



# Investment Performance Analysis

North Dakota Board of University and School Lands

Period Ended: December 31, 2021



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# Capital Markets Review

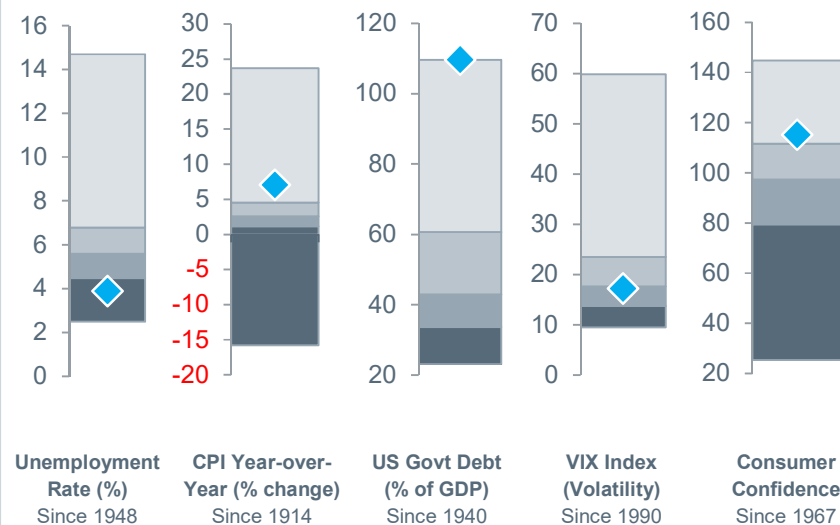




## Fourth Quarter Economic Environment

Inflation remained a top concern among investors as the year-over-year change in the CPI reached 7.0% according to the December reading, the highest level in 30 years. Nevertheless, consumer demand and the ability of companies to pass along increasing costs have buoyed corporate profits. Employment data has indicated mixed progress and has been complicated by releases missing expectations, only to be revised higher in subsequent reports. However, strong wage growth and a declining unemployment rate reflect incremental improvement in labor conditions. Headlines were dominated by the emergence of the omicron variant which early studies suggest spreads more quickly, but causes fewer hospitalizations. Continued vaccination efforts and the development of new treatments countered concerns regarding the increased spread of the virus. GDP growth estimates for 2022 were impacted with forecasts trending lower, but most continue to reflect healthy growth expected next year. For instance, the IMF released a 2022 GDP growth forecast of 4.9% in October representing a decline of 0.1% from its July estimate. In response to the current environment, the Federal Reserve has started to reduce measures taken during the pandemic. The tapering of bond purchases began in November and accelerated in December, a trend expected to continue in 2022. In response to these conditions, Treasury yields have trended upwards and credit spreads widened in the quarter.

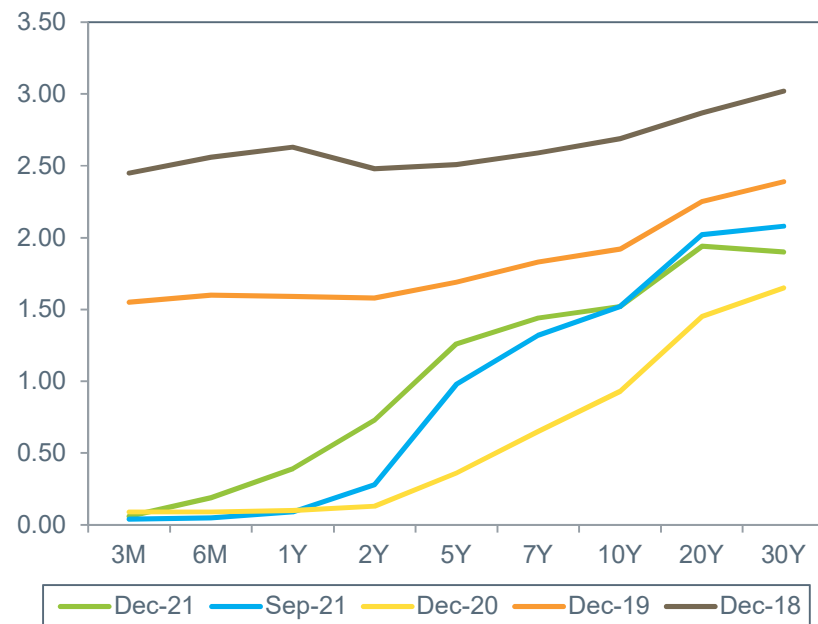
## Key Economic Indicators



Economic Indicators	Dec-21	Sep-21	Dec-20	Dec-18	20 Yr
Federal Funds Rate (%)	0.07 ▲	0.06	0.09	2.40	1.30
Breakeven Infl. - 5 Yr (%)	2.91 ▲	2.53	1.97	1.49	1.86
Breakeven Infl. - 10 Yr (%)	2.59 ▲	2.38	1.99	1.71	2.04
CPI YoY (Headline) (%)	7.0 ▲	5.4	1.4	1.9	2.2
Unemployment Rate (%)	3.9 ▼	4.7	6.7	3.9	6.1
Real GDP YoY (%)	5.5 ▲	4.9	-2.3	2.3	1.9
PMI - Manufacturing	58.8 ▼	60.5	60.5	54.9	53.5
USD Total Wtd Idx	115.32 ▲	114.67	111.33	115.57	103.10
WTI Crude Oil per Barrel (\$)	75.2 ▲	75.0	48.5	45.4	64.4
Gold Spot per Oz (\$)	1,829 ▲	1,757	1,898	1,282	1,086

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	11.03	28.71	28.71	18.47	16.55
Russell 2000	2.14	14.82	14.82	12.02	13.23
MSCI EAFE (Net)	2.69	11.26	11.26	9.55	8.03
MSCI EAFE SC (Net)	0.07	10.10	10.10	11.04	10.80
MSCI Emg Mkts (Net)	-1.31	-2.54	-2.54	9.87	5.49
Bloomberg US Agg Bond	0.01	-1.55	-1.55	3.57	2.90
ICE BofAML 3 Mo US T-Bill	0.01	0.05	0.05	1.14	0.63
NCREIF ODCE (Gross)	7.97	22.17	22.17	8.71	10.45
FTSE NAREIT Eq REIT (TR)	16.31	43.24	43.24	10.75	11.38
HFRI FOF Comp	0.42	6.17	6.17	5.71	4.56
Bloomberg Cmdty (TR)	-1.56	27.11	27.11	3.66	-2.85

## Treasury Yield Curve (%)



## Fourth Quarter Review

## Broad Market

US equity markets finished the year with a strong Q4, providing low double digit returns despite heightened volatility due to the spread of the Omicron variant, inflation fears, and global growth concerns. Volatility expectations, as measured by the CBOE Volatility Index, jumped above 30 in early December. However, investor uncertainty subsided shortly thereafter. The S&P 500 return of 28.7% in 2021 was its third highest calendar year return since 2000.

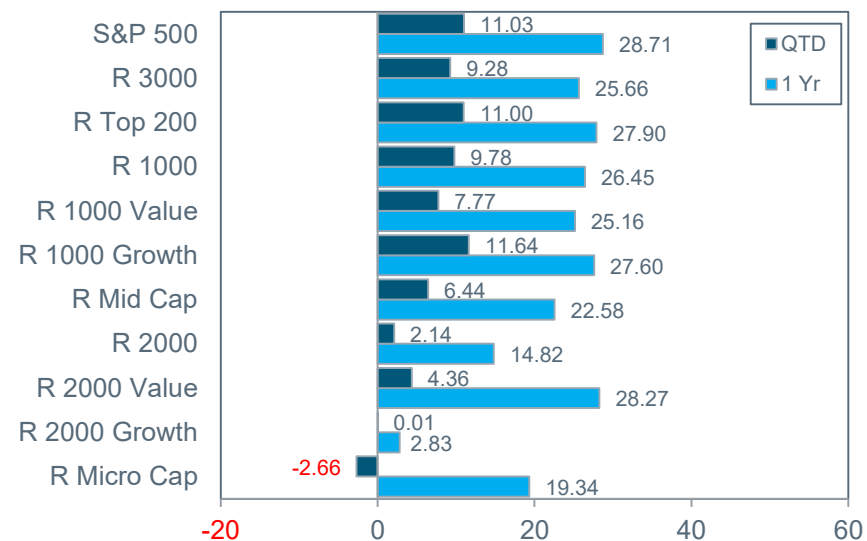
## Market Cap

Large-cap stocks significantly outperformed their smaller-cap counterparts. The Russell 2000 Index returned 2.1% compared to 11.0% for the S&P 500.

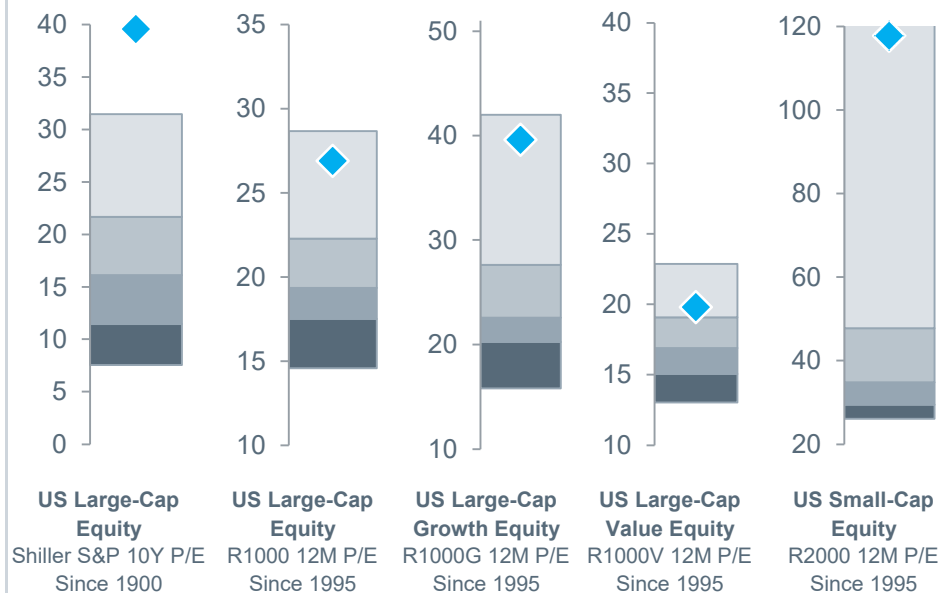
## Style and Sector

At the beginning of Q4, growth stocks outperformed value stocks across all market capitalizations before a rotation into value stocks occurred later in the period. Active management performed well in Q4, except for large-cap growth managers, who struggled to keep up with their respective benchmarks.

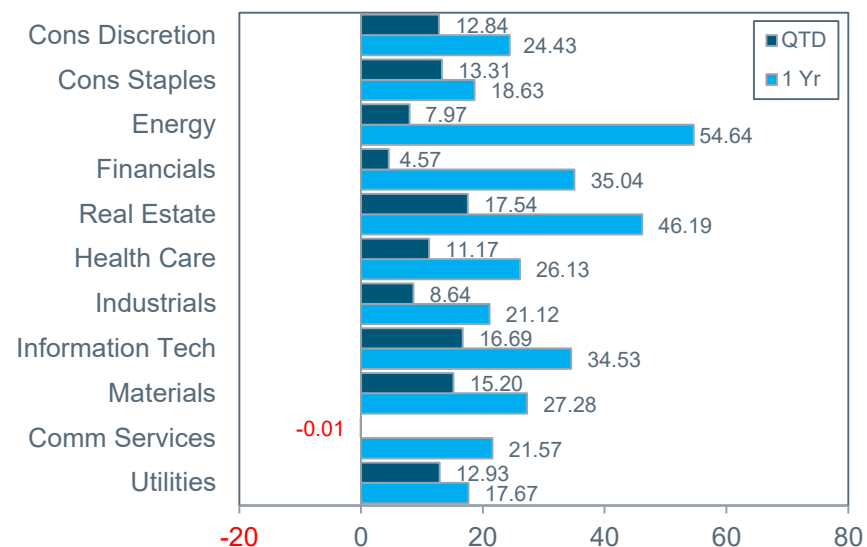
## Style and Capitalization Market Performance (%)



## Valuations



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



## Fourth Quarter Review

## Developed Markets

While international markets lagged behind the US equity market in Q4, developed international equities continued to participate in the recovery despite the COVID-19 surge led by the new Omicron variant. The MSCI EAFE Index saw a positive return of 2.7% for the quarter as growth stocks continued to outperform value from the prior quarter resulting in both growth and value performing in line for the calendar year. Large-cap stocks outperformed small-cap stocks.

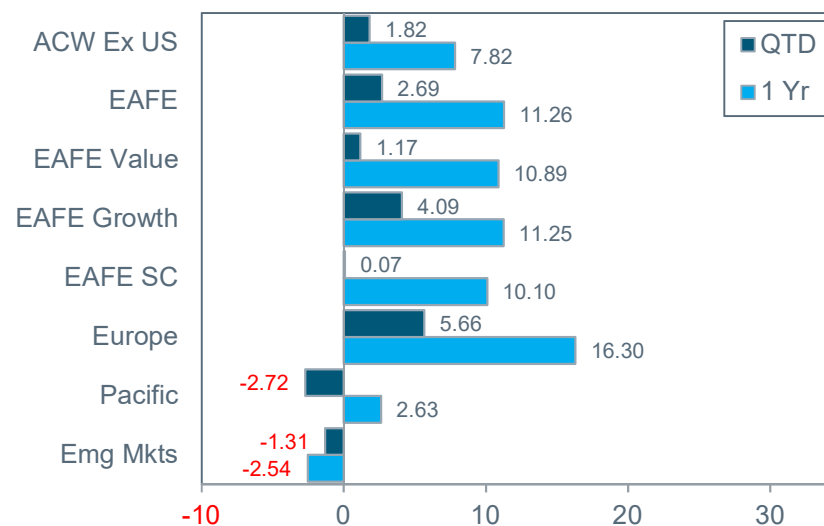
## Emerging Markets

Emerging markets experienced moderately negative returns in Q4 with the MSCI EM Index returning -1.3% for the period. Value stocks continued their outperformance over growth while small-cap stocks outperformed large.

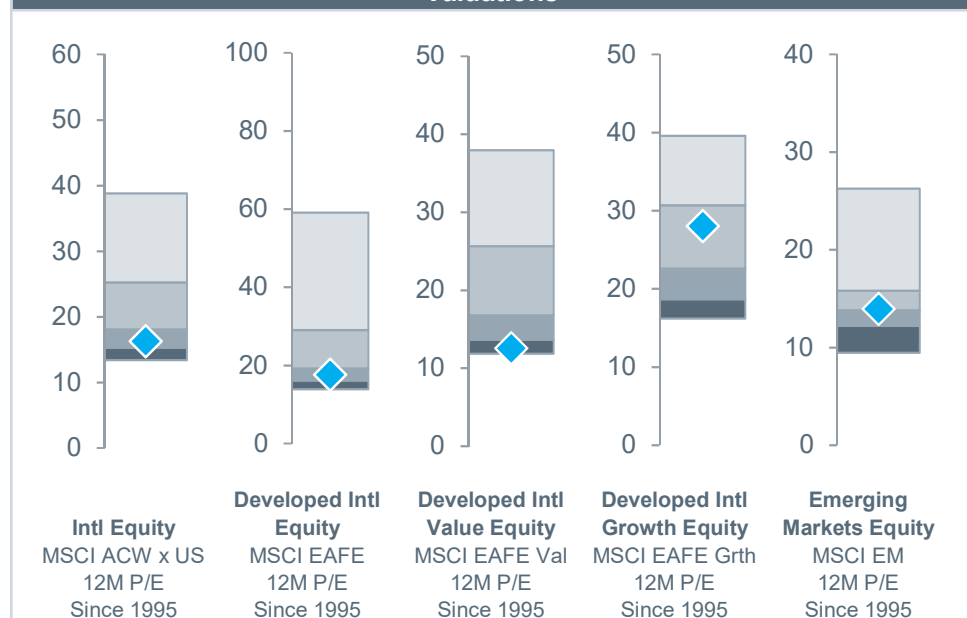
## Market Cap &amp; Style

In international markets, growth stocks outperformed value, while large-cap stocks outperformed small-cap. In emerging markets, value stocks outperformed growth, while small-cap stocks outperformed large-cap.

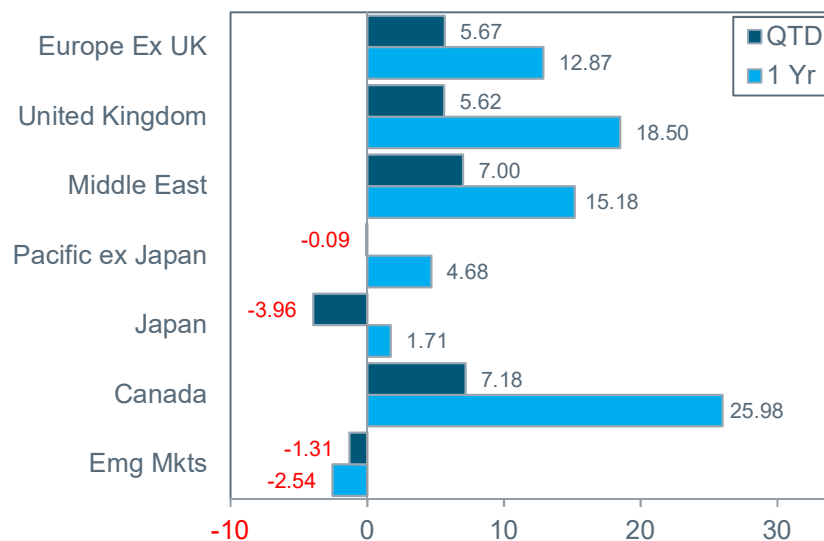
## MSCI Style and Capitalization Market Performance (%)



## 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.

## Fourth Quarter Review

## Broad Market

The Bloomberg US Aggregate Index ended the quarter flat, capping off the third most negative calendar year on record for the index with an overall annual return of -1.5%. An abrupt rise in interest rates at the start of the year due to inflation concerns and an uncertain outlook, followed by interest rate volatility and an ongoing uncertain outlook drove returns and yields.

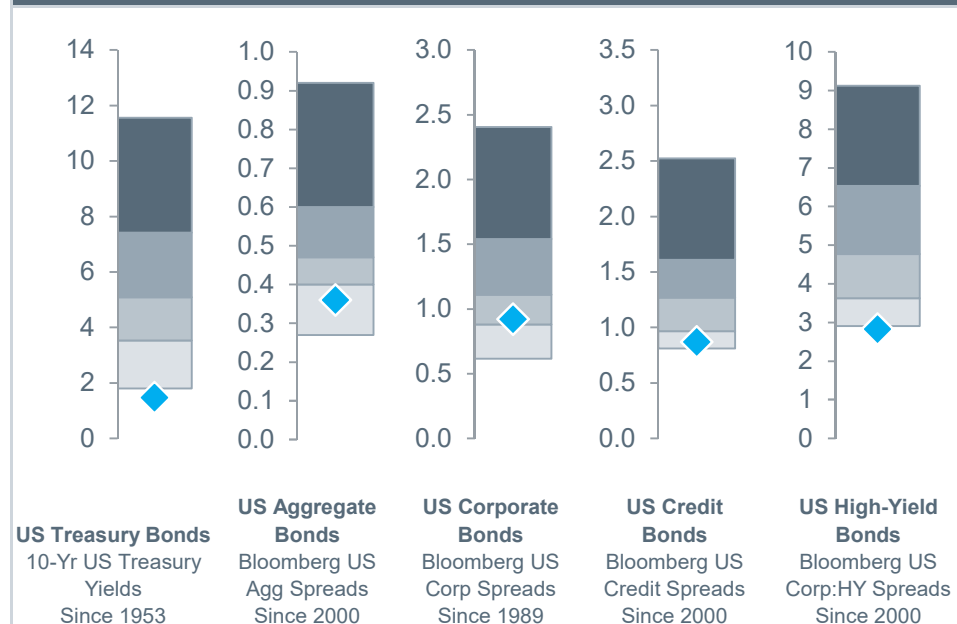
## Credit Market

US investment grade credit detracted -1.1% YTD, while US High Yield returned 5.3%, as measured by the Bloomberg US Credit Index and Bloomberg US High Yield Index, respectively. The divergence in returns demonstrates low quality outperformance as investors sought yield in a low interest rate environment.

## Emerging Market Debt

Despite a positive Q4, emerging market debt largely contracted over 2021, as each of the primary emerging market debt indices declined during the full year period.

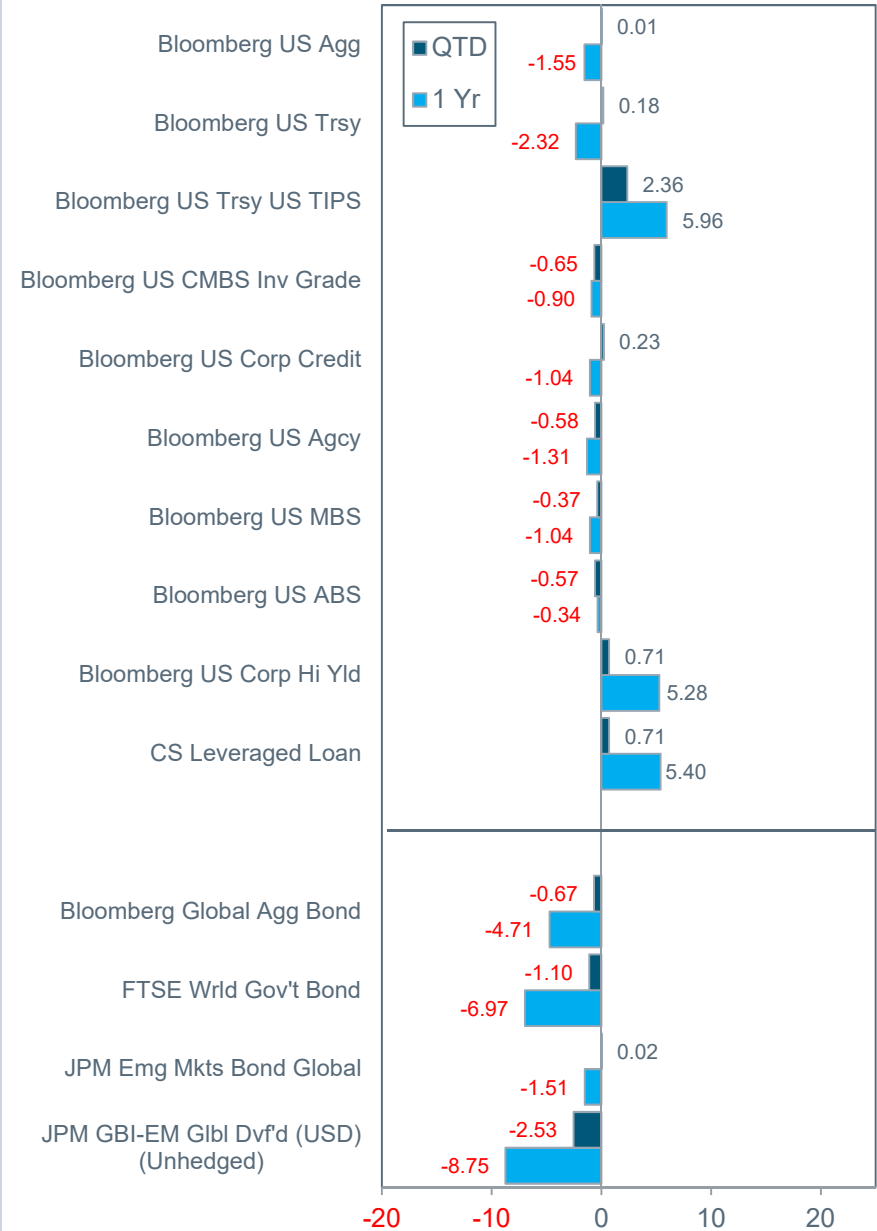
## Valuations



Valuation data courtesy of Bloomberg Professional Service.

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

## Fixed Income Performance (%)



### Fourth Quarter Review - Absolute Return

#### General Market - Hedge Funds

Hedge fund results were mixed in Q4. Many high-profile macro and relative value trading firms struggled as the yield curve flattened in October and November, while equity long/short ("ELS") funds faced headwinds from underperforming crowded trades on the long side of their portfolios amid significant factor rotations. The industry still returned 0.4% during Q4 according to the HFRI Fund Weighted Index, bringing YTD returns to 10.2%, the industry's third straight year of double-digit returns.

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

Global Tactical Asset Allocation strategies that RVK follows closely generated disparate performance in Q4. The top performing long-biased GTAA strategies either exclusively held US equity exposure or tended to hold larger proportion of US equities. In contrast, those who underperformed peers tended to hold larger foreign allocations, particularly within Japanese equity and emerging markets equity. Multi-asset managers who target lower correlations, volatility, and market sensitivity also produced disparate absolute returns, though generally with a narrower relative range compared to long-biased peers.

### Fourth Quarter Review - Real Assets

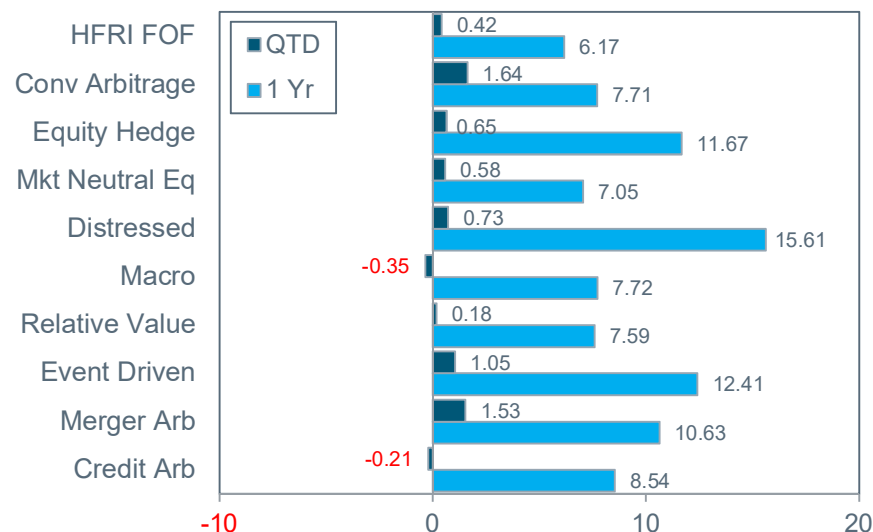
#### General Market - Diversified Inflation Strategies (DIS)

Diversified Inflation Strategies that RVK follows closely responded to increased inflationary measures with strong positive absolute performance. Managers with larger global listed infrastructure, natural resource equities and REIT exposures posted the strongest positive absolute returns. Whereas on a relative basis, those with larger commodities and TIPS allocations underperformed a strong peer group for the quarter. Inflation, as measured by the year-over-year change in Headline CPI, was reported as 7.0% for December.

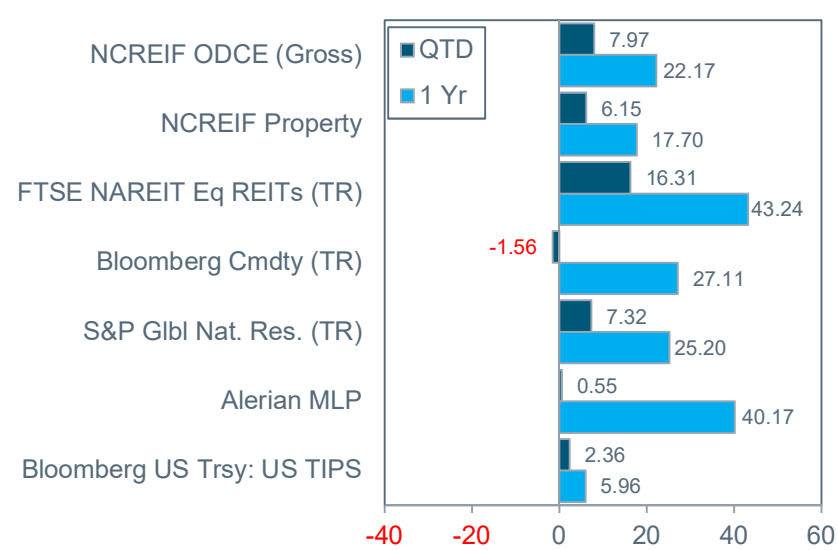
#### General Market - Real Estate

Core private real estate generated a positive 8.0% return in Q4, as reported by the NFI-ODCE Index, with the total return comprising of 1.0% income and 7.0% price appreciation. While the income return continues to trend in line with historical levels, price appreciation remains elevated. Investors of publicly traded real estate outperformed their private market counterparts by a meaningful margin.

### HFRI Hedge Fund Performance (%)



### Real Asset Performance (%)





## Annual Asset Class Performance

As of December 31, 2021

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	CYTD
<div>Best</div> <div>↑</div> <div>↓</div> <div>Worst</div>	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	19.96	43.24
	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	18.40	28.71
	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	18.31	27.11
	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	16.12	22.17
	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	12.34	14.82
	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	10.99	11.26
	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	10.88	10.10
	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	7.82	6.17
	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	7.51	5.96
	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	7.11	5.28
	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	1.19	0.05
	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	0.67	-1.55
	-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	-3.12	-2.52
	-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	-8.00	-2.54
	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



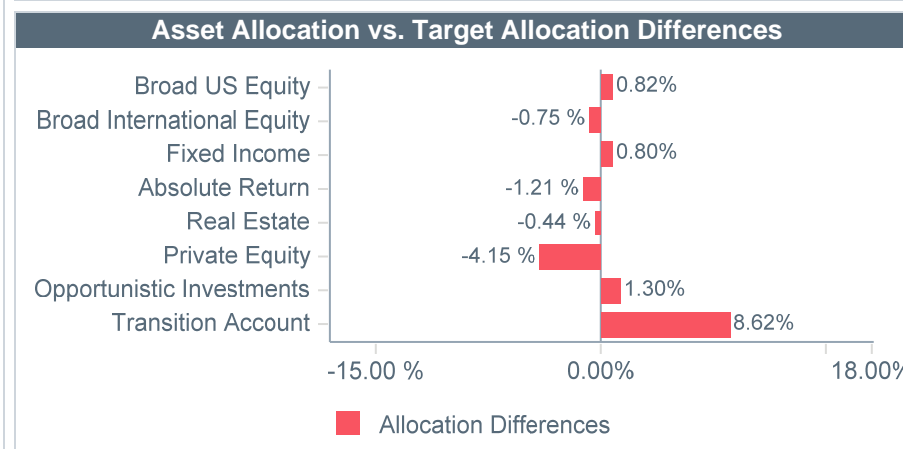
North Dakota Board of University and School Lands  
AA by Manager, AA vs. Target, and Schedule of Investable Assets

As of December 31, 2021

Asset Allocation by Manager		
	Market Value (\$)	Allocation (%)
<b>Broad US Equity</b>		
State Street Russell 1000 Index SL (US Large Cap)	911,691,904	14.51
State Street Russell Mid Cap Index (US Mid Cap)	118,094,713	1.88
NT Small Cap Core (US Small Cap)	215,950,989	3.44
<b>Broad International Equity</b>		
State Street World Ex US Index (International Equity)	680,035,442	10.82
Acadian International Small Cap (International Equity)	199,947,957	3.18
QMA Int'l Sm Cap Equity (International Equity)	25,256,653	0.40
Arrowstreet Emerging Markets (Emerging Markets Equity)	82,809,675	1.32
DFA Emg Mkts Core Eq.I (Emerging Markets Equity)	41,925,474	0.67
Harding Loevner:LEM;IZ (Emerging Markets Equity)	117,261,261	1.87
<b>Fixed Income</b>		
Payden & Rygel Long Term (Investment Grade US FI)	371,185,133	5.91
JP Morgan Core Bond (Investment Grade US FI)	362,907,624	5.77
Brandywine Gbl Opp Fixed Income (Global FI)	56,854,364	0.90
Loomis Sayles Credit Asset (Multi-Sector)	103,202,945	1.64
FLP (Loans)	6,913,590	0.11
AG Direct Lending III LP (Direct Lending)	152,789,457	2.43
AG Direct Lending IV LP (Direct Lending)	79,920,053	1.27
Owl Rock Diversified Lending (Private Credit)	43,624,967	0.69
Ares Pathfinder Fund LP (Private Credit)	41,993,165	0.67
Schroders Flexible Secured Income (Secured Income)	200,579,079	3.19
ND Land - PTF Cash (Cash)	13,073,427	0.21
<b>Absolute Return</b>		
GMO:Bchmk-Fr All;IV (GTAA)	86,138,975	1.37
PIMCO:All Ast Ath;Inst (GTAA)	483,778,435	7.70
Millennium USA LP (Multi-Strat HF)	30,000,000	0.48
PineBridge Dyn AA;Inst (GTAA)	266,755,010	4.24
<b>Real Estate</b>		
Morgan Stanley Prime Property (Core Real Estate)	265,954,250	4.23
UBS Trumbull Property LP (Core Real Estate)	197,444,971	3.14
Jamestown Premier Property (Core Real Estate)	64,542,019	1.03
Prologis Targeted US Logistics LP (Core Real Estate)	223,281,490	3.55
JP Morgan US RE Inc & Grth LP (Core Real Estate)	163,854,953	2.61
<b>Private Equity</b>		
GCM Grosvenor BUSL LP (Private Equity)	22,570,089	0.36
GCM Grosvenor Secondary Opp Fund III LP (Private Equity)	30,833,368	0.49

Asset Allocation by Manager		
	Market Value (\$)	Allocation (%)
<b>Opportunistic Investments</b>		
Varde Dislocation Fund LP (Private Credit)	65,537,857	1.08
Apollo Accord Fund IV LP (Private Credit)	16,105,845	0.27
<b>Transition Account</b>		
NT STIF (Transition Account)	541,725,963	8.96

Asset Allocation vs. Target Allocation					
	Asset Allocation (\$000)	Asset Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)
<b>Total Fund</b>	<b>6,284,541</b>	<b>100.00</b>	<b>95.00</b>	<b>-</b>	<b>-</b>
Broad US Equity	1,245,738	19.82	19.00	14.00	24.00
Broad International Equity	1,147,236	18.25	19.00	14.00	24.00
Fixed Income	1,433,044	22.80	22.00	17.00	27.00
Absolute Return	866,672	13.79	15.00	10.00	20.00
Real Estate	915,078	14.56	15.00	10.00	20.00
Private Equity	53,403	0.85	5.00	0.00	10.00
Opportunistic Investments	81,644	1.30	0.00	0.00	5.00
Transition Account	541,726	8.62	0.00	0.00	0.00



Schedule of Investable Assets					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
<b>QTD</b>	<b>6,063,405,578</b>	<b>10,404,082</b>	<b>210,731,436</b>	<b>6,284,541,095</b>	<b>3.47</b>

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. Real Estate market values are as of the most recent quarter-end. Market value for QMA Int'l Sm Cap Equity, DFA Emg Mkts Core Eq.I, Harding Loevner:LEM;IZ, and Brandywine Gbl Opp Fixed Income consist of uninvested cash. In Q4, Acadian International Small Cap, Arrowstreet Emerging Markets, Millennium USA LP and PineBridge Dyn AA;Inst(GTAA) were funded. The initial capital call occurred for the Owl Rock Diversified Lending and GCM Grosvenor Secondary Opportunities Fund III LP. Market value shown for Apollo Accord Fund IV LP includes \$9.25M distribution held as cash as of 12/31/2021. The cash was distributed on 1/4/2022.

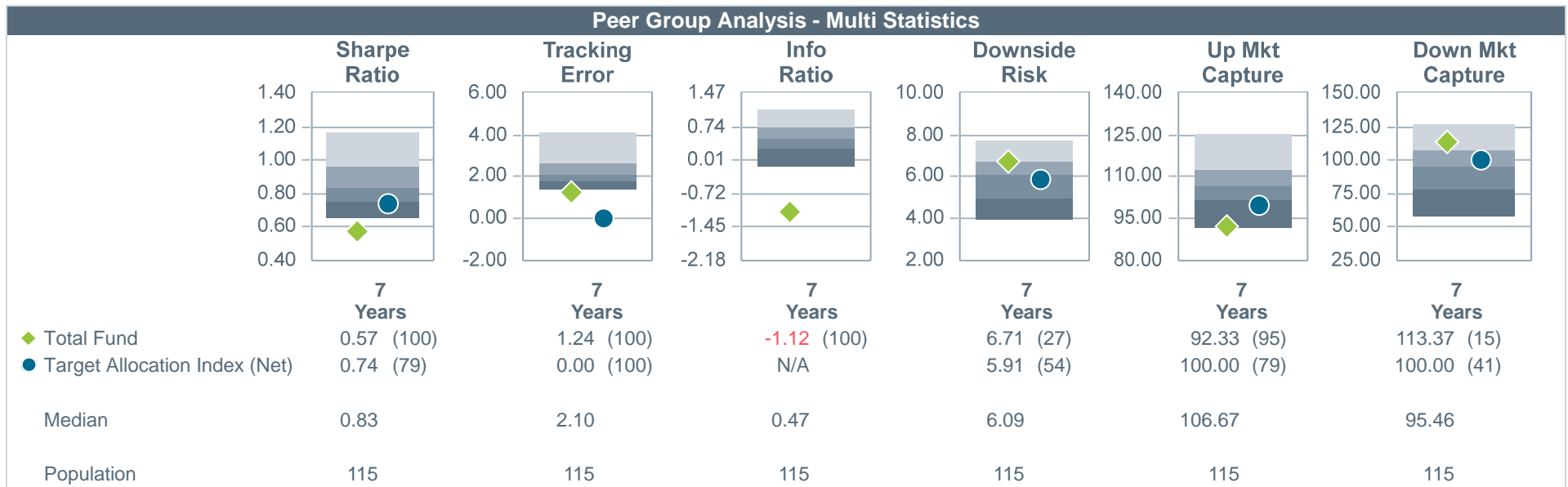
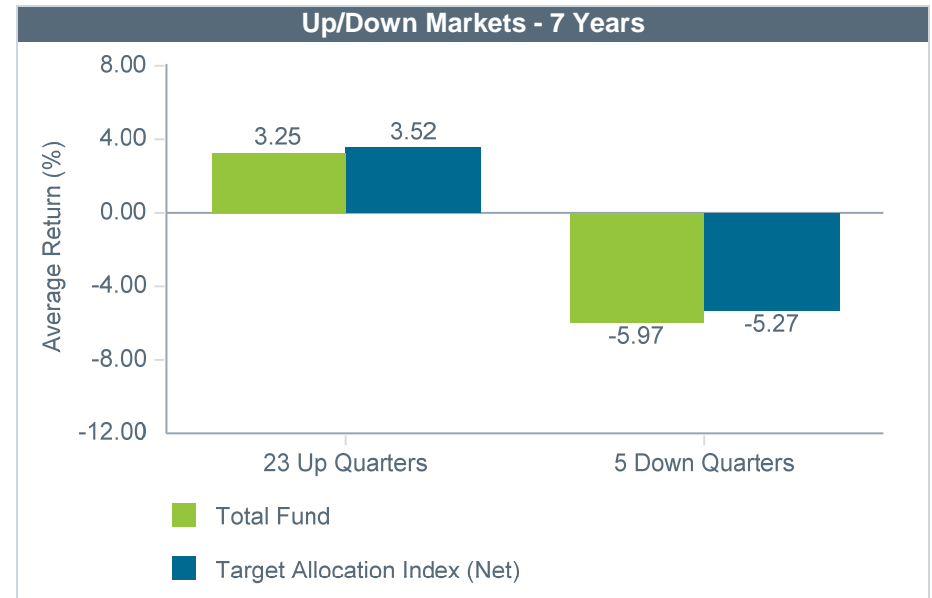
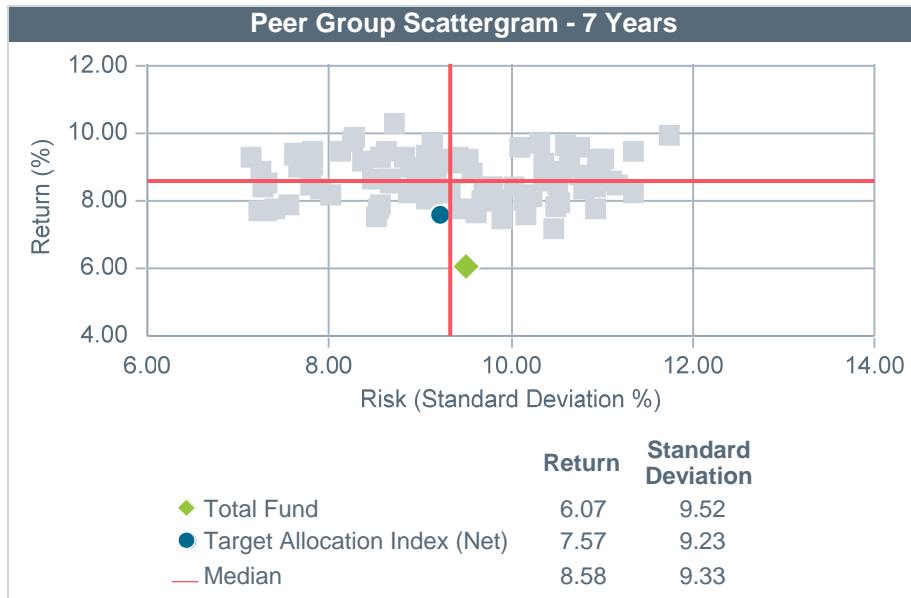
North Dakota Board of University and School Lands  
Comparative Performance

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Total Fund</b>	<b>3.47</b>	<b>4.32</b>	<b>12.44</b>	<b>12.44</b>	<b>10.87</b>	<b>7.81</b>	<b>6.07</b>	<b>7.14</b>	<b>5.95</b>	<b>14.40</b>	<b>-5.11</b>	<b>6.85</b>	<b>08/01/1995</b>
Target Allocation Index (Net)	4.31	4.89	12.89	12.89	13.48	9.56	7.57	8.43	11.31	16.30	-4.51	N/A	
Difference	-0.84	-0.57	-0.45	-0.45	-2.61	-1.75	-1.50	-1.29	-5.36	-1.90	-0.60	N/A	
All Public Plans > \$1B-Total Fund Median	4.16	4.72	15.18	15.18	14.72	10.71	8.58	9.55	11.31	17.06	-3.51	7.83	
Rank	82	63	85	85	98	100	99	98	94	92	77	97	
<b>Broad US Equity</b>	<b>7.87</b>	<b>8.12</b>	<b>24.58</b>	<b>24.58</b>	<b>25.23</b>	<b>17.64</b>	<b>14.34</b>	<b>15.46</b>	<b>20.97</b>	<b>30.30</b>	<b>-5.49</b>	<b>15.77</b>	<b>07/01/2009</b>
Russell 3000 Index	9.28	9.17	25.66	25.66	25.79	17.97	14.55	16.30	20.89	31.02	-5.24	16.28	
Difference	-1.41	-1.05	-1.08	-1.08	-0.56	-0.33	-0.21	-0.84	0.08	-0.72	-0.25	-0.51	
<b>Broad International Equity</b>	<b>3.02</b>	<b>2.51</b>	<b>13.26</b>	<b>13.26</b>	<b>14.44</b>	<b>9.63</b>	<b>6.68</b>	<b>8.14</b>	<b>8.42</b>	<b>22.05</b>	<b>-16.49</b>	<b>7.30</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	1.82	-1.22	7.82	7.82	13.18	9.61	6.56	7.28	10.65	21.51	-14.20	7.27	
Difference	1.20	3.73	5.44	5.44	1.26	0.02	0.12	0.86	-2.23	0.54	-2.29	0.03	
<b>Fixed Income</b>	<b>0.57</b>	<b>1.08</b>	<b>2.00</b>	<b>2.00</b>	<b>5.64</b>	<b>4.27</b>	<b>3.57</b>	<b>3.61</b>	<b>7.31</b>	<b>7.70</b>	<b>-0.24</b>	<b>5.51</b>	<b>08/01/1995</b>
Global Fixed Income Custom Index	-0.03	0.05	-1.10	-1.10	5.13	3.94	3.26	3.07	7.58	9.21	-0.52	N/A	
Difference	0.60	1.03	3.10	3.10	0.51	0.33	0.31	0.54	-0.27	-1.51	0.28	N/A	
Bloomberg US Agg Bond Index	0.01	0.06	-1.55	-1.55	4.79	3.57	3.00	2.90	7.51	8.72	0.01	5.06	
Difference	0.56	1.02	3.55	3.55	0.85	0.70	0.57	0.71	-0.20	-1.02	-0.25	0.45	
<b>Absolute Return</b>	<b>0.00</b>	<b>-1.40</b>	<b>7.90</b>	<b>7.90</b>	<b>6.57</b>	<b>5.18</b>	<b>3.80</b>	<b>N/A</b>	<b>0.99</b>	<b>11.09</b>	<b>-5.16</b>	<b>3.09</b>	<b>07/01/2014</b>
Absolute Return Custom Index	3.68	3.03	10.03	10.03	14.22	10.10	7.90	8.43	13.56	19.28	-5.93	7.28	
Difference	-3.68	-4.43	-2.13	-2.13	-7.65	-4.92	-4.10	N/A	-12.57	-8.19	0.77	-4.19	
Consumer Price Index+5%	2.88	5.15	12.39	12.39	8.71	8.07	7.61	7.24	6.43	7.40	7.01	7.22	
Difference	-2.88	-6.55	-4.49	-4.49	-2.14	-2.89	-3.81	N/A	-5.44	3.69	-12.17	-4.13	
<b>Real Estate</b>	<b>8.88</b>	<b>16.60</b>	<b>24.07</b>	<b>24.07</b>	<b>8.96</b>	<b>8.95</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.21</b>	<b>4.48</b>	<b>8.34</b>	<b>9.23</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	8.61	9.43	0.34	4.39	7.36	8.20	
Difference	1.22	2.04	3.05	3.05	0.73	1.21	N/A	N/A	-0.55	0.09	0.98	1.03	
<b>Private Equity</b>	<b>9.11</b>	<b>15.76</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>17.87</b>	<b>04/01/2021</b>
Cambridge US Prvt Eq Index	5.79	11.85	39.92	39.92	24.67	20.44	17.22	16.67	21.68	13.82	10.40	26.43	
Difference	3.32	3.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-8.56	
<b>Opportunistic Investments</b>	<b>1.36</b>	<b>2.52</b>	<b>10.86</b>	<b>10.86</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>29.12</b>	<b>07/01/2020</b>

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 December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Total Fund</b>	<b>3.47</b>	<b>4.32</b>	<b>12.44</b>	<b>12.44</b>	<b>10.87</b>	<b>7.81</b>	<b>7.14</b>	<b>5.95</b>	<b>14.40</b>	<b>-5.11</b>	<b>6.85</b>	<b>08/01/1995</b>
Target Allocation Index (Net)	4.31	4.89	12.89	12.89	13.48	9.56	8.43	11.31	16.30	-4.51	N/A	
Difference	-0.84	-0.57	-0.45	-0.45	-2.61	-1.75	-1.29	-5.36	-1.90	-0.60	N/A	
<b>Broad US Equity</b>	<b>7.87</b>	<b>8.12</b>	<b>24.58</b>	<b>24.58</b>	<b>25.23</b>	<b>17.64</b>	<b>15.46</b>	<b>20.97</b>	<b>30.30</b>	<b>-5.49</b>	<b>15.77</b>	<b>07/01/2009</b>
Russell 3000 Index	9.28	9.17	25.66	25.66	25.79	17.97	16.30	20.89	31.02	-5.24	16.28	
Difference	-1.41	-1.05	-1.08	-1.08	-0.56	-0.33	-0.84	0.08	-0.72	-0.25	-0.51	
<b>State Street Russell 1000 Index SL (CF)</b>	<b>9.77</b>	<b>10.00</b>	<b>26.43</b>	<b>26.43</b>	<b>26.17</b>	<b>N/A</b>	<b>N/A</b>	<b>20.90</b>	<b>31.39</b>	<b>-4.78</b>	<b>18.11</b>	<b>06/01/2017</b>
Russell 1000 Index	9.78	10.01	26.45	26.45	26.21	18.43	16.54	20.96	31.43	-4.78	18.14	
Difference	-0.01	-0.01	-0.02	-0.02	-0.04	N/A	N/A	-0.06	-0.04	0.00	-0.03	
<b>State Street Russell Mid Cap Index (SA)</b>	<b>6.44</b>	<b>5.46</b>	<b>22.58</b>	<b>22.58</b>	<b>23.22</b>	<b>N/A</b>	<b>N/A</b>	<b>17.05</b>	<b>30.38</b>	<b>-8.97</b>	<b>14.87</b>	<b>06/01/2017</b>
Russell Mid Cap Index	6.44	5.45	22.58	22.58	23.29	15.10	14.91	17.10	30.54	-9.06	14.89	
Difference	0.00	0.01	0.00	0.00	-0.07	N/A	N/A	-0.05	-0.16	0.09	-0.02	
<b>NT Small Cap Core (SA)</b>	<b>1.23</b>	<b>1.56</b>	<b>18.76</b>	<b>18.76</b>	<b>21.91</b>	<b>15.31</b>	<b>14.07</b>	<b>23.90</b>	<b>23.13</b>	<b>-7.63</b>	<b>11.37</b>	<b>07/01/2014</b>
Russell 2000 Index	2.14	-2.31	14.82	14.82	20.02	12.02	13.23	19.96	25.53	-11.01	10.25	
Difference	-0.91	3.87	3.94	3.94	1.89	3.29	0.84	3.94	-2.40	3.38	1.12	
<b>Broad International Equity</b>	<b>3.02</b>	<b>2.51</b>	<b>13.26</b>	<b>13.26</b>	<b>14.44</b>	<b>9.63</b>	<b>8.14</b>	<b>8.42</b>	<b>22.05</b>	<b>-16.49</b>	<b>7.30</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	1.82	-1.22	7.82	7.82	13.18	9.61	7.28	10.65	21.51	-14.20	7.27	
Difference	1.20	3.73	5.44	5.44	1.26	0.02	0.86	-2.23	0.54	-2.29	0.03	
<b>State Street World Ex US Index (CF)</b>	<b>3.13</b>	<b>2.45</b>	<b>12.63</b>	<b>12.63</b>	<b>14.01</b>	<b>9.57</b>	<b>N/A</b>	<b>7.52</b>	<b>22.38</b>	<b>-14.16</b>	<b>4.84</b>	<b>07/01/2014</b>
MSCI Wrld Ex US Index (USD) (Net)	3.14	2.46	12.62	12.62	14.07	9.63	7.84	7.59	22.49	-14.09	4.91	
Difference	-0.01	-0.01	0.01	0.01	-0.06	-0.06	N/A	-0.07	-0.11	-0.07	-0.07	
<b>Acadian International Small Cap</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>5.64</b>	<b>12/01/2021</b>
MSCI EAFE Sm Cap Index (USD) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.64	
<b>Arrowstreet Emerging Markets</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>5.10</b>	<b>12/01/2021</b>
MSCI Emg Mkts Index (USD) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.10	

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

**As of December 31, 2021**

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Fixed Income</b>	<b>0.57</b>	<b>1.08</b>	<b>2.00</b>	<b>2.00</b>	<b>5.64</b>	<b>4.27</b>	<b>3.61</b>	<b>7.31</b>	<b>7.70</b>	<b>-0.24</b>	<b>5.51</b>	<b>08/01/1995</b>
Global Fixed Income Custom Index	-0.03	0.05	-1.10	-1.10	5.13	3.94	3.07	7.58	9.21	-0.52	N/A	
Difference	0.60	1.03	3.10	3.10	0.51	0.33	0.54	-0.27	-1.51	0.28	N/A	
Bloomberg US Agg Bond Index	0.01	0.06	-1.55	-1.55	4.79	3.57	2.90	7.51	8.72	0.01	5.06	
Difference	0.56	1.02	3.55	3.55	0.85	0.70	0.71	-0.20	-1.02	-0.25	0.45	
<b>Payden &amp; Rygel Long Term (SA)</b>	<b>0.15</b>	<b>0.30</b>	<b>-0.69</b>	<b>-0.69</b>	<b>5.34</b>	<b>4.21</b>	<b>3.84</b>	<b>7.58</b>	<b>9.42</b>	<b>0.16</b>	<b>5.68</b>	<b>08/01/1995</b>
Bloomberg US Agg Bond Index	0.01	0.06	-1.55	-1.55	4.79	3.57	2.90	7.51	8.72	0.01	5.06	
Difference	0.14	0.24	0.86	0.86	0.55	0.64	0.94	0.07	0.70	0.15	0.62	
<b>JP Morgan Core Bond (SA)</b>	<b>0.00</b>	<b>0.08</b>	<b>-0.28</b>	<b>-0.28</b>	<b>4.20</b>	<b>3.25</b>	<b>N/A</b>	<b>6.31</b>	<b>6.70</b>	<b>1.01</b>	<b>2.48</b>	<b>08/01/2012</b>
JP Morgan FI Custom Index	0.01	0.06	-0.48	-0.48	4.20	3.11	2.48	6.43	6.80	0.88	2.30	
Difference	-0.01	0.02	0.20	0.20	0.00	0.14	N/A	-0.12	-0.10	0.13	0.18	
<b>Loomis Sayles Credit Asset (SA)</b>	<b>-0.01</b>	<b>0.64</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>3.22</b>	<b>04/01/2021</b>
Loomis Sayles CA Custom Index	0.48	0.98	2.07	2.07	7.45	5.30	5.26	7.54	13.03	-1.64	3.84	
Difference	-0.49	-0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.62	
<b>AG Direct Lending III LP</b>	<b>3.01</b>	<b>6.01</b>	<b>13.73</b>	<b>13.73</b>	<b>10.60</b>	<b>N/A</b>	<b>N/A</b>	<b>8.13</b>	<b>10.02</b>	<b>N/A</b>	<b>10.26</b>	<b>09/01/2018</b>
CS Lvg'd Loan Index	0.71	1.85	5.40	5.40	5.43	4.32	4.83	2.78	8.17	1.14	4.10	
Difference	2.30	4.16	8.33	8.33	5.17	N/A	N/A	5.35	1.85	N/A	6.16	
<b>AG Direct Lending IV LP</b>	<b>3.24</b>	<b>5.13</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>13.26</b>	<b>06/01/2021</b>
CS Lvg'd Loan Index	0.71	1.85	5.40	5.40	5.43	4.32	4.83	2.78	8.17	1.14	2.27	
Difference	2.53	3.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.99	
<b>Owl Rock Diversified Lending</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>0.29</b>	<b>11/01/2021</b>
CS Lvg'd Loan Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.29	

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North Dakota Board of University and School Lands  
Comparative Performance

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Fixed Income Cont.</b>												
<b>Ares Pathfinder Fund LP</b>	<b>1.11</b>	<b>8.37</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>88.81</b>	<b>03/01/2021</b>
<b>Schroders Flexible Secured Income (SA)</b>	<b>0.05</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>0.24</b>	<b>09/01/2021</b>
3 Month LIBOR Index (USD)+1.75%	0.46	0.93	1.92	1.92	3.05	3.18	2.66	2.85	4.39	3.86	0.61	
Difference	-0.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.37	
<b>ND Land - PTF Cash (SA)</b>	<b>0.01</b>	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>	<b>0.97</b>	<b>N/A</b>	<b>N/A</b>	<b>0.39</b>	<b>2.49</b>	<b>1.71</b>	<b>1.17</b>	<b>07/01/2017</b>
ICE BofAML 3 Mo US T-Bill Index	0.01	0.03	0.05	0.05	0.99	1.14	0.63	0.67	2.28	1.87	1.20	
Difference	0.00	0.01	0.00	0.00	-0.02	N/A	N/A	-0.28	0.21	-0.16	-0.03	
<b>FLP (Loans)</b>	<b>1.14</b>	<b>2.32</b>	<b>4.19</b>	<b>4.19</b>	<b>4.41</b>	<b>5.11</b>	<b>5.50</b>	<b>4.19</b>	<b>4.86</b>	<b>6.15</b>	<b>6.92</b>	<b>08/01/1995</b>

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

**As of December 31, 2021**

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Absolute Return</b>	<b>0.00</b>	<b>-1.40</b>	<b>7.90</b>	<b>7.90</b>	<b>6.57</b>	<b>5.18</b>	<b>N/A</b>	<b>0.99</b>	<b>11.09</b>	<b>-5.16</b>	<b>3.09</b>	<b>07/01/2014</b>
Absolute Return Custom Index	3.68	3.03	10.03	10.03	14.22	10.10	8.43	13.56	19.28	-5.93	7.28	
Difference	-3.68	-4.43	-2.13	-2.13	-7.65	-4.92	N/A	-12.57	-8.19	0.77	-4.19	
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>-0.45</b>	<b>-2.46</b>	<b>2.99</b>	<b>2.99</b>	<b>3.92</b>	<b>3.75</b>	<b>N/A</b>	<b>-2.40</b>	<b>11.64</b>	<b>-5.27</b>	<b>1.90</b>	<b>07/01/2014</b>
60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx	3.73	2.73	8.78	8.78	13.72	10.11	7.91	14.05	18.55	-6.00	6.66	
Difference	-4.18	-5.19	-5.79	-5.79	-9.80	-6.36	N/A	-16.45	-6.91	0.73	-4.76	
Consumer Price Index+5%	2.88	5.15	12.39	12.39	8.71	8.07	7.24	6.43	7.40	7.01	7.22	
Difference	-3.33	-7.61	-9.40	-9.40	-4.79	-4.32	N/A	-8.83	4.24	-12.28	-5.32	
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>	<b>3.17</b>	<b>2.27</b>	<b>15.51</b>	<b>15.51</b>	<b>9.14</b>	<b>6.46</b>	<b>N/A</b>	<b>4.59</b>	<b>7.62</b>	<b>-6.14</b>	<b>3.14</b>	<b>07/01/2014</b>
All Asset Custom Index (EqI Wtd)	2.42	2.64	6.46	6.46	9.74	7.21	5.99	9.89	12.97	-1.62	5.39	
Difference	0.75	-0.37	9.05	9.05	-0.60	-0.75	N/A	-5.30	-5.35	-4.52	-2.25	
Consumer Price Index+5%	2.88	5.15	12.39	12.39	8.71	8.07	7.24	6.43	7.40	7.01	7.22	
Difference	0.29	-2.88	3.12	3.12	0.43	-1.61	N/A	-1.84	0.22	-13.15	-4.08	
<b>Millennium USA LP</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>01/01/2022</b>
HFRI RV Multi Strat Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>PineBridge Dyn AA;Inst (PDAIX)</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>01/01/2022</b>
Consumer Price Index+5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Real Estate</b>	<b>8.88</b>	<b>16.60</b>	<b>24.07</b>	<b>24.07</b>	<b>8.96</b>	<b>8.95</b>	<b>N/A</b>	<b>-0.21</b>	<b>4.48</b>	<b>8.34</b>	<b>9.23</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	9.43	0.34	4.39	7.36	8.20	
Difference	1.22	2.04	3.05	3.05	0.73	1.21	N/A	-0.55	0.09	0.98	1.03	
<b>Morgan Stanley Prime Property (CF)</b>	<b>9.60</b>	<b>15.98</b>	<b>21.48</b>	<b>21.48</b>	<b>9.31</b>	<b>8.93</b>	<b>N/A</b>	<b>1.26</b>	<b>6.17</b>	<b>7.96</b>	<b>9.36</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	9.43	0.34	4.39	7.36	8.20	
Difference	1.94	1.42	0.46	0.46	1.08	1.19	N/A	0.92	1.78	0.60	1.16	
<b>UBS Trumbull Property LP (CF)</b>	<b>4.89</b>	<b>11.27</b>	<b>15.60</b>	<b>15.60</b>	<b>2.30</b>	<b>3.69</b>	<b>N/A</b>	<b>-4.67</b>	<b>-2.84</b>	<b>6.17</b>	<b>4.70</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	9.43	0.34	4.39	7.36	8.20	
Difference	-2.77	-3.29	-5.42	-5.42	-5.93	-4.05	N/A	-5.01	-7.23	-1.19	-3.50	
<b>Jamestown Premier Property (CF)</b>	<b>1.04</b>	<b>3.05</b>	<b>-1.80</b>	<b>-1.80</b>	<b>-3.21</b>	<b>2.22</b>	<b>N/A</b>	<b>-9.83</b>	<b>2.40</b>	<b>7.75</b>	<b>3.57</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	9.43	0.34	4.39	7.36	8.20	
Difference	-6.62	-11.51	-22.82	-22.82	-11.44	-5.52	N/A	-10.17	-1.99	0.39	-4.63	
<b>Prologis Targeted US Logistics LP (CF)</b>	<b>13.37</b>	<b>26.18</b>	<b>48.39</b>	<b>48.39</b>	<b>23.96</b>	<b>21.61</b>	<b>N/A</b>	<b>9.86</b>	<b>16.84</b>	<b>16.18</b>	<b>20.89</b>	<b>04/01/2016</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	9.43	0.34	4.39	7.36	7.73	
Difference	5.71	11.62	27.37	27.37	15.73	13.87	N/A	9.52	12.45	8.82	13.16	
<b>JP Morgan US RE Inc &amp; Grth LP (CF)</b>	<b>10.20</b>	<b>18.34</b>	<b>24.41</b>	<b>24.41</b>	<b>7.71</b>	<b>6.93</b>	<b>N/A</b>	<b>-1.76</b>	<b>2.24</b>	<b>5.73</b>	<b>7.27</b>	<b>07/01/2016</b>
NCREIF ODCE Index (AWA) (Net)	7.66	14.56	21.02	21.02	8.23	7.74	9.43	0.34	4.39	7.36	7.73	
Difference	2.54	3.78	3.39	3.39	-0.52	-0.81	N/A	-2.10	-2.15	-1.63	-0.46	
<b>Private Equity</b>	<b>9.11</b>	<b>15.76</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>17.87</b>	<b>04/01/2021</b>
Cambridge US Prvt Eq Index	5.79	11.85	39.92	39.92	24.67	20.44	16.67	21.68	13.82	10.40	26.43	
Difference	3.32	3.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-8.56	
<b>GCM Grosvenor BUSL LP</b>	<b>7.09</b>	<b>13.62</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>15.68</b>	<b>04/01/2021</b>
Cambridge US Prvt Eq Index	5.79	11.85	39.92	39.92	24.67	20.44	16.67	21.68	13.82	10.40	26.43	
Difference	1.30	1.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10.75	
<b>GCM Grosvenor Secondary Opp Fund III LP</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>01/01/2022</b>
Cambridge US Prvt Eq Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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 Q4, Acadian International Small Cap, Arrowstreet Emerging Markets, Millennium USA LP, PineBridge Dyn AA;Inst (PDAIX), Owl Rock Diversified Lending and GCM Grosvenor Secondary Opportunities Fund III LP were funded.

North Dakota Board of University and School Lands  
Comparative Performance

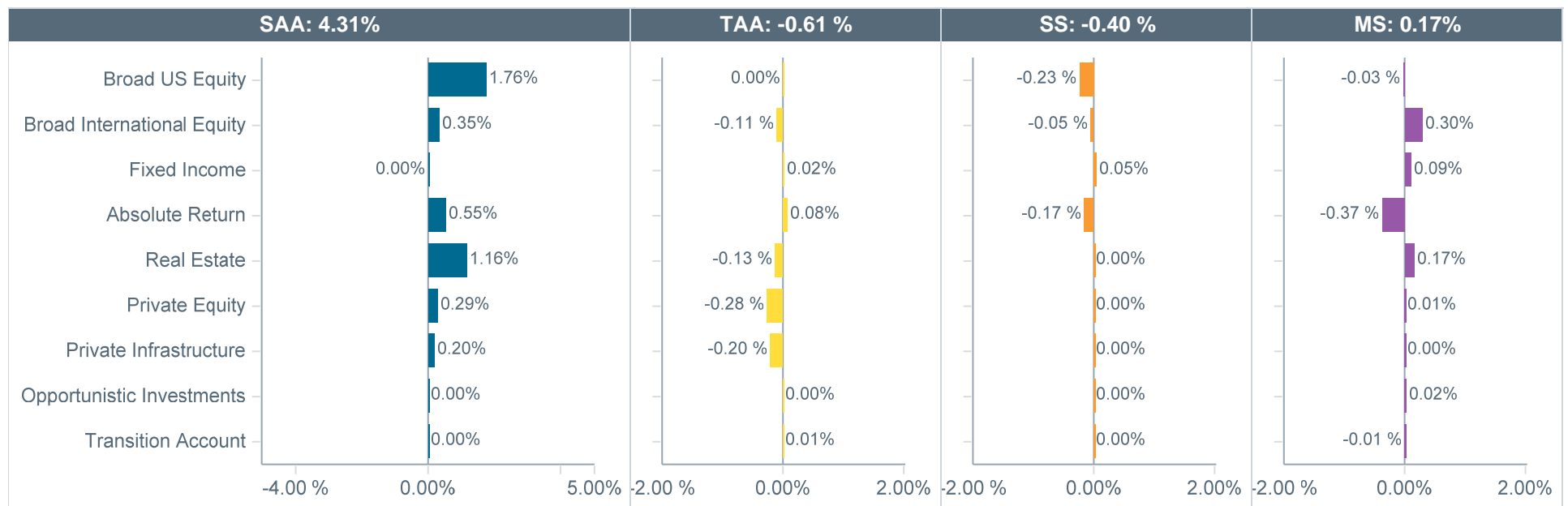
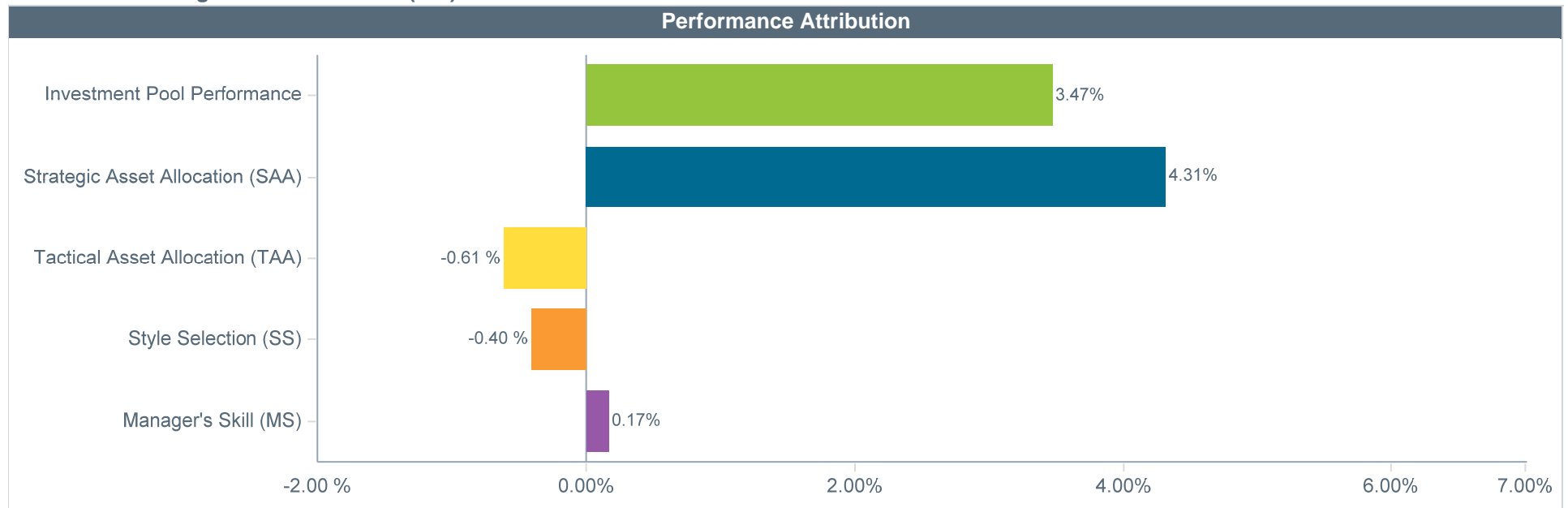
As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Opportunistic Investments</b>												
Varde Dislocation Fund LP	0.19	-0.29	7.39	7.39	N/A	N/A	N/A	N/A	N/A	N/A	27.68	07/01/2020
Apollo Accord Fund IV LP	6.03	13.25	25.99	25.99	N/A	N/A	N/A	N/A	N/A	N/A	26.35	10/01/2020
<b>Transition Account</b>												
NT STIF (Transition Account)	-0.13	-0.08	0.03	0.03	N/A	N/A	N/A	N/A	N/A	N/A	0.16	06/01/2020
ICE BofAML 3 Mo US T-Bill Index	0.01	0.03	0.05	0.05	0.99	1.14	0.63	0.67	2.28	1.87	0.08	
Difference	-0.14	-0.11	-0.02	-0.02	N/A	N/A	N/A	N/A	N/A	N/A	0.08	

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 Q4, Acadian International Small Cap, Arrowstreet Emerging Markets, Millennium USA LP, PineBridge Dyn AA;Inst (PDAIX), Owl Rock Diversified Lending and GCM Grosvenor Secondary Opportunities Fund III LP were funded.

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

Quarter To Date Ending December 31, 2021

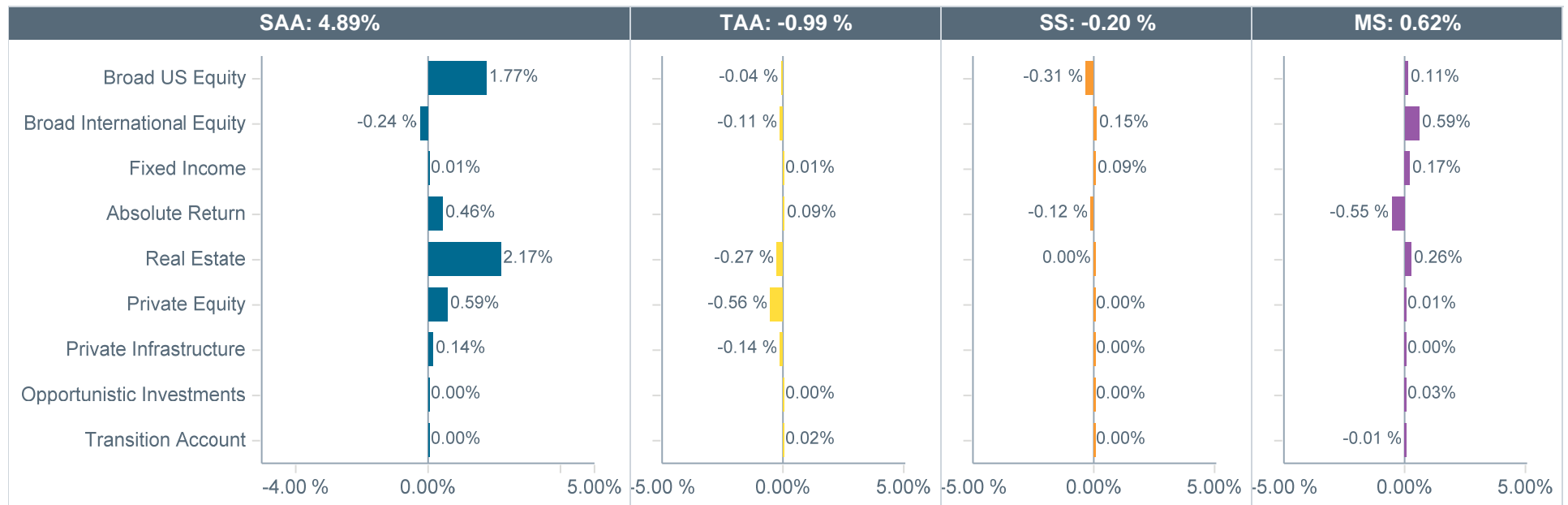
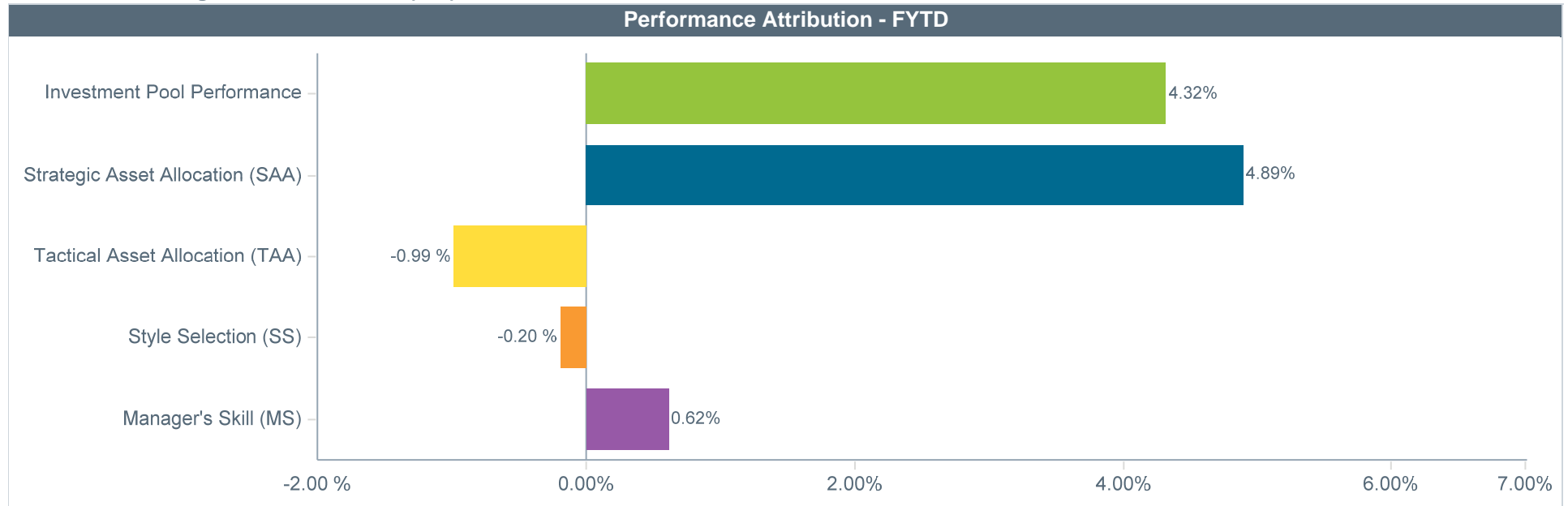


Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



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 December 31, 2021



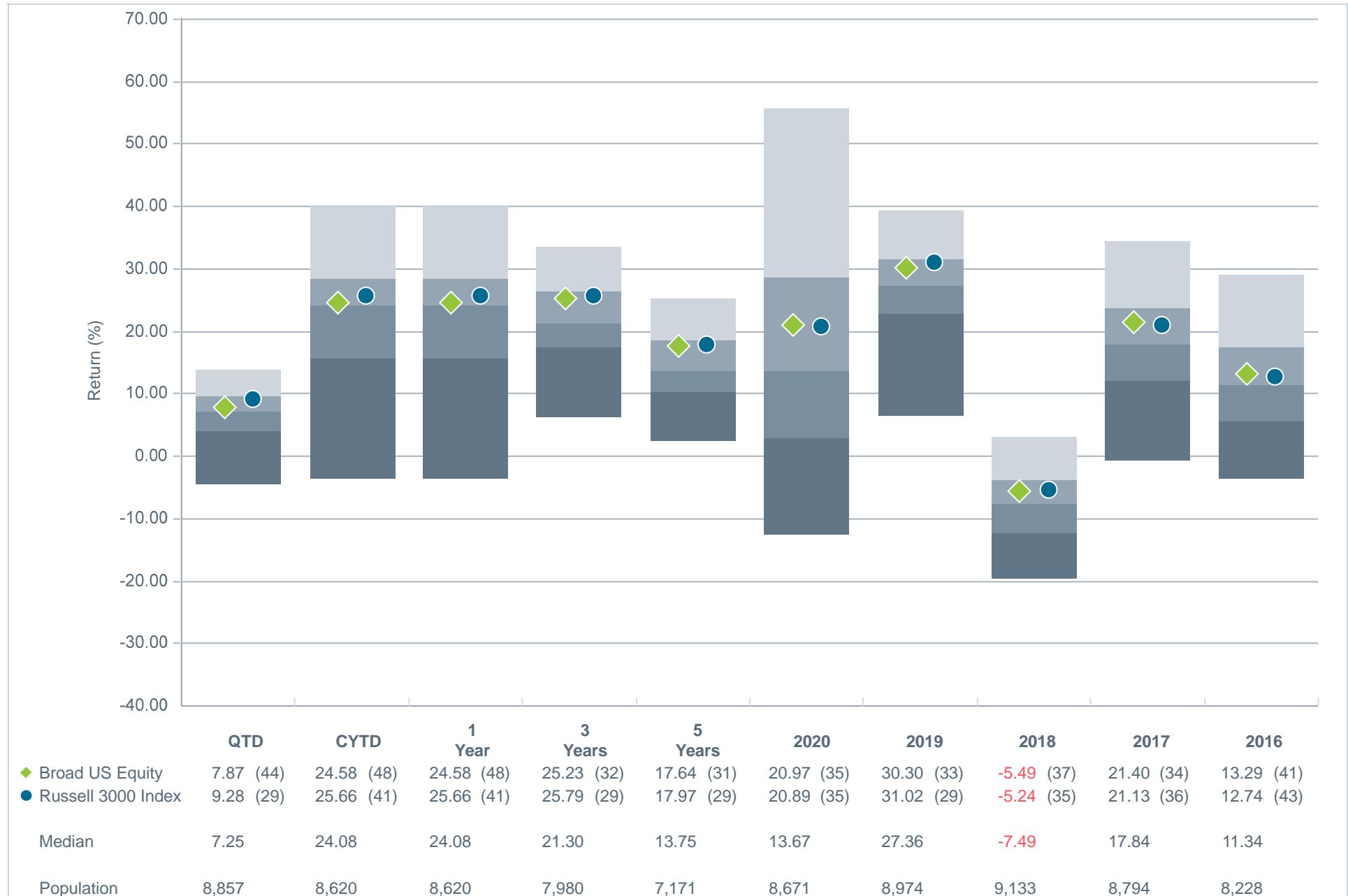
Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation. Fiscal year ends 06/30.

# Composite Profiles

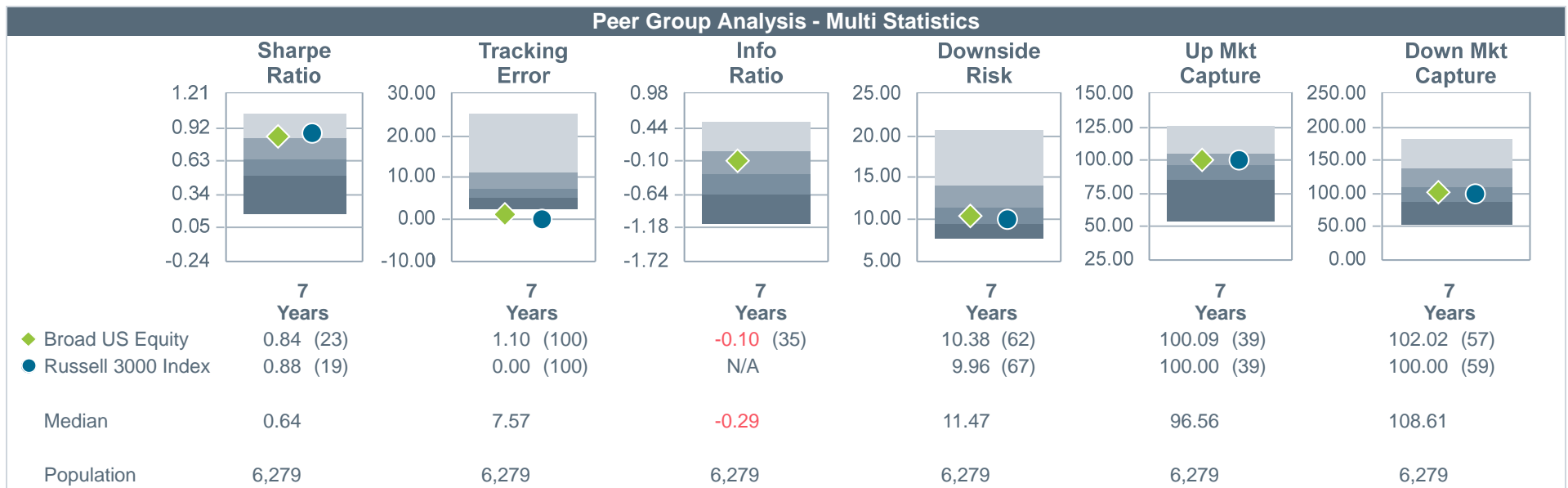
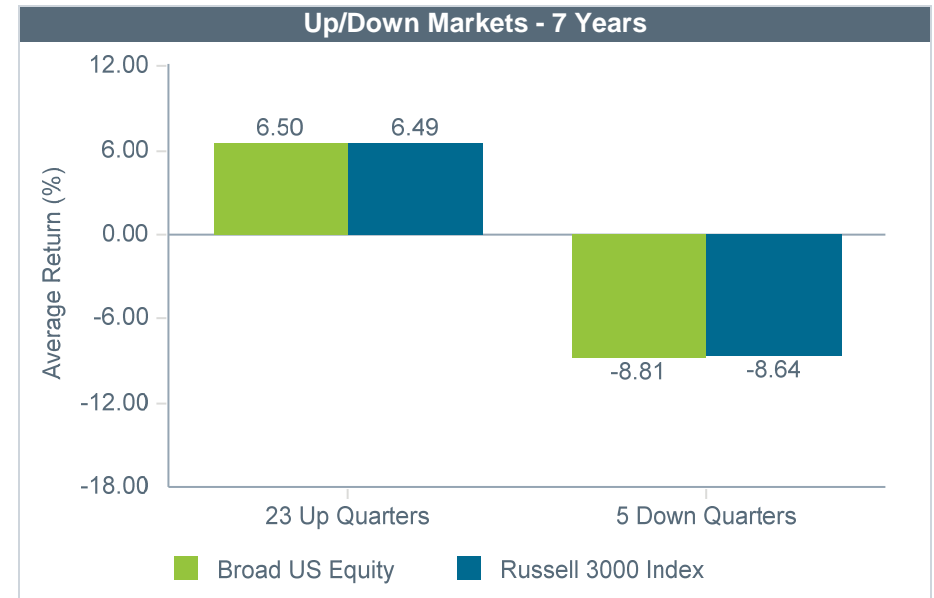
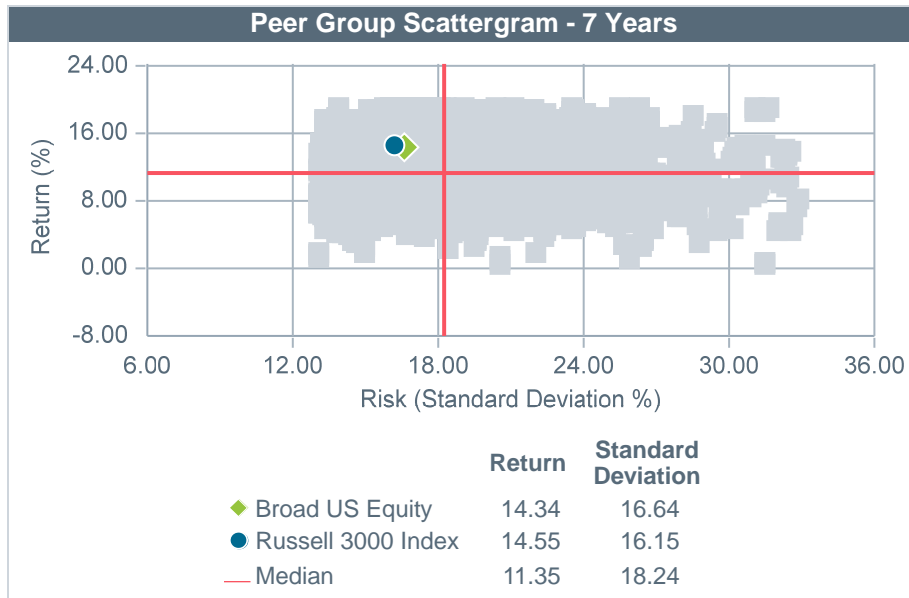


North Dakota Board of University and School Lands  
IM U.S. Equity (MF)  
Peer Group Analysis

As of December 31, 2021



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

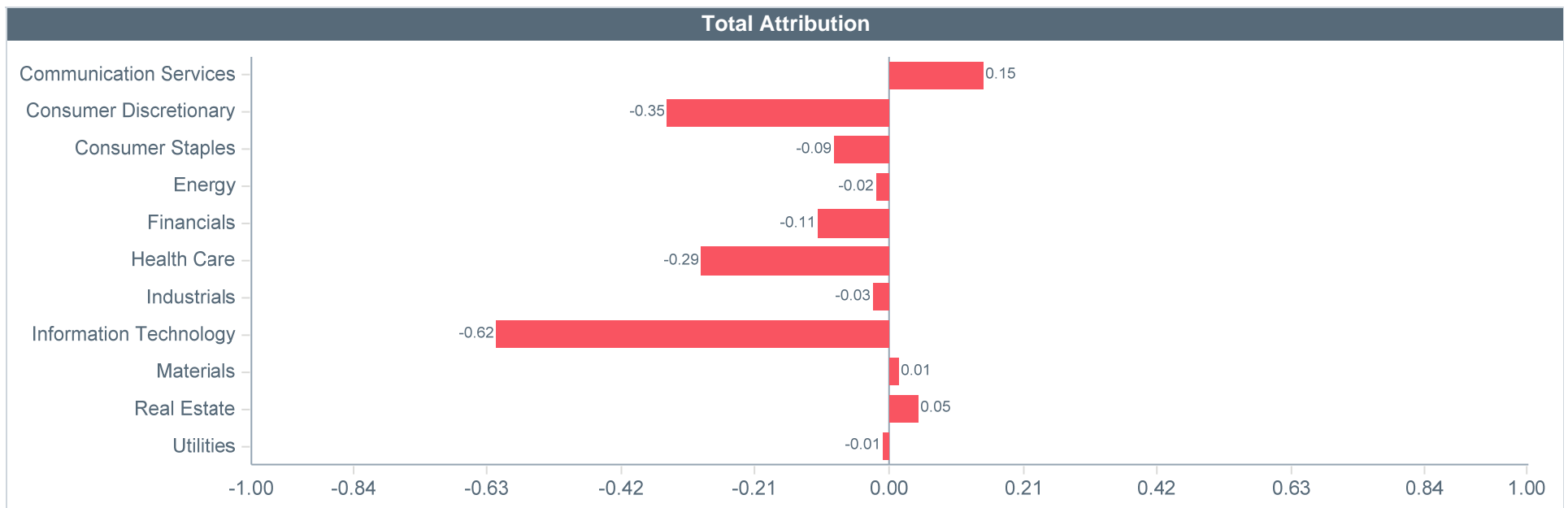
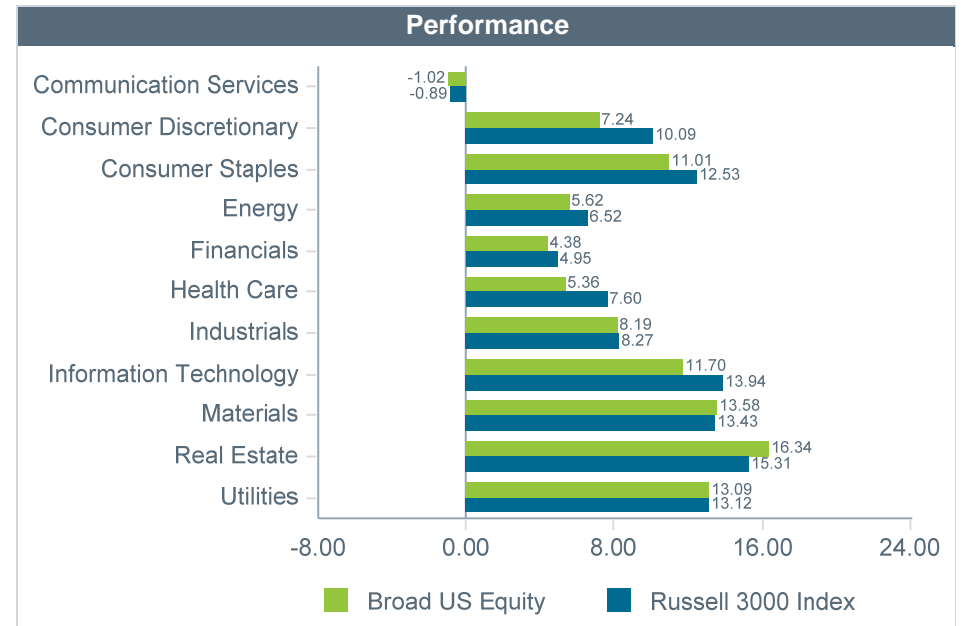
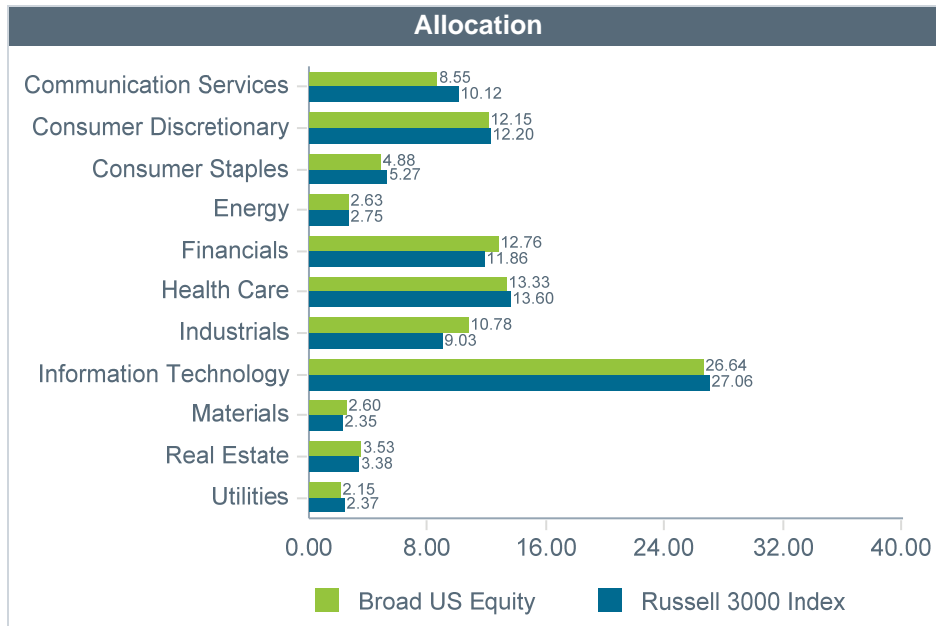


Performance shown is net of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



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

1 Quarter Ending December 31, 2021

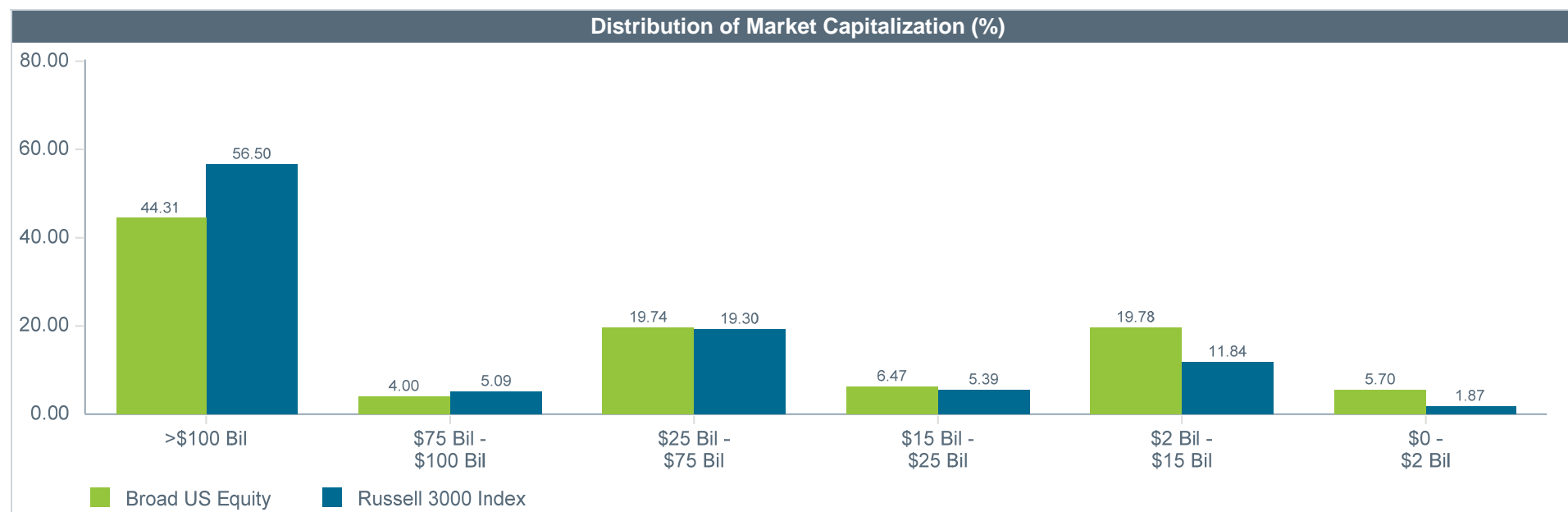


North Dakota Board of University and School Lands  
Broad US Equity vs. Russell 3000 Index  
Portfolio Characteristics

As of December 31, 2021

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Apple Inc	4.49	5.74	-1.25	25.67
Microsoft Corp	4.15	5.30	-1.15	19.51
Amazon.com Inc	2.37	3.03	-0.66	1.50
Alphabet Inc	1.43	1.82	-0.39	8.36
Tesla Inc	1.40	1.79	-0.39	36.27
Alphabet Inc	1.33	1.70	-0.37	8.57
Meta Platforms Inc	1.30	1.66	-0.36	-0.90
NVIDIA Corporation	1.15	1.47	-0.32	41.99
Berkshire Hathaway Inc	0.90	1.15	-0.25	9.55
Unitedhealth Group Inc	0.78	0.99	-0.21	28.92
% of Portfolio	19.30	24.65	-5.35	

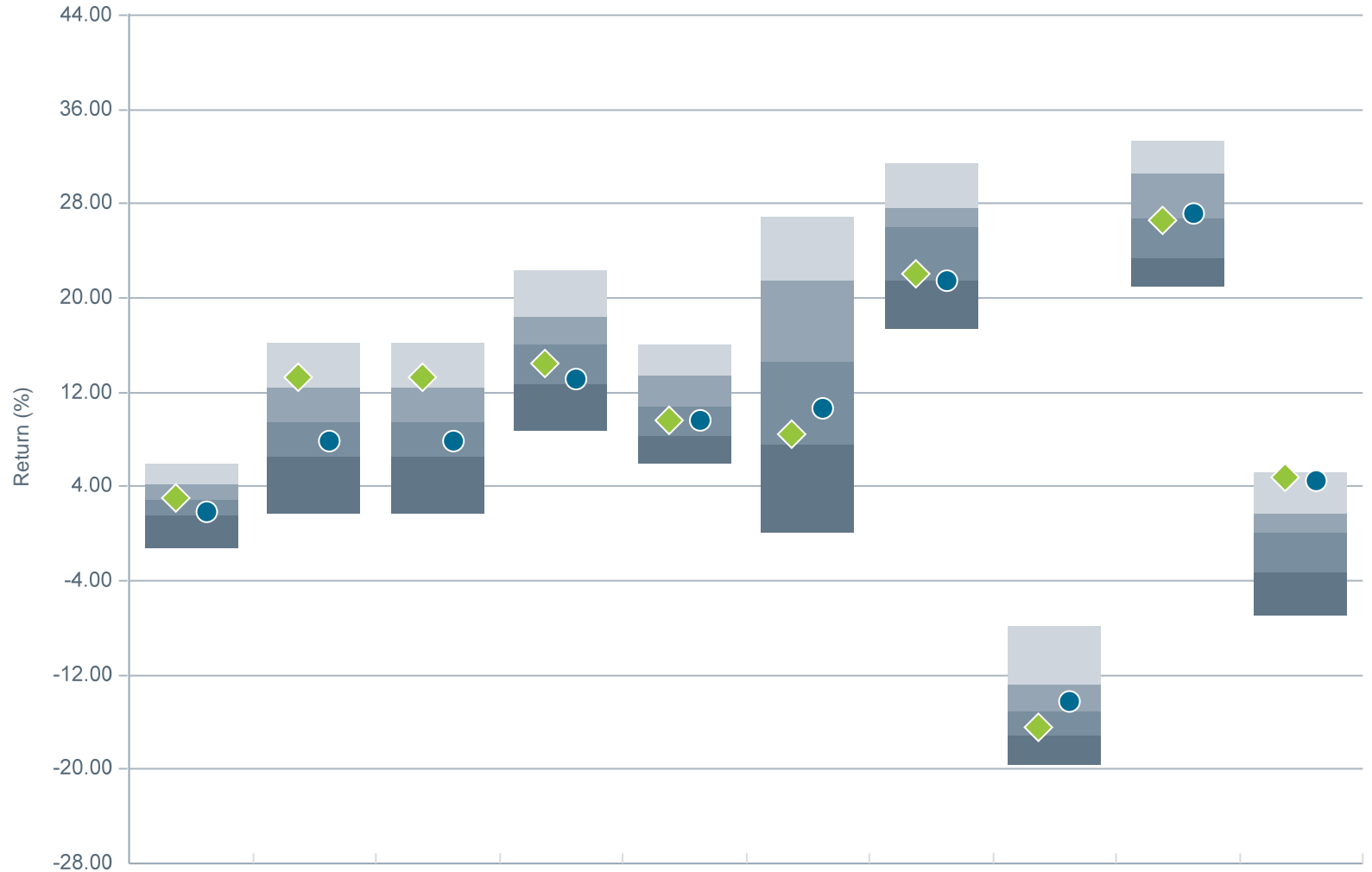
Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	443,330	562,093
Median Mkt. Cap (\$M)	11,621	2,476
Price/Earnings Ratio	23.98	24.56
Price/Book Ratio	4.17	4.60
5 Yr. EPS Growth Rate (%)	20.71	20.92
Current Yield (%)	1.19	1.25
Beta (5 Years, Monthly)	1.01	1.00
Number of Securities	1,218	3,067



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

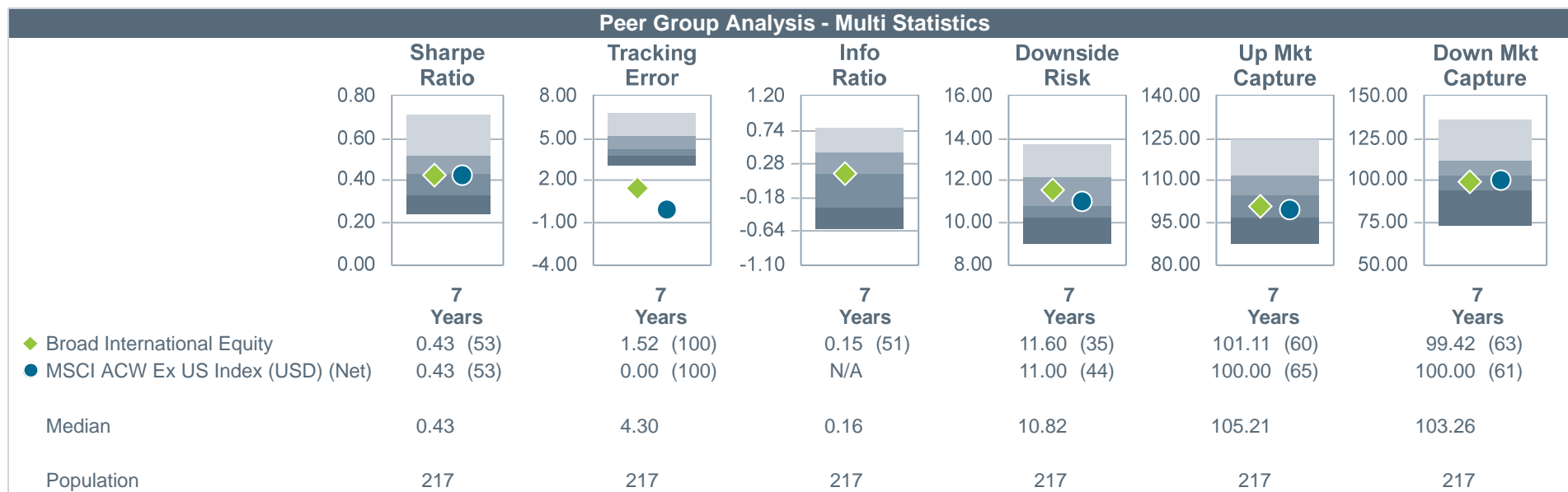
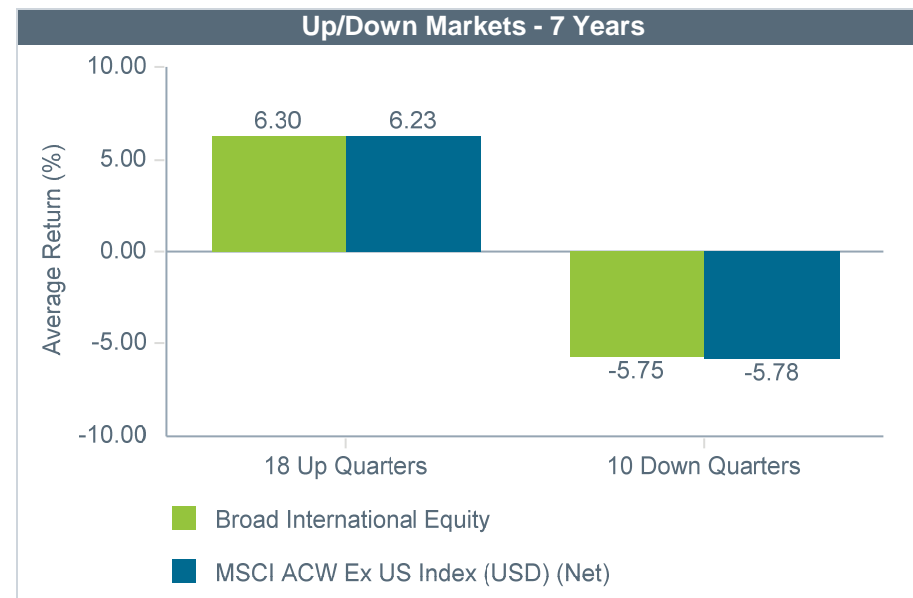
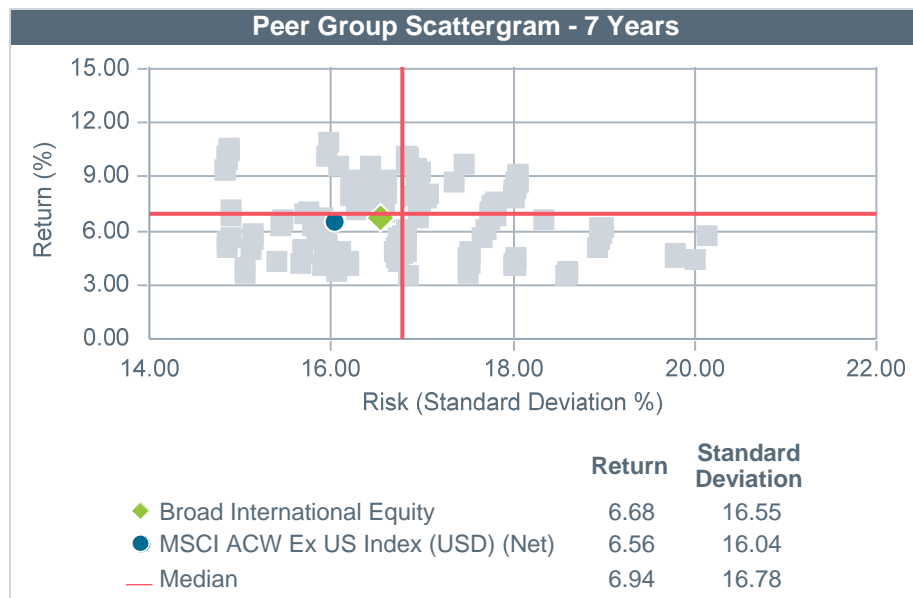
North Dakota Board of University and School Lands  
IM International Large Cap Equity (MF)  
Peer Group Analysis

As of December 31, 2021



	QTD	CYTD	1 Year	3 Years	5 Years	2020	2019	2018	2017	2016
◆ Broad International Equity	3.02 (47)	13.26 (17)	13.26 (17)	14.44 (62)	9.63 (63)	8.42 (72)	22.05 (73)	-16.49 (70)	26.51 (52)	4.82 (7)
● MSCI ACW Ex US Index (USD) (Net)	1.82 (74)	7.82 (67)	7.82 (67)	13.18 (71)	9.61 (63)	10.65 (62)	21.51 (76)	-14.20 (38)	27.19 (47)	4.50 (8)
Median	2.92	9.48	9.48	16.08	10.75	14.59	25.95	-15.18	26.76	0.06
Population	384	367	367	305	261	347	328	318	296	267

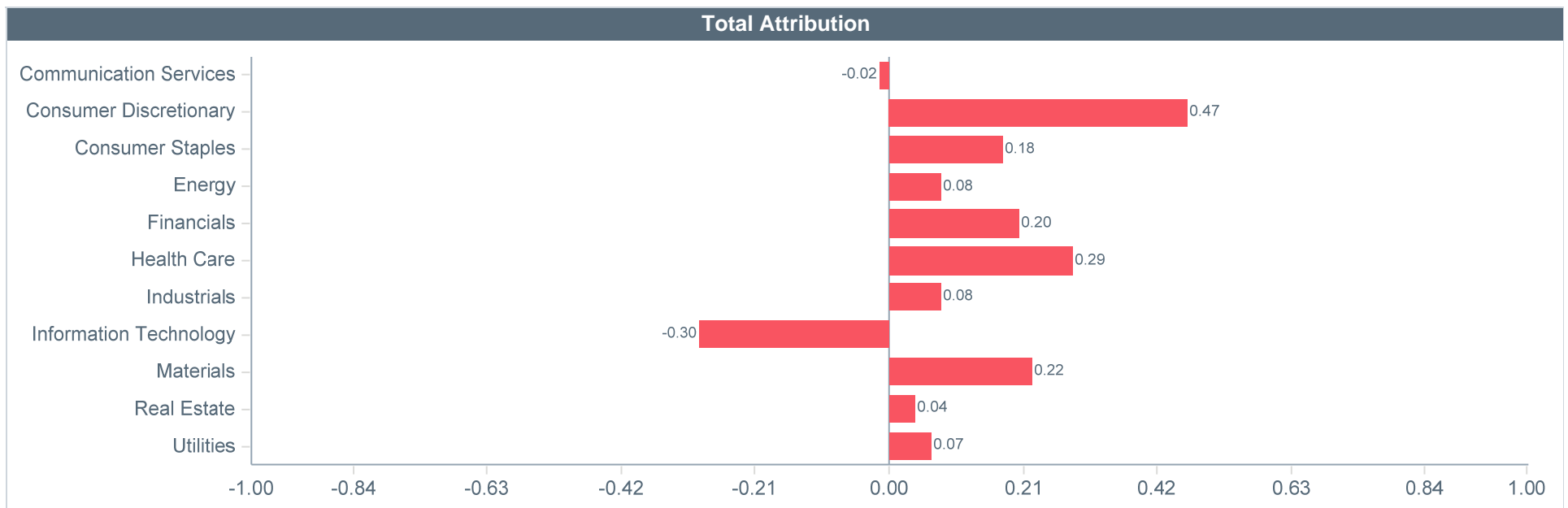
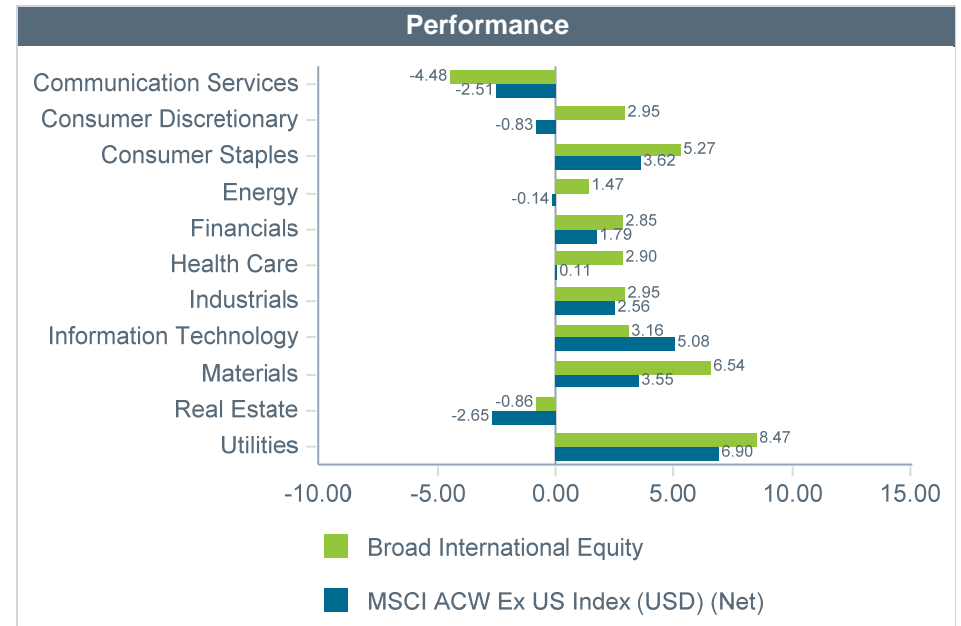
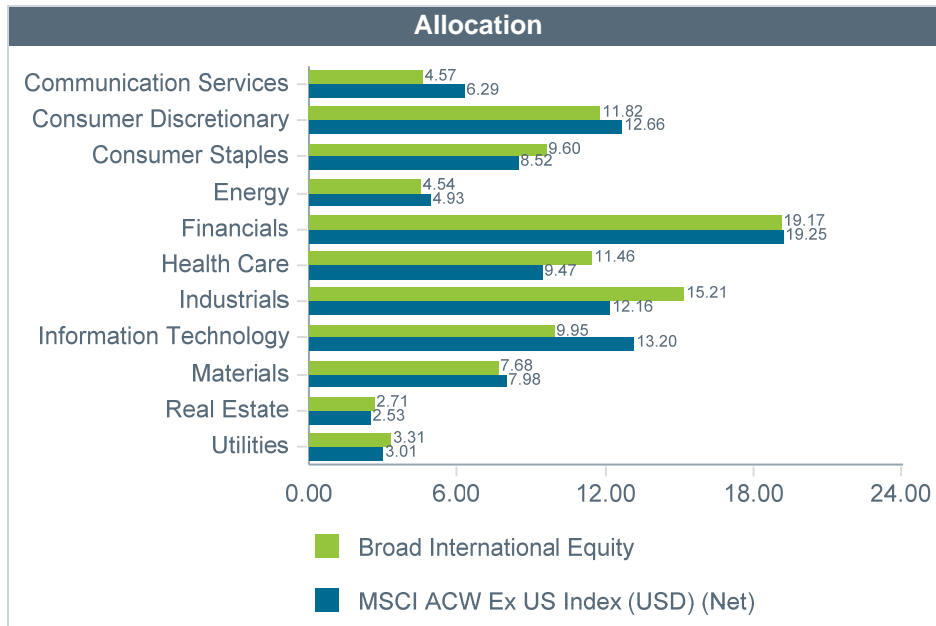
Performance shown is net of fees. Parentheses contain percentile ranks.



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

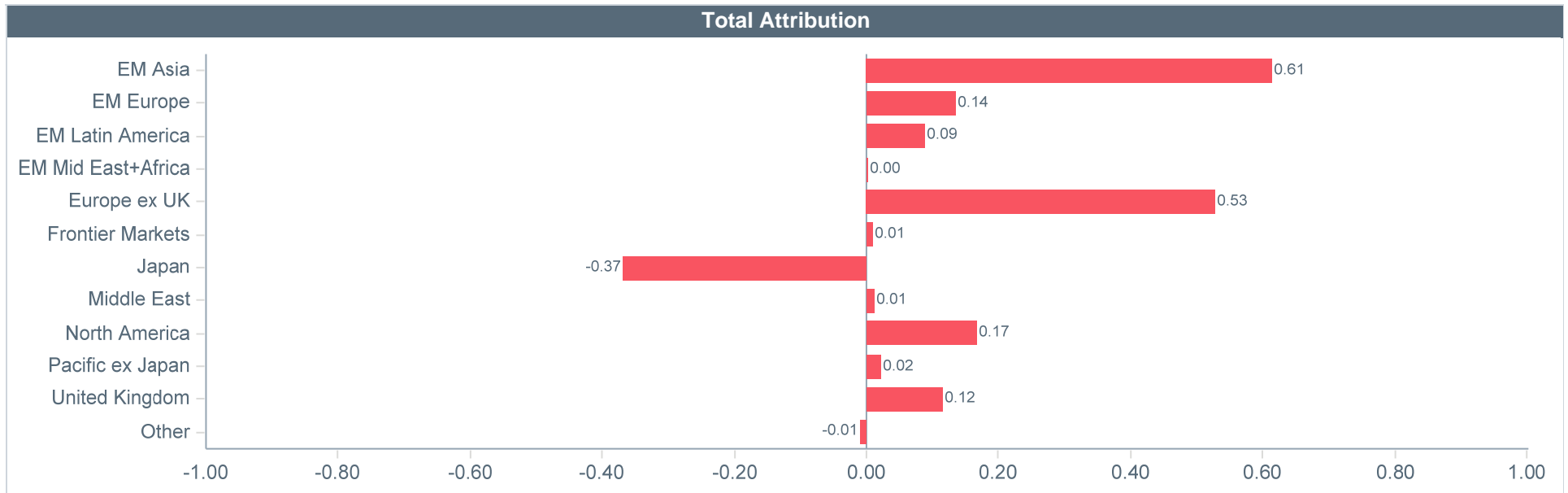
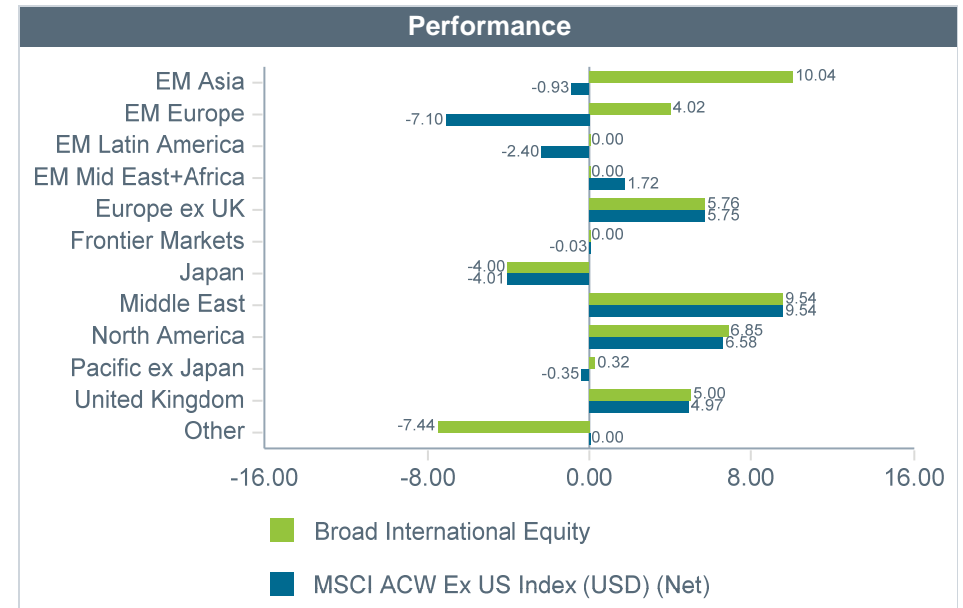
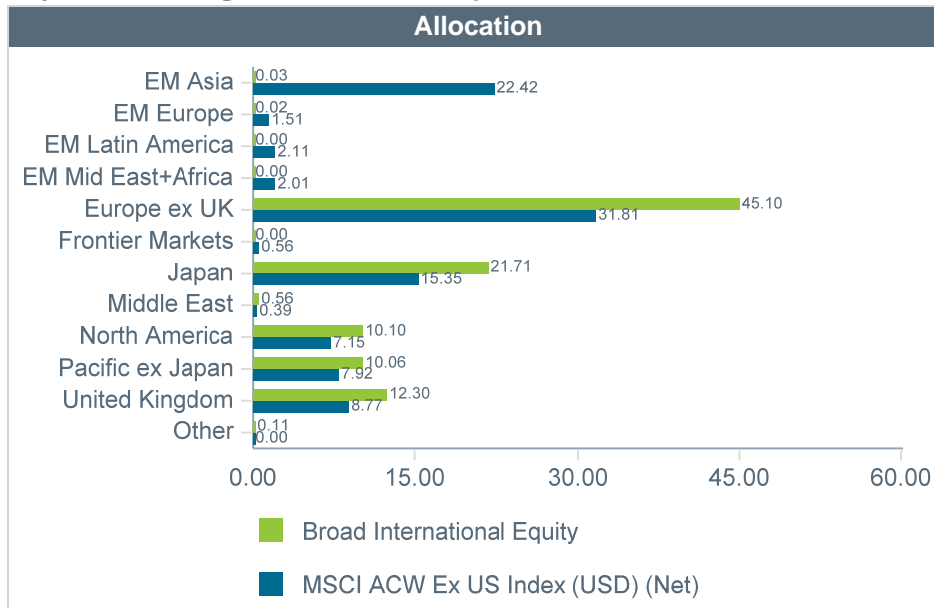
North Dakota Board of University and School Lands  
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)  
Buy and Hold Sector Attribution Graph

1 Quarter Ending December 31, 2021



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 December 31, 2021



Allocation to "Other" consists Luxembourg.

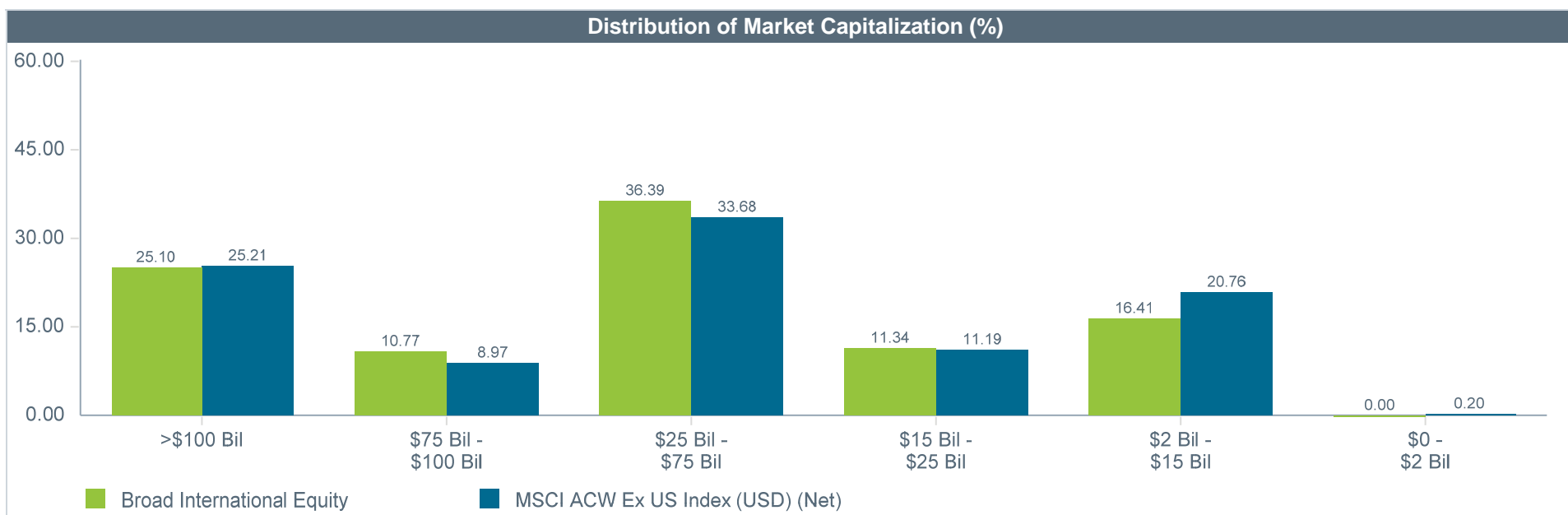


North Dakota Board of University and School Lands  
Broad International Equity vs. MSCI ACW Ex US Index (USD) (Net)  
Portfolio Characteristics

As of December 31, 2021

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Nestle SA, Cham Und Vevey	2.06	1.45	0.61	15.75
ASML Holding NV	1.74	1.22	0.52	7.64
Roche Holding AG	1.53	1.08	0.45	13.48
Lvmh Moet Hennessy Louis Vuitton	1.18	0.85	0.33	15.54
Novartis AG	1.01	0.71	0.30	6.96
Toyota Motor Corp	1.00	0.71	0.29	1.99
Novo Nordisk A/S	0.99	0.70	0.29	16.11
Astrazeneca PLC	0.93	0.67	0.26	-2.85
Sony Group Corporation	0.81	0.58	0.23	12.59
Shopify Inc	0.80	0.57	0.23	1.22
% of Portfolio	12.05	8.54	3.51	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	82,812	96,100
Median Mkt. Cap (\$M)	14,410	10,164
Price/Earnings Ratio	16.42	14.96
Price/Book Ratio	2.71	2.73
5 Yr. EPS Growth Rate (%)	14.37	14.92
Current Yield (%)	2.71	2.61
Beta (5 Years, Monthly)	1.02	1.00
Number of Securities	971	2,332

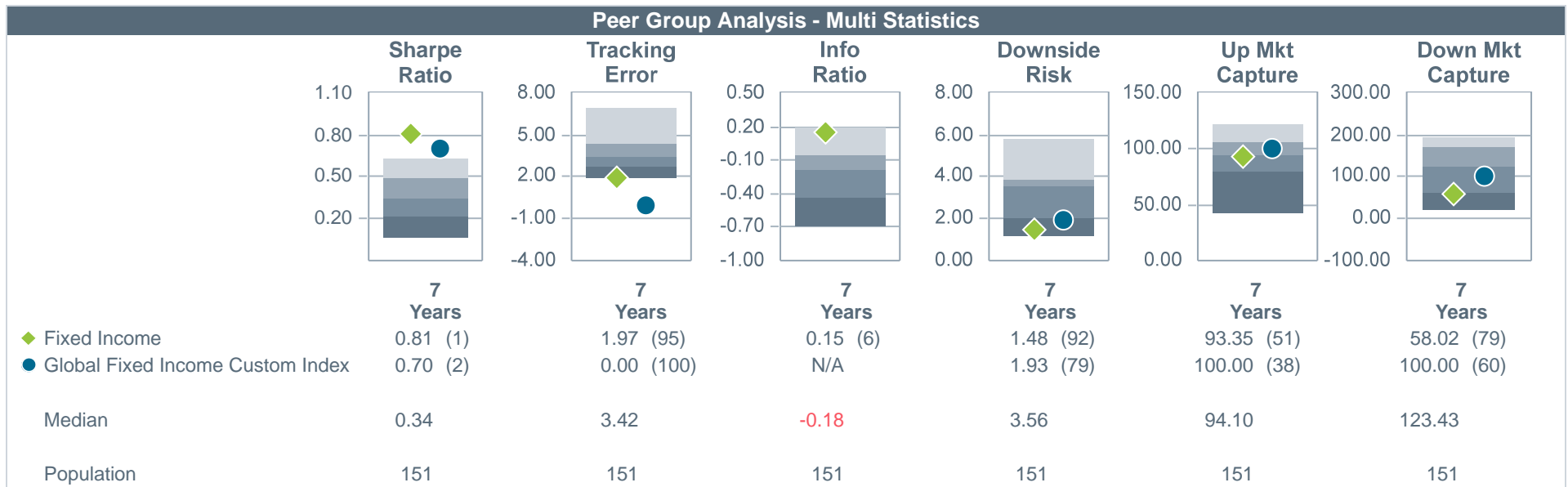
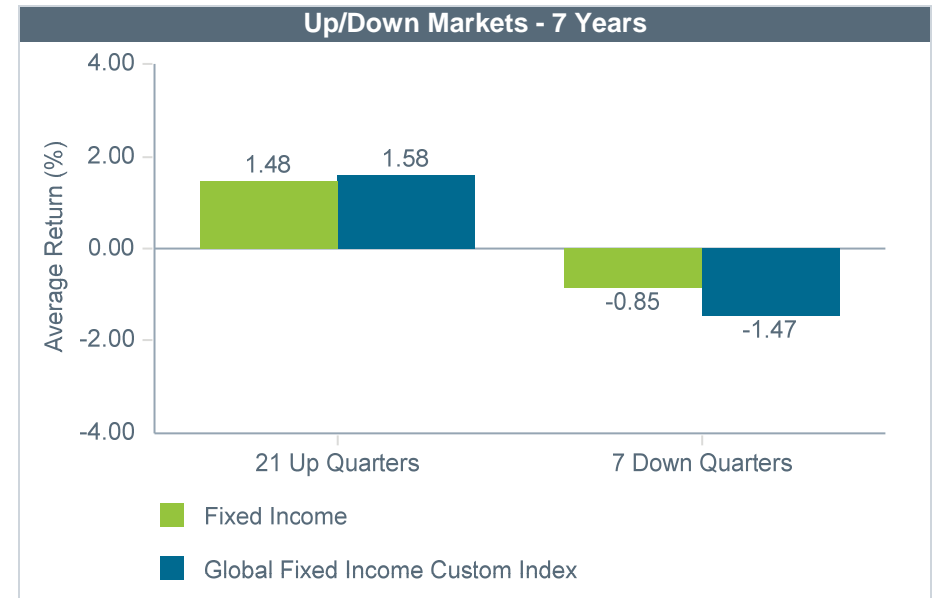
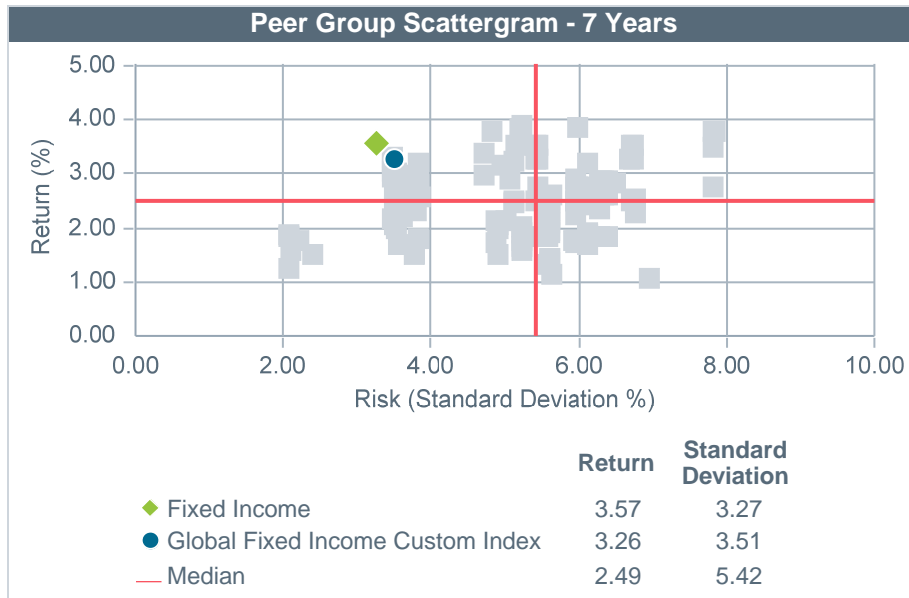


North Dakota Board of University and School Lands  
IM Global Fixed Income (MF)  
Peer Group Analysis

As of December 31, 2021



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

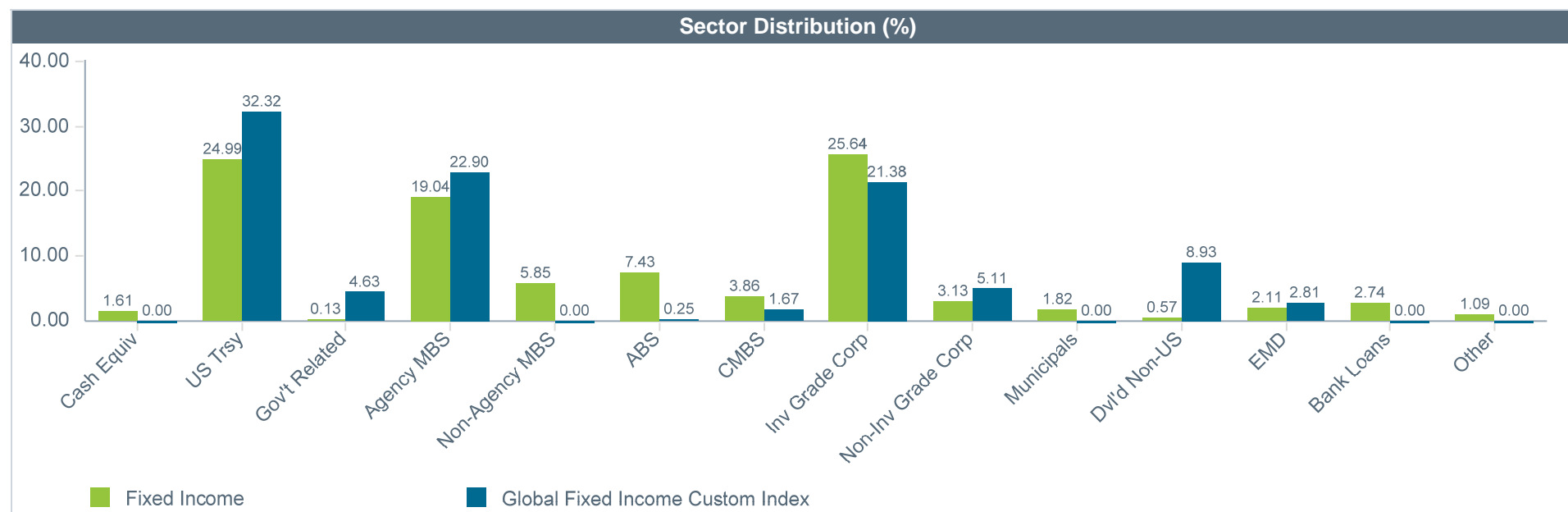


Performance shown is net of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

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

As of December 31, 2021

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.74	6.54
Avg. Maturity	7.87	8.60
Avg. Quality	A2	N/A
Coupon Rate (%)	2.67	2.77
Yield To Worst (%)	2.15	2.08
Current Yield (%)	2.75	N/A



FLP Bank Loans, AG Direct Lending Fund III LP, AG Direct Lending Fund IV LP, ND Land - PTF Cash (SA), Schrodgers Flexible Secured Income and Ares Pathfinder Fund LP are excluded from portfolio characteristics and sector distribution. Allocation to "Other" consists of CDOs and Convertibles.

North Dakota Board of University and School Lands  
Alternative Investment Private Credit Fund Performance Listing

As of December 31, 2021

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
AG Direct Lending Fund III, LP	2018	Private Credit - Direct Lending	150,000,000	138,000,000	24,693,198	152,789,457	11.01	N/A	4.21	1.29
AG Direct Lending Fund IV, LP	2020	Private Credit - Direct Lending	100,000,000	75,648,632	1,265,875	79,920,053	N/M	N/A	N/M	1.07
Apollo Accord Fund IV, L.P.	2020	Private Credit - Opportunistic Credit	100,000,000	18,500,000	15,287,460	6,855,845	30.54	N/A	0.00	1.20
Ares Pathfinder Fund, LP	2020	Private Credit - Specialty Finance	100,000,000	35,640,801	630,991	41,993,165	N/M	N/A	N/M	1.20
Owl Rock Diversified Lending 2020 Fund, LP	2020	Private Credit - Distressed/Special Situations	100,000,000	43,500,000	0	43,624,967	N/M	N/A	N/M	1.00
Varde Dislocation Fund, LP	2020	Private Credit - Distressed/Special Situations	100,000,000	57,500,000	100,849	65,537,857	16.31	N/A	0.00	1.14
			<b>650,000,000</b>	<b>368,789,433</b>	<b>41,978,373</b>	<b>390,721,344</b>	<b>13.57</b>		<b>3.32</b>	<b>1.17</b>

Certain valuations (marked with a \*\*) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the Barclays US Agg Bond Index assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin.



North Dakota Board of University and School Lands  
Alternative Investment Private Equity Fund Performance Listing

As of December 31, 2021

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Grosvenor - BUSL, LP	2021	Private Equity - Multi-Stage	130,000,000	20,029,609	0	22,570,089	N/M	N/A	N/M	1.13
Grosvenor Secondary Opportunities Fund III, LP	2021	Private Equity - Fund of Funds	150,000,000	29,022,250	0	30,833,368	N/M	N/A	N/M	1.06
			<b>280,000,000</b>	<b>49,051,859</b>	<b>0</b>	<b>53,403,457</b>				<b>1.09</b>

Certain valuations (marked with a "\*\*") are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the Russell 3000 Index assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin.





# Investment Manager Profiles



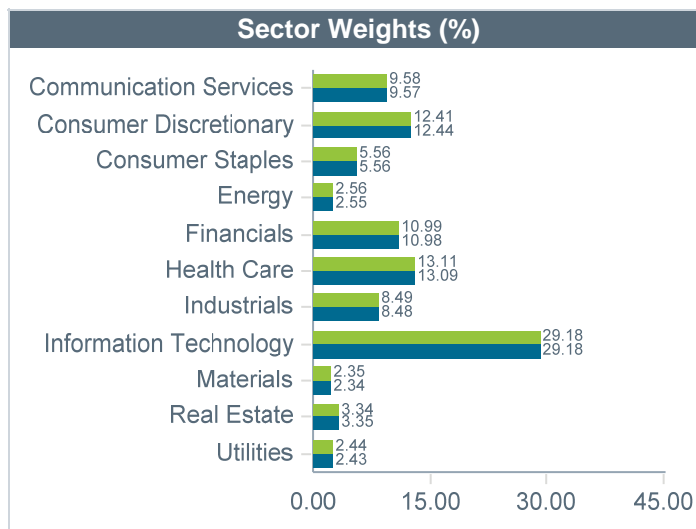
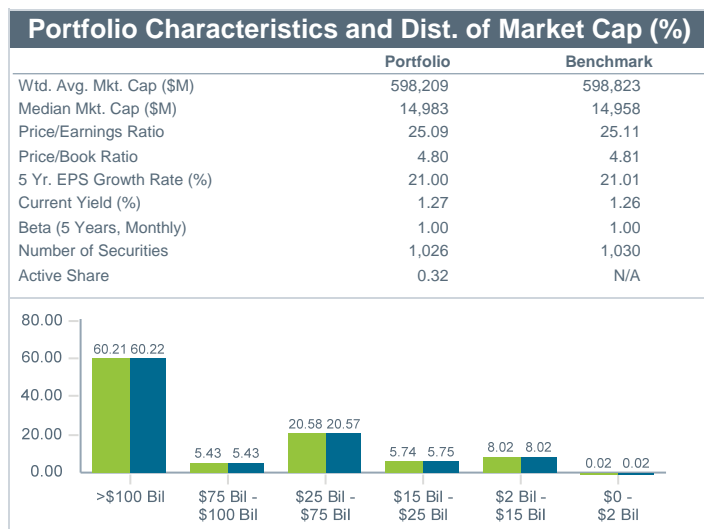
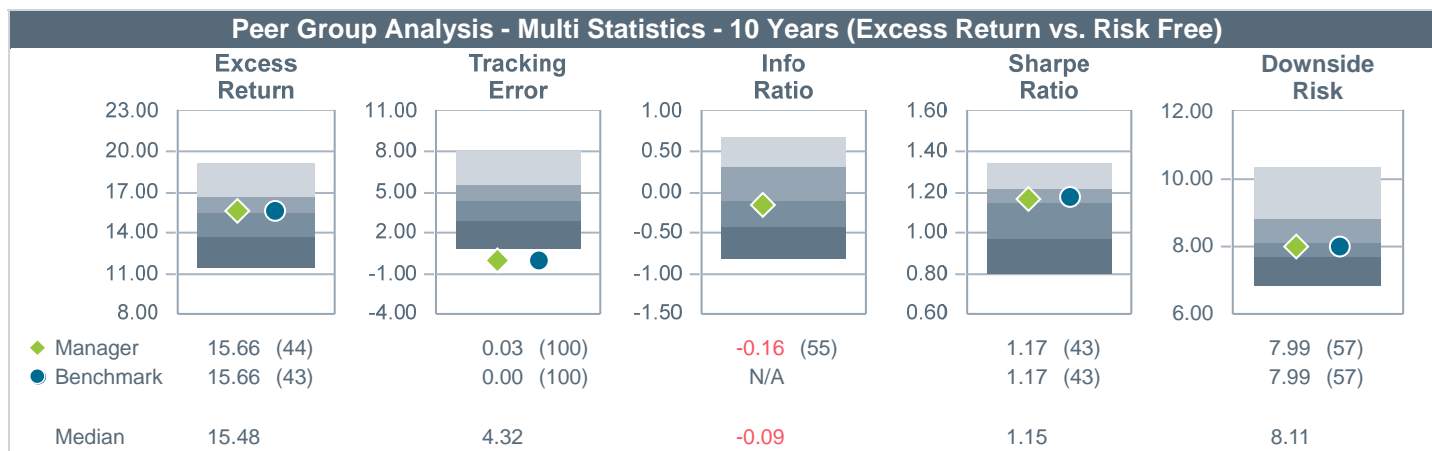
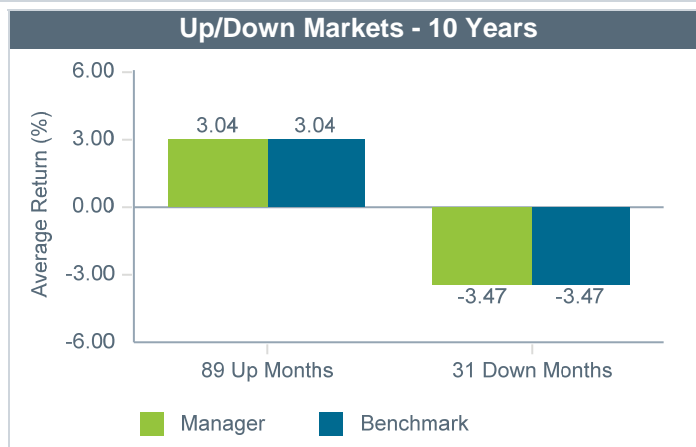
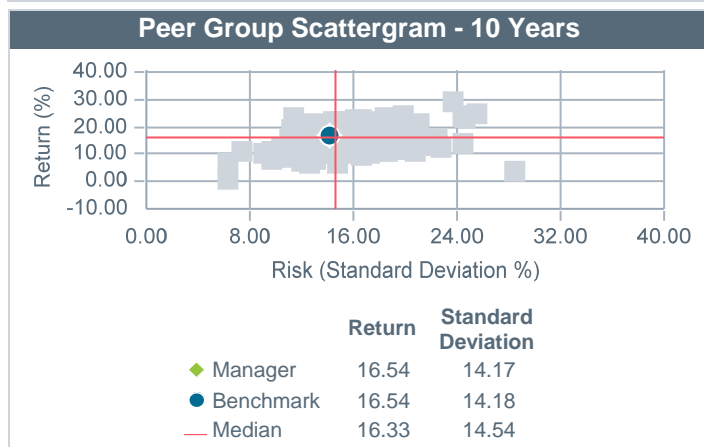
Manager: State Street Russell 1000 Index Lending (CF)

As of December 31, 2021

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	2020	2019	2018	2017	2016
Manager	9.78	26.45	26.18	18.42	14.84	16.54	20.91	31.42	-4.77	21.70	12.03
Benchmark	9.78	26.45	26.21	18.43	14.84	16.54	20.96	31.43	-4.78	21.69	12.05
Difference	0.00	0.00	-0.03	-0.01	0.00	0.00	-0.05	-0.01	0.01	0.01	-0.02
Peer Group Median	9.44	27.35	25.63	18.03	14.51	16.33	18.06	30.34	-4.99	21.76	11.18
Rank	45	57	41	46	44	45	36	40	48	51	41
Population	814	811	797	779	754	702	921	993	1,067	1,116	1,192



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

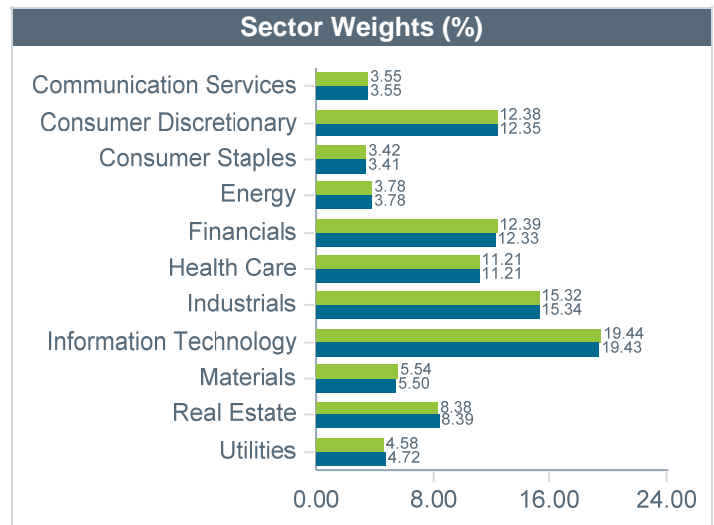
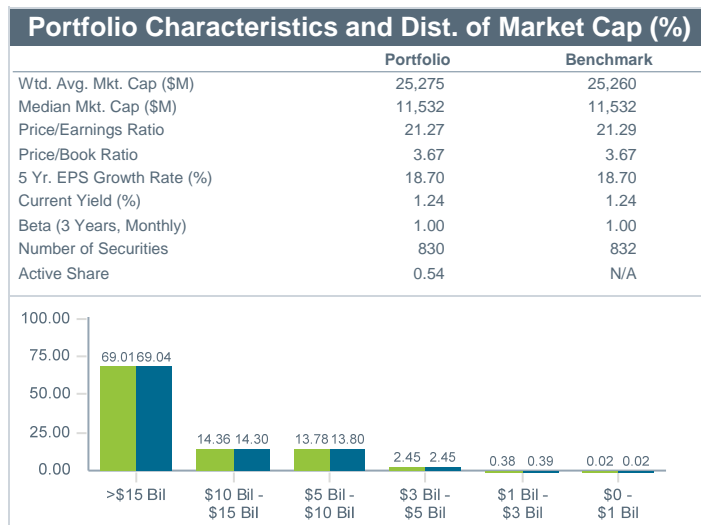
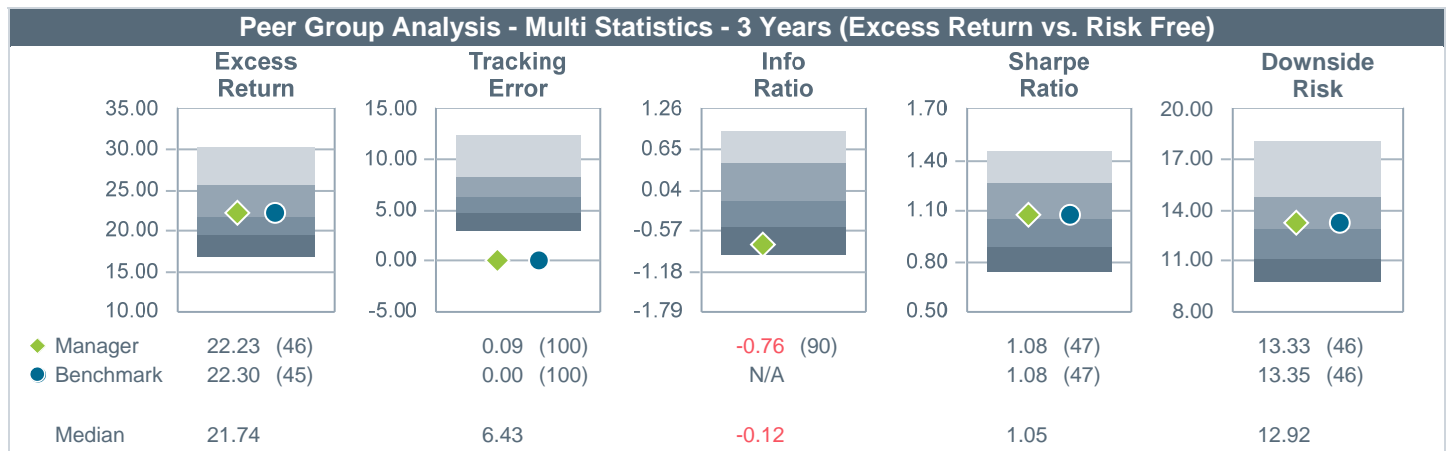
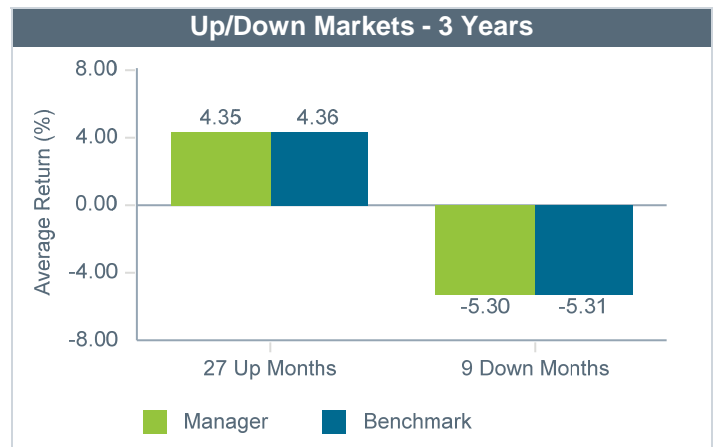
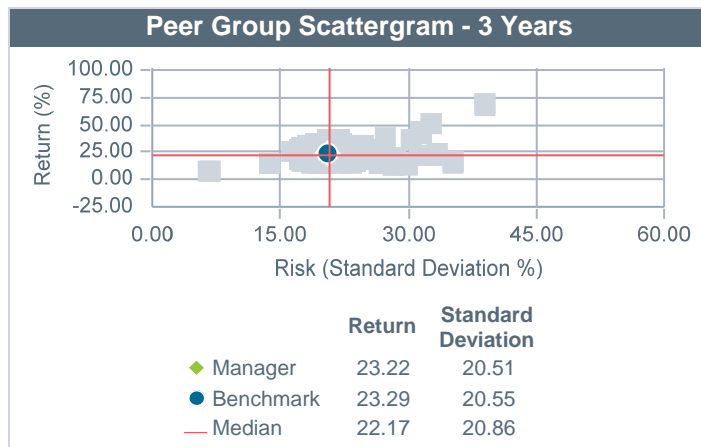
Manager: State Street Russell Mid Cap Index (SA)

As of December 31, 2021

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	2020	2019	2018	2017	2016
Manager	6.44	22.58	23.22	N/A	N/A	N/A	17.05	30.38	-8.97	N/A	N/A
Benchmark	6.44	22.58	23.29	15.10	12.23	14.91	17.10	30.54	-9.06	18.52	13.80
Difference	0.00	0.00	-0.07	N/A	N/A	N/A	-0.05	-0.16	0.09	N/A	N/A
Peer Group Median	6.70	22.08	22.17	14.40	12.03	14.28	17.39	30.27	-9.95	18.78	11.44
Rank	53	48	45	N/A	N/A	N/A	51	49	44	N/A	N/A
Population	871	847	783	716	620	515	838	857	891	861	799



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

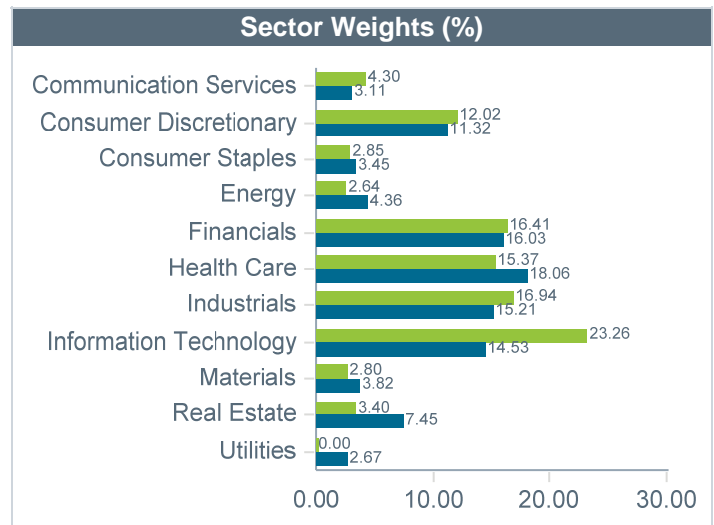
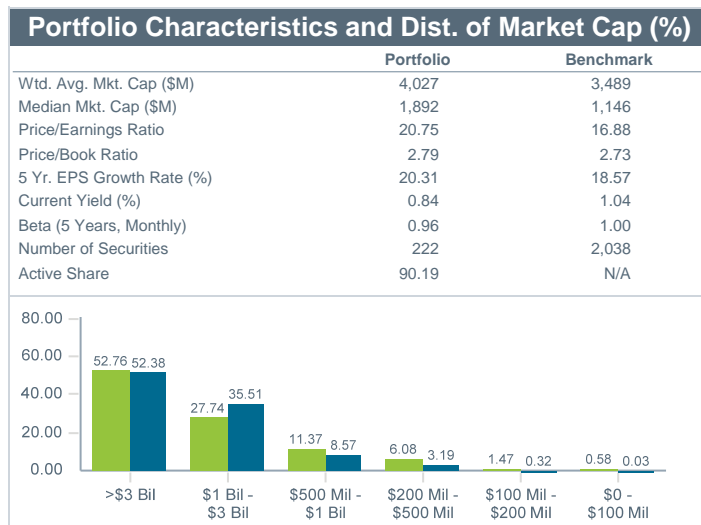
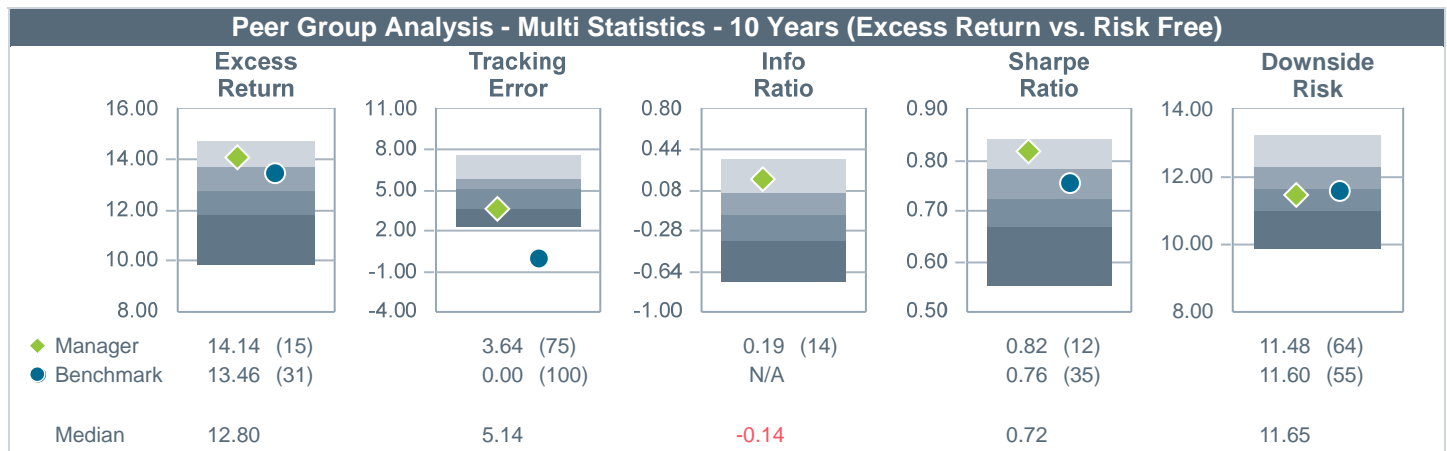
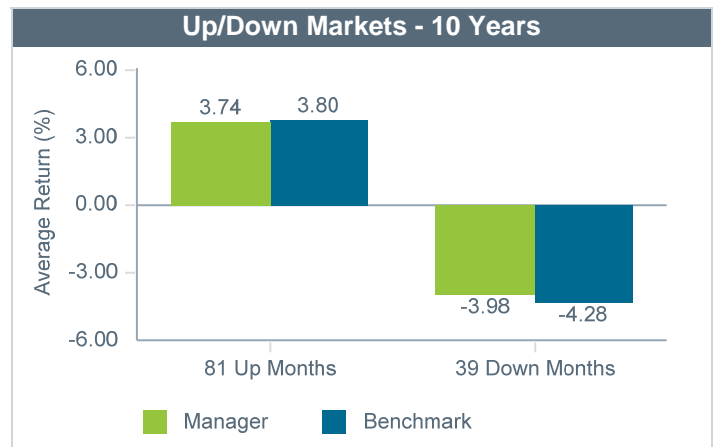
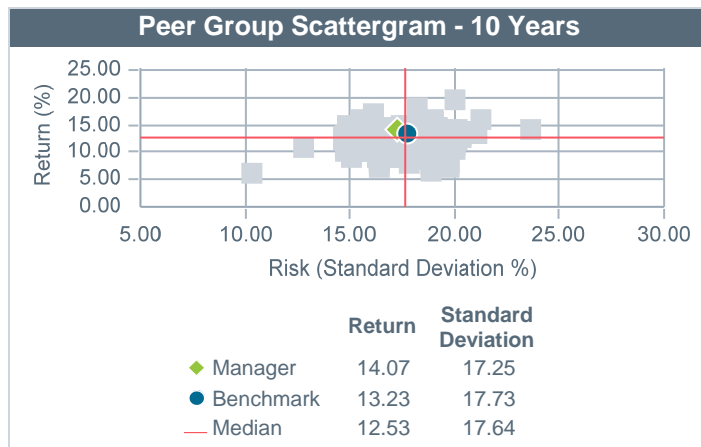
Manager: NT Small Cap Core (SA)

As of December 31, 2021

Benchmark: Russell 2000 Index

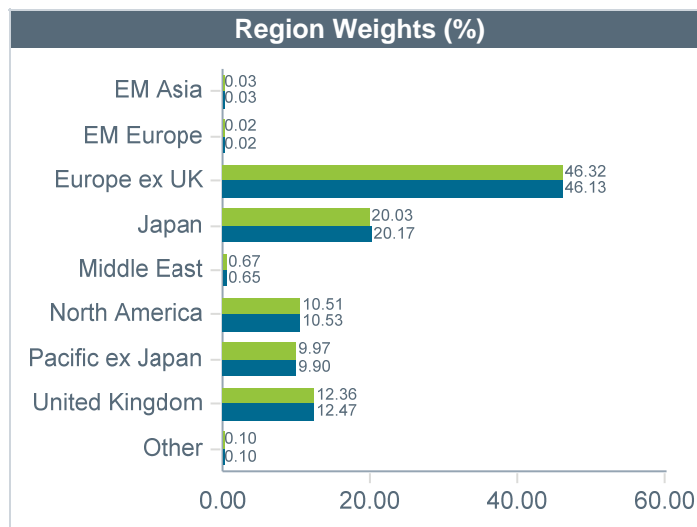
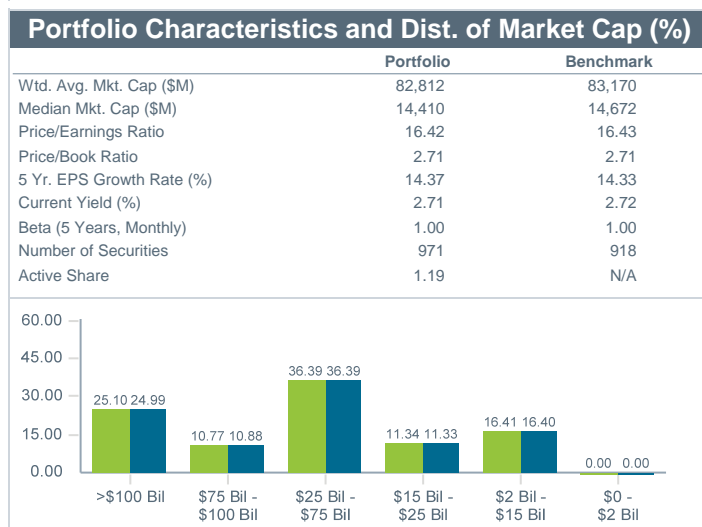
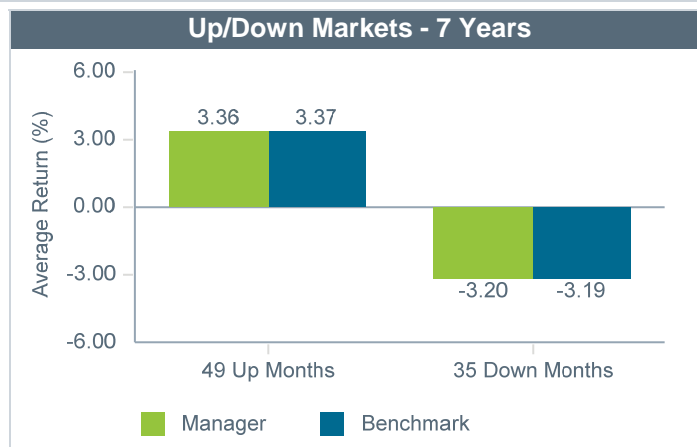
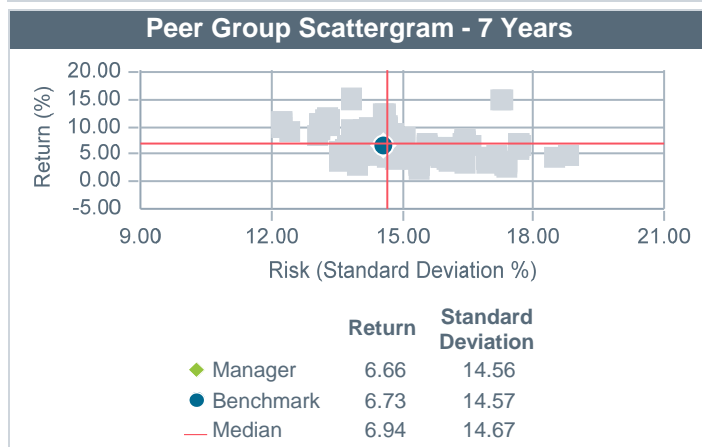
Peer Group: IM U.S. Small Cap Core Equity (MF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	1.23	18.76	21.91	15.31	12.39	14.07	23.90	23.13	-7.63	21.82	18.20
Benchmark	2.14	14.82	20.02	12.02	10.76	13.23	19.96	25.53	-11.01	14.65	21.31
Difference	-0.91	3.94	1.89	3.29	1.63	0.84	3.94	-2.40	3.38	7.17	-3.11
Peer Group Median	5.93	24.53	19.55	10.98	10.11	12.53	10.36	23.87	-12.66	12.38	21.34
Rank	98	81	18	2	6	12	8	59	7	2	79
Population	754	744	709	641	536	432	764	784	822	818	749



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

	Performance										
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	3.13	12.63	14.01	9.57	6.66	N/A	7.52	22.38	-14.16	24.15	2.66
Benchmark	3.14	12.62	14.07	9.63	6.73	7.84	7.59	22.49	-14.09	24.21	2.75
Difference	-0.01	0.01	-0.06	-0.06	-0.07	N/A	-0.07	-0.11	-0.07	-0.06	-0.09
Peer Group Median	2.92	9.48	16.08	10.75	6.94	7.94	14.59	25.95	-15.18	26.76	0.06
Rank	42	23	64	63	55	N/A	76	72	38	70	16
Population	384	367	305	261	217	194	347	328	318	296	267



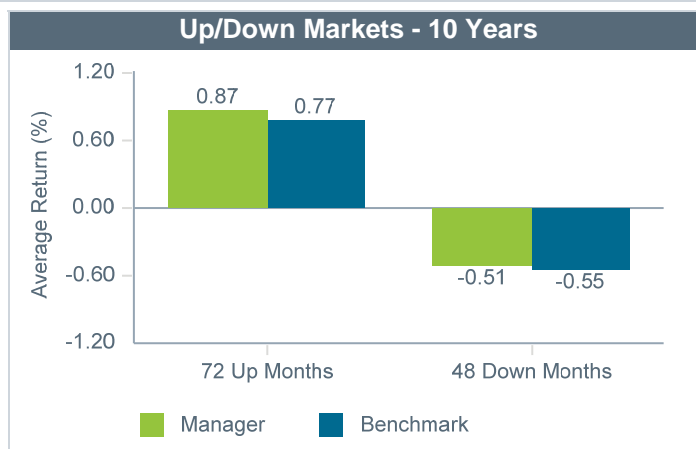
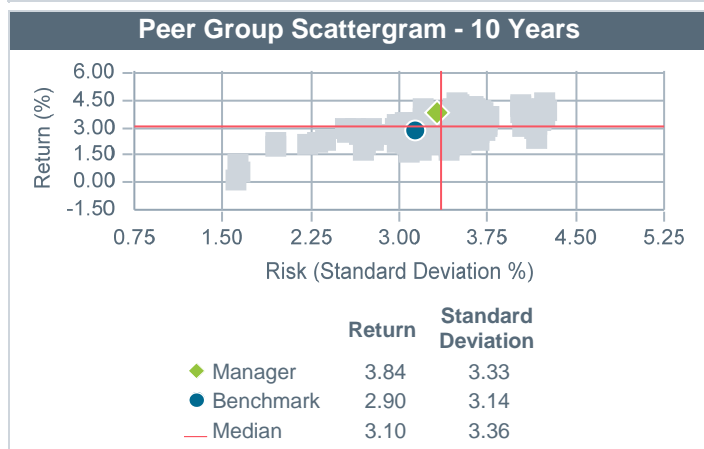
Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of Luxembourg.



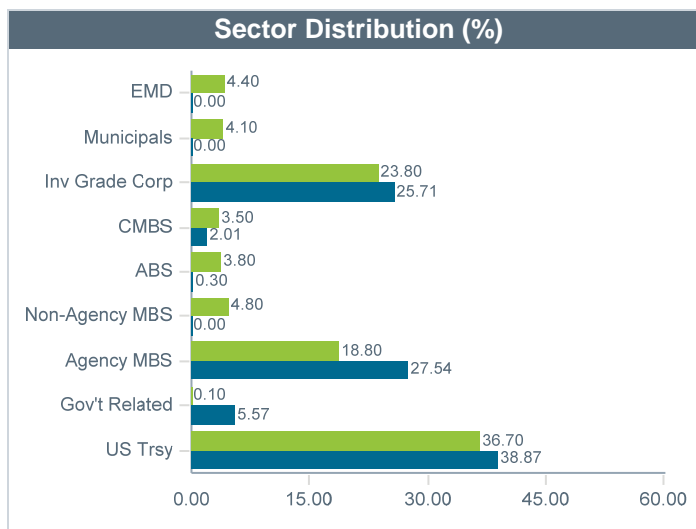
**Manager: Payden & Rygel Long Term (SA)**
**As of December 31, 2021**
**Benchmark:** Bloomberg US Agg Bond Index

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

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	0.15	-0.69	5.34	4.21	3.64	3.84	7.58	9.42	0.16	4.99	3.83
Benchmark	0.01	-1.55	4.79	3.57	3.00	2.90	7.51	8.72	0.01	3.54	2.65
Difference	0.14	0.86	0.55	0.64	0.64	0.94	0.07	0.70	0.15	1.45	1.18
Peer Group Median	-0.13	-1.29	5.18	3.72	3.08	3.10	8.18	8.78	-0.63	3.58	2.85
Rank	8	22	44	17	12	7	70	30	12	5	21
Population	501	494	466	416	360	306	491	513	508	499	470



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	6.14	6.78
Spread Duration	3.81	N/A
Avg. Maturity	8.33	8.71
Avg. Quality	Aa3	Aa1/Aa2
Yield To Maturity (%)	1.93	1.76
Coupon Rate (%)	2.64	2.43
Current Yield (%)	2.46	N/A
Holdings Count	263	12,350



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



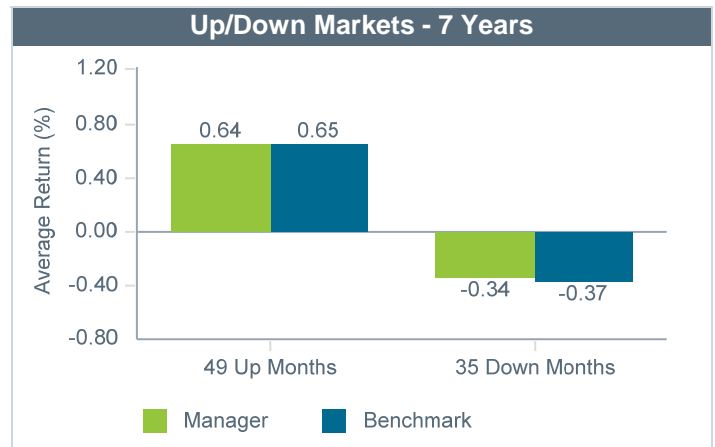
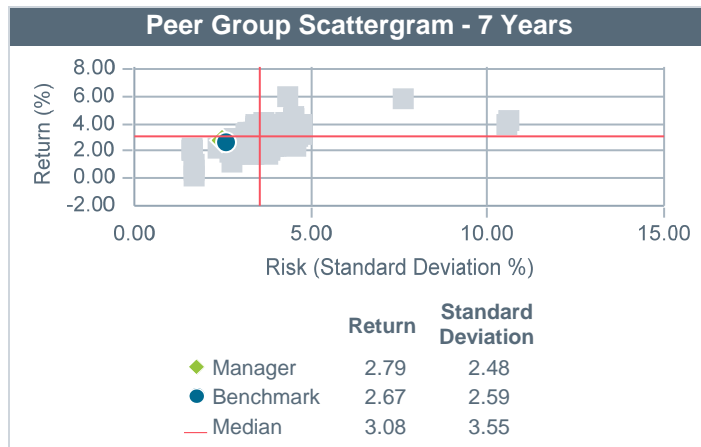
Manager: JP Morgan Core Bond (SA)

As of December 31, 2021

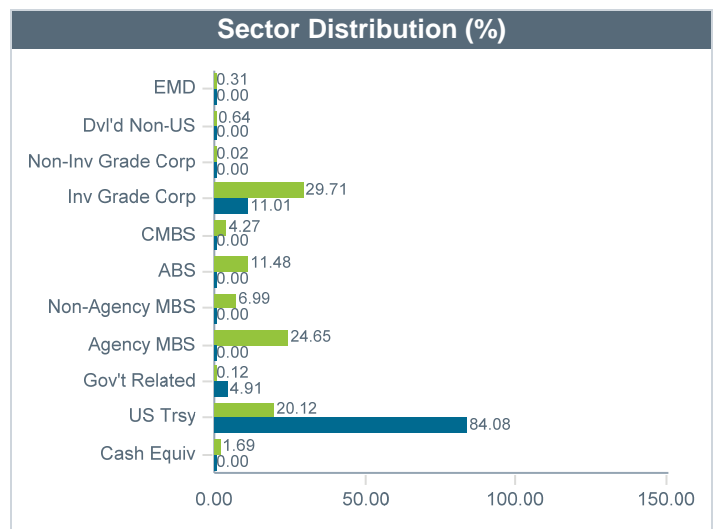
Benchmark: JP Morgan FI Custom Index

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

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	0.00	-0.28	4.20	3.25	2.79	N/A	6.31	6.70	1.01	2.71	1.88
Benchmark	0.01	-0.48	4.20	3.11	2.67	2.48	6.43	6.80	0.88	2.14	2.08
Difference	-0.01	0.20	0.00	0.14	0.12	N/A	-0.12	-0.10	0.13	0.57	-0.20
Peer Group Median	-0.13	-1.29	5.18	3.72	3.08	3.10	8.18	8.78	-0.63	3.58	2.85
Rank	23	11	90	78	74	N/A	91	93	3	88	91
Population	501	494	466	416	360	306	491	513	508	499	470



Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.96	1.08
Spread Duration	3.94	1.08
Avg. Maturity	7.78	1.02
Avg. Quality	A2	Aa1
Yield To Maturity (%)	2.03	0.44
Coupon Rate (%)	2.31	N/A
Current Yield (%)	2.75	N/A
Holdings Count	2,839	1,609



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

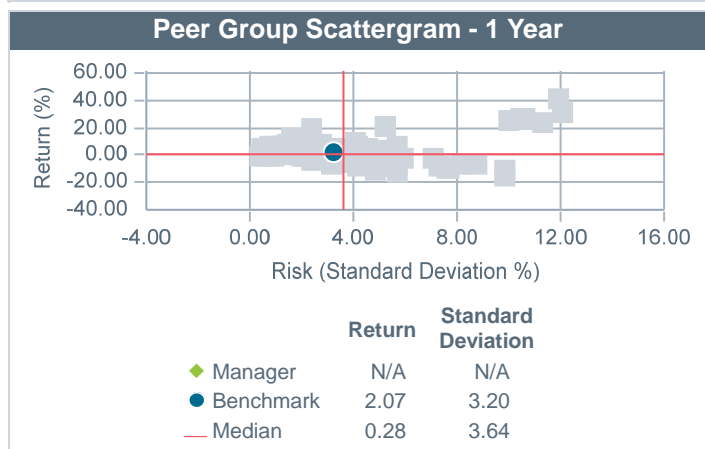
**Manager:** Loomis Sayles Credit Asset (SA)

**As of December 31, 2021**

**Benchmark:** Loomis Sayles CA Custom Index

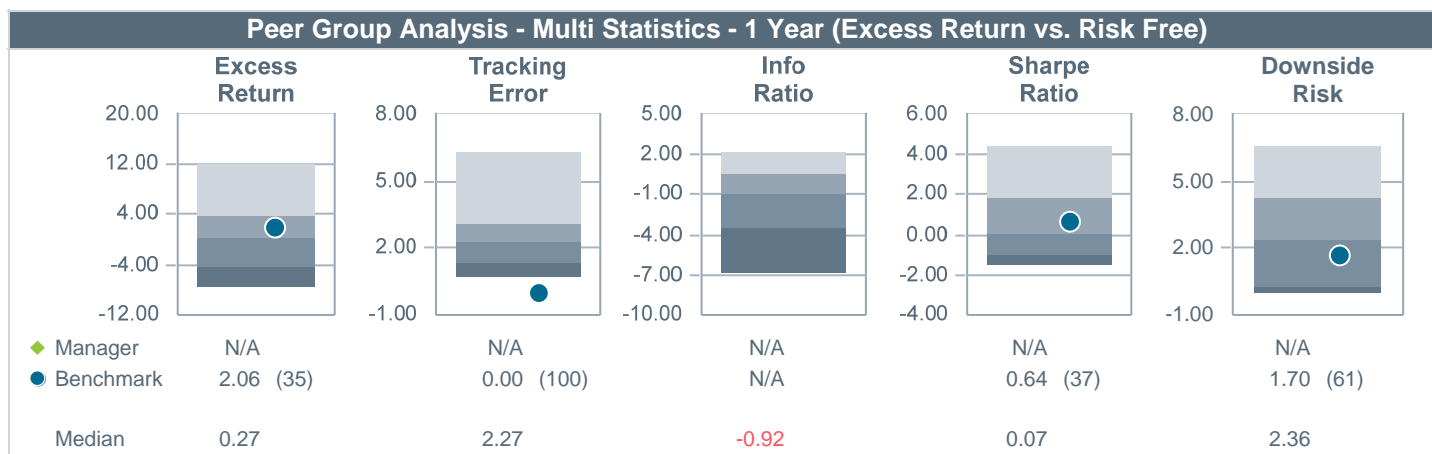
**Peer Group:** IM Global Fixed Income (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benchmark	0.48	2.07	7.45	5.30	4.92	5.26	7.54	13.03	-1.64	6.11	9.83
Difference	-0.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Peer Group Median	-0.19	0.28	6.15	4.81	3.82	3.87	8.61	9.48	-1.81	7.67	5.95
Rank	32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Population	200	200	195	190	181	144	224	239	255	263	277

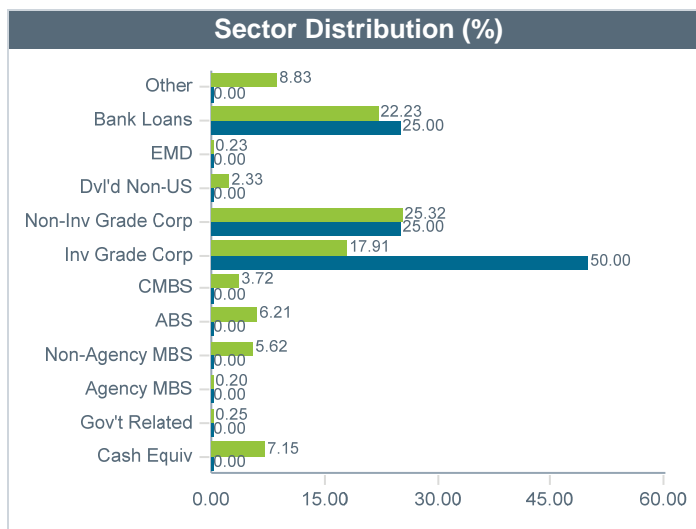


**Up/Down Markets - 1 Year**

Data is currently unavailable.



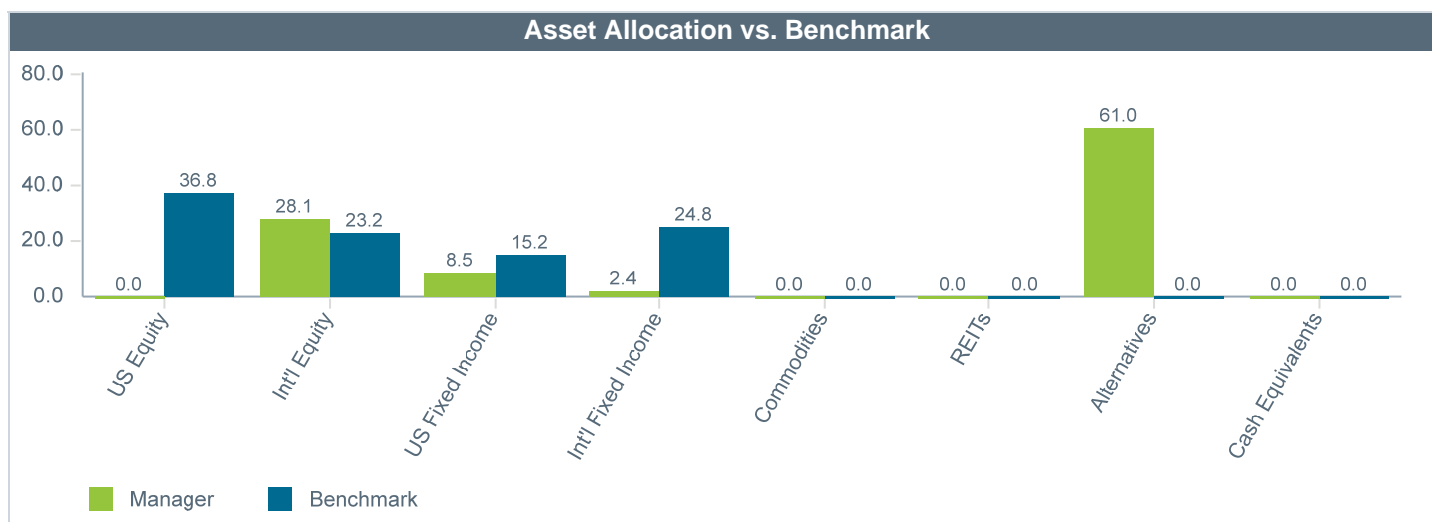
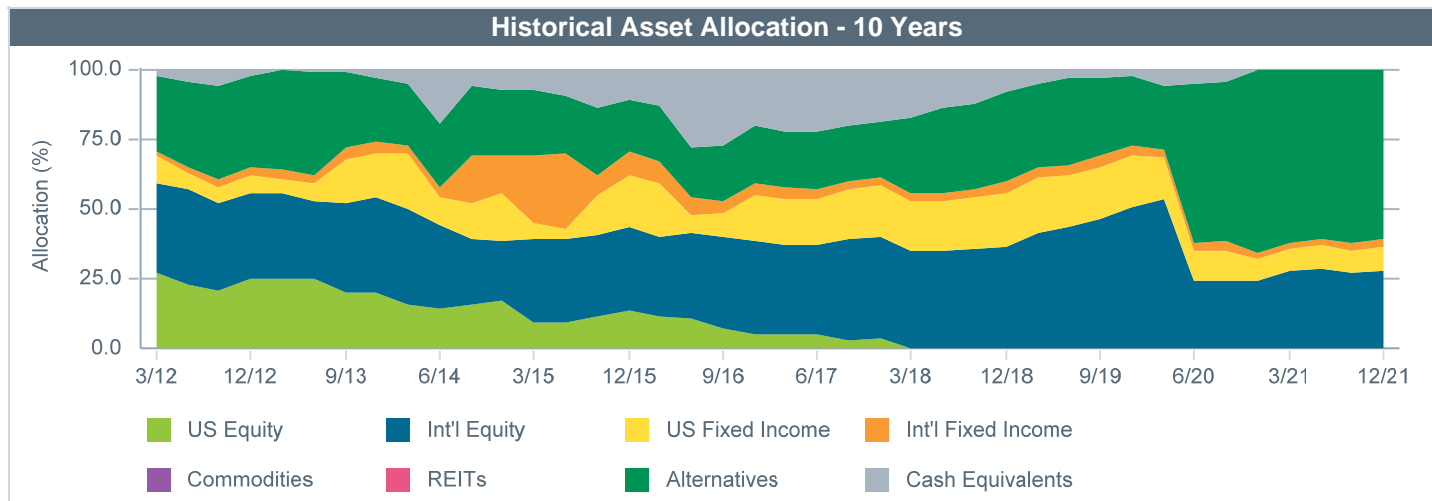
Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	3.56	5.36
Spread Duration	4.81	N/A
Avg. Maturity	6.52	8.99
Avg. Quality	Ba1	Ba1
Yield To Maturity (%)	3.59	3.49
Coupon Rate (%)	4.01	4.17
Current Yield (%)	3.80	N/A
Holdings Count	986	10,695



Performance shown is gross of fees and product specific prior to client inception. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Insufficient return data to calculate return statistic. Allocation to "Other" consists of Convertibles and CDO.



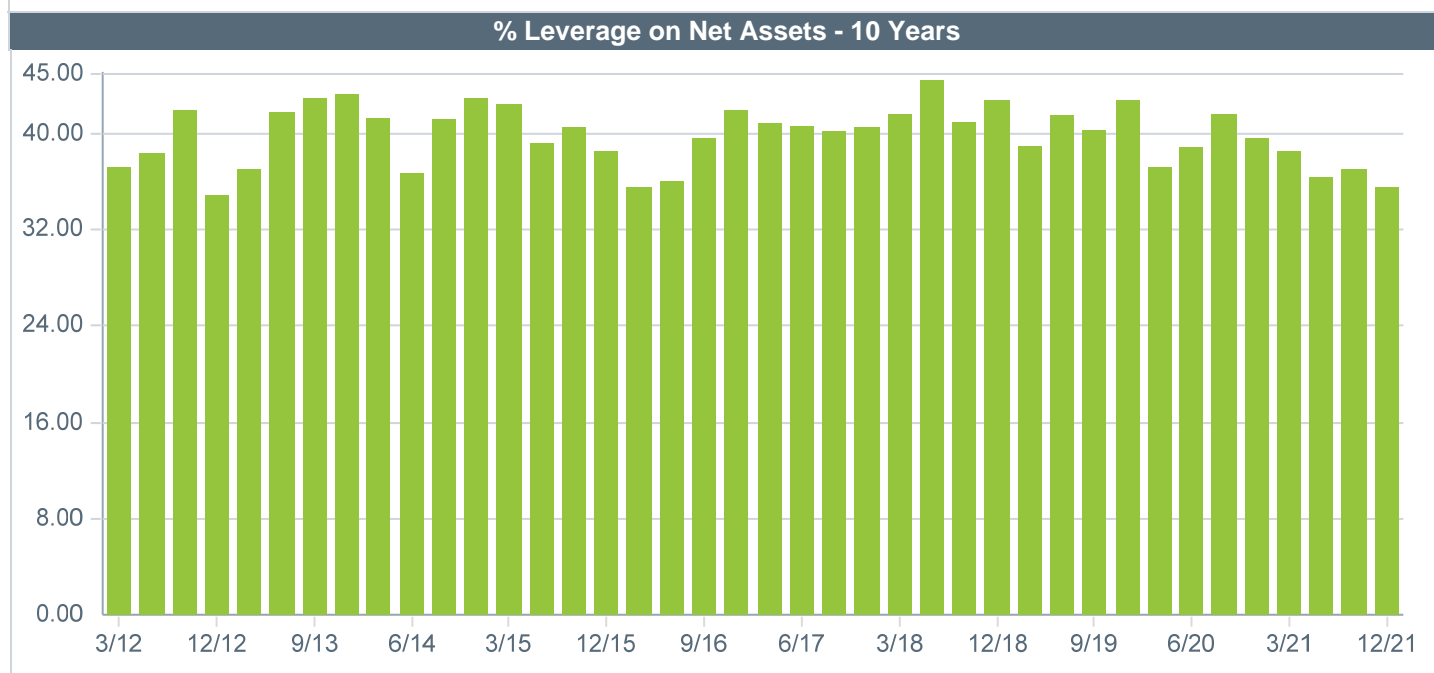
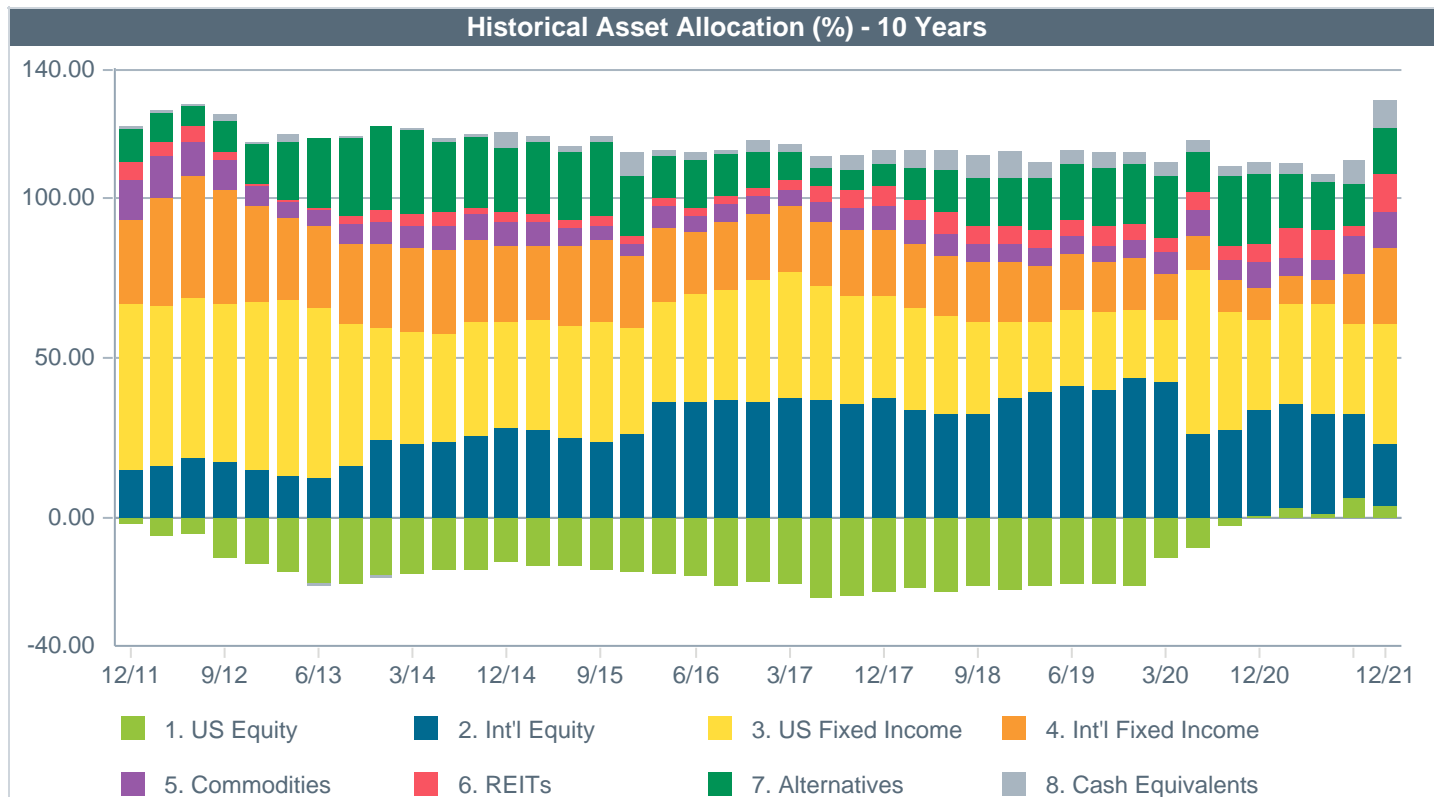
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	-0.48	2.96	3.87	3.70	2.48	3.88	-2.49	11.62	-5.35	13.04	3.40
Benchmark	3.73	8.78	13.72	10.11	7.59	7.91	14.05	18.55	-6.00	17.09	5.69
Difference	-4.21	-5.82	-9.85	-6.41	-5.11	-4.03	-16.54	-6.93	0.65	-4.05	-2.29



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	7.43	8.63	13.02	2.97	60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx	0.87
Sharpe Ratio	0.46	0.85	1.20	0.78	S&P 500 Index (Cap Wtd)	0.78
Downside Risk	5.15	5.30	7.81	1.64	Russell 2000 Index	0.72
Excess Return	3.46	7.39	15.64	2.28	MSCI EAFE Index (USD) (Net)	0.85
					MSCI Emg Mkts Index (USD) (Net)	0.85
					Bloomberg US Agg Bond Index	0.06
					Bloomberg US Trsy US TIPS Index	0.21
					Wilshire US REIT Index	0.55
					HFRI FOF Comp Index	0.78
					Bloomberg Cmdty Index (TR)	0.52
					ICE BofAML 3 Mo US T-Bill Index	-0.21
					Cons Price Index (Unadjusted)	0.02

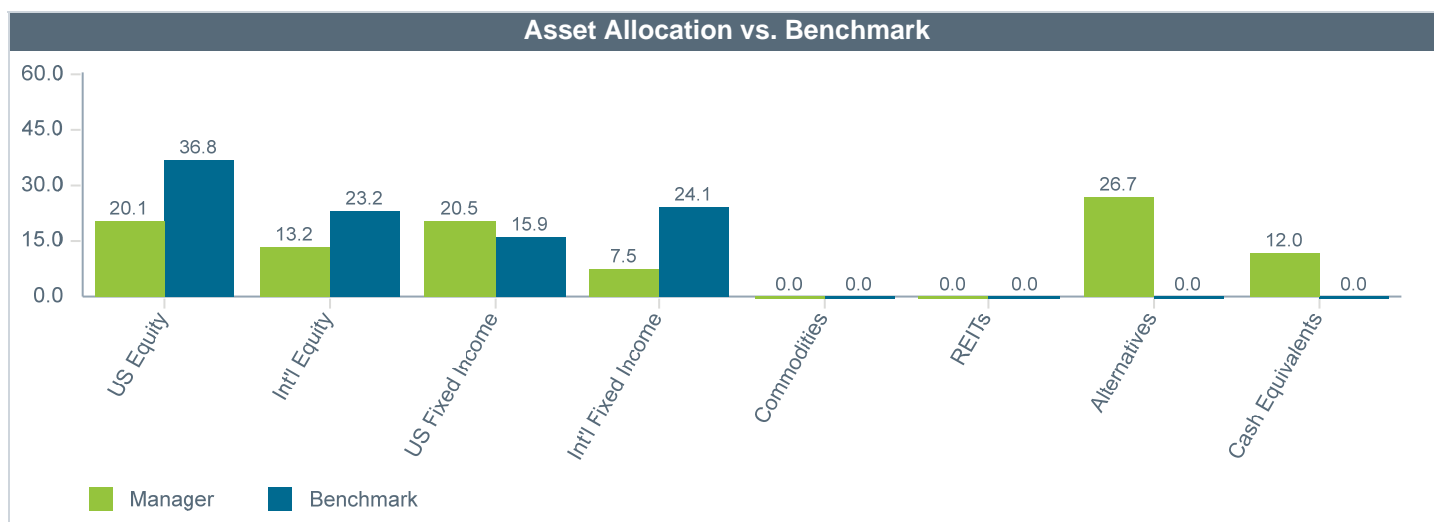
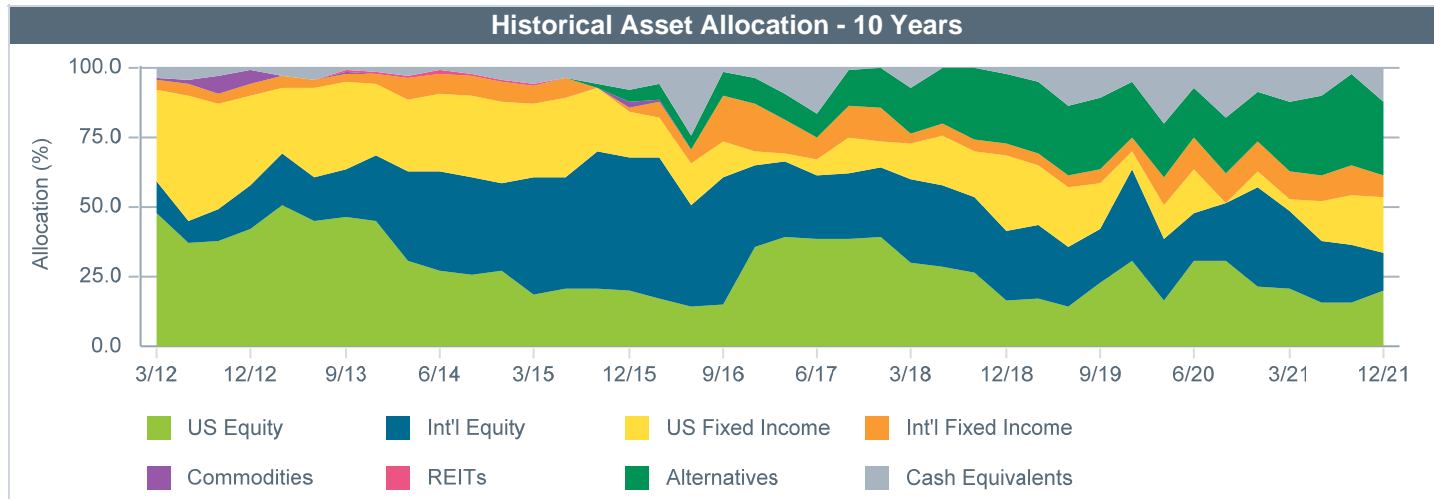
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Allocation to Int'l Eq includes Emg Mkts. Allocation to US Fixed Inc includes ABS/Struct'd Products and Hi Yld/Distr'd Debt. Allocation to Int'l Fixed Inc includes Emg Debt. Allocation to Alts includes 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	2020	2019	2018	2017	2016
Manager	3.17	15.51	9.14	6.46	4.63	4.07	4.59	7.62	-6.14	12.04	13.73
Benchmark	2.42	6.46	9.74	7.21	5.88	5.99	9.89	12.97	-1.62	8.94	6.47
Difference	0.75	9.05	-0.60	-0.75	-1.25	-1.92	-5.30	-5.35	-4.52	3.10	7.26



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 138.50% due to the use of 38.50% 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	2020	2019	2018	2017	2016
Manager	0.95	6.49	11.46	7.80	5.48	7.17	12.97	15.10	-9.48	16.12	0.11
Benchmark	3.56	7.76	13.40	9.97	7.44	7.60	14.53	18.17	-5.85	17.14	5.53
Difference	-2.61	-1.27	-1.94	-2.17	-1.96	-0.43	-1.56	-3.07	-3.63	-1.02	-5.42

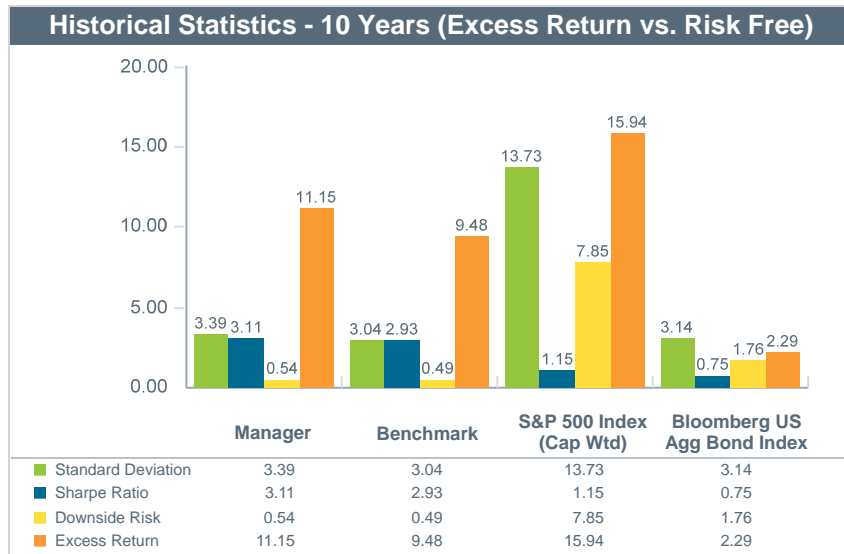


Historical Statistics - 10 Years					Actual Correlation - 10 Years	
	Manager	Benchmark	S&P 500 Index (Cap Wtd)	Bloomberg US Agg Bond Index		Actual Correlation
Standard Deviation	9.90	8.46	13.02	2.97	60% MSCI ACW (Net)/40% FTSE WGBI	0.91
Sharpe Ratio	0.68	0.83	1.20	0.78	S&P 500 Index (Cap Wtd)	0.90
Downside Risk	6.50	5.15	7.81	1.64	Russell 2000 Index	0.82
Excess Return	6.81	7.08	15.64	2.28	MSCI EAFE Index (USD) (Net)	0.89
					MSCI Emg Mkts Index (USD) (Net)	0.79
					Bloomberg US Agg Bond Index	0.08
					Bloomberg US Trsy US TIPS Index	0.26
					Wilshire US REIT Index	0.61
					HFRI FOF Comp Index	0.88
					Bloomberg Cmdty Index (TR)	0.49
					ICE BofAML 3 Mo US T-Bill Index	-0.25
					Cons Price Index (Unadjusted)	0.06

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Performance shown for PineBridge Dyn AA;Inst (PDAIX) prior to April 2016 is represented by PineBridge Dynamic Asset Allocation (CF).

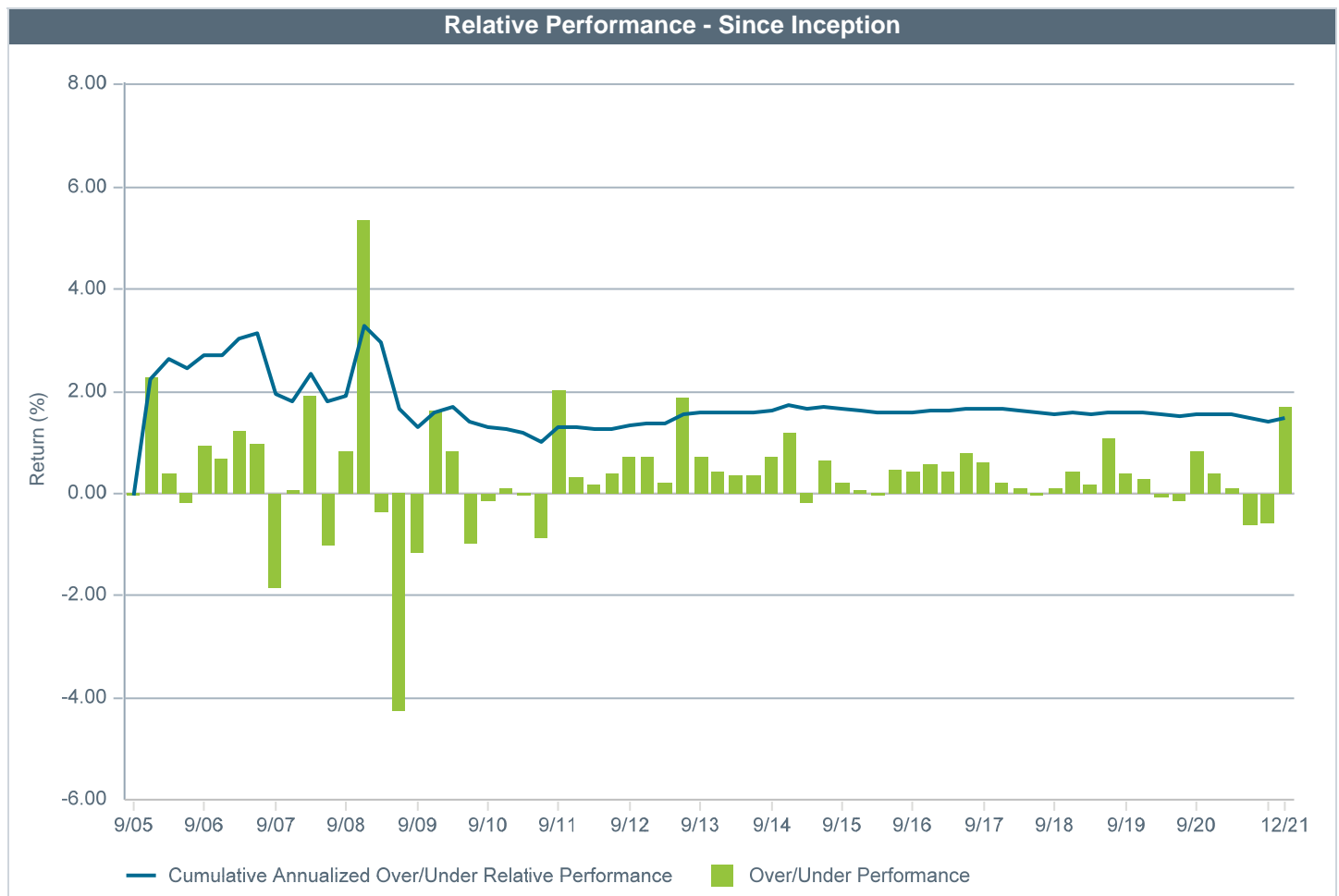


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	9.80	22.87	10.48	10.05	10.91	12.25	2.18	7.40	8.99	9.84	10.38
Benchmark	7.97	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	7.62	8.77
Difference	1.83	0.70	1.28	1.34	1.31	1.80	0.99	2.06	0.64	2.22	1.61



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.96
S&P 500 Index (Cap Wtd)	-0.05
Russell 2000 Index	-0.17
MSCI EAFE Index (USD) (Net)	-0.11
MSCI Emg Mkts Index (USD) (Net)	-0.30
Bloomberg US Agg Bond Index	-0.33
Bloomberg US Trsy US TIPS Index	-0.30
Wilshire US REIT Index	0.15
HFRI FOF Comp Index	-0.18
Bloomberg Cmdb Index (TR)	-0.13
ICE BofAML 3 Mo US T-Bill Index	-0.40
Cons Price Index (Unadjusted)	0.12





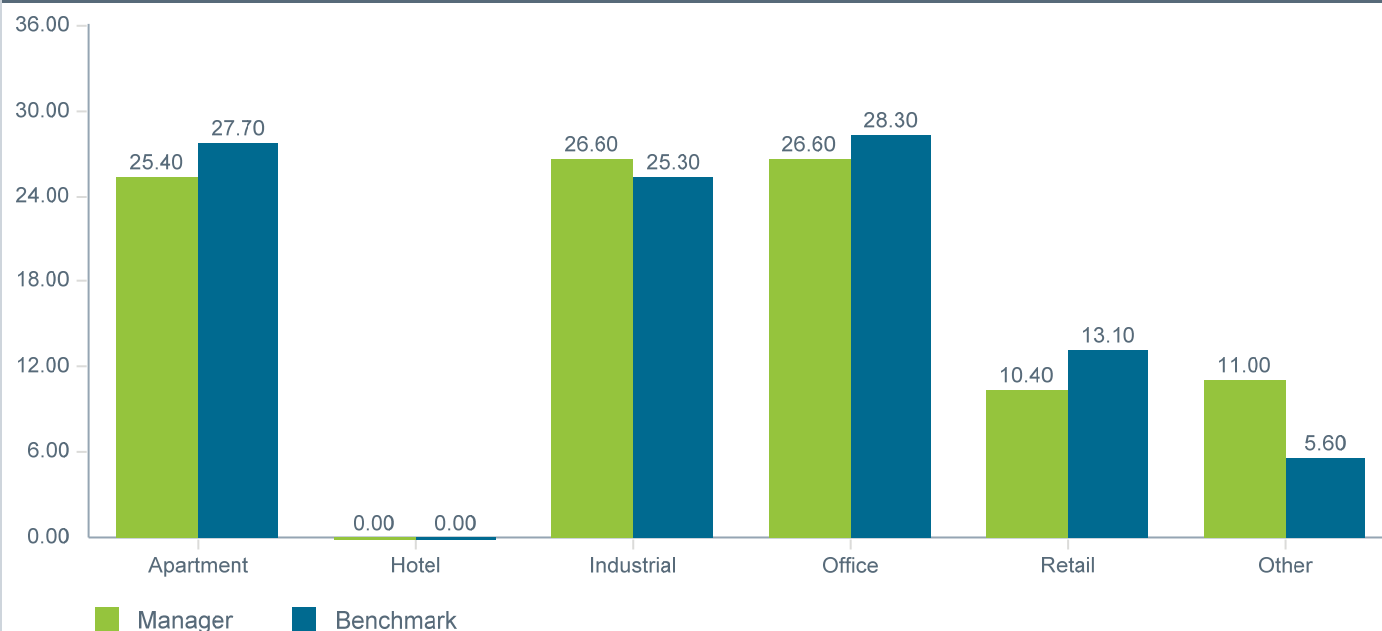
### Investment Strategy

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.

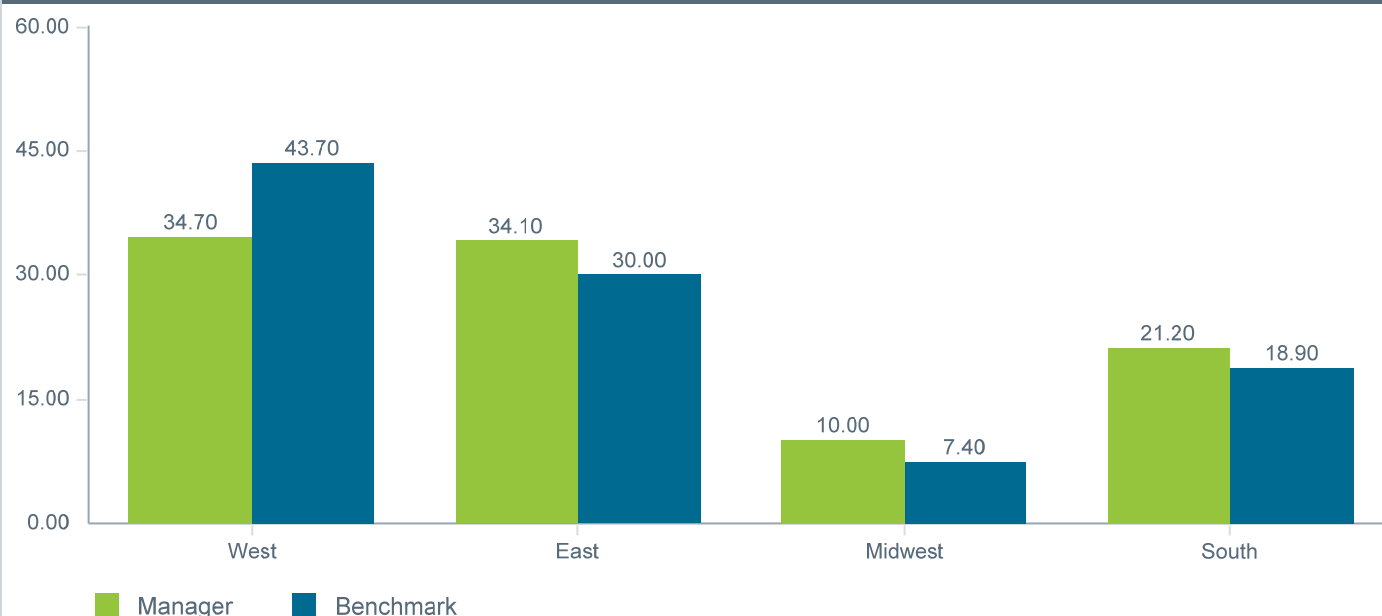
### Investment Profile

Fund Inception	1973
Legal Structure	LLC
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	37,104
Fund Leverage %	16.90
Portfolio Occupancy %	95.00
Cash Reserve %	0.50
Number of Investments	474
Number of Limited Partners	419

### Property Type Allocation (%)

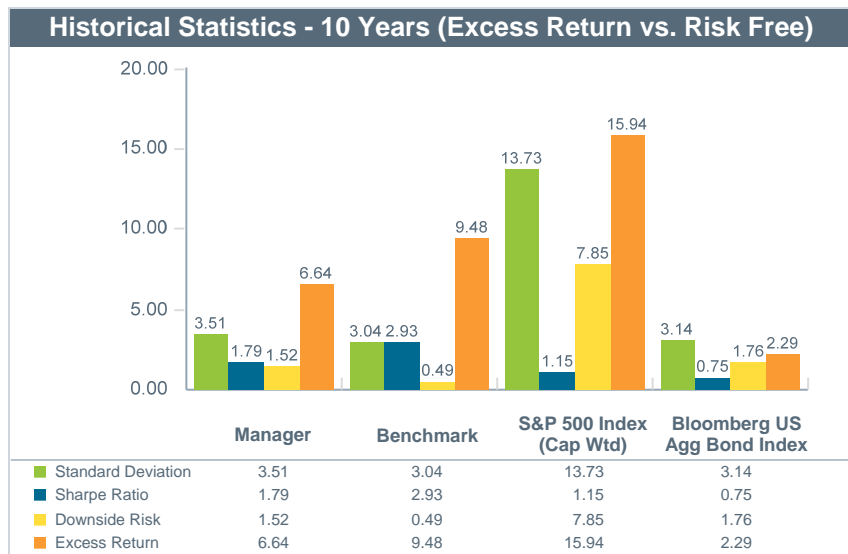


### Geographic Allocation (%)



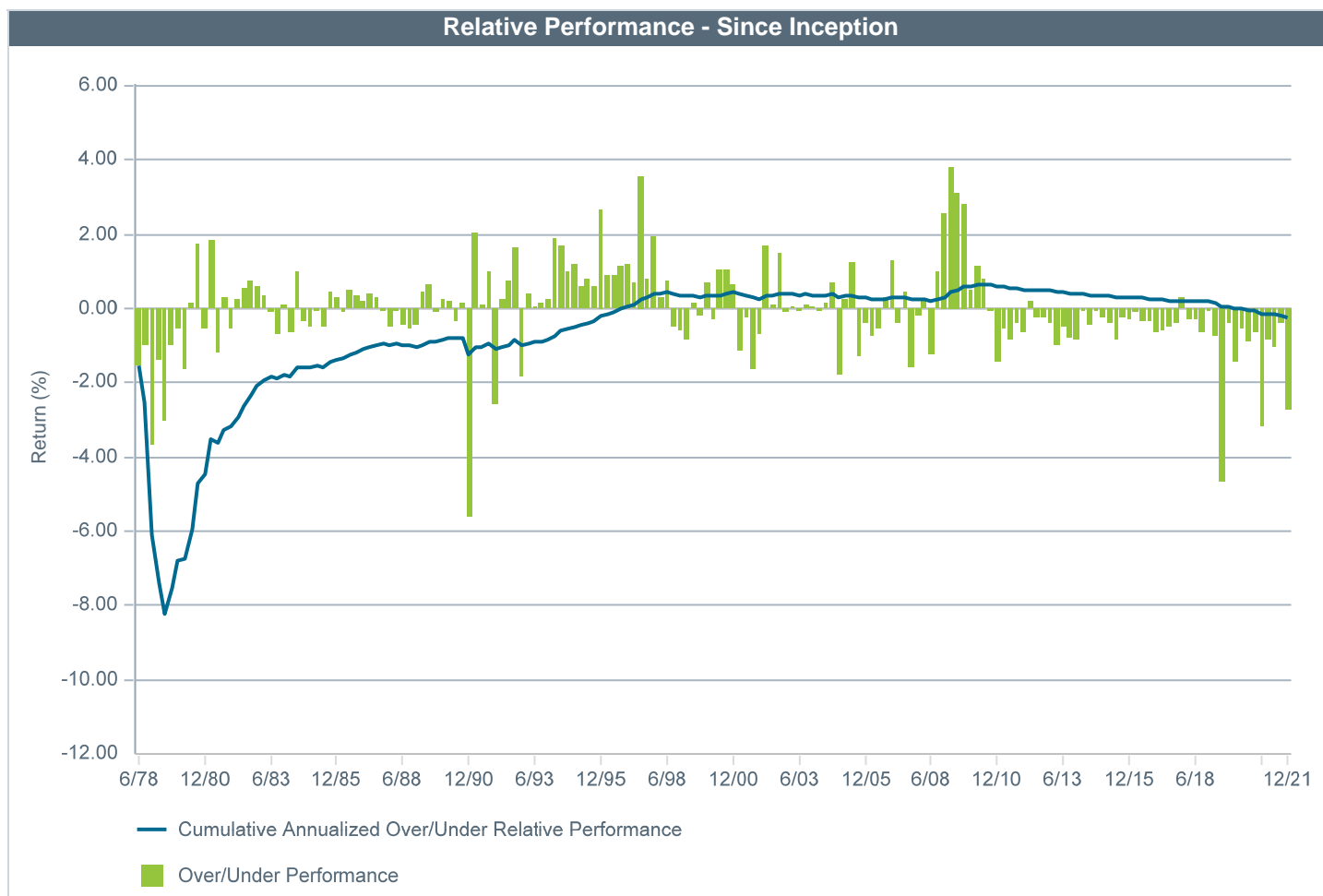
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of self-storage, health care land held for potential development, and hotel. 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	2020	2019	2018	2017	2016
Manager	5.05	16.24	2.98	4.43	6.00	7.41	-4.04	-2.10	6.99	6.30	7.21
Benchmark	7.97	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	7.62	8.77
Difference	-2.92	-5.93	-6.22	-4.28	-3.60	-3.04	-5.23	-7.44	-1.36	-1.32	-1.56



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.85
S&P 500 Index (Cap Wtd)	-0.21
Russell 2000 Index	-0.32
MSCI EAFE Index (USD) (Net)	-0.26
MSCI Emg Mkts Index (USD) (Net)	-0.38
Bloomberg US Agg Bond Index	-0.30
Bloomberg US Trsy US TIPS Index	-0.27
Wilshire US REIT Index	0.06
HFRI FOF Comp Index	-0.32
Bloomberg Cmnty Index (TR)	-0.16
ICE BofAML 3 Mo US T-Bill Index	-0.46
Cons Price Index (Unadjusted)	0.09



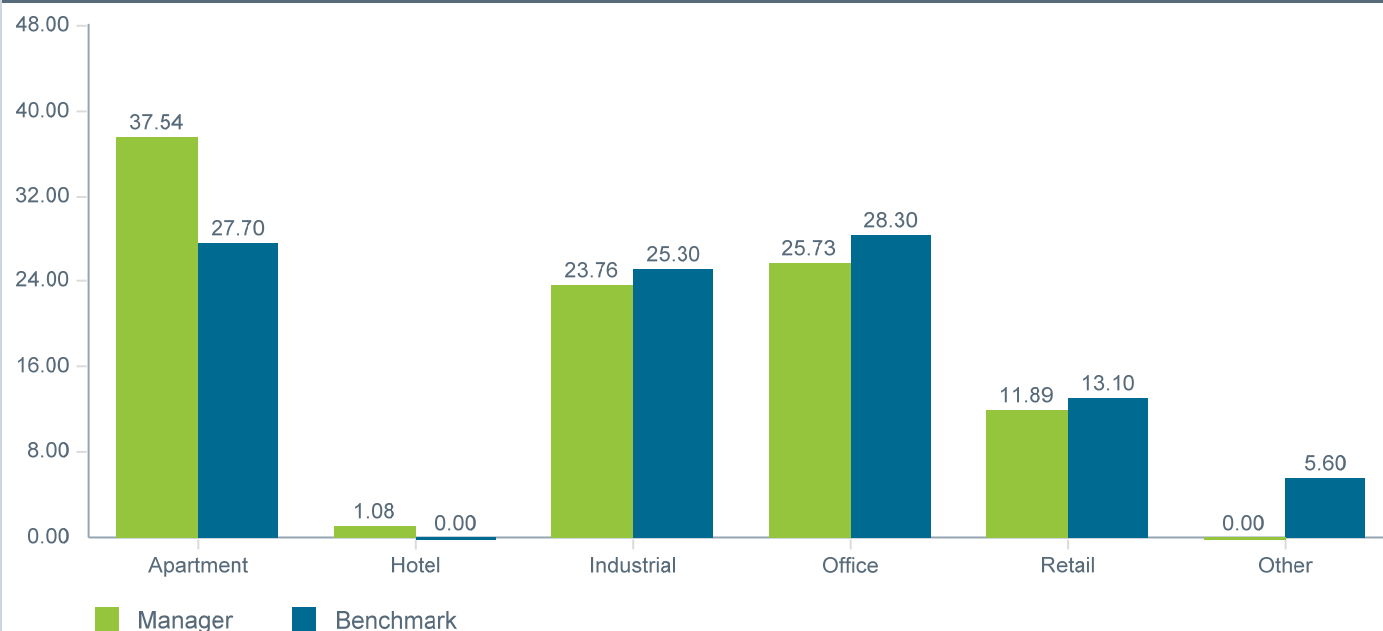
### Investment Strategy

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.

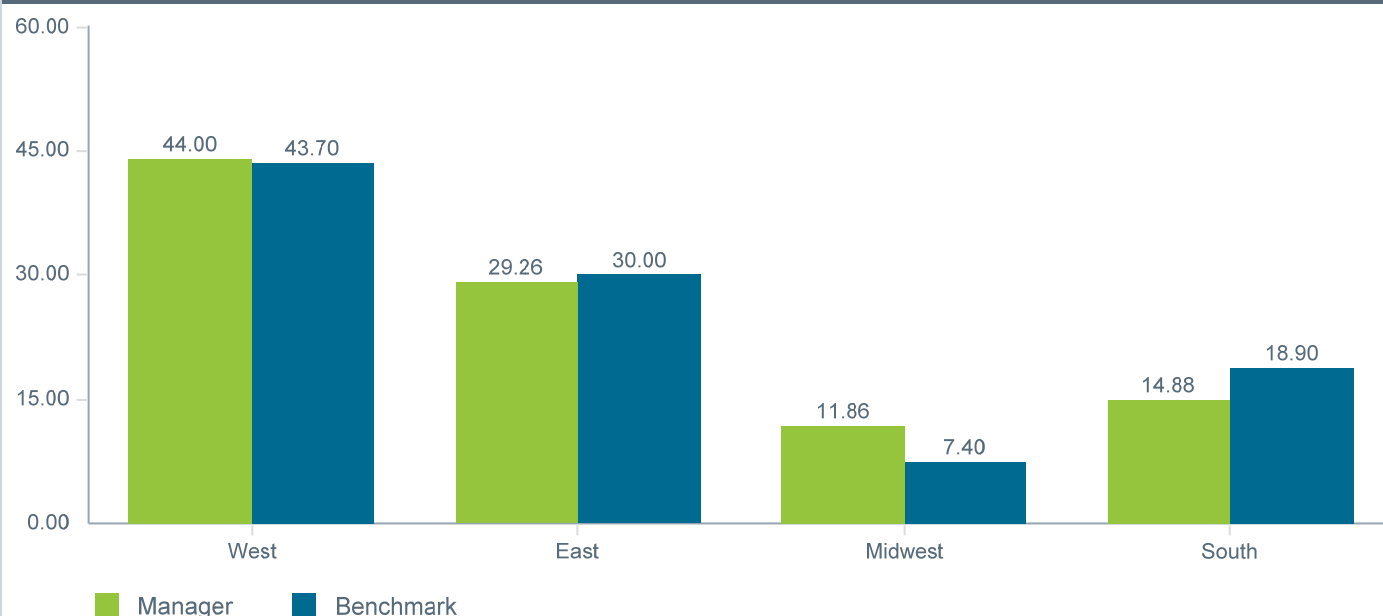
### Investment Profile

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	17,892
Fund Leverage %	17.00
Portfolio Occupancy %	93.20
Cash Reserve %	1.70
Number of Investments	167
Number of Limited Partners	445

### Property Type Allocation (%)



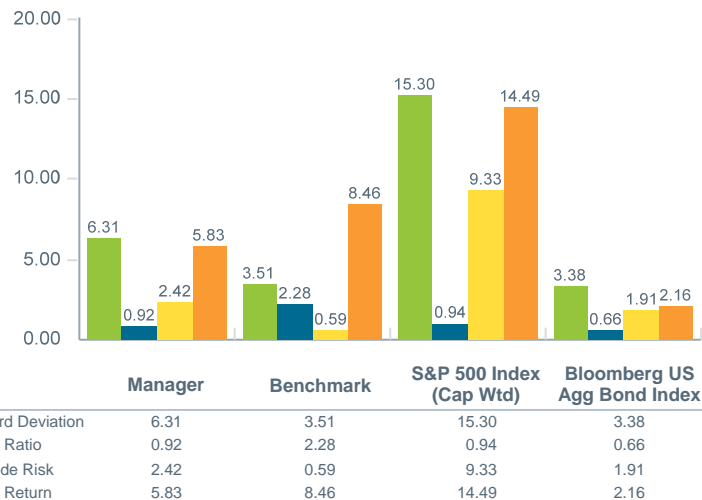
### Geographic Allocation (%)



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	2020	2019	2018	2017	2016
Manager	1.39	-0.48	-2.39	3.78	6.67	N/A	-9.32	3.03	9.71	18.00	6.60
Benchmark	7.97	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	7.62	8.77
Difference	-6.58	-22.65	-11.59	-4.93	-2.93	N/A	-10.51	-2.31	1.36	10.38	-2.17

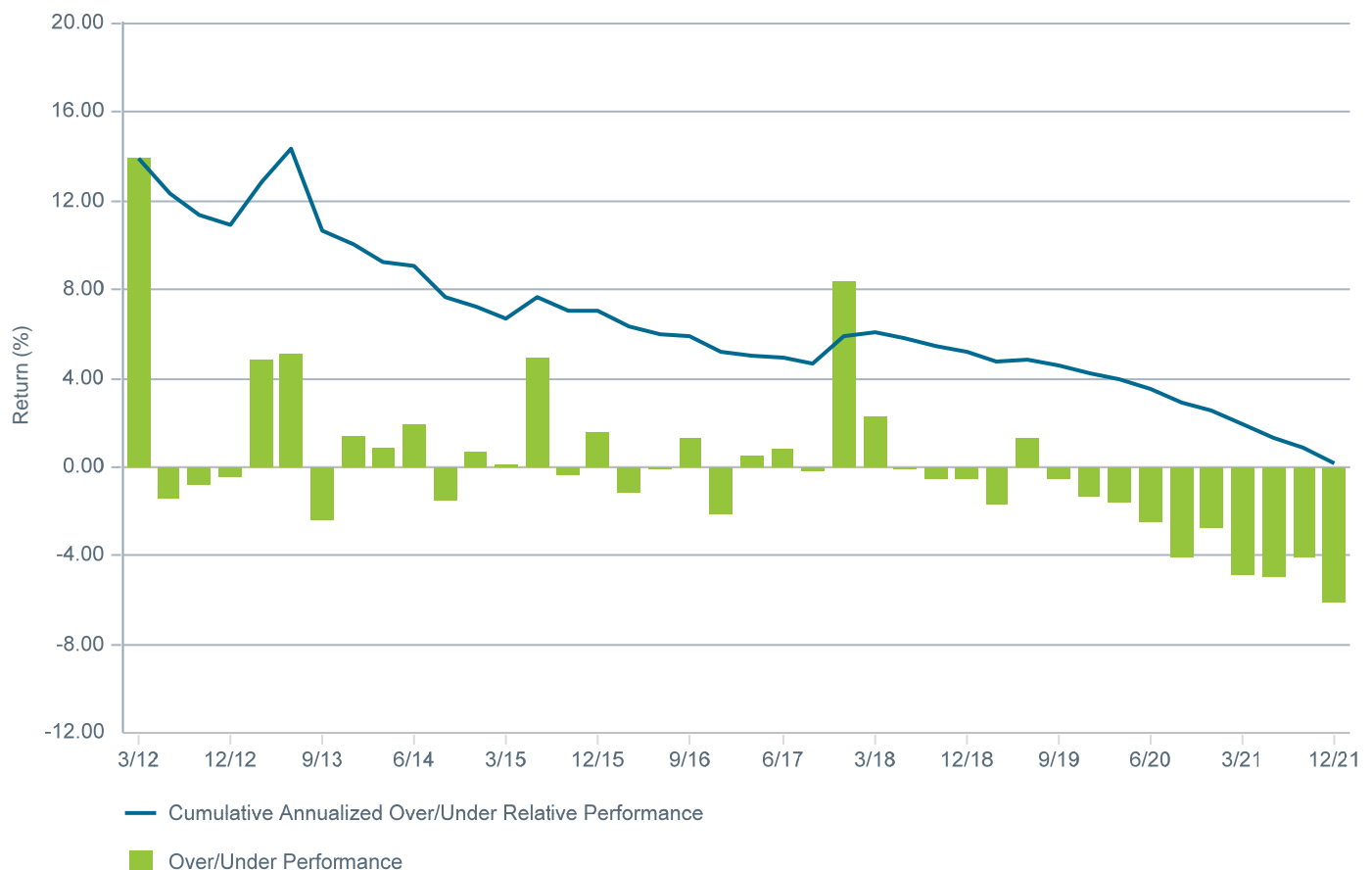
#### Historical Statistics - 7 Years (Excess Return vs. Risk Free)



#### Actual Correlation - 7 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.35
S&P 500 Index (Cap Wtd)	-0.24
Russell 2000 Index	-0.26
MSCI EAFE Index (USD) (Net)	-0.14
MSCI Emg Mkts Index (USD) (Net)	-0.17
Bloomberg US Agg Bond Index	-0.19
Bloomberg US Trsy US TIPS Index	-0.35
Wilshire US REIT Index	-0.25
HFRI FOF Comp Index	-0.24
Bloomberg Cmtty Index (TR)	-0.20
ICE BofAML 3 Mo US T-Bill Index	0.00
Cons Price Index (Unadjusted)	-0.19

#### Relative Performance - Since Inception



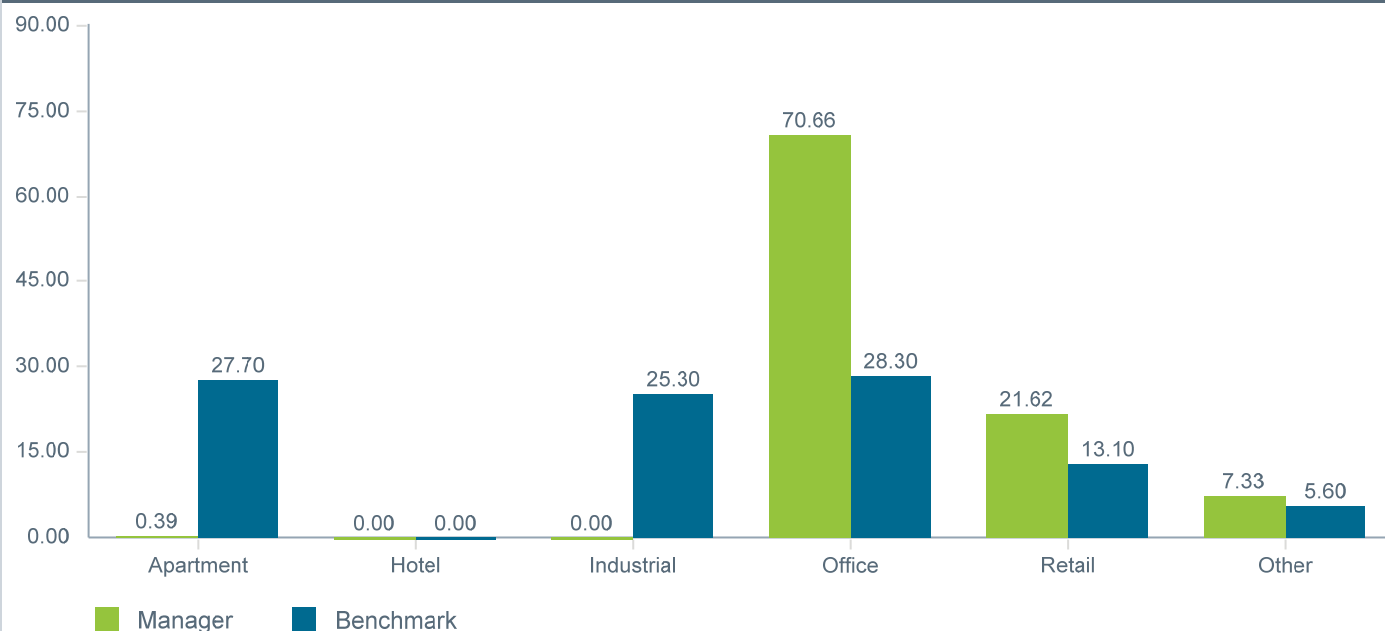
### Investment Strategy

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.

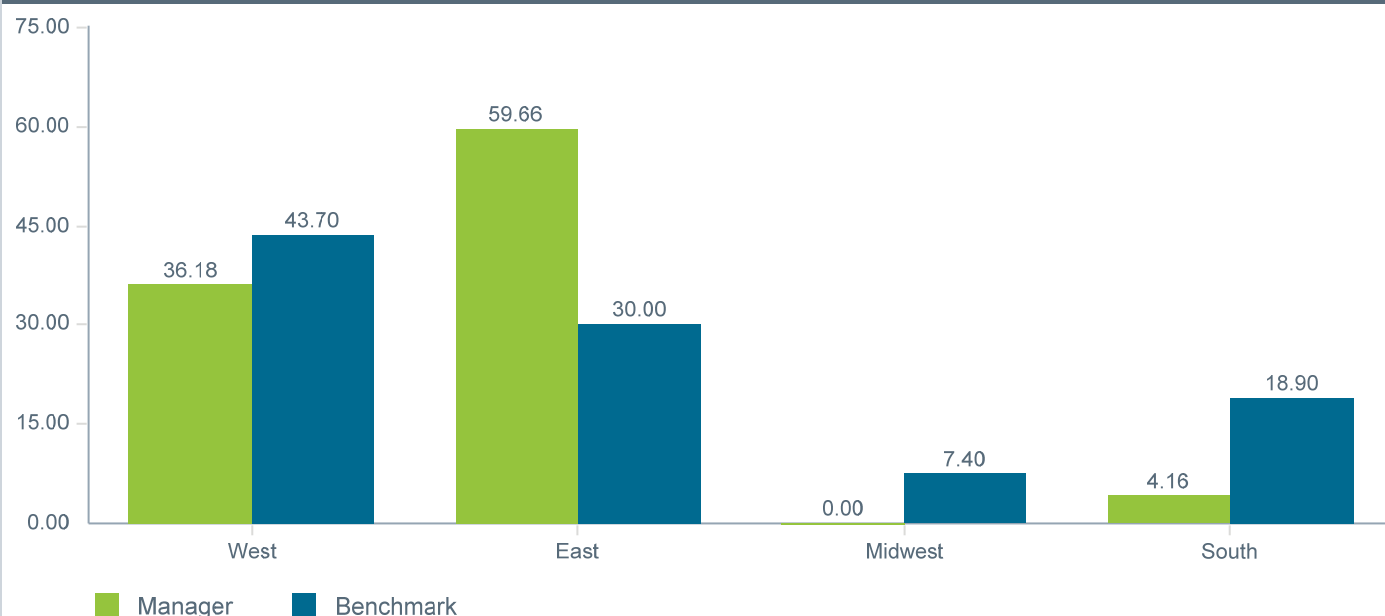
### Investment Profile

Fund Inception	2011
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	4,318
Fund Leverage %	45.39
Portfolio Occupancy %	79.28
Cash Reserve %	1.57
Number of Investments	26
Number of Limited Partners	50

### Property Type Allocation (%)

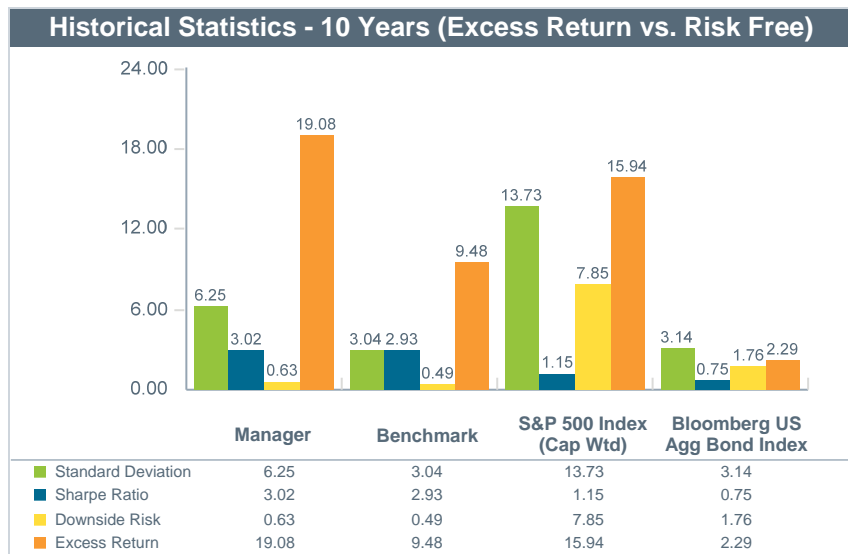


### Geographic Allocation (%)



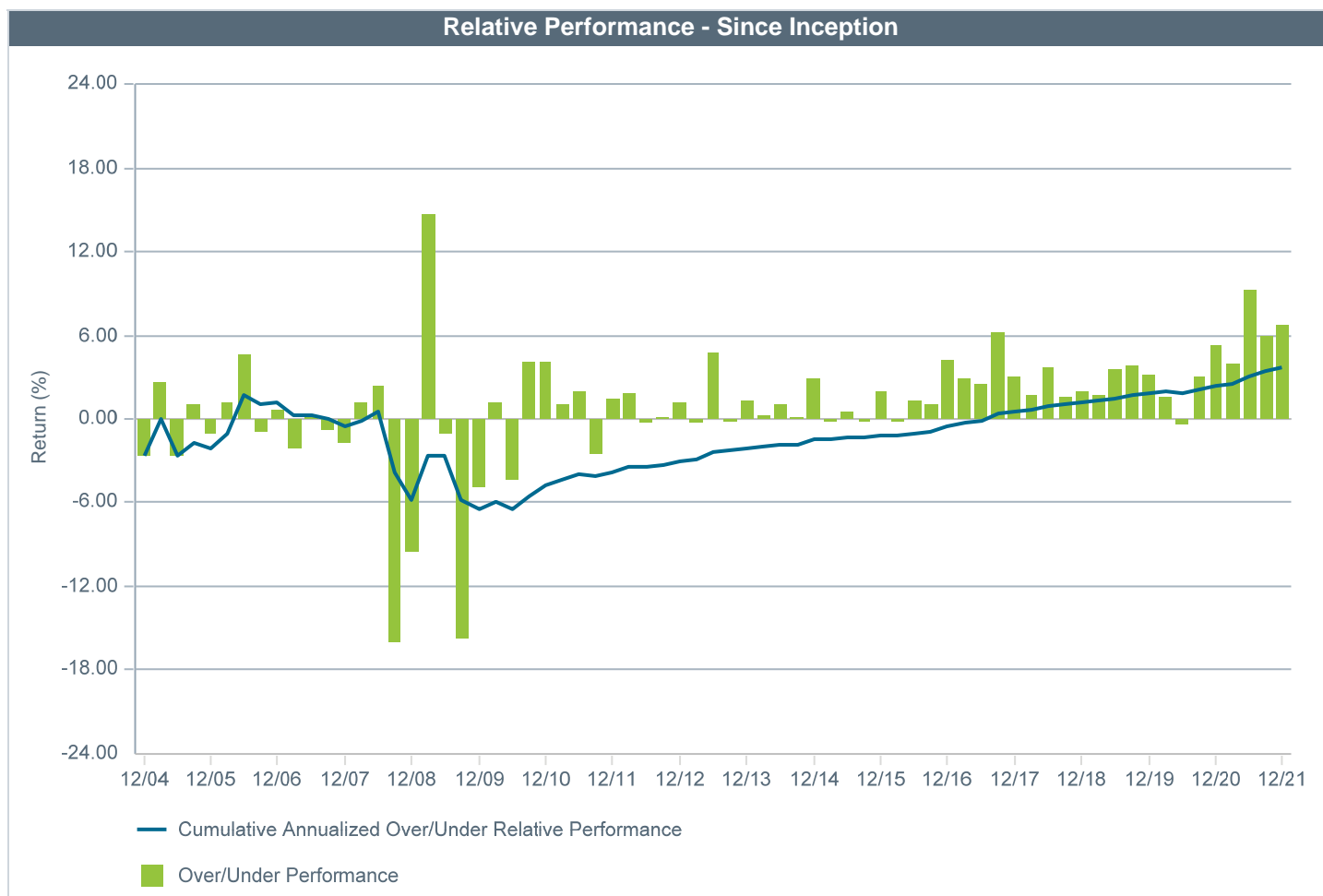
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists 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	2020	2019	2018	2017	2016
Manager	15.20	56.86	27.50	24.92	22.58	21.01	11.16	18.88	18.19	24.16	16.08
Benchmark	7.97	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	7.62	8.77
Difference	7.23	34.69	18.30	16.21	12.98	10.56	9.97	13.54	9.84	16.54	7.31



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.72
S&P 500 Index (Cap Wtd)	0.08
Russell 2000 Index	-0.01
MSCI EAFE Index (USD) (Net)	0.02
MSCI Emg Mkts Index (USD) (Net)	-0.13
Bloomberg US Agg Bond Index	-0.32
Bloomberg US Trsy US TIPS Index	-0.13
Wilshire US REIT Index	0.26
HFRI FOF Comp Index	0.02
Bloomberg Cmnty Index (TR)	0.17
ICE BofAML 3 Mo US T-Bill Index	-0.14
Cons Price Index (Unadjusted)	0.34



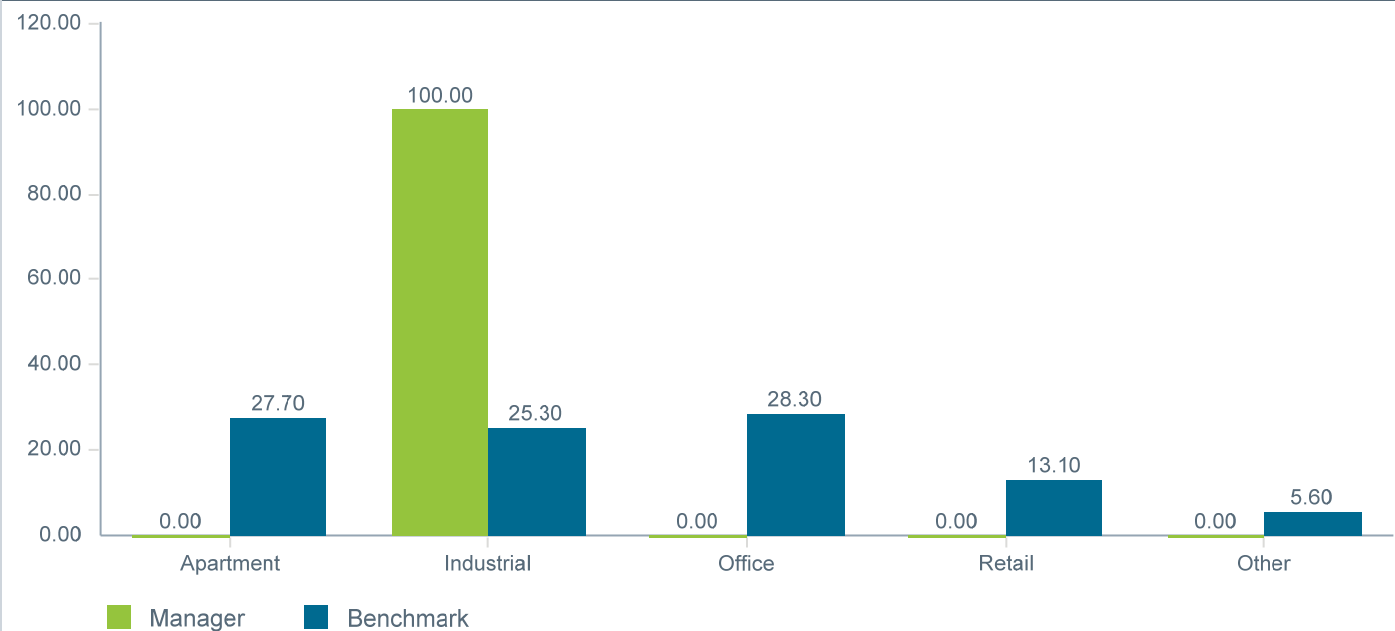
### Investment Strategy

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.

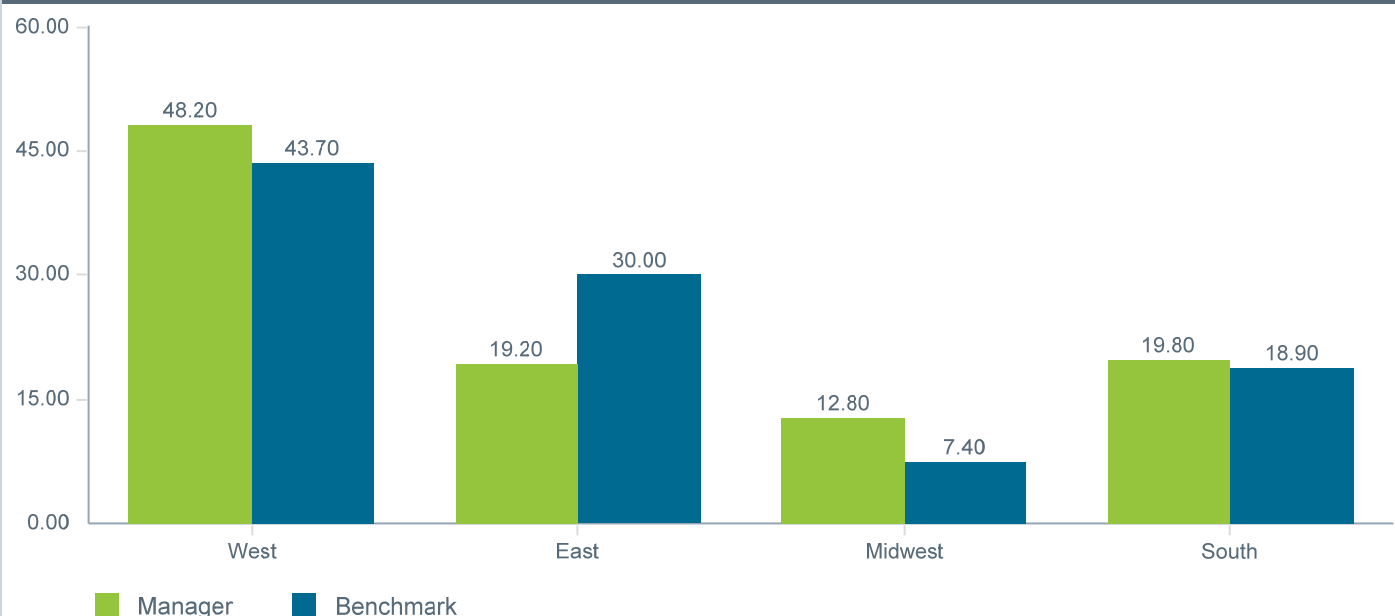
### Investment Profile

Fund Inception	2004
Legal Structure	N/A
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	21,400
Fund Leverage %	14.30
Portfolio Occupancy %	95.30
Cash Reserve %	1.10
Number of Investments	720
Number of Limited Partners	102

### Property Type Allocation (%)



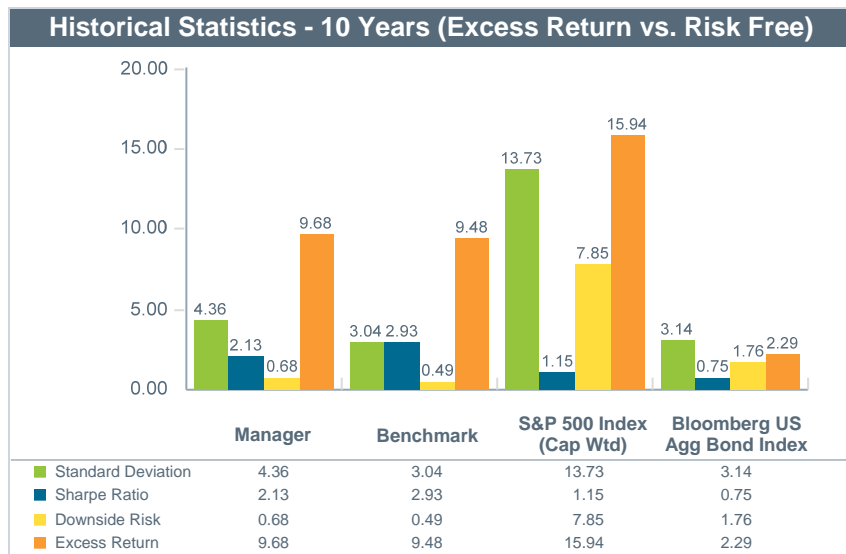
### Geographic Allocation (%)



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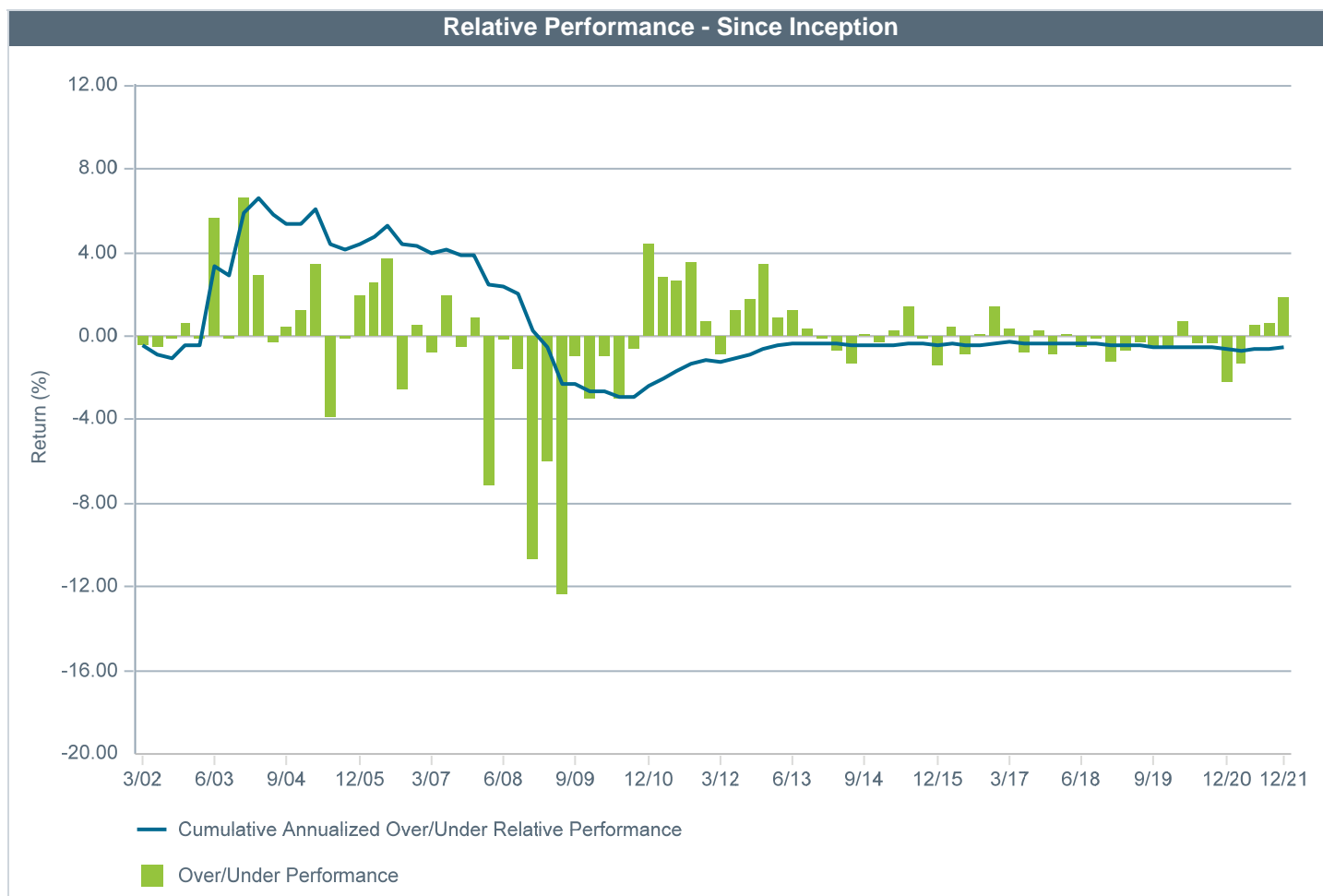


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016
Manager	10.00	24.12	8.14	7.50	8.93	10.62	-1.08	3.01	6.59	6.50	9.90
Benchmark	7.97	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	7.62	8.77
Difference	2.03	1.95	-1.06	-1.21	-0.67	0.17	-2.27	-2.33	-1.76	-1.12	1.13



**Actual Correlation - 10 Years**

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.89
S&P 500 Index (Cap Wtd)	-0.14
Russell 2000 Index	-0.25
MSCI EAFE Index (USD) (Net)	-0.17
MSCI Emg Mkts Index (USD) (Net)	-0.36
Bloomberg US Agg Bond Index	-0.30
Bloomberg US Trsy US TIPS Index	-0.21
Wilshire US REIT Index	-0.01
HFRI FOF Comp Index	-0.24
Bloomberg Cmnty Index (TR)	-0.13
ICE BofAML 3 Mo US T-Bill Index	-0.41
Cons Price Index (Unadjusted)	0.14



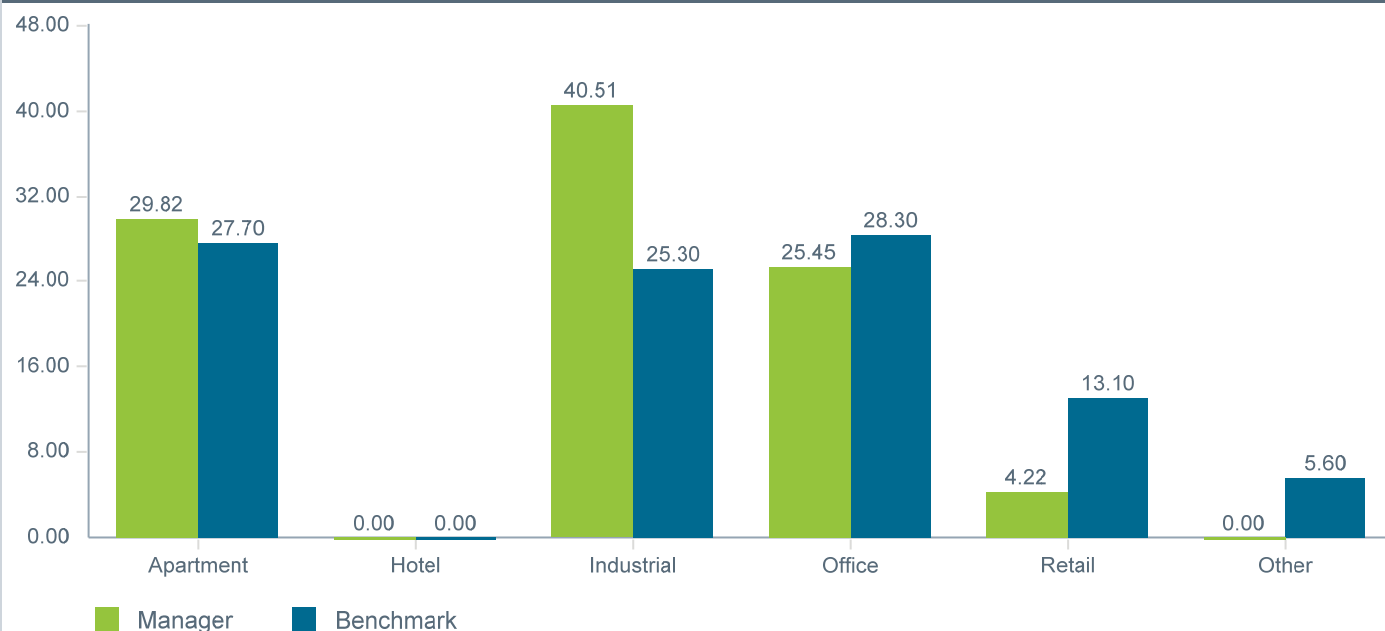
### Investment Strategy

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.

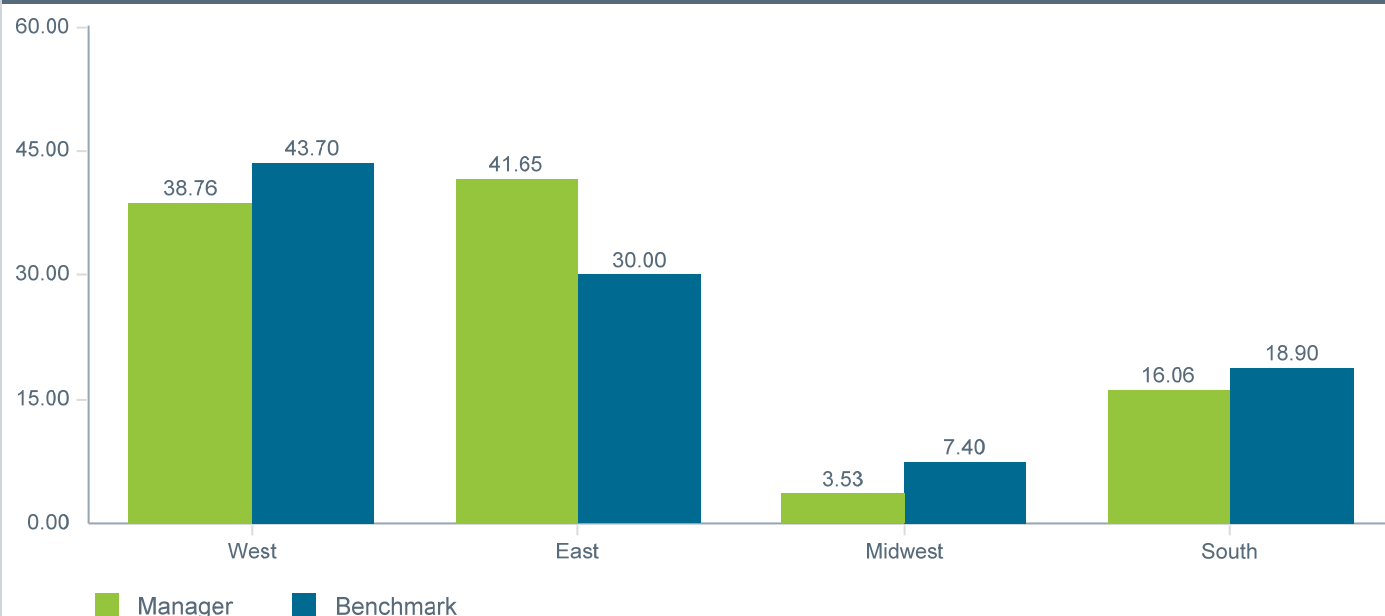
### Investment Profile

Fund Inception	2002
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	3,334
Fund Leverage %	34.92
Portfolio Occupancy %	93.38
Cash Reserve %	26.74
Number of Investments	55
Number of Limited Partners	42

### 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 December 31, 2021

Asset Allocation							
Asset Class	Market Value	Within Target Range?		Current (%)	Targets		
		Yes	No		Min.	Target	Max.
Broad US Equity	\$ 1,245,737,606	✓		19.82%	14.0%	19.0%	24.0%
Broad International Equity	\$ 1,147,236,461	✓		18.25%	14.0%	19.0%	24.0%
Fixed Income	\$ 1,433,043,803	✓		22.80%	17.0%	22.0%	27.0%
Absolute Return	\$ 866,672,419	✓		13.79%	10.0%	15.0%	20.0%
Real Estate	\$ 915,077,683	✓		14.56%	10.0%	15.0%	20.0%
Private Equity	\$ 53,403,457	✓		0.85%	0.0%	5.0%	10.0%
Private Infrastructure	-	✓		0.00%	0.0%	5.0%	10.0%
Opportunistic Investments	\$ 81,643,702	✓		1.30%	0.0%	0.0%	5.0%
Transition Account	\$ 541,725,963		✓	8.62%	0.0%	0.0%	0.0%
Total Fund	\$ 6,284,541,095			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 7.81% vs. 9.56% for the index.
Broad US Equity		Yes	No	
The composite returns exceed the Russell 3000 Index over a 5 year period.			✓	The composite returned 17.64% vs. 17.97% 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 31. 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 (SA)		Yes	No	
The fund returns exceed the Russell 2000 Index over a 5 year period.		✓		The fund returned 15.31% vs. 12.02% for the index.
Rank above the IM U.S. Small Cap Core Equity Median.		✓		The fund has a ranking of 22.
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 9.63% vs. 9.61% 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 63. Includes managers which are no longer in the portfolio. Current managers added 07/2014 and 12/2021.
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 9.57% vs. 9.63% for the index.
Rank above the IM International Large Cap Equity Median.			✓	The fund has a ranking of 63.
Acadian International Small Cap		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 Small Cap Equity Median.				5 year data is unavailable.
Arrowstreet Emerging Markets		Yes	No	
The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period.				5 year data is unavailable.
Rank above the IM Emerging Markets Equity Median.				5 year data is unavailable.
Fixed Income		Yes	No	
The composite returns exceed the Global Fixed Income Custom Index over a 5 year period.		✓		The composite returned 4.27% vs. 3.94% for the index.
Rank above the IM Global Fixed Income Median.		✓		The composite has a ranking of 20.
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 4.21% vs. 3.57% for the index.
Rank above the IM U.S. Broad Market Core Fixed Income Median.		✓		The fund has a ranking of 17.
JP Morgan Core Bond (SA)		Yes	No	
The fund returns exceed the JP Morgan FI Custom Index over a 5 year period.		✓		The fund returned 3.25% vs. 3.11% for the index.
Rank above the IM U.S. Broad Market Core Fixed Income Median.			✓	The fund has a ranking of 78.

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

As of December 31, 2021

Fixed Income (Continued)			
Loomis Sayles Credit Asset (SA)		Yes	No
The fund returns exceed the Loomis Sayles CA Custom Index over a 5 year period			5 year data is unavailable.
Rank above the IM Global Fixed Income Median.			5 year data is unavailable.
AG Direct Lending Fund III, LP		Yes	No
The fund returns exceed the Credit Suisse Leverage Loan Index over a 5 year period.			5 year data is unavailable.
Rank above the IM U.S. Intermediate Duration (MF) Median.			5 year data is unavailable.
AG Direct Lending Fund IV, LP		Yes	No
The fund returns exceed the Credit Suisse Leverage Loan Index over a 5 year period.			5 year data is unavailable.
Rank above the IM U.S. Intermediate Duration (MF) Median.			5 year data is unavailable.
Schroders Flexible Secured Income (SA)		Yes	No
The fund returns exceed the 3 Month LIBOR Index (USD)+1.75% 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 5.18% vs. 10.10% for the index.
GMO:Bchmk-Fr AII;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 3.75% vs. 10.11% for the index.
PIMCO:All Ast Ath;Inst (PAUIX)		Yes	No
The fund returns exceed the All Asset Custom Index (EqL Wtd) over a 5 year period.			✓ The fund returned 6.46% vs. 7.21% for the index.
Millennium USA LP		Yes	No
The fund returns exceed the HFRI RV Multi Strat Index over a 5 year period.			5 year data is unavailable.
PineBridge Dyn AA;Inst (PDAIX)		Yes	No
The fund returns exceed the Consumer Price Index+5% over a 5 year period.			5 year data is unavailable.
Real Estate		Yes	No
The composite returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.		✓	The composite returned 8.95% vs. 7.74% for the index.
Morgan Stanley Prime Property (CF)		Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.		✓	The fund returned 8.93% vs. 7.74% for the index.
UBS Trumbull Property LP (CF)		Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			✓ The fund returned 3.69% vs. 7.74% for the index.
Jamestown Premier Property (CF)		Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			✓ The fund returned 2.22% vs. 7.74% for the index.
Prologis Targeted US Logistics LP (CF)		Yes	No
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.		✓	The fund returned 21.61% vs. 7.74% for the index.
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.			✓ The fund returned 6.93% vs. 7.74% for the index.

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

Performance shown is net of fees.



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

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>3.63</b>	<b>4.63</b>	<b>13.07</b>	<b>13.07</b>	<b>11.42</b>	<b>8.36</b>	<b>6.58</b>	<b>7.59</b>	<b>8.43</b>	<b>07/01/2009</b>
Target Allocation Index (Gross)	4.36	4.97	13.06	13.06	13.64	9.71	7.70	8.54	9.40	
Difference	-0.73	-0.34	0.01	0.01	-2.22	-1.35	-1.12	-0.95	-0.97	
<b>Broad US Equity</b>	<b>7.88</b>	<b>8.13</b>	<b>24.61</b>	<b>24.61</b>	<b>25.31</b>	<b>17.73</b>	<b>14.45</b>	<b>15.58</b>	<b>15.90</b>	<b>07/01/2009</b>
Russell 3000 Index	9.28	9.17	25.66	25.66	25.79	17.97	14.55	16.30	16.28	
Difference	-1.40	-1.04	-1.05	-1.05	-0.48	-0.24	-0.10	-0.72	-0.38	
<b>Broad International Equity</b>	<b>3.04</b>	<b>2.59</b>	<b>13.51</b>	<b>13.51</b>	<b>14.74</b>	<b>9.90</b>	<b>6.93</b>	<b>8.51</b>	<b>7.72</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	1.82	-1.22	7.82	7.82	13.18	9.61	6.56	7.28	7.27	
Difference	1.22	3.81	5.69	5.69	1.56	0.29	0.37	1.23	0.45	
<b>Fixed Income</b>	<b>0.61</b>	<b>1.18</b>	<b>2.26</b>	<b>2.26</b>	<b>5.94</b>	<b>4.54</b>	<b>3.83</b>	<b>3.86</b>	<b>4.81</b>	<b>07/01/2009</b>
Global Fixed Income Custom Index	-0.03	0.05	-1.10	-1.10	5.13	3.94	3.26	3.07	3.98	
Difference	0.64	1.13	3.36	3.36	0.81	0.60	0.57	0.79	0.83	
Bloomberg US Agg Bond Index	0.01	0.06	-1.55	-1.55	4.79	3.57	3.00	2.90	3.78	
Difference	0.60	1.12	3.81	3.81	1.15	0.97	0.83	0.96	1.03	
<b>Absolute Return</b>	<b>0.24</b>	<b>-0.93</b>	<b>8.88</b>	<b>8.88</b>	<b>7.51</b>	<b>6.06</b>	<b>4.66</b>	<b>N/A</b>	<b>3.93</b>	<b>07/01/2014</b>
Absolute Return Custom Index	3.68	3.03	10.03	10.03	14.22	10.10	7.90	8.43	7.28	
Difference	-3.44	-3.96	-1.15	-1.15	-6.71	-4.04	-3.24	N/A	-3.35	
Consumer Price Index+5%	2.88	5.15	12.39	12.39	8.71	8.07	7.61	7.24	7.22	
Difference	-2.64	-6.08	-3.51	-3.51	-1.20	-2.01	-2.95	N/A	-3.29	
<b>Real Estate</b>	<b>9.67</b>	<b>18.16</b>	<b>26.89</b>	<b>26.89</b>	<b>10.52</b>	<b>10.49</b>	<b>N/A</b>	<b>N/A</b>	<b>10.73</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	7.97	15.12	22.17	22.17	9.20	8.71	9.60	10.45	9.18	
Difference	1.70	3.04	4.72	4.72	1.32	1.78	N/A	N/A	1.55	
<b>Private Equity</b>	<b>9.11</b>	<b>15.76</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>17.87</b>	<b>04/01/2021</b>
Cambridge US Prvt Eq Index	5.79	11.85	39.92	39.92	24.67	20.44	17.22	16.67	26.43	
Difference	3.32	3.91	N/A	N/A	N/A	N/A	N/A	N/A	-8.56	
<b>Opportunistic Investments</b>	<b>1.36</b>	<b>2.52</b>	<b>10.86</b>	<b>10.86</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>29.12</b>	<b>07/01/2020</b>

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

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	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Broad US Equity</b>													
<b>State Street Russell 1000 Index SL (CF)</b>	<b>9.78</b>	<b>10.00</b>	<b>26.44</b>	<b>26.44</b>	<b>26.18</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>20.91</b>	<b>31.40</b>	<b>-4.77</b>	<b>18.11</b>	<b>06/01/2017</b>
Russell 1000 Index	9.78	10.01	26.45	26.45	26.21	18.43	14.84	16.54	20.96	31.43	-4.78	18.14	
Difference	0.00	-0.01	-0.01	-0.01	-0.03	N/A	N/A	N/A	-0.05	-0.03	0.01	-0.03	
IM U.S. Large Cap Equity (SA+CF) Median	9.44	9.35	27.35	27.35	25.63	18.03	14.51	16.33	18.06	30.34	-4.99	17.68	
Rank	45	43	57	57	42	N/A	N/A	N/A	37	41	48	46	
<b>State Street Russell Mid Cap Index (SA)</b>													
<b>State Street Russell Mid Cap Index (SA)</b>	<b>6.44</b>	<b>5.48</b>	<b>22.62</b>	<b>22.62</b>	<b>23.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>17.09</b>	<b>30.42</b>	<b>-8.94</b>	<b>14.90</b>	<b>06/01/2017</b>
Russell Mid Cap Index	6.44	5.45	22.58	22.58	23.29	15.10	12.23	14.91	17.10	30.54	-9.06	14.89	
Difference	0.00	0.03	0.04	0.04	-0.04	N/A	N/A	N/A	-0.01	-0.12	0.12	0.01	
IM U.S. Mid Cap Equity (SA+CF) Median	7.46	6.21	24.64	24.64	23.59	15.68	12.91	15.27	16.08	30.18	-9.03	15.44	
Rank	62	64	57	57	52	N/A	N/A	N/A	48	49	49	53	
<b>NT Small Cap Core (SA)</b>													
<b>NT Small Cap Core (SA)</b>	<b>1.23</b>	<b>1.56</b>	<b>18.89</b>	<b>18.89</b>	<b>22.49</b>	<b>15.97</b>	<b>13.07</b>	<b>14.80</b>	<b>24.69</b>	<b>23.98</b>	<b>-6.97</b>	<b>12.05</b>	<b>07/01/2014</b>
Russell 2000 Index	2.14	-2.31	14.82	14.82	20.02	12.02	10.76	13.23	19.96	25.53	-11.01	10.25	
Difference	-0.91	3.87	4.07	4.07	2.47	3.95	2.31	1.57	4.73	-1.55	4.04	1.80	
IM U.S. Small Cap Core Equity (SA+CF) Median	6.13	4.83	25.18	25.18	22.86	14.40	12.80	15.01	18.37	25.11	-10.30	12.36	
Rank	97	80	80	80	54	27	48	52	24	58	24	53	
<b>Broad International Equity</b>													
<b>State Street World Ex US Index (CF)</b>	<b>3.13</b>	<b>2.46</b>	<b>12.65</b>	<b>12.65</b>	<b>14.03</b>	<b>9.59</b>	<b>6.68</b>	<b>N/A</b>	<b>7.54</b>	<b>22.40</b>	<b>-14.14</b>	<b>4.86</b>	<b>07/01/2014</b>
MSCI Wrld Ex US Index (USD) (Net)	3.14	2.46	12.62	12.62	14.07	9.63	6.73	7.84	7.59	22.49	-14.09	4.91	
Difference	-0.01	0.00	0.03	0.03	-0.04	-0.04	-0.05	N/A	-0.05	-0.09	-0.05	-0.05	
IM International Large Cap Equity (SA+CF) Median	2.48	1.19	11.60	11.60	16.04	11.10	8.12	9.41	11.79	23.97	-14.28	6.37	
Rank	39	36	40	40	64	67	73	N/A	65	61	48	76	
<b>Acadian International Small Cap</b>													
<b>Acadian International Small Cap</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>5.64</b>	<b>12/01/2021</b>
MSCI EAFE Sm Cap Index (USD) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.64	
IM International Small Cap Equity (SA+CF) Median	0.59	0.70	13.63	13.63	16.80	12.30	10.28	11.82	13.95	24.90	-18.30	4.41	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	
<b>Arrowstreet Emerging Markets</b>													
<b>Arrowstreet Emerging Markets</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>5.10</b>	<b>12/01/2021</b>
MSCI Emg Mkts Index (USD) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.10	
IM Emerging Markets Equity (SA+CF) Median	-0.68	-6.70	1.16	1.16	13.28	10.89	7.32	7.14	18.14	19.53	-15.23	2.53	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	

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

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Fixed Income</b>													
<b>Payden &amp; Rygel Long Term (SA)</b>	<b>0.19</b>	<b>0.38</b>	<b>-0.53</b>	<b>-0.53</b>	<b>5.53</b>	<b>4.41</b>	<b>3.84</b>	<b>4.04</b>	<b>7.77</b>	<b>9.64</b>	<b>0.36</b>	<b>5.82</b>	<b>08/01/1995</b>
Bloomberg US Agg Bond Index	0.01	0.06	-1.55	-1.55	4.79	3.57	3.00	2.90	7.51	8.72	0.01	5.06	
Difference	0.18	0.32	1.02	1.02	0.74	0.84	0.84	1.14	0.26	0.92	0.35	0.76	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.04	0.03	-1.20	-1.20	5.48	4.11	3.51	3.51	8.52	9.19	0.06	5.44	
Rank	5	6	23	23	49	25	21	14	72	26	27	13	
<b>JP Morgan Core Bond (SA)</b>	<b>0.02</b>	<b>0.12</b>	<b>-0.19</b>	<b>-0.19</b>	<b>4.29</b>	<b>3.35</b>	<b>2.89</b>	<b>N/A</b>	<b>6.40</b>	<b>6.80</b>	<b>1.11</b>	<b>2.58</b>	<b>08/01/2012</b>
JP Morgan FI Custom Index	0.01	0.06	-0.48	-0.48	4.20	3.11	2.67	2.48	6.43	6.80	0.88	2.30	
Difference	0.01	0.06	0.29	0.29	0.09	0.24	0.22	N/A	-0.03	0.00	0.23	0.28	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.04	0.03	-1.20	-1.20	5.48	4.11	3.51	3.51	8.52	9.19	0.06	3.22	
Rank	32	35	13	13	98	97	96	N/A	97	98	6	97	
<b>Loomis Sayles Credit Asset (SA)</b>	<b>0.09</b>	<b>0.84</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>3.53</b>	<b>04/01/2021</b>
Loomis Sayles CA Custom Index	0.48	0.98	2.07	2.07	7.45	5.30	4.92	5.26	7.54	13.03	-1.64	3.84	
Difference	-0.39	-0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.31	
IM Global Fixed Income (SA+CF) Median	-0.19	-0.11	0.28	0.28	6.15	4.81	3.82	3.87	8.61	9.48	-1.81	1.66	
Rank	32	28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28	
<b>AG Direct Lending III LP</b>	<b>3.01</b>	<b>6.33</b>	<b>14.75</b>	<b>14.75</b>	<b>11.72</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.32</b>	<b>11.14</b>	<b>N/A</b>	<b>11.28</b>	<b>09/01/2018</b>
CS Lvg'd Loan Index	0.71	1.85	5.40	5.40	5.43	4.32	4.41	4.83	2.78	8.17	1.14	4.10	
Difference	2.30	4.48	9.35	9.35	6.29	N/A	N/A	N/A	6.54	2.97	N/A	7.18	
IM U.S. Intermediate Duration Fixed Income (MF) Median	-0.48	-0.39	-0.83	-0.83	3.26	2.42	2.04	1.93	5.56	5.29	0.64	3.22	
Rank	1	1	1	1	1	N/A	N/A	N/A	1	1	N/A	1	
<b>AG Direct Lending IV LP</b>	<b>3.24</b>	<b>5.13</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>13.50</b>	<b>06/01/2021</b>
CS Lvg'd Loan Index	0.71	1.85	5.40	5.40	5.43	4.32	4.41	4.83	2.78	8.17	1.14	2.27	
Difference	2.53	3.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.23	
IM U.S. Intermediate Duration Fixed Income (MF) Median	-0.10	0.28	0.45	0.45	4.68	3.80	3.49	3.40	7.13	6.66	1.94	0.03	
Rank	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	

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

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Fixed Income Cont.</b>													
<b>Owl Rock Diversified Lending</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.29	11/01/2021
CS Lvg'd Loan Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.29	
<b>Ares Pathfinder Fund LP</b>	1.11	8.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	88.81	03/01/2021
<b>Schroders Flexible Secured Income (SA)</b>	0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.32	09/01/2021
3 Month LIBOR Index (USD)+1.75%	0.46	0.93	1.92	1.92	3.05	3.18	2.90	2.66	2.85	4.39	3.86	0.61	
Difference	-0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.29	
<b>ND Land - PTF Cash (SA)</b>	0.06	0.12	0.41	0.41	1.20	N/A	N/A	N/A	0.64	2.56	1.71	1.32	07/01/2017
ICE BofAML 3 Mo US T-Bill Index	0.01	0.03	0.05	0.05	0.99	1.14	0.87	0.63	0.67	2.28	1.87	1.20	
Difference	0.05	0.09	0.36	0.36	0.21	N/A	N/A	N/A	-0.03	0.28	-0.16	0.12	
<b>FLP (Loans)</b>	1.23	2.51	4.54	4.54	4.65	5.25	5.49	5.57	4.52	4.89	6.15	6.95	08/01/1995

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

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Absolute Return</b>													
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>-0.22</b>	<b>-2.00</b>	<b>3.90</b>	<b>3.90</b>	<b>4.82</b>	<b>4.65</b>	<b>3.41</b>	<b>N/A</b>	<b>-1.57</b>	<b>12.59</b>	<b>-4.46</b>	<b>2.78</b>	<b>07/01/2014</b>
60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx	3.73	2.73	8.78	8.78	13.72	10.11	7.59	7.91	14.05	18.55	-6.00	6.66	
Difference	-3.95	-4.73	-4.88	-4.88	-8.90	-5.46	-4.18	N/A	-15.62	-5.96	1.54	-3.88	
Consumer Price Index+5%	2.88	5.15	12.39	12.39	8.71	8.07	7.61	7.24	6.43	7.40	7.01	7.22	
Difference	-3.10	-7.15	-8.49	-8.49	-3.89	-3.42	-4.20	N/A	-8.00	5.19	-11.47	-4.44	
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>													
All Asset Custom Index (EqI Wtd)	2.42	2.64	6.46	6.46	9.74	7.21	5.88	5.99	9.89	12.97	-1.62	5.39	
Difference	0.99	0.11	10.13	10.13	0.43	0.25	-0.26	N/A	-4.32	-4.34	-3.60	-1.28	
Consumer Price Index+5%	2.88	5.15	12.39	12.39	8.71	8.07	7.61	7.24	6.43	7.40	7.01	7.22	
Difference	0.53	-2.40	4.20	4.20	1.46	-0.61	-1.99	N/A	-0.86	1.23	-12.23	-3.11	
<b>Millennium USA LP</b>													
HFRI RV Multi Strat Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>PineBridge Dyn AA;Inst (PDAIX)</b>													
Consumer Price Index+5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
IM Global Balanced/TAA (SA+CF+MF) Median	3.98	3.53	12.21	12.21	14.64	10.24	8.29	9.18	13.52	19.95	-5.84	N/A	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Real Estate</b>													
<b>Morgan Stanley Prime Property (CF)</b>	<b>9.81</b>	<b>16.44</b>	<b>22.46</b>	<b>22.46</b>	<b>10.32</b>	<b>9.97</b>	<b>N/A</b>	<b>N/A</b>	<b>2.11</b>	<b>7.38</b>	<b>9.05</b>	<b>10.45</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	7.97	15.12	22.17	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	9.18	
Difference	1.84	1.32	0.29	0.29	1.12	1.26	N/A	N/A	0.92	2.04	0.70	1.27	
<b>UBS Trumbull Property LP (CF)</b>	<b>5.03</b>	<b>11.57</b>	<b>16.22</b>	<b>16.22</b>	<b>2.96</b>	<b>4.41</b>	<b>N/A</b>	<b>N/A</b>	<b>-4.08</b>	<b>-2.11</b>	<b>6.98</b>	<b>5.52</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	7.97	15.12	22.17	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	9.18	
Difference	-2.94	-3.55	-5.95	-5.95	-6.24	-4.30	N/A	N/A	-5.27	-7.45	-1.37	-3.66	
<b>Jamestown Premier Property (CF)</b>	<b>1.19</b>	<b>3.36</b>	<b>-1.21</b>	<b>-1.21</b>	<b>-2.62</b>	<b>3.68</b>	<b>N/A</b>	<b>N/A</b>	<b>-9.27</b>	<b>3.02</b>	<b>9.96</b>	<b>5.15</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	7.97	15.12	22.17	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	9.18	
Difference	-6.78	-11.76	-23.38	-23.38	-11.82	-5.03	N/A	N/A	-10.46	-2.32	1.61	-4.03	
<b>Prologis Targeted US Logistics LP (CF)</b>	<b>16.14</b>	<b>31.89</b>	<b>60.03</b>	<b>60.03</b>	<b>28.62</b>	<b>25.66</b>	<b>N/A</b>	<b>N/A</b>	<b>11.25</b>	<b>19.51</b>	<b>18.56</b>	<b>24.72</b>	<b>04/01/2016</b>
NCREIF ODCE Index (AWA) (Gross)	7.97	15.12	22.17	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	8.71	
Difference	8.17	16.77	37.86	37.86	19.42	16.95	N/A	N/A	10.06	14.17	10.21	16.01	
<b>JP Morgan US RE Inc &amp; Grth LP (CF)</b>	<b>10.39</b>	<b>18.75</b>	<b>25.29</b>	<b>25.29</b>	<b>8.60</b>	<b>7.87</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.95</b>	<b>3.21</b>	<b>6.75</b>	<b>8.23</b>	<b>07/01/2016</b>
NCREIF ODCE Index (AWA) (Gross)	7.97	15.12	22.17	22.17	9.20	8.71	9.60	10.45	1.19	5.34	8.35	8.70	
Difference	2.42	3.63	3.12	3.12	-0.60	-0.84	N/A	N/A	-2.14	-2.13	-1.60	-0.47	
<b>Private Equity</b>													
<b>GCM Grosvenor BUSL LP</b>	<b>7.09</b>	<b>13.62</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>15.68</b>	<b>04/01/2021</b>
Cambridge US Prvt Eq Index	5.79	11.85	39.92	39.92	24.67	20.44	17.22	16.67	21.68	13.82	10.40	26.43	
Difference	1.30	1.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10.75	
<b>GCM Grosvenor Secondary Opp Fund III LP</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>N/A</b>	<b>01/01/2022</b>
Cambridge US Prvt Eq Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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 Q4, Acadian International Small Cap, Arrowstreet Emerging Markets, Millennium USA LP, PineBridge Dyn AA,Inst(GTAA), Owl Rock Diversified Lending and GCM Grosvenor Secondary Opportunities Fund III LP were funded.



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

As of December 31, 2021

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	Since Incep.	Inception Date
<b>Opportunistic Investments</b>													
Varde Dislocation Fund LP	0.19	-0.29	7.39	7.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	27.68	07/01/2020
Apollo Accord Fund IV LP	6.03	13.25	25.99	25.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26.35	10/01/2020
<b>Transition Account</b>													
NT STIF (Transition Account)	-0.10	-0.03	0.09	0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.21	06/01/2020
ICE BofAML 3 Mo US T-Bill Index	0.01	0.03	0.05	0.05	0.99	1.14	0.87	0.63	0.67	2.28	1.87	0.08	
Difference	-0.11	-0.06	0.04	0.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.13	

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 Q4, Acadian International Small Cap, Arrowstreet Emerging Markets, Millennium USA LP, PineBridge Dyn AA,Inst(GTAA), Owl Rock Diversified Lending and GCM Grosvenor Secondary Opportunities Fund III LP were funded.



**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.

**Manager Transition Comments**

- During 07/2020, Varde Dislocation Fund, LP was funded and Gresham Commodities (SA) was liquidated.
- During 09/2020, Apollo Accord Fund IV, LP was funded.
- During 03/2021, Loomis Sayles Credit Asseet (SA), Ares Pathfinder Fund LP and GCM Grosvenor BUSL LP was funded. Harvest MLP (SA) and ECLP (Loans) were liquidated.
- During 05/2021, Angelo Gordon Direct Lending IV Fund LP was funded.
- During 08/2021, QMA Int'l Sm Cap Equity, DFA Emg Mkts Core Eq;I and Brandywine Gbl Opp Fixed Income were liquidated. Schroders Securitized Credit (Structured Credit) transitioned into Schroders Flexible Secured Income (Secured Income)
- During 10/2021 Owl Rock Diversified Lending was funded.
- During 09/2021, Harding Loevner: IEM; IZ was liquidated.
- During 11/2021 Acadian International Small Cap was funded.
- During 11/2021 Arrowstreet Emerging Markets was funded.
- During 12/2021 PineBridge Dyn AA; Inst (PDAIX) was funded.
- During 12/2021 Millennium USA LP was funded.
- During 12/2021 GCM Grosvenor Secondary Opp Fund III LP was funded.

**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 JP Morgan FI Custom Index consists of the Bloomberg US Agg Bond Index. Prior to 03/2021, the index consisted of Bloomberg US Gov't Crdt Int Trm Bond Index.

The All Asset Custom Index (EqI Wtd) is an equal-weighted hybrid created independently by RVK specifically for PIMCO's All Asset strategies, and it consists of the following benchmarks:

1. Short Term Strategies: ICE BofAML 1 Yr T-Bill Index
2. US Core and Long Maturity Bond Strategies: Bloomberg US Agg Bond Index
3. EM and Gbl Bond Strategies: PIMCO GLADI Index\*
4. Crdt Strategies: ICE BofAML US Hi Yld Master II Index
5. Inflation Related Strategies: Bloomberg US Trsy US TIPS Index
6. US Equity Strategies: Russell 3000 Index
7. Global Equity Strategies: MSCI ACW Index (USD) (Net)
8. Alternative Strategies: ICE BofAML 3 Mo US T-Bill Index + 3%

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

Peer Groups

- Total Fund - All Master Trust Universe
- US Equity - IM US Equity (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, and 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.

## Glossary

- Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.
- Option-Adjusted Spread** - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.
- 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.
- Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.
- 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.
- 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 that 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

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multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

**Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

**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.

**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 valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

**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.

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**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	Stable Value (Plan Sponsor Directed)	50
TIPS	95	Hedge Funds of Funds	35
US Large Cap Equity	95		
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Global Equity	90	<u>Not Liquid Investments</u>	
Non-US Large Cap Equity	90	Core Real Estate	25
Global Tactical Asset Allocation	88	Core Plus Real Estate	15
MLPs	85	Non-Core Real Estate	5
US Mid Cap Equity	85	Private Equity Funds of Funds	5
US SMid Cap Equity	85		
US Small Cap Equity	85		
REITs	85		
Non-US Small Cap Equity	85		
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.



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

**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 portfolio's 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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