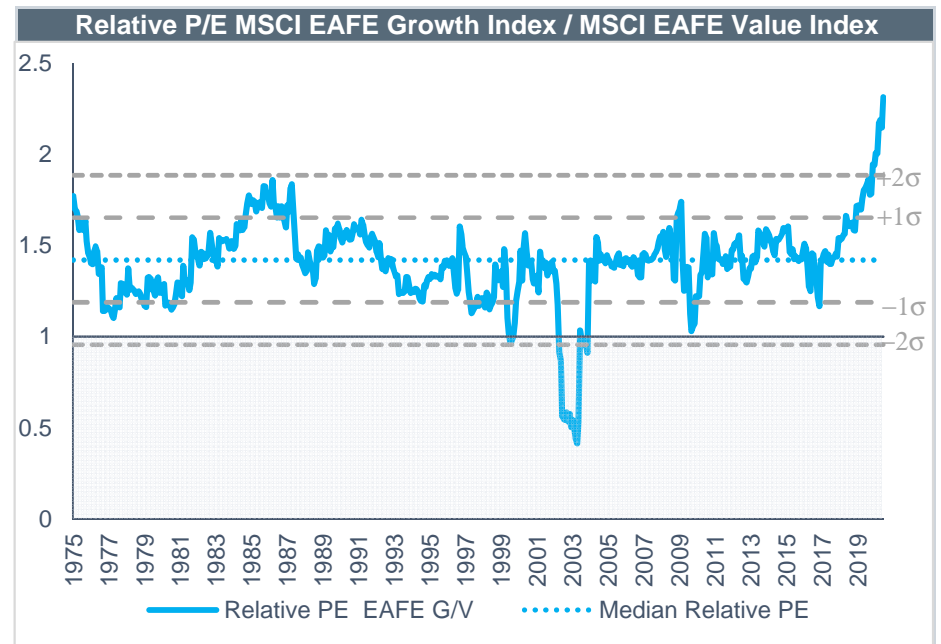
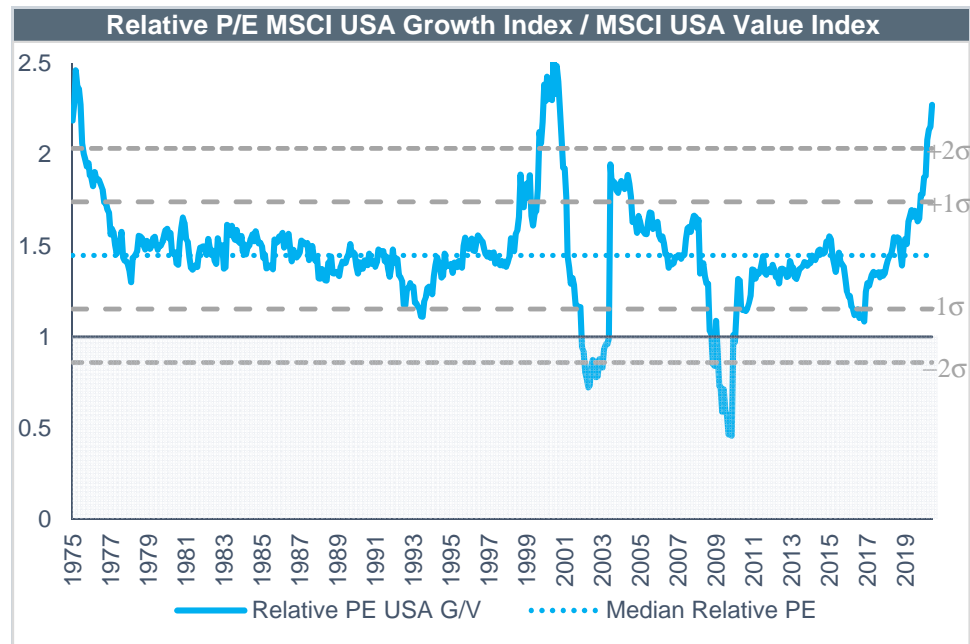
## S&amp;P 500 Index Sector Performance (%)



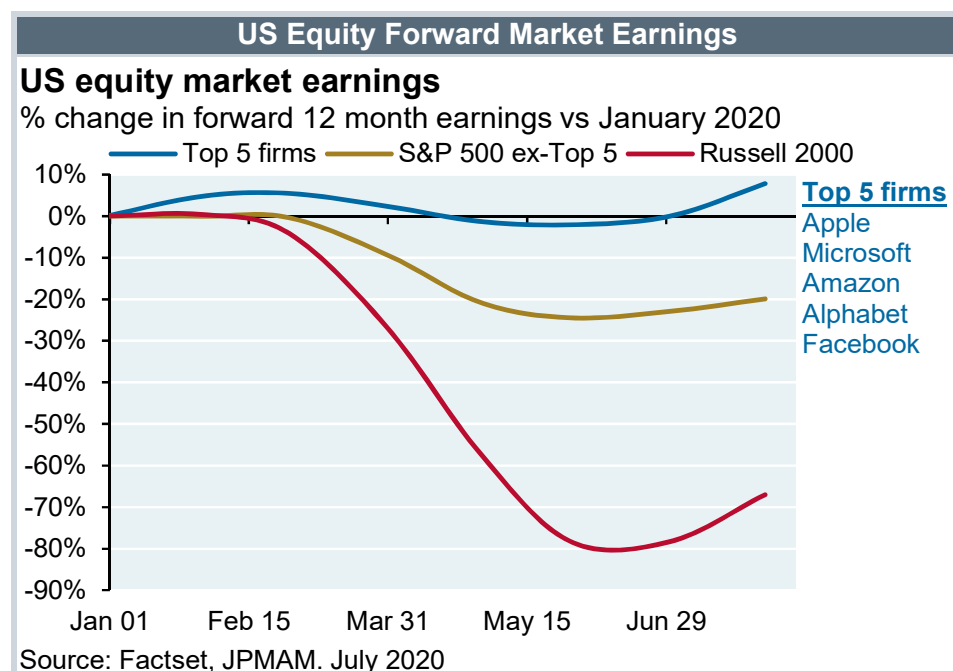
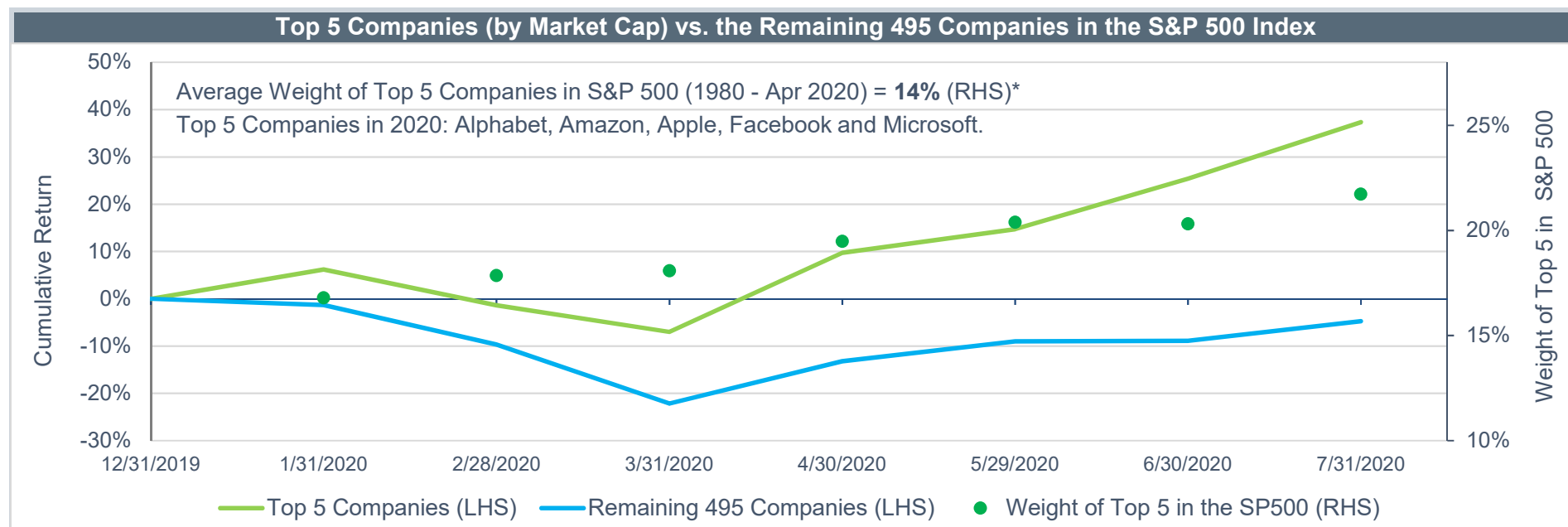


## Extreme Pricing Conditions

As of June 30, 2020



Relative valuation ratios are based on historical P/E ratios using trailing 12-month EPS, courtesy of MSCI. Treasury yield data courtesy of Robert Shiller. Data use monthly periodicity. Sigma symbol represents standard deviation.



**Top 5 Companies (by Market Cap) & the Combined Weight in S&P500**

1980**	1989**	1999	2009	2019
IBM	Exxon	Microsoft	Exxon	Apple
AT&T	General Electric	General Electric	Microsoft	Microsoft
Exxon	IBM	Cisco	Apple	Alphabet
Standard Oil	AT&T	Wal-Mart	Johnson & Johnson	Amazon
Schlumberger	Royal Dutch	Exxon	Procter & Gamb	Facebook
19%	12%	17%	11%	17%

Legend: Communications (Blue), Cons. Staples (Orange), Health Care (Grey), Technology (Light Blue)  
 Cons. Discr. (Light Green), Energy (Dark Orange), Industrials (Purple)

\* Source: Goldman Sachs Portfolio Strategy Research, "U.S. Weekly Kickstart" - April 24, 2020.

\*\*Source: Visual History of the S&P 500 at <https://etfdb.com/history-of-the-s-and-p-500/>. The earliest data available is from Jan 1980.

Data courtesy of Bloomberg Professional Service except when noted. Cumulative returns are calculated assuming hypothetical portfolios consisting of the top 5 companies and of the remaining 495 companies; the weights for each hypothetical portfolio are adjusted based on the actual month end market capitalizations.

"US Equity Forward Market Earnings" Source: Factset and J.P. Morgan Asset Management, "Eye on the Market: COVID Charts of the Week" - August 11, 2020.

## Second Quarter Review

## Developed Markets

Developed international markets had a strong quarter, although they lagged both US and emerging markets. During Q2, value stocks underperformed growth, while small-cap stocks outperformed their larger counterparts. Each developed country index generated positive returns for the quarter and the vast majority saw double digit returns. Markets were bolstered by government programs, but the near-term macro outlook remains poor.

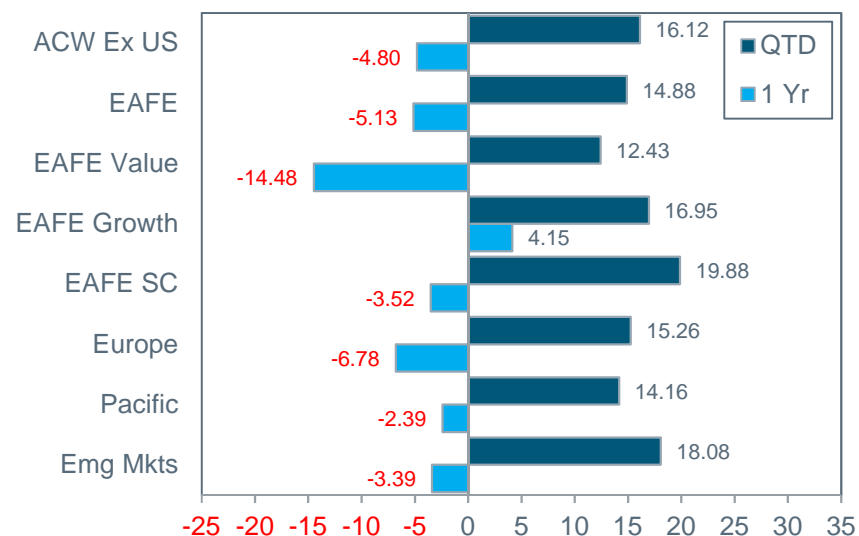
## Emerging Markets

Emerging markets outpaced developed international, but lagged the US market. All emerging countries and broad sectors saw positive returns for the quarter. Latin America, a laggard in Q1, saw some mean reversion, with countries such as Brazil and Argentina leading the region higher.

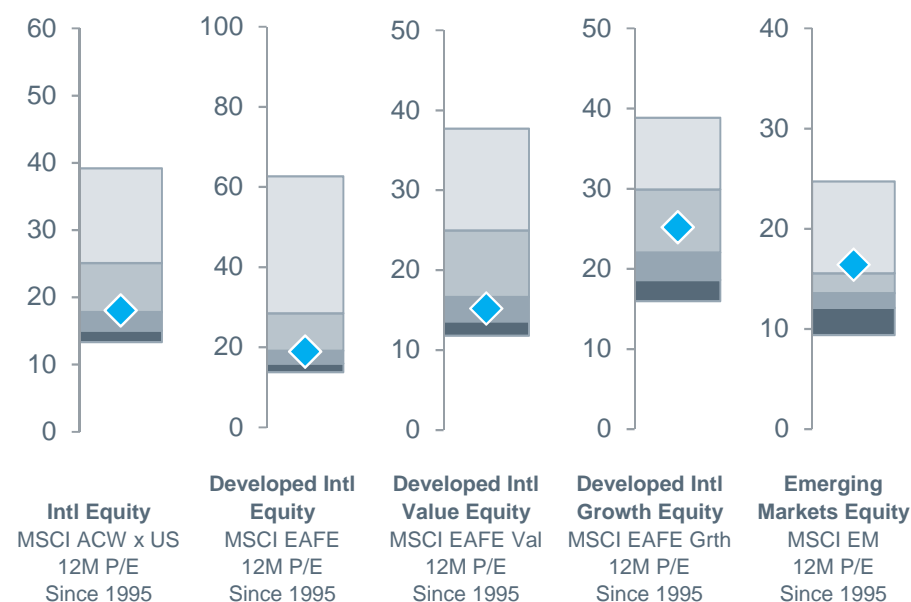
## Market Cap &amp; Style

In both developed international markets and emerging markets, value stocks continued to underperform growth, while small-cap stocks outperformed large-cap for the quarter.

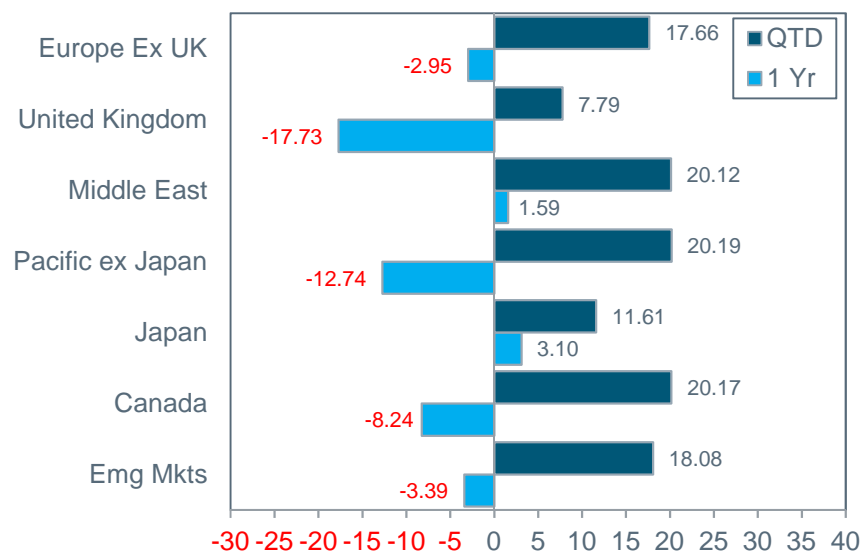
## MSCI Style and Capitalization Market Performance (%)



## 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.



## Second Quarter Review

## Broad Market

A supportive Fed helped propel the beginning of a recovery that saw few periods of slowdown throughout the quarter. While a spike in COVID-19 cases threatened to disrupt the rally in June, a better-than-expected jobs report and the Fed's announcement of its plan to purchase corporate bonds helped the segment finish the quarter on a positive note.

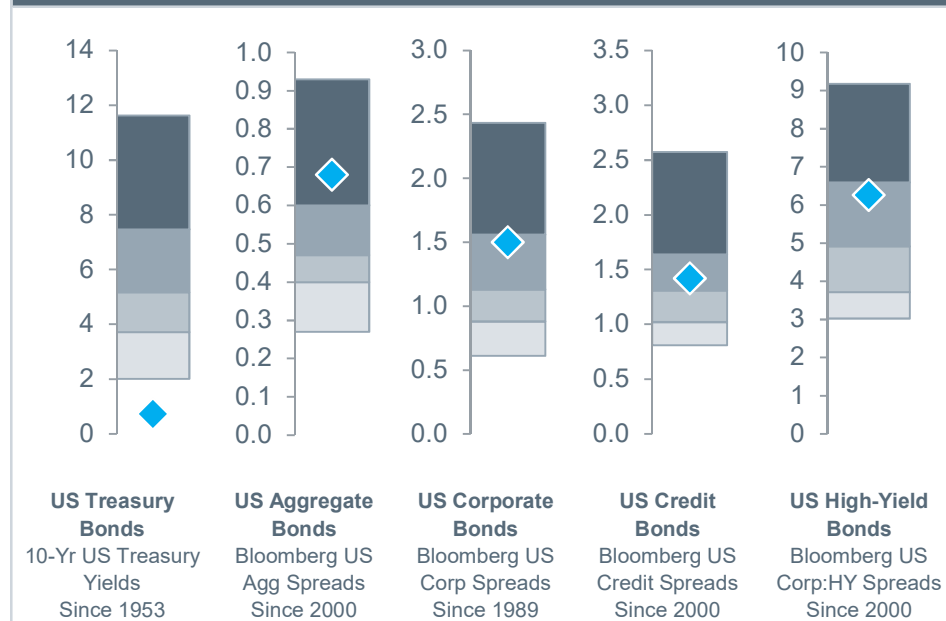
## Credit Market

In contrast to Q1, investor appetite for risk returned, leading to a strong recovery in credit. Overall, the Bloomberg US Credit Index and US High Yield Index returned 8.2% and 10.2% in Q2, respectively.

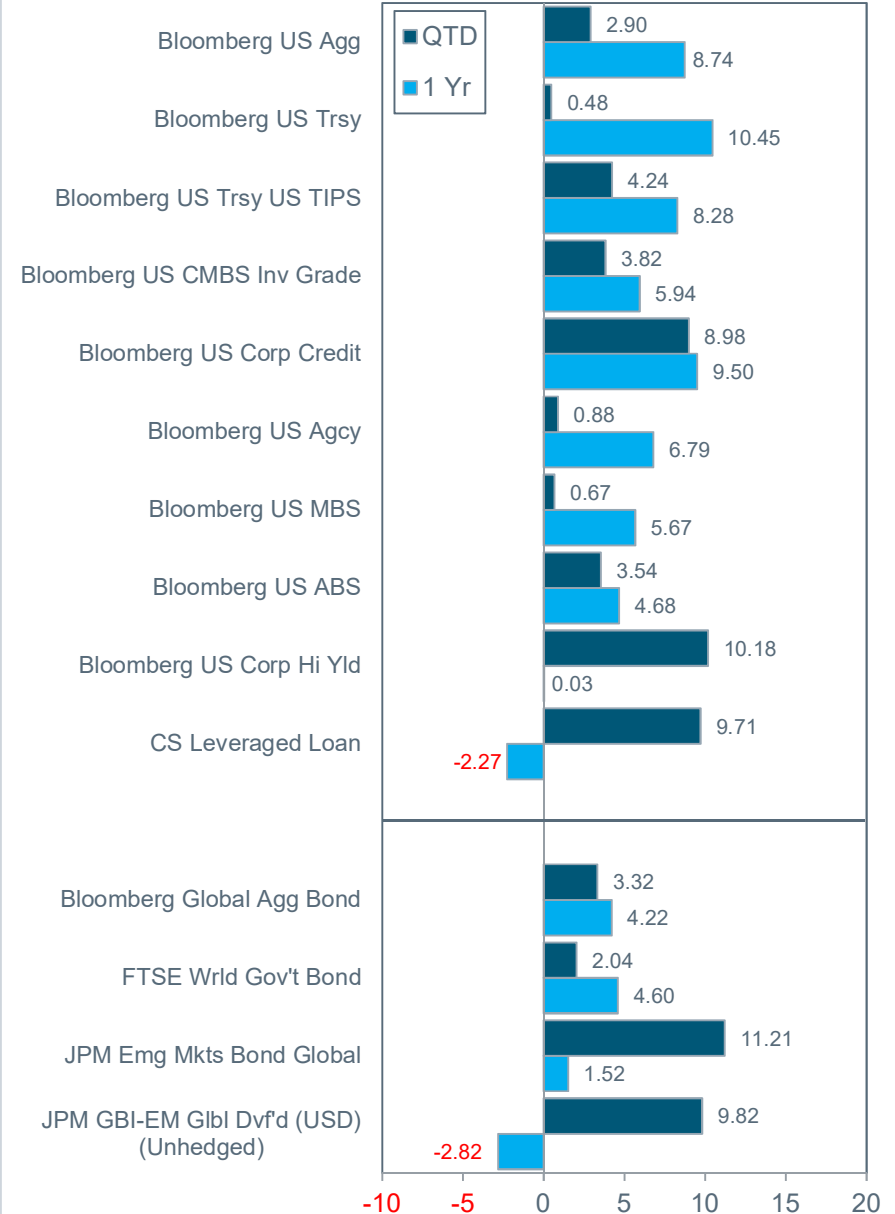
## Emerging Market Debt

Emerging market debt enjoyed its own rally, erasing most of its losses of the first quarter. The JPMorgan EMBI Global Diversified Index returned 12.3%, with nearly every country in the index ending positive.

## 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.

## Second Quarter Review - Absolute Return

### General Market - Hedge Funds

Broad hedge fund benchmarks indicate the industry recovered relatively well from Q1-2020 drawdowns. The HFRI Fund Weighted Composite Index is down just 3.5% YTD after a 9.0% gain in Q2, led higher by the HFRI Hedged Equity Index, which finished the quarter up 13.6%. Still, YTD the vast majority of hedge fund strategies remain at least marginally negative, with those that pursue event oriented and special situations strategies, particularly within credit markets, still off from 5.0% to 7.0% YTD on average.

### General Market - Global Tactical Asset Allocation (GTAA)

GTAA managers largely provided positive absolute returns during Q2. Even with positive absolute returns, long-biased strategies reported mixed performance versus a static and less diversified blend of 60% US equity and 40% US fixed income. Long-biased strategies that had relatively weaker performance versus peers tended to have more exposure to EM equities which slightly underperformed US and other developed markets. Within EM equities, growth equities once again out-paced value by a significant margin, detracting from performance for managers.

## Second Quarter Review - Real Assets

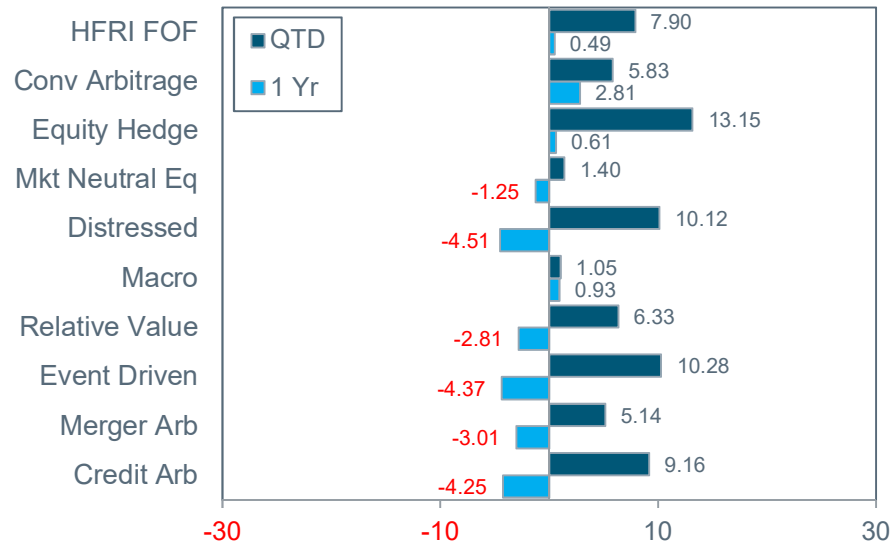
### General Market - Diversified Inflation Strategies (DIS)

Performance across DIS managers RVK tracks was largely positive during Q2, ranging from the high single digits to the high teens. With the relatively strong performance across a number of risk assets, managers with larger TIPS allocations tended to underperform peers as generally riskier assets saw a bounce back from poor Q1 performance. These strategies also tended to hold higher relative allocations to commodities. Though commodities provided positive absolute returns in Q2, the asset class did not keep up with other parts of the market.

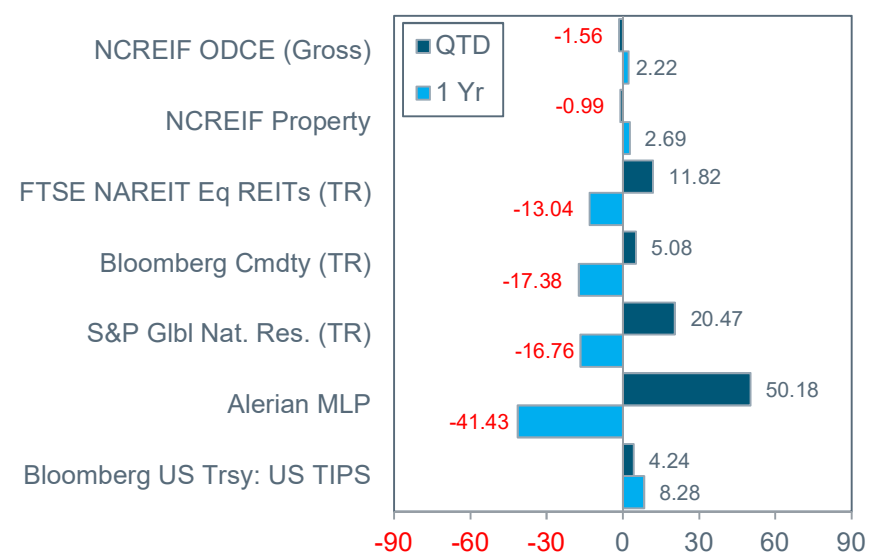
### General Market - Real Estate

Core private real estate returned -1.6% during the second quarter, as reported by the NFI-ODCE Index, with the total return comprised of 0.9% from income and -2.5% from price appreciation. While the income component remained relatively healthy and in-line with historical levels, price appreciation experienced a further meaningful decrease from Q1. Investors in publicly traded real estate outperformed their private market counterparts by a wide margin.

## HFRI Hedge Fund Performance (%)



## Real Asset Performance (%)



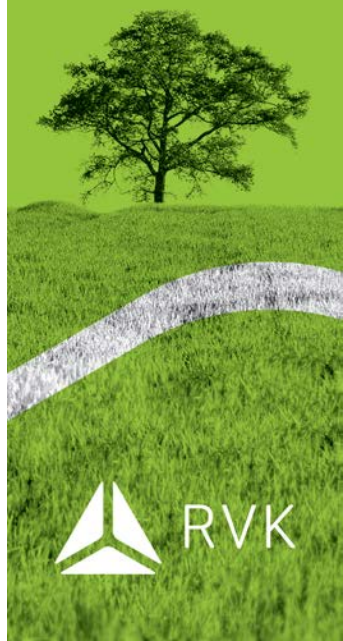
## Annual Asset Class Performance

As of June 30, 2020

<div>Best</div> <div>↑</div> <div>↓</div> <div>Worst</div>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD
	35.03	39.38	8.44	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	12.82
	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	6.14
	26.34	15.97	2.06	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	6.01
	19.31	11.63	-2.35	31.78	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	0.60
	18.37	11.17	-10.01	28.01	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	-0.60
	16.32	10.25	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	-1.57
	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.44	-3.08
	11.86	6.60	-33.79	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	-3.80
	10.39	5.49	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	-9.78
	4.85	5.00	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	-11.34
	4.34	1.87	-37.74	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	-12.98
	2.72	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	7.69	-13.11
	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.58	5.34	-18.71
	0.49	-15.70	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-19.40
S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp Hi Yield - FI	Bloombrg US Trsry US TIPS - FI	Bloombrg US Gov Credit Lng - FI	NCREIF ODCE (Gross) - Real Estate	FTSE NAREIT Eq REITs Index (TR)	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv		

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

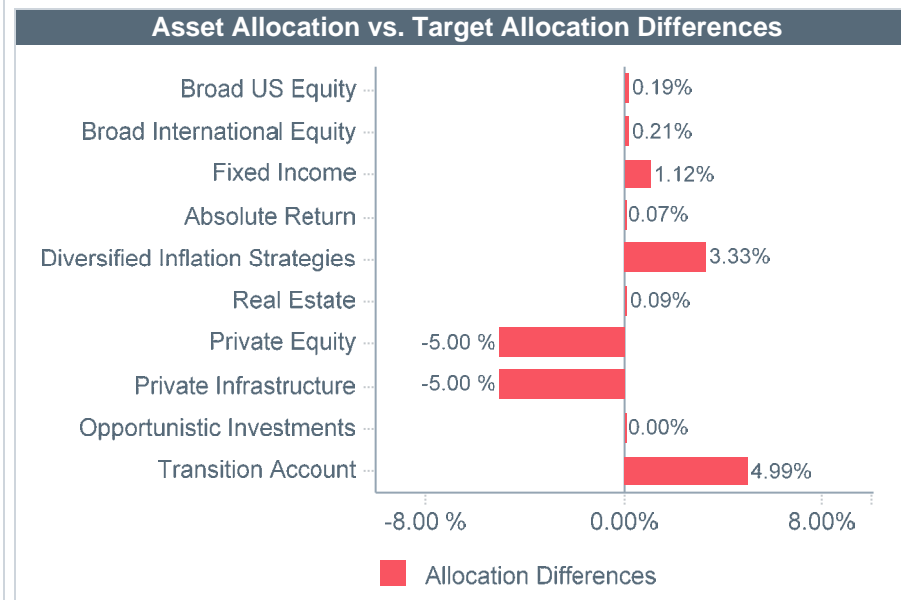
# Total Fund



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

As of June 30, 2020

Asset Allocation by Manager			Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Asset Allocation (\$000)	Asset Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	
<b>Broad US Equity</b>			Total Fund	4,823,961	100.00	100.00	-	-
State Street Russell 1000 Index SL (US Large Cap)	736,918,417	15.28	Broad US Equity	925,701	19.19	19.00	14.00	24.00
State Street Russell Mid Cap Index (US Mid Cap)	85,626,923	1.78	Broad International Equity	926,535	19.21	19.00	14.00	24.00
NT Small Cap Core (US Small Cap)	103,155,811	2.14	Fixed Income	1,115,400	23.12	22.00	17.00	27.00
<b>Broad International Equity</b>			Absolute Return	727,120	15.07	15.00	10.00	20.00
State Street World Ex US Index (International Equity)	590,353,697	12.24	Diversified Inflation Strategies	160,564	3.33	0.00	0.00	0.00
QMA International Small Cap Equity (International Equity)	146,941,314	3.05	Real Estate	727,914	15.09	15.00	10.00	20.00
DFA Emg Mkts Core Eq;I (Emerging Markets Equity)	95,241,295	1.97	Private Equity	-	0.00	5.00	0.00	10.00
Harding Loevner:IEM;IZ (Emerging Markets Equity)	93,998,315	1.95	Private Infrastructure	-	0.00	5.00	0.00	10.00
<b>Fixed Income</b>			Opportunistic Investments	-	0.00	0.00	0.00	5.00
Payden & Rygel Long Term (Investment Grade US FI)	323,978,509	6.72	Transition Account	240,727	4.99	0.00	0.00	0.00
JP Morgan FI Intermediate Bond (Investment Grade US FI)	319,159,541	6.62						
Brandywine Gbl Opp FI (Global FI)	179,059,712	3.71						
FLP (Loans)	9,389,122	0.19						
ECLP (Loans)	941,672	0.02						
AG Direct Lending III LP (Direct Lending)	152,350,463	3.16						
Schroders Securitized Credit (Structured Credit)	118,083,240	2.45						
ND Land - PTF Cash (Cash)	12,437,963	0.26						
<b>Absolute Return</b>								
GMO:Bchmk-Fr All;IV (GTAA)	359,361,431	7.45						
PIMCO:All Ast Ath;Inst (GTAA)	367,758,776	7.62						
<b>Diversified Inflation Strategies</b>								
Gresham Commodities (Commodities)	31,981,547	0.66						
Harvest MLP (MLPs)	97,257,524	2.02						
Van Eck NR Equities (Natural Resources)	31,324,485	0.65						
<b>Real Estate</b>								
Morgan Stanley Prime Property (Core Real Estate)	213,468,132	4.43						
UBS Trumbull Property LP (Core Real Estate)	174,924,243	3.63						
Jamestown Premier Property (Core Plus Real Estate)	68,589,262	1.42						
Prologis USLF (Core Plus Real Estate)	137,656,300	2.85						
JP Morgan US RE Inc & Grth LP (Core Plus Real Estate)	133,276,533	2.76						
<b>Transition Account</b>								
NT STIF (Transition Account)	240,726,614	4.99						



Schedule of Investable Assets					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
QTD	4,366,206,062	499,268	457,255,508	4,823,960,839	10.47

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is net of fees. Net cash flow includes securities lending income and client directed flows. Gain/loss includes dividend and interest income and capital appreciation. Target Allocations and associated ranges displayed on the Asset Allocation vs. Target Allocation reflect the newly approved policy targets. In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).

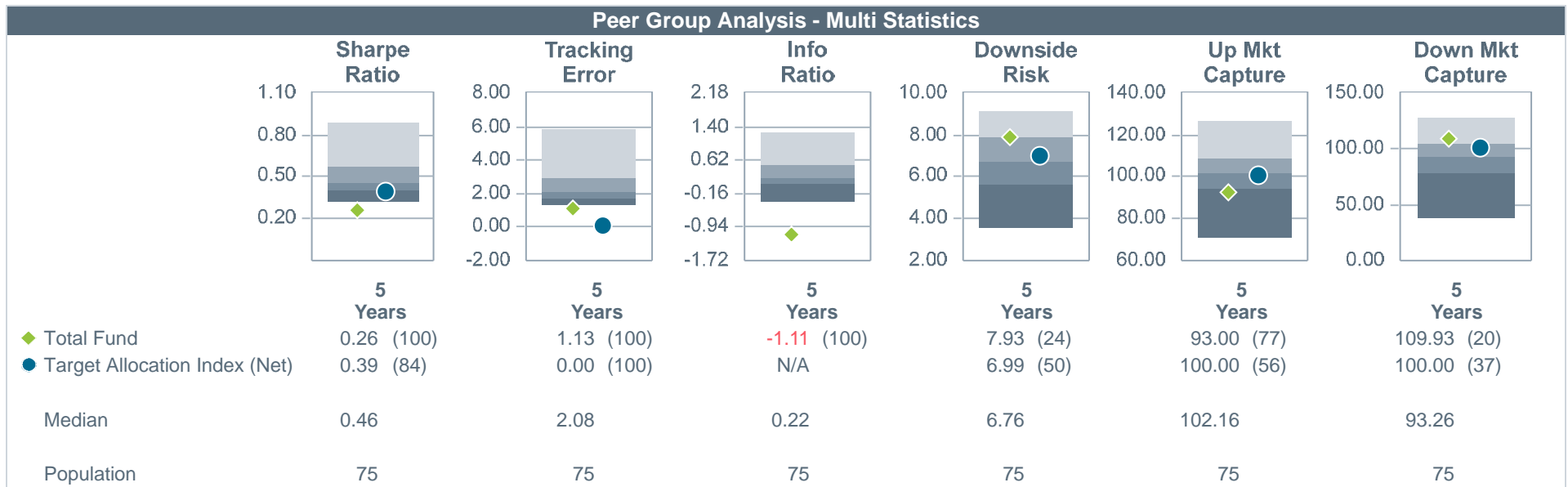
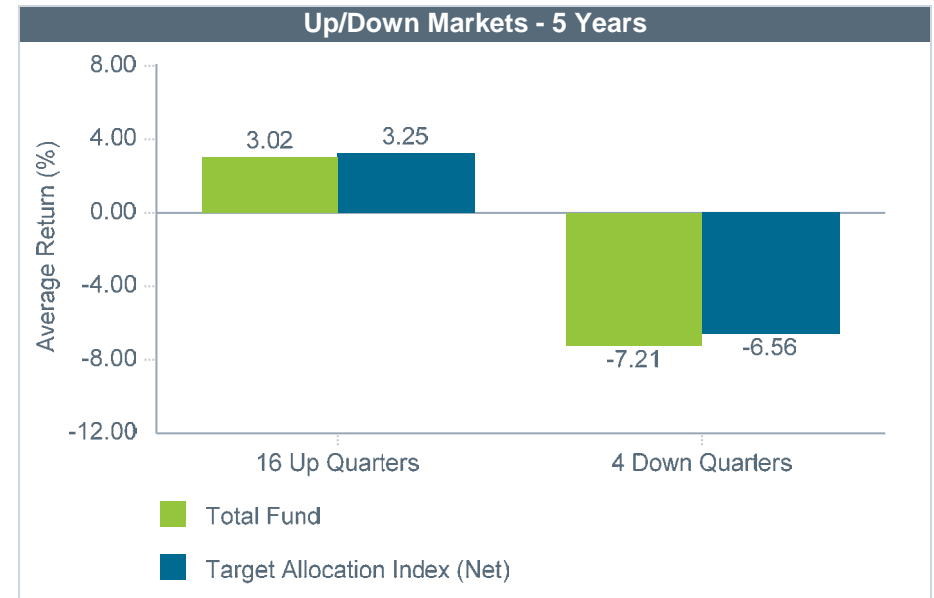
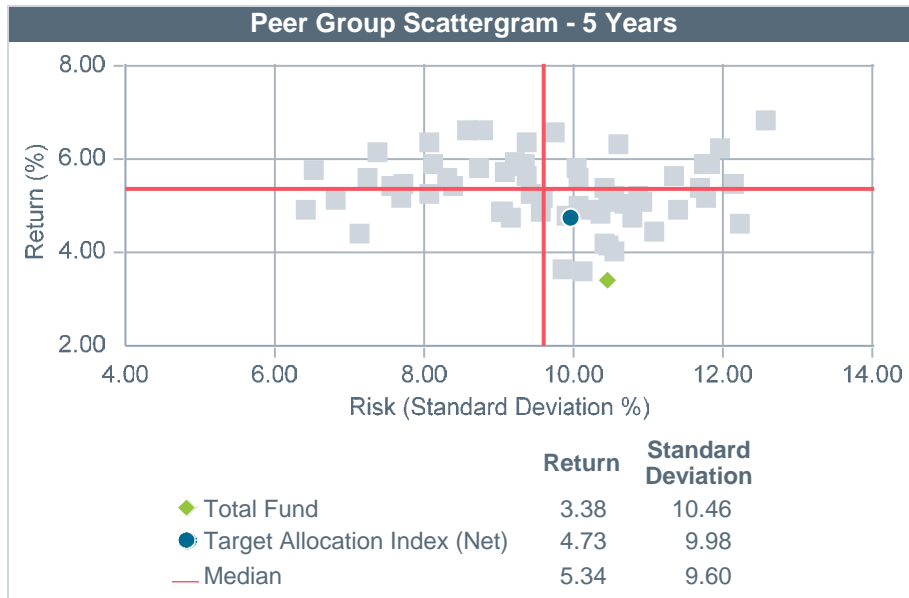


North Dakota Board of University and School Lands  
Comparative Performance

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Total Fund</b>	<b>10.47</b>	<b>-6.13</b>	<b>-1.87</b>	<b>-1.87</b>	<b>2.77</b>	<b>3.38</b>	<b>4.38</b>	<b>6.08</b>	<b>14.40</b>	<b>-5.11</b>	<b>12.62</b>	<b>6.25</b>	<b>08/01/1995</b>
Target Allocation Index (Net)	11.37	-2.95	2.01	2.01	4.67	4.73	5.76	7.23	16.30	-4.51	13.14	N/A	
Difference	-0.90	-3.18	-3.88	-3.88	-1.90	-1.35	-1.38	-1.15	-1.90	-0.60	-0.52	N/A	
All Public Plans > \$1B-Total Fund Median	10.05	-4.14	1.31	1.31	4.96	5.34	6.29	7.75	17.10	-3.51	15.73	7.00	
Rank	37	87	92	92	96	96	97	94	88	79	95	89	
<b>Broad US Equity</b>	<b>22.97</b>	<b>-4.09</b>	<b>5.12</b>	<b>5.12</b>	<b>9.54</b>	<b>9.87</b>	<b>11.01</b>	<b>12.57</b>	<b>30.30</b>	<b>-5.49</b>	<b>21.40</b>	<b>13.35</b>	<b>07/01/2009</b>
Russell 3000 Index	22.03	-3.48	6.53	6.53	10.04	10.03	11.68	13.72	31.02	-5.24	21.13	13.90	
Difference	0.94	-0.61	-1.41	-1.41	-0.50	-0.16	-0.67	-1.15	-0.72	-0.25	0.27	-0.55	
<b>Broad International Equity</b>	<b>16.65</b>	<b>-12.81</b>	<b>-6.43</b>	<b>-6.43</b>	<b>-0.49</b>	<b>1.46</b>	<b>3.41</b>	<b>5.03</b>	<b>22.05</b>	<b>-16.49</b>	<b>26.51</b>	<b>5.02</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	16.12	-11.00	-4.80	-4.80	1.13	2.26	3.71	4.97	21.51	-14.20	27.19	5.46	
Difference	0.53	-1.81	-1.63	-1.63	-1.62	-0.80	-0.30	0.06	0.54	-2.29	-0.68	-0.44	
<b>Fixed Income</b>	<b>4.82</b>	<b>2.41</b>	<b>4.80</b>	<b>4.80</b>	<b>3.76</b>	<b>3.62</b>	<b>3.48</b>	<b>3.92</b>	<b>7.70</b>	<b>-0.24</b>	<b>4.79</b>	<b>5.57</b>	<b>08/01/1995</b>
Global Fixed Income Custom Index	3.81	5.17	7.88	7.88	5.17	4.45	3.91	3.94	9.21	-0.52	4.98	N/A	
Difference	1.01	-2.76	-3.08	-3.08	-1.41	-0.83	-0.43	-0.02	-1.51	0.28	-0.19	N/A	
Bloomberg US Agg Bond Index	2.90	6.14	8.74	8.74	5.32	4.30	3.96	3.82	8.72	0.01	3.54	5.39	
Difference	1.92	-3.73	-3.94	-3.94	-1.56	-0.68	-0.48	0.10	-1.02	-0.25	1.25	0.18	
<b>Absolute Return</b>	<b>10.25</b>	<b>-9.22</b>	<b>-6.50</b>	<b>-6.50</b>	<b>0.19</b>	<b>1.58</b>	<b>N/A</b>	<b>N/A</b>	<b>11.09</b>	<b>-5.16</b>	<b>12.11</b>	<b>0.76</b>	<b>07/01/2014</b>
Absolute Return Custom Index	12.88	-1.47	4.76	4.76	5.83	5.68	6.39	7.24	19.28	-5.93	15.39	4.94	
Difference	-2.63	-7.75	-11.26	-11.26	-5.64	-4.10	N/A	N/A	-8.19	0.77	-3.28	-4.18	
Consumer Price Index+5%	1.10	2.80	5.68	5.68	6.80	6.63	6.49	6.78	7.40	7.01	7.21	6.38	
Difference	9.15	-12.02	-12.18	-12.18	-6.61	-5.05	N/A	N/A	3.69	-12.17	4.90	-5.62	
<b>Diversified Inflation Strategies</b>	<b>17.05</b>	<b>-18.08</b>	<b>-18.29</b>	<b>-18.29</b>	<b>-5.31</b>	<b>-5.56</b>	<b>N/A</b>	<b>N/A</b>	<b>12.19</b>	<b>-14.24</b>	<b>2.45</b>	<b>-3.24</b>	<b>04/01/2014</b>
DIS Custom Index	18.33	-14.59	-14.63	-14.63	-3.72	-3.01	-0.98	2.35	10.27	-9.13	4.80	-1.62	
Difference	-1.28	-3.49	-3.66	-3.66	-1.59	-2.55	N/A	N/A	1.92	-5.11	-2.35	-1.62	
<b>Real Estate</b>	<b>-2.29</b>	<b>-1.45</b>	<b>1.39</b>	<b>1.39</b>	<b>5.61</b>	<b>7.16</b>	<b>N/A</b>	<b>N/A</b>	<b>4.48</b>	<b>8.34</b>	<b>9.52</b>	<b>7.16</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	8.09	9.78	4.39	7.36	6.66	6.35	
Difference	-0.54	-0.44	0.06	0.06	0.89	0.81	N/A	N/A	0.09	0.98	2.86	0.81	

Performance shown is net of fees, and annualized for periods greater than one year. 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 net of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

North Dakota Board of University and School Lands  
Comparative Performance

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Total Fund</b>	<b>10.47</b>	<b>-6.13</b>	<b>-1.87</b>	<b>-1.87</b>	<b>2.77</b>	<b>3.38</b>	<b>6.08</b>	<b>14.40</b>	<b>-5.11</b>	<b>12.62</b>	<b>6.25</b>	<b>08/01/1995</b>
Target Allocation Index (Net)	11.37	-2.95	2.01	2.01	4.67	4.73	7.23	16.30	-4.51	13.14	N/A	
Difference	-0.90	-3.18	-3.88	-3.88	-1.90	-1.35	-1.15	-1.90	-0.60	-0.52	N/A	
<b>Broad US Equity</b>	<b>22.97</b>	<b>-4.09</b>	<b>5.12</b>	<b>5.12</b>	<b>9.54</b>	<b>9.87</b>	<b>12.57</b>	<b>30.30</b>	<b>-5.49</b>	<b>21.40</b>	<b>13.35</b>	<b>07/01/2009</b>
Russell 3000 Index	22.03	-3.48	6.53	6.53	10.04	10.03	13.72	31.02	-5.24	21.13	13.90	
Difference	0.94	-0.61	-1.41	-1.41	-0.50	-0.16	-1.15	-0.72	-0.25	0.27	-0.55	
<b>State Street Russell 1000 Index SL (CF)</b>	<b>21.82</b>	<b>-2.82</b>	<b>7.47</b>	<b>7.47</b>	<b>10.62</b>	<b>N/A</b>	<b>N/A</b>	<b>31.39</b>	<b>-4.78</b>	<b>N/A</b>	<b>10.57</b>	<b>06/01/2017</b>
Russell 1000 Index	21.82	-2.81	7.48	7.48	10.64	10.47	13.97	31.43	-4.78	21.69	10.59	
Difference	0.00	-0.01	-0.01	-0.01	-0.02	N/A	N/A	-0.04	0.00	N/A	-0.02	
<b>State Street Russell Mid Cap Index (SA)</b>	<b>24.53</b>	<b>-9.11</b>	<b>-2.26</b>	<b>-2.26</b>	<b>5.78</b>	<b>N/A</b>	<b>N/A</b>	<b>30.38</b>	<b>-8.97</b>	<b>N/A</b>	<b>5.97</b>	<b>06/01/2017</b>
Russell Mid Cap Index	24.61	-9.13	-2.24	-2.24	5.79	6.76	12.35	30.54	-9.06	18.52	5.97	
Difference	-0.08	0.02	-0.02	-0.02	-0.01	N/A	N/A	-0.16	0.09	N/A	0.00	
<b>NT Small Cap Core (CF)</b>	<b>30.47</b>	<b>-8.71</b>	<b>-4.22</b>	<b>-4.22</b>	<b>5.21</b>	<b>6.59</b>	<b>10.76</b>	<b>23.13</b>	<b>-7.63</b>	<b>21.82</b>	<b>5.66</b>	<b>07/01/2014</b>
Russell 2000 Index	25.42	-12.98	-6.63	-6.63	2.01	4.29	10.50	25.53	-11.01	14.65	4.65	
Difference	5.05	4.27	2.41	2.41	3.20	2.30	0.26	-2.40	3.38	7.17	1.01	

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

**As of June 30, 2020**

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Broad International Equity</b>	<b>16.65</b>	<b>-12.81</b>	<b>-6.43</b>	<b>-6.43</b>	<b>-0.49</b>	<b>1.46</b>	<b>5.03</b>	<b>22.05</b>	<b>-16.49</b>	<b>26.51</b>	<b>5.02</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	16.12	-11.00	-4.80	-4.80	1.13	2.26	4.97	21.51	-14.20	27.19	5.46	
Difference	0.53	-1.81	-1.63	-1.63	-1.62	-0.80	0.06	0.54	-2.29	-0.68	-0.44	
<b>State Street World Ex US Index (CF)</b>	<b>15.33</b>	<b>-11.51</b>	<b>-5.47</b>	<b>-5.47</b>	<b>0.77</b>	<b>1.93</b>	<b>N/A</b>	<b>22.38</b>	<b>-14.16</b>	<b>24.15</b>	<b>0.68</b>	<b>07/01/2014</b>
MSCI Wrld Ex US Index (USD) (Net)	15.34	-11.49	-5.42	-5.42	0.84	2.01	5.43	22.49	-14.09	24.21	0.76	
Difference	-0.01	-0.02	-0.05	-0.05	-0.07	-0.08	N/A	-0.11	-0.07	-0.06	-0.08	
<b>QMA International Small Cap Equity (CF)</b>	<b>21.17</b>	<b>-14.61</b>	<b>-6.45</b>	<b>-6.45</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>22.54</b>	<b>N/A</b>	<b>N/A</b>	<b>-11.01</b>	<b>02/01/2018</b>
MSCI EAFE Sm Cap Index (USD) (Net)	19.88	-13.11	-3.52	-3.52	0.53	3.81	8.02	24.96	-17.89	33.01	-6.59	
Difference	1.29	-1.50	-2.93	-2.93	N/A	N/A	N/A	-2.42	N/A	N/A	-4.42	
<b>DFA Emg Mkts Core Eq;I (DFCEX)</b>	<b>20.76</b>	<b>-13.43</b>	<b>-8.29</b>	<b>-8.29</b>	<b>-0.77</b>	<b>1.68</b>	<b>N/A</b>	<b>16.04</b>	<b>-15.25</b>	<b>36.55</b>	<b>0.43</b>	<b>07/01/2014</b>
MSCI Emg Mkts Index (USD) (Net)	18.08	-9.78	-3.39	-3.39	1.90	2.86	3.27	18.44	-14.58	37.28	1.48	
Difference	2.68	-3.65	-4.90	-4.90	-2.67	-1.18	N/A	-2.40	-0.67	-0.73	-1.05	
<b>Harding Loevner:IEM;IZ (HLEZX)</b>	<b>17.54</b>	<b>-14.91</b>	<b>-7.71</b>	<b>-7.71</b>	<b>-0.28</b>	<b>2.75</b>	<b>N/A</b>	<b>25.97</b>	<b>-18.53</b>	<b>35.79</b>	<b>1.10</b>	<b>07/01/2014</b>
MSCI Emg Mkts Index (USD) (Net)	18.08	-9.78	-3.39	-3.39	1.90	2.86	3.27	18.44	-14.58	37.28	1.48	
Difference	-0.54	-5.13	-4.32	-4.32	-2.18	-0.11	N/A	7.53	-3.95	-1.49	-0.38	

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North Dakota Board of University and School Lands  
Comparative Performance

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Fixed Income</b>	<b>4.82</b>	<b>2.41</b>	<b>4.80</b>	<b>4.80</b>	<b>3.76</b>	<b>3.62</b>	<b>3.92</b>	<b>7.70</b>	<b>-0.24</b>	<b>4.79</b>	<b>5.57</b>	<b>08/01/1995</b>
Global Fixed Income Custom Index	3.81	5.17	7.88	7.88	5.17	4.45	3.94	9.21	-0.52	4.98	N/A	
Difference	1.01	-2.76	-3.08	-3.08	-1.41	-0.83	-0.02	-1.51	0.28	-0.19	N/A	
Bloomberg US Agg Bond Index	2.90	6.14	8.74	8.74	5.32	4.30	3.82	8.72	0.01	3.54	5.39	
Difference	1.92	-3.73	-3.94	-3.94	-1.56	-0.68	0.10	-1.02	-0.25	1.25	0.18	
<b>Payden &amp; Rygel Long Term (SA)</b>	<b>4.95</b>	<b>4.71</b>	<b>7.42</b>	<b>7.42</b>	<b>5.35</b>	<b>4.70</b>	<b>4.45</b>	<b>9.42</b>	<b>0.16</b>	<b>4.99</b>	<b>5.94</b>	<b>08/01/1995</b>
Bloomberg US Agg Bond Index	2.90	6.14	8.74	8.74	5.32	4.30	3.82	8.72	0.01	3.54	5.39	
Difference	2.05	-1.43	-1.32	-1.32	0.03	0.40	0.63	0.70	0.15	1.45	0.55	
<b>JP Morgan FI Intermediate Bond (SA)</b>	<b>3.06</b>	<b>4.87</b>	<b>6.74</b>	<b>6.74</b>	<b>4.42</b>	<b>3.52</b>	<b>N/A</b>	<b>6.70</b>	<b>1.01</b>	<b>2.71</b>	<b>2.81</b>	<b>08/01/2012</b>
Bloomberg US Gov't Crdt Int Trm Bond Index	2.81	5.28	7.12	7.12	4.43	3.46	3.13	6.80	0.88	2.14	2.67	
Difference	0.25	-0.41	-0.38	-0.38	-0.01	0.06	N/A	-0.10	0.13	0.57	0.14	
<b>Brandywine Gbl Opp FI (CF)</b>	<b>10.06</b>	<b>-2.30</b>	<b>0.06</b>	<b>0.06</b>	<b>1.35</b>	<b>2.76</b>	<b>N/A</b>	<b>9.31</b>	<b>-5.16</b>	<b>12.91</b>	<b>1.55</b>	<b>11/01/2014</b>
FTSE Wrld Gov't Bond Index	2.04	4.08	4.60	4.60	3.98	3.70	2.37	5.90	-0.84	7.49	2.29	
Difference	8.02	-6.38	-4.54	-4.54	-2.63	-0.94	N/A	3.41	-4.32	5.42	-0.74	
<b>AG Direct Lending III LP</b>	<b>2.57</b>	<b>0.82</b>	<b>6.12</b>	<b>6.12</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.02</b>	<b>N/A</b>	<b>N/A</b>	<b>7.17</b>	<b>09/01/2018</b>
CS Lvg'd Loan Index	9.71	-4.76	-2.27	-2.27	2.13	2.94	4.34	8.17	1.14	4.25	0.29	
Difference	-7.14	5.58	8.39	8.39	N/A	N/A	N/A	1.85	N/A	N/A	6.88	
<b>Schroders Securitized Credit (SA)</b>	<b>5.99</b>	<b>-1.86</b>	<b>-0.63</b>	<b>-0.63</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>3.85</b>	<b>N/A</b>	<b>N/A</b>	<b>1.08</b>	<b>12/01/2018</b>
3 Month LIBOR Index (USD)+1.75%	0.88	1.82	3.90	3.90	3.86	3.27	2.68	4.39	3.86	2.88	4.17	
Difference	5.11	-3.68	-4.53	-4.53	N/A	N/A	N/A	-0.54	N/A	N/A	-3.09	
<b>ND Land - PTF Cash (SA)</b>	<b>0.05</b>	<b>0.37</b>	<b>1.68</b>	<b>1.68</b>	<b>1.74</b>	<b>N/A</b>	<b>N/A</b>	<b>2.49</b>	<b>1.71</b>	<b>N/A</b>	<b>1.74</b>	<b>07/01/2017</b>
ICE BofAML 3 Mo US T-Bill Index	0.02	0.60	1.63	1.63	1.77	1.19	0.64	2.28	1.87	0.86	1.77	
Difference	0.03	-0.23	0.05	0.05	-0.03	N/A	N/A	0.21	-0.16	N/A	-0.03	
<b>FLP (Loans)</b>	<b>0.71</b>	<b>1.84</b>	<b>4.29</b>	<b>4.29</b>	<b>5.35</b>	<b>5.65</b>	<b>5.80</b>	<b>4.86</b>	<b>6.15</b>	<b>6.16</b>	<b>7.08</b>	<b>08/01/1995</b>
<b>ECLP (Loans)</b>	<b>1.17</b>	<b>2.32</b>	<b>4.63</b>	<b>4.63</b>	<b>4.55</b>	<b>4.63</b>	<b>N/A</b>	<b>4.49</b>	<b>4.58</b>	<b>4.25</b>	<b>5.01</b>	<b>11/01/2010</b>

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North Dakota Board of University and School Lands  
Comparative Performance

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Absolute Return</b>	<b>10.25</b>	<b>-9.22</b>	<b>-6.50</b>	<b>-6.50</b>	<b>0.19</b>	<b>1.58</b>	<b>N/A</b>	<b>11.09</b>	<b>-5.16</b>	<b>12.11</b>	<b>0.76</b>	<b>07/01/2014</b>
Absolute Return Custom Index	12.88	-1.47	4.76	4.76	5.83	5.68	7.24	19.28	-5.93	15.39	4.94	
Difference	-2.63	-7.75	-11.26	-11.26	-5.64	-4.10	N/A	-8.19	0.77	-3.28	-4.18	
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>7.84</b>	<b>-9.43</b>	<b>-5.67</b>	<b>-5.67</b>	<b>0.20</b>	<b>1.20</b>	<b>N/A</b>	<b>11.64</b>	<b>-5.27</b>	<b>13.07</b>	<b>0.62</b>	<b>07/01/2014</b>
60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx	12.70	-2.28	3.42	3.42	5.50	5.54	6.79	18.55	-6.00	17.09	4.17	
Difference	-4.86	-7.15	-9.09	-9.09	-5.30	-4.34	N/A	-6.91	0.73	-4.02	-3.55	
Consumer Price Index+5%	1.10	2.80	5.68	5.68	6.80	6.63	6.78	7.40	7.01	7.21	6.38	
Difference	6.74	-12.23	-11.35	-11.35	-6.60	-5.43	N/A	4.24	-12.28	5.86	-5.76	
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>	<b>13.13</b>	<b>-8.78</b>	<b>-7.19</b>	<b>-7.19</b>	<b>-0.99</b>	<b>0.83</b>	<b>N/A</b>	<b>7.62</b>	<b>-6.14</b>	<b>12.04</b>	<b>-0.82</b>	<b>07/01/2014</b>
All Asset Custom Index (EqI Wtd)	7.77	0.60	4.77	4.77	5.22	4.93	5.63	12.97	-1.62	8.94	4.12	
Difference	5.36	-9.38	-11.96	-11.96	-6.21	-4.10	N/A	-5.35	-4.52	3.10	-4.94	
Consumer Price Index+5%	1.10	2.80	5.68	5.68	6.80	6.63	6.78	7.40	7.01	7.21	6.38	
Difference	12.03	-11.58	-12.87	-12.87	-7.79	-5.80	N/A	0.22	-13.15	4.83	-7.20	

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North Dakota Board of University and School Lands  
Comparative Performance

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Diversified Inflation Strategies</b>	<b>17.05</b>	<b>-18.08</b>	<b>-18.29</b>	<b>-18.29</b>	<b>-5.31</b>	<b>-5.56</b>	<b>N/A</b>	<b>12.19</b>	<b>-14.24</b>	<b>2.45</b>	<b>-3.24</b>	<b>04/01/2014</b>
DIS Custom Index	18.33	-14.59	-14.63	-14.63	-3.72	-3.01	2.35	10.27	-9.13	4.80	-1.62	
Difference	-1.28	-3.49	-3.66	-3.66	-1.59	-2.55	N/A	1.92	-5.11	-2.35	-1.62	
<b>Gresham Commodities (SA)</b>	<b>7.68</b>	<b>-21.66</b>	<b>-18.34</b>	<b>-18.34</b>	<b>-4.17</b>	<b>-6.28</b>	<b>N/A</b>	<b>13.59</b>	<b>-13.80</b>	<b>11.31</b>	<b>-6.28</b>	<b>07/01/2015</b>
Bloomberg Cmdty Ex Energy Index (TR)	4.06	-7.86	-4.98	-4.98	-3.70	-3.21	-2.09	6.01	-10.95	5.36	-3.21	
Difference	3.62	-13.80	-13.36	-13.36	-0.47	-3.07	N/A	7.58	-2.85	5.95	-3.07	
Gresham Commodities (SA) Custom Index	7.57	-19.48	-16.15	-16.15	-4.60	-6.21	N/A	12.83	-14.04	5.89	-6.21	
Difference	0.11	-2.18	-2.19	-2.19	0.43	-0.07	N/A	0.76	0.24	5.42	-0.07	
<b>Harvest MLP (SA)</b>	<b>32.63</b>	<b>-32.43</b>	<b>-36.63</b>	<b>-36.63</b>	<b>-13.80</b>	<b>-11.20</b>	<b>N/A</b>	<b>12.72</b>	<b>-13.63</b>	<b>-5.50</b>	<b>-11.20</b>	<b>07/01/2015</b>
S&P MLP Index (TR)	45.82	-35.66	-40.17	-40.17	-15.34	-12.68	-0.52	9.78	-11.67	-5.58	-12.68	
Difference	-13.19	3.23	3.54	3.54	1.54	1.48	N/A	2.94	-1.96	0.08	1.48	
<b>Van Eck NR Equities (SA)</b>	<b>33.62</b>	<b>-17.61</b>	<b>-17.90</b>	<b>-17.90</b>	<b>-7.63</b>	<b>-8.27</b>	<b>N/A</b>	<b>12.89</b>	<b>-28.52</b>	<b>-0.55</b>	<b>-8.27</b>	<b>07/01/2015</b>
S&P Gbl Ntrl Res Sect Index (TR)	20.47	-19.14	-16.76	-16.76	-0.11	0.94	1.48	17.20	-12.57	22.66	0.94	
Difference	13.15	1.53	-1.14	-1.14	-7.52	-9.21	N/A	-4.31	-15.95	-23.21	-9.21	
S&P N Amer Ntrl Res Index	31.31	-26.33	-24.37	-24.37	-8.02	-6.47	-0.69	17.63	-21.07	1.23	-6.47	
Difference	2.31	8.72	6.47	6.47	0.39	-1.80	N/A	-4.74	-7.45	-1.78	-1.80	

Performance shown is net of fees, and annualized for periods greater than one year. 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. In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).

North Dakota Board of University and School Lands  
Comparative Performance

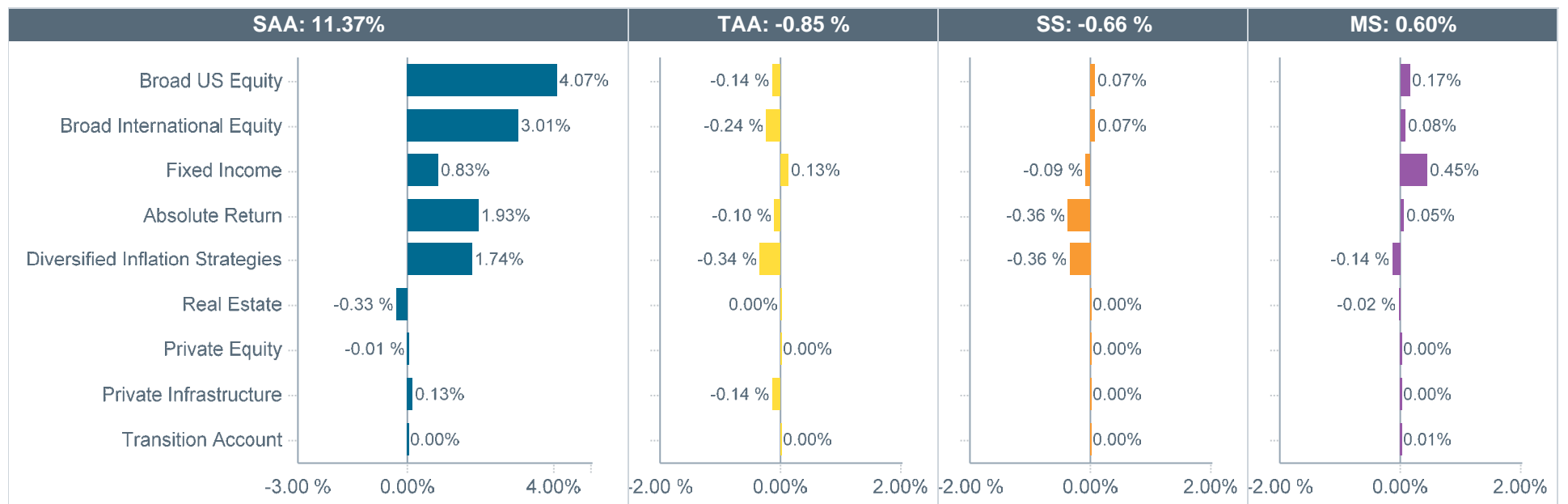
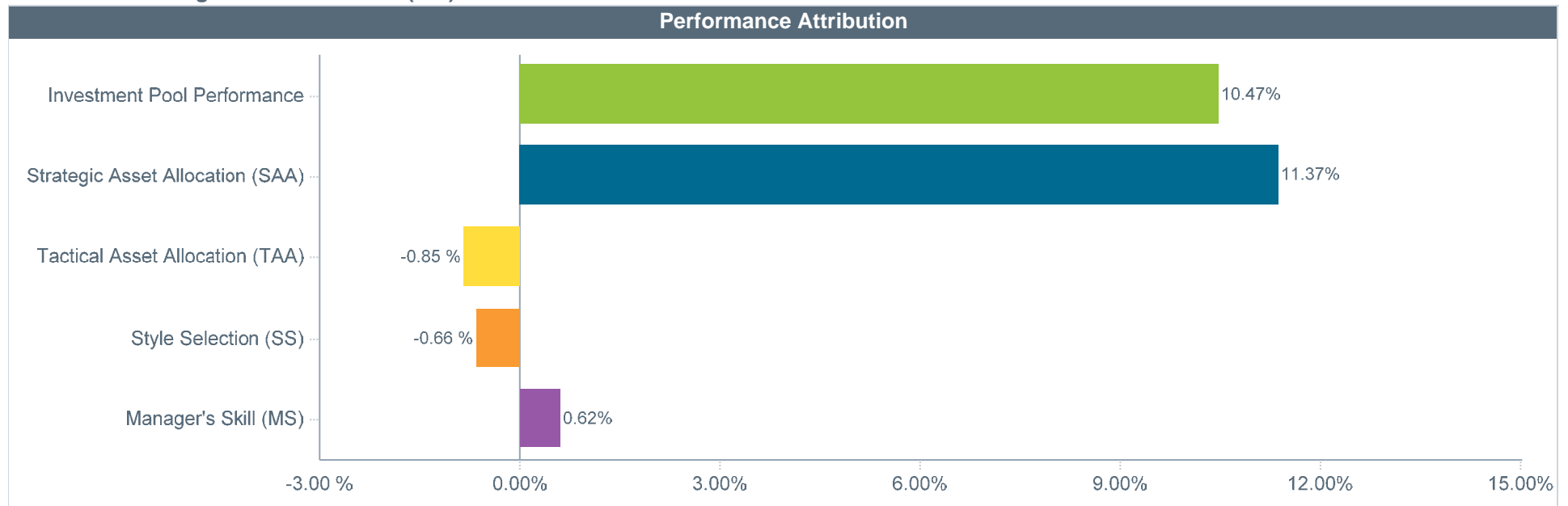
As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Real Estate</b>	<b>-2.29</b>	<b>-1.45</b>	<b>1.39</b>	<b>1.39</b>	<b>5.61</b>	<b>7.16</b>	<b>N/A</b>	<b>4.48</b>	<b>8.34</b>	<b>9.52</b>	<b>7.16</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	9.78	4.39	7.36	6.66	6.35	
Difference	-0.54	-0.44	0.06	0.06	0.89	0.81	N/A	0.09	0.98	2.86	0.81	
<b>Morgan Stanley Prime Property (CF)</b>	<b>-1.85</b>	<b>-1.26</b>	<b>1.66</b>	<b>1.66</b>	<b>5.71</b>	<b>7.50</b>	<b>N/A</b>	<b>6.17</b>	<b>7.96</b>	<b>8.75</b>	<b>7.50</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	9.78	4.39	7.36	6.66	6.35	
Difference	-0.10	-0.25	0.33	0.33	0.99	1.15	N/A	1.78	0.60	2.09	1.15	
<b>UBS Trumbull Property LP (CF)</b>	<b>-2.61</b>	<b>-2.36</b>	<b>-1.81</b>	<b>-1.81</b>	<b>1.38</b>	<b>3.62</b>	<b>N/A</b>	<b>-2.84</b>	<b>6.17</b>	<b>5.42</b>	<b>3.62</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	9.78	4.39	7.36	6.66	6.35	
Difference	-0.86	-1.35	-3.14	-3.14	-3.34	-2.73	N/A	-7.23	-1.19	-1.24	-2.73	
<b>Jamestown Premier Property (CF)</b>	<b>-4.04</b>	<b>-4.87</b>	<b>-4.40</b>	<b>-4.40</b>	<b>4.87</b>	<b>6.18</b>	<b>N/A</b>	<b>2.40</b>	<b>7.75</b>	<b>14.22</b>	<b>6.18</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	9.78	4.39	7.36	6.66	6.35	
Difference	-2.29	-3.86	-5.73	-5.73	0.15	-0.17	N/A	-1.99	0.39	7.56	-0.17	
<b>Prologis USLF (CF)</b>	<b>-1.78</b>	<b>0.50</b>	<b>9.65</b>	<b>9.65</b>	<b>15.12</b>	<b>N/A</b>	<b>N/A</b>	<b>16.84</b>	<b>16.18</b>	<b>20.21</b>	<b>15.36</b>	<b>04/01/2016</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	9.78	4.39	7.36	6.66	5.41	
Difference	-0.03	1.51	8.32	8.32	10.40	N/A	N/A	12.45	8.82	13.55	9.95	
<b>JP Morgan US Real Estate Income and Growth LP (CF)</b>	<b>-2.18</b>	<b>-0.68</b>	<b>0.56</b>	<b>0.56</b>	<b>3.43</b>	<b>N/A</b>	<b>N/A</b>	<b>2.24</b>	<b>5.73</b>	<b>5.82</b>	<b>4.56</b>	<b>07/01/2016</b>
NCREIF ODCE Index (AWA) (Net)	-1.75	-1.01	1.33	1.33	4.72	6.35	9.78	4.39	7.36	6.66	5.26	
Difference	-0.43	0.33	-0.77	-0.77	-1.29	N/A	N/A	-2.15	-1.63	-0.84	-0.70	
<b>Transition Account</b>												
<b>NT STIF (Transition Account)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.03</b>	<b>06/01/2020</b>
ICE BofAML 3 Mo US T-Bill Index	0.02	0.60	1.63	1.63	1.77	1.19	0.64	2.28	1.87	0.86	0.01	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.02	

Performance shown is net of fees, and annualized for periods greater than one year. 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. In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).

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

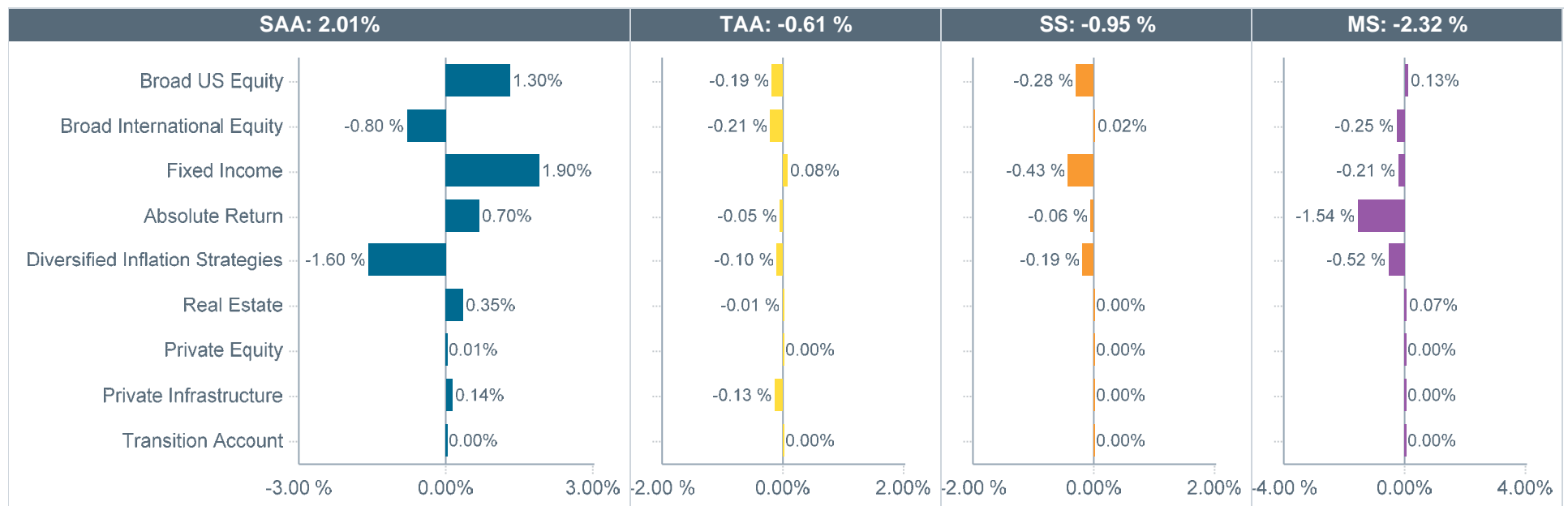
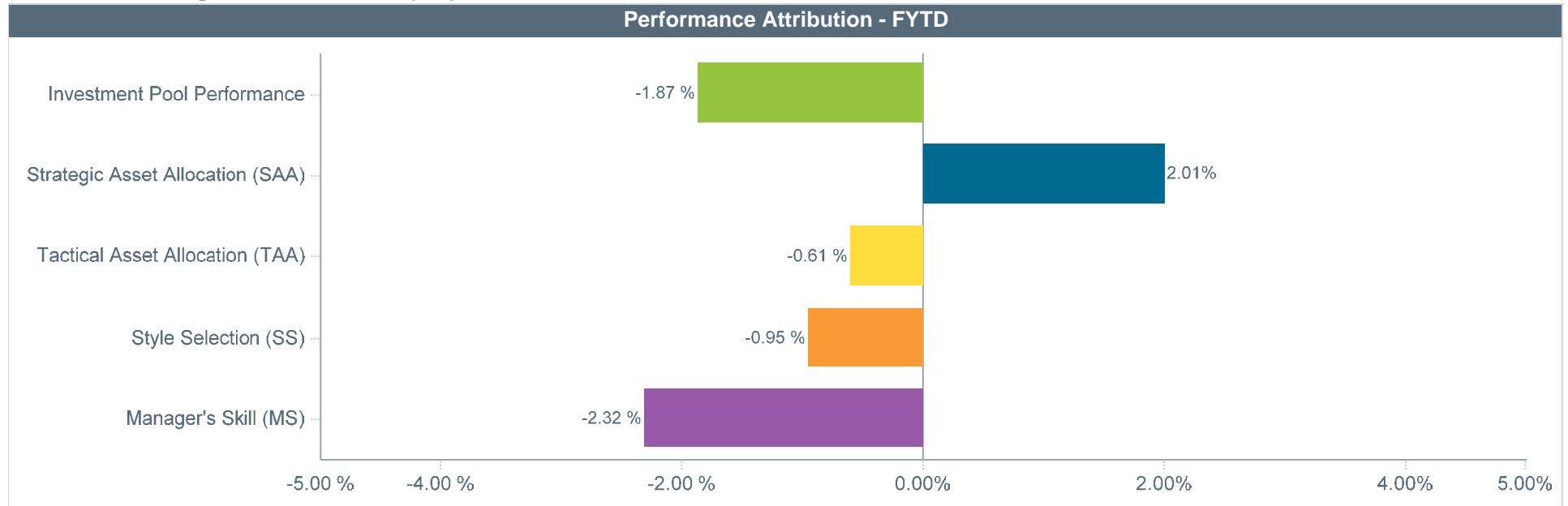
Quarter To Date Ending June 30, 2020



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)

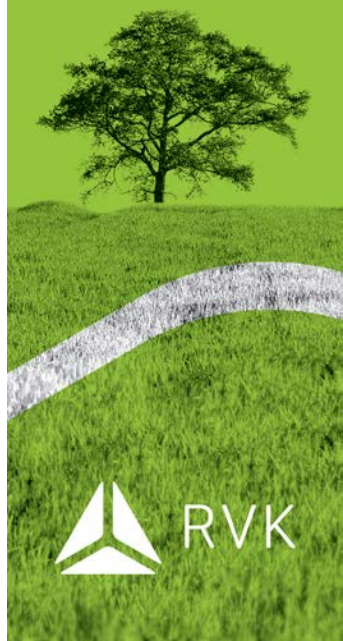
Fiscal Year To Date as of June 30, 2020



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.

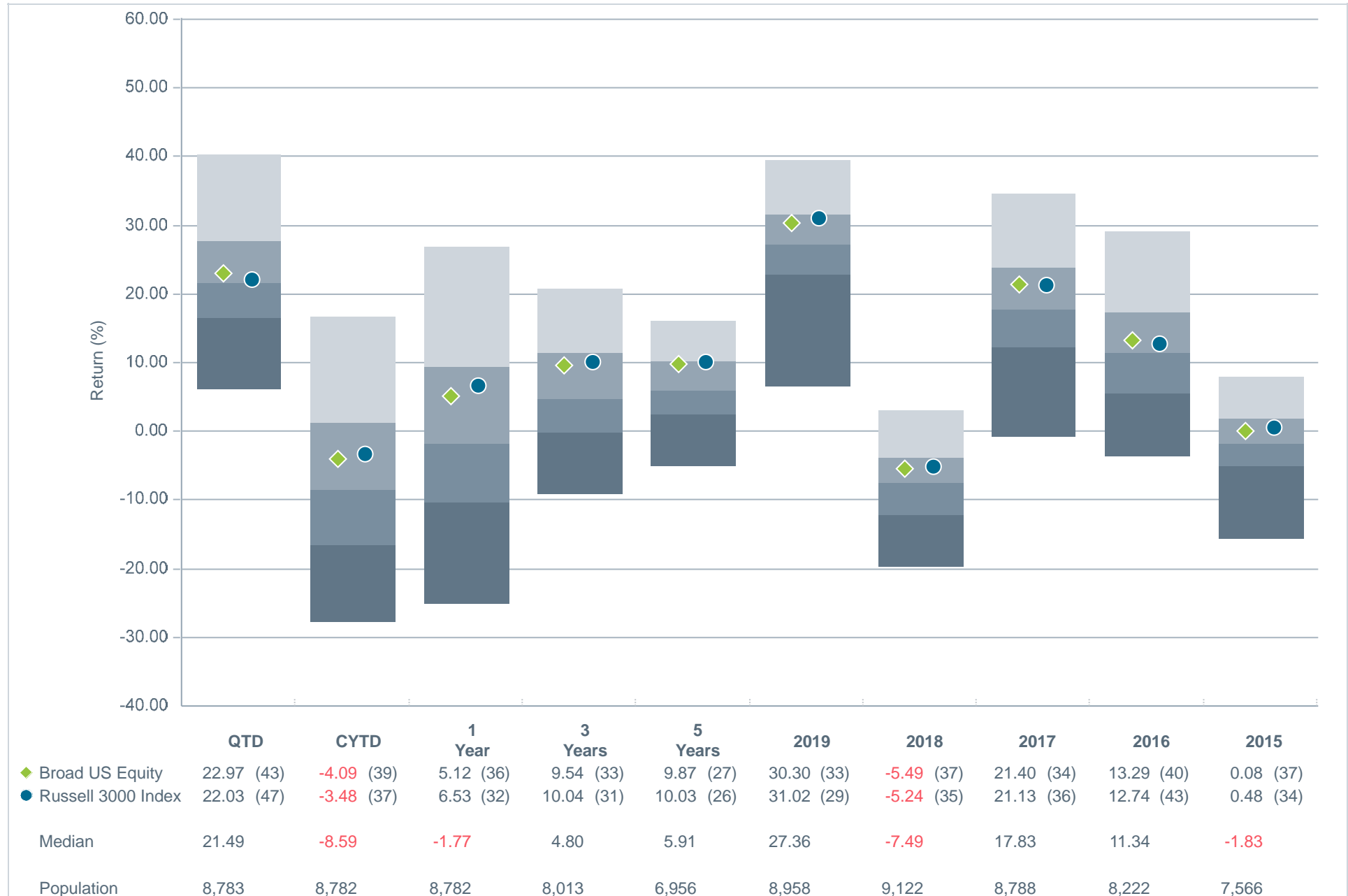


# Composite Profiles

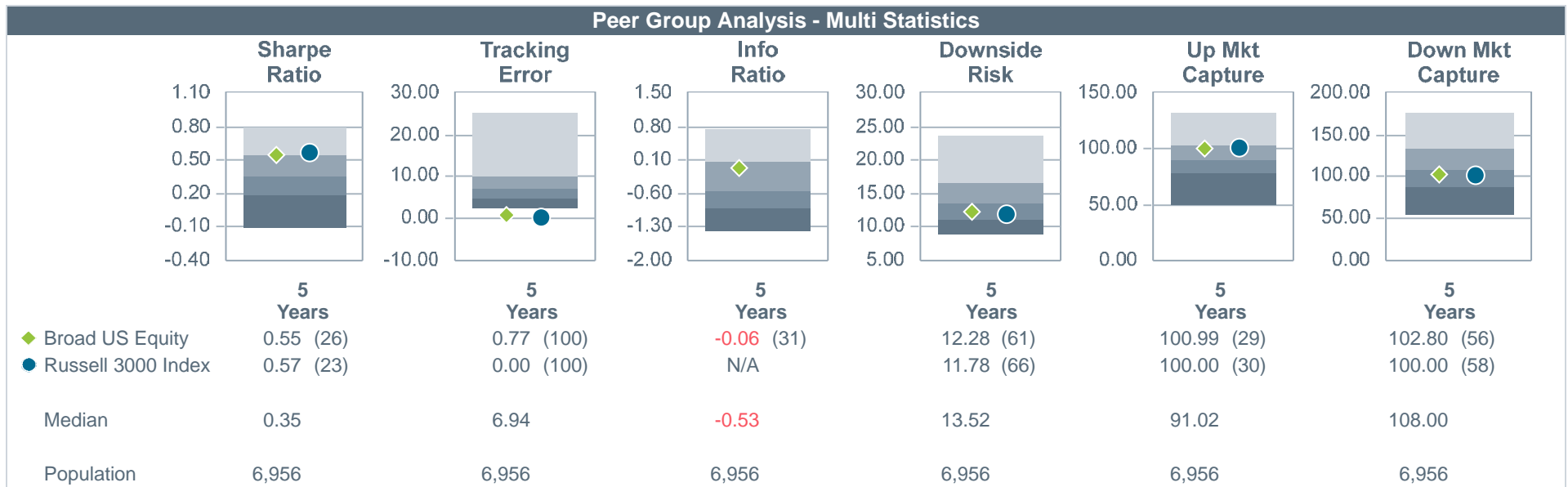
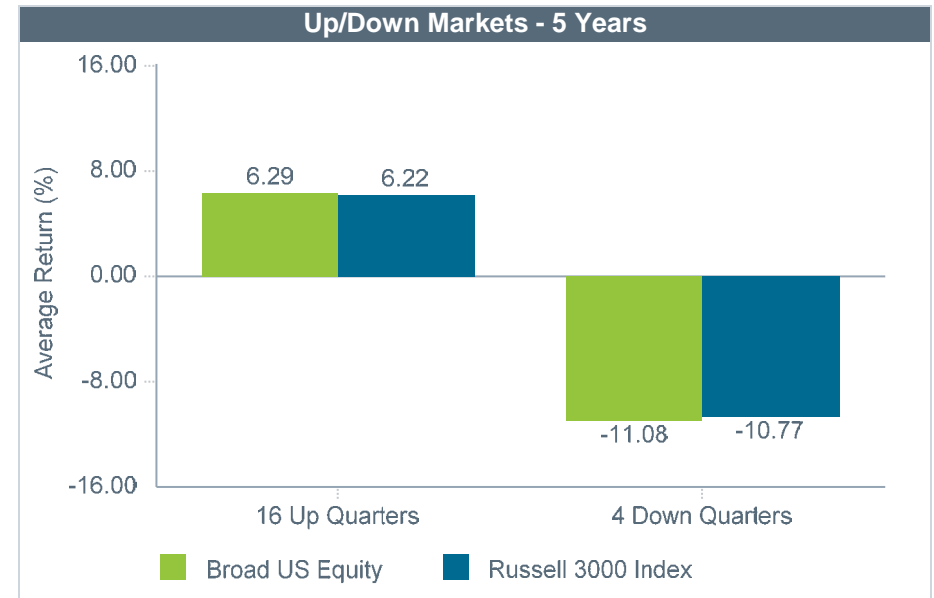
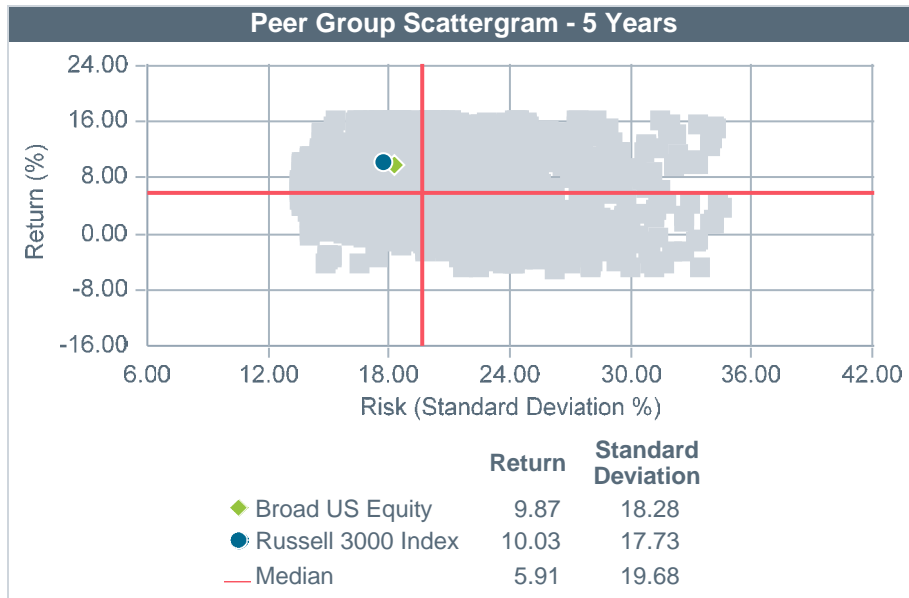


North Dakota Board of University and School Lands  
IM U.S. Equity (MF)  
Peer Group Analysis

As of June 30, 2020



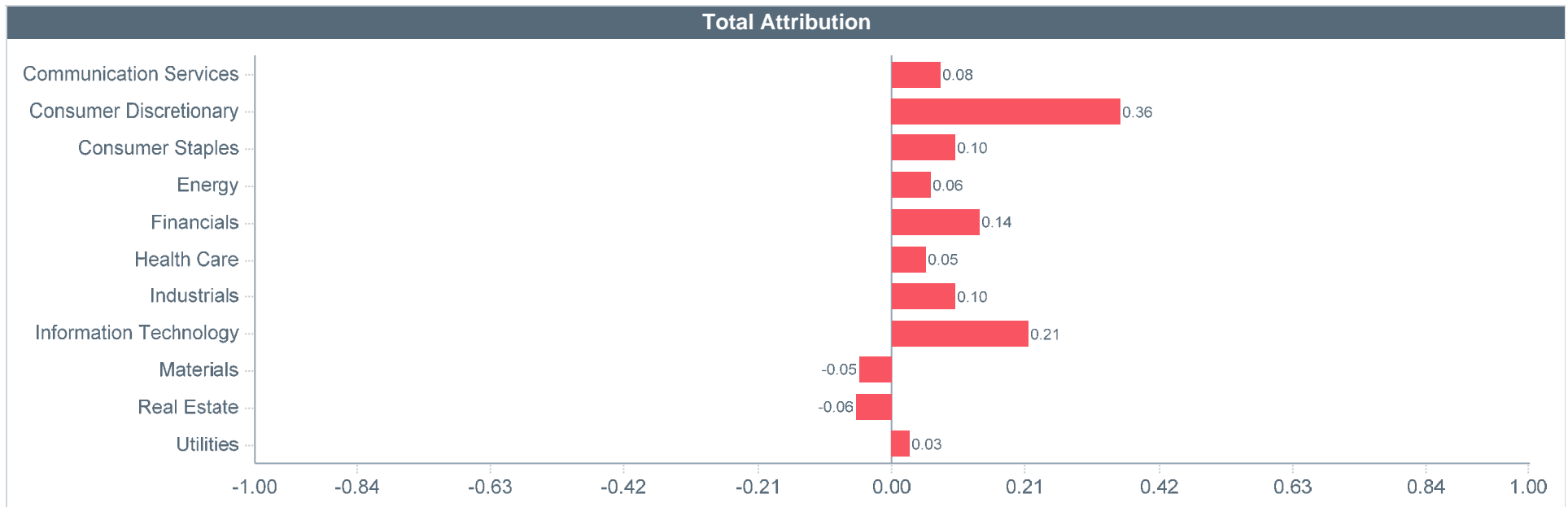
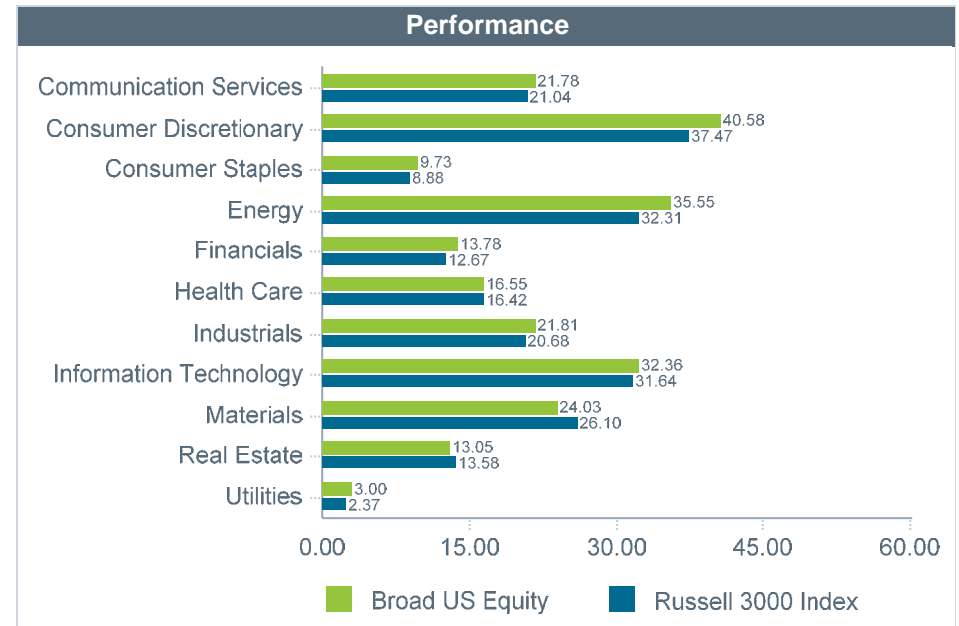
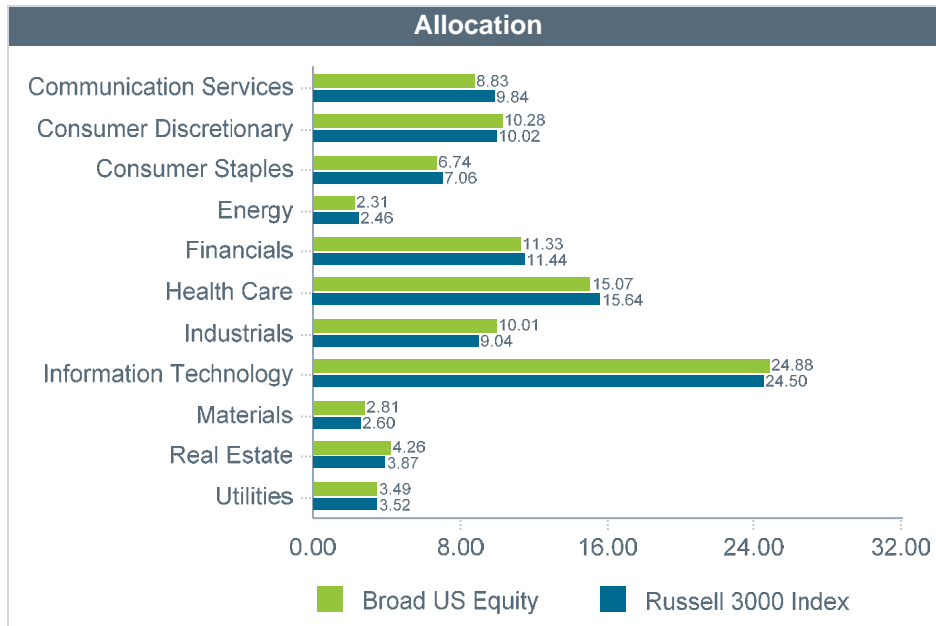
Performance shown is net of fees. Parentheses contain percentile ranks.



Performance shown is net 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 June 30, 2020

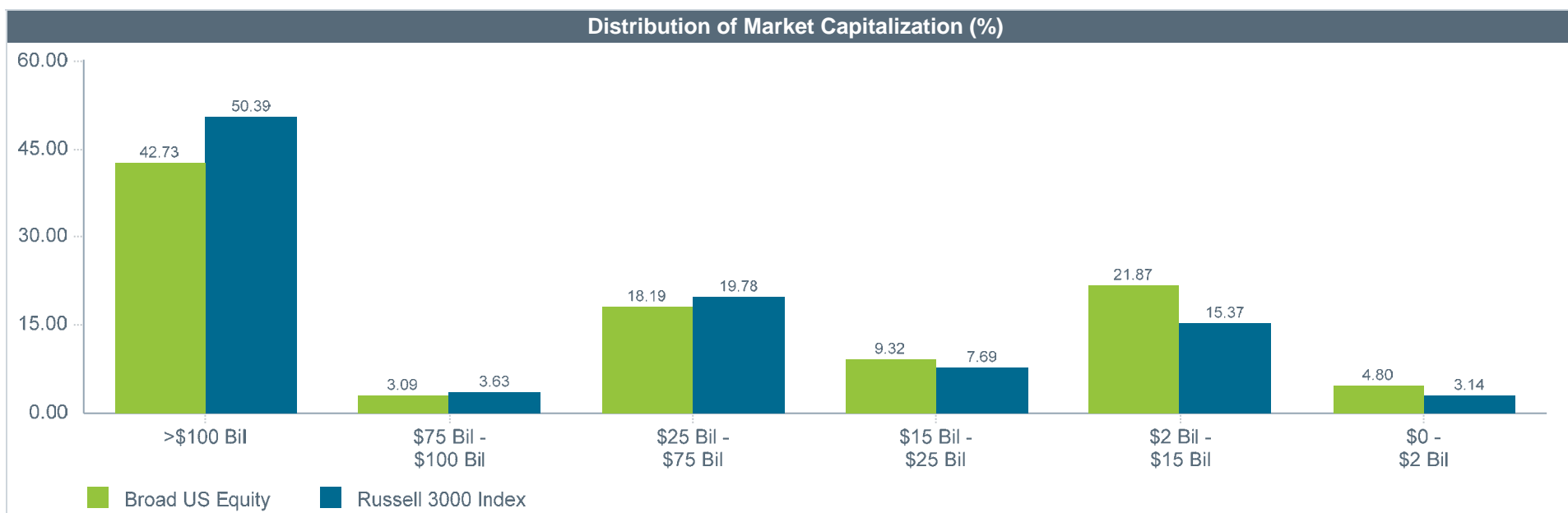


North Dakota Board of University and School Lands  
Broad US Equity vs. Russell 3000 Index  
Portfolio Characteristics

As of June 30, 2020

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	4.21	5.00	-0.79	29.40
Apple Inc	4.12	4.89	-0.77	43.84
Amazon.com Inc	3.23	3.84	-0.61	41.50
Facebook Inc	1.50	1.79	-0.29	36.13
Alphabet Inc	1.18	1.40	-0.22	22.04
Alphabet Inc	1.16	1.37	-0.21	21.57
Johnson & Johnson	1.04	1.22	-0.18	8.00
Berkshire Hathaway Inc	0.98	1.14	-0.16	-2.36
Visa Inc	0.90	1.07	-0.17	20.10
Procter & Gamble Co (The)	0.81	0.96	-0.15	9.42
% of Portfolio	19.13	22.68	-3.55	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	275,491	324,318
Median Mkt. Cap (\$M)	7,832	1,460
Price/Earnings Ratio	22.87	22.81
Price/Book Ratio	3.81	3.93
5 Yr. EPS Growth Rate (%)	12.11	12.15
Current Yield (%)	1.68	1.74
Beta (5 Years, Monthly)	1.02	1.00
Number of Securities	1,178	3,009

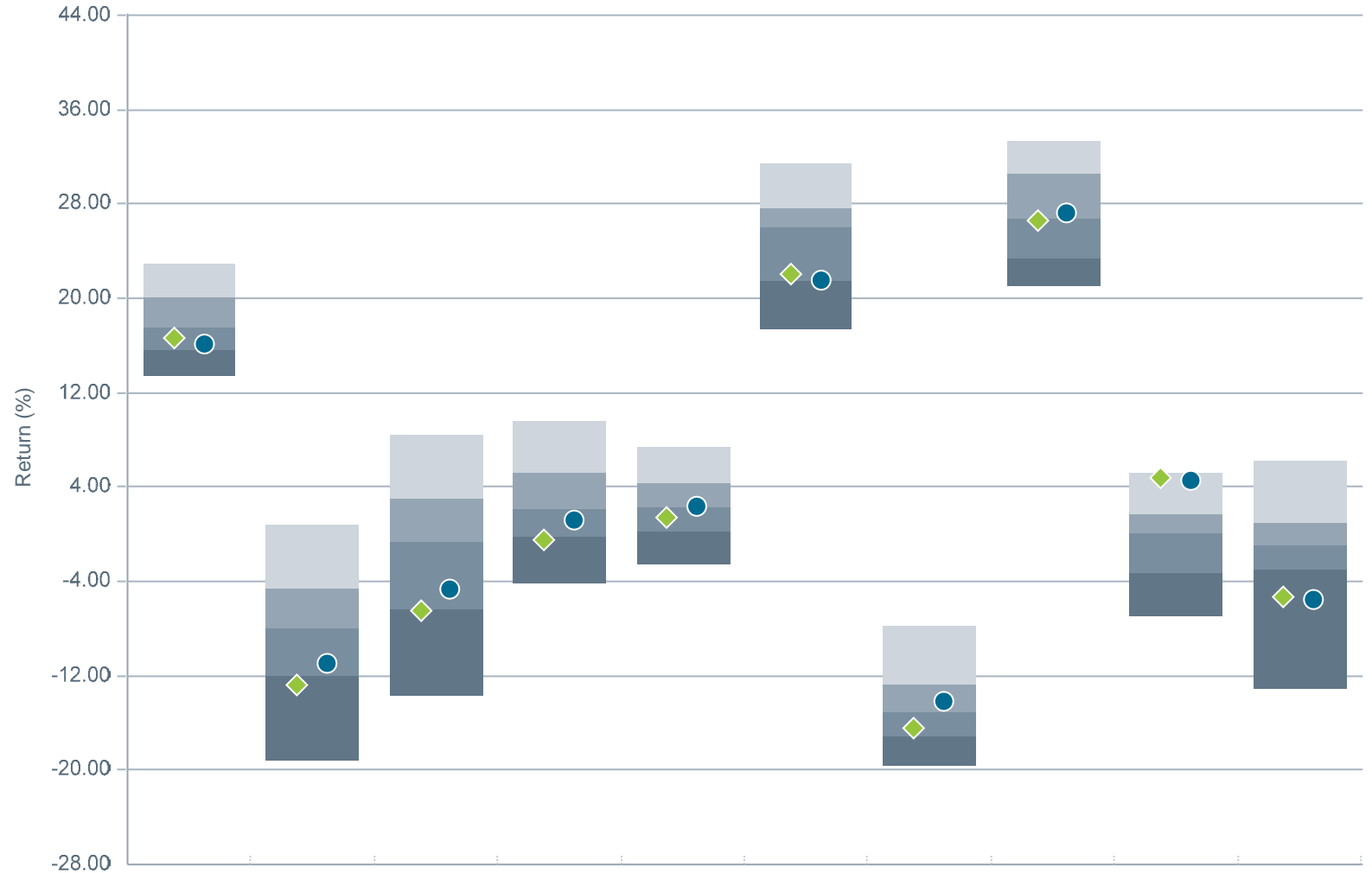


Alphabet Inc. is shown twice in the Top Ten Equity Holdings, but represents two different share classes: GOOGL (Class A) and GOOG (Class C).



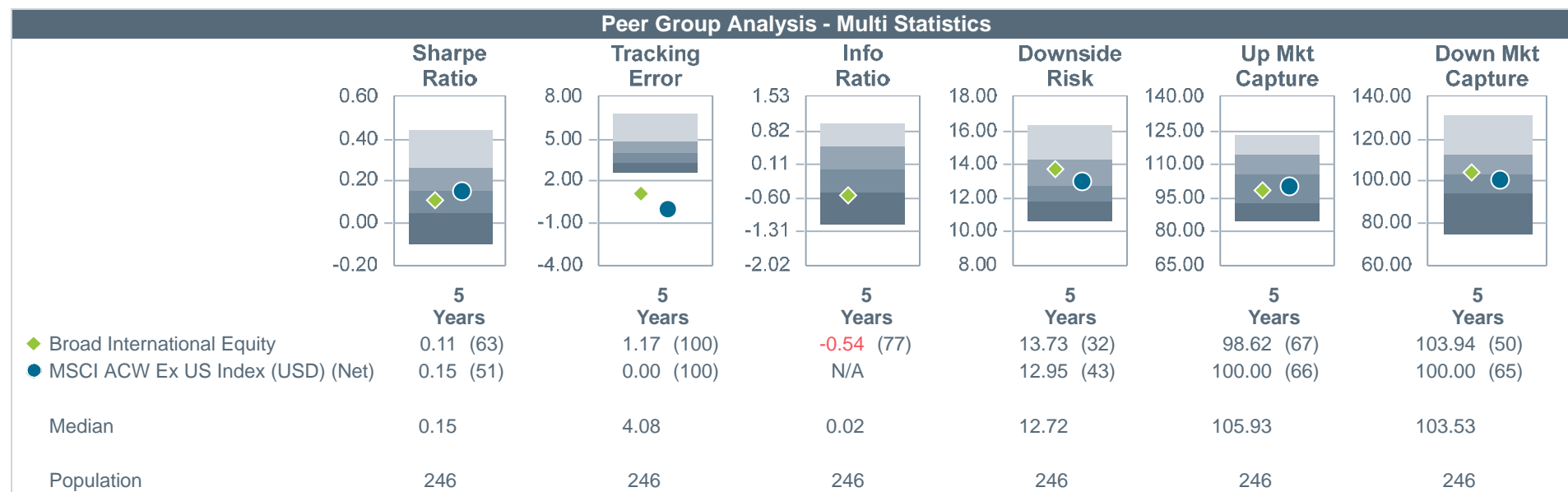
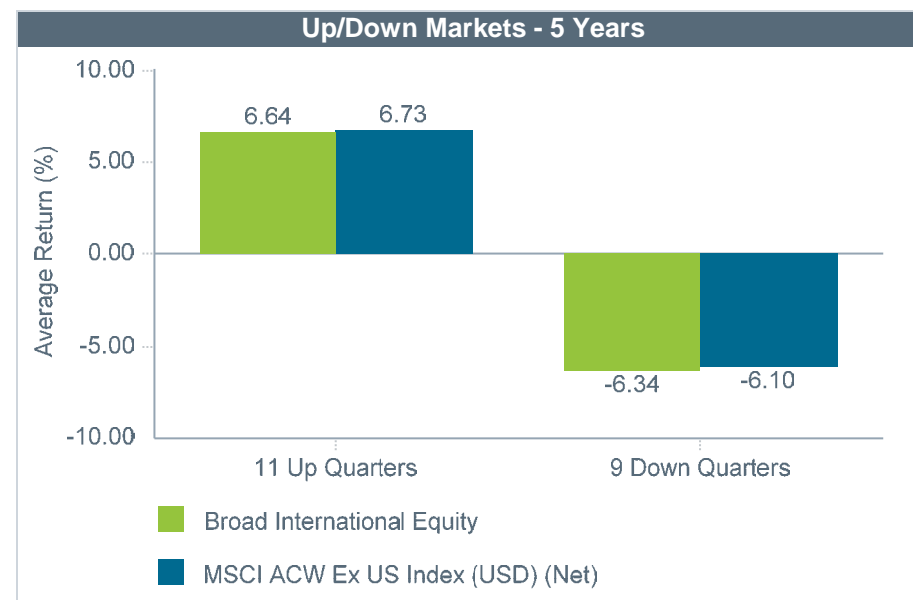
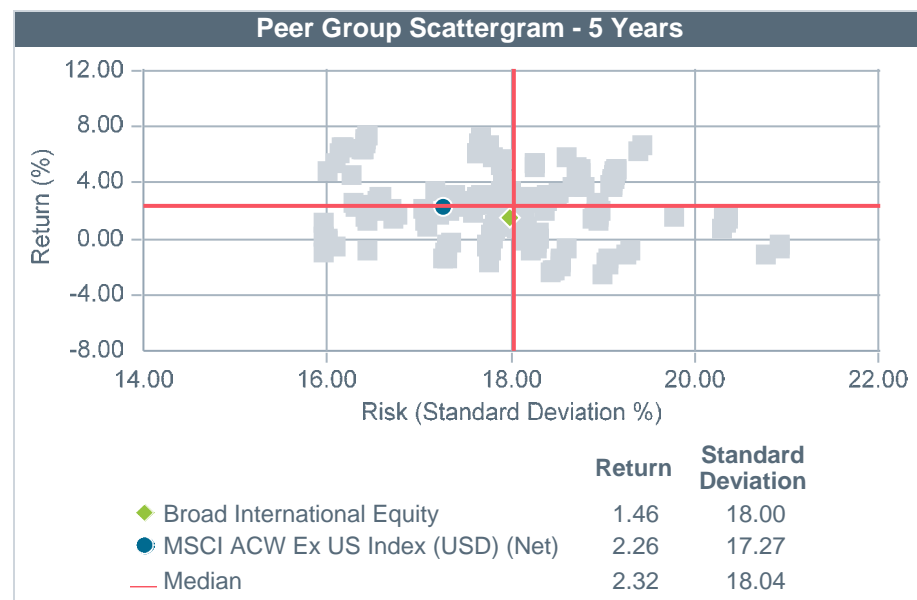
North Dakota Board of University and School Lands  
IM International Large Cap Equity (MF)  
Peer Group Analysis

As of June 30, 2020



	QTD	CYTD	1 Year	3 Years	5 Years	2019	2018	2017	2016	2015
◆ Broad International Equity	16.65 (69)	-12.81 (80)	-6.43 (77)	-0.49 (79)	1.46 (62)	22.05 (73)	-16.49 (70)	26.51 (52)	4.82 (7)	-5.25 (87)
● MSCI ACW Ex US Index (USD) (Net)	16.12 (72)	-11.00 (71)	-4.80 (70)	1.13 (62)	2.26 (52)	21.51 (76)	-14.20 (38)	27.19 (47)	4.50 (8)	-5.66 (87)
Median	17.54	-7.99	-0.70	2.09	2.32	25.94	-15.18	26.76	0.06	-0.98
Population	333	333	333	291	246	328	318	296	267	244

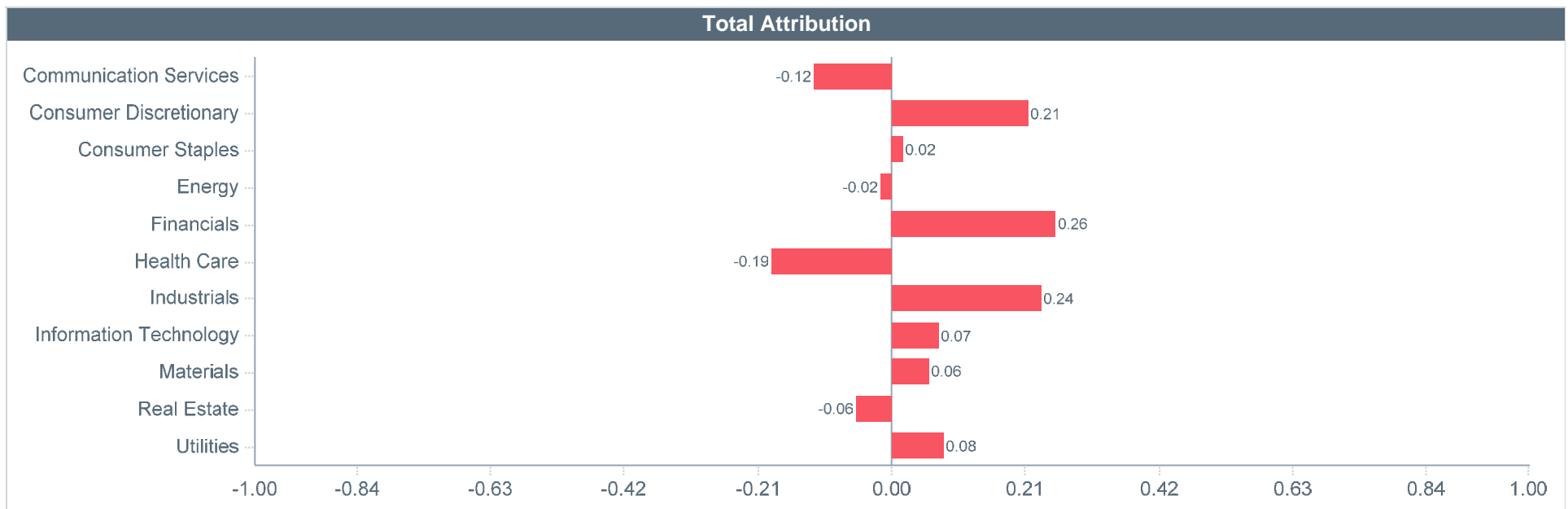
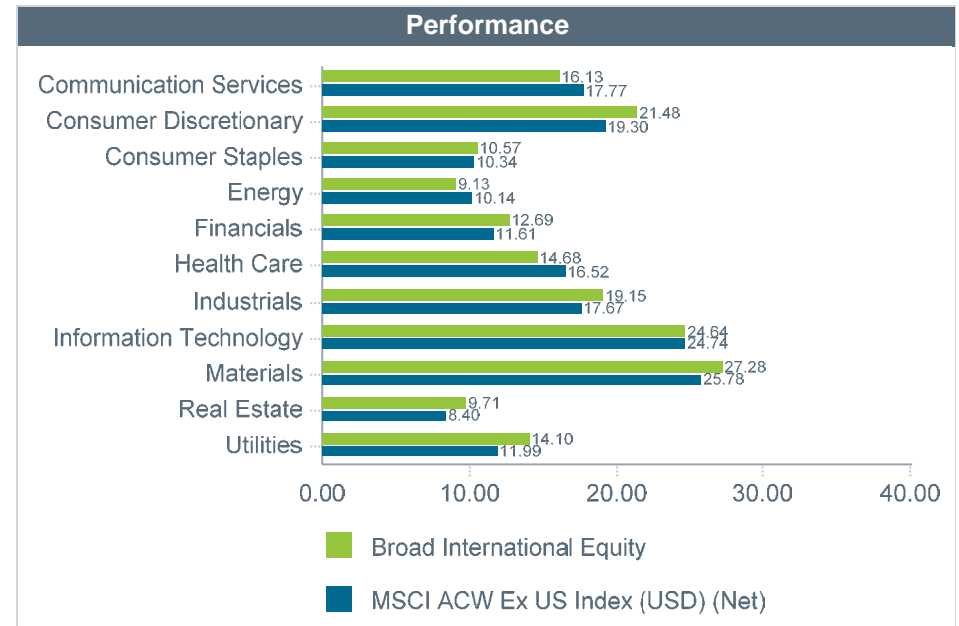
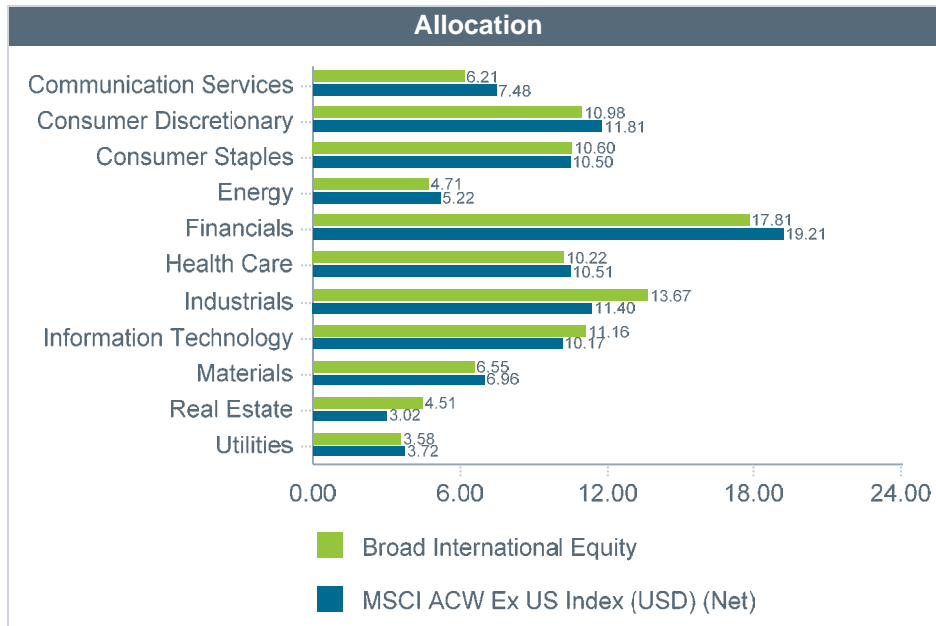
Performance shown is net of fees. Parentheses contain percentile ranks.



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

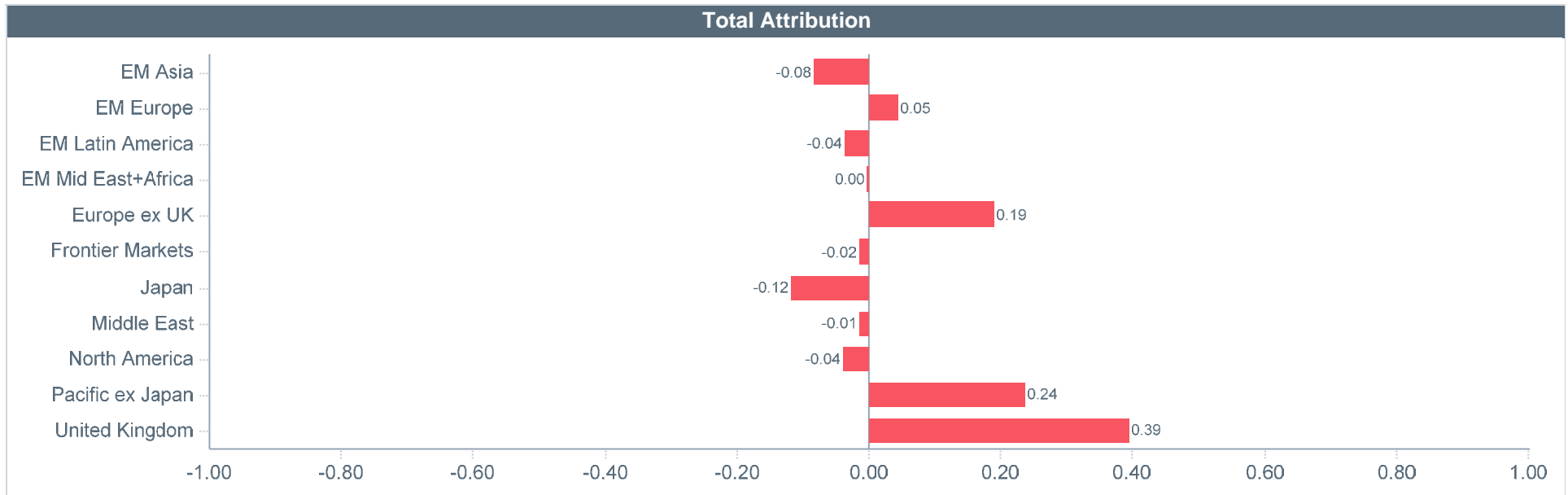
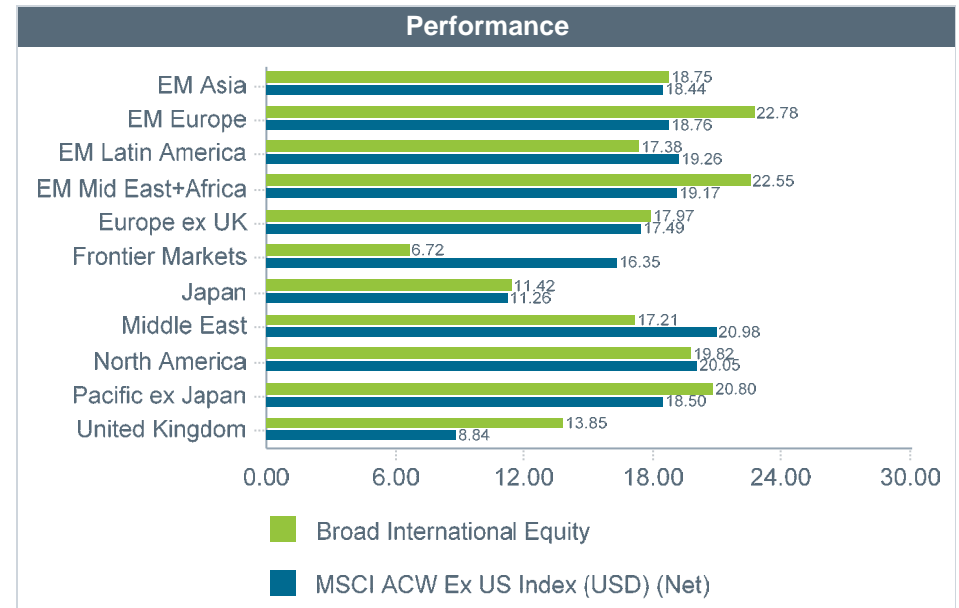
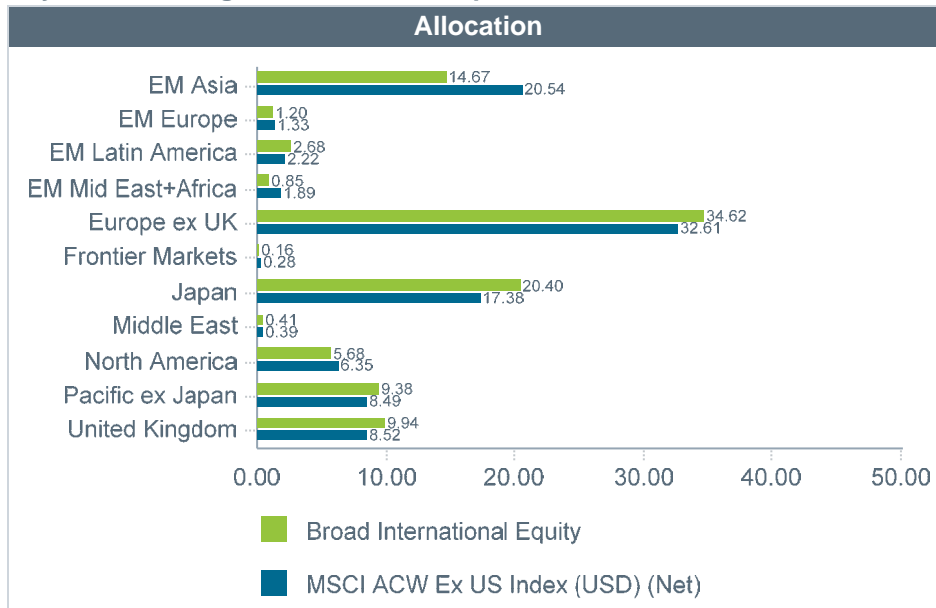
North Dakota Board of University and School Lands  
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)  
Buy and Hold Sector Attribution Graph

1 Quarter Ending June 30, 2020



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 June 30, 2020

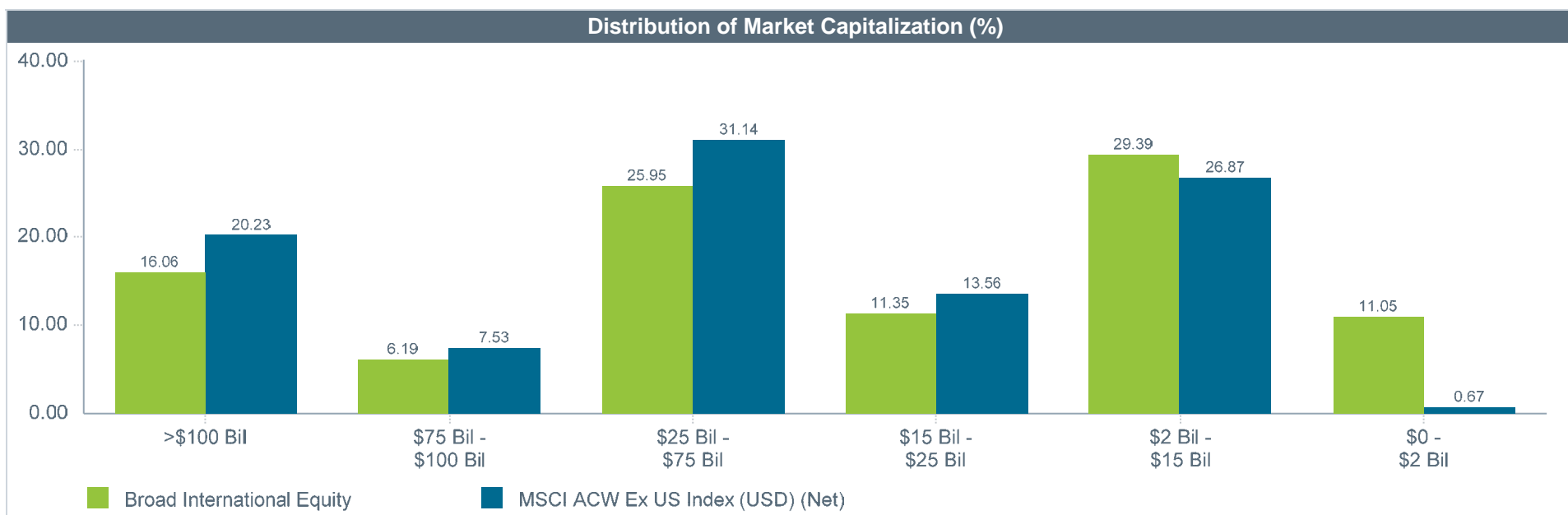


North Dakota Board of University and School Lands  
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)  
Portfolio Characteristics

As of June 30, 2020

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Nestle SA, Cham Und Vevey	1.46	1.63	-0.17	9.93
Tencent Holdings LTD	1.15	1.82	-0.67	31.53
Roche Holding AG	1.08	1.20	-0.12	6.38
Novartis AG	0.83	0.92	-0.09	5.02
Taiwan Semiconductor Mfg	0.82	1.30	-0.48	18.29
AIA Group Ltd	0.79	0.56	0.23	4.44
Alibaba Group Holding Ltd	0.74	2.00	-1.26	10.91
ASML Holding NV	0.69	0.77	-0.08	38.79
SAP AG Systeme Anwendungen	0.64	0.72	-0.08	25.69
Astrazeneca PLC	0.59	0.68	-0.09	16.06
% of Portfolio	8.79	11.60	-2.81	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	58,522	80,702
Median Mkt. Cap (\$M)	731	7,497
Price/Earnings Ratio	14.81	16.19
Price/Book Ratio	2.60	2.62
5 Yr. EPS Growth Rate (%)	7.67	7.11
Current Yield (%)	2.86	2.80
Beta (5 Years, Monthly)	1.02	1.00
Number of Securities	6,638	2,372

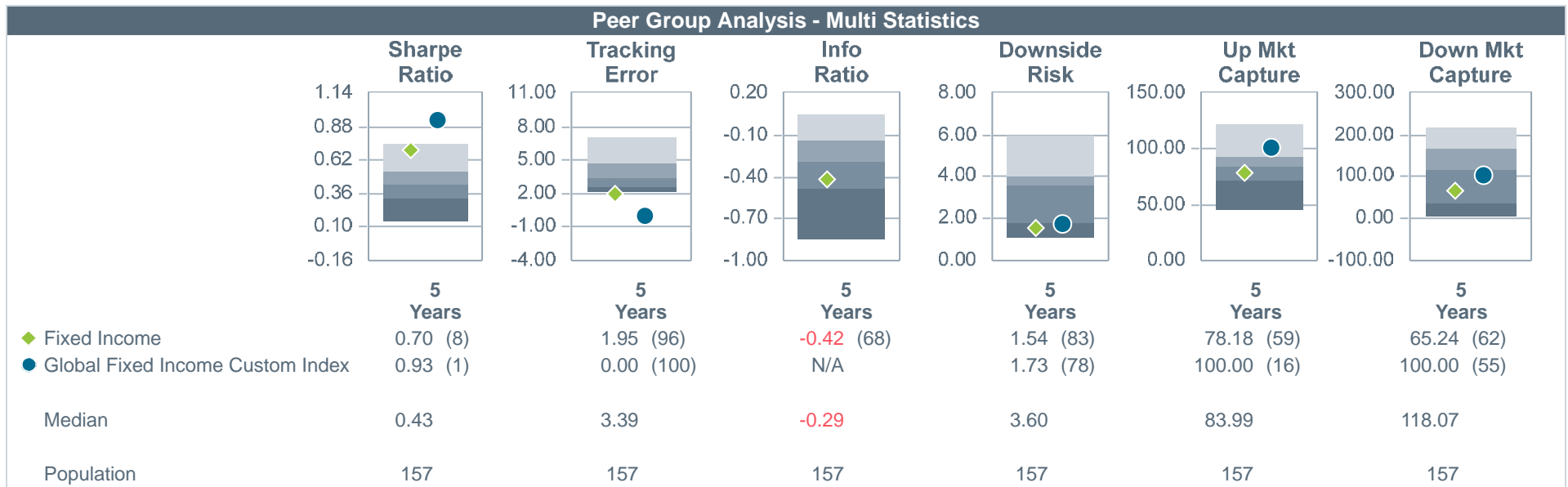
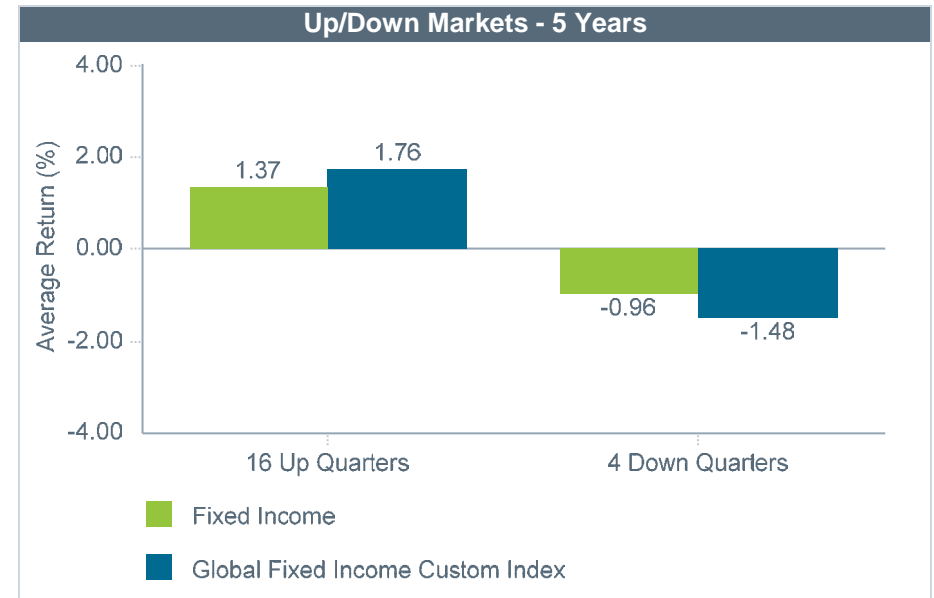
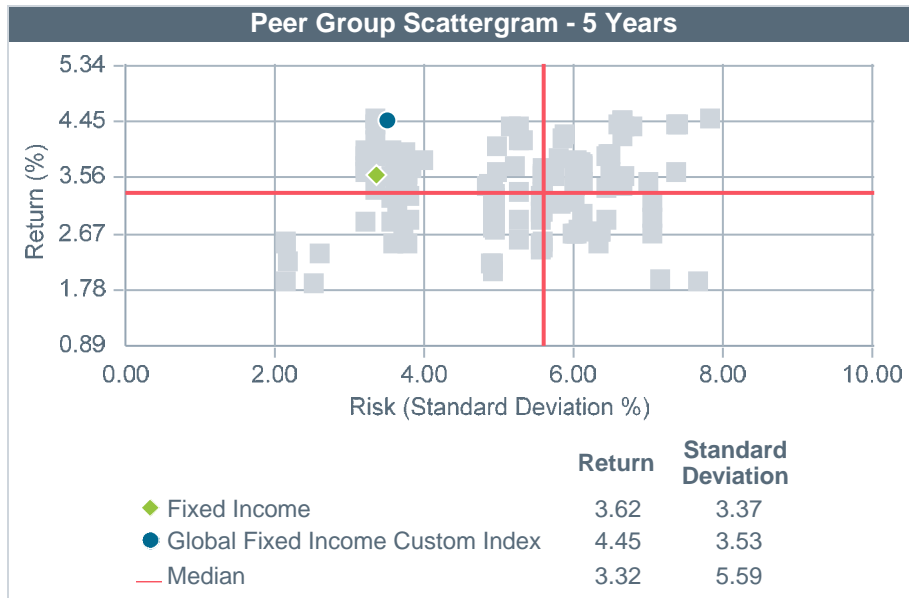


North Dakota Board of University and School Lands  
IM Global Fixed Income (MF)  
Peer Group Analysis

As of June 30, 2020



Performance shown is net of fees. Parentheses contain percentile ranks.



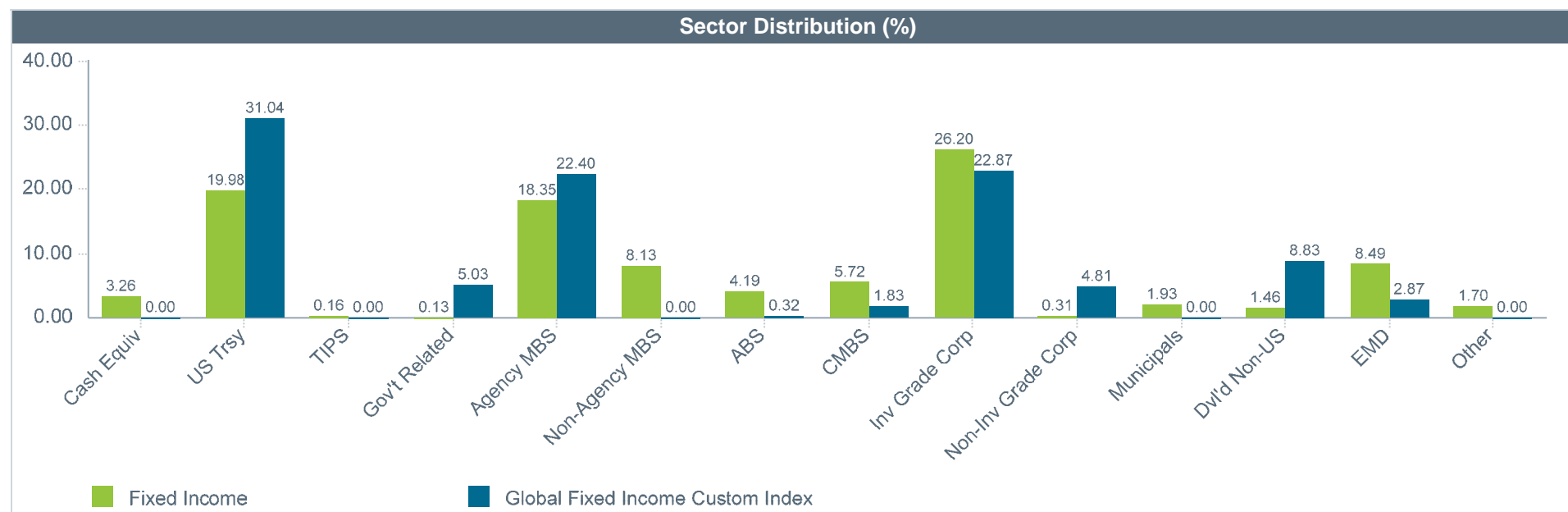
Performance shown is net of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



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

As of June 30, 2020

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	4.97	5.89
Avg. Maturity	7.62	8.07
Avg. Quality	Aa3	N/A
Coupon Rate (%)	3.51	3.38
Yield To Worst (%)	1.94	1.82
Current Yield (%)	3.26	0.17



FLP & ECLP Bank Loans, AG Direct Lending Fund III, LP and ND Land - PTF Cash (SA) are excluded from portfolio characteristics and sector distribution.  
Allocation to "Other" consists of CLOs.

# Investment Manager Profiles



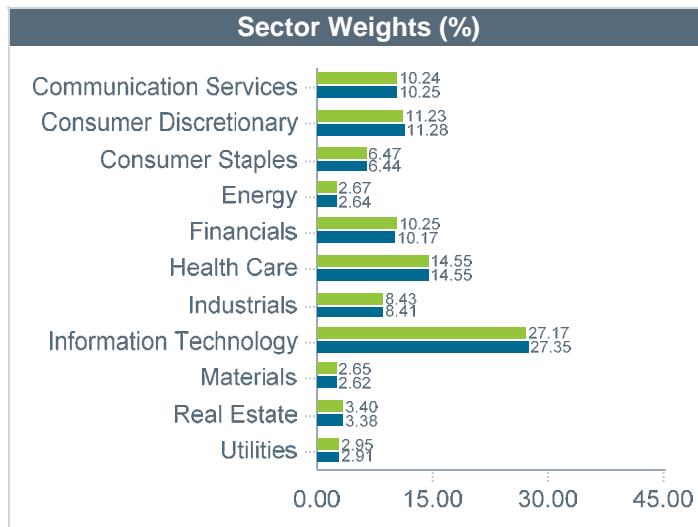
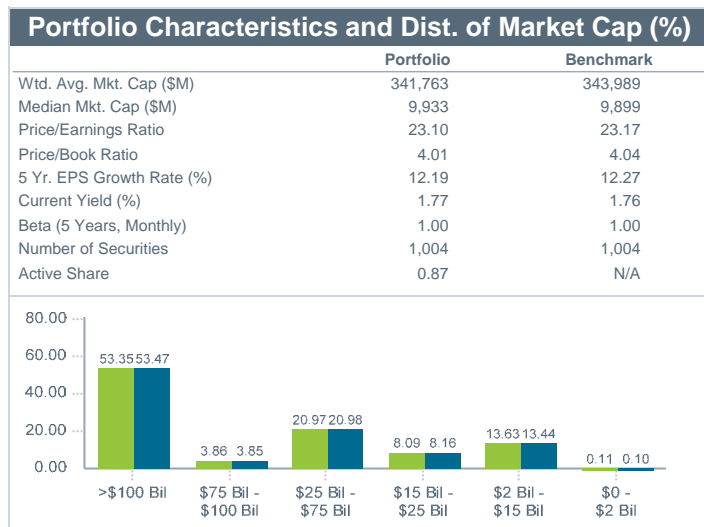
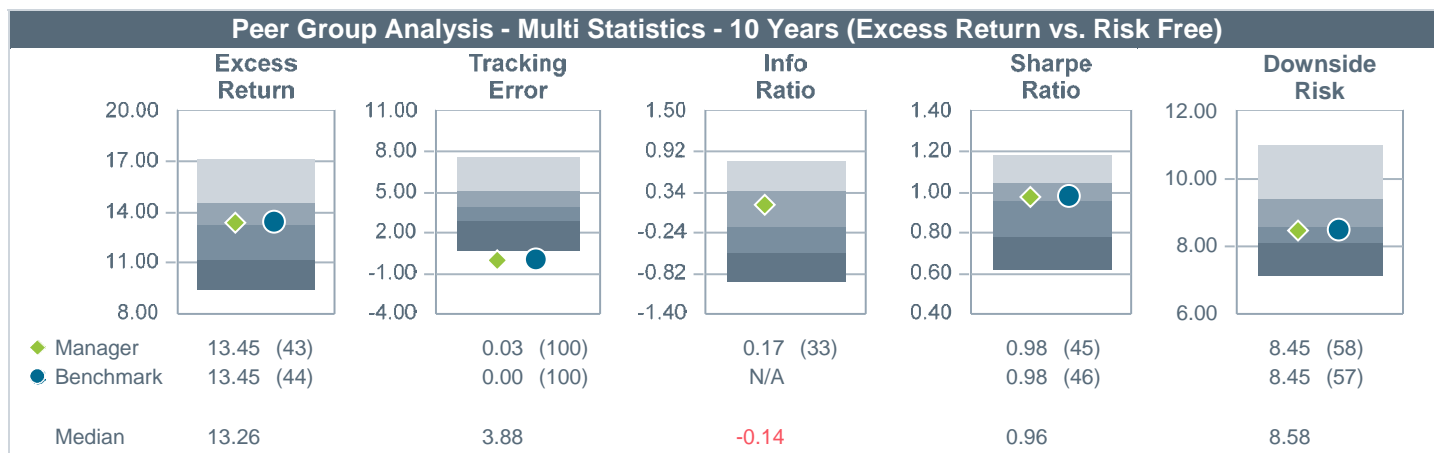
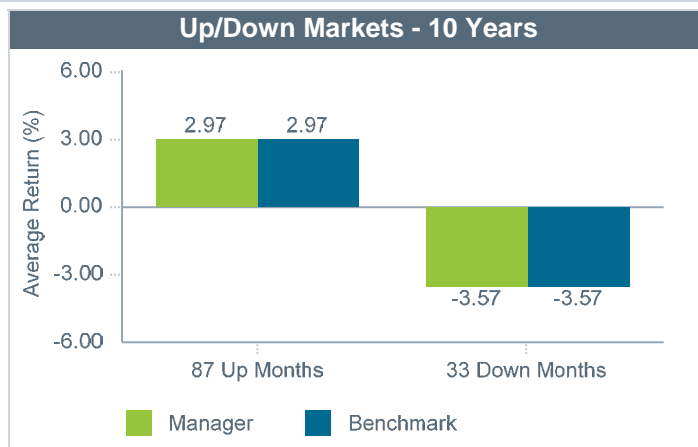
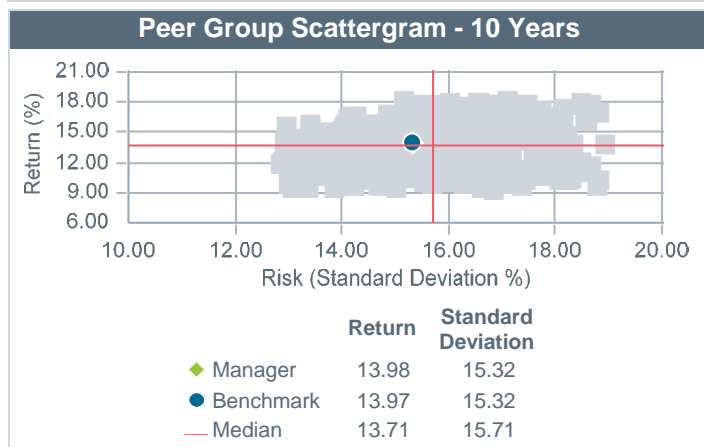
Manager: State Street Russell 1000 Index Lending (CF)

As of June 30, 2020

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	2019	2018	2017	2016	2015
Manager	21.83	7.48	10.64	10.48	12.03	13.98	31.42	-4.77	21.70	12.03	0.96
Benchmark	21.82	7.48	10.64	10.47	12.03	13.97	31.43	-4.78	21.69	12.05	0.92
Difference	0.01	0.00	0.00	0.01	0.00	0.01	-0.01	0.01	0.01	-0.02	0.04
Peer Group Median	20.54	5.66	9.74	9.63	11.64	13.71	30.22	-5.12	21.71	11.02	0.94
Rank	38	41	42	42	44	45	40	47	51	40	50
Population	863	860	853	821	790	719	934	1,029	1,086	1,163	1,234



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

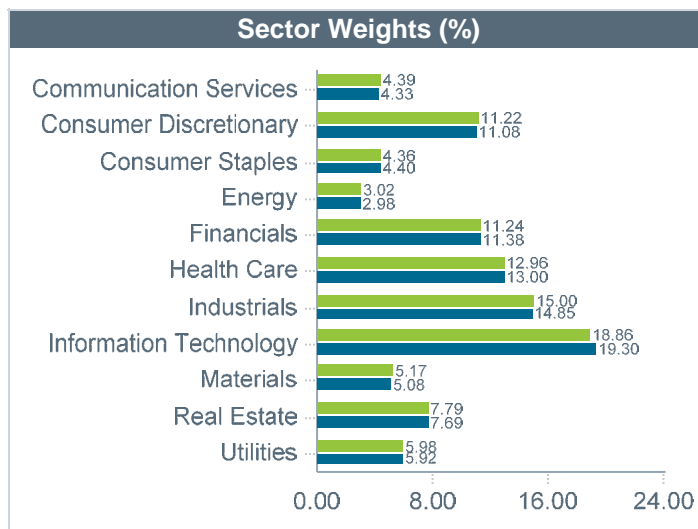
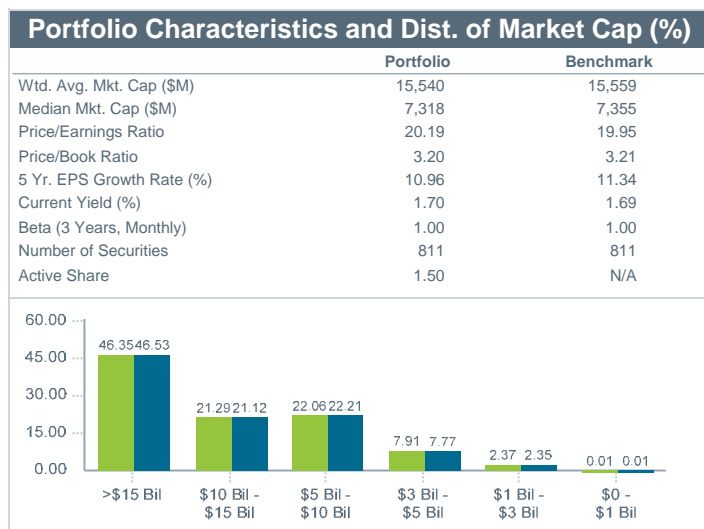
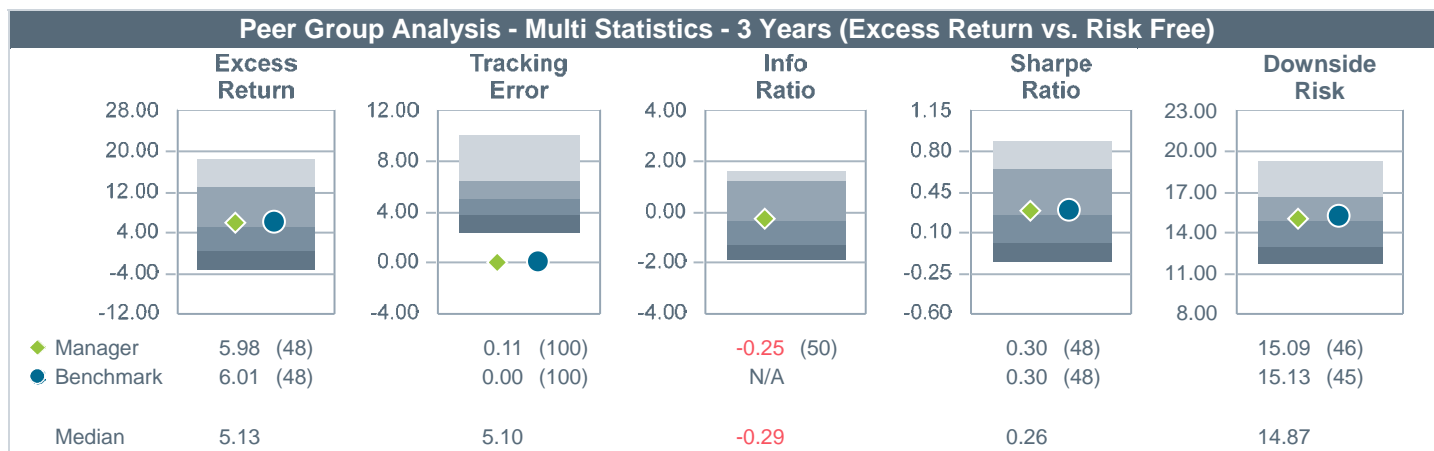
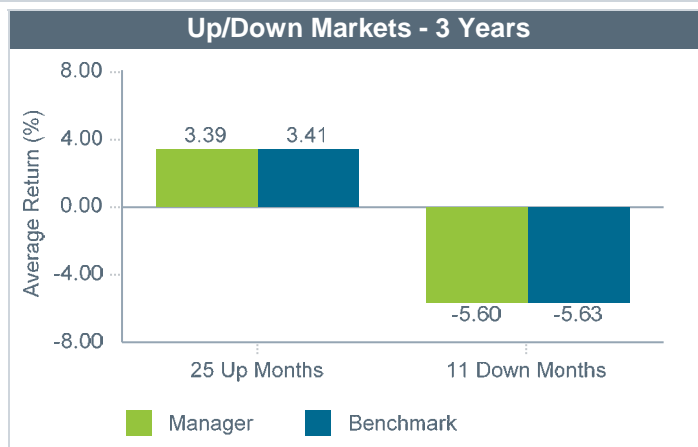
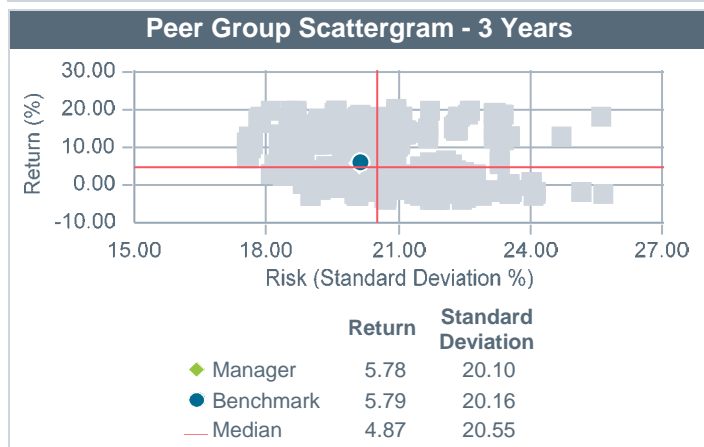
Manager: State Street Russell Mid Cap Index (SA)

As of June 30, 2020

Benchmark: Russell Mid Cap Index

Peer Group: IM U.S. Mid Cap Equity (MF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	24.53	-2.26	5.78	N/A	N/A	N/A	30.38	-8.97	N/A	N/A	N/A
Benchmark	24.61	-2.24	5.79	6.76	9.40	12.35	30.54	-9.06	18.52	13.80	-2.44
Difference	-0.08	-0.02	-0.01	N/A	N/A	N/A	-0.16	0.09	N/A	N/A	N/A
Peer Group Median	24.49	-2.30	4.87	6.62	9.07	11.49	30.29	-9.95	18.71	11.41	-2.50
Rank	50	50	49	N/A	N/A	N/A	49	44	N/A	N/A	N/A
Population	836	836	782	675	590	501	855	889	859	797	739



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

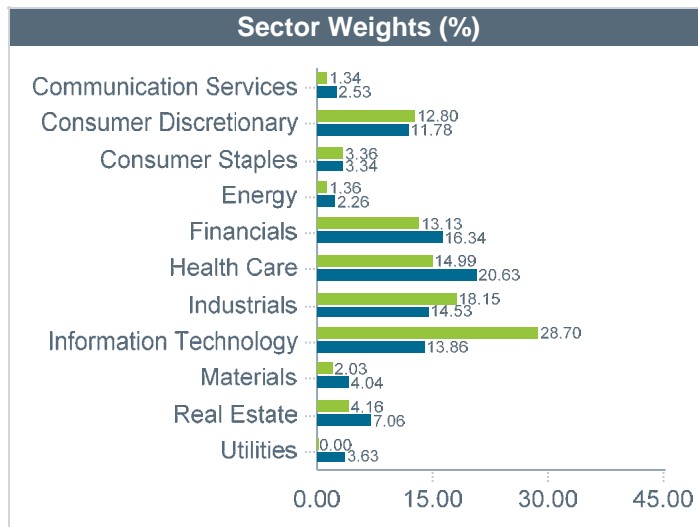
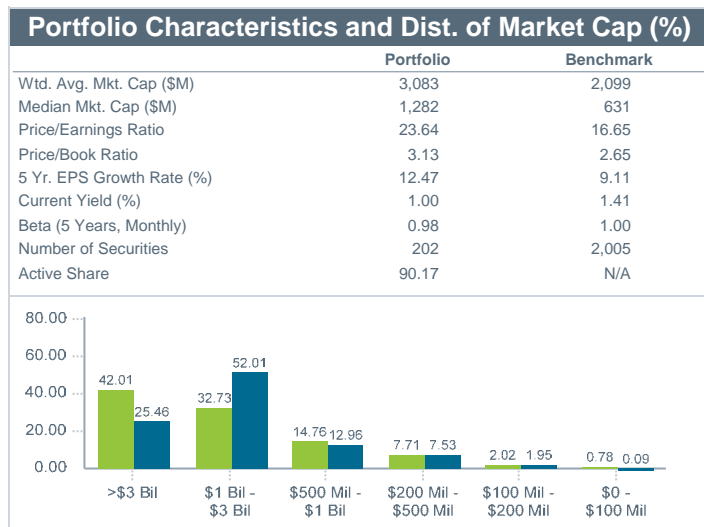
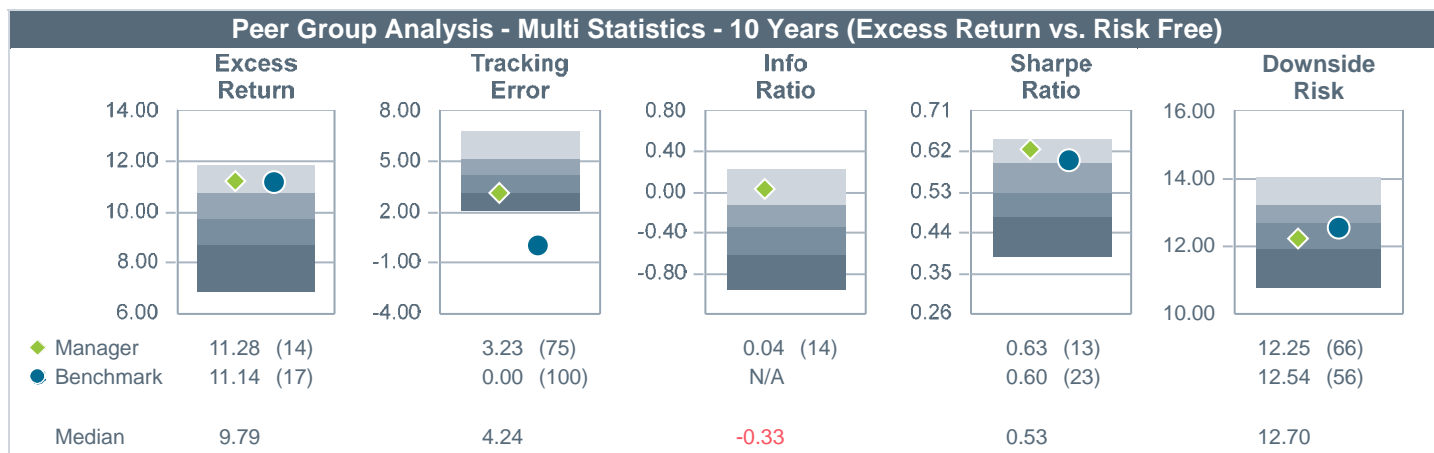
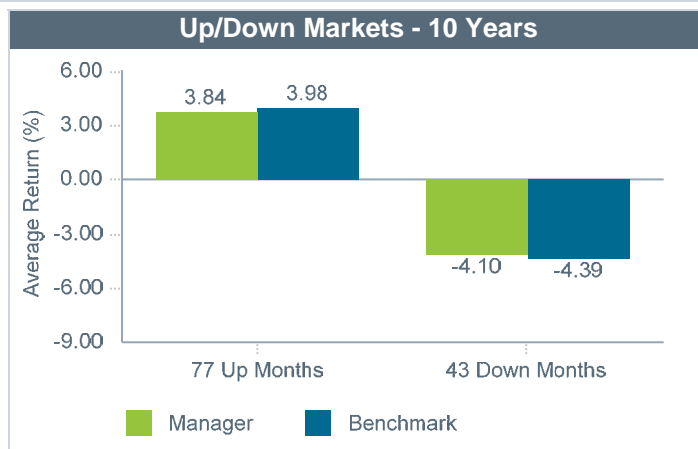
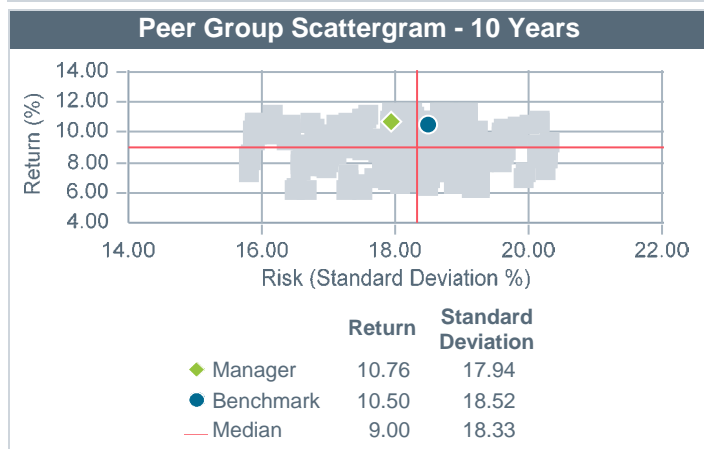
Manager: NT Small Cap Core (CF)

As of June 30, 2020

Benchmark: Russell 2000 Index

Peer Group: IM U.S. Small Cap Core Equity (MF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	30.47	-4.22	5.21	6.59	8.04	10.76	23.13	-7.63	21.82	18.20	-6.01
Benchmark	25.42	-6.63	2.01	4.29	7.17	10.50	25.53	-11.01	14.65	21.31	-4.41
Difference	5.05	2.41	3.20	2.30	0.87	0.26	-2.40	3.38	7.17	-3.11	-1.60
Peer Group Median	22.39	-11.79	-0.91	2.33	5.37	9.00	23.87	-12.68	12.38	21.34	-4.34
Rank	4	12	3	3	7	13	59	7	2	79	73
Population	771	771	724	610	510	420	780	818	814	745	669

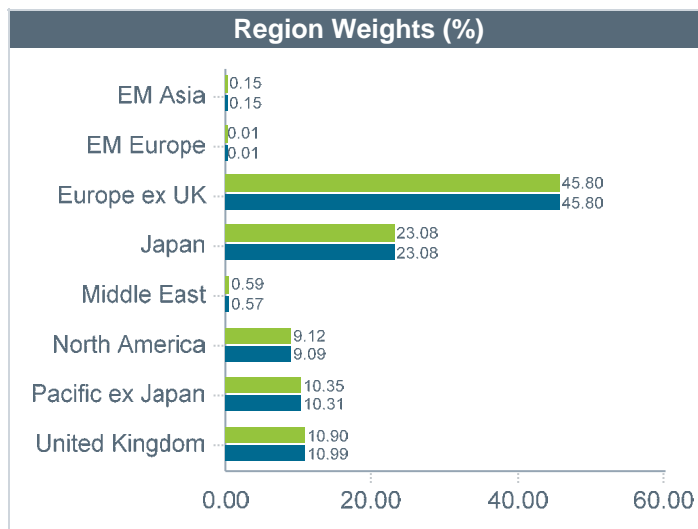
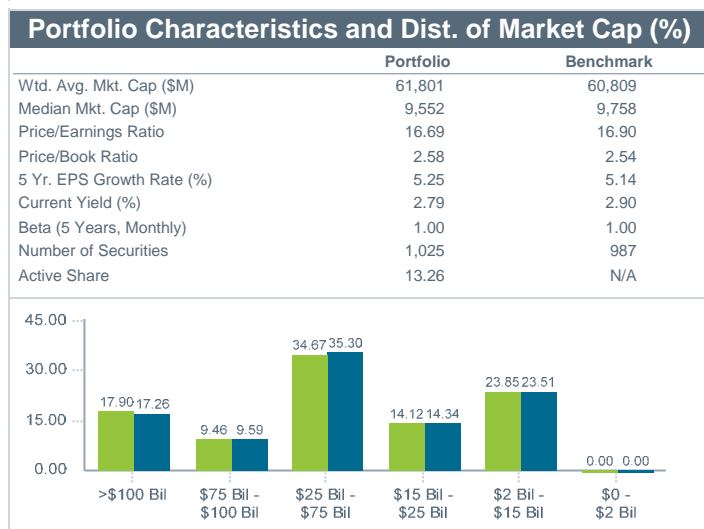
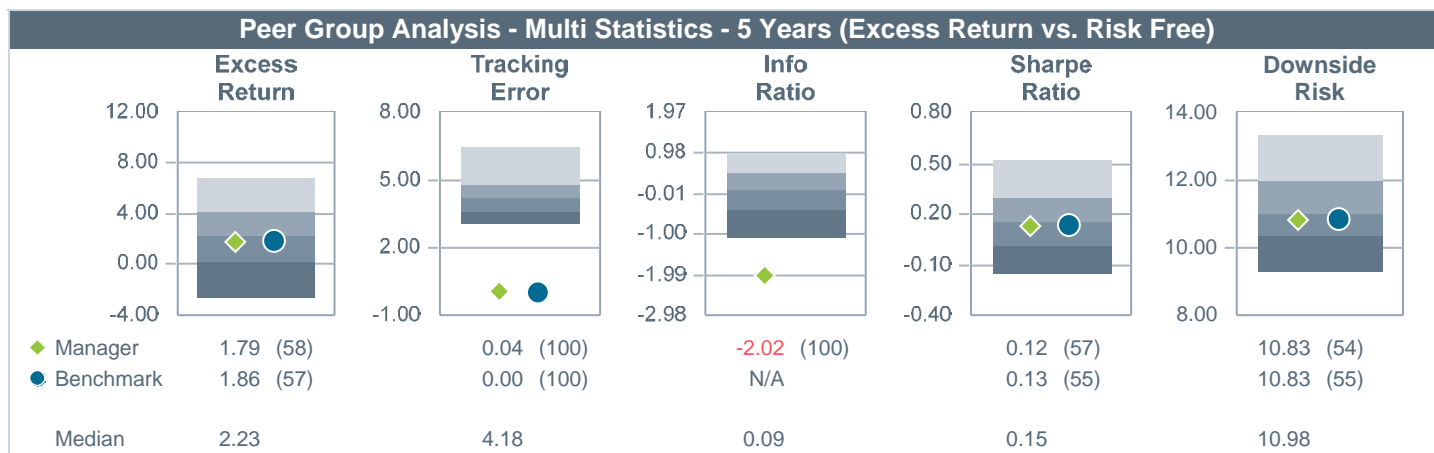
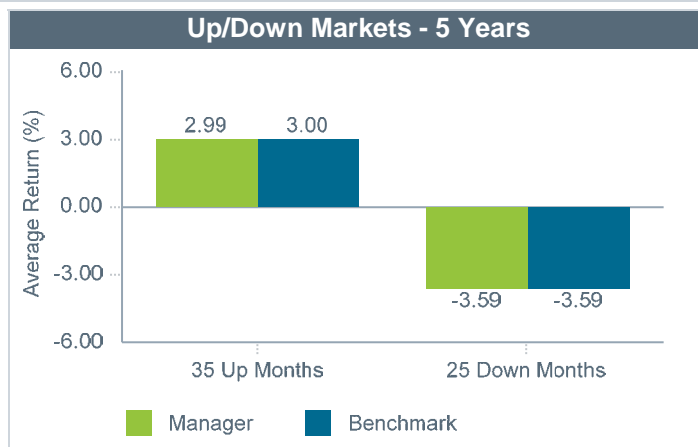
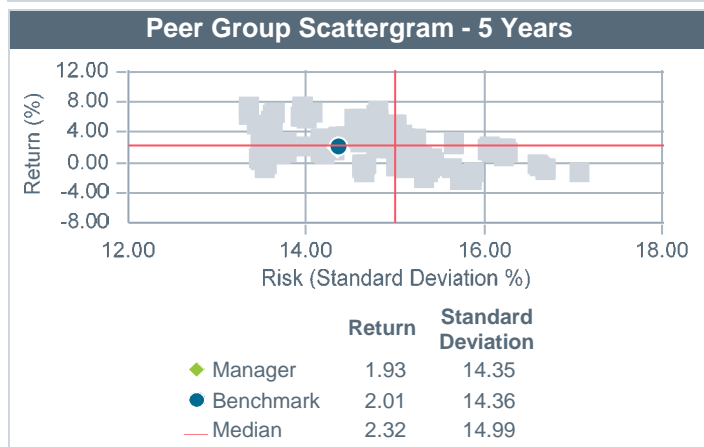


Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

**Manager:** State Street World Ex US Index (CF)  
**Benchmark:** MSCI Wld Ex US Index (USD) (Net)  
**Peer Group:** IM International Large Cap Equity (MF)

As of June 30, 2020

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	15.33	-5.47	0.77	1.93	N/A	N/A	22.38	-14.16	24.15	2.66	-3.12
Benchmark	15.34	-5.42	0.84	2.01	3.77	5.43	22.49	-14.09	24.21	2.75	-3.04
Difference	-0.01	-0.05	-0.07	-0.08	N/A	N/A	-0.11	-0.07	-0.06	-0.09	-0.08
Peer Group Median	17.54	-0.70	2.09	2.32	3.87	5.44	25.94	-15.18	26.76	0.06	-0.98
Rank	82	72	64	56	N/A	N/A	72	38	70	16	78
Population	333	333	291	246	220	187	328	318	296	267	244



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

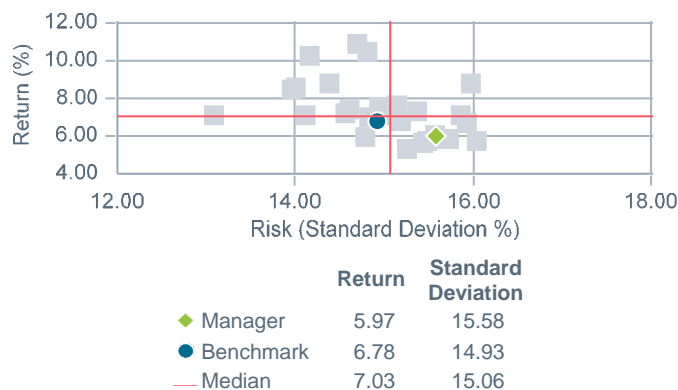
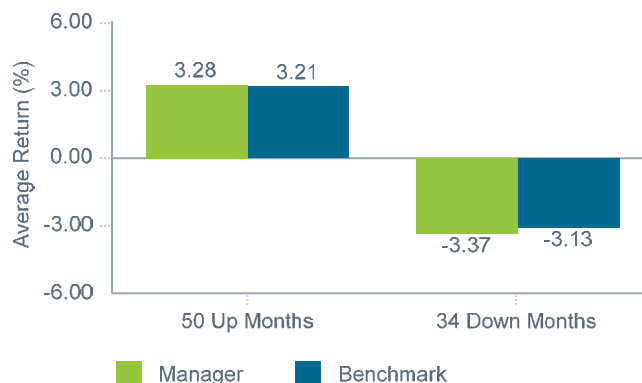
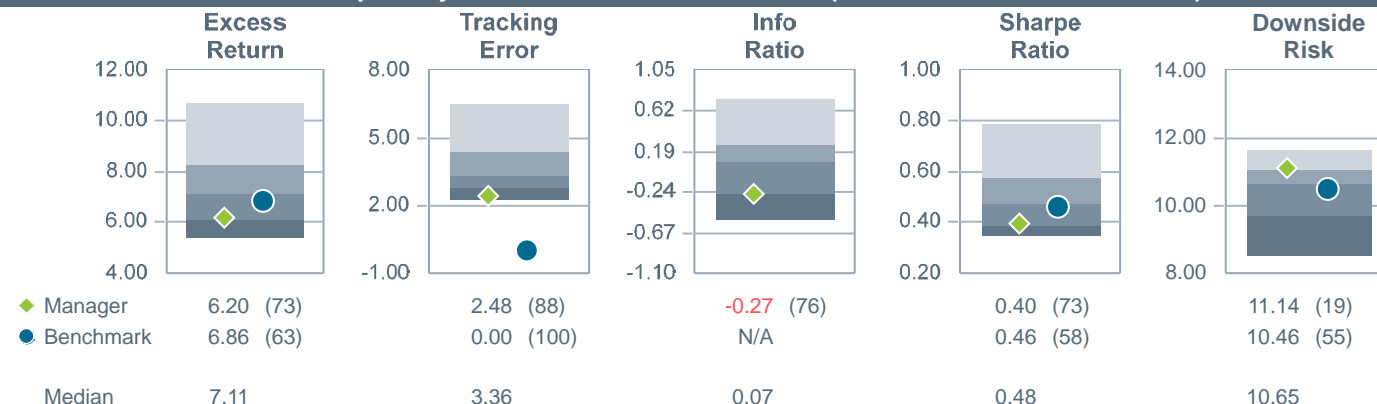
**Manager: QMA Int'l Sm Cap Equity (CF)**

As of June 30, 2020

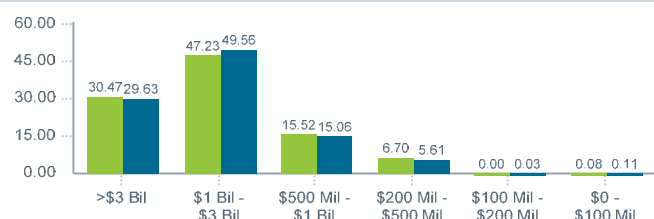
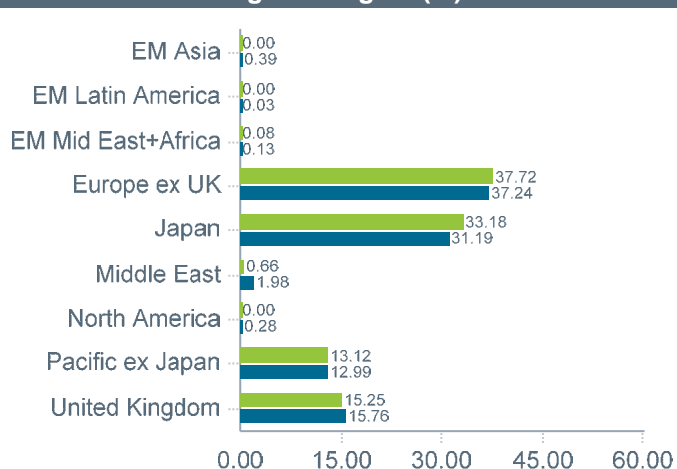
**Benchmark:** MSCI EAFE Sm Cap Index (USD) (Gross)

**Peer Group:** IM International Small Cap Core Equity (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	19.97	-5.93	-2.06	1.54	5.97	N/A	23.52	-22.79	35.05	-0.81	11.09
Benchmark	20.04	-3.19	0.90	4.19	6.78	8.39	25.47	-17.58	33.50	2.55	9.94
Difference	-0.07	-2.74	-2.96	-2.65	-0.81	N/A	-1.95	-5.21	1.55	-3.36	1.15
Peer Group Median	21.28	-2.17	1.39	4.36	7.03	9.50	24.94	-17.85	34.58	2.49	9.95
Rank	68	73	90	96	73	N/A	60	98	49	88	40
Population	51	51	47	41	34	24	51	50	50	48	44

**Peer Group Scattergram - 7 Years**

**Up/Down Markets - 7 Years**

**Peer Group Analysis - Multi Statistics - 7 Years (Excess Return vs. Risk Free)**

**Portfolio Characteristics and Dist. of Market Cap (%)**

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	2,409	2,388
Median Mkt. Cap (\$M)	1,452	971
Price/Earnings Ratio	10.12	14.30
Price/Book Ratio	2.30	2.27
5 Yr. EPS Growth Rate (%)	13.07	8.22
Current Yield (%)	3.33	2.59
Beta (5 Years, Monthly)	1.04	1.00
Number of Securities	292	2,323
Active Share	83.68	N/A


**Region Weights (%)**


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



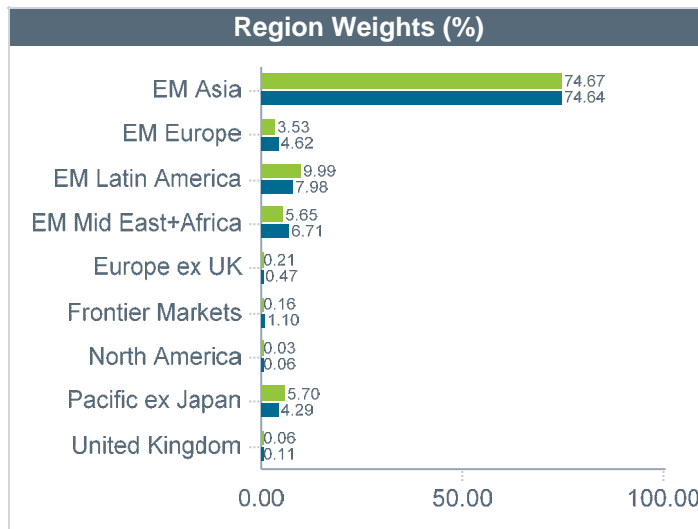
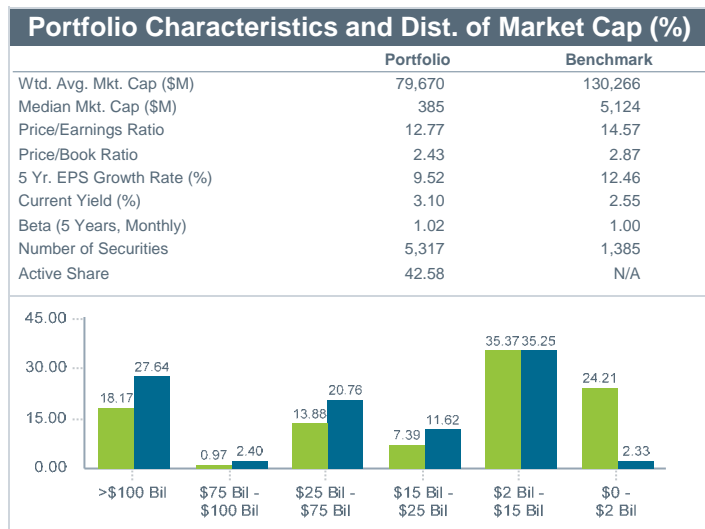
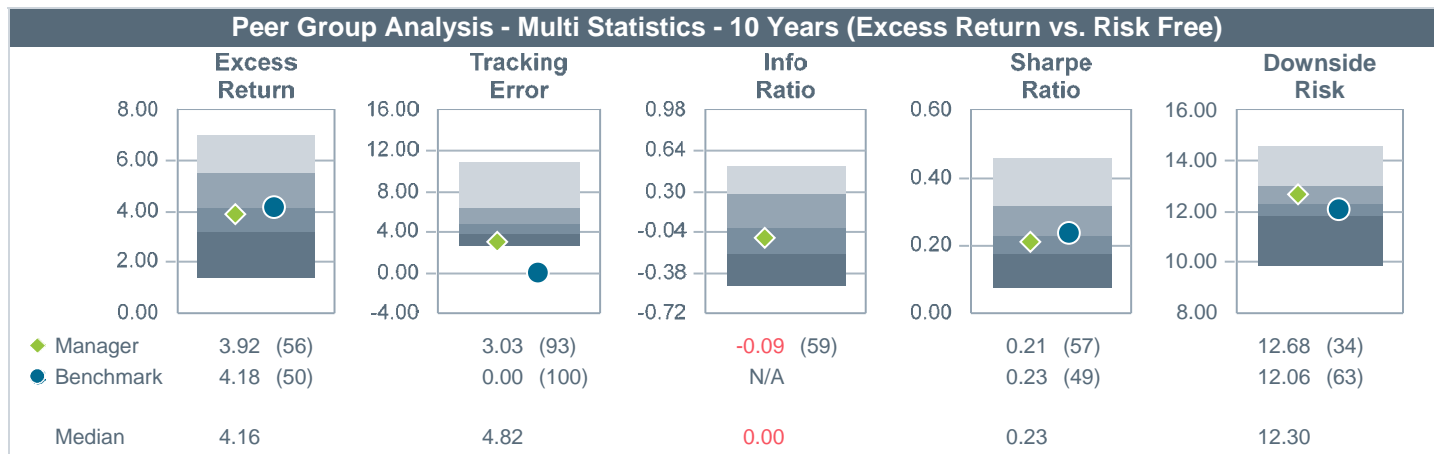
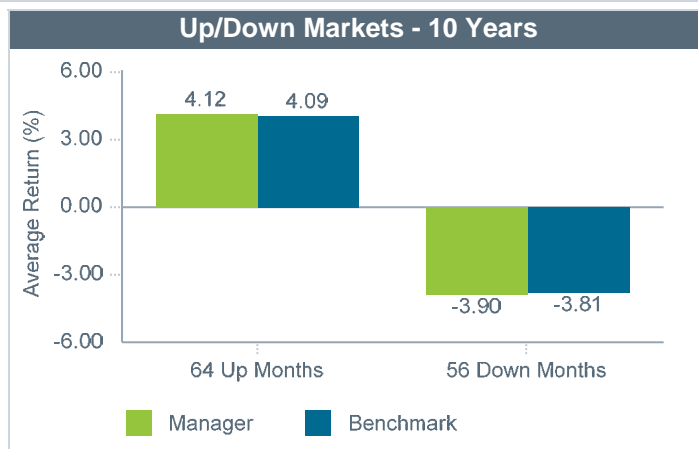
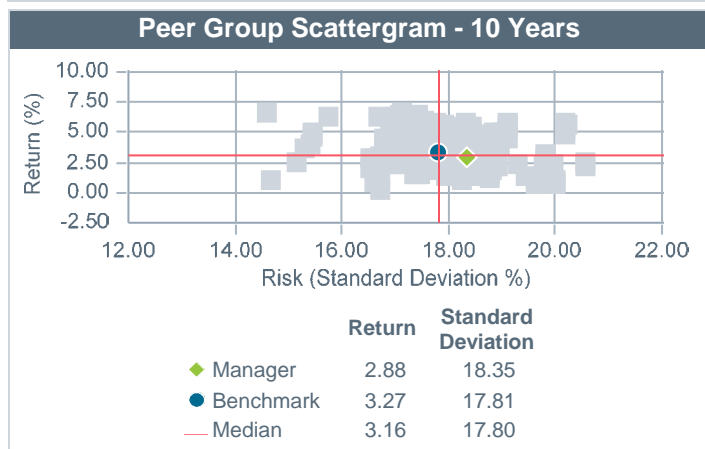
Manager: DFA Emg Mkts Core Eq;I (DFCEX)

As of June 30, 2020

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	2019	2018	2017	2016	2015
Manager	20.76	-8.29	-0.77	1.68	2.46	2.88	16.04	-15.25	36.55	12.35	-14.86
Benchmark	18.08	-3.39	1.90	2.86	3.22	3.27	18.44	-14.58	37.28	11.19	-14.92
Difference	2.68	-4.90	-2.67	-1.18	-0.76	-0.39	-2.40	-0.67	-0.73	1.16	0.06
Peer Group Median	20.27	-3.04	1.15	2.57	3.03	3.16	20.08	-16.40	35.37	8.35	-13.66
Rank	48	76	76	67	61	57	77	40	45	21	63
Population	821	821	715	606	439	254	846	843	813	750	656



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

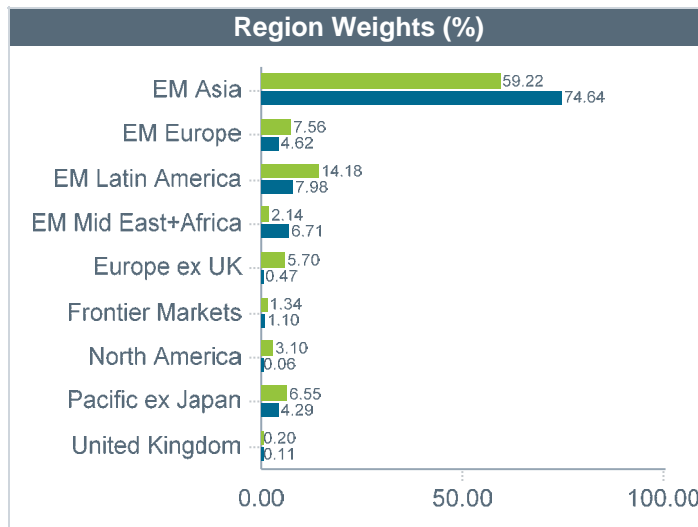
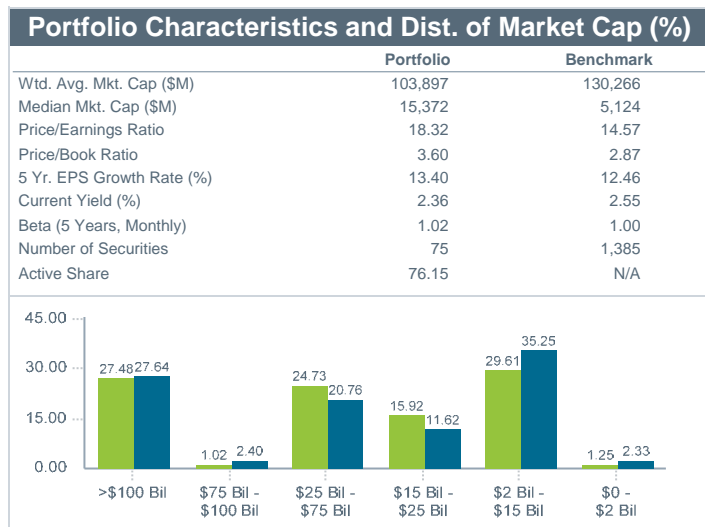
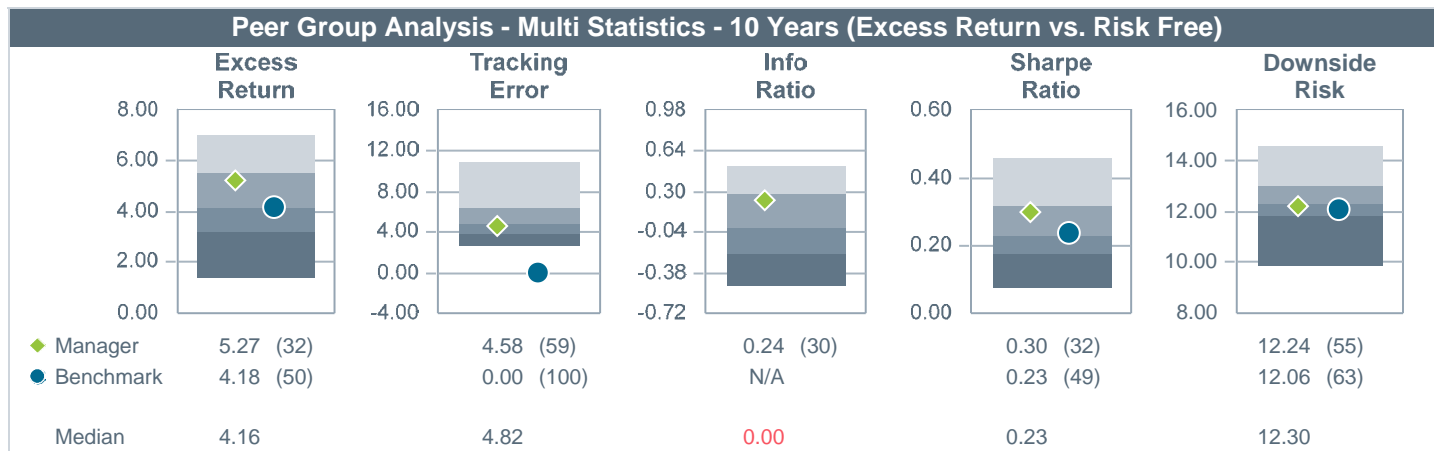
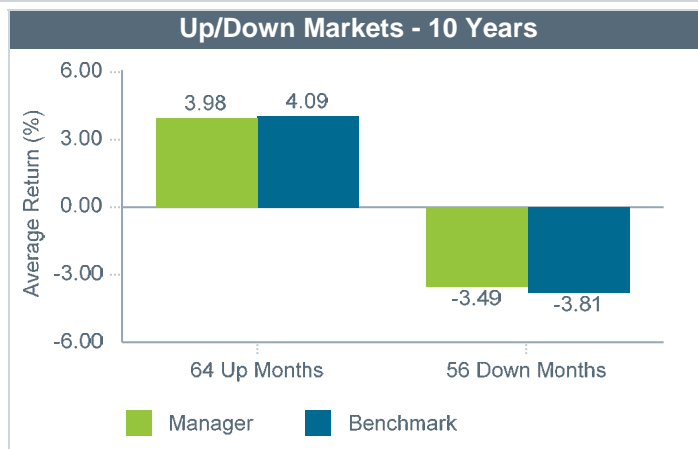
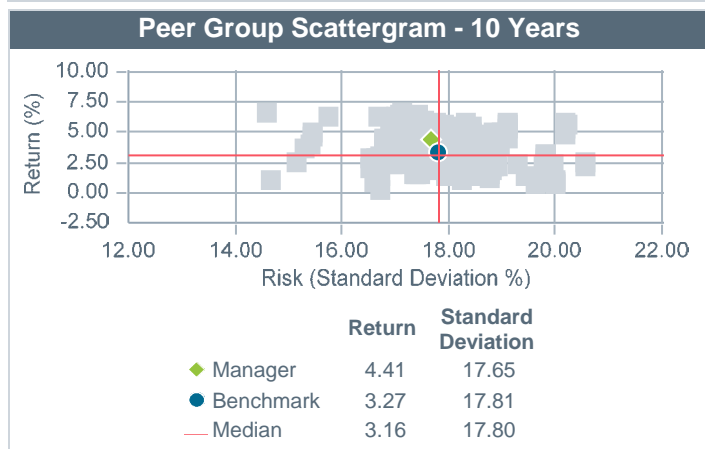
Manager: Harding Loevner: IEM; IZ (HLEZX)

As of June 30, 2020

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	2019	2018	2017	2016	2015
Manager	17.54	-7.71	-0.28	2.75	3.53	4.41	25.97	-18.53	35.79	13.44	-13.31
Benchmark	18.08	-3.39	1.90	2.86	3.22	3.27	18.44	-14.58	37.28	11.19	-14.92
Difference	-0.54	-4.32	-2.18	-0.11	0.31	1.14	7.53	-3.95	-1.49	2.25	1.61
Peer Group Median	20.27	-3.04	1.15	2.57	3.03	3.16	20.08	-16.40	35.37	8.35	-13.66
Rank	83	74	69	48	39	32	21	71	49	15	47
Population	821	821	715	606	439	254	846	843	813	750	656



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

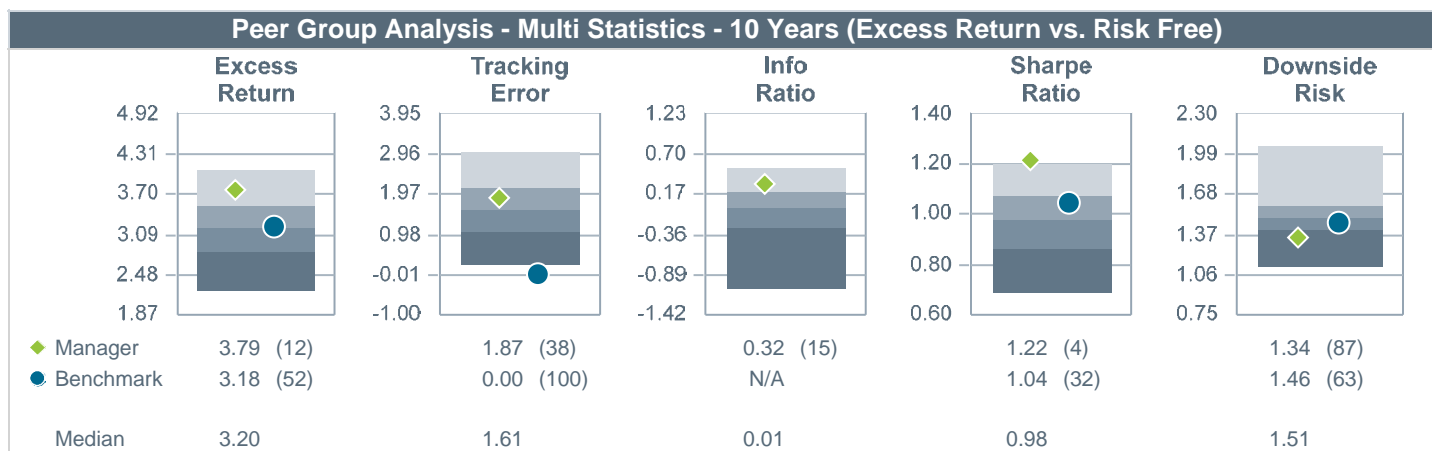
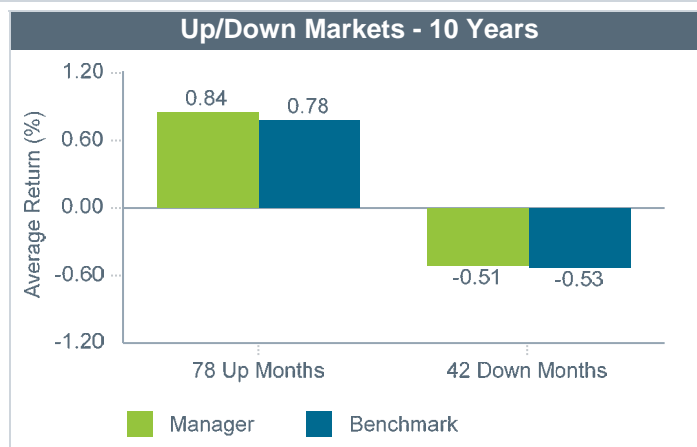
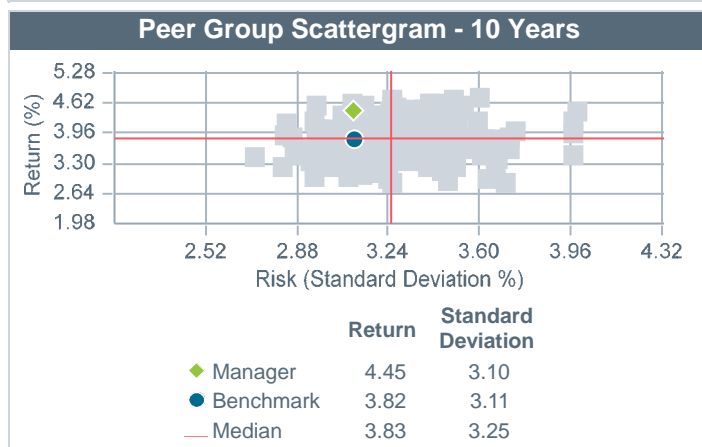
Manager: Payden & Rygel Long Term (SA)

As of June 30, 2020

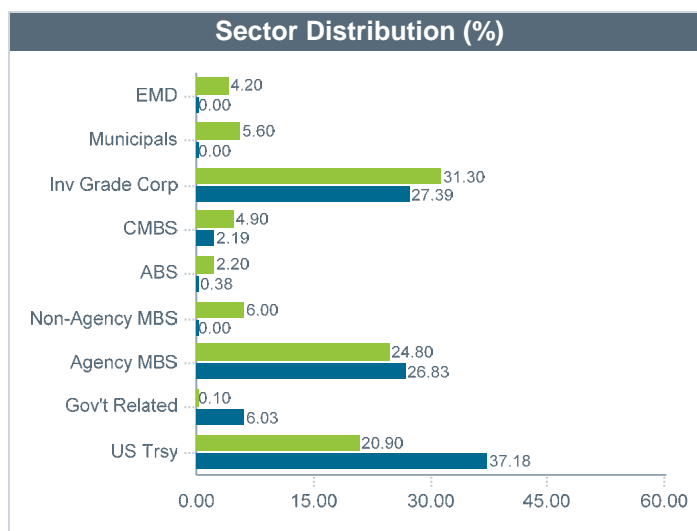
Benchmark: Bloomberg US Agg Bond Index

Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	4.95	7.42	5.35	4.70	4.39	4.45	9.42	0.16	4.99	3.83	0.62
Benchmark	2.90	8.74	5.32	4.30	3.96	3.82	8.72	0.01	3.54	2.65	0.55
Difference	2.05	-1.32	0.03	0.40	0.43	0.63	0.70	0.15	1.45	1.18	0.07
Peer Group Median	4.97	8.07	4.91	4.05	3.79	3.83	8.76	-0.63	3.59	2.86	0.09
Rank	51	67	22	10	11	11	30	12	6	21	17
Population	504	504	461	402	349	289	511	506	498	469	433



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.98	6.04
Spread Duration	4.74	6.30
Avg. Maturity	8.61	8.14
Avg. Quality	Aa2	Aa1/Aa2
Yield To Maturity (%)	1.82	1.27
Coupon Rate (%)	3.35	3.03
Current Yield (%)	3.06	N/A
Holdings Count	267	11,690



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

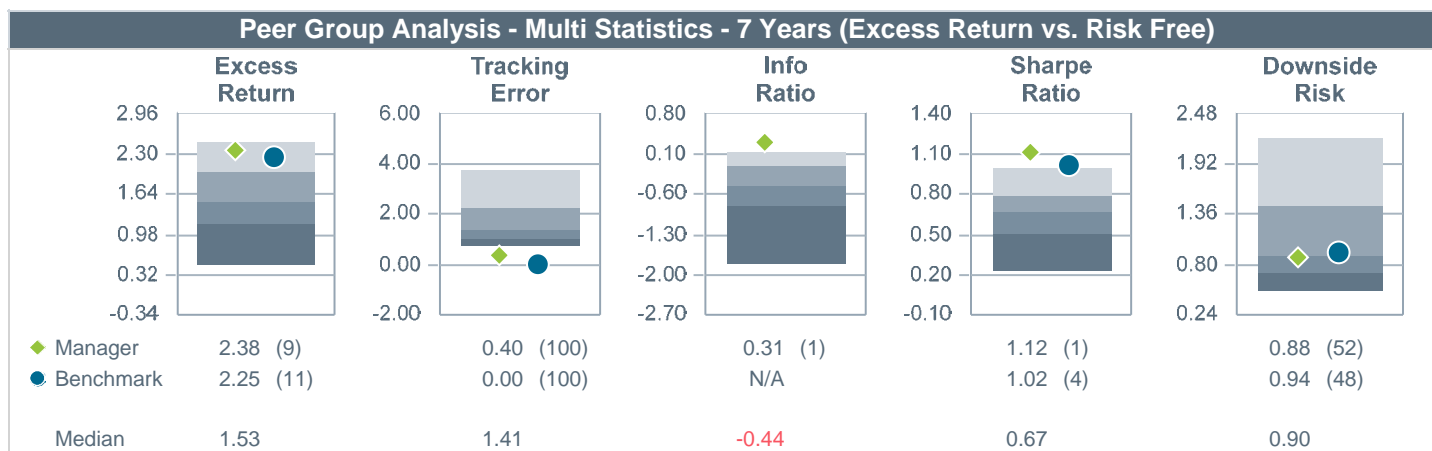
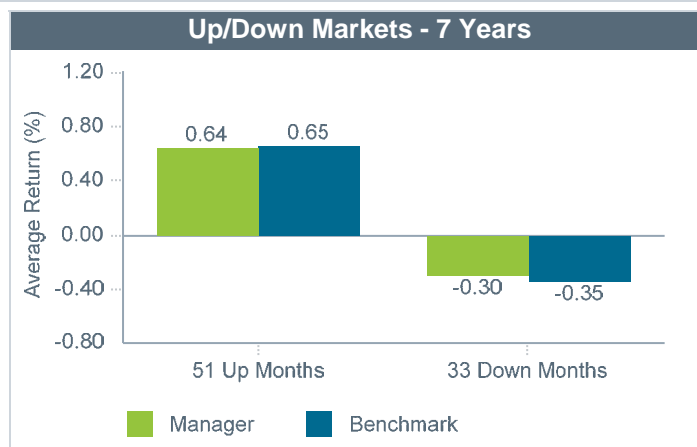
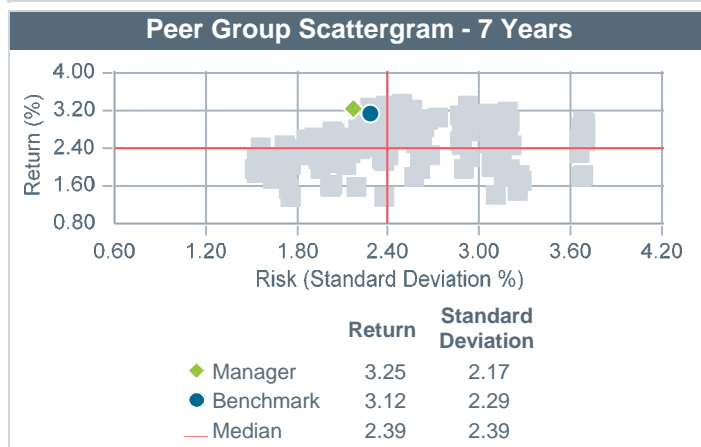
Manager: JP Morgan FI Intermediate Bond (SA)

As of June 30, 2020

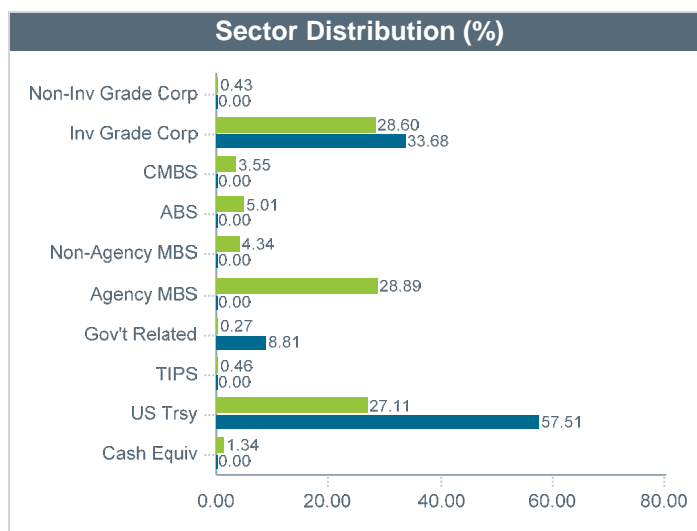
Benchmark: Bloomberg US Gov't Crdt Int Trm Bond Index

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

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	3.06	6.74	4.42	3.52	3.25	N/A	6.70	1.01	2.71	1.88	1.42
Benchmark	2.81	7.12	4.43	3.46	3.12	3.13	6.80	0.88	2.14	2.08	1.07
Difference	0.25	-0.38	-0.01	0.06	0.13	N/A	-0.10	0.13	0.57	-0.20	0.35
Peer Group Median	2.73	5.42	3.41	2.58	2.39	2.53	5.29	0.64	1.68	1.69	0.48
Rank	45	29	10	7	9	N/A	12	27	8	44	10
Population	244	244	218	199	176	121	244	229	220	215	204



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	3.87	4.09
Spread Duration	2.64	4.10
Avg. Maturity	4.71	4.46
Avg. Quality	Aa2	Aa2/Aa3
Yield To Maturity (%)	1.24	0.77
Coupon Rate (%)	3.13	2.49
Current Yield (%)	3.21	N/A
Holdings Count	2,415	5,203



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

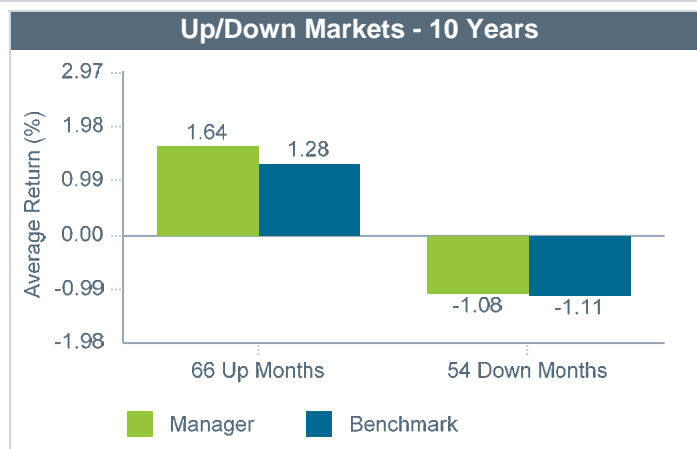
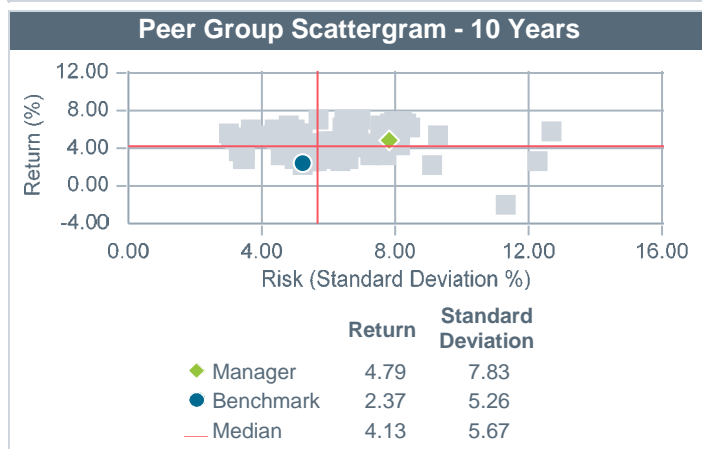
Manager: Brandywine Gbl Opp Fixed Income (CF)

As of June 30, 2020

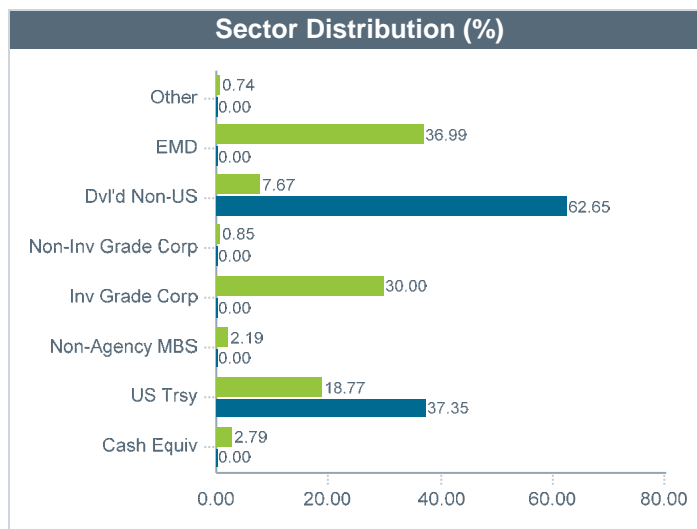
Benchmark: FTSE Wrld Gov't Bond Index

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

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	10.17	0.49	1.79	3.22	2.74	4.79	9.73	-4.66	13.39	5.75	-8.02
Benchmark	2.04	4.60	3.98	3.70	2.21	2.37	5.90	-0.84	7.49	1.60	-3.57
Difference	8.13	-4.11	-2.19	-0.48	0.53	2.42	3.83	-3.82	5.90	4.15	-4.45
Peer Group Median	7.94	2.76	3.74	4.18	3.70	4.17	9.48	-1.73	7.57	5.91	-2.27
Rank	27	65	84	76	75	34	48	88	4	53	92
Population	219	219	213	206	184	129	227	248	257	271	281

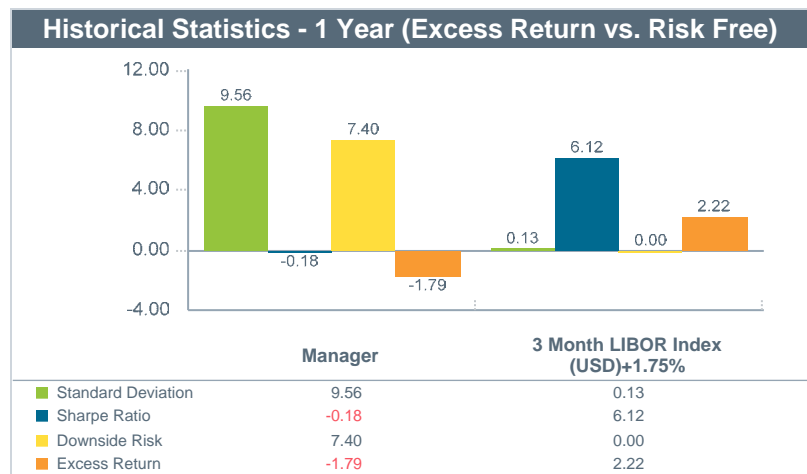


Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	8.12	8.77
Spread Duration	6.16	N/A
Avg. Maturity	13.73	9.33
Avg. Quality	A1	Aa2
Yield To Maturity (%)	3.30	0.32
Coupon Rate (%)	4.44	2.11
Current Yield (%)	4.00	N/A
Holdings Count	118	N/A



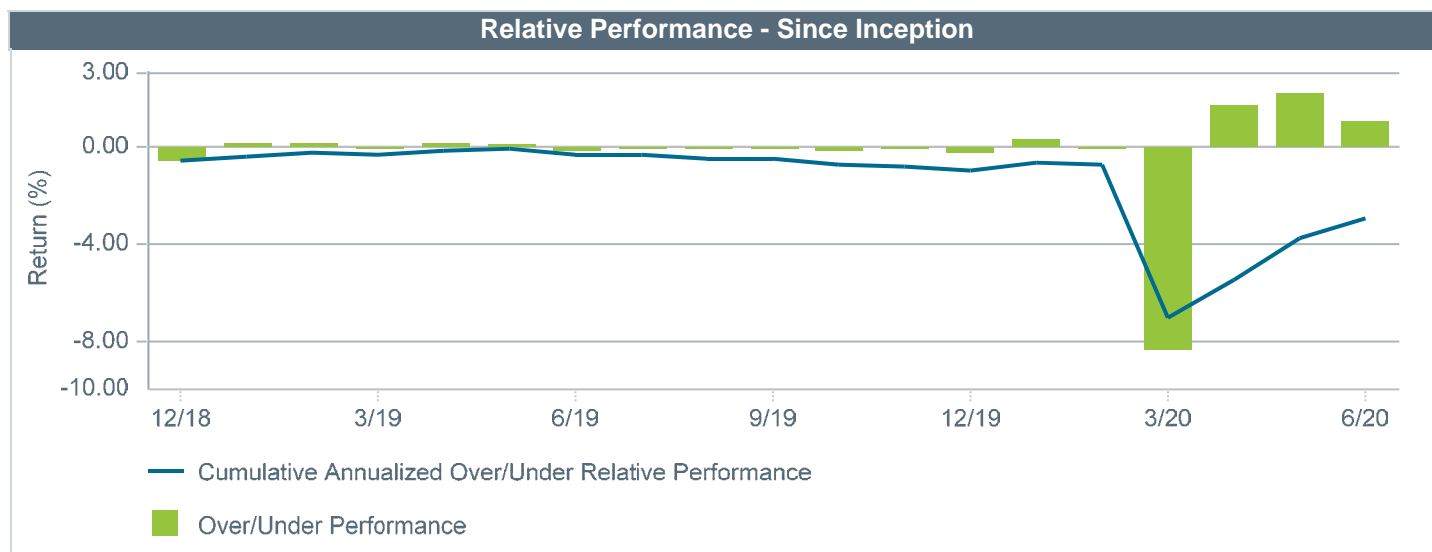
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of derivatives.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	5.99	-0.63	N/A	N/A	N/A	N/A	3.85	N/A	N/A	N/A	N/A
Benchmark	0.88	3.90	3.86	3.27	2.91	2.68	4.39	3.86	2.88	2.42	1.99
Difference	5.11	-4.53	N/A	N/A	N/A	N/A	-0.54	N/A	N/A	N/A	N/A



**Actual Correlation - 1 Year**

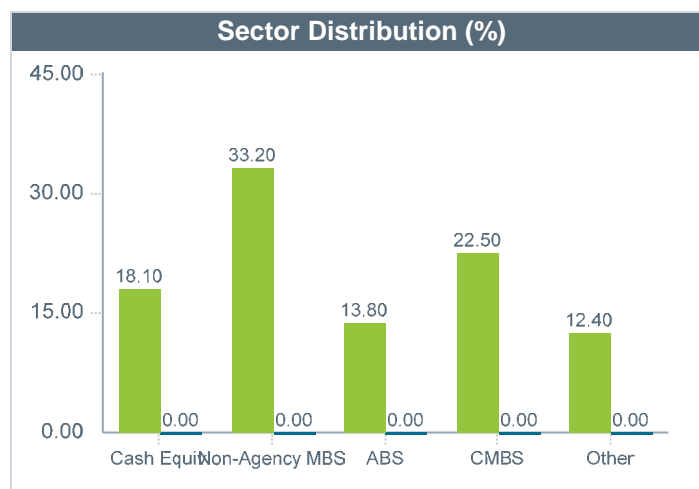
	Actual Correlation
3 Month LIBOR Index (USD)+1.75%	-0.21
Bloomberg US Agg Bond Index	-0.17
S&P 500 Index (Cap Wtd)	0.98



**Portfolio Characteristics**

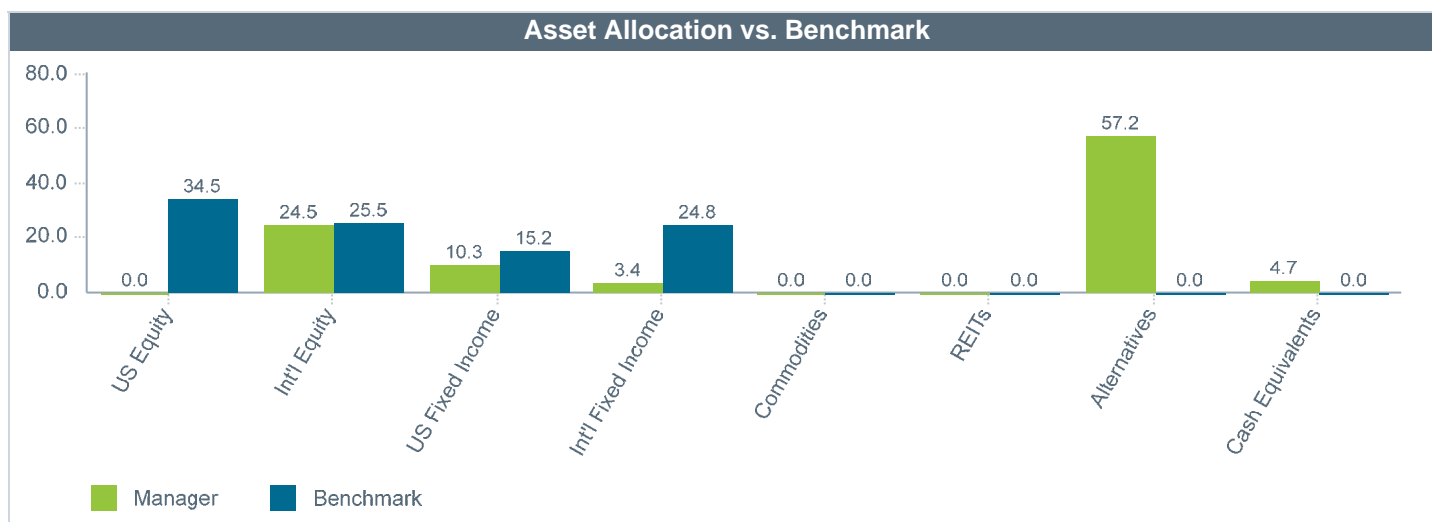
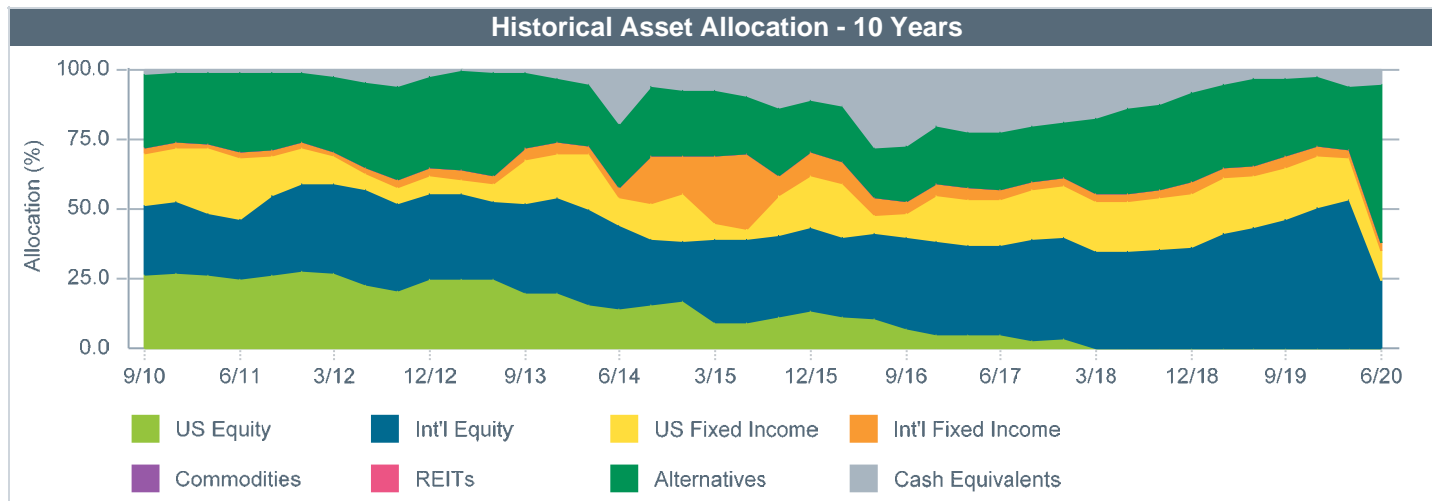
	Portfolio	Benchmark
Effective Duration	0.43	N/A
Spread Duration	3.13	N/A
Avg. Maturity	3.48	N/A
Avg. Quality	Aa3	N/A
Yield To Maturity (%)	3.30	N/A
Coupon Rate (%)	3.56	N/A

Cash Equity Non-Agency MBS ABS CMBS Other



Performance shown is net of fees and client specific. Calculation is based on quarterly periodicity. Allocation to "Other" consists of CLOs.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	7.84	-5.67	0.20	1.20	2.09	4.19	11.64	-5.27	13.07	3.45	-4.23
Benchmark	12.70	3.42	5.50	5.54	5.86	6.79	18.55	-6.00	17.09	5.69	-2.47
Difference	-4.86	-9.09	-5.30	-4.34	-3.77	-2.60	-6.91	0.73	-4.02	-2.24	-1.76

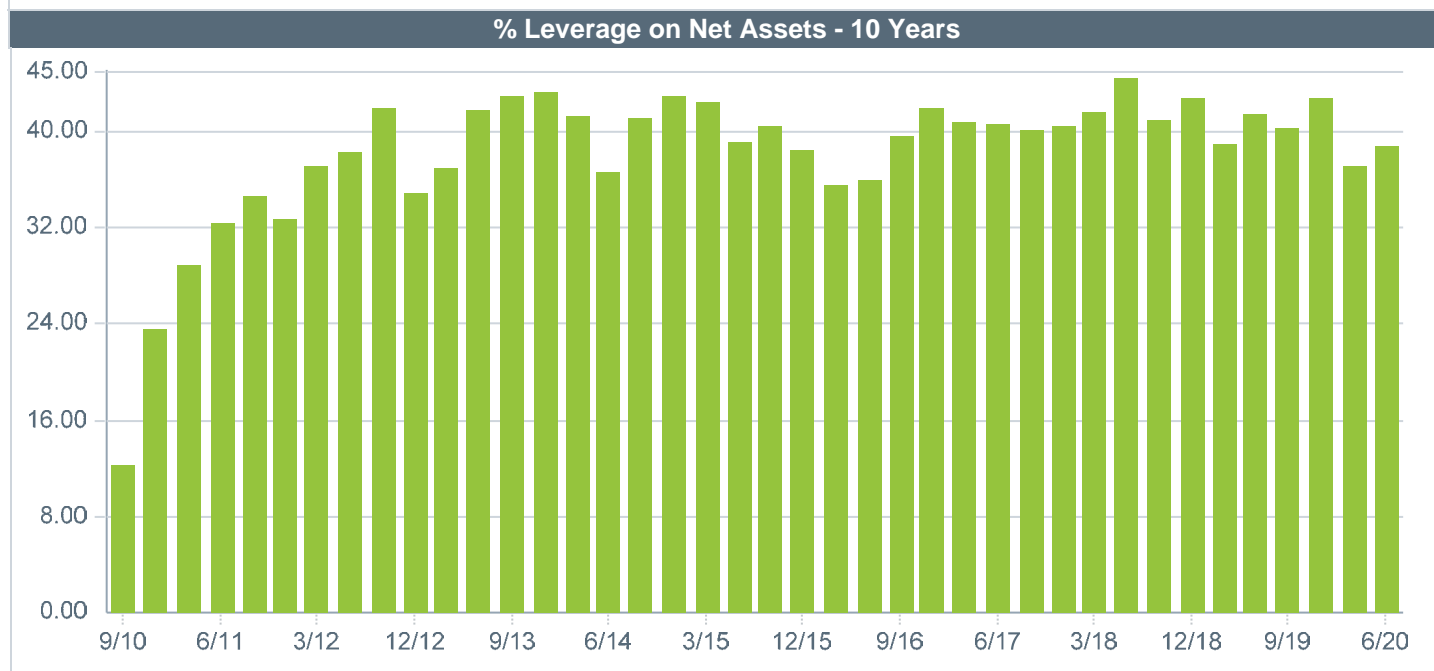
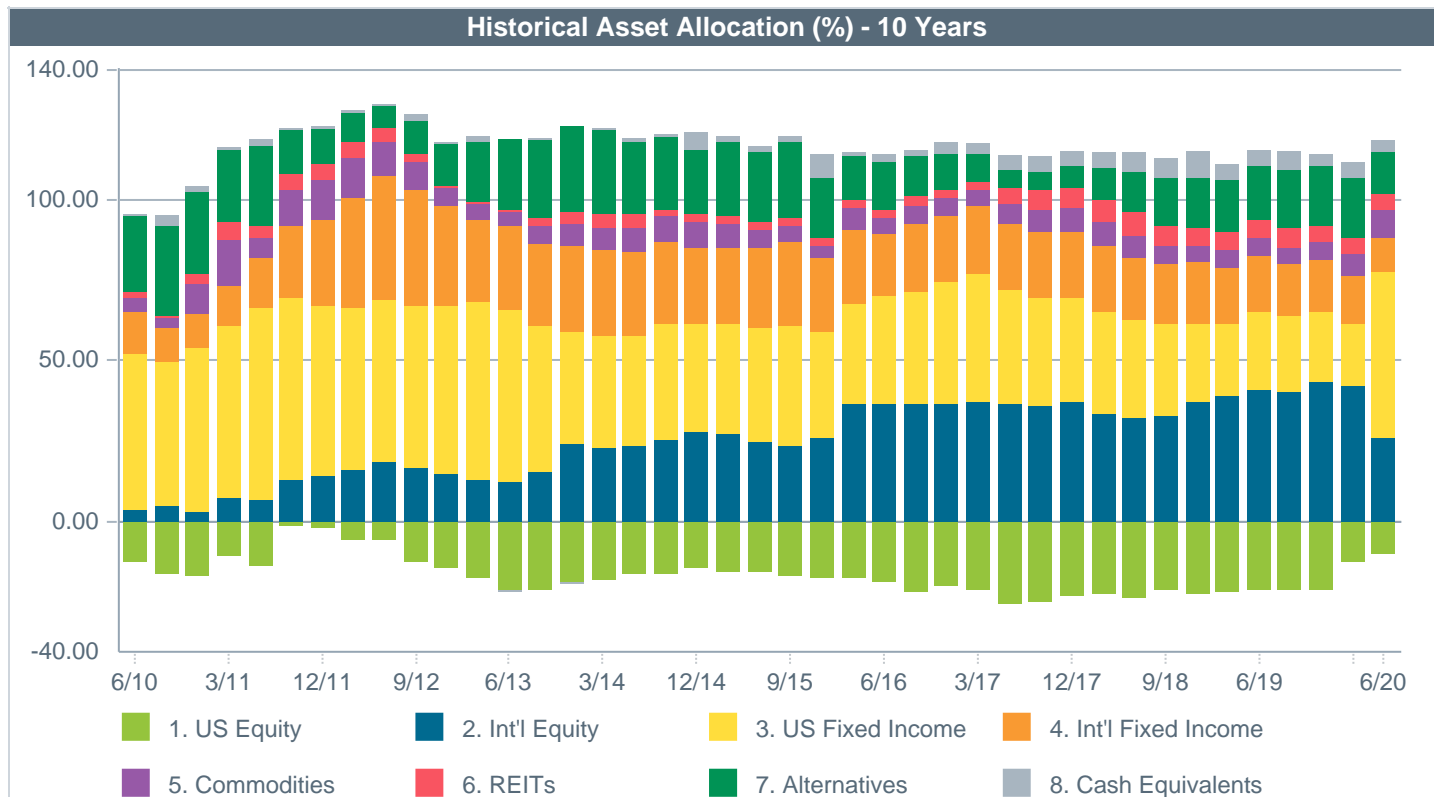


Historical Statistics - 10 Years					Actual Correlation - 10 Years	
	Manager	Benchmark	S&P 500 Index (Cap Wtd)	Bloomberg US Agg Bond Index		Actual Correlation
Standard Deviation	7.41	9.26	13.36	2.93	60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx	0.91
Sharpe Ratio	0.50	0.69	1.00	1.09	S&P 500 Index (Cap Wtd)	0.85
Downside Risk	5.11	5.82	8.21	1.50	Russell 2000 Index	0.75
Excess Return	3.75	6.39	13.42	3.17	MSCI EAFE Index (USD) (Net)	0.87
					MSCI Emg Mkts Index (USD) (Net)	0.85
					Bloomberg US Agg Bond Index	0.06
					Bloomberg US Trsy US TIPS Index	0.24
					Wilshire US REIT Index	0.61
					HFRI FOF Comp Index	0.83
					Bloomberg Cmdty Index (TR)	0.60
					ICE BofAML 3 Mo US T-Bill Index	-0.21
					Cons Price Index (Unadjusted)	0.04

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Allocation to Int'l Eq includes Emg Mkts. Allocation to US Fixed Inc includes ABS/Struct'd Products and Hi Yld/Distr'd Debt. Allocation to Int'l Fixed Inc includes Emg Debt. Allocation to Alts includes Merger Arbitrage, Systematic Global Macro, Relative Value Interest Rates & FX (Global); Emg Mkts, Cyclical Focus and Special Opp vs. S&P 500; US Small Value vs. Russell 2000; Dvlp'd ex-US, Dvlp'd ex-US Small Value and ACWI ex-US Equity Ext vs. EAFE.



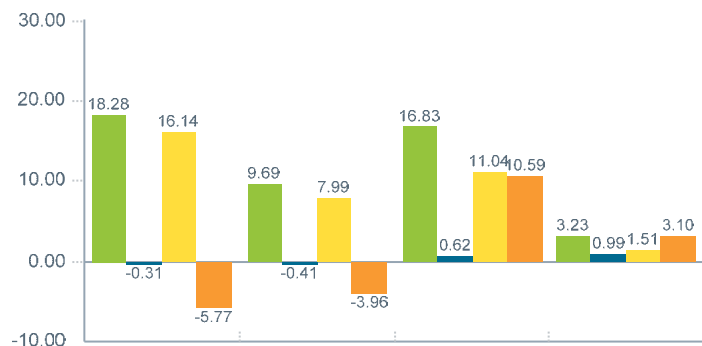
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	13.13	-7.19	-0.99	0.83	0.29	1.86	7.62	-6.14	12.04	13.73	-11.73
Benchmark	7.77	4.77	5.22	4.93	4.91	5.63	12.97	-1.62	8.94	6.47	-1.07
Difference	5.36	-11.96	-6.21	-4.10	-4.62	-3.77	-5.35	-4.52	3.10	7.26	-10.66



Performance shown is net of fees and product specific. Manager 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 gross exposures sum to 138.87% due to the use of 38.87% leverage on net assets. Historical Commodities and REITs allocations shown are available at a one-quarter lag due to the disclosure guidelines set by the investment manager for the underlying fund strategies. Please see the Addendum for custom index definition.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	7.68	-18.34	-4.17	-6.28	N/A	N/A	13.59	-13.80	11.31	11.76	N/A
Benchmark	4.06	-4.98	-3.70	-3.21	-4.20	-2.09	6.01	-10.95	5.36	7.77	-17.74
Difference	3.62	-13.36	-0.47	-3.07	N/A	N/A	7.58	-2.85	5.95	3.99	N/A

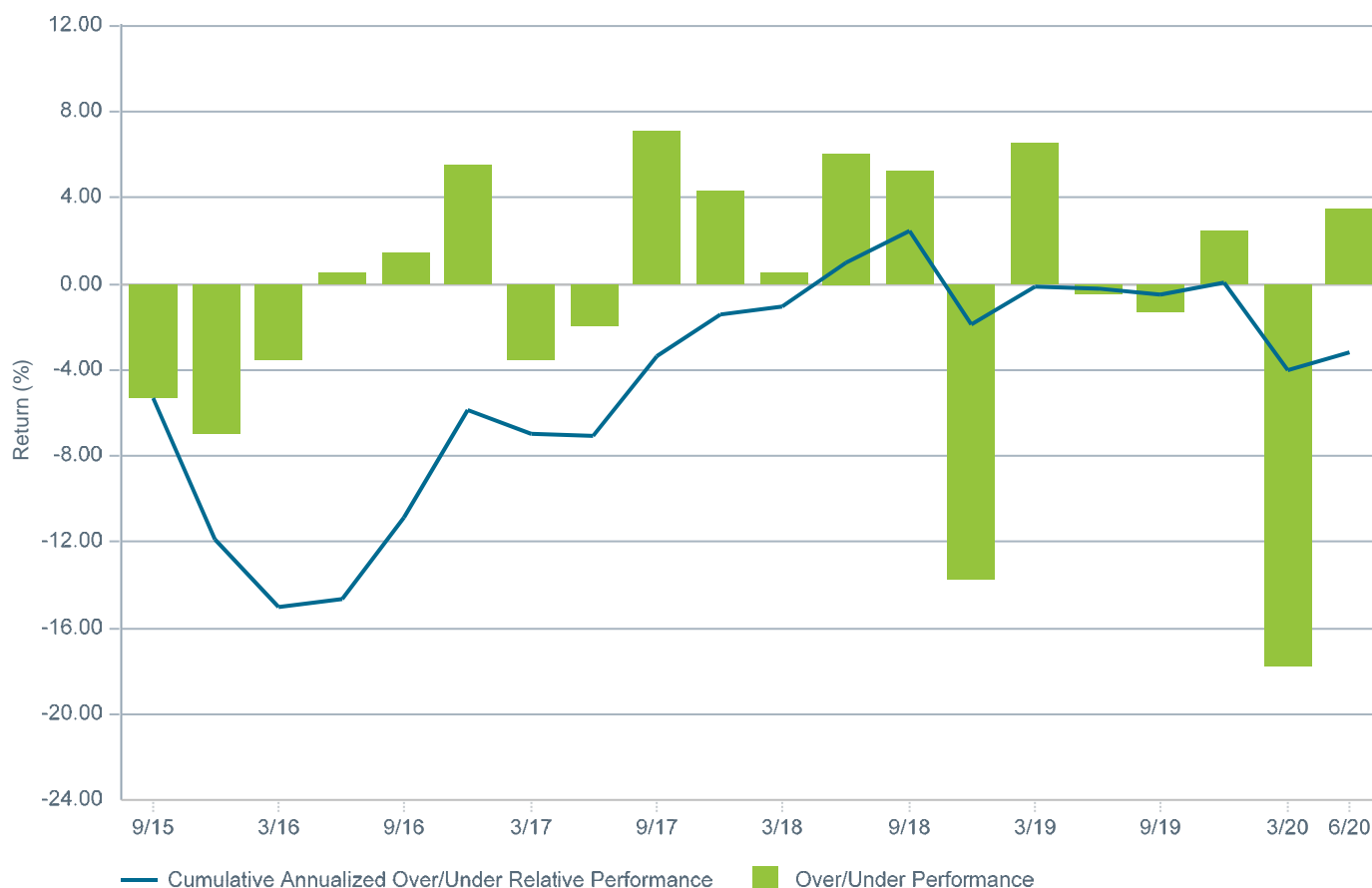
#### Historical Statistics - 5 Years (Excess Return vs. Risk Free)



#### Actual Correlation - 5 Years

	Actual Correlation
Bloomberg Cmdty Ex Energy Index (TR)	0.78
S&P 500 Index (Cap Wtd)	0.81
Russell 2000 Index	0.85
MSCI EAFE Index (USD) (Net)	0.78
MSCI Emg Mkts Index (USD) (Net)	0.77
Bloomberg US Agg Bond Index	-0.11
Bloomberg US Trsy US TIPS Index	0.30
Wilshire US REIT Index	0.65
HFRI FOF Comp Index	0.81
Bloomberg Cmdty Index (TR)	0.98
ICE BofAML 3 Mo US T-Bill Index	-0.14
Cons Price Index (Unadjusted)	0.39

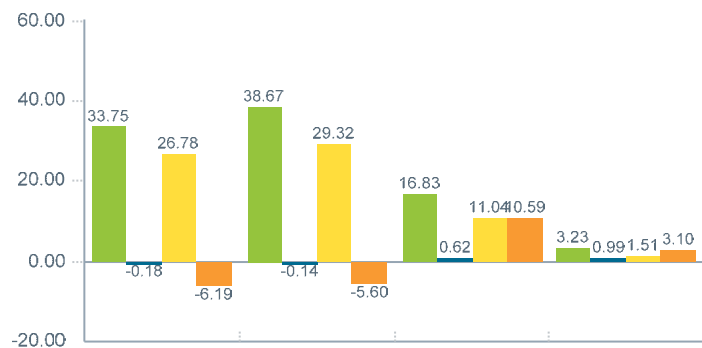
#### Relative Performance - Since Inception



Performance shown is net of fees and client specific. Calculation is based on quarterly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	32.63	-36.63	-13.80	-11.20	N/A	N/A	12.72	-13.63	-5.50	19.24	N/A
Benchmark	45.82	-40.17	-15.34	-12.68	-8.68	-0.52	9.78	-11.67	-5.58	21.95	-35.07
Difference	-13.19	3.54	1.54	1.48	N/A	N/A	2.94	-1.96	0.08	-2.71	N/A

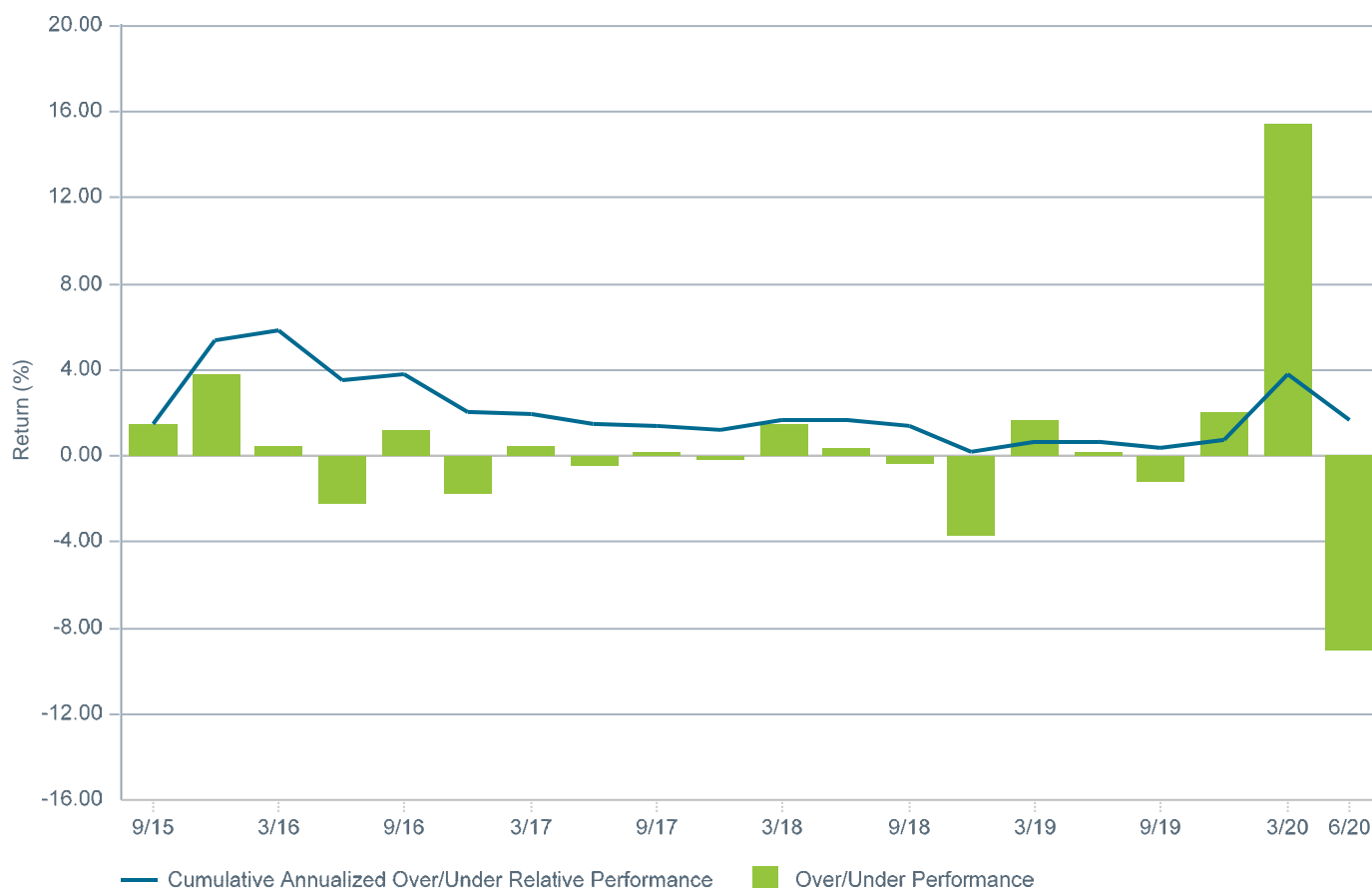
#### Historical Statistics - 5 Years (Excess Return vs. Risk Free)



#### Actual Correlation - 5 Years

	Actual Correlation
S&P MLP Index (TR)	0.99
S&P 500 Index (Cap Wtd)	0.89
Russell 2000 Index	0.92
MSCI EAFE Index (USD) (Net)	0.82
MSCI Emg Mkts Index (USD) (Net)	0.72
Bloomberg US Agg Bond Index	-0.04
Bloomberg US Trsy US TIPS Index	0.34
Wilshire US REIT Index	0.80
HFRI FOF Comp Index	0.88
Bloomberg Cmtty Index (TR)	0.84
ICE BofAML 3 Mo US T-Bill Index	-0.24
Cons Price Index (Unadjusted)	0.26

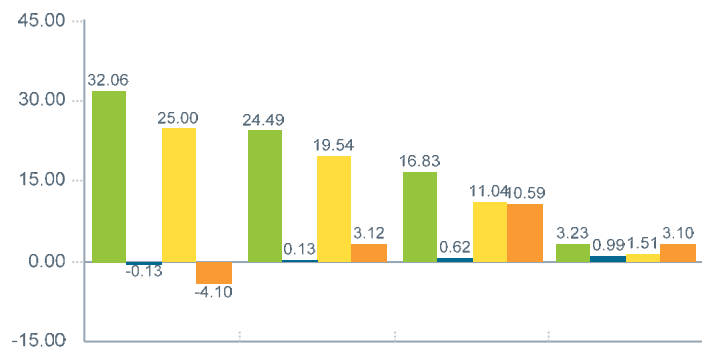
#### Relative Performance - Since Inception



Performance shown is net of fees and client specific. Calculation is based on quarterly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	33.62	-17.90	-7.63	-8.27	N/A	N/A	12.89	-28.52	-0.55	44.23	N/A
Benchmark	20.47	-16.76	-0.11	0.94	0.72	1.48	17.20	-12.57	22.66	32.28	-24.00
Difference	13.15	-1.14	-7.52	-9.21	N/A	N/A	-4.31	-15.95	-23.21	11.95	N/A

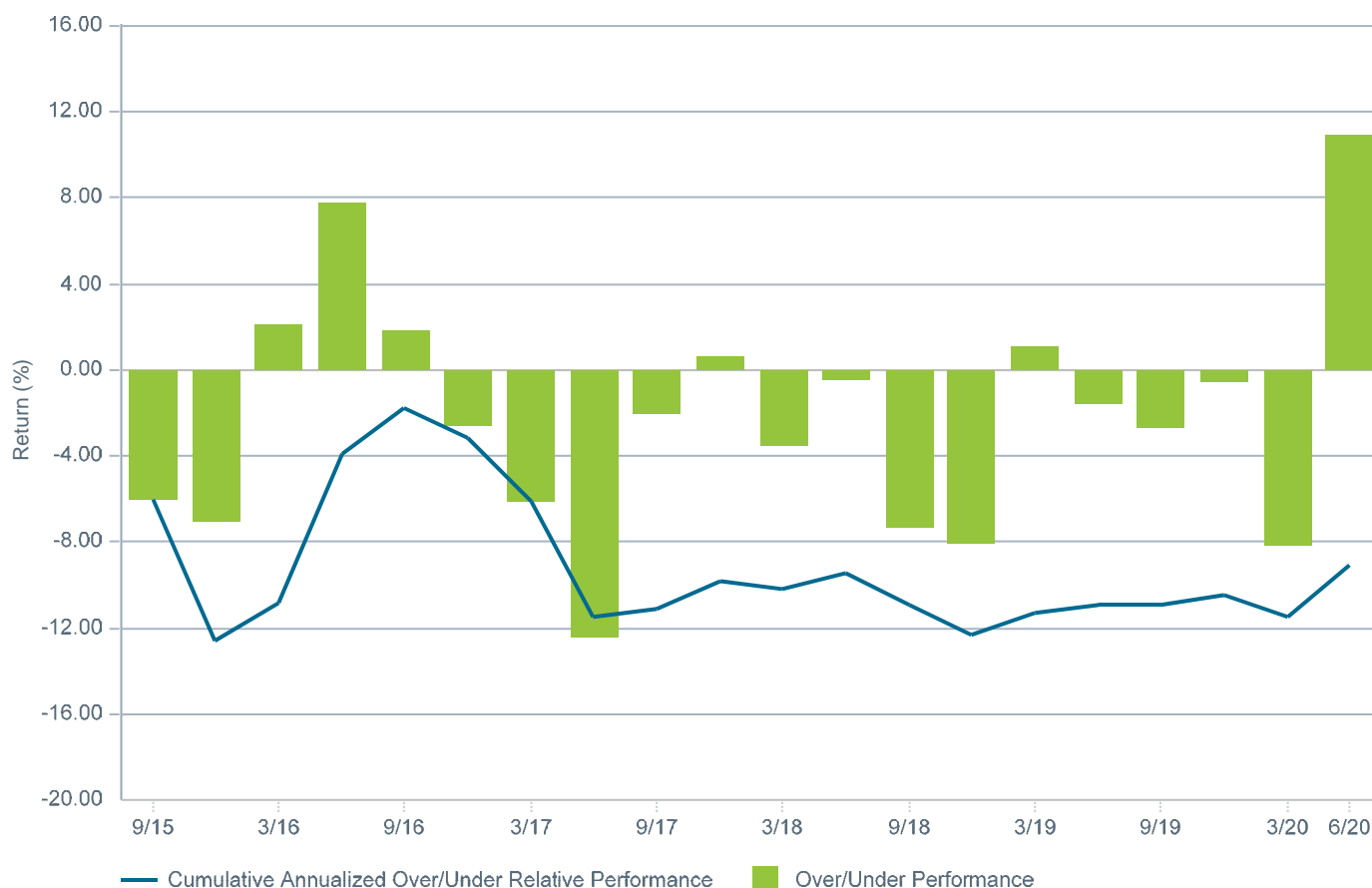
#### Historical Statistics - 5 Years (Excess Return vs. Risk Free)



#### Actual Correlation - 5 Years

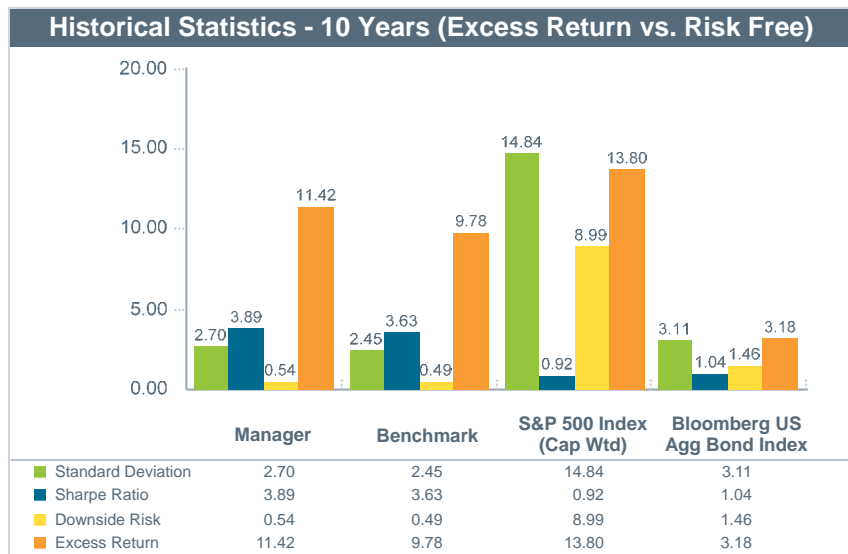
	Actual Correlation
S&P Gbl Ntrl Res Sect Index (TR)	0.96
S&P 500 Index (Cap Wtd)	0.85
Russell 2000 Index	0.90
MSCI EAFE Index (USD) (Net)	0.79
MSCI Emg Mkts Index (USD) (Net)	0.81
Bloomberg US Agg Bond Index	0.00
Bloomberg US Trsy US TIPS Index	0.50
Wilshire US REIT Index	0.65
HFRI FOF Comp Index	0.84
Bloomberg Cmnty Index (TR)	0.87
ICE BofAML 3 Mo US T-Bill Index	-0.30
Cons Price Index (Unadjusted)	0.24

#### Relative Performance - Since Inception



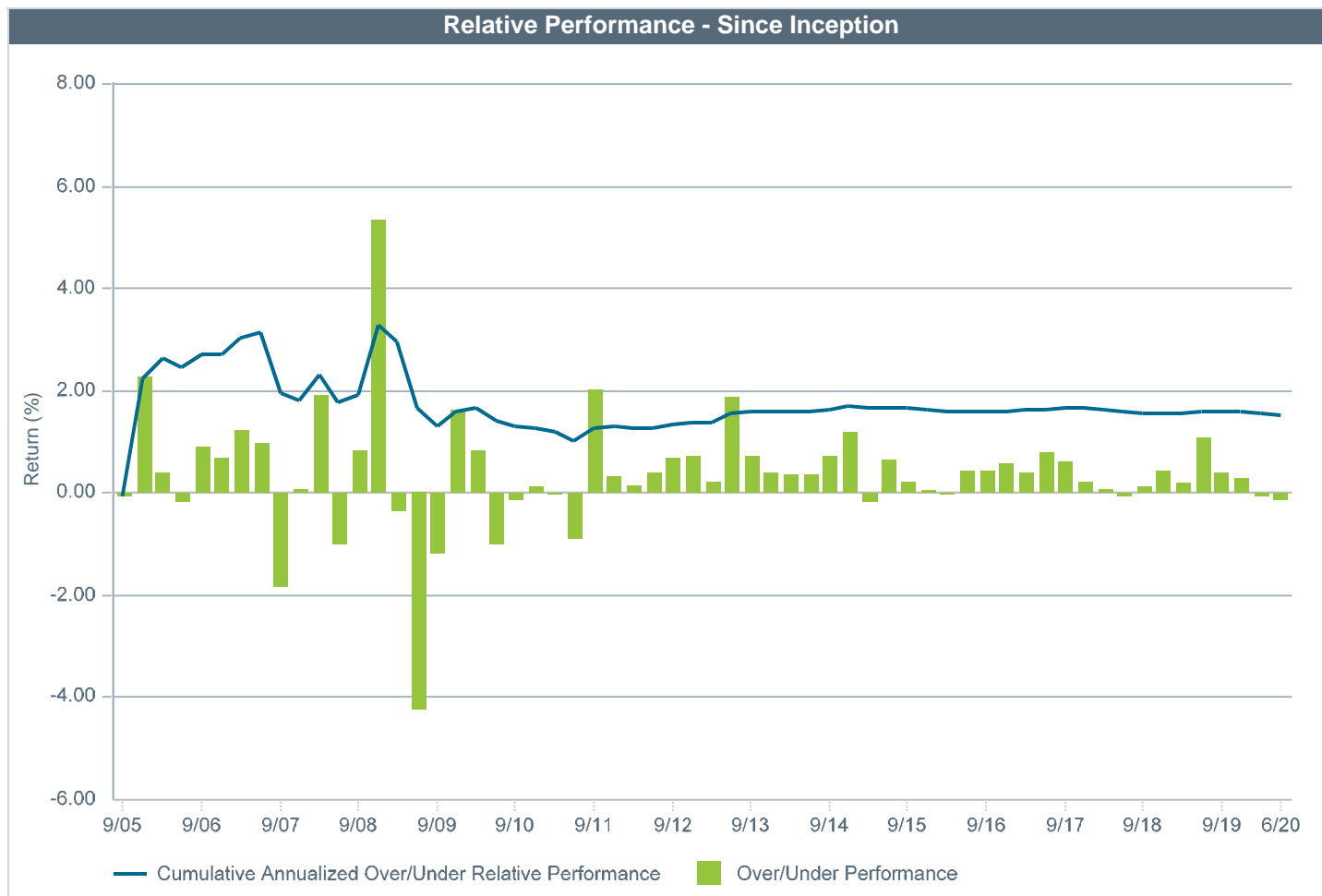
Performance shown is net of fees and client specific. Calculation is based on quarterly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	-1.70	2.69	6.78	8.62	10.69	12.57	7.40	8.99	9.84	10.38	15.86
Benchmark	-1.56	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	8.77	15.02
Difference	-0.14	0.47	1.12	1.31	1.62	1.77	2.06	0.64	2.22	1.61	0.84



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.92
S&P 500 Index (Cap Wtd)	-0.14
Russell 2000 Index	-0.10
MSCI EAFE Index (USD) (Net)	-0.09
MSCI Emg Mkts Index (USD) (Net)	-0.21
Bloomberg US Agg Bond Index	-0.28
Bloomberg US Trsy US TIPS Index	-0.34
Wilshire US REIT Index	-0.02
HFRI FOF Comp Index	-0.15
Bloomberg Cmtty Index (TR)	-0.03
ICE BofAML 3 Mo US T-Bill Index	-0.52
Cons Price Index (Unadjusted)	-0.05



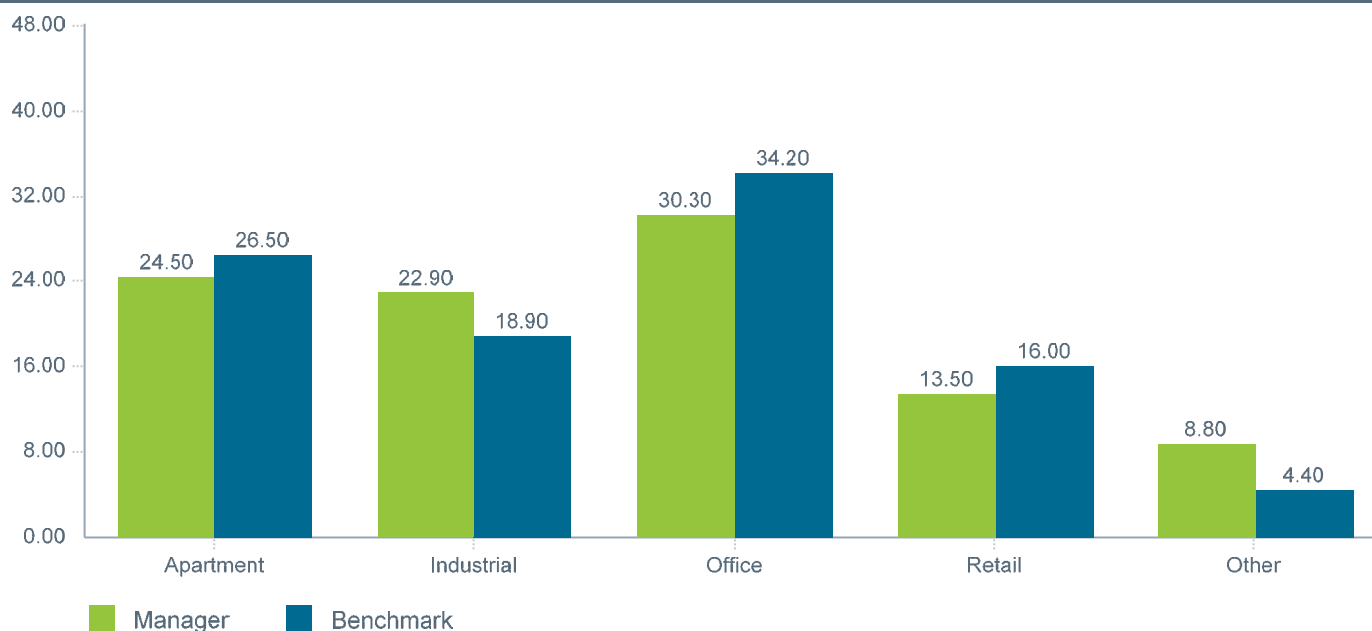
### Investment Strategy

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.

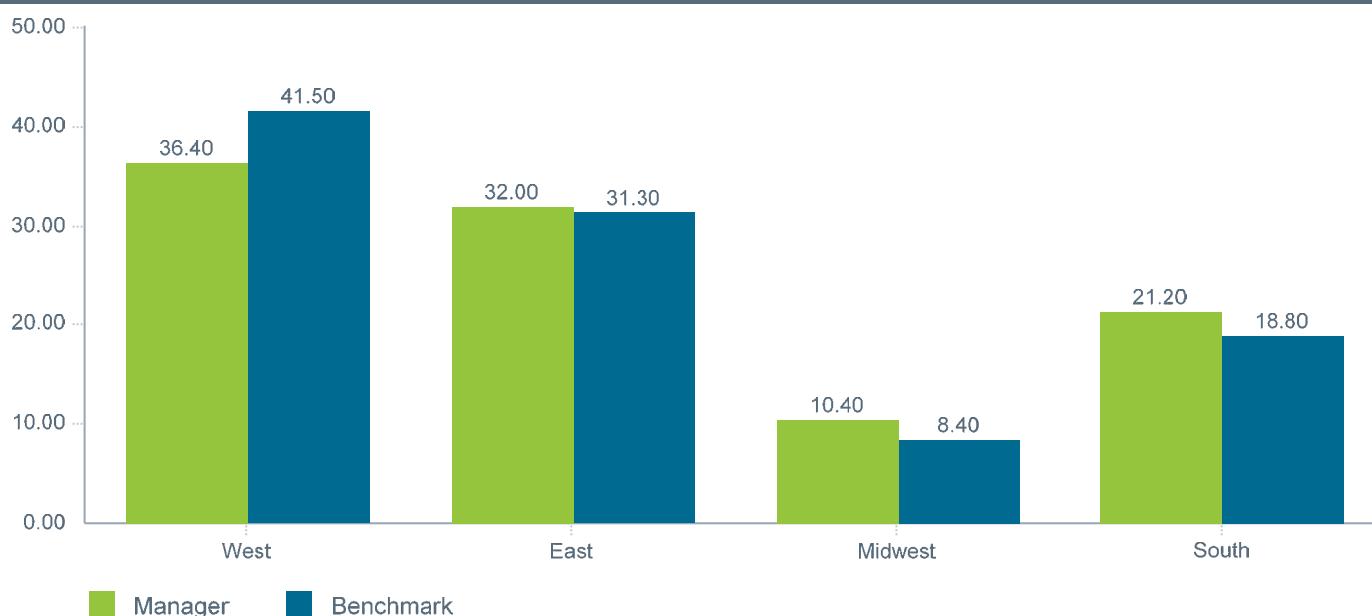
### Investment Profile

Fund Inception	1973
Legal Structure	LLC
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	31,866
Fund Leverage %	16.40
Portfolio Occupancy %	93.30
Cash Reserve %	2.00
Number of Investments	444
Number of Limited Partners	410

### Property Type Allocation (%)

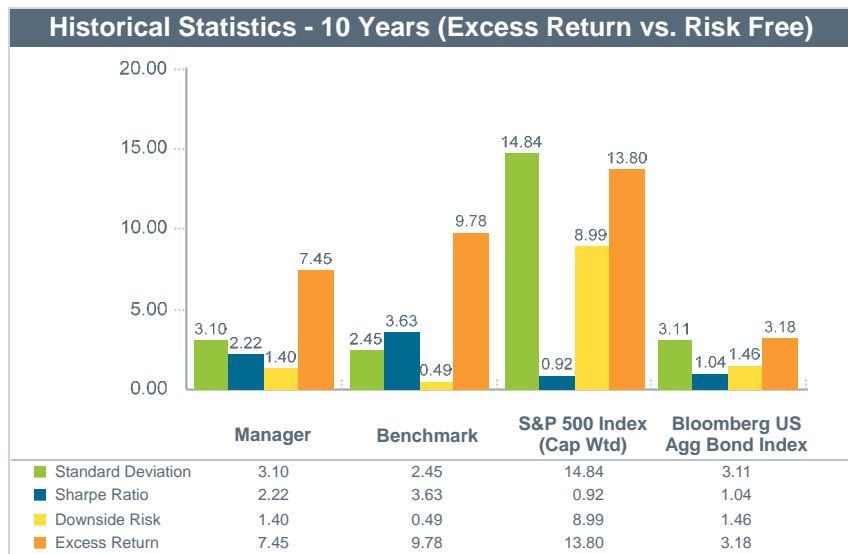


### Geographic Allocation (%)



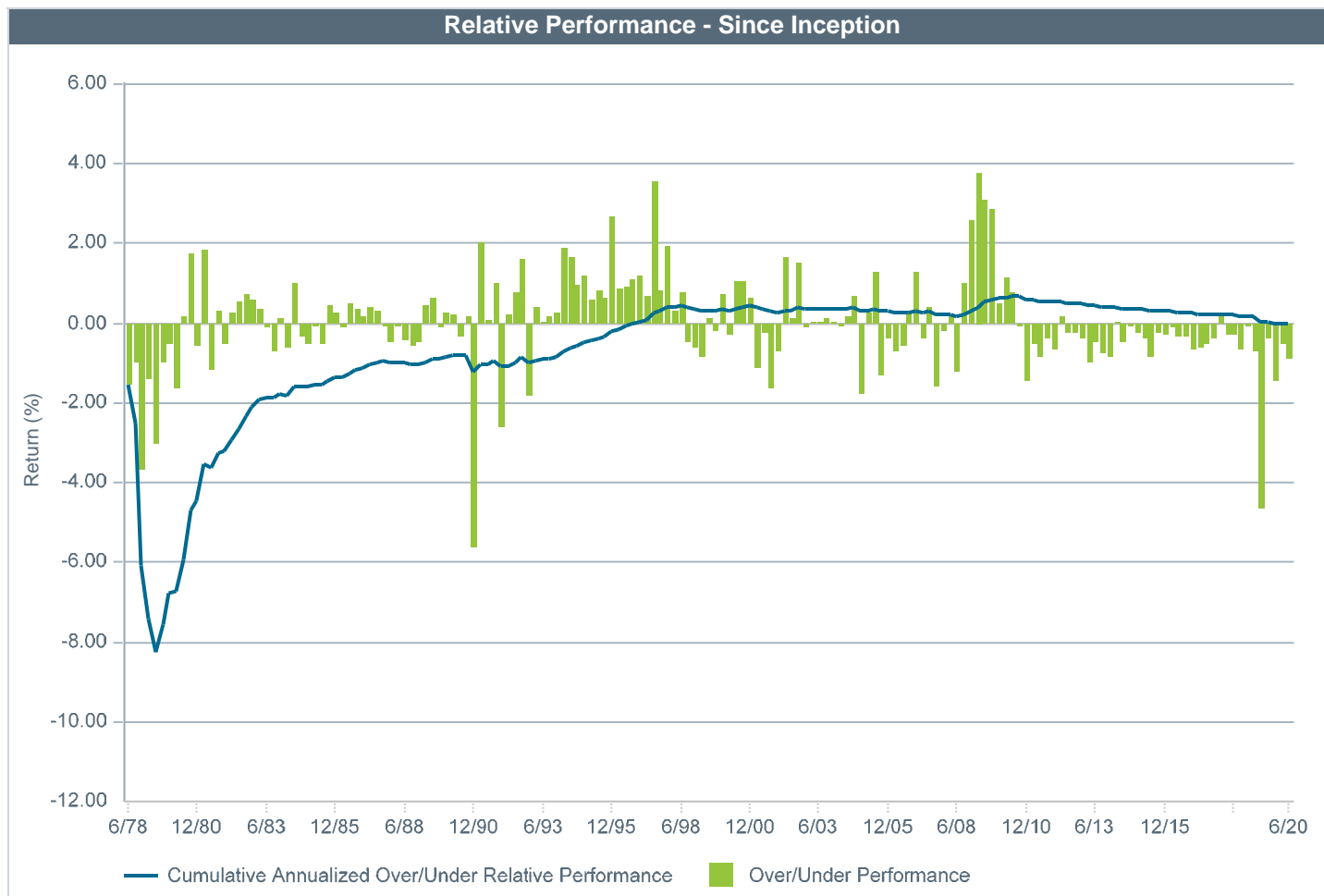
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists 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	2019	2018	2017	2016	2015
Manager	-2.43	-1.06	2.16	4.50	6.47	8.28	-2.10	6.99	6.30	7.21	12.94
Benchmark	-1.56	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	8.77	15.02
Difference	-0.87	-3.28	-3.50	-2.81	-2.60	-2.52	-7.44	-1.36	-1.32	-1.56	-2.08



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.88
S&P 500 Index (Cap Wtd)	-0.12
Russell 2000 Index	-0.09
MSCI EAFE Index (USD) (Net)	-0.06
MSCI Emg Mkts Index (USD) (Net)	-0.11
Bloomberg US Agg Bond Index	-0.25
Bloomberg US Trsy US TIPS Index	-0.22
Wilshire US REIT Index	0.10
HFRI FOF Comp Index	-0.16
Bloomberg Cmnty Index (TR)	-0.01
ICE BofAML 3 Mo US T-Bill Index	-0.58
Cons Price Index (Unadjusted)	-0.01



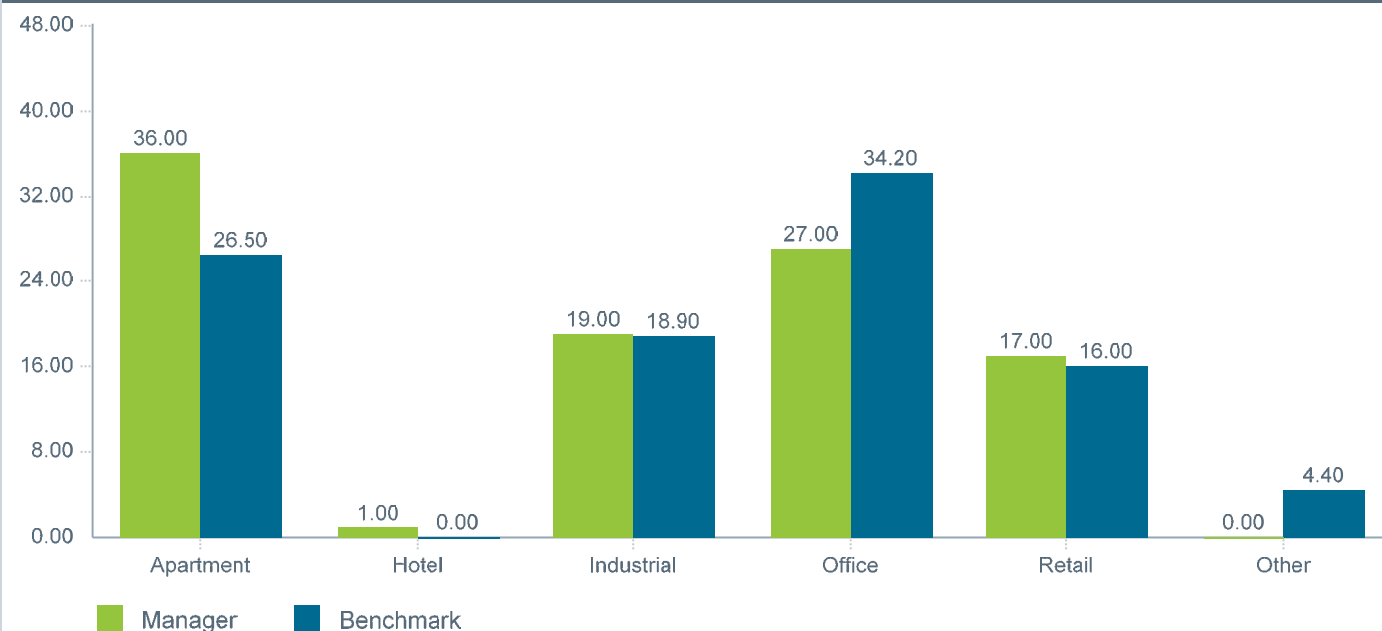
### Investment Strategy

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.

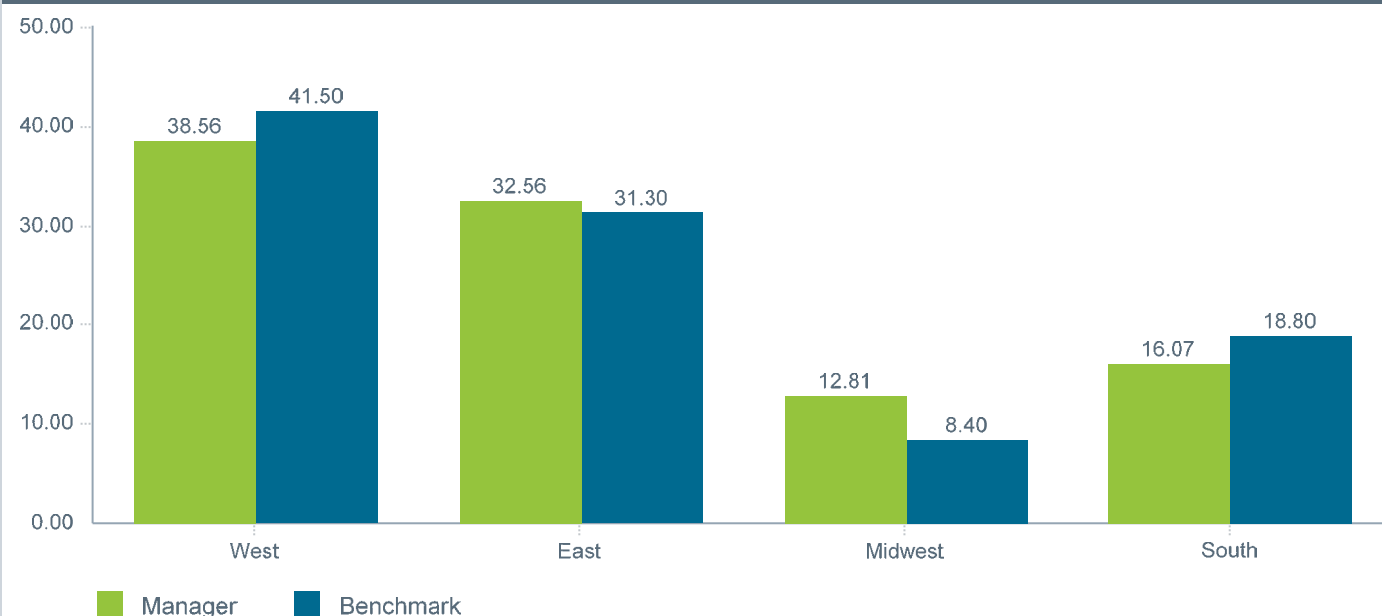
### Investment Profile

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	19,396
Fund Leverage %	18.60
Portfolio Occupancy %	93.40
Cash Reserve %	1.50
Number of Investments	184
Number of Limited Partners	446

### Property Type Allocation (%)



### Geographic Allocation (%)

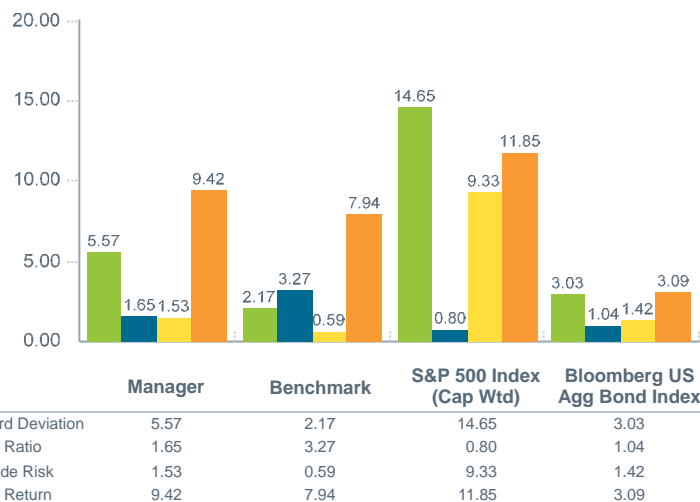


Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists 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	2019	2018	2017	2016	2015
Manager	-3.98	-3.70	6.66	8.05	10.53	N/A	3.03	9.71	18.01	6.60	22.42
Benchmark	-1.56	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	8.77	15.02
Difference	-2.42	-5.92	1.00	0.74	1.46	N/A	-2.31	1.36	10.39	-2.17	7.40

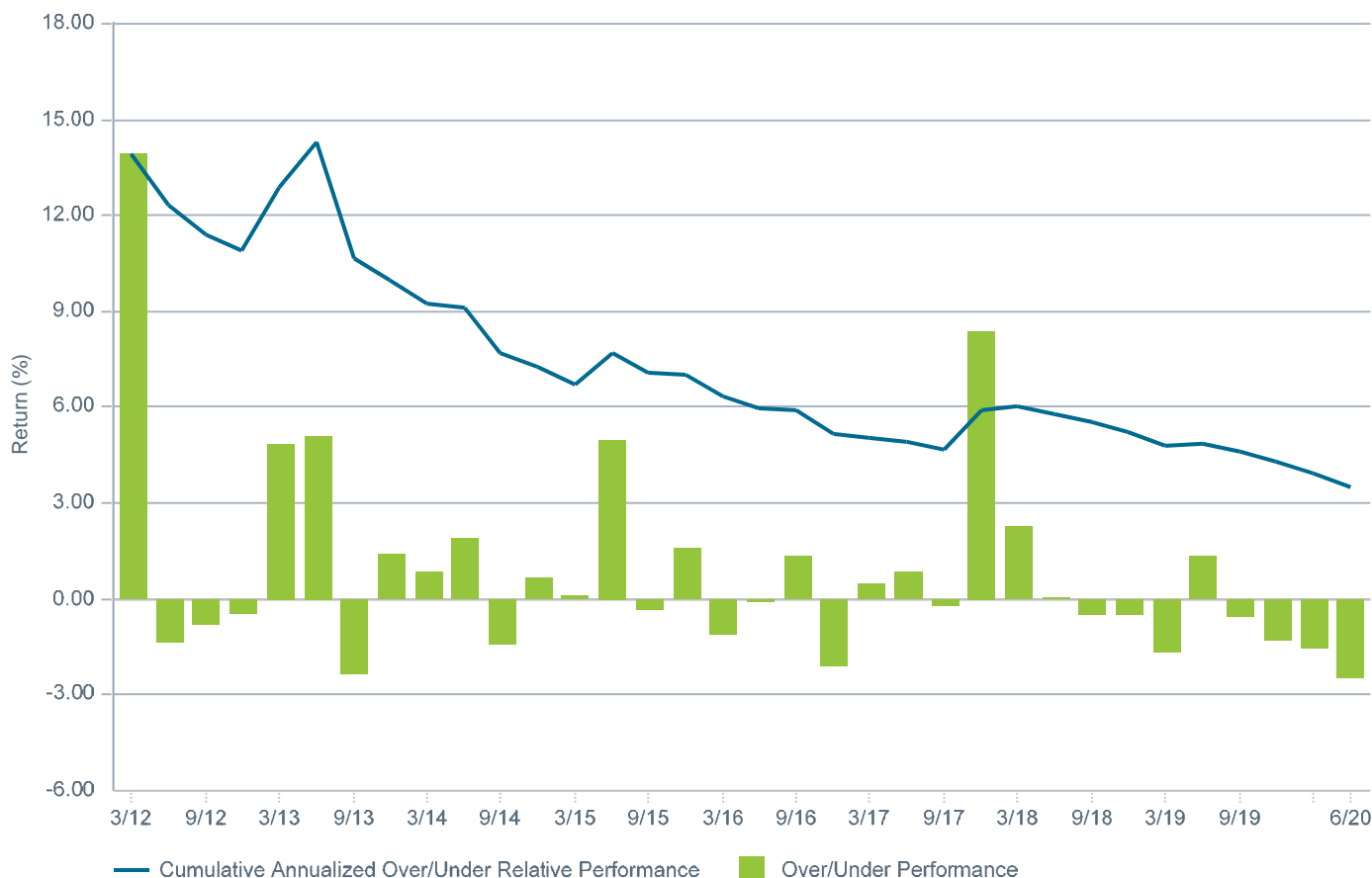
#### Historical Statistics - 7 Years (Excess Return vs. Risk Free)



#### Actual Correlation - 7 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.62
S&P 500 Index (Cap Wtd)	-0.08
Russell 2000 Index	-0.09
MSCI EAFE Index (USD) (Net)	0.00
MSCI Emg Mkts Index (USD) (Net)	-0.02
Bloomberg US Agg Bond Index	-0.38
Bloomberg US Trsy US TIPS Index	-0.29
Wilshire US REIT Index	-0.06
HFRI FOF Comp Index	-0.02
Bloomberg Cmtty Index (TR)	0.05
ICE BofAML 3 Mo US T-Bill Index	-0.27
Cons Price Index (Unadjusted)	0.00

#### Relative Performance - Since Inception



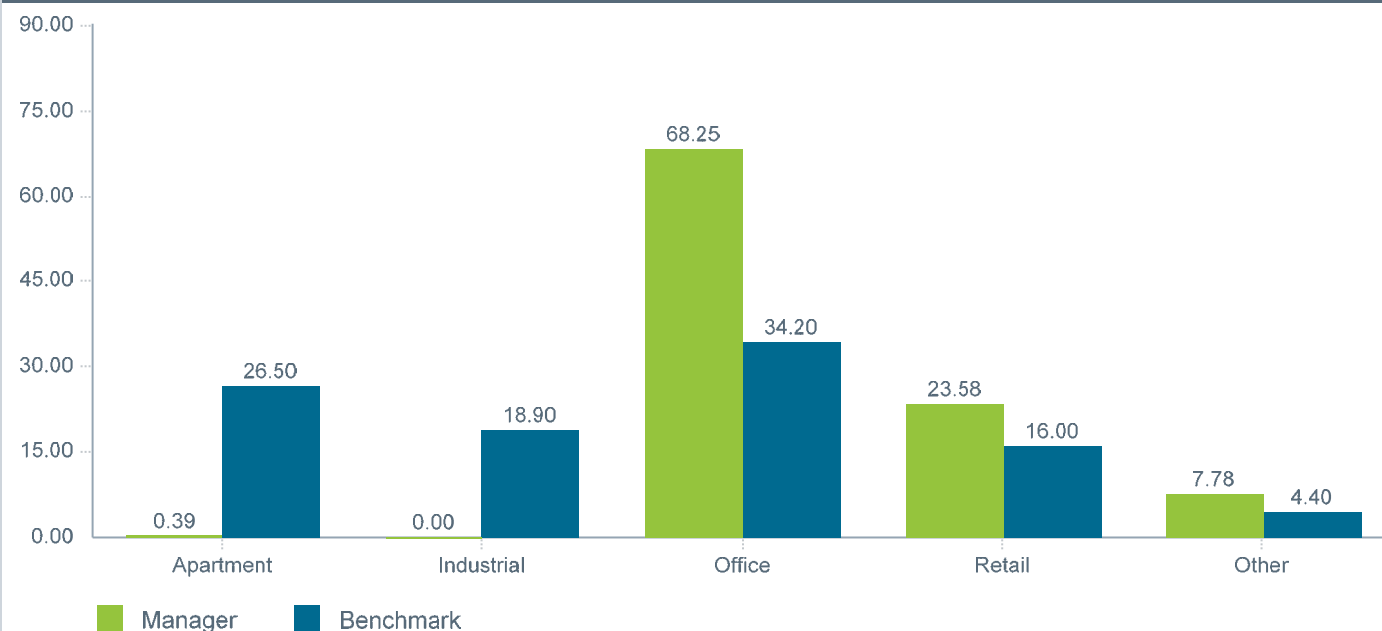
### Investment Strategy

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.

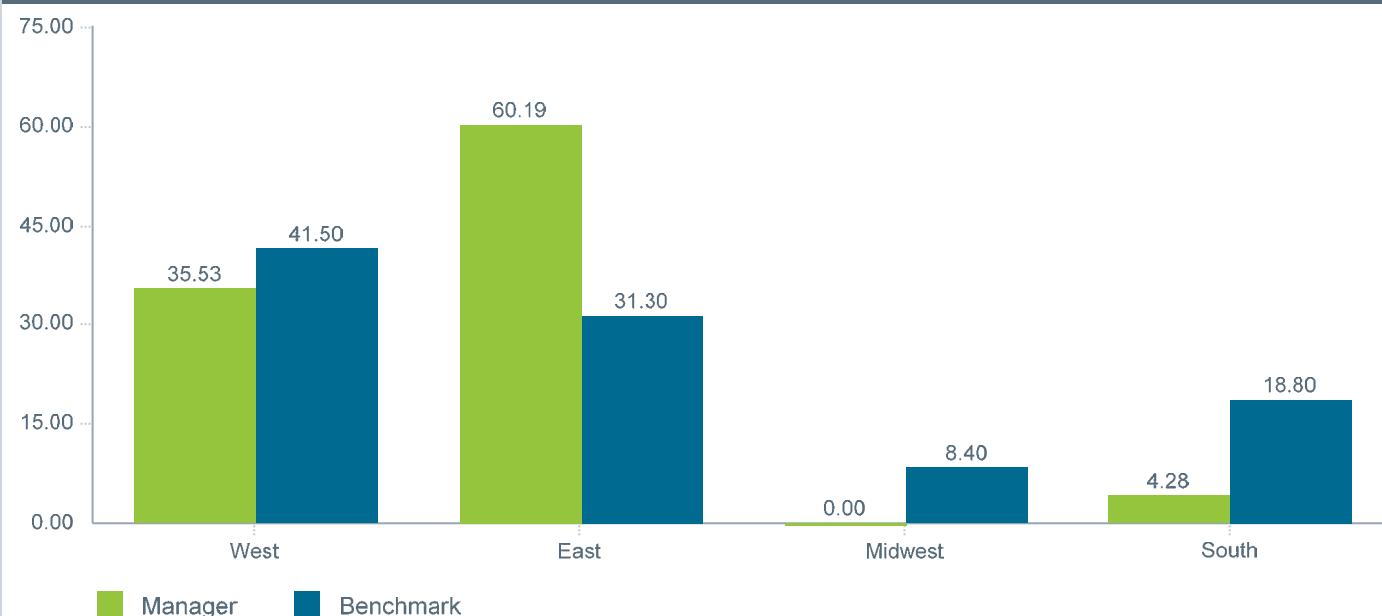
### Investment Profile

Fund Inception	2011
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	4,505
Fund Leverage %	43.07
Portfolio Occupancy %	81.66
Cash Reserve %	5.51
Number of Investments	25
Number of Limited Partners	48

### Property Type Allocation (%)

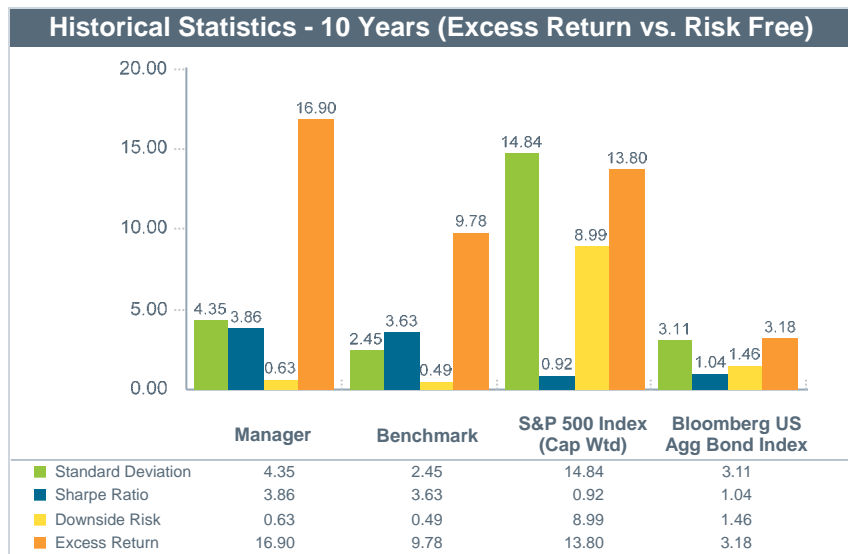


### Geographic Allocation (%)



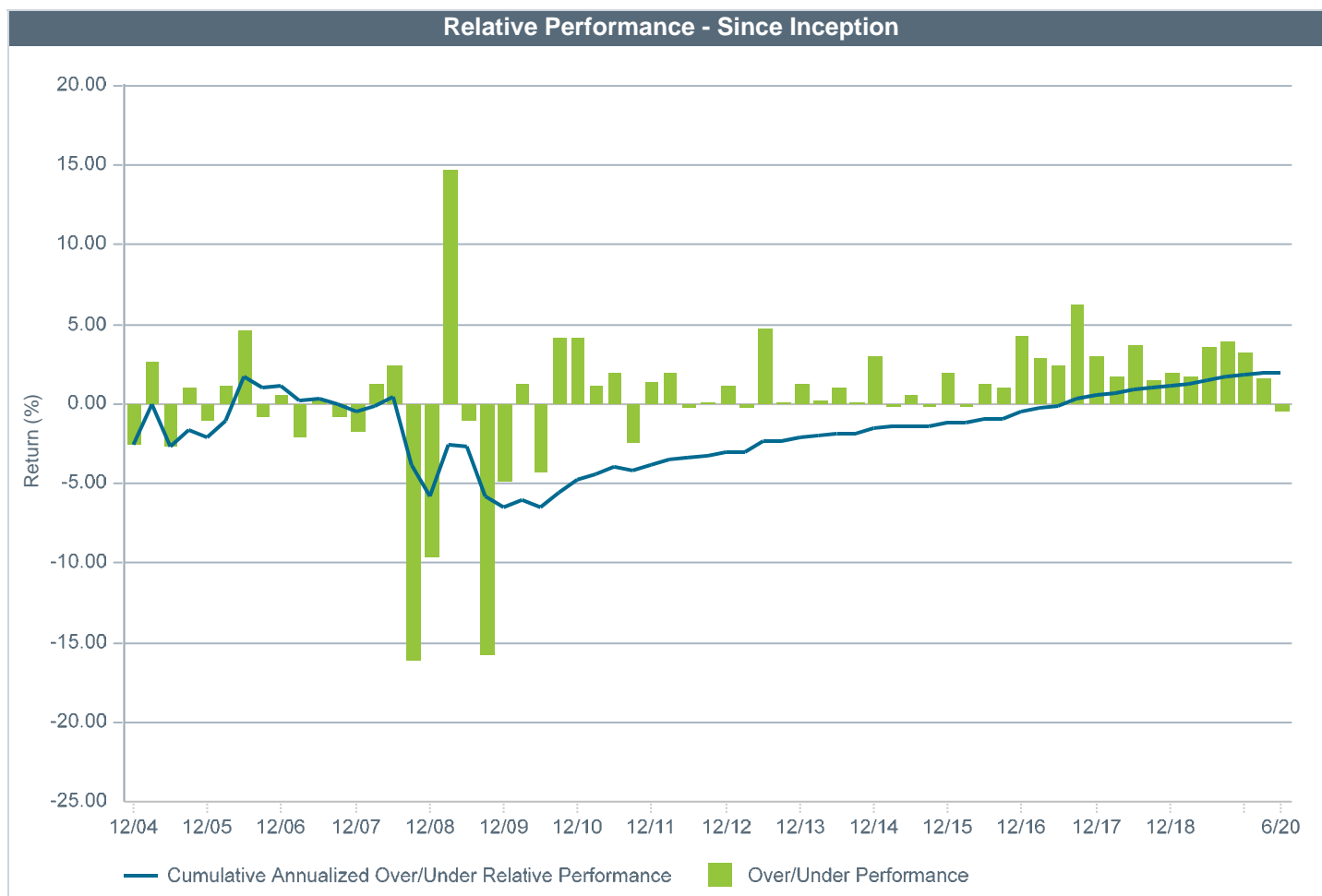
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists 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	2019	2018	2017	2016	2015
Manager	-1.99	10.85	17.15	17.31	17.27	18.61	18.88	18.19	24.16	16.08	17.76
Benchmark	-1.56	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	8.77	15.02
Difference	-0.43	8.63	11.49	10.00	8.20	7.81	13.54	9.84	16.54	7.31	2.74



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.58
S&P 500 Index (Cap Wtd)	0.15
Russell 2000 Index	0.19
MSCI EAFE Index (USD) (Net)	0.21
MSCI Emg Mkts Index (USD) (Net)	0.13
Bloomberg US Agg Bond Index	-0.44
Bloomberg US Trsy US TIPS Index	-0.43
Wilshire US REIT Index	0.19
HFRI FOF Comp Index	0.11
Bloomberg Cndty Index (TR)	0.20
ICE BofAML 3 Mo US T-Bill Index	0.00
Cons Price Index (Unadjusted)	-0.04



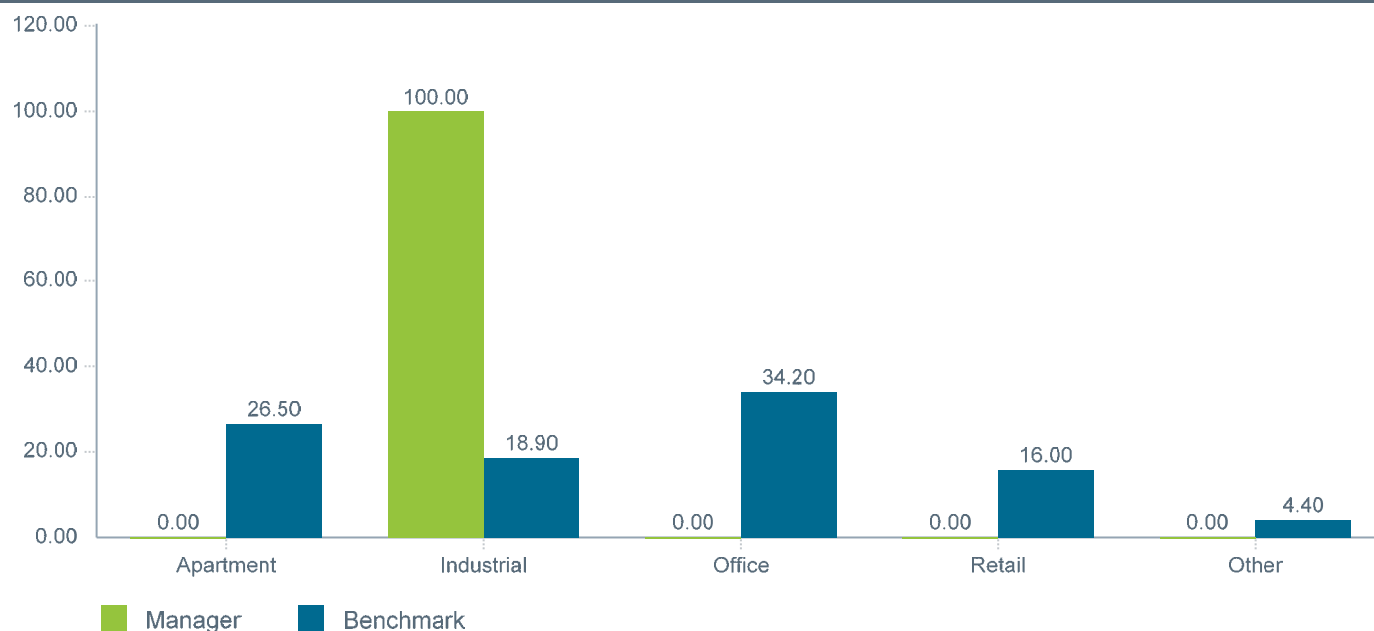
### Investment Strategy

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.

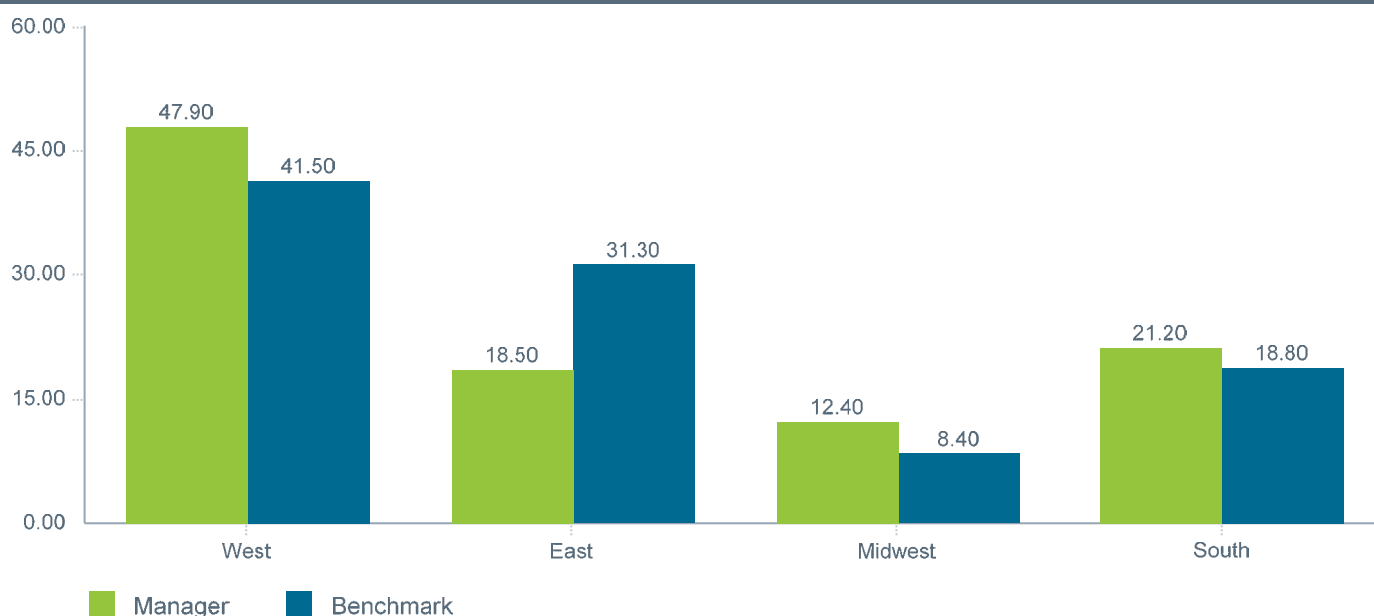
### Investment Profile

Fund Inception	2004
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	15,342
Fund Leverage %	19.10
Portfolio Occupancy %	95.00
Cash Reserve %	1.00
Number of Investments	715
Number of Limited Partners	100

### Property Type Allocation (%)

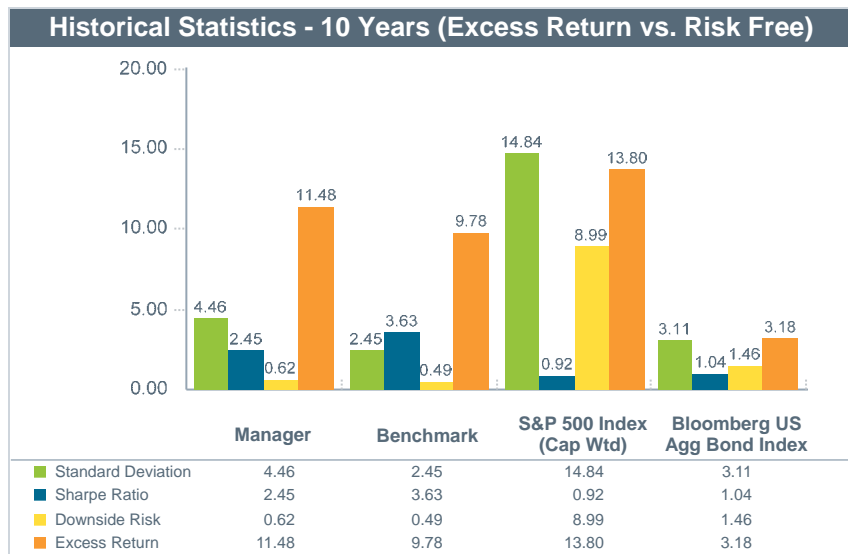


### Geographic Allocation (%)



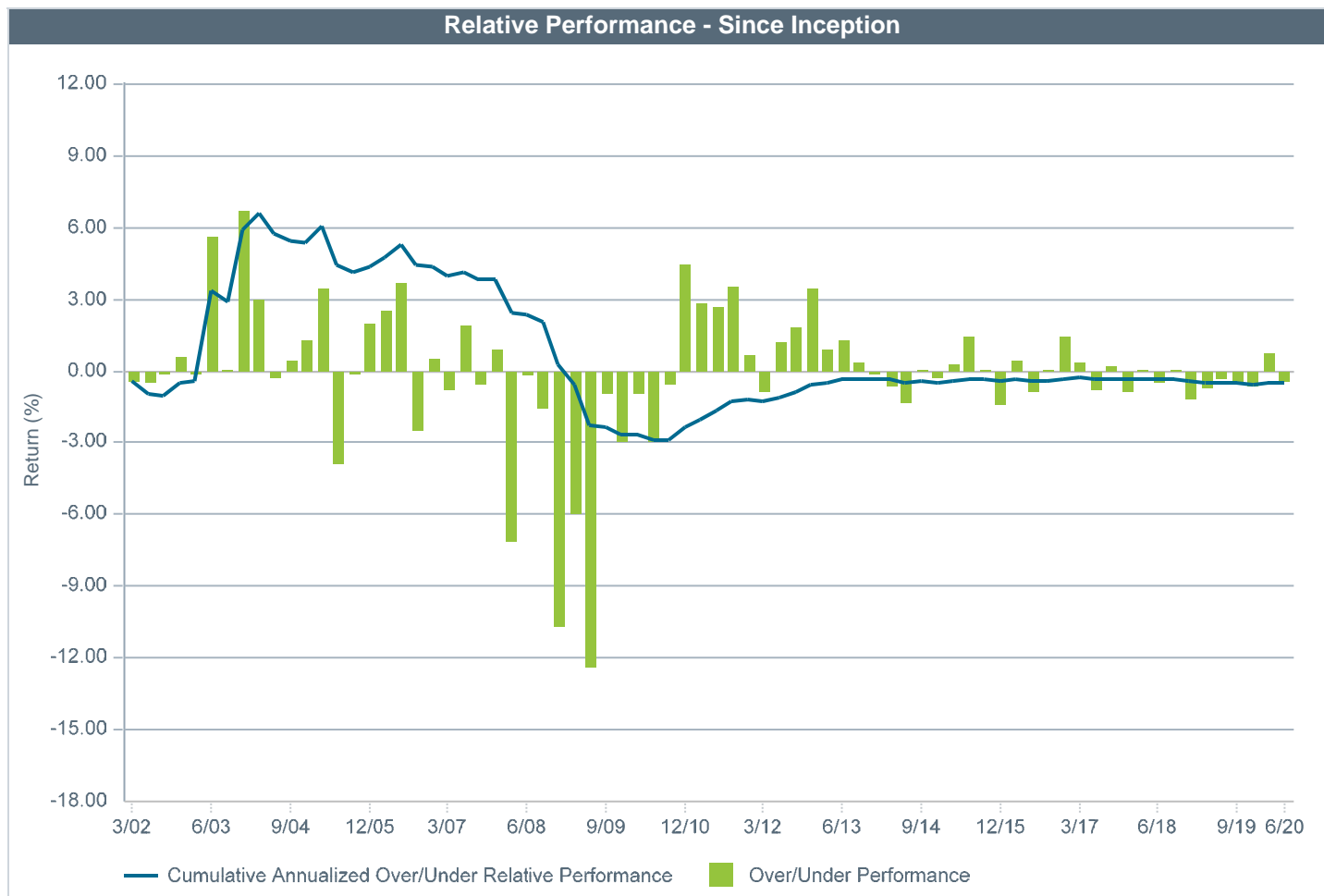
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists 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	2019	2018	2017	2016	2015
Manager	-1.95	1.31	4.19	6.25	8.27	12.57	3.01	6.59	6.50	9.90	15.34
Benchmark	-1.56	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	8.77	15.02
Difference	-0.39	-0.91	-1.47	-1.06	-0.80	1.77	-2.33	-1.76	-1.12	1.13	0.32



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.81
S&P 500 Index (Cap Wtd)	-0.15
Russell 2000 Index	-0.06
MSCI EAFE Index (USD) (Net)	-0.09
MSCI Emg Mkts Index (USD) (Net)	-0.19
Bloomberg US Agg Bond Index	-0.26
Bloomberg US Trsy US TIPS Index	-0.12
Wilshire US REIT Index	-0.10
HFRI FOF Comp Index	-0.14
Bloomberg Cmtty Index (TR)	0.04
ICE BofAML 3 Mo US T-Bill Index	-0.50
Cons Price Index (Unadjusted)	0.07



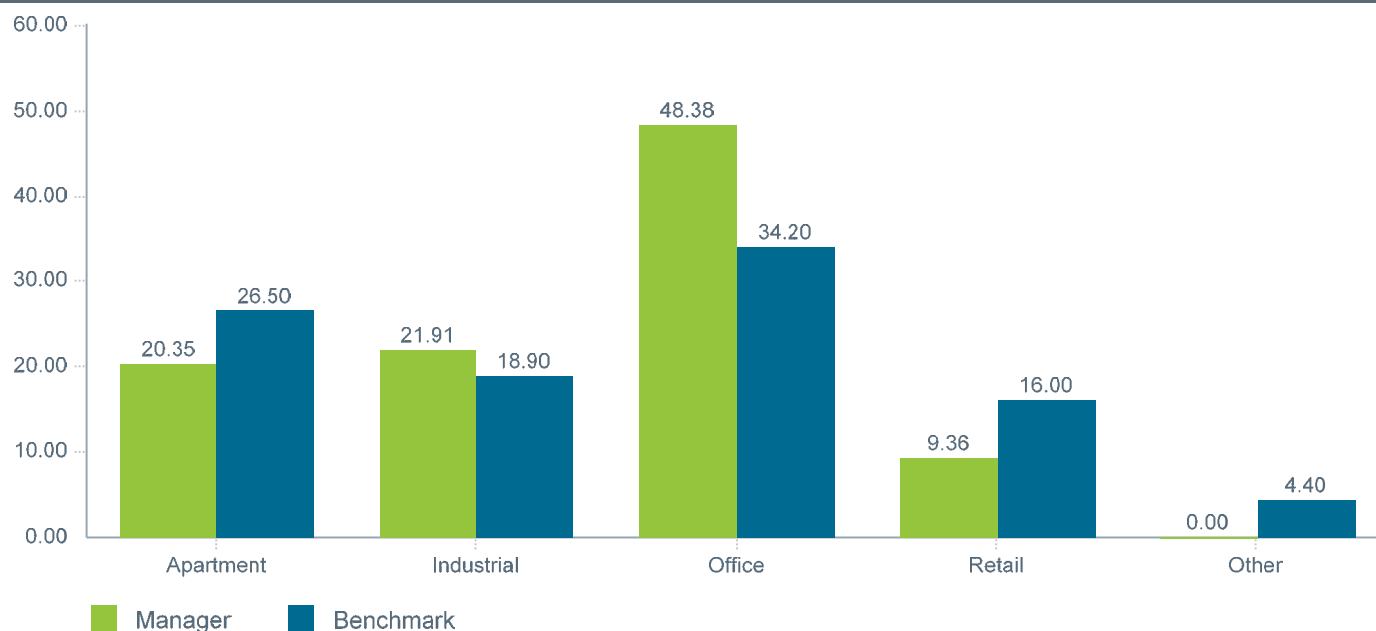
### Investment Strategy

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.

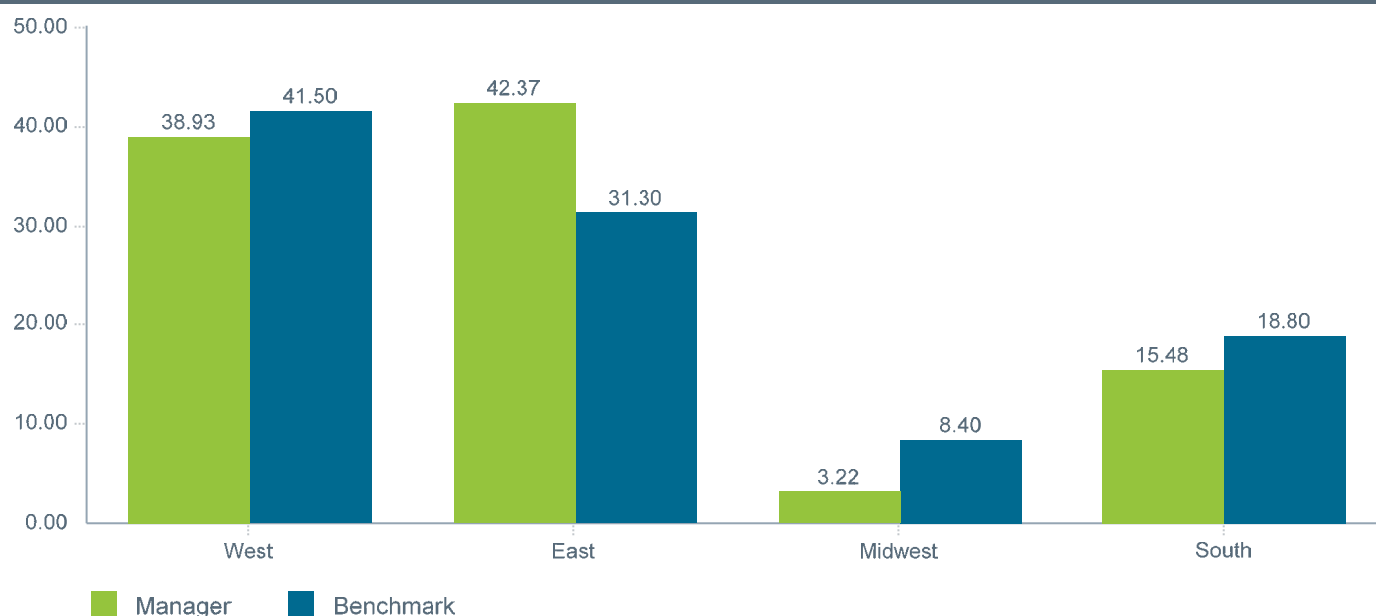
### Investment Profile

Fund Inception	2002
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	3,944
Fund Leverage %	37.18
Portfolio Occupancy %	91.70
Cash Reserve %	10.38
Number of Investments	64
Number of Limited Partners	50

### Property Type Allocation (%)

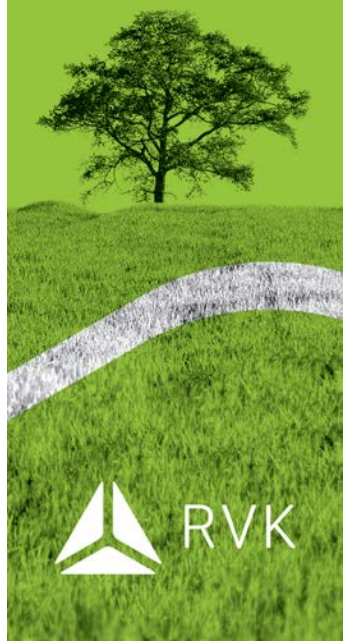


### Geographic Allocation (%)



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



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

As of June 30, 2020

Asset Allocation							
Asset Class	Market Value	Within Target Range?		Current (%)	Targets		
		Yes	No		Min.	Target	Max.
Broad US Equity	\$ 925,701,151	✓		19.19%	14.0%	19.0%	24.0%
Broad International Equity	\$ 926,534,621	✓		19.21%	14.0%	19.0%	24.0%
Fixed Income	\$ 1,115,400,221	✓		23.12%	17.0%	22.0%	27.0%
Absolute Return	\$ 727,120,206	✓		15.07%	10.0%	15.0%	20.0%
Diversified Inflation Strategies	\$ 160,563,556		✓	3.33%	0.0%	0.0%	0.0%
Real Estate	\$ 727,914,470	✓		15.09%	10.0%	15.0%	20.0%
Private Equity	\$ -	✓		0.00%	0.0%	5.0%	10.0%
Private Infrastructure	\$ -	✓		0.00%	0.0%	5.0%	10.0%
Opportunistic Investments	\$ -	✓		0.00%	0.0%	0.0%	5.0%
Transition Account	\$ 240,726,614		✓	4.99%	0.0%	0.0%	0.0%
Total Fund	\$ 4,823,960,839			100.00%			

Monitoring Guideline (Over a Full Market Cycle of 5 Years)				Explanation
Total Fund		Yes	No	
Total Fund returns exceed the Target Allocation Index over a 5-year period.			✓	The Total Fund returned 3.38% vs. 4.73% for the index.
Broad US Equity		Yes	No	
The composite returns exceed the Russell 3000 Index over a 5 year period.			✓	The composite returned 9.87% vs. 10.03% 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 27. 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 Cap Core (CF)		Yes	No	
The fund returns exceed the Russell 2000 Index over a 5 year period.		✓		The fund returned 6.59% vs. 4.29% for the index.
Rank above the IM U.S. Small Cap Core Equity Median.		✓		The fund has a ranking of 3.
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 1.46% vs. 2.26% for the index. Includes managers which are no longer in the portfolio. Current managers added 07/2014 and 02/2018.
Rank above the IM International Large Cap Equity Median.			✓	The composite has a ranking of 62. Includes managers which are no longer in the portfolio. Current managers added 07/2014 and 02/2018.
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.		✓		The fund returned 1.93% vs. 2.01% for the index.
Rank above the IM International Large Cap Equity Median.			✓	The fund has a ranking of 56.
QMA International Small Cap Equity (CF)		Yes	No	
The fund returns exceed the MSCI EAFE Sm Cap Index (USD) (Net) over a 5 year period.				5 year data is unavailable.
Rank above the IM International SMID Cap Core 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.			✓	The fund returned 1.68% vs. 2.86% for the index.
Rank above the IM Emerging Markets Equity Median.			✓	The fund has a ranking of 67.
Harding Loevner: IEM;IZ (HLEZX)		Yes	No	
The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period.			✓	The fund returned 2.75% vs. 2.86% for the index.
Rank above the IM Emerging Markets Equity Median.		✓		The fund has a ranking of 48.
Fixed Income		Yes	No	
The composite returns exceed the Global Fixed Income Custom Index over a 5 year period.			✓	The composite returned 3.62% vs. 4.45% for the index.
Rank above the IM Global Fixed Income Median.		✓		The composite has a ranking of 37.
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 4.70% vs. 4.30% for the index.
Rank above the IM U.S. Broad Market Core Fixed Income Median.		✓		The fund has a ranking of 10.
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 3.52% vs. 3.46% for the index.
Rank above the IM U.S. Intermediate Duration Fixed Income Median.		✓		The fund has a ranking of 7.

Performance shown is net of fees.





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

As of June 30, 2020

Fixed Income (Continued)		
Brandywine Gbl Opp FI (CF)	Yes	No
The fund returns exceed the FTSE Wrld Gov't Bond Index over a 5 year period.		✓
Rank above the IM Global Fixed Income Median.		✓
The fund returned 2.76% vs. 3.70% for the index.		
The fund has a ranking of 71.		
AG Direct Lending Fund III, L.P.	Yes	No
The fund returns exceed the Credit Suisse Leverage Loan Index over a 5 year period.		
Rank above the IM U.S. Intermediate Duration (MF) Median.		
5 year data is unavailable.		
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		
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.		✓
The composite returned 1.58% vs. 5.68% for the index.		
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.		✓
The fund returned 1.20% vs. 5.54% for the index.		
PIMCO:All Ast Ath;Inst (PAUIX)	Yes	No
The fund returns exceed the All Asset Custom Index (EqI Wtd) over a 5 year period.		✓
The fund returned 0.83% vs. 4.93% for the index.		
Diversified Inflation Strategies (DIS)	Yes	No
The composite returns exceed the DIS Custom Index over a 5 year period.		✓
The composite returned -5.56% vs. -3.01% for the index.		
Gresham Commodities (SA)	Yes	No
The fund returns exceed the Bloomberg Cmdty Ex-Energy Index (TR) over a 5 year period.		✓
The fund returned -6.28% vs. -3.21% for the index.		
Harvest MLP (SA)	Yes	No
The fund returns exceed the S&P MLP Index Index (TR) over a 5 year period.	✓	
The fund returned -11.20% vs. -12.68% for the index.		
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.		✓
The fund returned -8.27% vs. 0.94% for the index.		
Real Estate	Yes	No
The composite returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.	✓	
The composite returned 7.16% vs. 6.35% for the index.		
Morgan Stanley Prime Property Fund (CF)	Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.	✓	
The fund returned 7.50% vs. 6.35% for the index.		
UBS Trumbull Property Fund, L.P. (CF)	Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.		✓
The fund returned 3.62% vs. 6.35% for the index.		
Jamestown Premier Property Fund (CF)	Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.		✓
The fund returned 6.18% vs. 6.35% for the index.		
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.

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

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>10.57</b>	<b>-5.93</b>	<b>-1.41</b>	<b>-1.41</b>	<b>3.29</b>	<b>3.90</b>	<b>4.84</b>	<b>6.48</b>	<b>7.20</b>	<b>07/01/2009</b>
Target Allocation Index (Gross)	11.40	-2.89	2.14	2.14	4.81	4.87	5.88	7.31	8.16	
Difference	-0.83	-3.04	-3.55	-3.55	-1.52	-0.97	-1.04	-0.83	-0.96	
<b>Broad US Equity</b>	<b>23.00</b>	<b>-4.05</b>	<b>5.22</b>	<b>5.22</b>	<b>9.64</b>	<b>9.99</b>	<b>11.14</b>	<b>12.70</b>	<b>13.48</b>	<b>07/01/2009</b>
Russell 3000 Index	22.03	-3.48	6.53	6.53	10.04	10.03	11.68	13.72	13.90	
Difference	0.97	-0.57	-1.31	-1.31	-0.40	-0.04	-0.54	-1.02	-0.42	
<b>Broad International Equity</b>	<b>16.73</b>	<b>-12.68</b>	<b>-6.16</b>	<b>-6.16</b>	<b>-0.22</b>	<b>1.70</b>	<b>3.71</b>	<b>5.44</b>	<b>5.45</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	16.12	-11.00	-4.80	-4.80	1.13	2.26	3.71	4.97	5.46	
Difference	0.61	-1.68	-1.36	-1.36	-1.35	-0.56	0.00	0.47	-0.01	
<b>Fixed Income</b>	<b>4.91</b>	<b>2.57</b>	<b>5.13</b>	<b>5.13</b>	<b>4.02</b>	<b>3.86</b>	<b>3.72</b>	<b>4.16</b>	<b>4.81</b>	<b>07/01/2009</b>
Global Fixed Income Custom Index	3.81	5.17	7.88	7.88	5.17	4.45	3.91	3.94	4.42	
Difference	1.10	-2.60	-2.75	-2.75	-1.15	-0.59	-0.19	0.22	0.39	
Bloomberg US Agg Bond Index	2.90	6.14	8.74	8.74	5.32	4.30	3.96	3.82	4.33	
Difference	2.01	-3.57	-3.61	-3.61	-1.30	-0.44	-0.24	0.34	0.48	
<b>Absolute Return</b>	<b>10.49</b>	<b>-8.81</b>	<b>-5.64</b>	<b>-5.64</b>	<b>1.02</b>	<b>2.40</b>	<b>N/A</b>	<b>N/A</b>	<b>1.57</b>	<b>07/01/2014</b>
Absolute Return Custom Index	12.88	-1.47	4.76	4.76	5.83	5.68	6.39	7.24	4.94	
Difference	-2.39	-7.34	-10.40	-10.40	-4.81	-3.28	N/A	N/A	-3.37	
Consumer Price Index+5%	1.10	2.80	5.68	5.68	6.80	6.63	6.49	6.78	6.38	
Difference	9.39	-11.61	-11.32	-11.32	-5.78	-4.23	N/A	N/A	-4.81	
<b>Diversified Inflation Strategies</b>	<b>17.29</b>	<b>-17.78</b>	<b>-17.78</b>	<b>-17.78</b>	<b>-4.77</b>	<b>-5.03</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.74</b>	<b>04/01/2014</b>
DIS Custom Index	18.33	-14.59	-14.63	-14.63	-3.72	-3.01	-0.98	2.35	-1.62	
Difference	-1.04	-3.19	-3.15	-3.15	-1.05	-2.02	N/A	N/A	-1.12	
<b>Real Estate</b>	<b>-2.22</b>	<b>-1.12</b>	<b>2.35</b>	<b>2.35</b>	<b>6.89</b>	<b>8.48</b>	<b>N/A</b>	<b>N/A</b>	<b>8.48</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	-1.56	-0.60	2.22	2.22	5.66	7.31	9.07	10.80	7.31	
Difference	-0.66	-0.52	0.13	0.13	1.23	1.17	N/A	N/A	1.17	

Performance shown is gross of fees except where noted, and annualized for periods greater than one year. 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 - Gross

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Broad US Equity</b>													
<b>State Street Russell 1000 Index SL (CF)</b>	<b>21.83</b>	<b>-2.82</b>	<b>7.47</b>	<b>7.47</b>	<b>10.63</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>31.40</b>	<b>-4.77</b>	<b>N/A</b>	<b>10.58</b>	<b>06/01/2017</b>
Russell 1000 Index	21.82	-2.81	7.48	7.48	10.64	10.47	12.03	13.97	31.43	-4.78	21.69	10.59	
Difference	0.01	-0.01	-0.01	-0.01	-0.01	N/A	N/A	N/A	-0.03	0.01	N/A	-0.01	
IM U.S. Large Cap Equity (SA+CF) Median	20.54	-4.32	5.66	5.66	9.74	9.63	11.64	13.71	30.22	-5.12	21.71	9.77	
Rank	38	39	41	41	42	N/A	N/A	N/A	40	47	N/A	42	
<b>State Street Russell Mid Cap Index (SA)</b>													
<b>State Street Russell Mid Cap Index (SA)</b>	<b>24.54</b>	<b>-9.10</b>	<b>-2.24</b>	<b>-2.24</b>	<b>5.81</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>30.42</b>	<b>-8.94</b>	<b>N/A</b>	<b>6.00</b>	<b>06/01/2017</b>
Russell Mid Cap Index	24.61	-9.13	-2.24	-2.24	5.79	6.76	9.40	12.35	30.54	-9.06	18.52	5.97	
Difference	-0.07	0.03	0.00	0.00	0.02	N/A	N/A	N/A	-0.12	0.12	N/A	0.03	
IM U.S. Mid Cap Equity (SA+CF) Median	23.94	-9.55	-2.38	-2.38	4.42	6.10	8.90	12.30	30.14	-9.10	19.52	5.13	
Rank	41	49	49	49	48	N/A	N/A	N/A	48	49	N/A	48	
<b>NT Small Cap Core (CF)</b>													
<b>NT Small Cap Core (CF)</b>	<b>30.68</b>	<b>-8.39</b>	<b>-3.54</b>	<b>-3.54</b>	<b>5.95</b>	<b>7.34</b>	<b>8.80</b>	<b>11.54</b>	<b>23.98</b>	<b>-6.97</b>	<b>22.66</b>	<b>6.40</b>	<b>07/01/2014</b>
Russell 2000 Index	25.42	-12.98	-6.63	-6.63	2.01	4.29	7.17	10.50	25.53	-11.01	14.65	4.65	
Difference	5.26	4.59	3.09	3.09	3.94	3.05	1.63	1.04	-1.55	4.04	8.01	1.75	
IM U.S. Small Cap Core Equity (SA+CF) Median	25.08	-14.30	-8.36	-8.36	2.26	5.19	8.32	11.86	25.11	-10.69	15.13	5.74	
Rank	12	20	28	28	18	19	41	53	59	24	9	36	
<b>NT Small/Smid Composite</b>													
<b>NT Small/Smid Composite</b>	<b>30.68</b>	<b>-8.39</b>	<b>-3.54</b>	<b>-3.54</b>	<b>5.95</b>	<b>7.34</b>	<b>8.80</b>	<b>11.54</b>	<b>23.98</b>	<b>-6.97</b>	<b>22.66</b>	<b>9.95</b>	<b>03/01/1996</b>
Small/Smid Blended Index	25.42	-12.98	-6.63	-6.63	2.01	4.29	7.49	10.98	25.53	-11.01	14.65	8.92	
Difference	5.26	4.59	3.09	3.09	3.94	3.05	1.31	0.56	-1.55	4.04	8.01	1.03	
IM U.S. SMID Cap Core Equity (SA+CF) Median	23.64	-11.04	-3.90	-3.90	5.74	6.75	9.34	12.41	29.72	-9.61	18.03	N/A	
Rank	17	39	49	49	50	40	62	84	94	18	14	N/A	

Performance shown is gross of fees, except for FLP & ECLP Bank Loans which are shown net of fees, and annualized for periods greater than one year. 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. In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).

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

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Broad International Equity</b>													
<b>State Street World Ex US Index (CF)</b>	<b>15.33</b>	<b>-11.51</b>	<b>-5.45</b>	<b>-5.45</b>	<b>0.79</b>	<b>1.95</b>	<b>N/A</b>	<b>N/A</b>	<b>22.40</b>	<b>-14.14</b>	<b>24.17</b>	<b>0.70</b>	<b>07/01/2014</b>
MSCI Wrld Ex US Index (USD) (Net)	15.34	-11.49	-5.42	-5.42	0.84	2.01	3.77	5.43	22.49	-14.09	24.21	0.76	
Difference	-0.01	-0.02	-0.03	-0.03	-0.05	-0.06	N/A	N/A	-0.09	-0.05	-0.04	-0.06	
IM International Large Cap Equity (SA+CF) Median	17.07	-9.28	-2.23	-2.23	2.15	3.20	4.96	7.11	23.97	-14.23	27.65	2.27	
Rank	70	61	63	63	61	66	N/A	N/A	61	49	78	73	
<b>QMA International Small Cap Equity (CF)</b>													
<b>MSCI EAFE Sm Cap Index (USD) (Gross)</b>	<b>21.42</b>	<b>-14.29</b>	<b>-5.82</b>	<b>-5.82</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>23.29</b>	<b>N/A</b>	<b>N/A</b>	<b>-10.48</b>	<b>02/01/2018</b>
MSCI EAFE Sm Cap Index (USD) (Gross)	20.04	-12.91	-3.19	-3.19	0.90	4.19	6.78	8.39	25.47	-17.58	33.50	-6.20	
Difference	1.38	-1.38	-2.63	-2.63	N/A	N/A	N/A	N/A	-2.18	N/A	N/A	-4.28	
IM International Small Cap Core Equity (SA+CF) Median	21.28	-10.92	-2.17	-2.17	1.39	4.36	7.03	9.50	24.94	-17.85	34.58	-5.70	
Rank	48	70	71	71	N/A	N/A	N/A	N/A	61	N/A	N/A	99	
<b>DFA Emg Mkts Core Eq;I (DFCEX)</b>													
<b>MSCI Emg Mkts Index (USD) (Net)</b>	<b>20.89</b>	<b>-13.21</b>	<b>-7.82</b>	<b>-7.82</b>	<b>-0.24</b>	<b>2.26</b>	<b>N/A</b>	<b>N/A</b>	<b>16.64</b>	<b>-14.77</b>	<b>37.36</b>	<b>1.01</b>	<b>07/01/2014</b>
MSCI Emg Mkts Index (USD) (Net)	18.08	-9.78	-3.39	-3.39	1.90	2.86	3.22	3.27	18.44	-14.58	37.28	1.48	
Difference	2.81	-3.43	-4.43	-4.43	-2.14	-0.60	N/A	N/A	-1.80	-0.19	0.08	-0.47	
IM Emerging Markets Equity (SA+CF) Median	19.49	-10.00	-3.72	-3.72	1.28	2.90	3.62	4.77	19.53	-15.23	36.79	1.58	
Rank	43	70	70	70	68	60	N/A	N/A	70	45	44	65	
<b>Harding Loevner:IEM;IZ (HLEZX)</b>													
<b>MSCI Emg Mkts Index (USD) (Net)</b>	<b>17.85</b>	<b>-14.42</b>	<b>-6.67</b>	<b>-6.67</b>	<b>0.84</b>	<b>3.91</b>	<b>N/A</b>	<b>N/A</b>	<b>27.35</b>	<b>-17.61</b>	<b>37.29</b>	<b>2.24</b>	<b>07/01/2014</b>
MSCI Emg Mkts Index (USD) (Net)	18.08	-9.78	-3.39	-3.39	1.90	2.86	3.22	3.27	18.44	-14.58	37.28	1.48	
Difference	-0.23	-4.64	-3.28	-3.28	-1.06	1.05	N/A	N/A	8.91	-3.03	0.01	0.76	
IM Emerging Markets Equity (SA+CF) Median	19.49	-10.00	-3.72	-3.72	1.28	2.90	3.62	4.77	19.53	-15.23	36.79	1.58	
Rank	68	77	64	64	55	40	N/A	N/A	17	76	45	42	

Performance shown is gross of fees, except for FLP & ECLP Bank Loans which are shown net of fees, and annualized for periods greater than one year. 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. In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).

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

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Fixed Income</b>													
<b>Payden &amp; Rygel Long Term (SA)</b>	<b>4.99</b>	<b>4.81</b>	<b>7.63</b>	<b>7.63</b>	<b>5.56</b>	<b>4.91</b>	<b>4.59</b>	<b>4.63</b>	<b>9.64</b>	<b>0.36</b>	<b>5.20</b>	<b>6.08</b>	<b>08/01/1995</b>
Bloomberg US Agg Bond Index	2.90	6.14	8.74	8.74	5.32	4.30	3.96	3.82	8.72	0.01	3.54	5.39	
Difference	2.09	-1.33	-1.11	-1.11	0.24	0.61	0.63	0.81	0.92	0.35	1.66	0.69	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	4.37	6.23	8.93	8.93	5.57	4.69	4.38	4.33	9.18	0.06	4.04	5.75	
Rank	30	88	89	89	51	27	27	25	27	27	7	16	
<b>JP Morgan FI Intermediate Bond (SA)</b>	<b>3.09</b>	<b>4.92</b>	<b>6.84</b>	<b>6.84</b>	<b>4.52</b>	<b>3.63</b>	<b>3.36</b>	<b>N/A</b>	<b>6.80</b>	<b>1.11</b>	<b>2.81</b>	<b>2.92</b>	<b>08/01/2012</b>
Bloomberg US Gov't Crdt Int Trm Bond Index	2.81	5.28	7.12	7.12	4.43	3.46	3.12	3.13	6.80	0.88	2.14	2.67	
Difference	0.28	-0.36	-0.28	-0.28	0.09	0.17	0.24	N/A	0.00	0.23	0.67	0.25	
IM U.S. Intermediate Duration (SA+CF) Median	3.72	5.05	7.09	7.09	4.56	3.71	3.41	3.48	6.93	0.94	2.54	2.98	
Rank	68	55	61	61	56	59	59	N/A	59	38	31	58	
<b>Brandywine Gbl Opp FI (CF)</b>	<b>10.16</b>	<b>-2.12</b>	<b>0.45</b>	<b>0.45</b>	<b>1.77</b>	<b>3.17</b>	<b>N/A</b>	<b>N/A</b>	<b>9.74</b>	<b>-4.71</b>	<b>13.33</b>	<b>1.94</b>	<b>11/01/2014</b>
FTSE Wrld Gov't Bond Index	2.04	4.08	4.60	4.60	3.98	3.70	2.21	2.37	5.90	-0.84	7.49	2.29	
Difference	8.12	-6.20	-4.15	-4.15	-2.21	-0.53	N/A	N/A	3.84	-3.87	5.84	-0.35	
IM Global Fixed Income (SA+CF) Median	7.94	0.30	2.76	2.76	3.74	4.18	3.70	4.17	9.48	-1.73	7.57	3.29	
Rank	27	64	66	66	84	76	N/A	N/A	48	90	4	83	
<b>AG Direct Lending III LP</b>	<b>2.85</b>	<b>1.38</b>	<b>7.26</b>	<b>7.26</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>11.14</b>	<b>N/A</b>	<b>N/A</b>	<b>8.12</b>	<b>09/01/2018</b>
CS Lvg'd Loan Index	9.71	-4.76	-2.27	-2.27	2.13	2.94	3.27	4.34	8.17	1.14	4.25	0.29	
Difference	-6.86	6.14	9.53	9.53	N/A	N/A	N/A	N/A	2.97	N/A	N/A	7.83	
IM U.S. Intermediate Duration Fixed Income (MF) Median	3.04	4.74	6.15	6.15	4.05	3.33	3.12	3.41	6.07	1.27	2.56	6.20	
Rank	56	88	38	38	N/A	N/A	N/A	N/A	1	N/A	N/A	14	
<b>Schroders Securitized Credit (SA)</b>	<b>6.08</b>	<b>-1.68</b>	<b>-0.28</b>	<b>-0.28</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.22</b>	<b>N/A</b>	<b>N/A</b>	<b>1.46</b>	<b>12/01/2018</b>
3 Month LIBOR Index (USD)+1.75%	0.88	1.82	3.90	3.90	3.86	3.27	2.91	2.68	4.39	3.86	2.88	4.17	
Difference	5.20	-3.50	-4.18	-4.18	N/A	N/A	N/A	N/A	-0.17	N/A	N/A	-2.71	
<b>ND Land - PTF Cash (SA)</b>	<b>0.11</b>	<b>0.47</b>	<b>1.85</b>	<b>1.85</b>	<b>1.80</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.56</b>	<b>1.71</b>	<b>N/A</b>	<b>1.80</b>	<b>07/01/2017</b>
ICE BofAML 3 Mo US T-Bill Index	0.02	0.60	1.63	1.63	1.77	1.19	0.86	0.64	2.28	1.87	0.86	1.77	
Difference	0.09	-0.13	0.22	0.22	0.03	N/A	N/A	N/A	0.28	-0.16	N/A	0.03	
<b>FLP (Loans)</b>	<b>0.71</b>	<b>1.84</b>	<b>4.29</b>	<b>4.29</b>	<b>5.35</b>	<b>5.65</b>	<b>5.77</b>	<b>5.80</b>	<b>4.86</b>	<b>6.15</b>	<b>6.16</b>	<b>7.08</b>	<b>08/01/1995</b>
<b>ECLP (Loans)</b>	<b>1.17</b>	<b>2.32</b>	<b>4.63</b>	<b>4.63</b>	<b>4.55</b>	<b>4.63</b>	<b>4.76</b>	<b>N/A</b>	<b>4.49</b>	<b>4.58</b>	<b>4.25</b>	<b>5.01</b>	<b>11/01/2010</b>

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

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Absolute Return</b>													
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>8.07</b>	<b>-9.03</b>	<b>-4.84</b>	<b>-4.84</b>	<b>1.07</b>	<b>2.08</b>	<b>N/A</b>	<b>N/A</b>	<b>12.59</b>	<b>-4.46</b>	<b>14.07</b>	<b>1.49</b>	<b>07/01/2014</b>
60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx	12.70	-2.28	3.42	3.42	5.50	5.54	5.86	6.79	18.55	-6.00	17.09	4.17	
Difference	-4.63	-6.75	-8.26	-8.26	-4.43	-3.46	N/A	N/A	-5.96	1.54	-3.02	-2.68	
Consumer Price Index+5%	1.10	2.80	5.68	5.68	6.80	6.63	6.49	6.78	7.40	7.01	7.21	6.38	
Difference	6.97	-11.83	-10.52	-10.52	-5.73	-4.55	N/A	N/A	5.19	-11.47	6.86	-4.89	
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>													
<b>All Asset Custom Index (EqI Wtd)</b>	<b>7.77</b>	<b>0.60</b>	<b>4.77</b>	<b>4.77</b>	<b>5.22</b>	<b>4.93</b>	<b>4.91</b>	<b>5.63</b>	<b>12.97</b>	<b>-1.62</b>	<b>8.94</b>	<b>4.12</b>	
Difference	5.62	-8.94	-11.08	-11.08	-5.27	-3.15	N/A	N/A	-4.34	-3.60	4.15	-3.99	
Consumer Price Index+5%	1.10	2.80	5.68	5.68	6.80	6.63	6.49	6.78	7.40	7.01	7.21	6.38	
Difference	12.29	-11.14	-11.99	-11.99	-6.85	-4.85	N/A	N/A	1.23	-12.23	5.88	-6.25	
<b>Diversified Inflation Strategies (DIS)</b>													
<b>Gresham Commodities (SA)</b>	<b>7.89</b>	<b>-21.37</b>	<b>-17.80</b>	<b>-17.80</b>	<b>-3.59</b>	<b>-5.71</b>	<b>N/A</b>	<b>N/A</b>	<b>14.25</b>	<b>-13.29</b>	<b>11.98</b>	<b>-5.71</b>	<b>07/01/2015</b>
Bloomberg Cmdty Ex Energy Index (TR)	4.06	-7.86	-4.98	-4.98	-3.70	-3.21	-4.20	-2.09	6.01	-10.95	5.36	-3.21	
Difference	3.83	-13.51	-12.82	-12.82	0.11	-2.50	N/A	N/A	8.24	-2.34	6.62	-2.50	
Gresham Commodities (SA) Custom Index	7.57	-19.48	-16.15	-16.15	-4.60	-6.21	N/A	N/A	12.83	-14.04	5.89	-6.21	
Difference	0.32	-1.89	-1.65	-1.65	1.01	0.50	N/A	N/A	1.42	0.75	6.09	0.50	
<b>Harvest MLP (SA)</b>													
<b>S&amp;P MLP Index (TR)</b>	<b>45.82</b>	<b>-35.66</b>	<b>-40.17</b>	<b>-40.17</b>	<b>-15.34</b>	<b>-12.68</b>	<b>-8.68</b>	<b>-0.52</b>	<b>9.78</b>	<b>-11.67</b>	<b>-5.58</b>	<b>-12.68</b>	
Difference	-12.94	3.56	4.06	4.06	2.20	2.16	N/A	N/A	3.76	-1.31	0.77	2.16	
<b>Van Eck NR Equities (SA)</b>													
<b>S&amp;P Gbl Ntrl Res Sect Index (TR)</b>	<b>20.47</b>	<b>-19.14</b>	<b>-16.76</b>	<b>-16.76</b>	<b>-0.11</b>	<b>0.94</b>	<b>0.72</b>	<b>1.48</b>	<b>17.20</b>	<b>-12.57</b>	<b>22.66</b>	<b>0.94</b>	
Difference	13.59	1.98	-0.43	-0.43	-6.86	-8.57	N/A	N/A	-3.61	-15.47	-22.57	-8.57	
S&P N Amer Ntrl Res Index	31.31	-26.33	-24.37	-24.37	-8.02	-6.47	-4.81	-0.69	17.63	-21.07	1.23	-6.47	
Difference	2.75	9.17	7.18	7.18	1.05	-1.16	N/A	N/A	-4.04	-6.97	-1.14	-1.16	

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

As of June 30, 2020

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
<b>Real Estate</b>													
<b>Morgan Stanley Prime Property (CF)</b>	<b>-1.74</b>	<b>-0.84</b>	<b>2.66</b>	<b>2.66</b>	<b>6.78</b>	<b>8.64</b>	<b>N/A</b>	<b>N/A</b>	<b>7.38</b>	<b>9.05</b>	<b>9.86</b>	<b>8.64</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	-1.56	-0.60	2.22	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	7.31	
Difference	-0.18	-0.24	0.44	0.44	1.12	1.33	N/A	N/A	2.04	0.70	2.24	1.33	
<b>UBS Trumbull Property LP (CF)</b>	<b>-2.47</b>	<b>-2.04</b>	<b>-1.11</b>	<b>-1.11</b>	<b>2.14</b>	<b>4.49</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.11</b>	<b>6.98</b>	<b>6.30</b>	<b>4.49</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	-1.56	-0.60	2.22	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	7.31	
Difference	-0.91	-1.44	-3.33	-3.33	-3.52	-2.82	N/A	N/A	-7.45	-1.37	-1.32	-2.82	
<b>Jamestown Premier Property (CF)</b>	<b>-3.89</b>	<b>-4.58</b>	<b>-3.82</b>	<b>-3.82</b>	<b>6.74</b>	<b>8.09</b>	<b>N/A</b>	<b>N/A</b>	<b>3.02</b>	<b>9.96</b>	<b>18.00</b>	<b>8.09</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	-1.56	-0.60	2.22	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	7.31	
Difference	-2.33	-3.98	-6.04	-6.04	1.08	0.78	N/A	N/A	-2.32	1.61	10.38	0.78	
<b>Prologis USLF (CF)</b>	<b>-2.06</b>	<b>0.55</b>	<b>11.21</b>	<b>11.21</b>	<b>17.50</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>19.51</b>	<b>18.56</b>	<b>24.22</b>	<b>17.88</b>	<b>04/01/2016</b>
NCREIF ODCE Index (AWA) (Gross)	-1.56	-0.60	2.22	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	6.36	
Difference	-0.50	1.15	8.99	8.99	11.84	N/A	N/A	N/A	14.17	10.21	16.60	11.52	
<b>JP Morgan US Real Estate Income and Growth LP (CF)</b>	<b>-1.95</b>	<b>-0.21</b>	<b>1.51</b>	<b>1.51</b>	<b>4.41</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>3.21</b>	<b>6.75</b>	<b>6.83</b>	<b>5.58</b>	<b>07/01/2016</b>
NCREIF ODCE Index (AWA) (Gross)	-1.56	-0.60	2.22	2.22	5.66	7.31	9.07	10.80	5.34	8.35	7.62	6.21	
Difference	-0.39	0.39	-0.71	-0.71	-1.25	N/A	N/A	N/A	-2.13	-1.60	-0.79	-0.63	
<b>Transition Account</b>													
<b>NT STIF (Transition Account)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.05</b>	<b>06/01/2020</b>
ICE BofAML 3 Mo US T-Bill Index	0.02	0.60	1.63	1.63	1.77	1.19	0.86	0.64	2.28	1.87	0.86	0.01	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.04	

Performance shown is gross of fees, except for FLP & ECLP Bank Loans which are shown net of fees, and annualized for periods greater than one year. 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. In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).



**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.
- In 05/2020, NT Common TIPS Index (TIPS) was liquidated and proceeds were used to fund NT STIF (Transition Account).

**Index Comments**

- The Target Allocation Index (Net) is a static custom index that is calculated monthly and consists of:
  - From 05/2020 through present: 19% Russell 3000 Index, 19% MSCI ACW Ex US Index (USD) (Net), 22% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 15% Absolute Return Index, 5% Cambridge US Private Equity Index, and 5% MSCI World Infrastructure Index.
  - From 07/2019 through 04/2020: 18.5% Russell 3000 Index, 18.5% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 15% Absolute Return Custom Index, and 10% DIS Custom Index.
  - From 02/2018 through 06/2019: 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 07/2016 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 04/2016 through 06/2016: 17.6% Russell 3000 Index, 15.5% MSCI ACW Ex US Index (USD) (Net), 23.8% Global Fixed Income Custom Index, 12% NCREIF ODCE Index (AWA) (Net), 20.7% Absolute Return Custom Index, and 10.4% DIS Custom Index.
  - From 01/2016 through 03/2016: 17.7% Russell 3000 Index, 15.6% MSCI ACW Ex US Index (USD) (Net), 25.3% Global Fixed Income Custom Index, 10% NCREIF ODCE Index (AWA) (Net), 21% Absolute Return Custom Index, and 10.4% DIS Custom Index.
  - From 10/2015 through 12/2015: 17.9% Russell 3000 Index, 15.9% MSCI ACW Ex US Index (USD) (Net), 25.5% Global Fixed Income Custom Index, 9% NCREIF ODCE Index (AWA) (Net), 21.1% Absolute Return Custom Index, and 10.6% DIS Custom Index.
  - From 07/2015 through 09/2015: 19.5% Russell 3000 Index, 17.4% MSCI ACW Ex US Index (USD) (Net), 26.2% Global Fixed Income Custom Index, 4.1% NCREIF ODCE Index (AWA) (Net), 22% Absolute Return Custom Index, and 10.8% DIS Custom Index.
  - From 07/2014 through 06/2015: The index was calculated monthly using beginning of month asset class weights applied to each corresponding primary benchmark return.
  - 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).



## Addendum

Index Comments Cont.

- The Target Allocation Index (Gross) is a static custom index that is calculated monthly and consists of:
  - From 05/2020 through present: 19% Russell 3000 Index, 19% MSCI ACW Ex US Index (USD) (Net), 22% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Gross), 15% Absolute Return Index, 5% Cambridge US Private Equity Index, and 5% MSCI World Infrastructure Index.
  - From 07/2019 through 04/2020: 18.5% Russell 3000 Index, 18.5% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Gross), 15% Absolute Return Custom Index, and 10% DIS Custom Index.
  - From 02/2018 through 06/2019: 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 07/2016 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 04/2016 through 06/2016: 17.6% Russell 3000 Index, 15.5% MSCI ACW Ex US Index (USD) (Net), 23.8% Global Fixed Income Custom Index, 12% NCREIF ODCE Index (AWA) (Gross), 20.7% Absolute Return Custom Index, and 10.4% DIS Custom Index.
  - From 01/2016 through 03/2016: 17.7% Russell 3000 Index, 15.6% MSCI ACW Ex US Index (USD) (Net), 25.3% Global Fixed Income Custom Index, 10% NCREIF ODCE Index (AWA) (Gross), 21% Absolute Return Custom Index, and 10.4% DIS Custom Index.
  - From 10/2015 through 12/2015: 17.9% Russell 3000 Index, 15.9% MSCI ACW Ex US Index (USD) (Net), 25.5% Global Fixed Income Custom Index, 9% NCREIF ODCE Index (AWA) (Gross), 21.1% Absolute Return Custom Index, and 10.6% DIS Custom Index.
  - From 07/2015 through 09/2015: 19.5% Russell 3000 Index, 17.4% MSCI ACW Ex US Index (USD) (Net), 26.2% Global Fixed Income Custom Index, 4.1% NCREIF ODCE Index (AWA) (Gross), 22% Absolute Return Custom Index, and 10.8% DIS Custom Index.
  - From 07/2014 through 06/2015: The index was calculated monthly using beginning of month asset class weights applied to each corresponding primary benchmark return.
  - 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, and 20% Bloomberg US Trsy US TIPS Index, 30% Bloomberg Cmdty Ex Energy Index (TR), 30% S&P MLP Index (TR), and 20% S&P Gbl Natural Res Sect Index (TR) through 04/2020. Starting in 05/2020, the DIS Custom Index return is calculated using benchmark returns of the underlying DIS managers, given their respective weights, adjusted on days of major liquidating cash flows.
- 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 All Asset Custom Index (Eq'l 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 Dvl'd Index (TR).

Peer Groups

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

## 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&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>
<b>Higher Credit Quality – Investment Grade</b>			<b>Lower Credit Quality – Below Investment Grade</b>		
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., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> 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, and thus may differ from the classification of the investment manager and/or index provider.

**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. Stocks are unclassified when there is not enough data to determine a size and style metric.

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.

## Glossary

- 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.
- 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 returns for the selected periodicity. 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.

## Glossary

**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.

**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.

**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 4<sup>th</sup> 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.

**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.

**Return** - Compounded rate of return for the period.

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

**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.

**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		

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

**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.

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