



# Quarterly Investment Performance Analysis

City of Austin Employees' Retirement System

Period Ended: September 30, 2023



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# Executive Summary



Capital Markets Review	
<ul style="list-style-type: none"> <li>During Q3, investors grappled with mixed signals regarding the health of the economy and the direction of corporate profits. Although labor market data releases have exceeded expectations, rising energy costs and mortgage rates raised concerns about a decline in consumer spending.</li> <li>Rising energy prices drove the September reading of the Consumer Price Index (CPI) to 3.7%, higher than earlier in the year.</li> <li>The Federal Open Markets Committee (FOMC) paused rate hikes during its September meeting--marking only the second pause since March 2022--but it also indicated that an additional rate increase should be expected before the end of the year.</li> </ul>	

Market Performance					
	QTD	1 Year	3 Years	5 Years	10 Years
S&P 500 (Mkt Cap Wtd)	-3.3	21.6	10.2	9.9	11.9
Russell 2000	-5.1	8.9	7.2	2.4	6.6
MSCI EAFE (Net)	-4.1	25.6	5.8	3.2	3.8
MSCI Emg Mkts (Net)	-2.9	11.7	-1.7	0.6	2.1
Bbrg US Agg Bond	-3.2	0.6	-5.2	0.1	1.1
Bbrg Cmnty (TR)	4.7	-1.3	16.2	6.1	-0.7
NCREIF ODCE (Net)	-2.1	-12.9	6.2	4.7	7.2

Total Fund Performance												
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
<b>Total Fund</b>	<b>-3.8</b>	<b>3.4</b>	<b>9.7</b>	<b>2.9</b>	<b>3.9</b>	<b>5.4</b>	<b>5.3</b>	<b>-15.6</b>	<b>13.0</b>	<b>10.8</b>	<b>20.7</b>	<b>-5.9</b>
Policy Benchmark	-4.0	4.7	13.2	3.6	4.1	5.4	5.3	-17.3	14.4	10.9	21.6	-6.8
Excess Return	0.2	-1.3	-3.5	-0.7	-0.2	0.0	0.0	1.7	-1.4	-0.1	-0.9	0.9

Total Fund Risk Metrics												
	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018		
Sharpe Ratio	0.5	0.2	0.2	0.4	0.5	-1.2	1.9	0.6	2.3	-0.9		
Standard Deviation	11.1	12.2	11.0	12.7	10.0	14.3	6.7	17.4	7.3	8.3		
Tracking Error	1.3	1.7	1.8	1.7	1.8	2.1	1.2	2.0	1.0	1.8		

Asset Class Performance						
	QTD	CYTD	1 Year	3 Years	Since Inception	Inception Date
<b>Total Fund</b>	<b>-3.8</b>	<b>3.4</b>	<b>9.7</b>	<b>2.9</b>	<b>9.2</b>	<b>06/01/1982</b>
Policy Benchmark	-4.0	4.7	13.2	3.6	N/A	
Excess Return	0.2	-1.3	-3.5	-0.7	N/A	
<b>US Equity</b>	<b>-3.6</b>	<b>7.6</b>	<b>16.6</b>	<b>7.8</b>	<b>10.3</b>	<b>06/01/1988</b>
US Equity Benchmark	-3.2	13.1	21.0	9.0	10.5	
Excess Return	-0.4	-5.5	-4.4	-1.2	-0.2	
<b>Developed Markets Equity</b>	<b>-6.5</b>	<b>4.9</b>	<b>20.2</b>	<b>2.7</b>	<b>4.4</b>	<b>01/01/2008</b>
Developed Market Equity Benchmark	-4.1	6.7	24.0	6.1	2.2	
Excess Return	-2.4	-1.8	-3.8	-3.4	2.2	
<b>Emerging Markets Equity</b>	<b>-4.1</b>	<b>4.2</b>	<b>15.2</b>	<b>-3.0</b>	<b>0.6</b>	<b>03/01/2008</b>
Emerging Market Equity Benchmark	-2.9	1.8	11.7	-1.7	1.1	
Excess Return	-1.2	2.4	3.5	-1.3	-0.5	
<b>Real Estate Equity</b>	<b>-5.2</b>	<b>-5.5</b>	<b>-7.3</b>	<b>5.1</b>	<b>6.4</b>	<b>09/01/2004</b>
Real Estate Equity Benchmark	-7.1	-2.1	3.0	5.8	7.3	
Excess Return	1.9	-3.4	-10.3	-0.7	-0.9	
<b>Infrastructure Equity</b>	<b>-2.5</b>	<b>1.7</b>	<b>8.1</b>	<b>8.1</b>	<b>1.5</b>	<b>01/01/2020</b>
Infrastructure Equity Benchmark	-7.5	-4.5	5.9	6.5	-0.5	
Excess Return	5.0	6.2	2.2	1.6	2.0	
<b>Global Fixed Income</b>	<b>-3.5</b>	<b>-1.2</b>	<b>0.0</b>	<b>-6.4</b>	<b>4.8</b>	<b>02/01/1991</b>
Global Fixed Income Benchmark	-3.6	-2.2	2.2	-6.9	4.5	
Excess Return	0.1	1.0	-2.2	0.5	0.3	
<b>Asset Allocation</b>	<b>-2.9</b>	<b>6.2</b>	<b>13.0</b>	<b>3.1</b>	<b>5.5</b>	<b>05/01/2020</b>
Multi-Asset Benchmark	-3.5	5.1	13.2	2.8	5.8	
Excess Return	0.6	1.1	-0.2	0.3	-0.3	
<b>Commodities &amp; Other</b>	<b>-3.7</b>	<b>-1.7</b>	<b>6.3</b>	<b>-1.1</b>	<b>N/A</b>	<b>07/01/2017</b>
Commodities & Other Benchmark	4.7	-3.4	-1.3	16.2	5.7	
Excess Return	-8.4	1.7	7.6	-17.3	N/A	

Performance Commentary	
<ul style="list-style-type: none"> <li>The Total Fund returned -3.8% net of fees during the quarter, outperforming the Policy Benchmark which returned -4.0%.</li> <li>Cash &amp; Equivalents was the best performing asset class on an absolute basis, net of fees, returning 1.3%. Infrastructure Equity had strong relative returns, outpacing its benchmark in Q3 by 5.0%.</li> </ul>	

Asset Allocation vs. Target Allocation			
	Market Value (\$000)	Allocation (%)	Target (%)
US Equity	1,036,351	34.8	34.0
DM Equity	463,165	15.6	16.0
EM Equity	198,647	6.7	6.0
Real Estate Equity	270,063	9.1	10.0
Infrastructure Equity	153,467	5.2	5.0
Global Fixed Income	498,604	16.8	21.0
Asset Allocation	83,787	2.8	5.0
Commodities & Other	37,285	1.3	2.0
Cash & Equivalents	235,290	7.9	1.0
<b>Total Fund</b>	<b>2,976,658</b>	<b>100.0</b>	<b>100.0</b>

Schedule of Investable Assets					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
<b>CYTD</b>	<b>2,941,251,159</b>	<b>-64,721,659</b>	<b>100,128,452</b>	<b>2,976,657,953</b>	<b>3.39</b>

Performance shown is net of fees. Allocations shown may not sum up to 100% exactly. Tracking Error shown is relative to the Passive Benchmark. Risk statistics shown are less meaningful for periods less than one year. Please see the addendum for custom benchmark definitions.



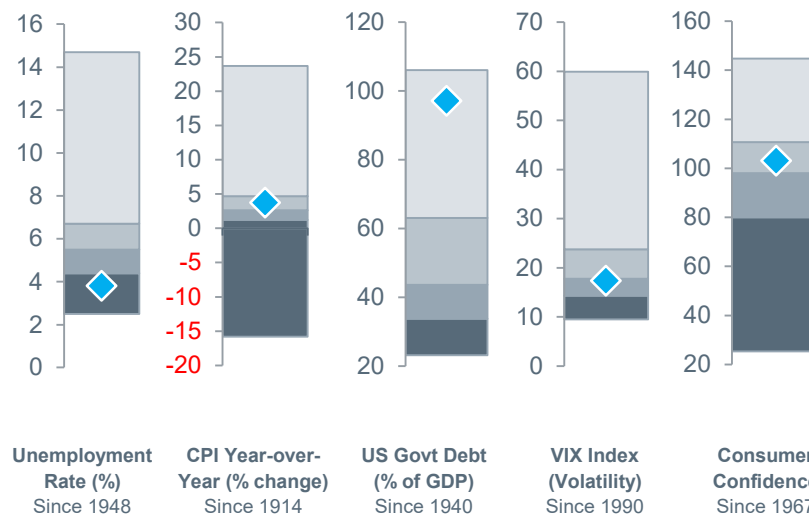
# Capital Markets Review



**Third Quarter Economic Environment**

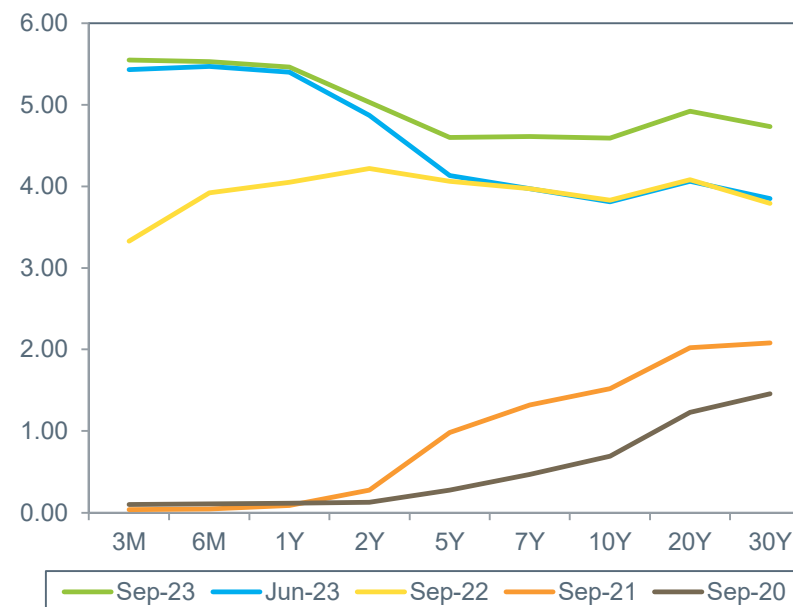
During Q3, investors grappled with mixed signals regarding the health of the economy and the direction of corporate profits. Several factors were at play, including an uptick in inflation, a downgrade to the US debt rating, ongoing labor negotiations and strikes, and uncertainty around the funding of the US government—all of which complicated the outlook for investors. As the prospect of a “higher for longer” outlook for interest rates was digested by investors, it led to increased volatility and negative equity market returns in the latter part of the quarter. Among investors, there was an increasing focus on the behavior and financial health of the US consumer. Although labor market data releases, including wage growth, have exceeded expectations, rising energy costs and mortgage rates, as well as the resumption of student loan payments following a multi-year pause, raised concerns about a decline in consumer spending. Within the US, rising energy prices drove the August and September readings of the Consumer Price Index (CPI) to 3.7% for consecutive months, higher than earlier in the year. Global central banks and policymakers have continued to focus on the balance between maintaining downward pressure on inflation and avoiding significant disruption to economic growth. The Federal Open Markets Committee (FOMC) paused rate hikes during its September meeting—marking only the second pause since March 2022—but it also indicated that an additional rate increase should be expected before the end of the year.

**Key Economic Indicators**



Economic Indicators	Sep-23	Jun-23	Sep-22	Sep-20	20 Yr
Federal Funds Rate (%)	5.33 ▲	5.08	3.08	0.09	1.44
Breakeven Infl. - 5 Yr (%)	2.25 ▲	2.17	2.16	1.49	1.94
Breakeven Infl. - 10 Yr (%)	2.34 ▲	2.21	2.15	1.63	2.10
CPI YoY (Headline) (%)	3.7 ▲	3.0	8.2	1.4	2.6
Unemployment Rate (%)	3.8 ▲	3.6	3.5	7.9	5.9
Real GDP YoY (%)	N/A —	2.4	1.8	-2.0	2.0
PMI - Manufacturing	49.0 ▲	46.0	50.9	55.4	53.6
USD Total Wtd Idx	122.77 ▲	119.89	127.64	116.97	103.67
WTI Crude Oil per Barrel (\$)	90.8 ▲	70.6	79.5	40.2	69.6
Gold Spot per Oz (\$)	1,872 ▼	1,906	1,661	1,886	1,219

**Treasury Yield Curve (%)**



Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	-3.27	13.07	21.62	9.92	11.91
Russell 2000	-5.13	2.54	8.93	2.40	6.65
MSCI EAFE (Net)	-4.11	7.08	25.65	3.24	3.82
MSCI EAFE SC (Net)	-3.51	1.82	17.90	0.76	4.30
MSCI Emg Mkts (Net)	-2.93	1.82	11.70	0.55	2.07
Bloomberg US Agg Bond	-3.23	-1.21	0.64	0.10	1.13
ICE BofAML 3 Mo US T-Bill	1.31	3.60	4.47	1.72	1.11
NCREIF ODCE (Gross)	-1.99	-7.64	-12.22	5.63	8.15
FTSE NAREIT Eq REIT (TR)	-7.13	-2.14	2.99	2.77	5.96
HFRI FOF Comp	0.51	2.81	4.59	3.38	3.28
Bloomberg Cmdty (TR)	4.71	-3.44	-1.30	6.13	-0.75

Third Quarter Review

Broad Market

US equity markets reversed into negative territory after an extended rebound earlier in the year. In the first half of 2023, US equity returns were driven primarily by mega-cap growth-oriented companies. However, in Q3 the performance of these mega-cap companies was mixed, with Apple, Amazon, and Microsoft delivering negative returns, while Alphabet and NVIDIA posted positive returns.

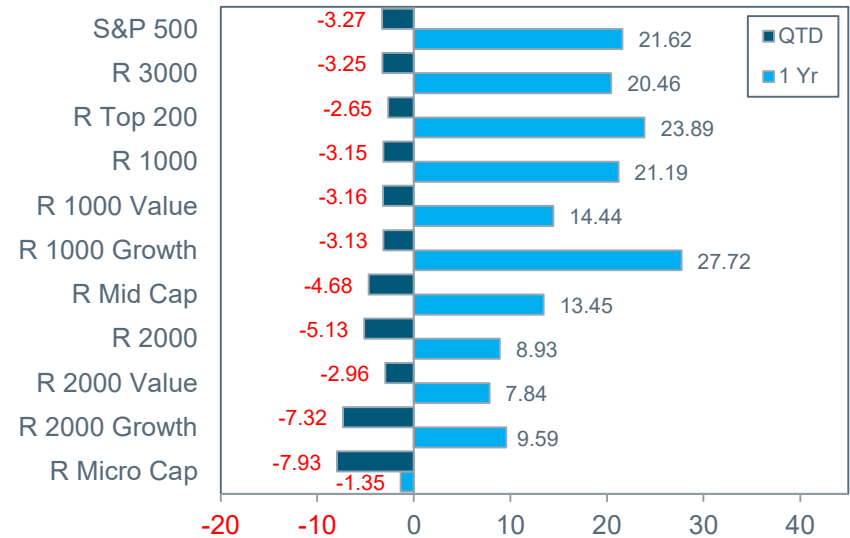
Market Cap

Compared to previous quarters, active large-cap managers generated higher excess returns on average due to reversals in some of the largest, best performing stocks and overall increased market volatility. Mid-cap and small-cap managers also generally performed well, with a majority outpacing their respective benchmarks.

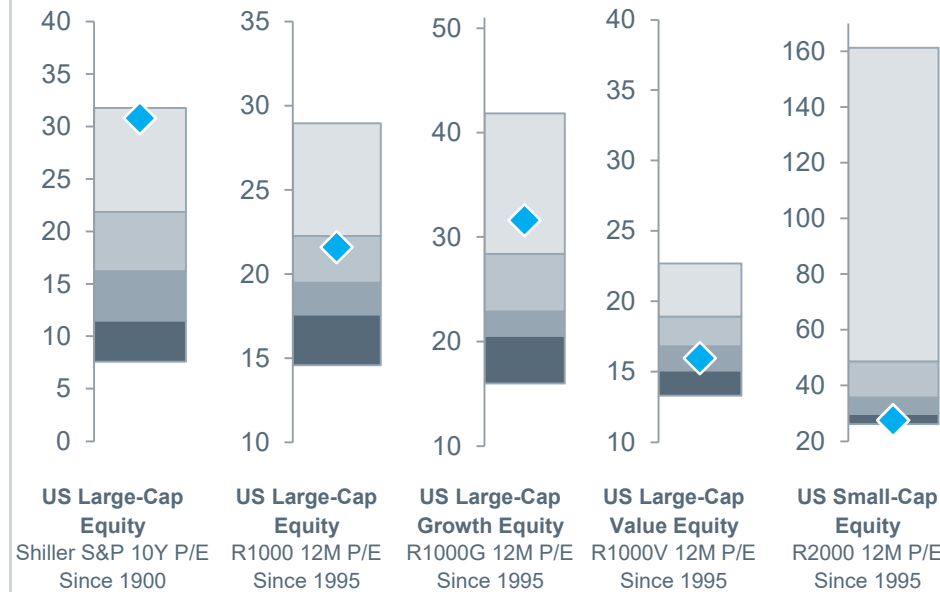
Style and Sector

There was no major dispersion between growth and value stocks among large- and mid-cap stocks. However, within small-cap, value stocks significantly outperformed growth stocks, with biotechnology stocks, which represent a significant portion of the small-cap growth space, experiencing a sharp decline during the quarter. Only the communications services and energy sectors produced positive returns, with the latter far outpacing other sectors.

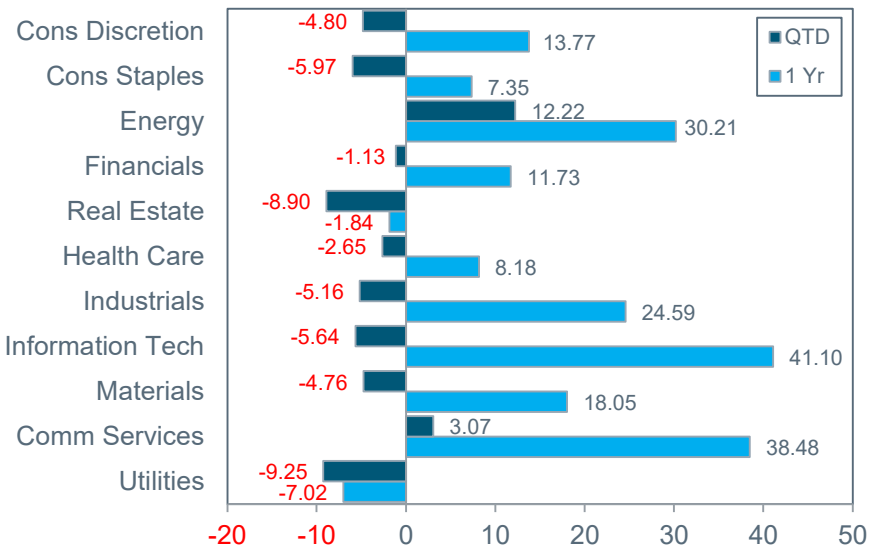
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

Third Quarter Review

Developed Markets

Developed international stocks lagged both US and emerging markets during Q3. On the style front, developed international value stocks outperformed growth stocks. Small-cap stocks outperformed large-cap stocks but not by a significant margin.

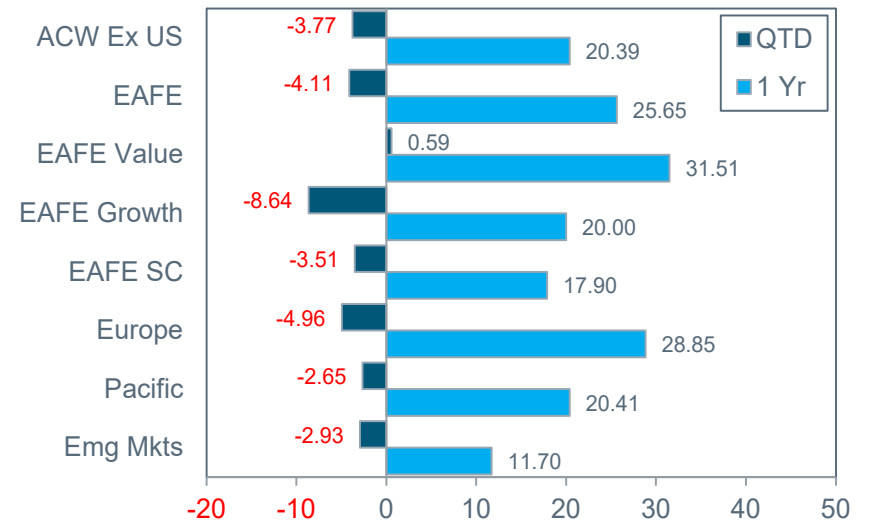
Emerging Markets

Emerging markets equities outperformed developed markets for the quarter. Similarly, value outperformed growth due to a strong showing from the energy sector. Small-cap stocks outperformed large-cap by a sizeable margin. China continued to struggle but saw some improvement in retail sales and industrial production in August. Subsequently, the Chinese Communist Party continued to engage in stimulus, lowering reserve requirements and rates. However, consumer spending levels in China remain below expectations.

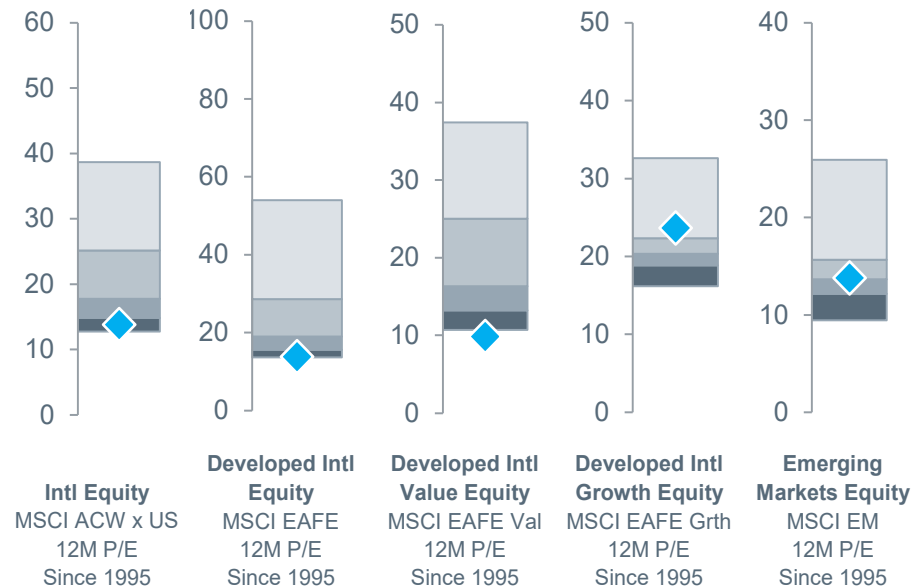
Market Cap & Style

A key bright spot for international markets in Q3 was the energy sector, which was the only sector to end the quarter with positive returns which also drove the MSCI EAFE Value Index into positive territory. Production cuts that are supposed to last until the end of the year drove relatively positive sentiment around the energy sector. Despite the oil price spike, most European countries saw a slowdown in inflation.

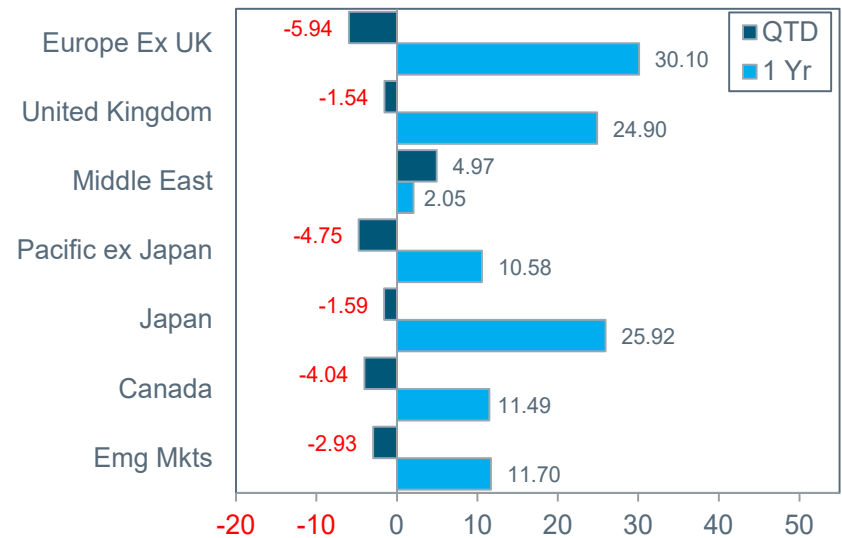
MSCI Style and Capitalization Market Performance (%)



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.



**Third Quarter Review**

**Broad Market**

In Q3, the Fed increased the target interest rate by another 25 basis points. The FOMC reaffirmed its dedication to returning inflation to the 2.00% target and suggested the possibility of maintaining a more restrictive stance than previously anticipated. Treasury yields rose steadily, with the 10-year increase of 78 basis points ending at 4.59%. The yield curve became less inverted as investors sought higher income for longer maturities. The slope between 2-year and 10-year Treasury rates hit a low of -108 basis points in July and ended September at -44 basis points. Amidst this backdrop, the Bloomberg US Aggregate Bond Index returned -3.23%.

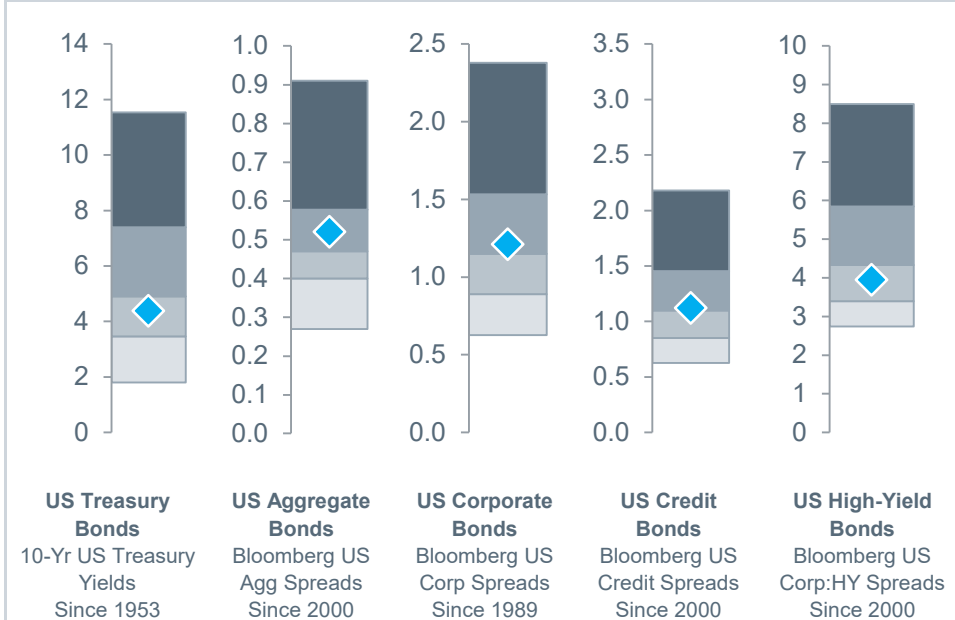
**Credit Market**

Lower-rated bonds outperformed during the quarter, as the Bloomberg US Corporate Investment Grade Index returned -3.09%, while the Bloomberg US Corporate High Yield Index returned 0.46%.

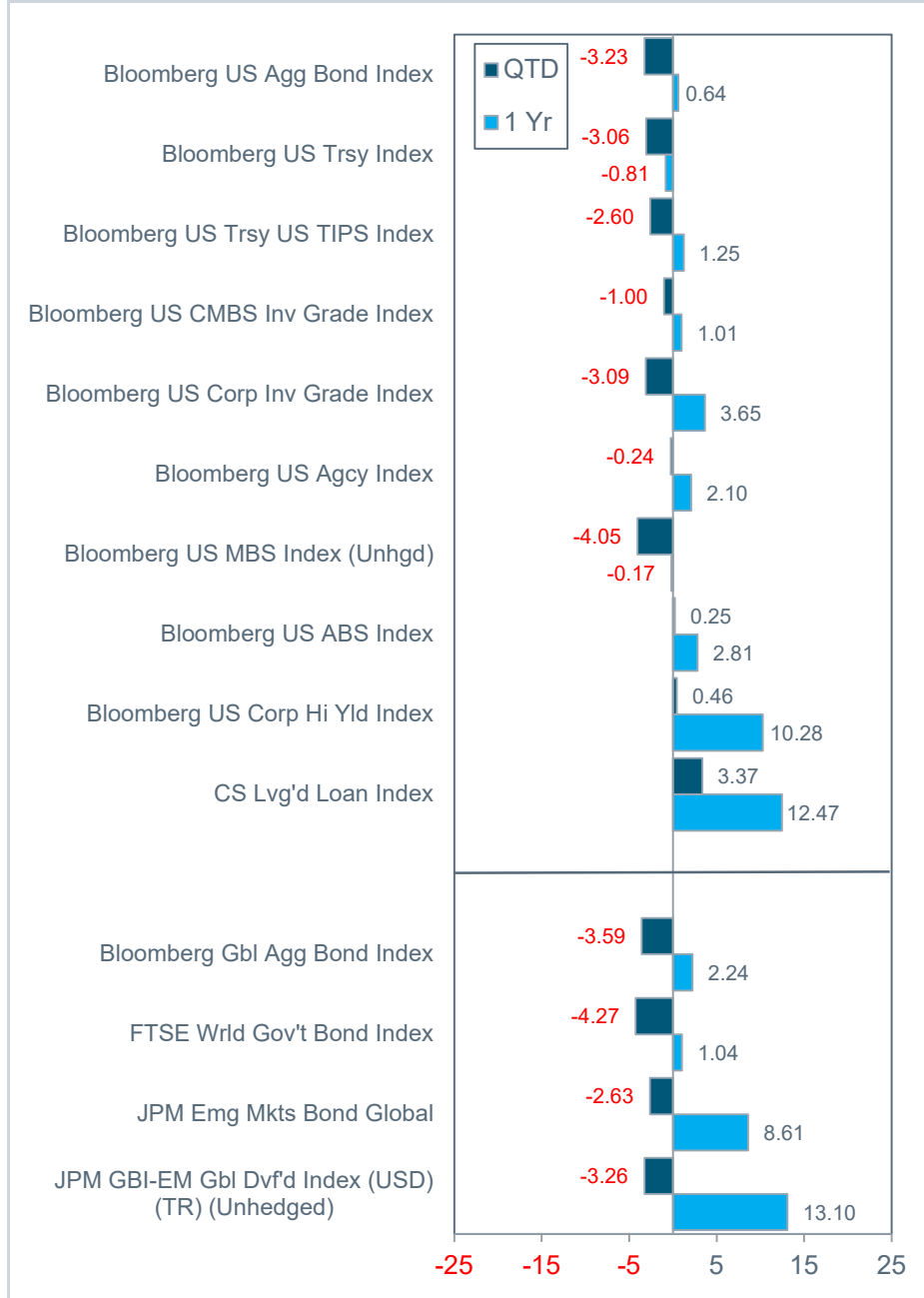
**Emerging Market Debt**

Emerging market debt remained vulnerable to increased US yields and a robust dollar. During the quarter, the JPMorgan EMBI Global Diversified Index, which tracks hard currency emerging markets, returned -2.23%, while the JPMorgan GBI-EM Global Diversified Index, reflecting local currency emerging markets, returned -3.26%.

**Valuations**



**Fixed Income Performance (%)**



Valuation data courtesy of Bloomberg Professional Service. Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.



**Third Quarter Review - Absolute Return**

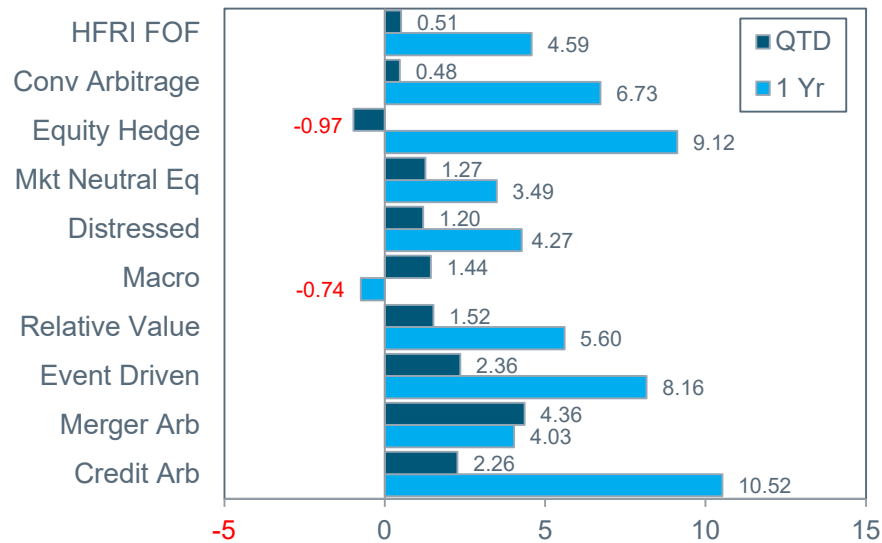
**General Market - Hedge Funds**

In Q3, hedge funds broadly delivered positive results amidst a backdrop of increased market volatility. The diversification benefits of these strategies were highlighted in September, with managers generally limiting downside capture to a fraction of the sharp equity market decline. The HFRI Fund-Weighted Composite Index reported a net return of 0.8% during the quarter. Year-to-date, long/short equity strategies, directional quants, and event-driven managers focused on credit arbitrage and equity activism have been leading performers. For multi-strategy and equity long/short managers, long alpha generation has been strongest in the communication services and industrials sectors while short alpha has been strongest in the communication services and financial sectors.

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

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely generally posted negative returns in Q3. Long-biased strategies reported mixed performance, albeit with wide divergence, versus a static and less diversified blend of 60% US equity and 40% US fixed income. The top-performing long-biased GTAA strategies featured greater exposures to emerging markets (ex China), Japan and value equity exposure, outpacing those that held larger US exposures with significant growth tilts.

**HFRI Hedge Fund Performance (%)**



**Third Quarter Review - Real Assets**

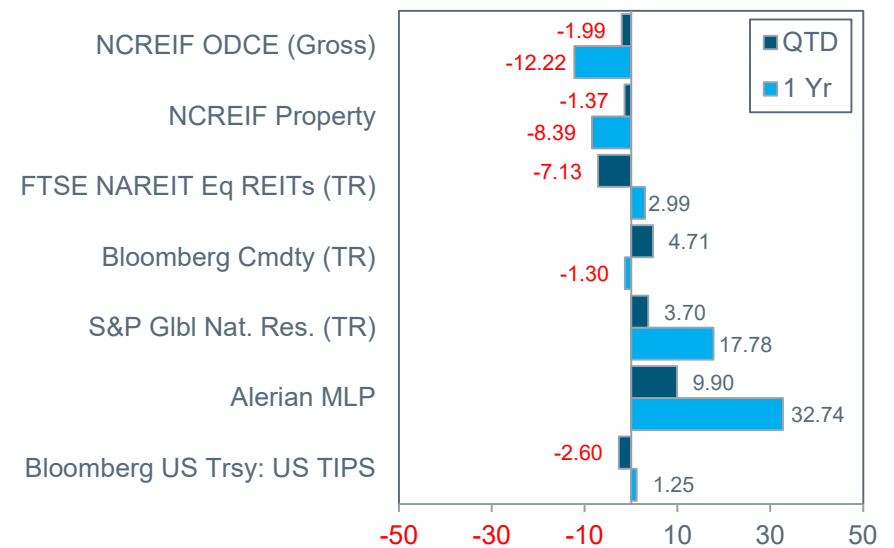
**General Market - Diversified Inflation Strategies (DIS)**

Diversified Inflation Strategy managers tracked closely by RVK reported mixed performance versus a US-centric 60% equity and 40% fixed income blend with manager performance ranging from strongly negative to slightly positive. Managers with larger exposures to long-duration fixed income, listed infrastructure, and real estate lagged peers most significantly while those with larger exposure to the energy commodity sector tended to outperform peers.

**General Market - Real Estate**

Core private real estate returned -2.0% in Q3 (on a preliminary and gross-of-fee basis), as reported by the NFI-ODCE Index. The total return comprised of 0.9% from income and -2.9% from price appreciation. Income returns remained steady compared to Q2 but continue to trend at the lower end of historical levels while price appreciation remains negative with modest improvement over the Q2 level. During the quarter, publicly traded real estate significantly underperformed private market counterparts by a meaningful margin with the FTSE NAREIT All REITs Index reporting returns of -8.0%. The office sector remains the most challenged as it relates to operating fundamentals with weakness in buyer interest, vacancy and leasing velocity.

**Real Asset Performance (%)**



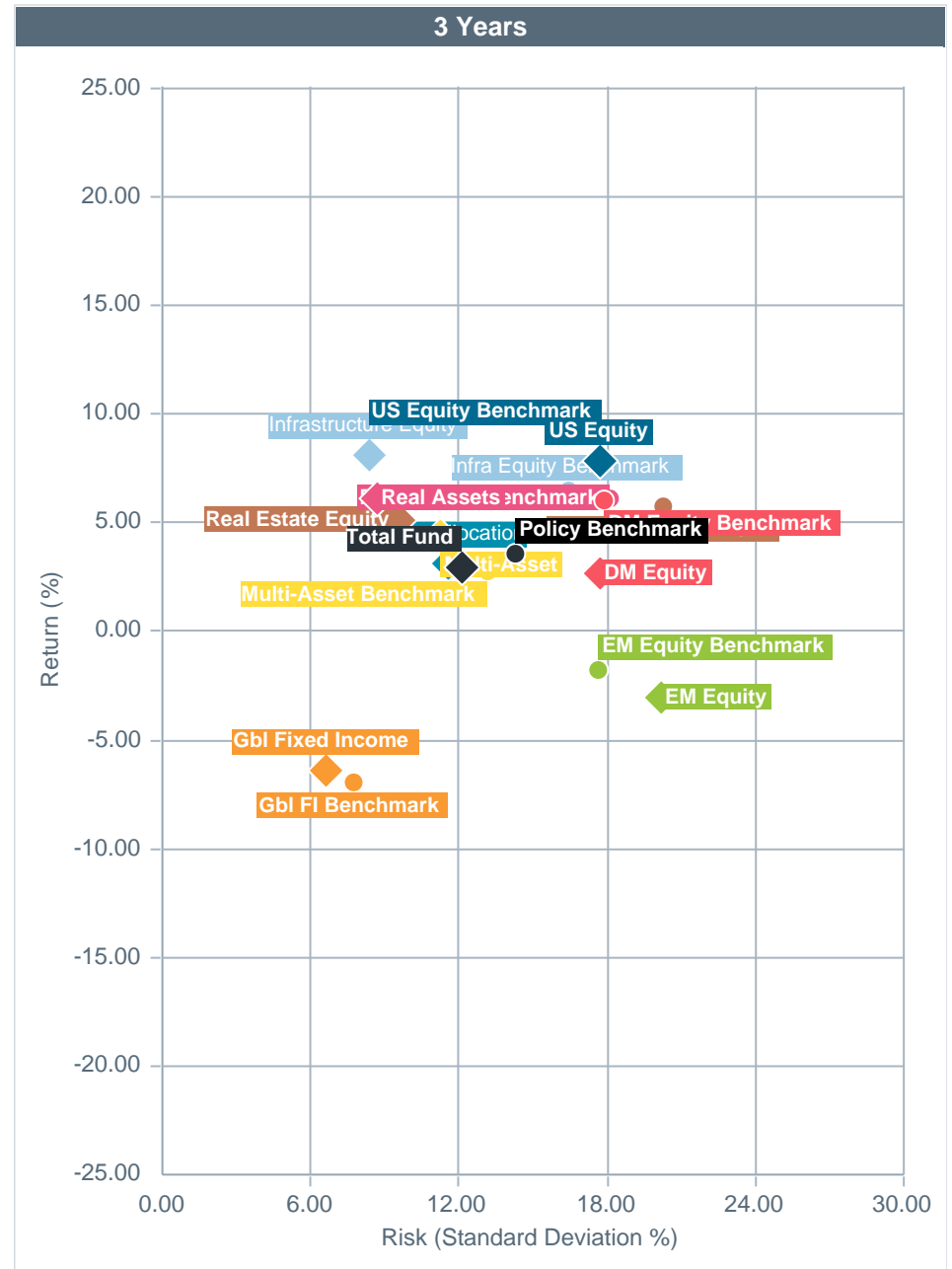
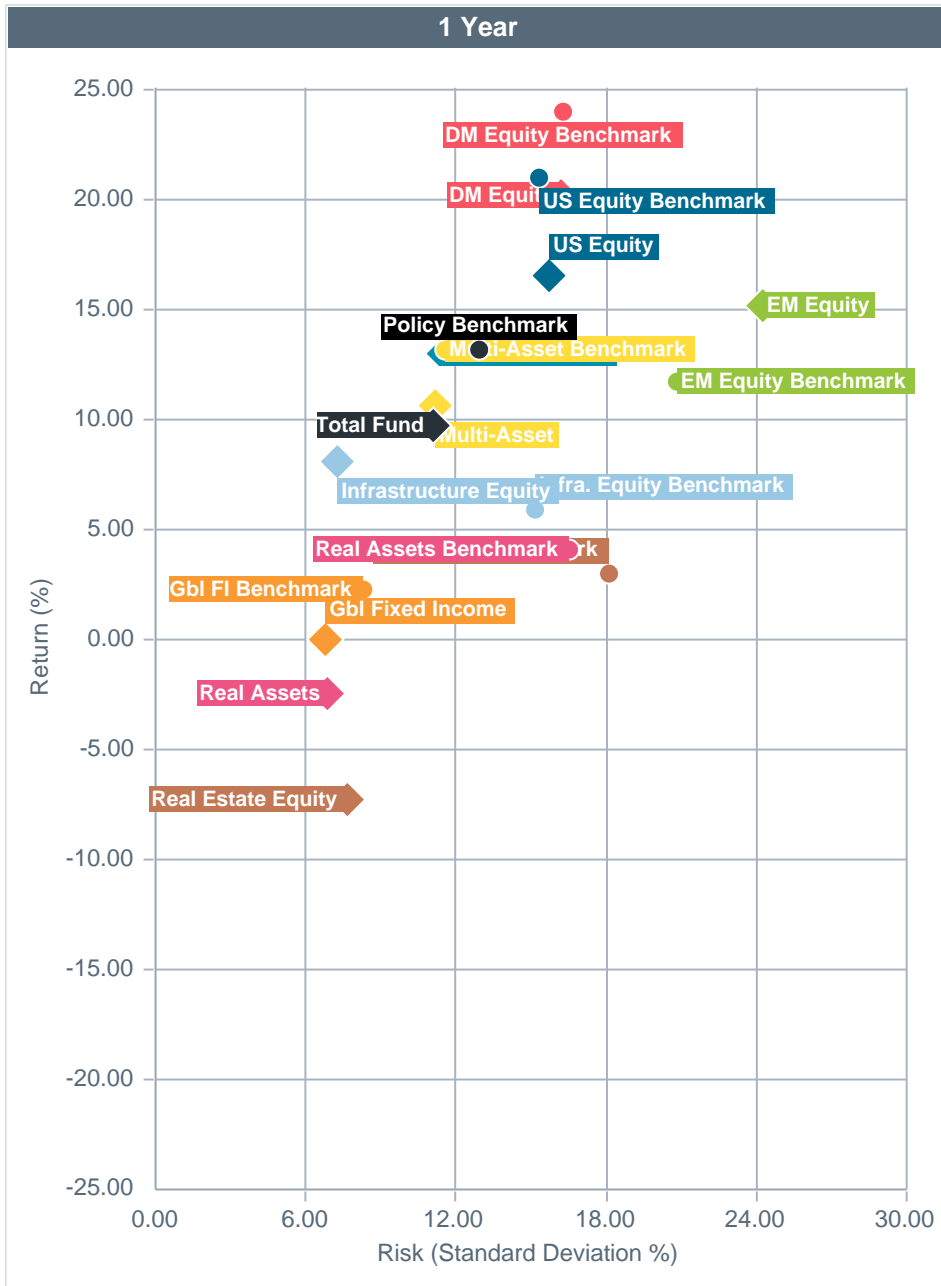
Annual Asset Class Performance

As of September 30, 2023

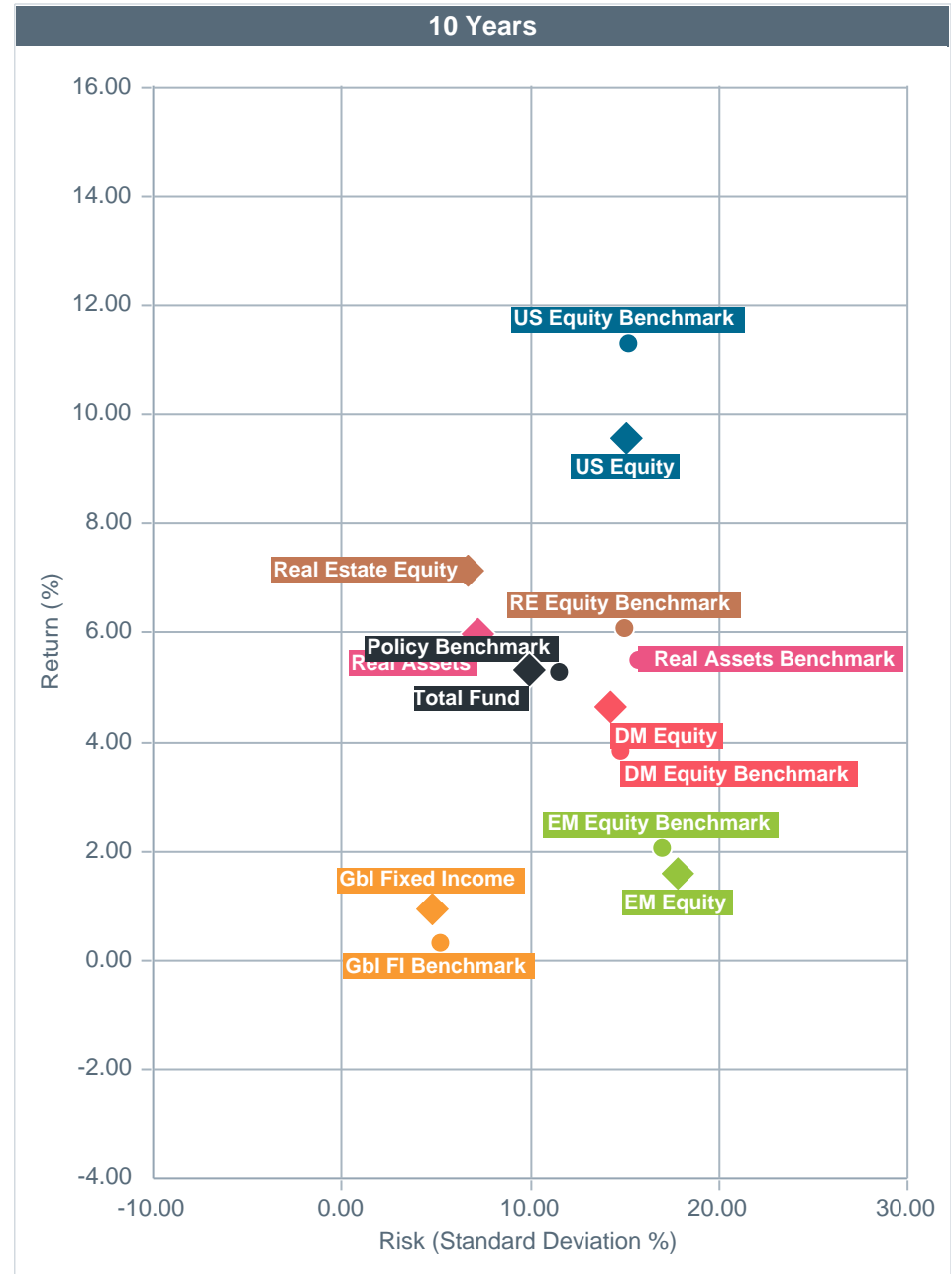
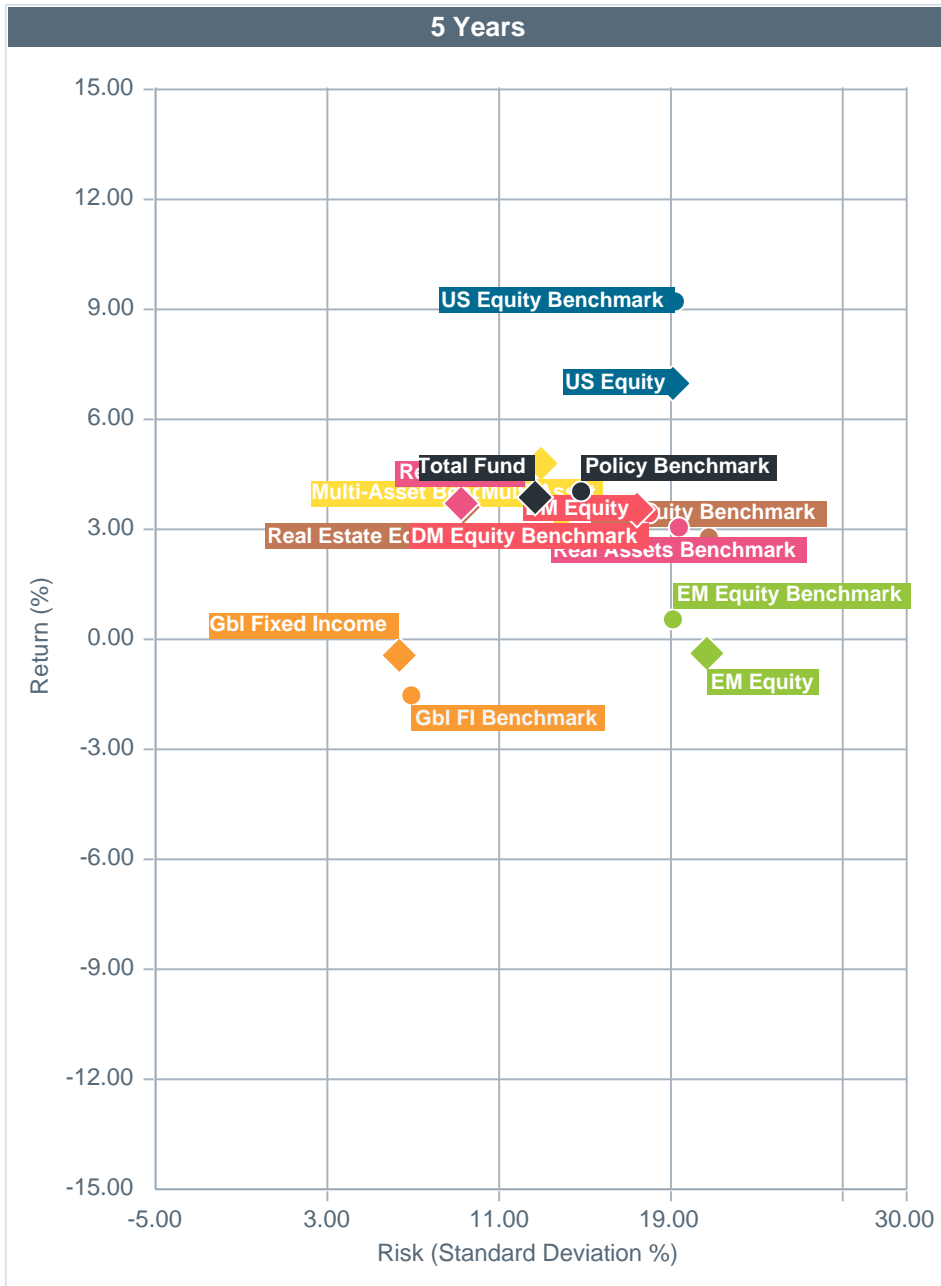
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD
Best	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	13.07
	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	7.08
	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	5.86
	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	-5.31	3.60
	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	-11.19	2.81
	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	-11.85	2.54
	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01	1.82
	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	-14.45	1.82
	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	-18.11	-0.78
	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	-20.09	-1.21
	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	-20.44	-2.14
	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	-21.39	-3.44
	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37	-5.40
Worst	-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	-27.09	-7.64
	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.





Performance shown is net of fees. Calculation is based on monthly periodicity. Composites with less history than the specified time period will not appear in the chart. Diamonds symbolize COAERS composites and circles symbolize asset class benchmarks.



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# Total Fund

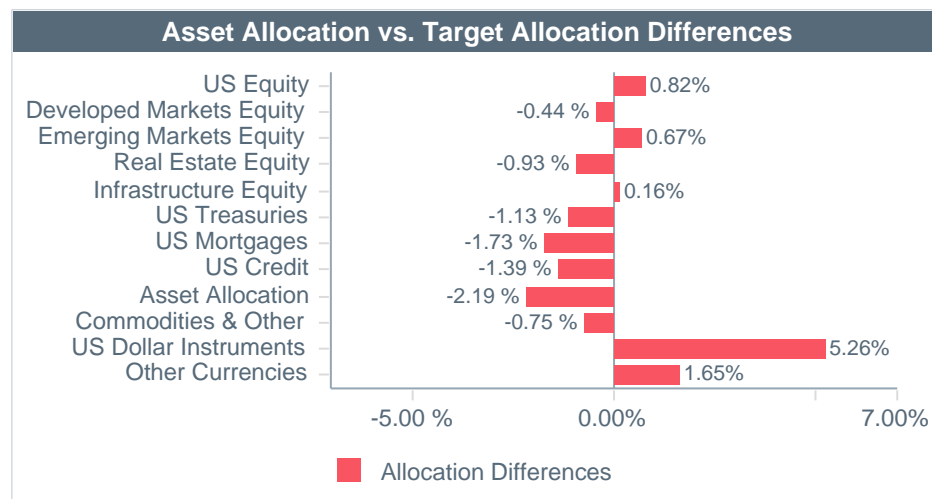
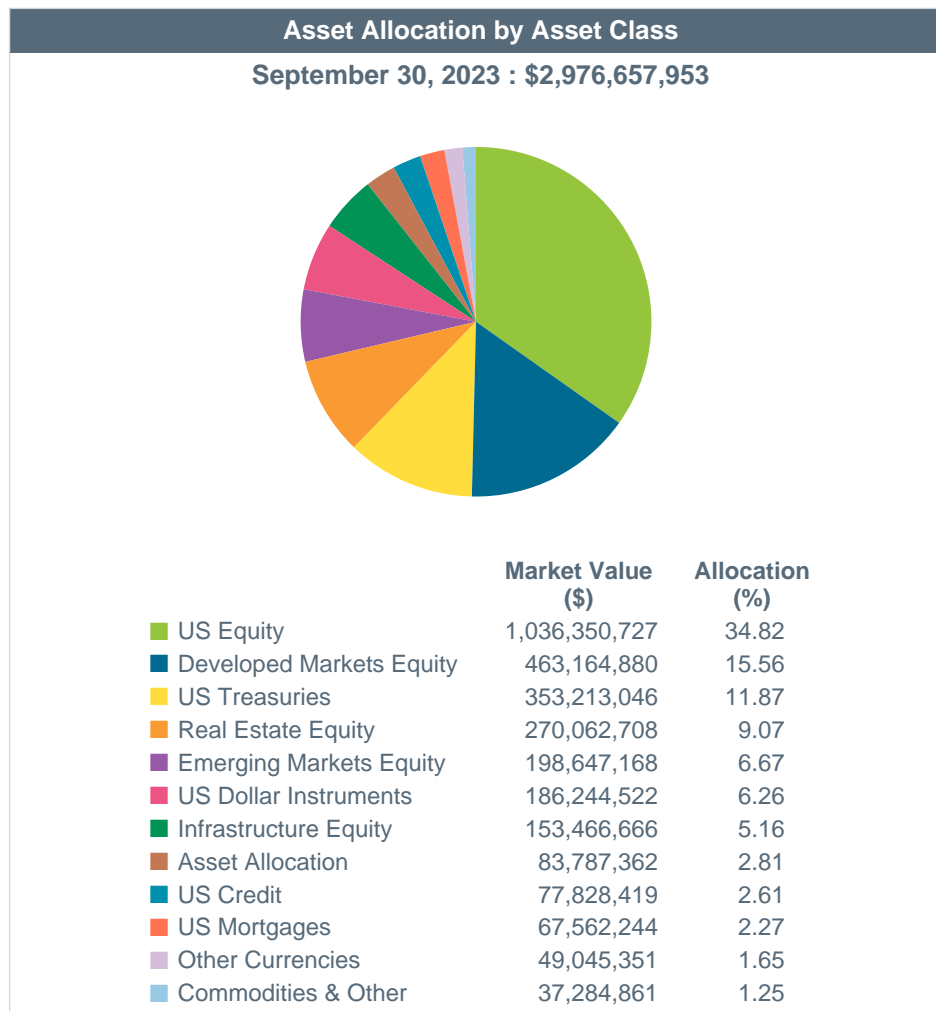


Composite: Total Fund

Asset Alloc. by Asset Class, Asset Alloc. vs. Target, and Schedule of Investable Assets

Schedule of Investable Assets					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
CYTD	2,941,251,159	-64,721,659	100,128,452	2,976,657,953	3.39
1 Year	2,778,760,359	-72,788,184	270,685,778	2,976,657,953	9.73
3 Years	2,885,026,655	-172,831,061	264,462,359	2,976,657,953	2.91

Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Neutral (%)	Min. (%)	Max. (%)
<b>Total Fund</b>	<b>2,976,657,953</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>	<b>-</b>
US Equity	1,036,350,727	34.82	34.00	29.00	39.00
Developed Markets Equity	463,164,880	15.56	16.00	13.50	18.50
Emerging Markets Equity	198,647,168	6.67	6.00	4.00	10.50
Real Estate Equity	270,062,708	9.07	10.00	7.00	13.00
Infrastructure Equity	153,466,666	5.16	5.00	1.00	7.00
US Treasuries	353,213,046	11.87	13.00	11.00	21.00
US Mortgages	67,562,244	2.27	4.00	3.00	6.00
US Credit	77,828,419	2.61	4.00	2.50	7.00
Asset Allocation	83,787,362	2.81	5.00	3.50	7.50
Commodities & Other	37,284,861	1.25	2.00	1.00	5.00
US Dollar Instruments	186,244,522	6.26	1.00	0.00	5.00
Other Currencies	49,045,351	1.65	0.00	0.00	1.00



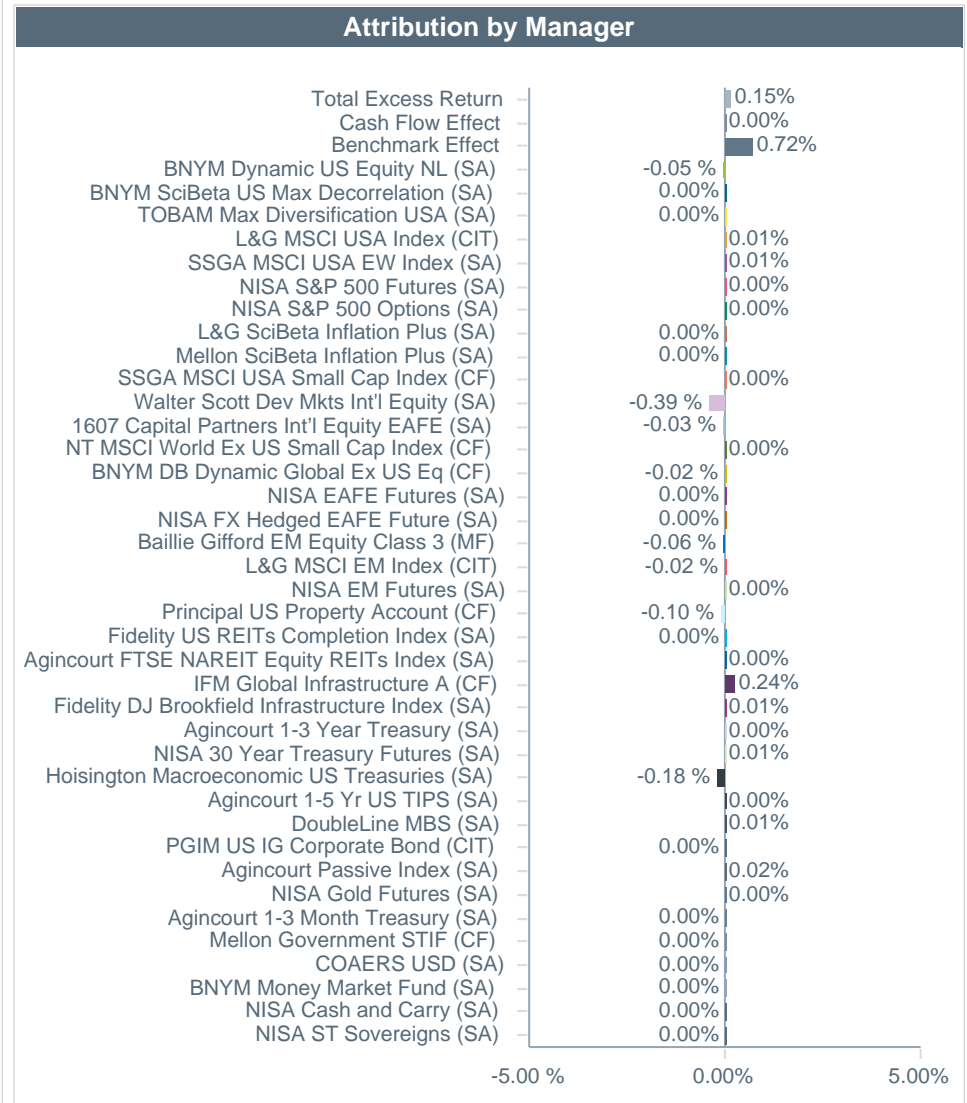
Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding. Performance is annualized for periods greater than one year. Total Fund market value does not include \$385,777.95 in assets remaining at Northern Trust - representing accruals, cash, tax reclaims, and some assets that were restricted from being delivered due to a liquidation or pending corporate action.

**Composite: Total Fund**  
**Benchmark: Policy Benchmark**

As of September 30, 2023

	Market Value (\$)	Allocation (%)
BNYM Dynamic US Equity NL (SA)	231,860,033	7.79
Agincourt 1-3 Year Treasury (SA)	186,555,582	6.27
SSGA MSCI USA EW Index (SA)	184,465,464	6.20
Walter Scott Dev Mkts Int'l Equity (SA)	181,176,307	6.09
L&G MSCI USA Index (CIT)	175,835,213	5.91
Principal US Property Account (CF)	168,300,792	5.65
1607 Capital Partners Int'l Equity EAFE (SA)	143,091,355	4.81
BNYM SciBeta US Max Decorrelation (SA)	130,769,057	4.39
Baillie Gifford EM Equity Class 3 (MF)	120,200,232	4.04
Agincourt 1-3 Month Treasury (SA)	114,460,965	3.85
TOBAM Max Diversification USA (SA)	109,366,163	3.67
Mellon SciBeta Inflation Plus (SA)	93,912,455	3.15
IFM Global Infrastructure A (CF)	93,199,633	3.13
Fidelity US REITs Completion Index (SA)	92,370,480	3.10
Agincourt Passive Index (SA)	83,787,362	2.81
PGIM US IG Corporate Bond (CIT)	77,828,419	2.61
L&G MSCI EM Index (CIT)	70,798,881	2.38
DoubleLine MBS (SA)	67,562,244	2.27
NISA S&P 500 Futures (SA)	67,160,427	2.26
NISA Cash and Carry (SA)	66,871,519	2.25
Agincourt 1-5 Yr US TIPS (SA)	63,439,756	2.13
Fidelity DJ Brookfield Infrastructure Index (SA)	60,267,032	2.02
NISA 30 Year Treasury Futures (SA)	54,203,898	1.82
NISA ST Sovereigns (SA)	49,045,351	1.65
Hoisington Macroeconomic US Treasuries (SA)	49,013,810	1.65
SSGA MSCI USA Small Cap Index (CF)	42,914,262	1.44
NT MSCI World Ex US Small Cap Index (CF)	41,424,743	1.39
NISA FX Hedged EAFE Future (SA)	38,013,059	1.28
NISA Gold Futures (SA)	37,284,861	1.25
NISA EAFE Futures (SA)	32,837,441	1.10
BNYM DB Dynamic Global Ex US Eq (CF)	26,621,975	0.89
Agincourt FTSE NAREIT Equity REITs Index (SA)	9,391,435	0.32
NISA EM Futures (SA)	7,648,056	0.26
BNYM Money Market Fund (SA)	2,099,031	0.07
Mellon Government STIF (CF)	1,797,197	0.06
COAERS USD (SA)	1,015,809	0.03
NISA S&P 500 Options (SA)	64,219	0.00
L&G SciBeta Inflation Plus (SA)	3,434	0.00

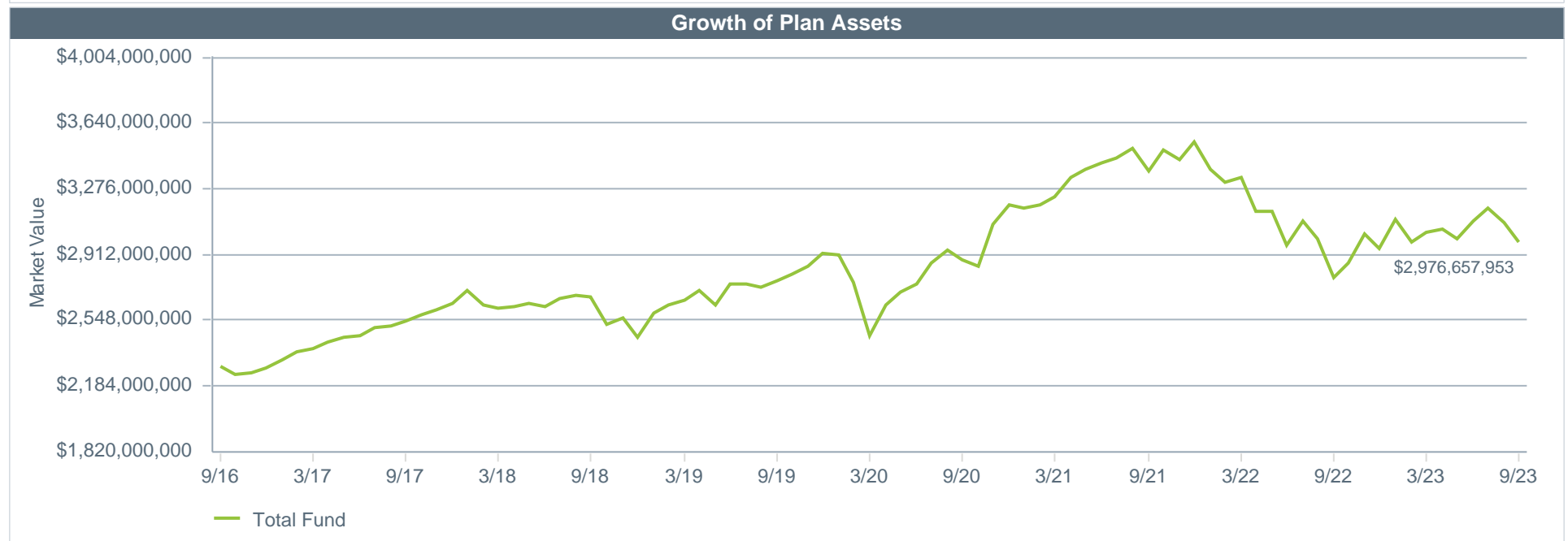
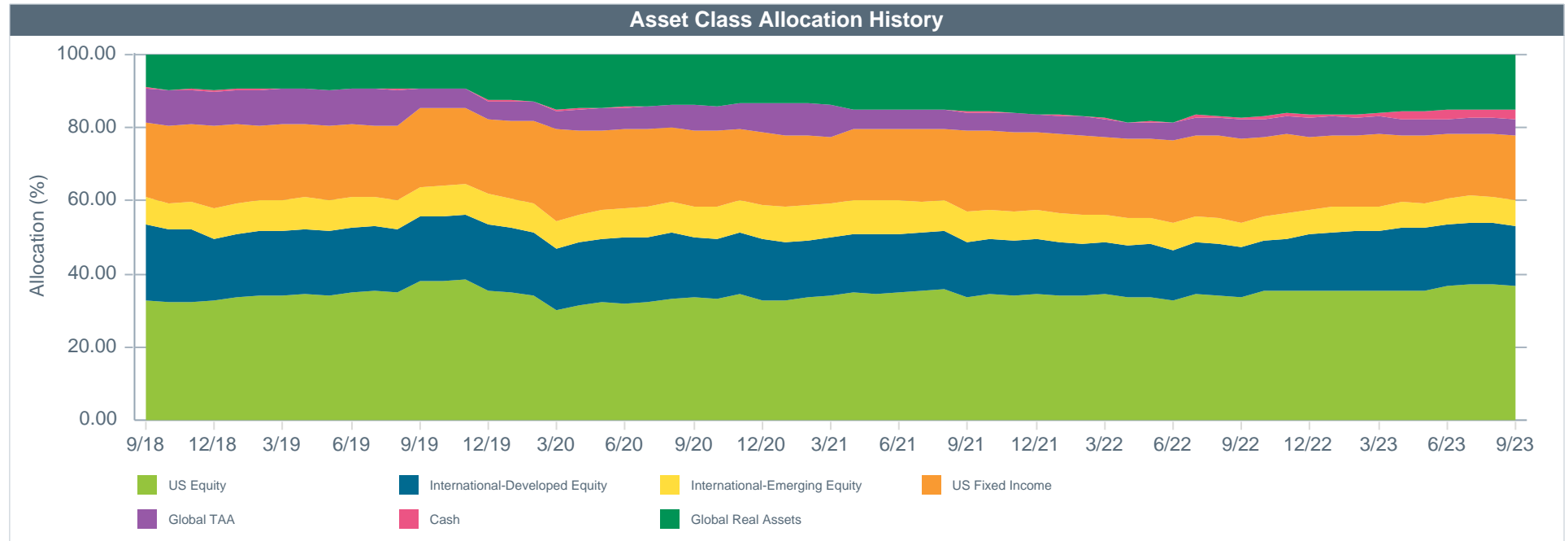
Rate of Return	
	QTD
Composite	-3.82
Benchmark	-3.97
Excess Return	0.15



Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions. Market value shown for L&G SciBeta Inflation Plus (SA) represents residual cash from liquidation.

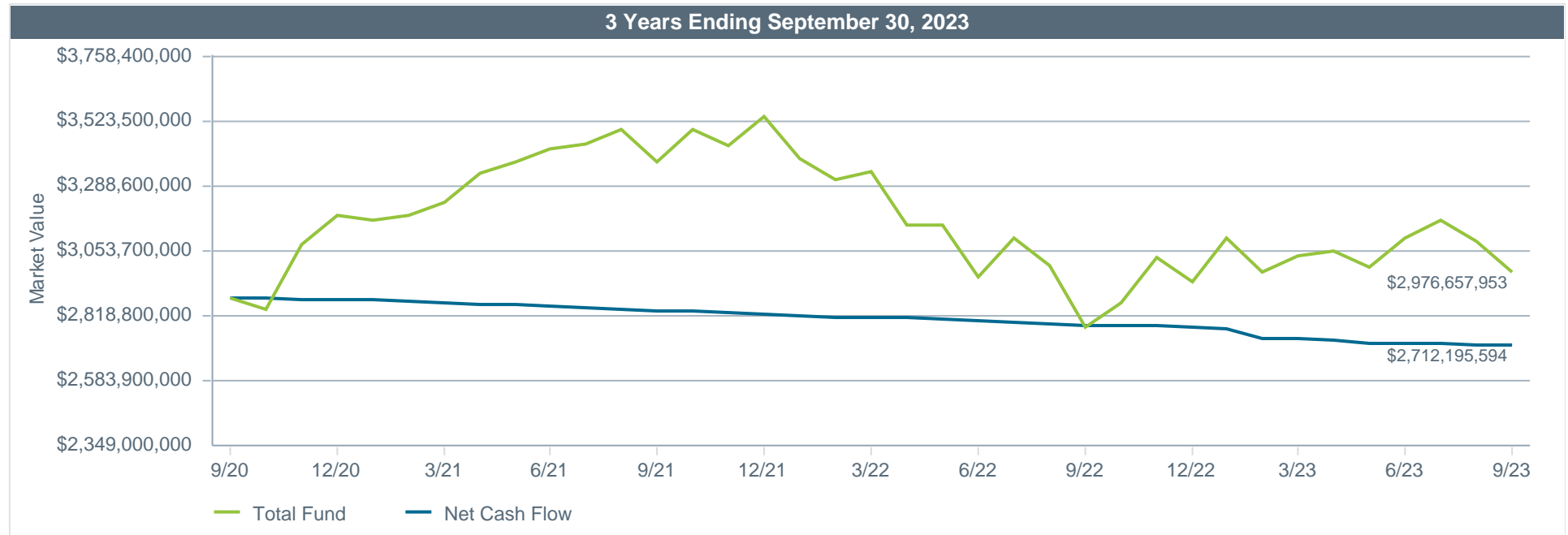






Global TAA currently consists of Agincourt Passive Index (SA) and NISA Gold Futures (SA).





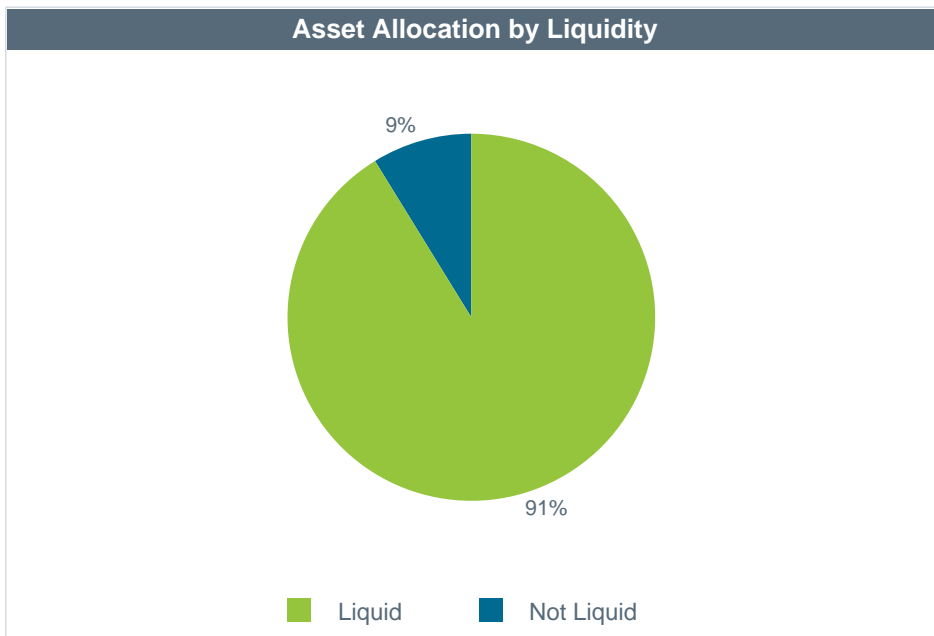
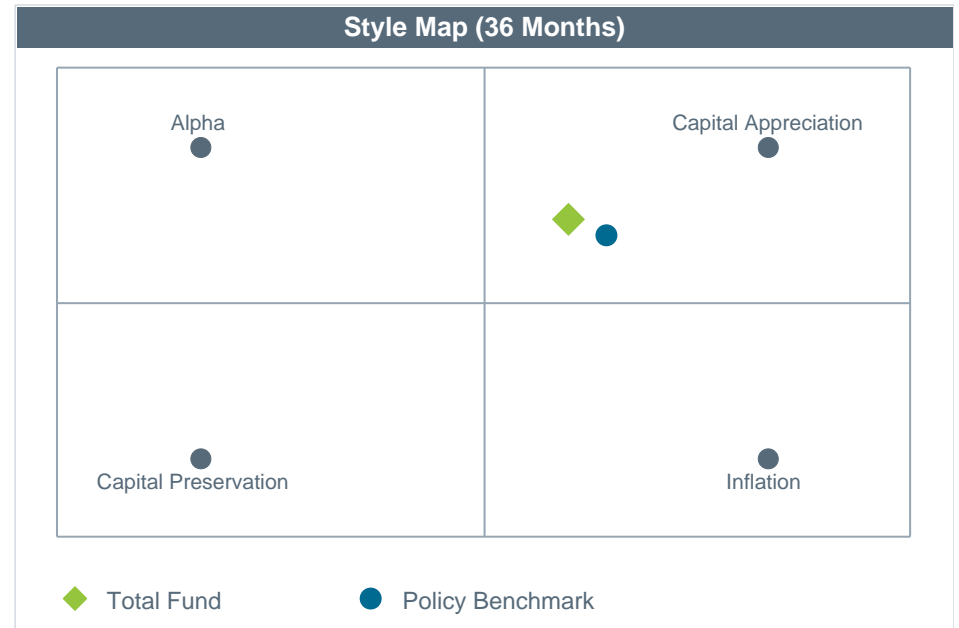
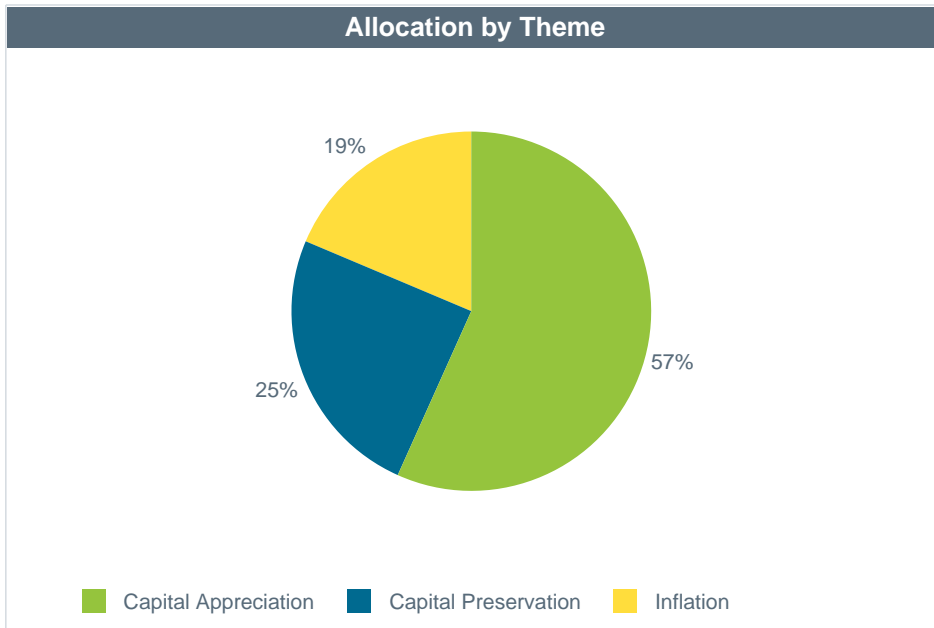
Schedule of Investable Assets - Quarter To Date						
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
QTD	3,098,785,392	191,522	-4,257,015	-4,065,493	-118,061,946	2,976,657,953

Schedule of Investable Assets - Year To Date						
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
CYTD	2,941,251,159	514,995,328	-579,716,987	-64,721,659	100,128,452	2,976,657,953

Schedule of Investable Assets - 1 Year						
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
1 Year	2,778,760,359	806,212,914	-879,001,099	-72,788,184	270,685,778	2,976,657,953

Schedule of Investable Assets - 3 Years						
Periods Ending	Beginning Market Value (\$)	Contributions (\$)	Withdrawals (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)
3 Years	2,885,026,655	2,550,272,184	-2,723,103,245	-172,831,061	264,462,359	2,976,657,953

Cash flows shown are net of fees. Net cash flow shown in the line chart represents the beginning market value, adjusted for cash flows. Contributions and withdrawals detail shown includes intra-portfolio cash flows.



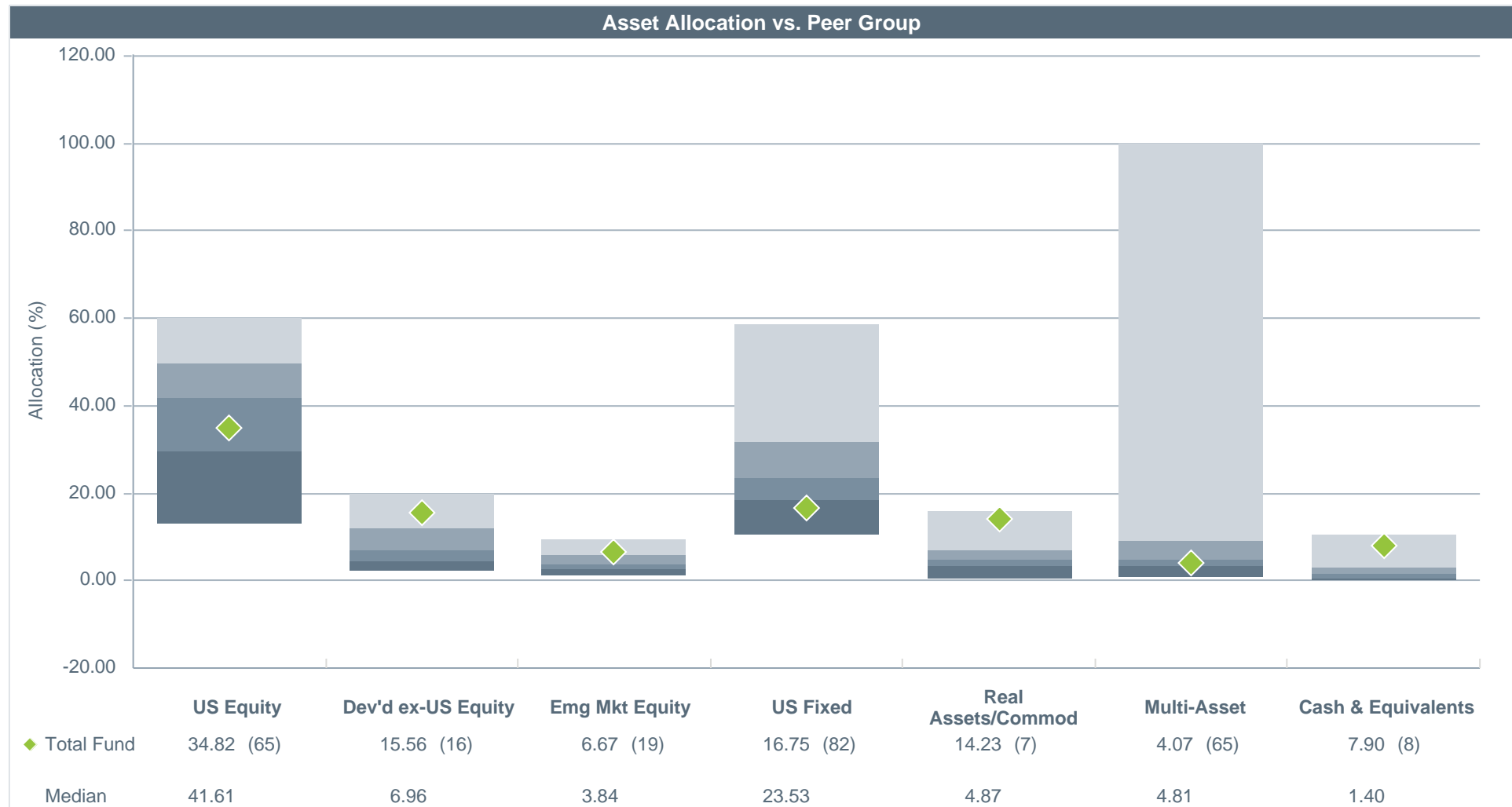
### Actual Correlation - 10 Years

	A	B	C	D	E
A	1.00				
B	0.47	1.00			
C	-0.18	0.04	1.00		
D	0.42	0.79	0.13	1.00	
E	0.46	0.98	0.15	0.82	1.00

A = HFRI EH: Eq Mkt Neut Index (Alpha)  
 B = MSCI ACW Index (USD) (Gross) (Capital Appreciation)  
 C = Bloomberg US Gov't Bond Index (Capital Preservation)  
 D = Real Return Custom Index (Inflation)  
 E = Total Fund

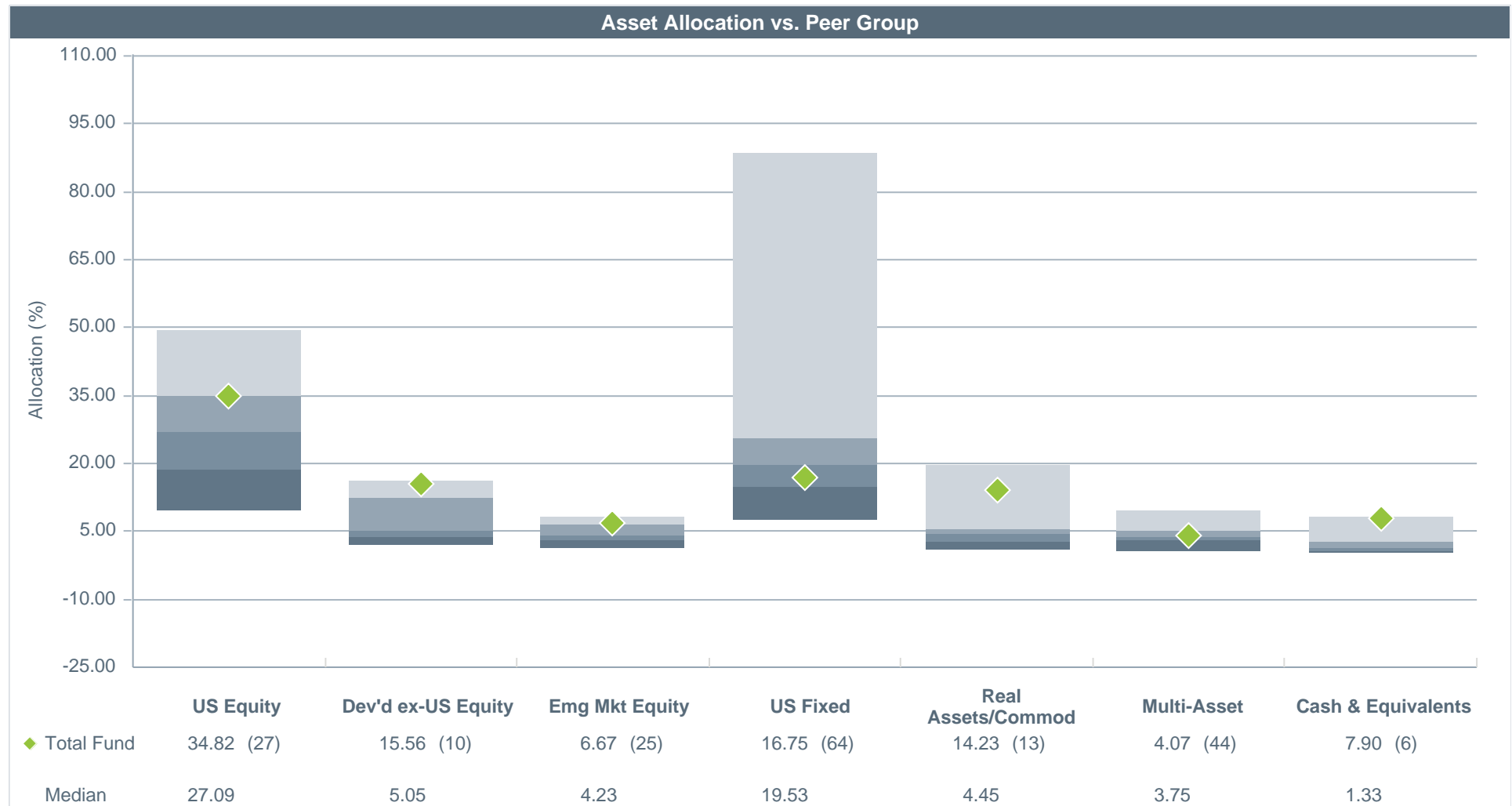
Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. Allocations may not sum up to 100% exactly due to rounding.

Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-3.77 (95)	3.55 (82)	9.96 (64)	3.16 (83)	4.13 (88)	5.66 (85)	5.65 (84)	-15.40 (82)	13.32 (61)	11.07 (75)	20.97 (18)	8.11 (66)	06/01/1988
Benchmark	-3.97	4.69	13.20	3.59	4.06	5.42	5.29	-17.32	14.38	10.92	21.57	7.62	
Excess Return	0.20	-1.14	-3.24	-0.43	0.07	0.24	0.36	1.92	-1.06	0.15	-0.60	0.49	
Peer Group Median	-2.57	4.74	10.66	4.90	5.37	6.67	6.51	-12.85	14.01	12.63	18.63	8.16	



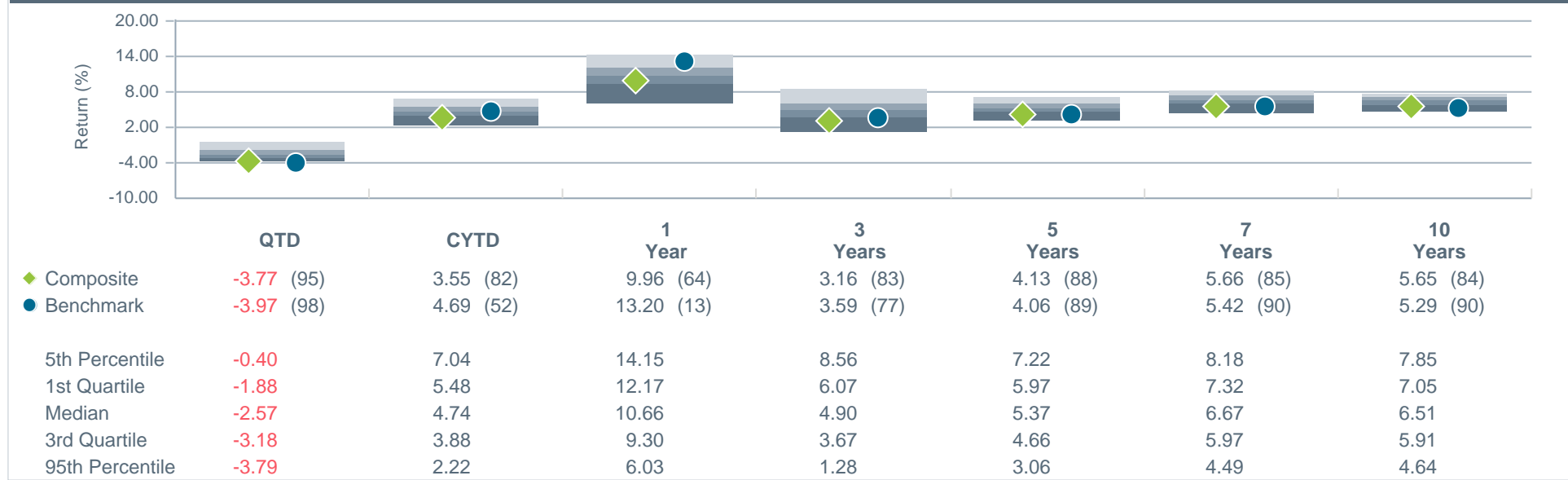
Performance shown is gross of fees and is annualized for periods greater than one year. Allocations shown may not sum up to 100% exactly due to rounding. Parentheses contain percentile ranks.

Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-3.77 (99)	3.55 (79)	9.96 (50)	3.16 (90)	4.13 (93)	5.66 (92)	5.65 (88)	-15.40 (94)	13.32 (69)	11.07 (63)	20.97 (7)	8.11 (38)	06/01/1988
Benchmark	-3.97	4.69	13.20	3.59	4.06	5.42	5.29	-17.32	14.38	10.92	21.57	7.62	
Excess Return	0.20	-1.14	-3.24	-0.43	0.07	0.24	0.36	1.92	-1.06	0.15	-0.60	0.49	
Peer Group Median	-2.01	4.43	9.96	5.62	5.37	6.61	6.50	-11.37	14.21	11.68	17.37	8.10	

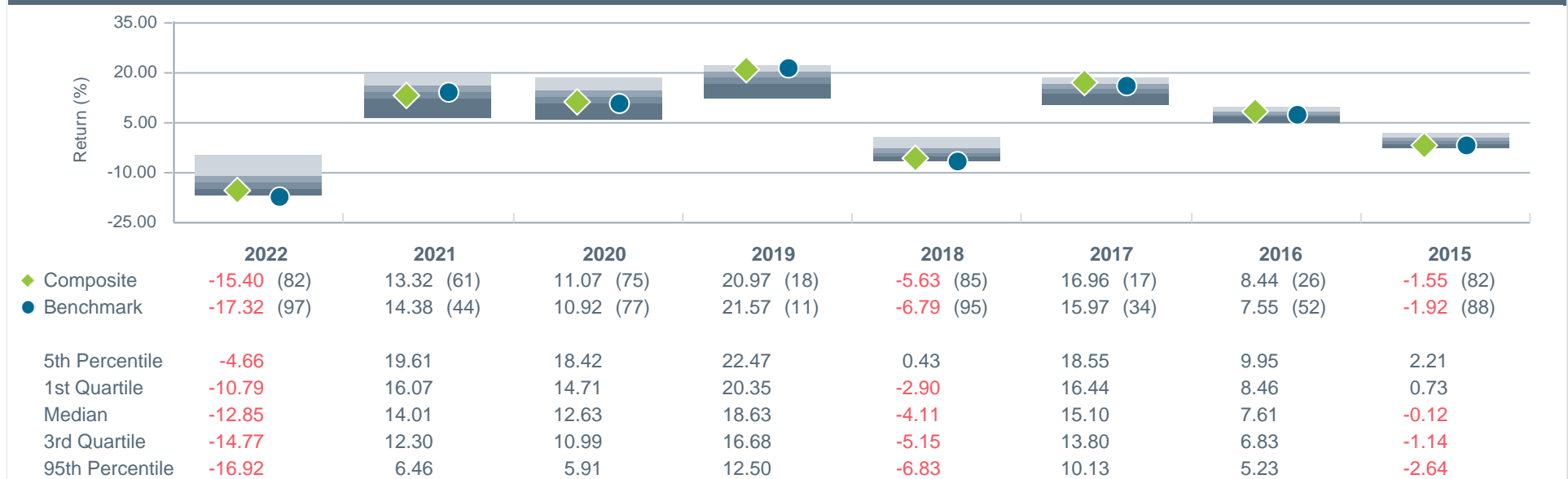


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Rate of Return - Trailing

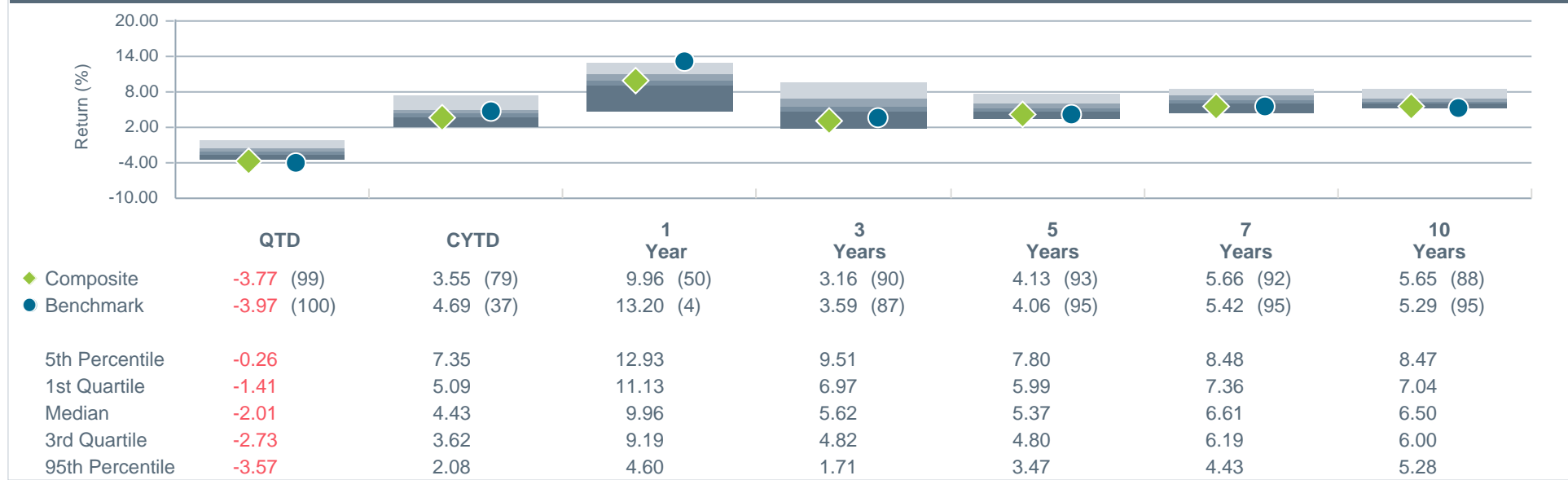


Rate of Return - Calendar

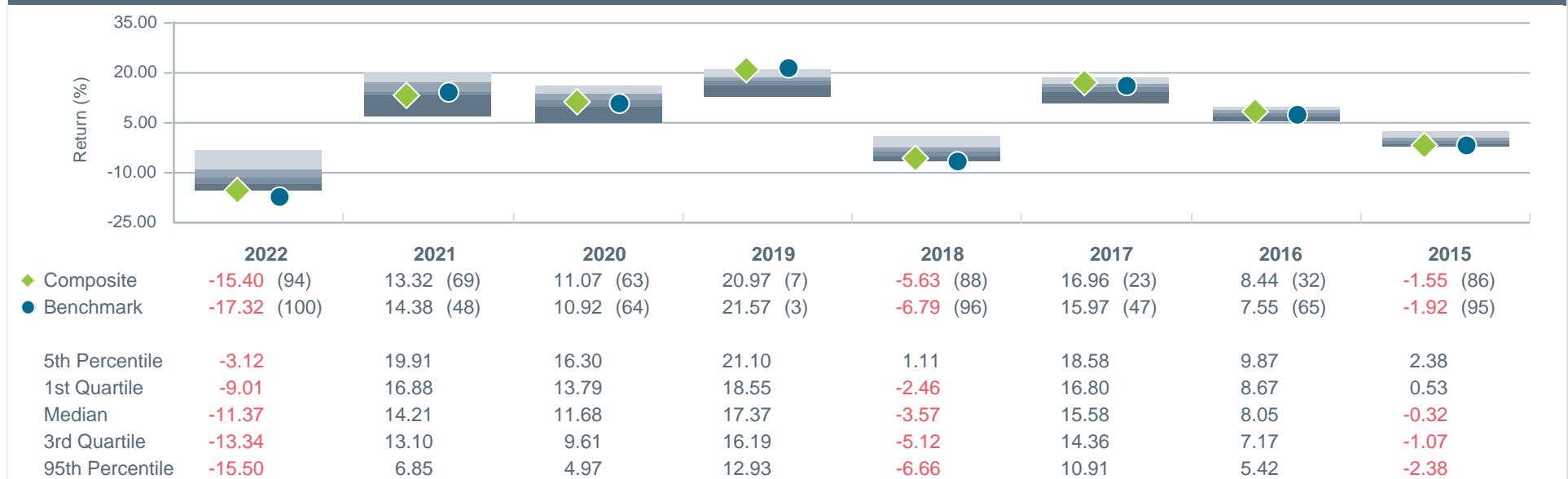


Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Rate of Return - Trailing

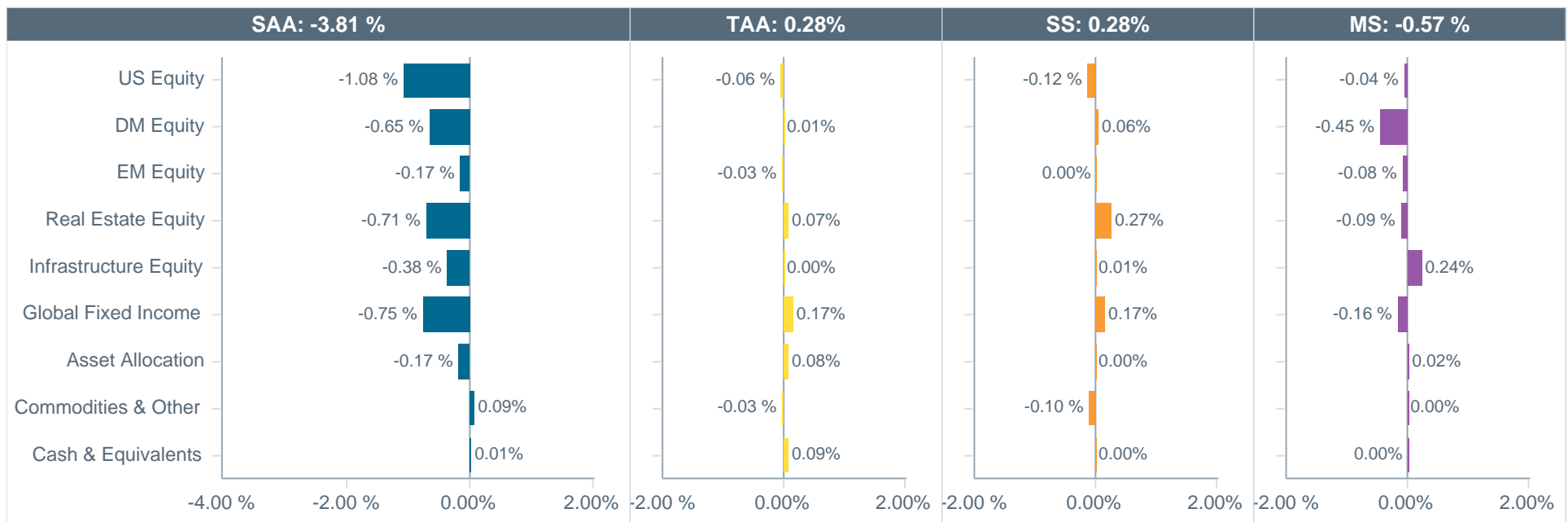
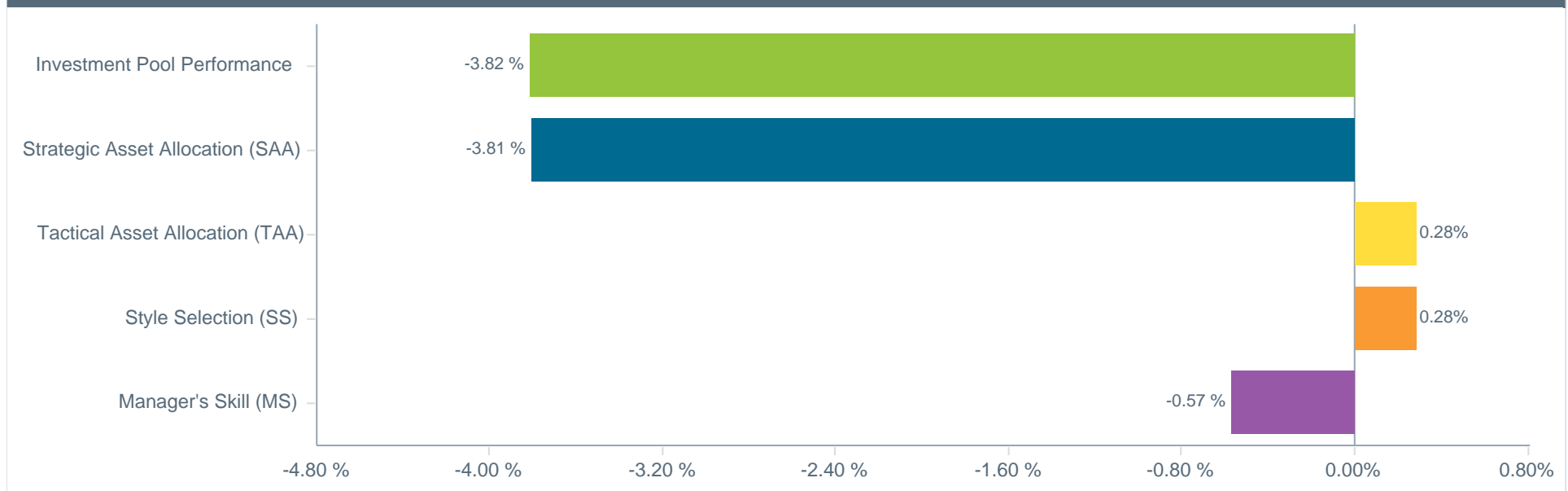


Rate of Return - Calendar



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

Performance Attribution

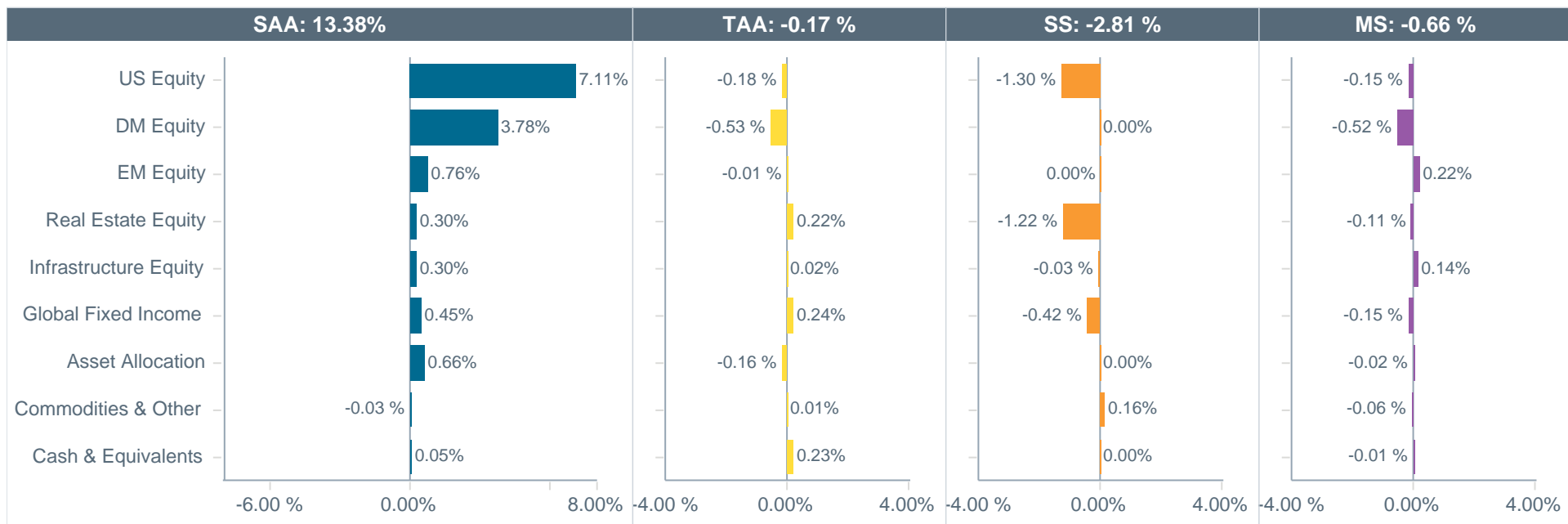
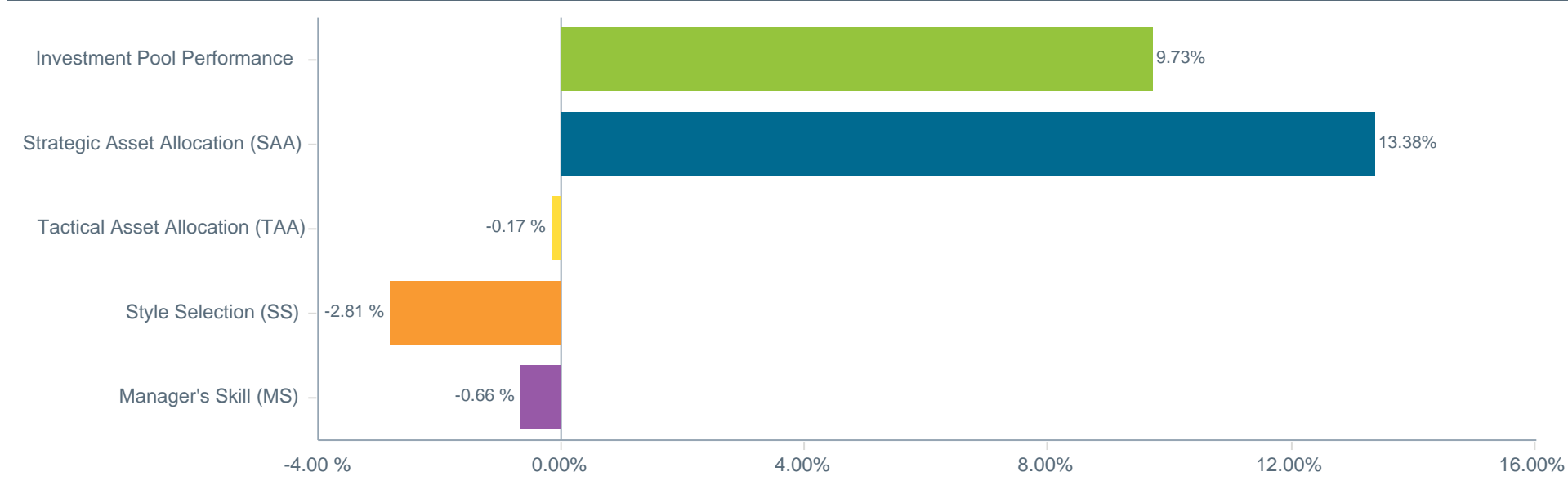


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.





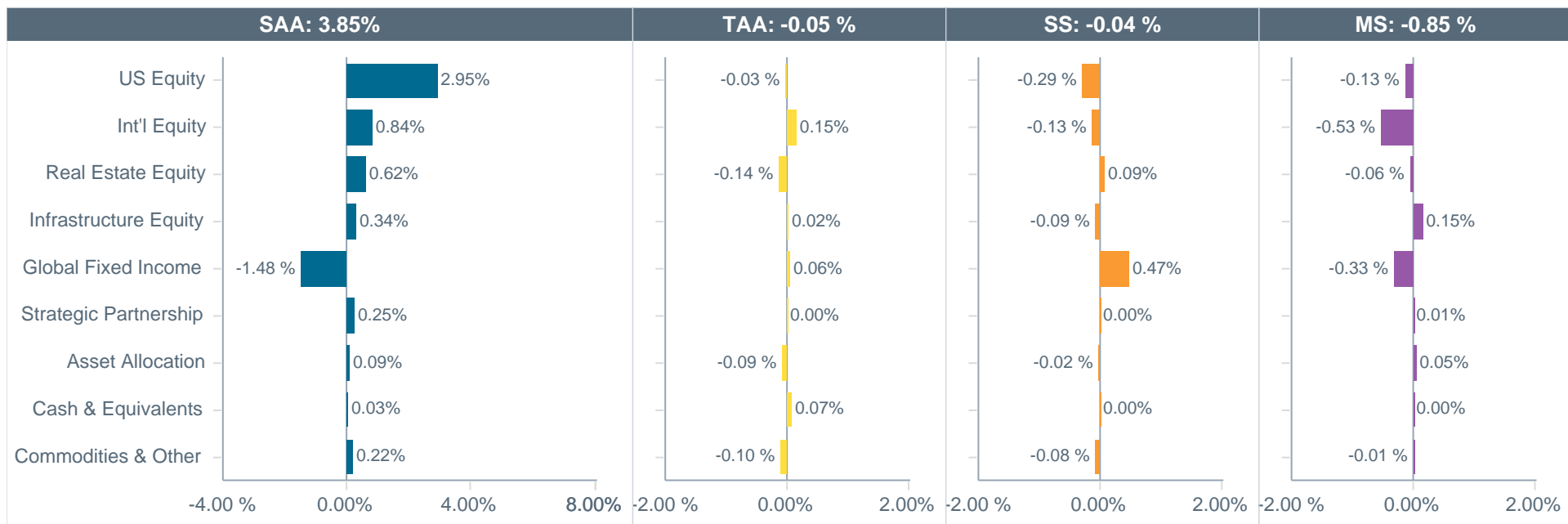
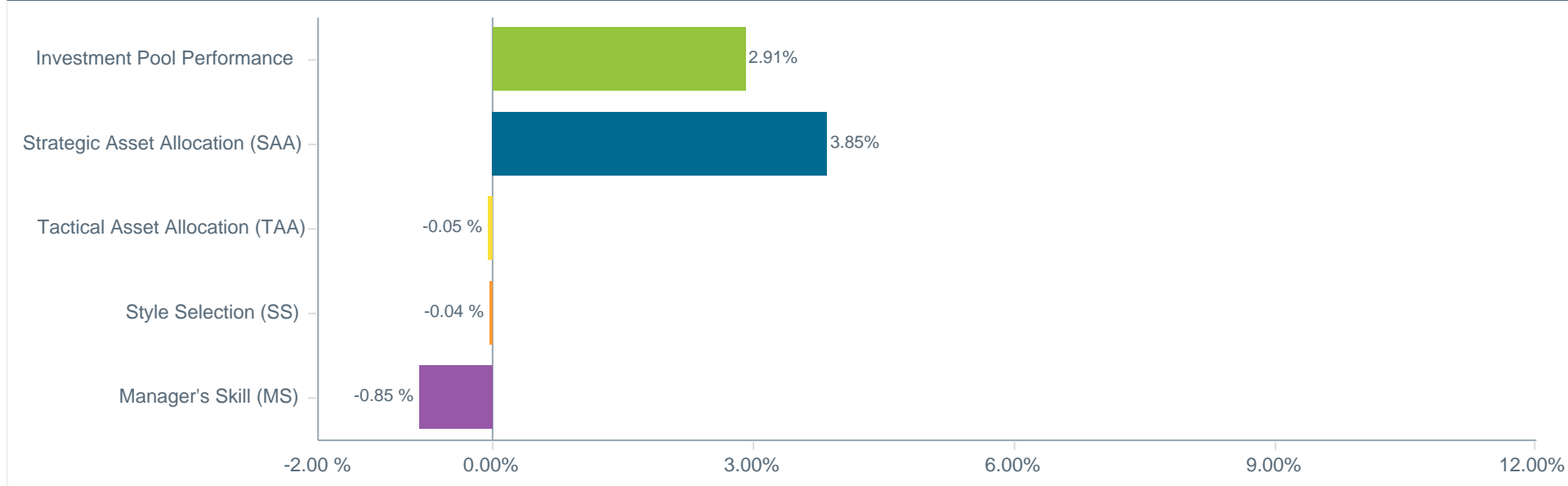
Performance Attribution



Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

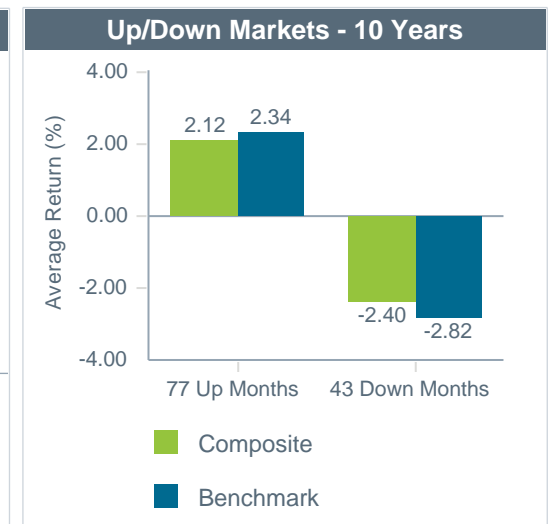
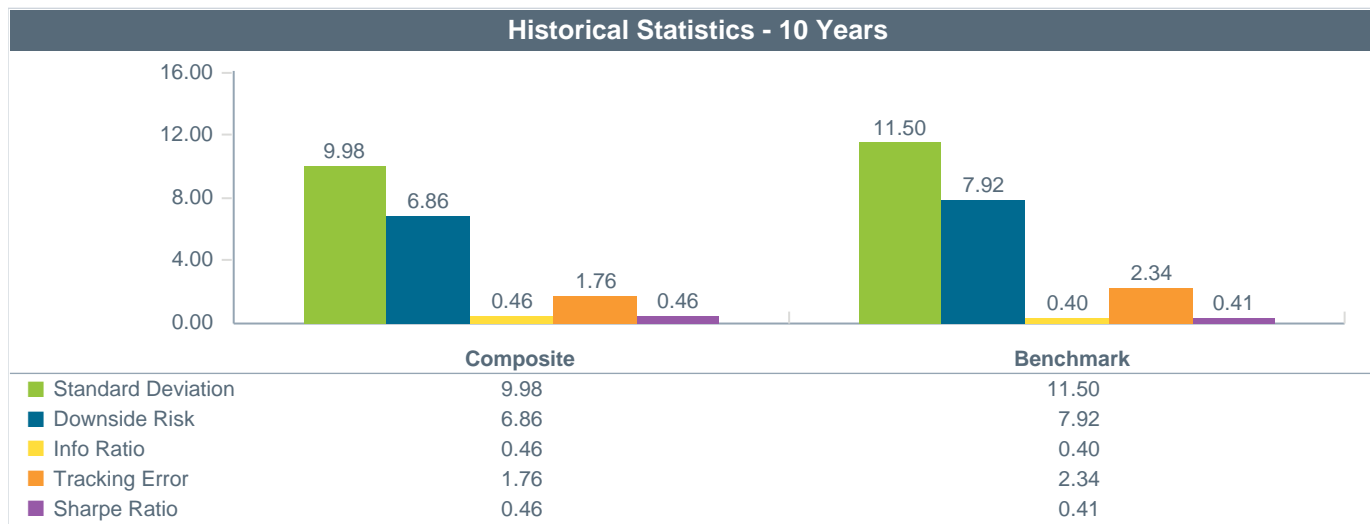
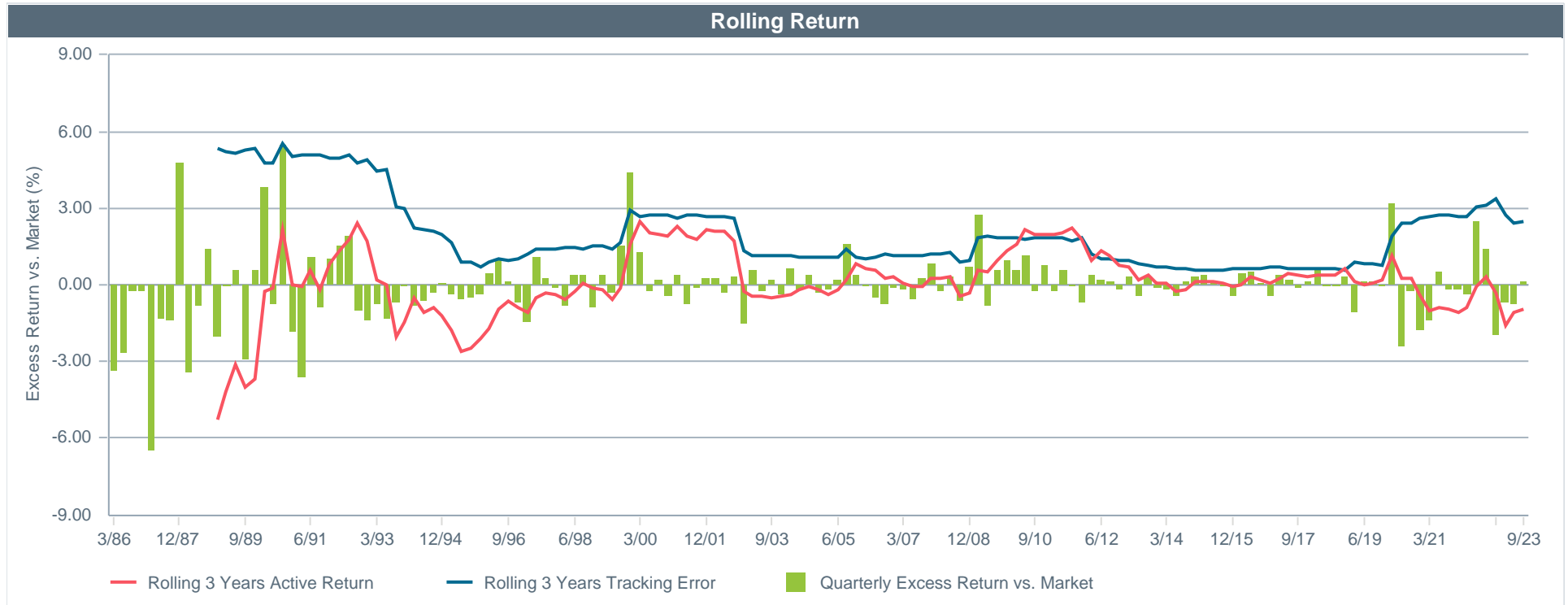


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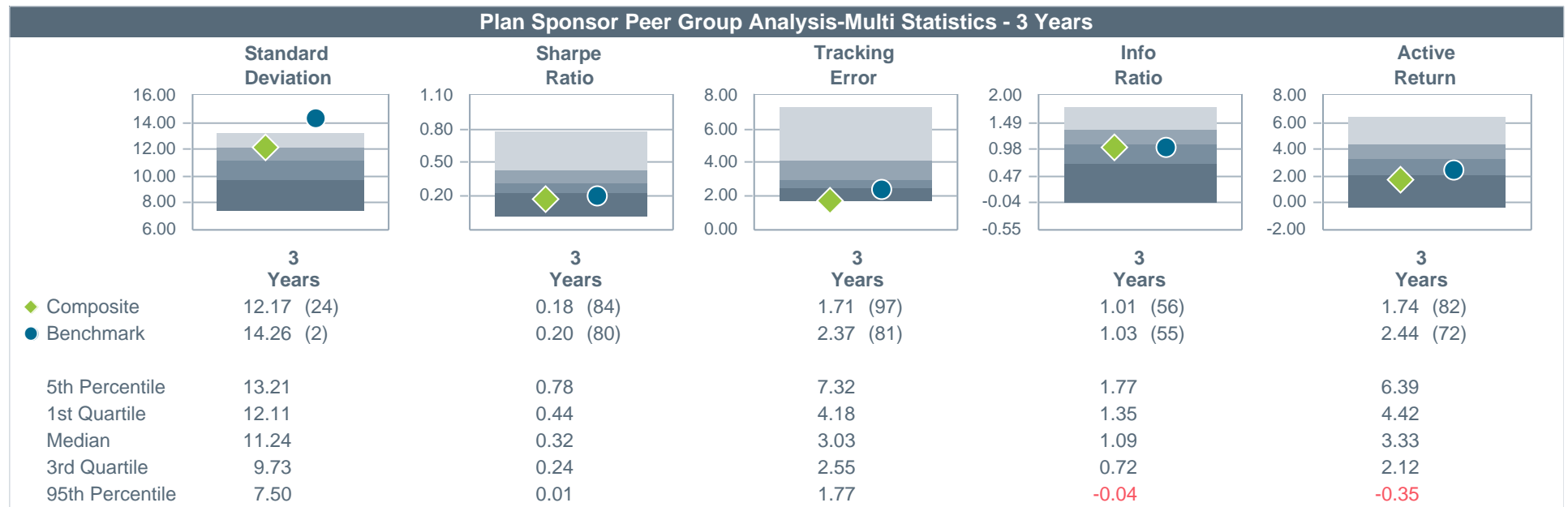
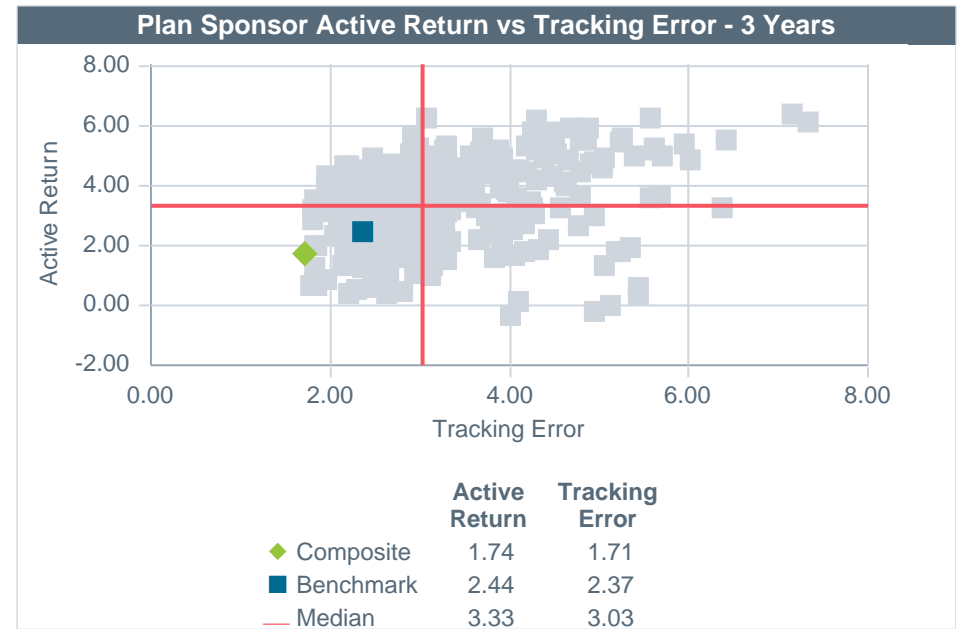
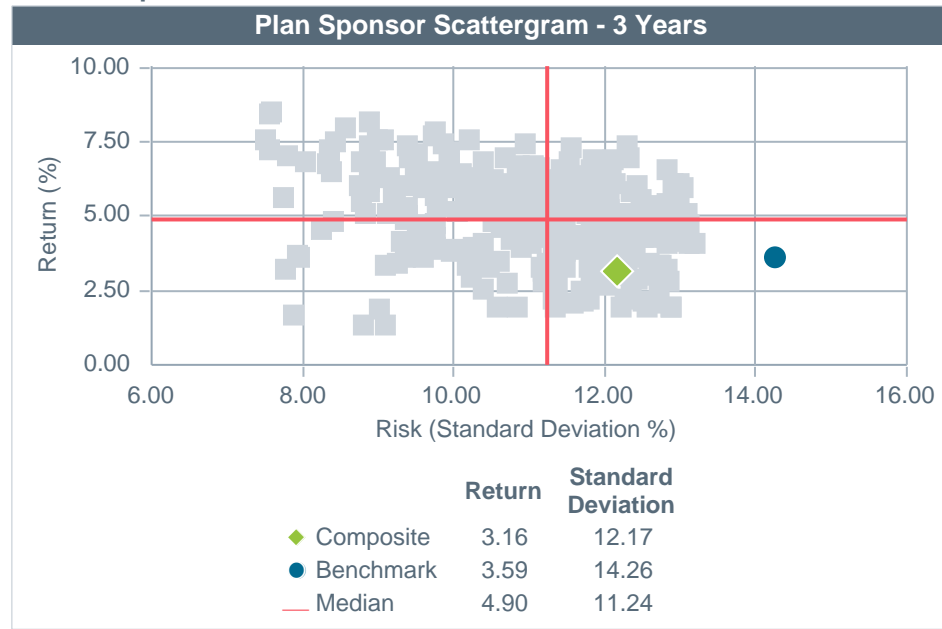


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation. Commodities line shown references prior composite, liquidated 07/2018.

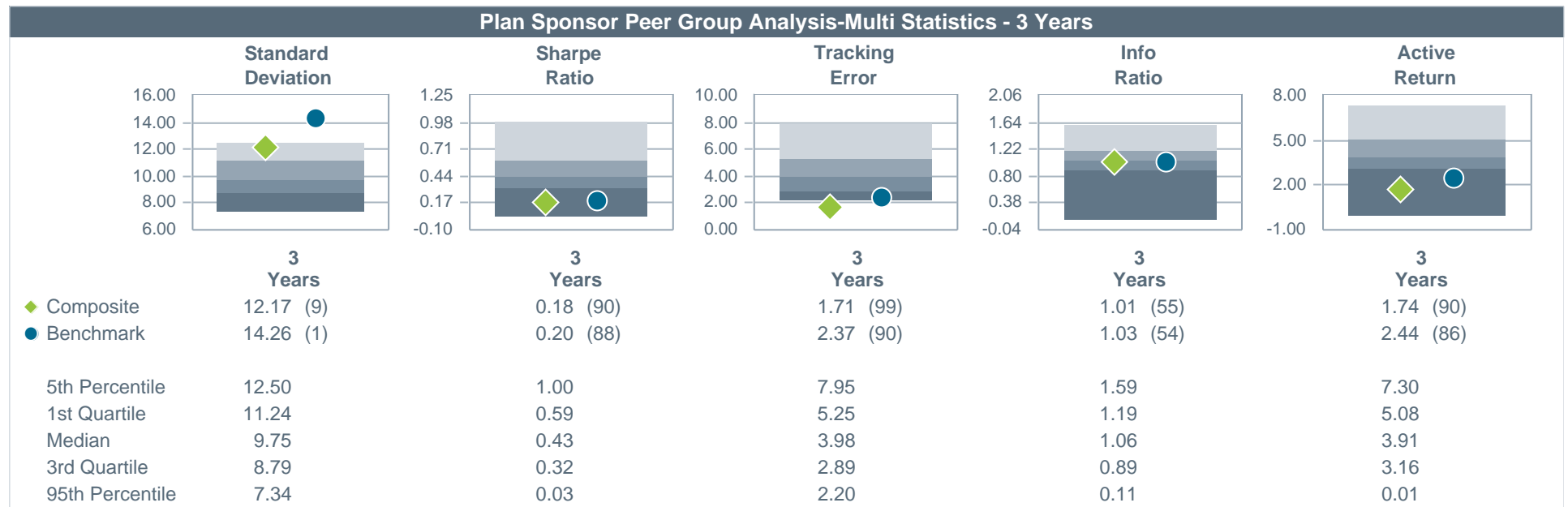
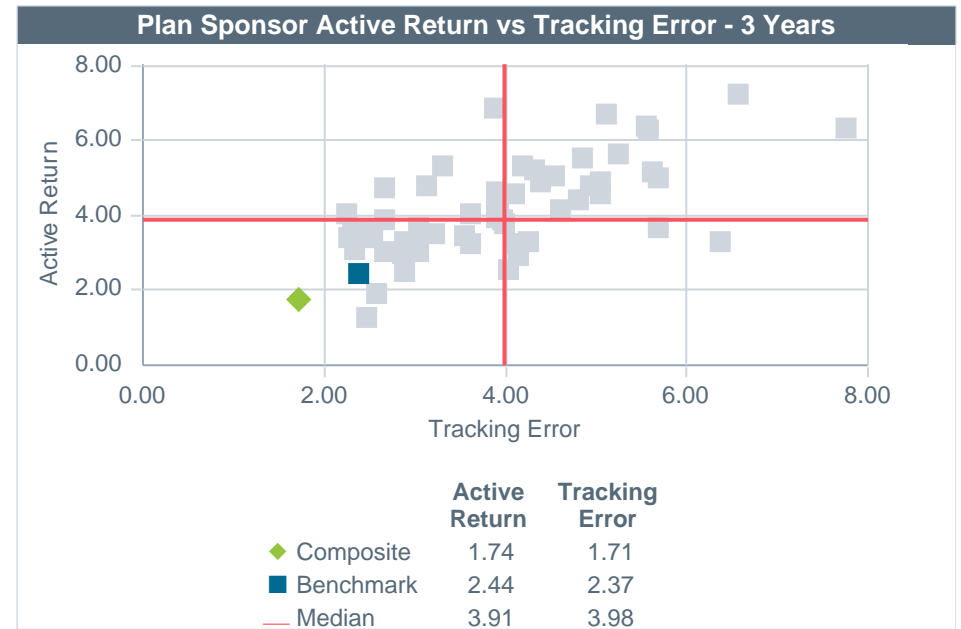
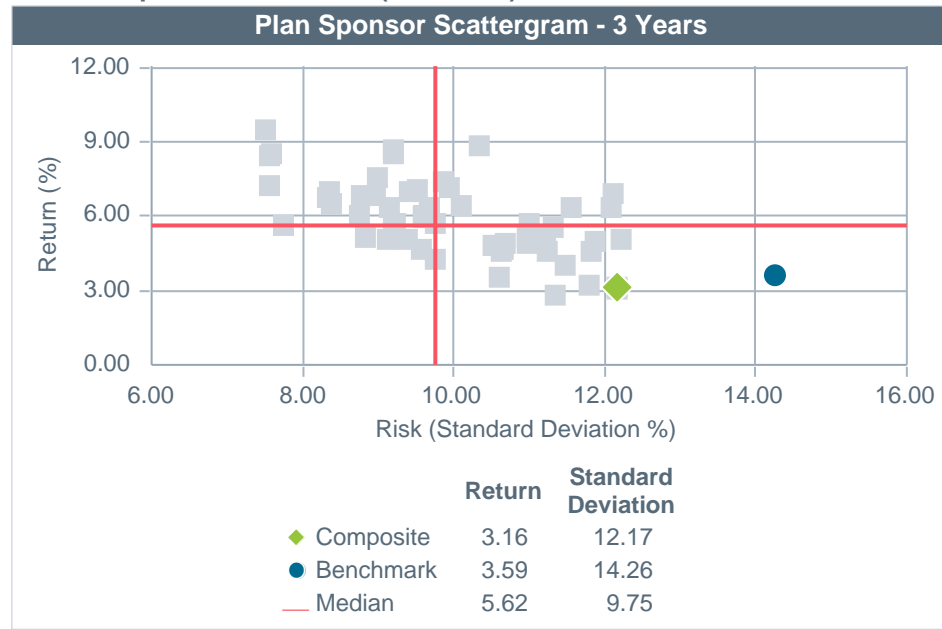




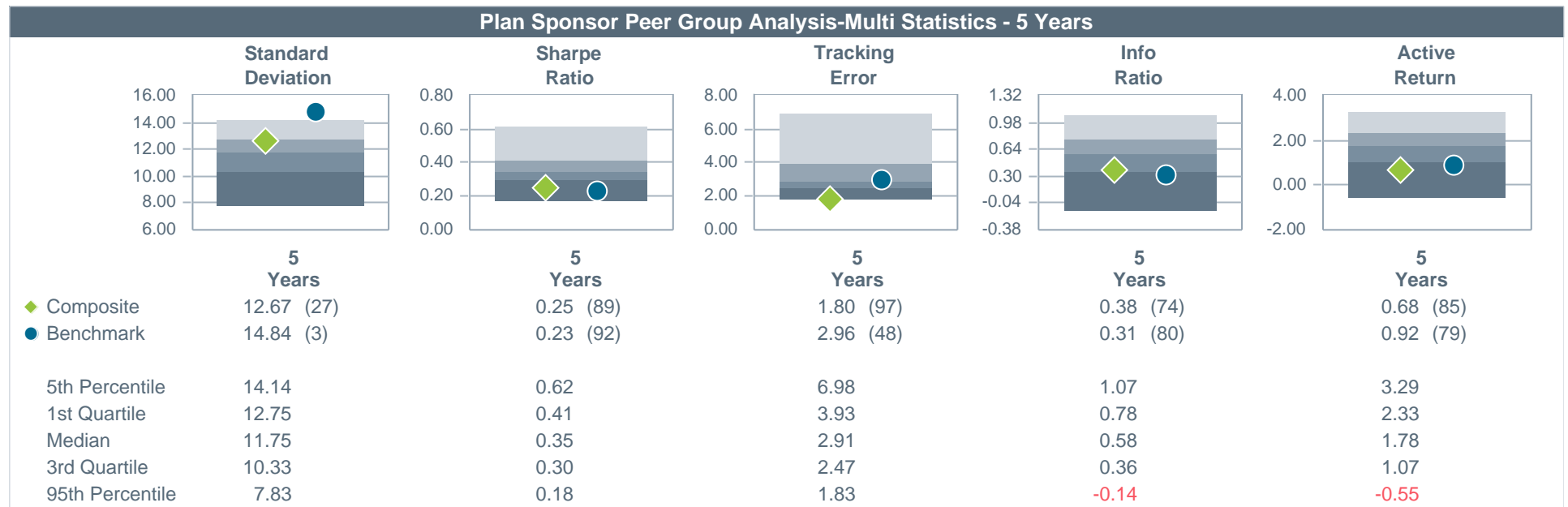
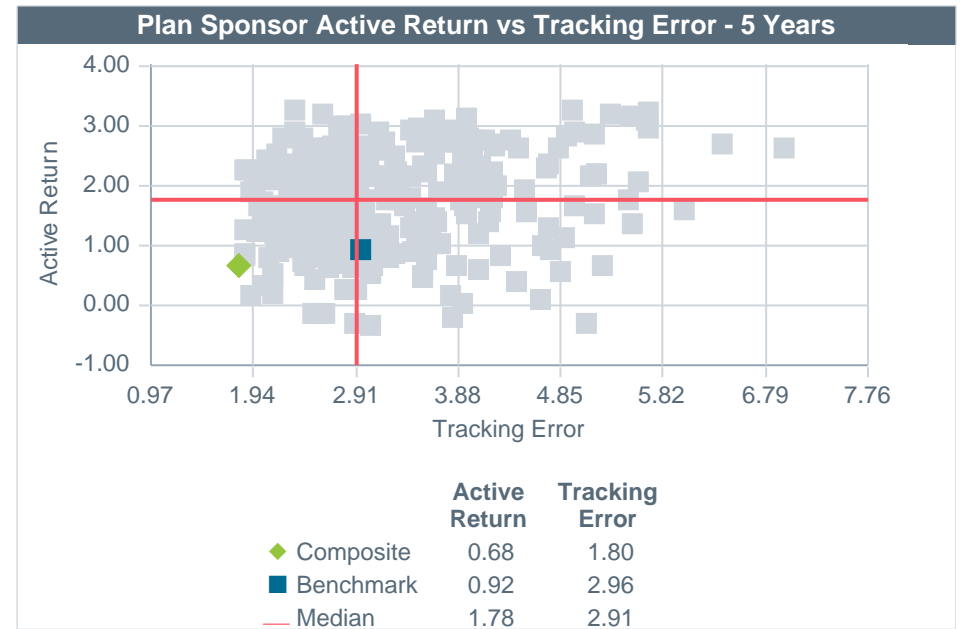
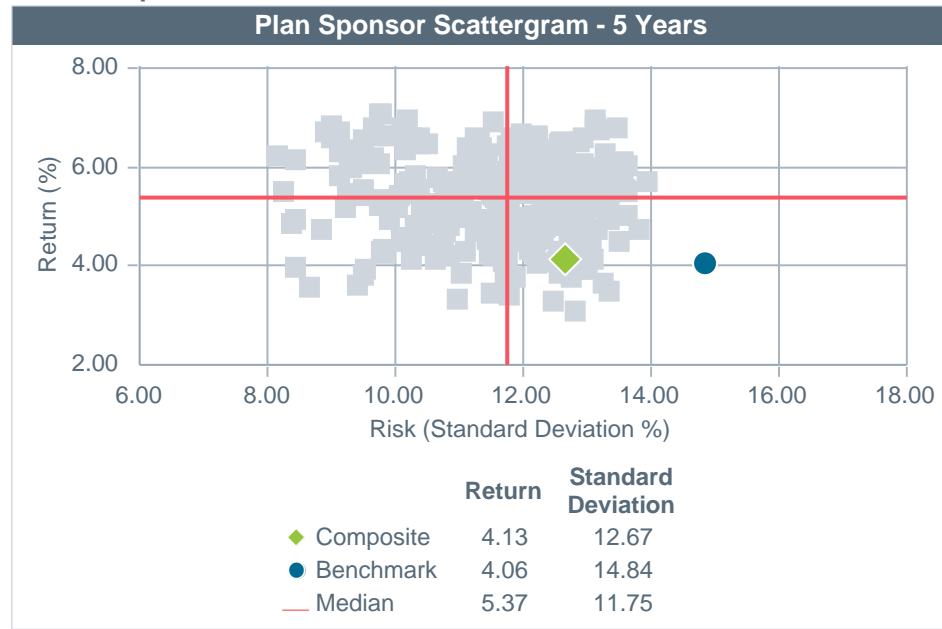
Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Downside Risk, Information Ratio, and Tracking Error shown are relative to the Passive Benchmark.



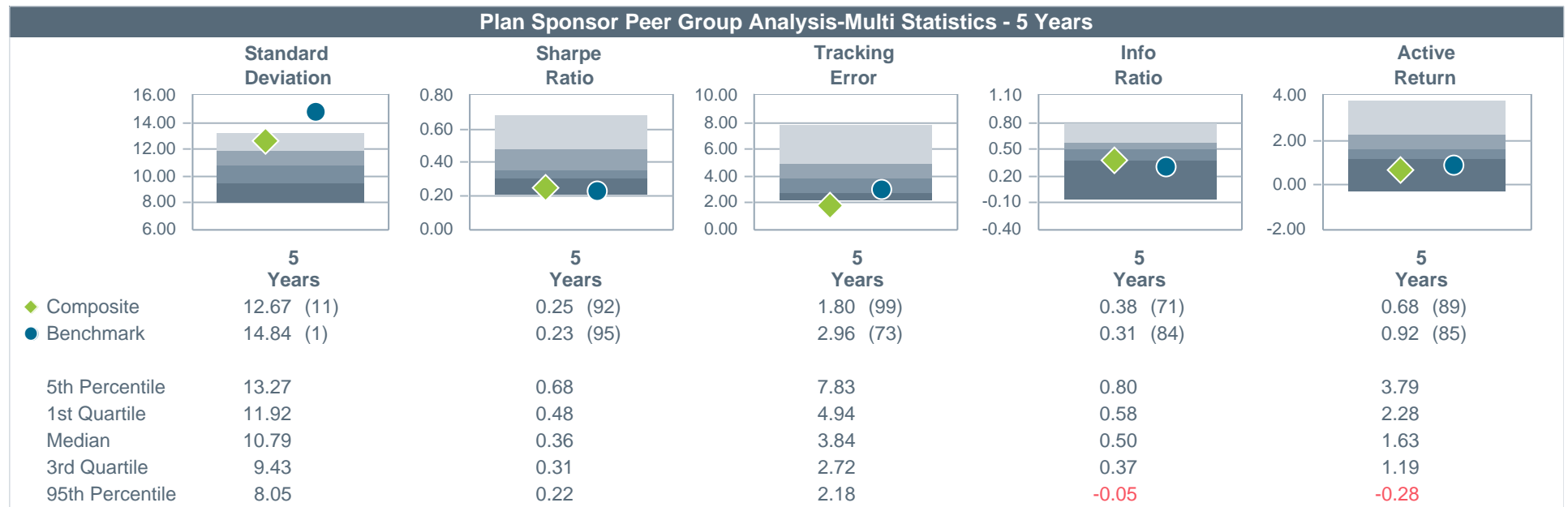
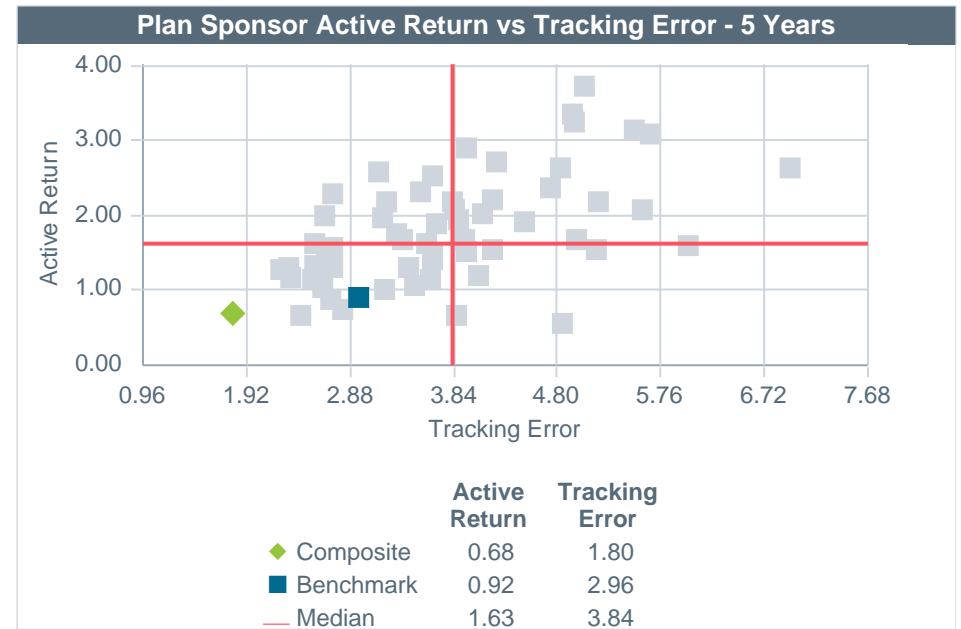
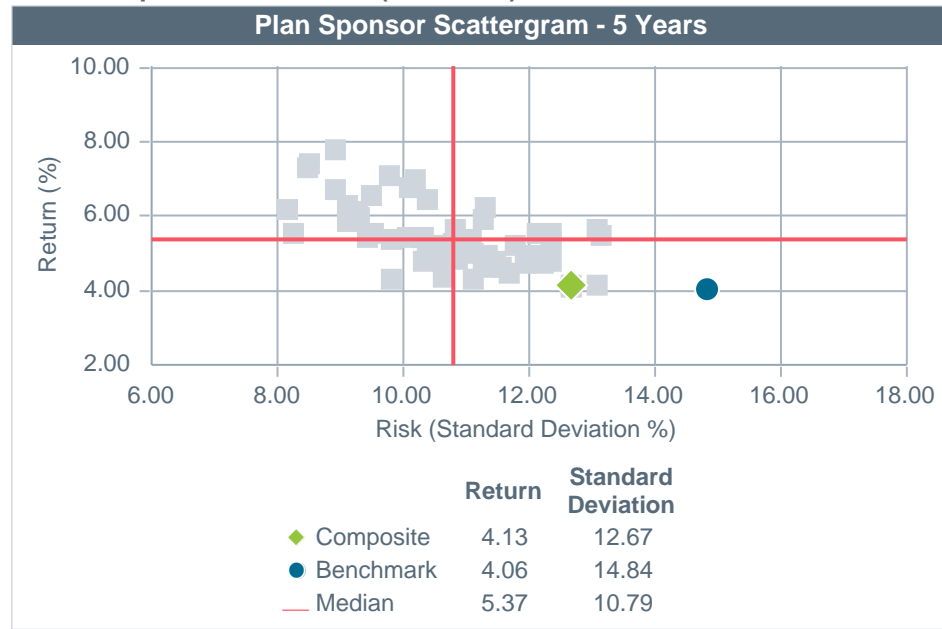
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Active Return, Tracking Error, and Information Ratio shown are relative to the Passive Benchmark.



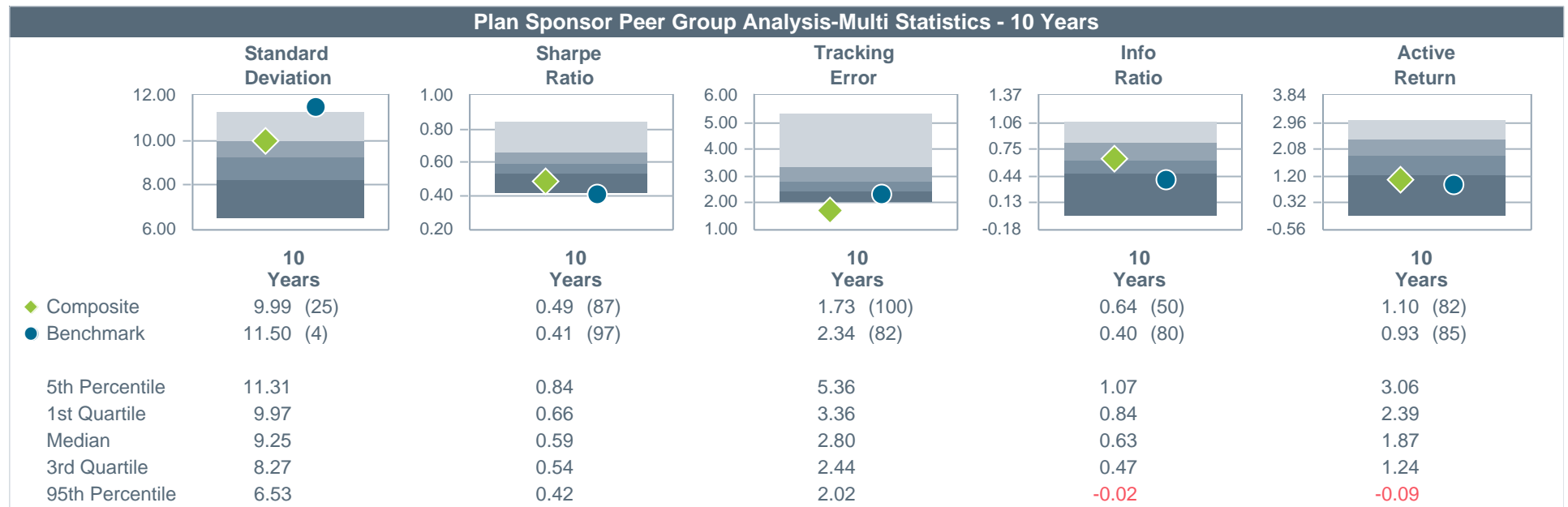
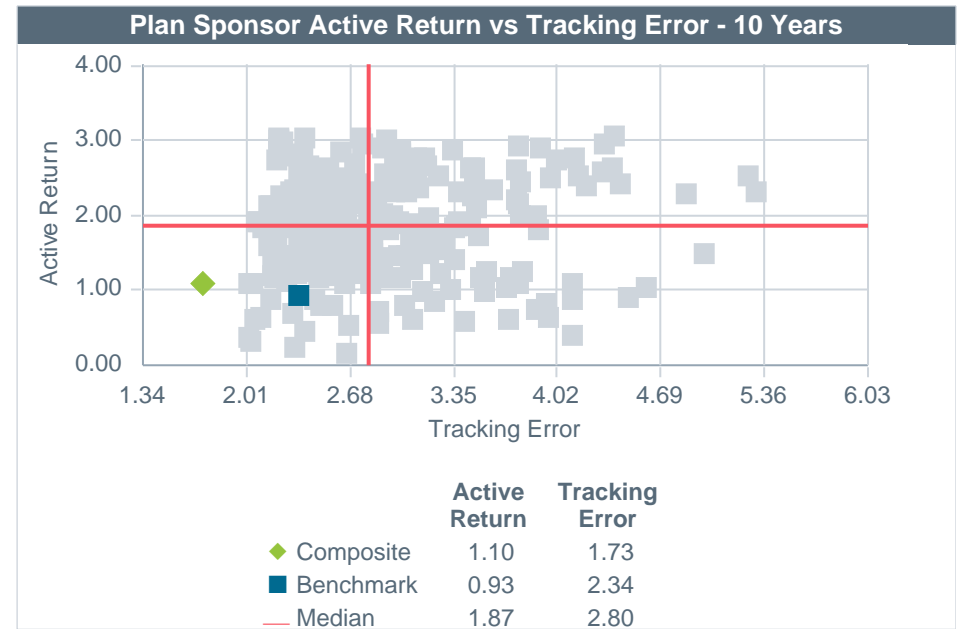
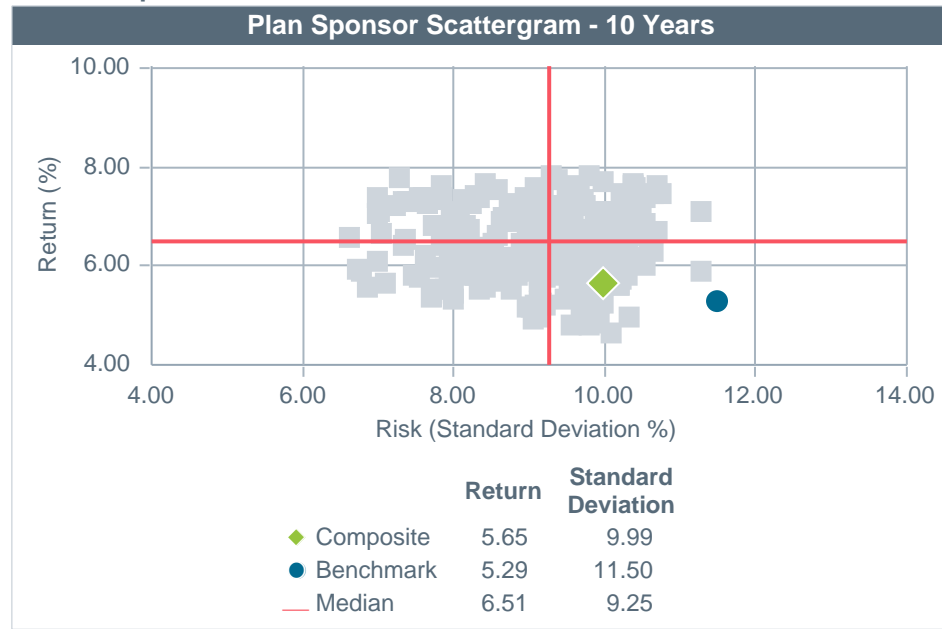
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Active Return, Tracking Error, and Information Ratio shown are relative to the Passive Benchmark.



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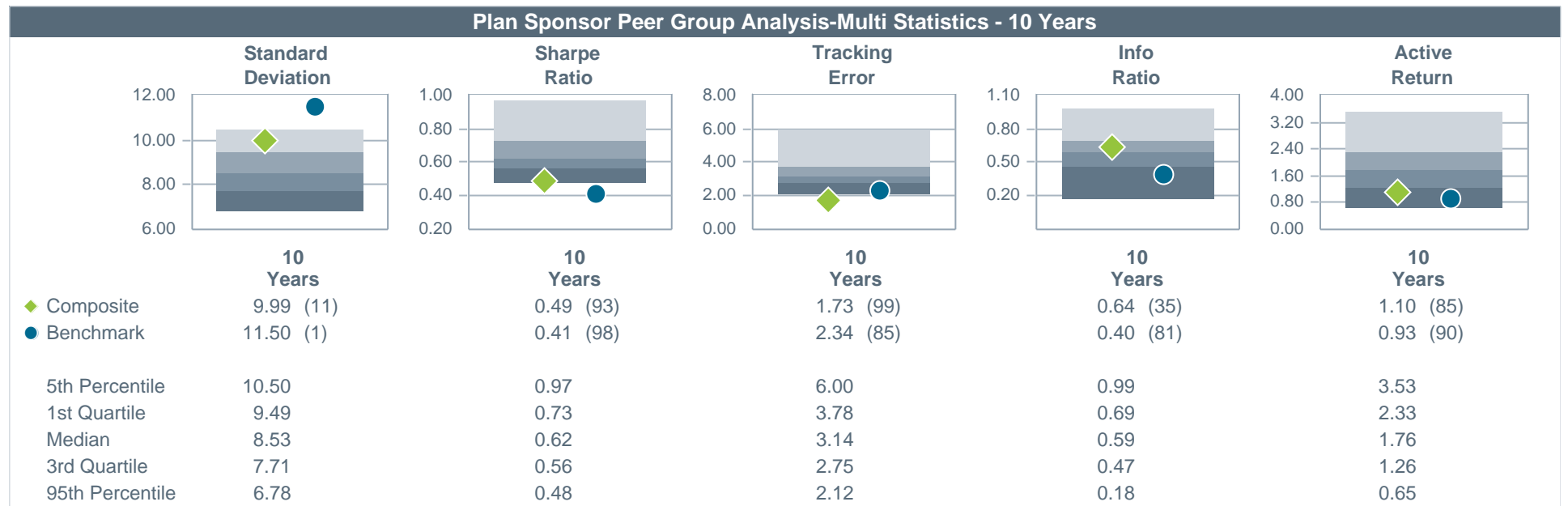
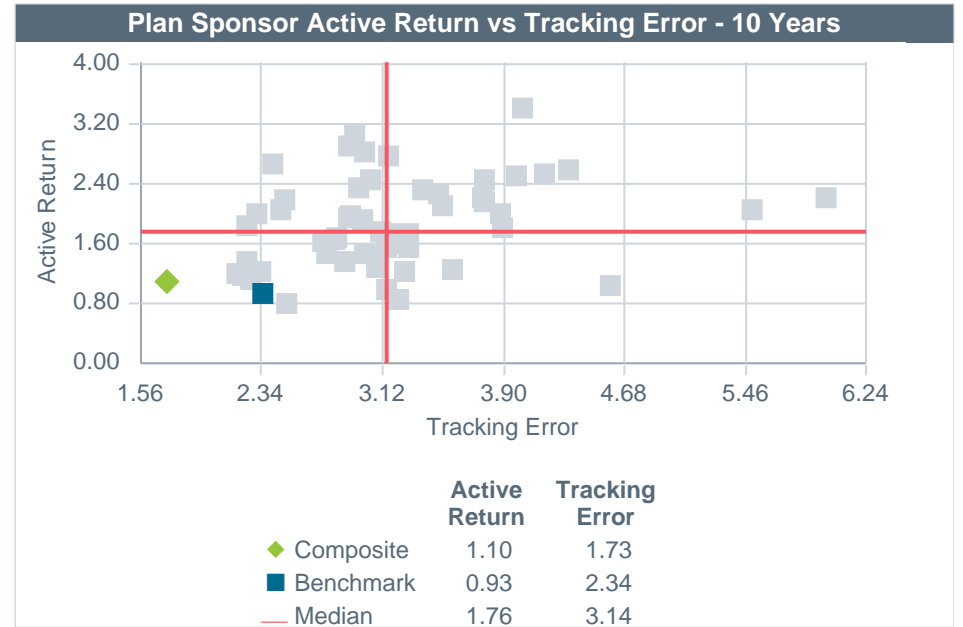
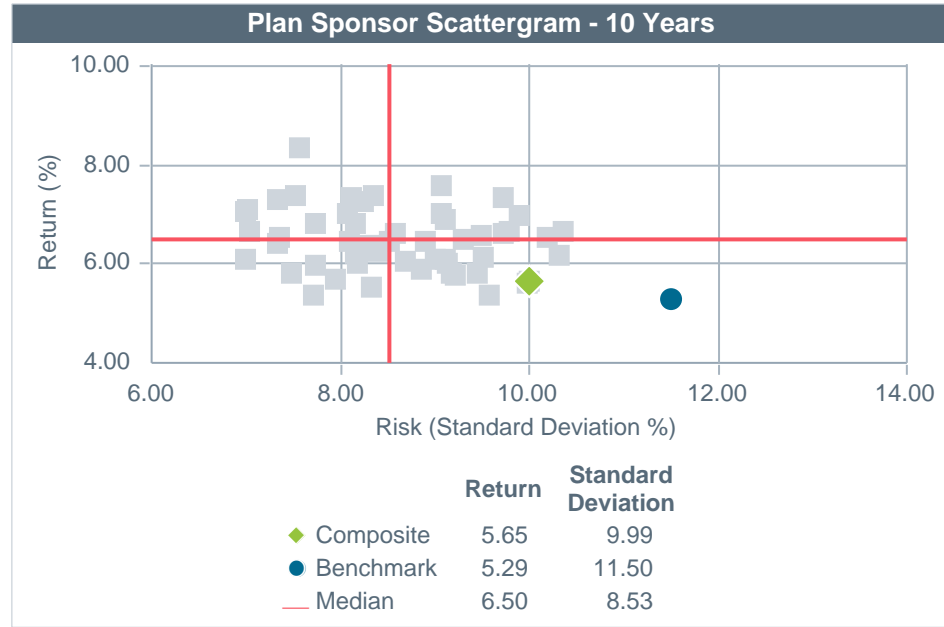


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Active Return, Tracking Error, and Information Ratio shown are relative to the Passive Benchmark.

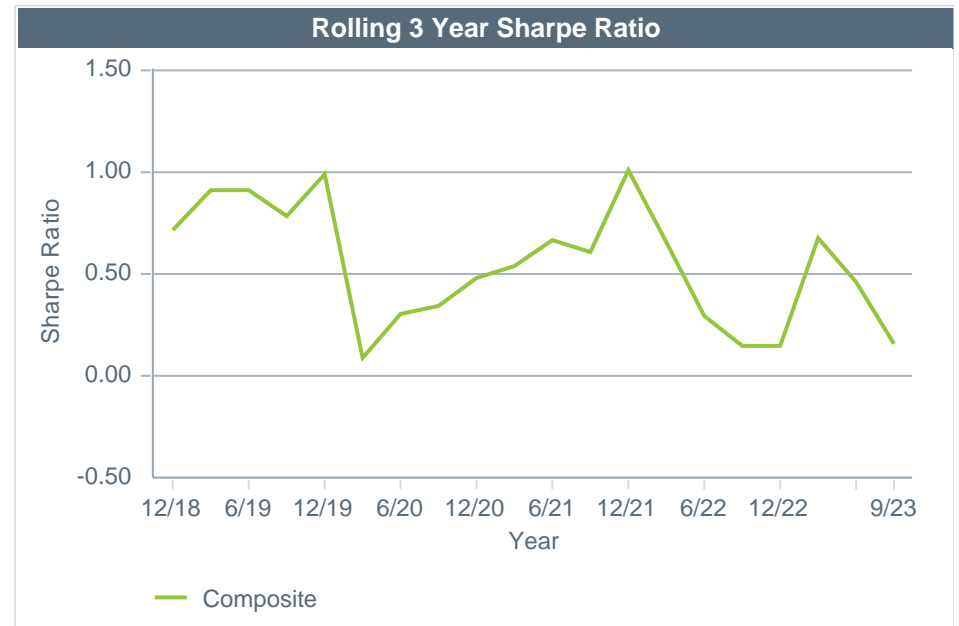
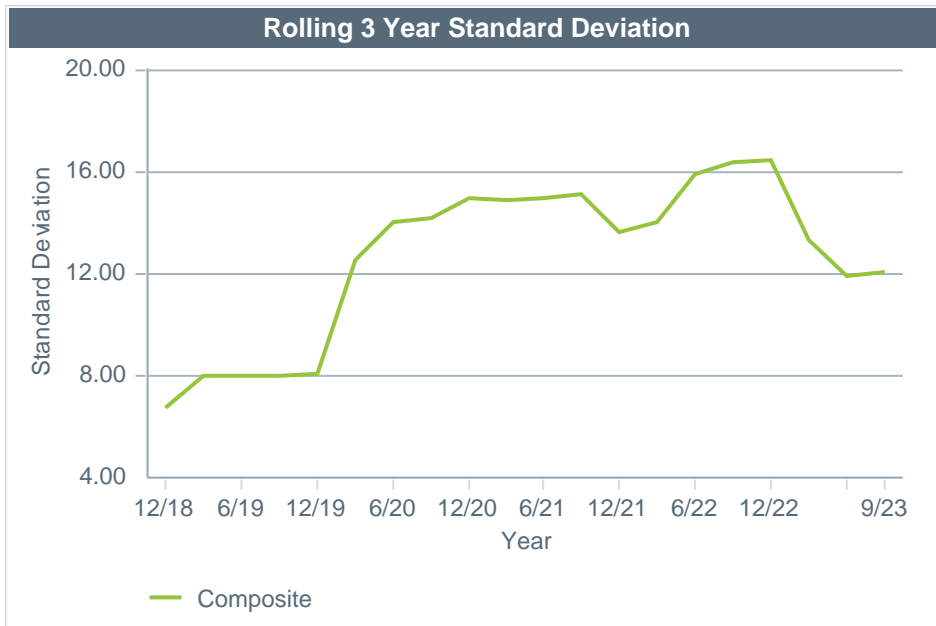
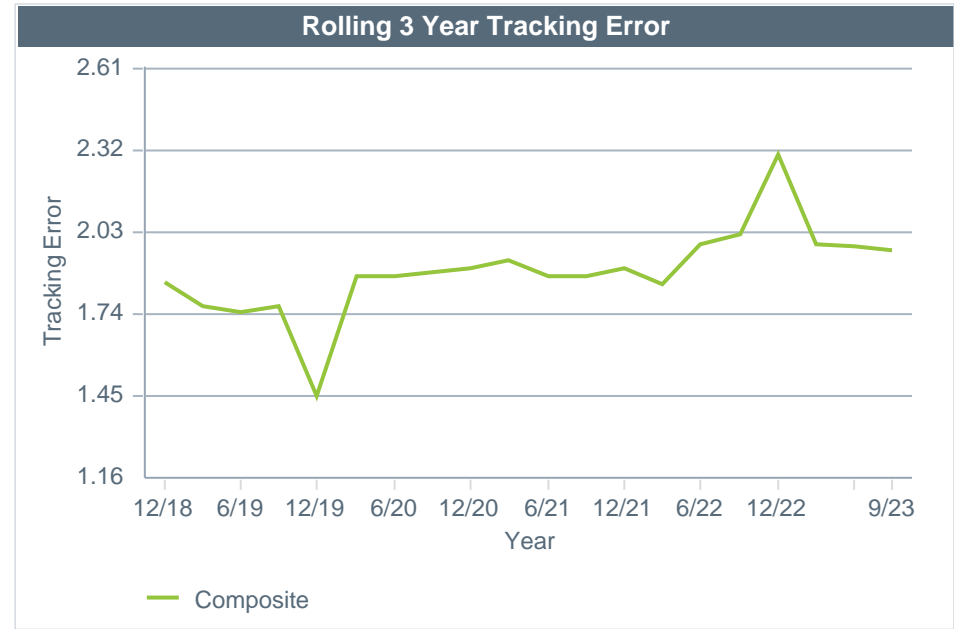
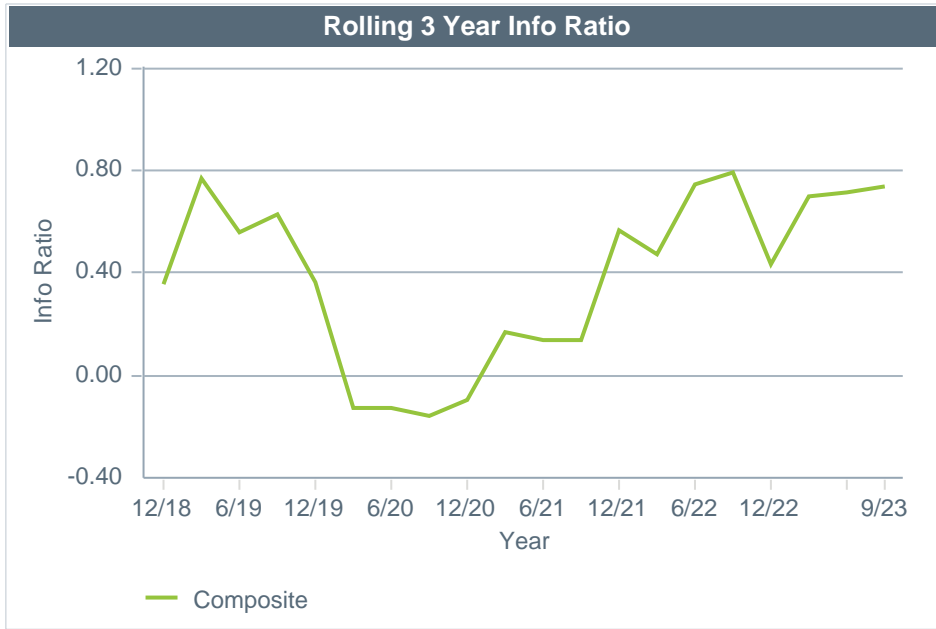


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Active Return, Tracking Error, and Information Ratio shown are relative to the Passive Benchmark.

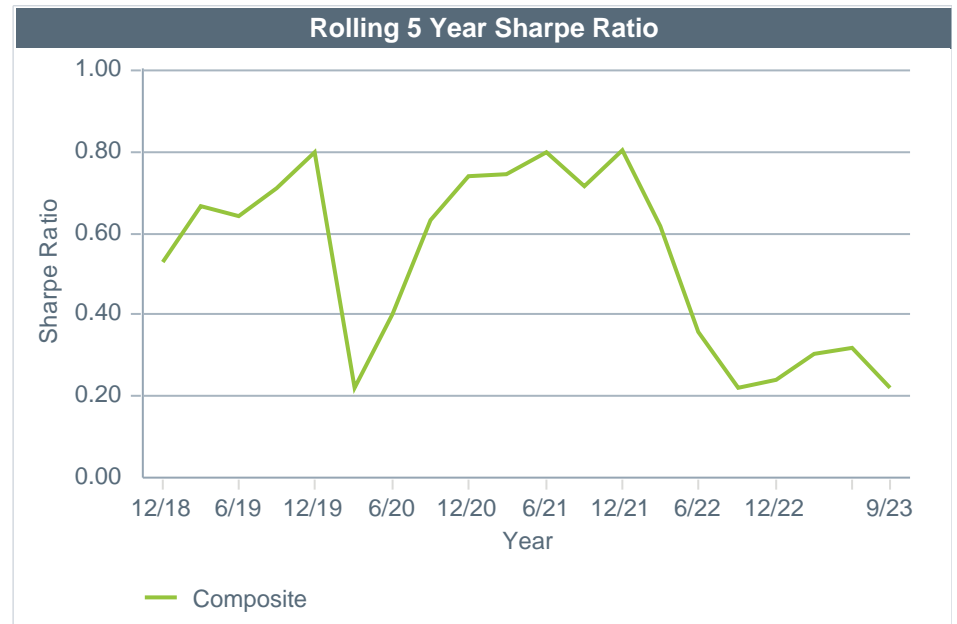
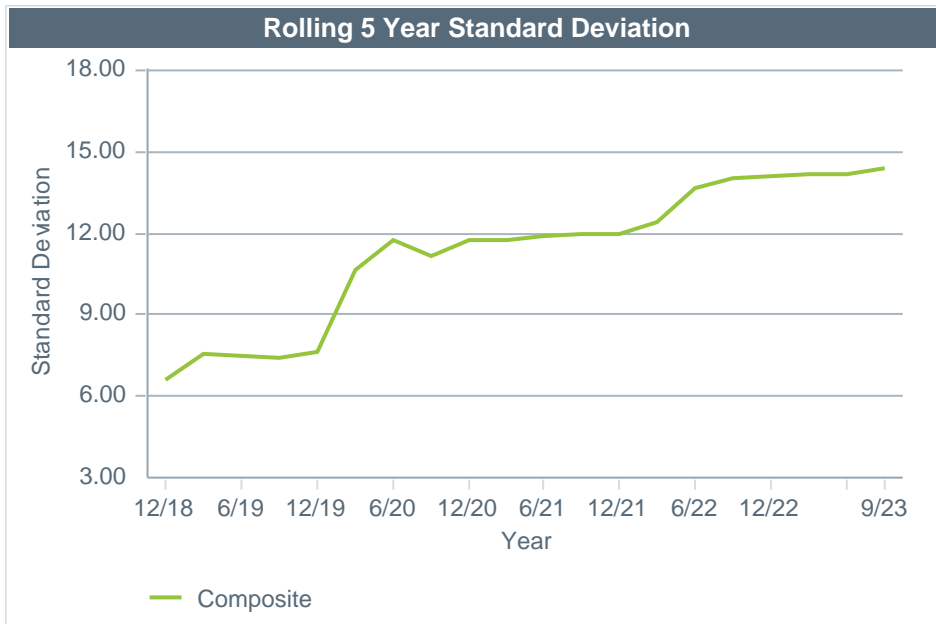
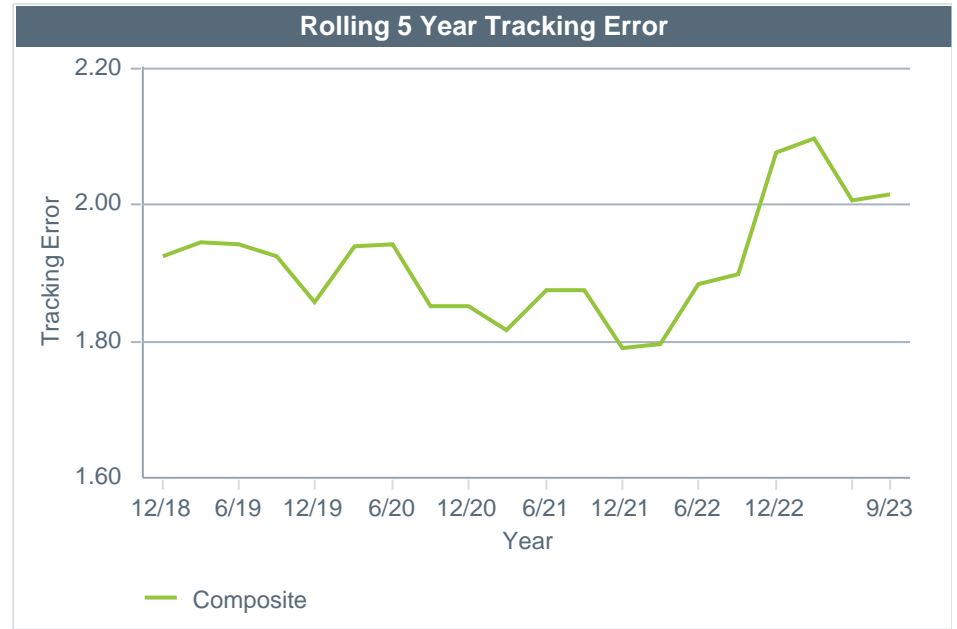
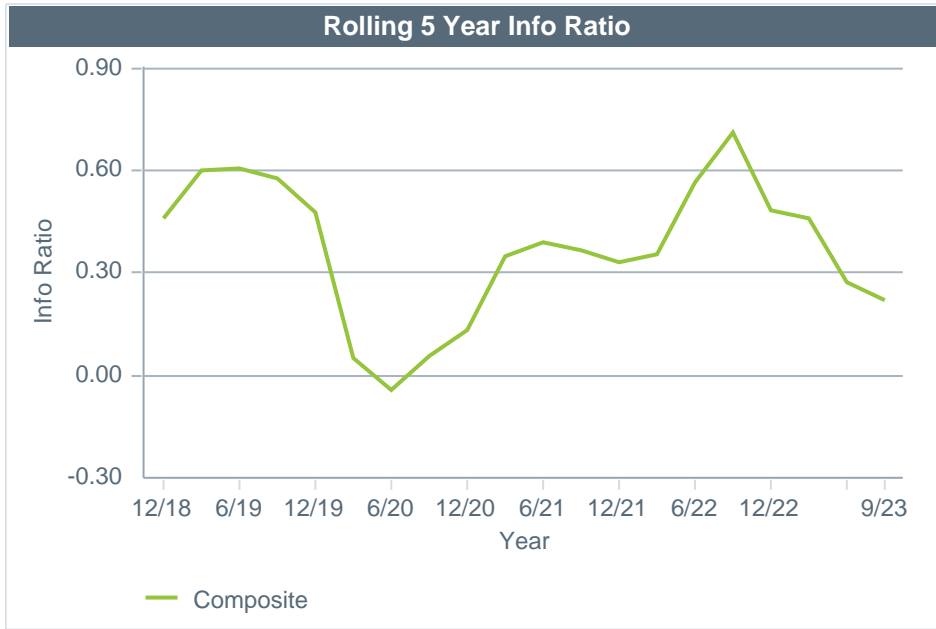




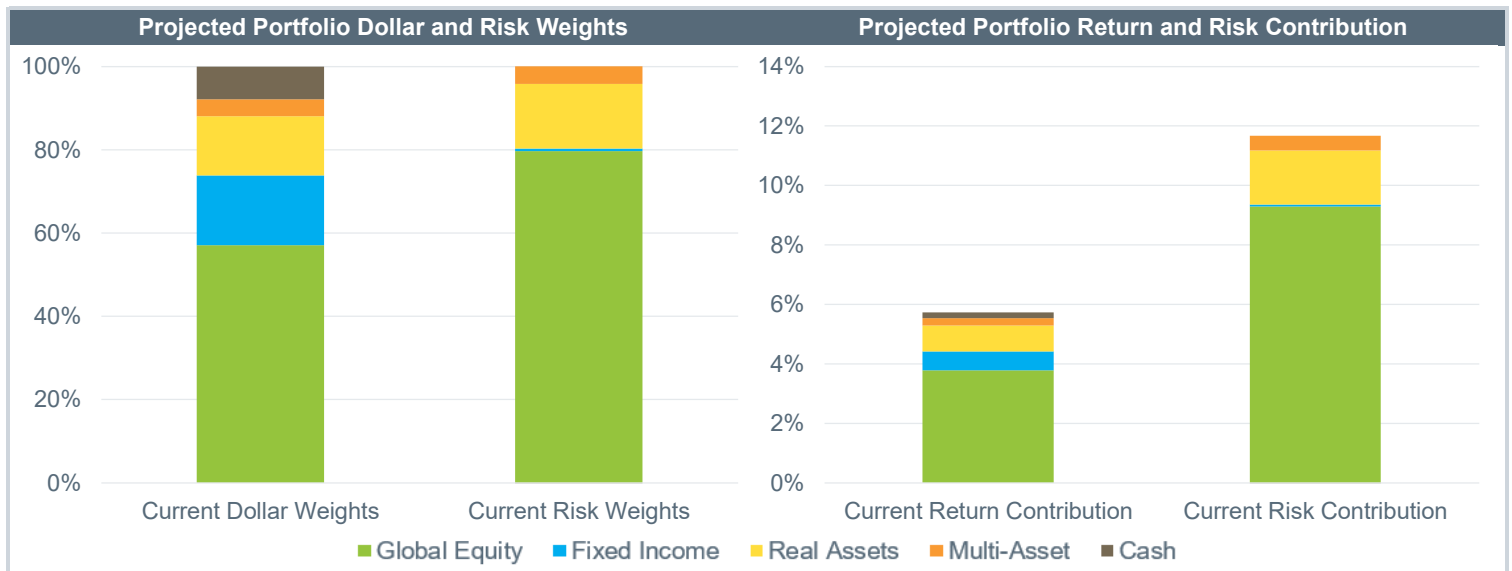
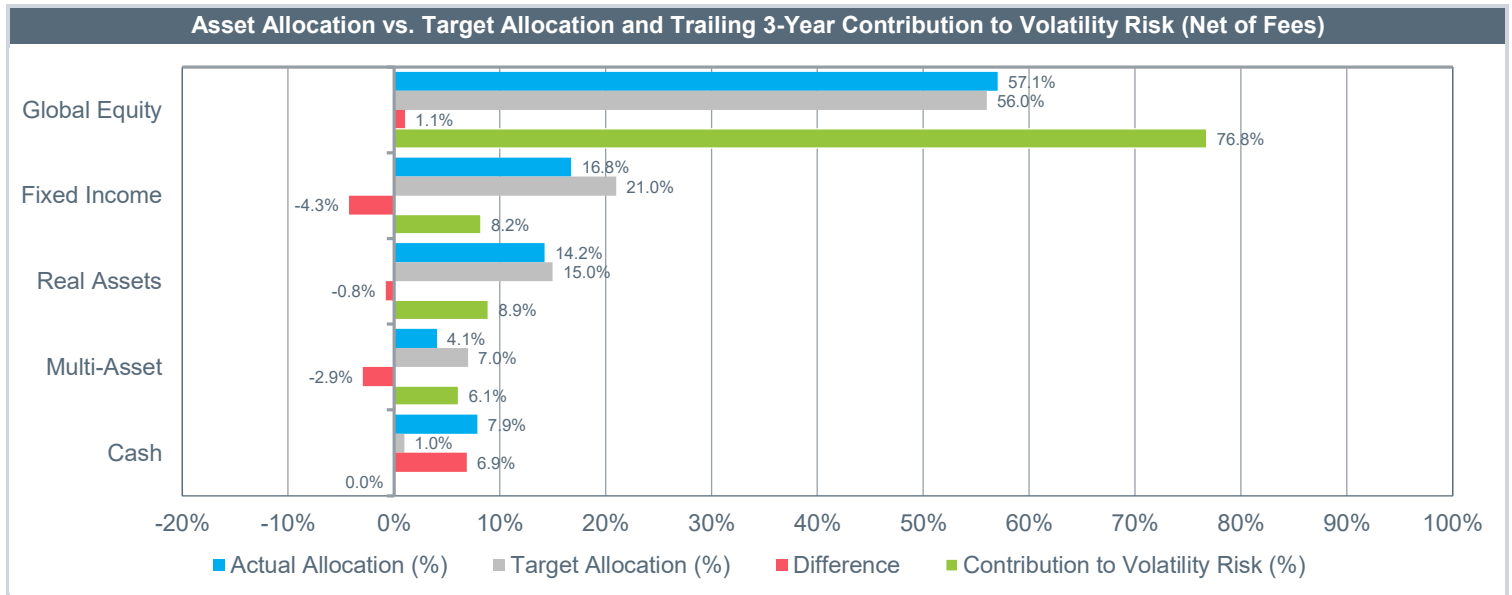
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Active Return, Tracking Error, and Information Ratio shown are relative to the Passive Benchmark.



Performance shown is net of fees. Information Ratio and Tracking Error shown are relative to the Passive Benchmark.



Performance shown is net of fees. Information Ratio and Tracking Error shown are relative to the Passive Benchmark.



**Risk and Return Sources by Asset Class**

Asset Class	Current \$ Weight (%)	Target \$ Weight (%)	Current Proj Return (%)	Current Proj Risk (%)	Current Risk Weight (%)	Target Risk Weight (%)	Current Proj Return Contrib (%)	Current Proj Risk Contrib (%)	Current Proj Ret/Risk Contrib
Global Equity	57.05	56.00	6.62	16.40	79.69	76.00	3.78	9.29	0.41
Fixed Income	16.75	21.00	3.81	6.29	0.57	0.92	0.64	0.07	9.55
Real Assets	14.23	15.00	6.11	14.53	15.55	15.94	0.87	1.81	0.48
Multi-Asset	4.07	7.00	6.16	12.32	4.26	7.15	0.25	0.50	0.50
Cash	7.90	1.00	2.48	2.00	-0.07	-0.01	0.20	-0.01	N/A
<b>Total Fund</b>	<b>100.00</b>	<b>100.00</b>	<b>6.00</b>	<b>11.66</b>	<b>100.00</b>	<b>100.00</b>	<b>5.73</b>	<b>11.66</b>	<b>0.49</b>

Projected asset class risk and return figures shown are based on RVK 2023 Capital Markets Assumptions. Projected returns are shown on a compound basis.



**Composite: Total Fund**  
**Equity Beta Analysis vs. S&P 500 Index (Market Cap Weighted)**

As of September 30, 2023

Equity Beta														
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Composite	0.73	0.78	0.67	0.67	0.65	0.64	0.64	0.63	0.60	0.68	0.57	0.54	0.50	06/01/1982
Benchmark	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**3 Year Rolling Equity Beta**



The objective of the Total Fund Beta is to measure the aggregate level of non-diversifiable or systematic equity risk exposure of the City of Austin Employees' Retirement System. The Total Fund Beta is calculated using the S&P 500 (Market Cap Weighted) as the benchmark and is based on monthly periodicity. It represents a measure of the sensitivity of the total fund to movements of the S&P 500 (Market Cap Weighted) over the preceding three year period.

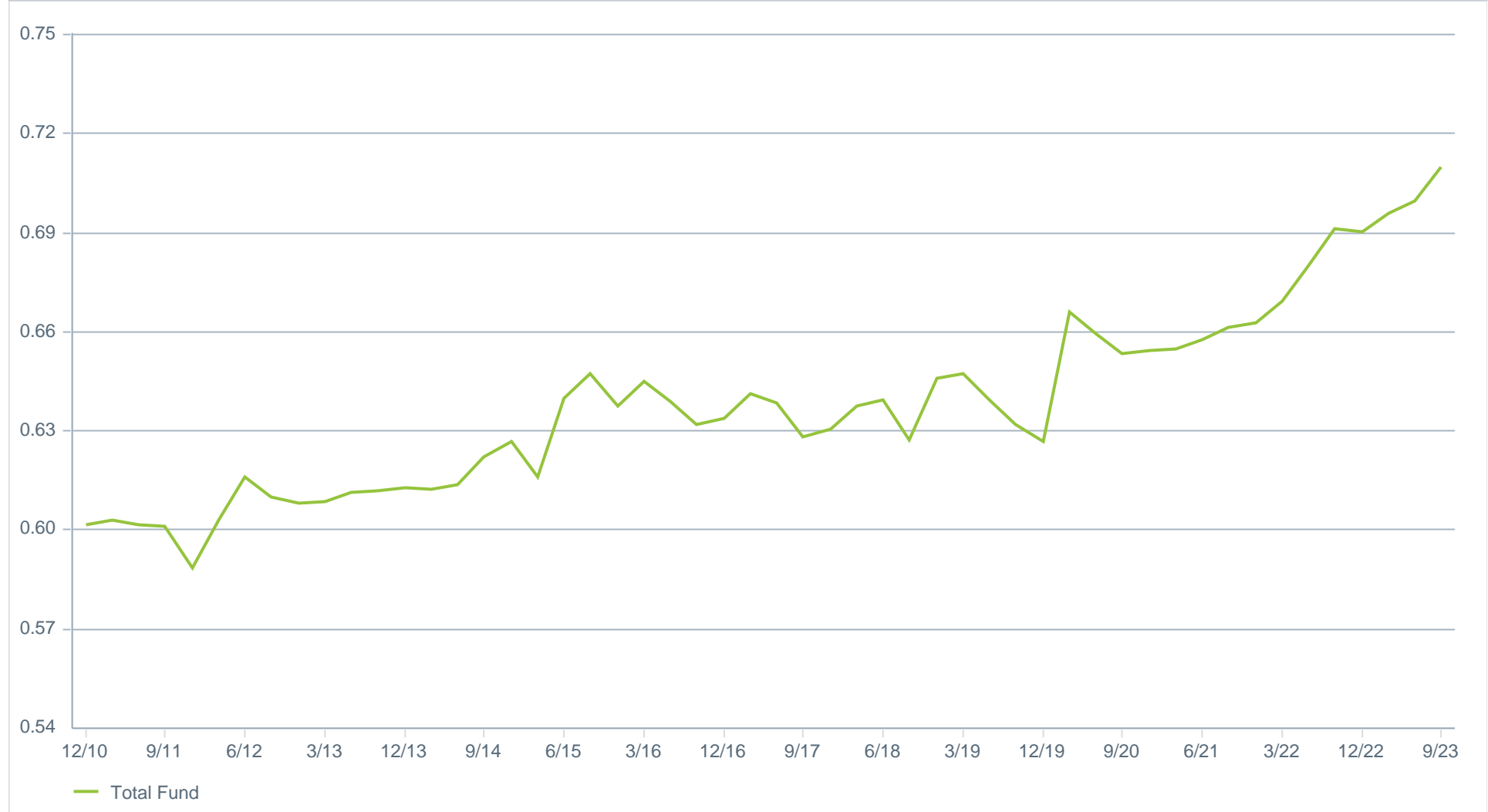


Composite: Total Fund  
Equity Beta Analysis vs MSCI ACW IM Index (USD) (Net)

As of September 30, 2023

Equity Beta														
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Composite	0.70	0.76	0.73	0.71	0.68	0.68	0.67	0.70	0.72	0.67	0.59	0.63	N/A	06/01/1982
Benchmark	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A	

3 Year Rolling Equity Beta



The objective of the Total Fund Beta is to measure the aggregate level of non-diversifiable or systematic equity risk exposure of the City of Austin Employees' Retirement System. The Total Fund Beta is calculated using the MSCI ACW IM Index (USD) (Net) as the benchmark and is based on monthly periodicity. It represents a measure of the sensitivity of the total fund to movements of the MSCI ACW IM Index (USD) (Net) over the preceding three year period.



**Composite: Total Fund**  
**Asset Allocation & Performance - Net of Fees**

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>Total Fund</b>	<b>2,976,657,953</b>	<b>100.00</b>	<b>-3.82</b>	<b>3.39</b>	<b>9.73</b>	<b>2.91</b>	<b>3.87</b>	<b>5.33</b>	<b>9.18</b>	<b>06/01/1982</b>
Policy Benchmark			-3.97	4.69	13.20	3.59	4.06	5.29	N/A	
Excess Return			0.15	-1.30	-3.47	-0.68	-0.19	0.04	N/A	
Passive Benchmark			-3.46	5.05	13.18	1.33	3.44	4.49	N/A	
Excess Return			-0.36	-1.66	-3.45	1.58	0.43	0.84	N/A	
<b>Global Equity</b>	<b>1,698,162,775</b>	<b>57.05</b>	<b>-4.51</b>	<b>6.42</b>	<b>17.26</b>	<b>4.86</b>	<b>4.97</b>	<b>6.85</b>	<b>8.64</b>	<b>06/01/1988</b>
Global Equity Benchmark			-3.40	9.39	20.16	6.88	6.09	7.39	N/A	
Excess Return			-1.11	-2.97	-2.90	-2.02	-1.12	-0.54	N/A	
<b>US Equity</b>	<b>1,036,350,727</b>	<b>34.82</b>	<b>-3.65</b>	<b>7.59</b>	<b>16.55</b>	<b>7.84</b>	<b>6.98</b>	<b>9.57</b>	<b>10.33</b>	<b>06/01/1988</b>
US Equity Benchmark			-3.18	13.13	21.03	9.02	9.22	11.32	10.50	
Excess Return			-0.47	-5.54	-4.48	-1.18	-2.24	-1.75	-0.17	
<b>Developed Markets Equity</b>	<b>463,164,880</b>	<b>15.56</b>	<b>-6.54</b>	<b>4.92</b>	<b>20.22</b>	<b>2.71</b>	<b>3.53</b>	<b>4.63</b>	<b>4.40</b>	<b>01/01/2008</b>
Developed Market Equity Benchmark			-4.10	6.73	24.00	6.07	3.44	3.84	2.18	
Excess Return			-2.44	-1.81	-3.78	-3.36	0.09	0.79	2.22	
<b>Emerging Markets Equity</b>	<b>198,647,168</b>	<b>6.67</b>	<b>-4.09</b>	<b>4.16</b>	<b>15.17</b>	<b>-3.00</b>	<b>-0.37</b>	<b>1.57</b>	<b>0.58</b>	<b>03/01/2008</b>
Emerging Market Equity Benchmark			-2.93	1.82	11.70	-1.73	0.55	2.07	1.14	
Excess Return			-1.16	2.34	3.47	-1.27	-0.92	-0.50	-0.56	
<b>Real Assets</b>	<b>423,529,373</b>	<b>14.23</b>	<b>-4.23</b>	<b>-3.11</b>	<b>-2.49</b>	<b>6.09</b>	<b>3.70</b>	<b>5.99</b>	<b>5.78</b>	<b>09/01/2004</b>
Real Assets Benchmark			-7.25	-2.85	4.07	6.17	3.04	5.51	6.98	
Excess Return			3.02	-0.26	-6.56	-0.08	0.66	0.48	-1.20	
<b>Real Estate Equity</b>	<b>270,062,708</b>	<b>9.07</b>	<b>-5.19</b>	<b>-5.54</b>	<b>-7.27</b>	<b>5.14</b>	<b>3.58</b>	<b>7.16</b>	<b>6.38</b>	<b>09/01/2004</b>
Real Estate Equity Benchmark			-7.13	-2.14	2.99	5.76	2.77	6.10	7.27	
Excess Return			1.94	-3.40	-10.26	-0.62	0.81	1.06	-0.89	
<b>Infrastructure Equity</b>	<b>153,466,666</b>	<b>5.16</b>	<b>-2.51</b>	<b>1.70</b>	<b>8.06</b>	<b>8.14</b>	<b>1.11</b>	<b>N/A</b>	<b>1.49</b>	<b>01/01/2020</b>
Infrastructure Equity Benchmark			-7.50	-4.45	5.90	6.45	3.18	4.20	-0.48	
Excess Return			4.99	6.15	2.16	1.69	-2.07	N/A	1.97	

Performance shown is net of fees and is annualized for periods greater than one year. Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.

**Composite: Total Fund**  
**Asset Allocation & Performance - Net of Fees**

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>Global Fixed Income</b>	<b>498,603,708</b>	<b>16.75</b>	<b>-3.54</b>	<b>-1.17</b>	<b>-0.01</b>	<b>-6.39</b>	<b>-0.41</b>	<b>0.93</b>	<b>4.80</b>	<b>02/01/1991</b>
Global Fixed Income Benchmark			-3.59	-2.21	2.24	-6.93	-1.50	0.31	4.54	
Excess Return			0.05	1.04	-2.25	0.54	1.09	0.62	0.26	
<b>US Treasuries</b>	<b>353,213,046</b>	<b>11.87</b>	<b>-3.64</b>	<b>-1.50</b>	<b>-1.03</b>	<b>-7.46</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.85</b>	<b>05/01/2019</b>
US Treasuries Benchmark			-3.06	-1.52	-0.81	-5.83	-0.07	0.63	-1.05	
Excess Return			-0.58	0.02	-0.22	-1.63	N/A	N/A	0.20	
<b>US Mortgages</b>	<b>67,562,244</b>	<b>2.27</b>	<b>-3.56</b>	<b>-1.42</b>	<b>0.16</b>	<b>-4.90</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.39</b>	<b>08/01/2019</b>
US Mortgages Benchmark			-4.05	-2.26	-0.17	-5.09	-0.77	0.61	-2.47	
Excess Return			0.49	0.84	0.33	0.19	N/A	N/A	0.08	
<b>US Credit</b>	<b>77,828,419</b>	<b>2.61</b>	<b>-3.03</b>	<b>0.56</b>	<b>4.25</b>	<b>-4.54</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.93</b>	<b>08/01/2019</b>
US Credit Benchmark			-3.01	0.03	3.47	-4.83	0.86	2.12	-1.24	
Excess Return			-0.02	0.53	0.78	0.29	N/A	N/A	0.31	
<b>Multi-Asset</b>	<b>121,072,223</b>	<b>4.07</b>	<b>-3.13</b>	<b>3.54</b>	<b>10.68</b>	<b>4.41</b>	<b>4.78</b>	<b>N/A</b>	<b>4.37</b>	<b>02/01/2014</b>
Multi-Asset Benchmark			-3.46	5.05	13.18	2.75	3.35	4.44	4.37	
Excess Return			0.33	-1.51	-2.50	1.66	1.43	N/A	0.00	
<b>Asset Allocation</b>	<b>83,787,362</b>	<b>2.81</b>	<b>-2.87</b>	<b>6.19</b>	<b>13.03</b>	<b>3.13</b>	<b>N/A</b>	<b>N/A</b>	<b>5.55</b>	<b>05/01/2020</b>
Multi-Asset Benchmark			-3.46	5.05	13.18	2.75	3.35	4.44	5.78	
Excess Return			0.59	1.14	-0.15	0.38	N/A	N/A	-0.23	
<b>Commodities &amp; Other</b>	<b>37,284,861</b>	<b>1.25</b>	<b>-3.72</b>	<b>-1.72</b>	<b>6.31</b>	<b>-1.12</b>	<b>N/A</b>	<b>N/A</b>	<b>2.36</b>	<b>04/01/2021</b>
Commodities & Other Benchmark			4.71	-3.44	-1.30	16.23	6.13	-0.75	12.17	
Excess Return			-8.43	1.72	7.61	-17.35	N/A	N/A	-9.81	
<b>Cash &amp; Equivalents</b>	<b>235,289,873</b>	<b>7.90</b>	<b>1.28</b>	<b>3.67</b>	<b>4.40</b>	<b>1.77</b>	<b>1.69</b>	<b>N/A</b>	<b>1.61</b>	<b>07/01/2017</b>
Cash & Equivalents Benchmark			1.34	3.71	4.63	1.75	1.71	1.09	1.65	
Excess Return			-0.06	-0.04	-0.23	0.02	-0.02	N/A	-0.04	
<b>US Dollar Instruments</b>	<b>186,244,522</b>	<b>6.26</b>	<b>1.29</b>	<b>3.62</b>	<b>4.29</b>	<b>1.76</b>	<b>1.69</b>	<b>1.06</b>	<b>1.31</b>	<b>09/01/2015</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	1.35	
Excess Return			-0.05	-0.09	-0.34	0.01	-0.02	-0.03	-0.04	
<b>Other Currencies</b>	<b>49,045,351</b>	<b>1.65</b>	<b>1.23</b>	<b>3.72</b>	<b>4.66</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.93</b>	<b>12/01/2021</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	2.85	
Excess Return			-0.11	0.01	0.03	N/A	N/A	N/A	0.08	

Performance shown is net of fees and is annualized for periods greater than one year. Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.



Composite: Total Fund  
Asset Allocation & Performance - Net of Fees

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>US Equity</b>										
<b>BNYM Dynamic US Equity NL (SA)</b>	<b>231,860,033</b>	<b>7.79</b>	<b>-3.95</b>	<b>11.05</b>	<b>18.43</b>	<b>8.16</b>	<b>9.44</b>	<b>N/A</b>	<b>10.99</b>	<b>05/01/2018</b>
S&P 500 Index (Cap Wtd)			-3.27	13.07	21.62	10.15	9.92	11.91	11.24	
Excess Return			-0.68	-2.02	-3.19	-1.99	-0.48	N/A	-0.25	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	9.58	
Rank			83	49	61	68	29	N/A	24	
<b>BNYM SciBeta US Max Decorrelation (SA)</b>	<b>130,769,057</b>	<b>4.39</b>	<b>-3.05</b>	<b>4.07</b>	<b>14.92</b>	<b>9.32</b>	<b>N/A</b>	<b>N/A</b>	<b>9.32</b>	<b>10/01/2020</b>
SciBeta Max Decorrelation Index			-3.00	4.17	15.07	9.48	7.66	10.45	9.48	
Excess Return			-0.05	-0.10	-0.15	-0.16	N/A	N/A	-0.16	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	9.08	
Rank			51	86	79	48	N/A	N/A	48	
<b>TOBAM Max Diversification USA (SA)</b>	<b>109,366,163</b>	<b>3.67</b>	<b>-5.01</b>	<b>-2.12</b>	<b>7.97</b>	<b>1.02</b>	<b>N/A</b>	<b>N/A</b>	<b>1.02</b>	<b>10/01/2020</b>
TOBAM Max Diversification Index			-4.93	-2.14	8.10	1.16	3.88	8.74	1.16	
Excess Return			-0.08	0.02	-0.13	-0.14	N/A	N/A	-0.14	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	9.08	
Rank			94	99	99	99	N/A	N/A	99	
<b>L&amp;G MSCI USA Index (CIT)</b>	<b>175,835,213</b>	<b>5.91</b>	<b>-3.07</b>	<b>13.38</b>	<b>21.45</b>	<b>9.61</b>	<b>N/A</b>	<b>N/A</b>	<b>9.61</b>	<b>10/01/2020</b>
MSCI USA Index (Net)			-3.18	13.13	21.03	9.02	9.32	11.19	9.02	
Excess Return			0.11	0.25	0.42	0.59	N/A	N/A	0.59	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	9.08	
Rank			52	22	29	44	N/A	N/A	44	
<b>SSGA MSCI USA EW Index (SA)</b>	<b>184,465,464</b>	<b>6.20</b>	<b>-4.04</b>	<b>4.35</b>	<b>14.46</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.30</b>	<b>11/01/2020</b>
MSCI USA Equal Weighted Index (Net)			-4.16	3.96	13.90	8.34	6.28	8.87	8.78	
Excess Return			0.12	0.39	0.56	N/A	N/A	N/A	0.52	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	10.27	
Rank			84	85	80	N/A	N/A	N/A	68	
<b>SSGA MSCI USA Small Cap Index (CF)</b>	<b>42,914,262</b>	<b>1.44</b>	<b>-4.91</b>	<b>3.98</b>	<b>12.31</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.26</b>	<b>11/01/2020</b>
MSCI US Sm Cap Index (USD) (Net)			-4.99	3.65	11.81	9.43	4.36	7.83	8.80	
Excess Return			0.08	0.33	0.50	N/A	N/A	N/A	0.46	
IM U.S. Small Cap Equity (SA+CF) Median			-4.69	3.83	11.77	10.40	4.35	7.84	10.07	
Rank			55	49	48	N/A	N/A	N/A	54	

Performance shown is net of fees and is annualized for periods greater than one year.

Composite: Total Fund  
Asset Allocation & Performance - Net of Fees

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>NISA S&amp;P 500 Futures (SA)</b>	<b>67,160,427</b>	<b>2.26</b>	<b>-3.23</b>	<b>12.24</b>	<b>19.98</b>	<b>9.72</b>	<b>N/A</b>	<b>N/A</b>	<b>9.41</b>	<b>02/01/2020</b>
S&P 500 Index (Cap Wtd)			-3.27	13.07	21.62	10.15	9.92	11.91	9.86	
Excess Return			0.04	-0.83	-1.64	-0.43	N/A	N/A	-0.45	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	8.66	
Rank			60	36	50	43	N/A	N/A	34	
<b>Mellon SciBeta Inflation Plus (SA)</b>	<b>93,912,455</b>	<b>3.15</b>	<b>-2.10</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.10</b>	<b>07/01/2023</b>
SciBeta Inflation Plus Index			-2.10	9.01	17.67	N/A	N/A	N/A	-2.10	
Excess Return			0.00	N/A	N/A	N/A	N/A	N/A	0.00	
IM U.S. Large Cap Core Equity (SA+CF) Median			-3.02	10.88	19.95	9.08	8.53	10.97	-3.02	
Rank			25	N/A	N/A	N/A	N/A	N/A	25	
<b>Developed Markets Equity</b>										
<b>Walter Scott Dev Mkts Int'l Equity (SA)</b>	<b>181,176,307</b>	<b>6.09</b>	<b>-10.14</b>	<b>4.87</b>	<b>19.56</b>	<b>0.38</b>	<b>5.01</b>	<b>5.88</b>	<b>7.92</b>	<b>10/01/1992</b>
MSCI EAFE Index (USD) (Net)			-4.11	7.08	25.65	5.75	3.24	3.82	5.53	
Excess Return			-6.03	-2.21	-6.09	-5.37	1.77	2.06	2.39	
IM All EAFE (SA+CF) Median			-4.48	6.95	24.65	5.10	3.08	4.08	7.13	
Rank			95	74	82	89	13	7	26	
<b>1607 Capital Partners Int'l Equity EAFE (SA)</b>	<b>143,091,355</b>	<b>4.81</b>	<b>-4.68</b>	<b>3.98</b>	<b>21.18</b>	<b>4.07</b>	<b>3.38</b>	<b>4.57</b>	<b>6.51</b>	<b>08/01/2010</b>
90% MSCI EAFE/10% MSCI EM Index			-3.99	6.57	24.26	5.05	3.02	3.70	5.04	
Excess Return			-0.69	-2.59	-3.08	-0.98	0.36	0.87	1.47	
IM International Core Equity (SA+CF) Median			-4.48	5.58	21.31	4.00	2.84	4.15	5.87	
Rank			51	67	53	49	27	33	27	
<b>BNYM DB Dynamic Global Ex US Eq (CF)</b>	<b>26,621,975</b>	<b>0.89</b>	<b>-5.50</b>	<b>3.75</b>	<b>18.48</b>	<b>1.92</b>	<b>N/A</b>	<b>N/A</b>	<b>2.81</b>	<b>09/01/2019</b>
MSCI ACW Ex US Index (USD) (Net)			-3.77	5.34	20.39	3.74	2.58	3.35	4.13	
Excess Return			-1.73	-1.59	-1.91	-1.82	N/A	N/A	-1.32	
IM ACWI Ex US Core (SA+CF) Median			-4.48	5.26	20.66	3.01	2.90	3.57	4.23	
Rank			76	79	75	70	N/A	N/A	84	
<b>NISA EAFE Futures (SA)</b>	<b>32,837,441</b>	<b>1.10</b>	<b>-4.54</b>	<b>6.68</b>	<b>24.31</b>	<b>5.41</b>	<b>N/A</b>	<b>N/A</b>	<b>2.98</b>	<b>02/01/2020</b>
MSCI EAFE Index (USD) (Net)			-4.11	7.08	25.65	5.75	3.24	3.82	3.20	
Excess Return			-0.43	-0.40	-1.34	-0.34	N/A	N/A	-0.22	
IM All EAFE (SA+CF) Median			-4.48	6.95	24.65	5.10	3.08	4.08	3.08	
Rank			51	55	53	44	N/A	N/A	52	

Performance shown is net of fees and is annualized for periods greater than one year.

Composite: Total Fund  
Asset Allocation & Performance - Net of Fees

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>NT MSCI World Ex US Small Cap Index (CF)</b>	<b>41,424,743</b>	<b>1.39</b>	<b>-3.47</b>	<b>1.80</b>	<b>18.42</b>	<b>2.10</b>	<b>1.64</b>	<b>N/A</b>	<b>1.31</b>	<b>08/01/2018</b>
MSCI Wrld Ex US Sm Cap Index (USD) (Net)			-3.48	1.83	17.32	1.85	1.28	4.13	0.96	
Excess Return			0.01	-0.03	1.10	0.25	0.36	N/A	0.35	
IM International Small Cap Equity (SA+CF) Median			-3.94	3.62	19.15	1.44	1.65	4.46	1.37	
Rank			42	63	54	45	51	N/A	51	
<b>NISA FX Hedged EAFE Future (SA)</b>	<b>38,013,059</b>	<b>1.28</b>	<b>-0.90</b>	<b>11.96</b>	<b>20.57</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>3.11</b>	<b>01/01/2022</b>
MSCI EAFE Index (USD) (Net) (Hedged)			-0.54	13.17	24.15	12.98	7.81	8.17	4.47	
Excess Return			-0.36	-1.21	-3.58	N/A	N/A	N/A	-1.36	
IM All EAFE (SA+CF) Median			-4.48	6.95	24.65	5.10	3.08	4.08	-5.82	
Rank			10	6	76	N/A	N/A	N/A	5	
<b>Emerging Markets Equity</b>										
<b>Baillie Gifford EM Equity Class 3 (MF)</b>	<b>120,200,232</b>	<b>4.04</b>	<b>-4.47</b>	<b>6.15</b>	<b>18.41</b>	<b>-3.81</b>	<b>1.59</b>	<b>N/A</b>	<b>5.18</b>	<b>10/01/2016</b>
MSCI Emerging Markets Index (USD) (Net)			-2.93	1.82	11.70	-1.73	0.55	2.07	3.22	
Excess Return			-1.54	4.33	6.71	-2.08	1.04	N/A	1.96	
IM Emerging Markets Equity (MF) Median			-3.79	3.16	13.05	-2.37	0.77	1.88	2.94	
Rank			61	21	16	63	36	N/A	15	
<b>L&amp;G MSCI EM Index (CIT)</b>	<b>70,798,881</b>	<b>2.38</b>	<b>-3.57</b>	<b>1.18</b>	<b>10.97</b>	<b>-2.03</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.03</b>	<b>10/01/2020</b>
MSCI Emerging Markets Index (USD) (Net)			-2.93	1.82	11.70	-1.73	0.55	2.07	-1.73	
Excess Return			-0.64	-0.64	-0.73	-0.30	N/A	N/A	-0.30	
IM Emerging Markets Equity (SA+CF) Median			-3.29	4.07	14.01	-1.06	1.66	2.71	-1.06	
Rank			56	71	67	58	N/A	N/A	58	
<b>NISA EM Futures (SA)</b>	<b>7,648,056</b>	<b>0.26</b>	<b>-2.82</b>	<b>1.98</b>	<b>10.87</b>	<b>-2.29</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.45</b>	<b>02/01/2020</b>
MSCI Emerging Markets Index (USD) (Net)			-2.93	1.82	11.70	-1.73	0.55	2.07	-0.44	
Excess Return			0.11	0.16	-0.83	-0.56	N/A	N/A	-0.01	
IM Emerging Markets Equity (SA+CF) Median			-3.29	4.07	14.01	-1.06	1.66	2.71	0.37	
Rank			45	64	67	63	N/A	N/A	60	

Performance shown is net of fees and is annualized for periods greater than one year.

Composite: Total Fund  
Asset Allocation & Performance - Net of Fees

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>Real Estate Equity</b>										
<b>Principal US Property Account (CF)</b>	<b>168,300,792</b>	<b>5.65</b>	<b>-3.87</b>	<b>-8.65</b>	<b>-14.32</b>	<b>5.94</b>	<b>4.84</b>	<b>7.81</b>	<b>6.72</b>	<b>09/01/2004</b>
NCREIF ODCE Index (AWA) (Net)			-2.10	-8.14	-12.88	6.19	4.72	7.19	6.56	
Excess Return			-1.77	-0.51	-1.44	-0.25	0.12	0.62	0.16	
<b>Fidelity US REITs Completion Index (SA)</b>	<b>92,370,480</b>	<b>3.10</b>	<b>-7.31</b>	<b>-0.92</b>	<b>4.03</b>	<b>5.04</b>	<b>N/A</b>	<b>N/A</b>	<b>0.55</b>	<b>01/01/2020</b>
Fidelity REITs Completion Index			-7.31	-0.87	4.10	5.12	N/A	N/A	0.61	
Excess Return			0.00	-0.05	-0.07	-0.08	N/A	N/A	-0.06	
<b>Agincourt FTSE NAREIT Equity REITs Index (SA)</b>	<b>9,391,435</b>	<b>0.32</b>	<b>-7.07</b>	<b>-2.42</b>	<b>2.66</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.92</b>	<b>05/01/2021</b>
FTSE NAREIT Eq REITs Index (TR)			-7.13	-2.14	2.99	5.76	2.77	5.96	-4.22	
Excess Return			0.06	-0.28	-0.33	N/A	N/A	N/A	0.30	
<b>Infrastructure Equity</b>										
<b>IFM Global Infrastructure A (CF)</b>	<b>93,199,633</b>	<b>3.13</b>	<b>0.37</b>	<b>5.55</b>	<b>9.80</b>	<b>11.65</b>	<b>N/A</b>	<b>N/A</b>	<b>10.84</b>	<b>04/01/2020</b>
S&P Gbl Infrastructure Index (Net)			-7.50	-4.45	5.90	6.45	3.18	4.20	9.86	
Excess Return			7.87	10.00	3.90	5.20	N/A	N/A	0.98	
<b>Fidelity DJ Brookfield Infrastructure Index (SA)</b>	<b>60,267,032</b>	<b>2.02</b>	<b>-6.67</b>	<b>-3.73</b>	<b>5.48</b>	<b>6.43</b>	<b>N/A</b>	<b>N/A</b>	<b>0.36</b>	<b>01/01/2020</b>
DJ Brookfield Gbl Infra Comp Index			-6.93	-4.46	4.50	5.79	2.97	4.20	-0.31	
Excess Return			0.26	0.73	0.98	0.64	N/A	N/A	0.67	
<b>US Treasuries</b>										
<b>Agincourt 1-3 Year Treasury (SA)</b>	<b>186,555,582</b>	<b>6.27</b>	<b>0.74</b>	<b>1.70</b>	<b>2.42</b>	<b>-0.93</b>	<b>N/A</b>	<b>N/A</b>	<b>0.59</b>	<b>05/01/2019</b>
Bloomberg US Trsy 1-3 Yr Index			0.71	1.69	2.44	-0.92	1.03	0.79	0.60	
Excess Return			0.03	0.01	-0.02	-0.01	N/A	N/A	-0.01	
IM U.S. Short Term Treasury/Govt Bonds (MF) Median			0.52	1.36	2.03	-1.50	0.54	0.48	0.16	
Rank			31	30	28	26	N/A	N/A	17	
<b>Agincourt 1-5 Yr US TIPS (SA)</b>	<b>63,439,756</b>	<b>2.13</b>	<b>0.31</b>	<b>1.73</b>	<b>3.02</b>	<b>1.56</b>	<b>N/A</b>	<b>N/A</b>	<b>2.41</b>	<b>01/01/2020</b>
Bloomberg US TIPS 1-5 Yr Index			0.24	1.52	2.84	1.45	2.67	1.63	2.26	
Excess Return			0.07	0.21	0.18	0.11	N/A	N/A	0.15	
IM U.S. TIPS (MF) Median			-2.21	-0.59	1.44	-2.04	1.94	1.39	0.70	
Rank			10	10	17	16	N/A	N/A	11	

Performance shown is net of fees and is annualized for periods greater than one year.

Composite: Total Fund  
Asset Allocation & Performance - Net of Fees

As of September 30, 2023

	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>NISA 30 Year Treasury Futures (SA)</b>	<b>54,203,898</b>	<b>1.82</b>	<b>-12.15</b>	<b>-9.53</b>	<b>-17.10</b>	<b>-16.37</b>	<b>N/A</b>	<b>N/A</b>	<b>-15.04</b>	<b>05/01/2020</b>
Bloomberg US Trsy Bellwethers 30 Yr Index			-12.72	-9.68	-12.05	-18.04	-3.73	0.28	-16.87	
Excess Return			0.57	0.15	-5.05	1.67	N/A	N/A	1.83	
IM U.S. Long Term Treasury/Govt Bond (MF) Median			-3.36	-2.55	-1.67	-5.96	-0.78	0.43	-5.23	
Rank			92	93	99	94	N/A	N/A	95	
<b>Hoisington Macroeconomic US Treasuries (SA)</b>	<b>49,013,810</b>	<b>1.65</b>	<b>-13.13</b>	<b>-9.69</b>	<b>-10.48</b>	<b>-17.75</b>	<b>N/A</b>	<b>N/A</b>	<b>-5.14</b>	<b>05/01/2019</b>
Bloomberg US Trsy Index			-3.06	-1.52	-0.81	-5.83	-0.07	0.63	-1.05	
Excess Return			-10.07	-8.17	-9.67	-11.92	N/A	N/A	-4.09	
IM U.S. Long Term Treasury/Govt Bond (MF) Median			-3.36	-2.55	-1.67	-5.96	-0.78	0.43	-1.67	
Rank			96	94	93	96	N/A	N/A	93	
<b>US Mortgages</b>										
<b>DoubleLine MBS (SA)</b>	<b>67,562,244</b>	<b>2.27</b>	<b>-3.56</b>	<b>-1.42</b>	<b>0.16</b>	<b>-4.90</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.39</b>	<b>08/01/2019</b>
Bloomberg US MBS Index (Unhgd)			-4.05	-2.26	-0.17	-5.09	-0.77	0.61	-2.47	
Excess Return			0.49	0.84	0.33	0.19	N/A	N/A	0.08	
IM U.S. Mortgage Backed Bonds (SA+CF) Median			-2.84	-1.09	0.30	-3.41	-0.33	1.25	-1.96	
Rank			65	56	52	67	N/A	N/A	82	
<b>US Credit</b>										
<b>PGIM US IG Corporate Bond (CIT)</b>	<b>77,828,419</b>	<b>2.61</b>	<b>-3.03</b>	<b>0.56</b>	<b>4.25</b>	<b>-4.54</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.71</b>	<b>08/01/2019</b>
Bloomberg US Crdt Index			-3.01	0.03	3.47	-4.83	0.86	2.12	-1.24	
Excess Return			-0.02	0.53	0.78	0.29	N/A	N/A	0.53	
IM U.S. Corporate Bonds (SA+CF) Median			-3.01	0.25	3.40	-4.85	1.07	2.61	-1.02	
Rank			52	39	20	37	N/A	N/A	35	
<b>Asset Allocation</b>										
<b>Agincourt Passive Index (SA)</b>	<b>83,787,362</b>	<b>2.81</b>	<b>-2.87</b>	<b>6.19</b>	<b>13.03</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.50</b>	<b>01/01/2021</b>
Passive Benchmark			-3.46	5.05	13.18	1.33	3.44	4.49	-2.05	
Excess Return			0.59	1.14	-0.15	N/A	N/A	N/A	1.55	
<b>Commodities &amp; Other</b>										
<b>NISA Gold Futures (SA)</b>	<b>37,284,861</b>	<b>1.25</b>	<b>-3.72</b>	<b>-1.72</b>	<b>6.31</b>	<b>-1.12</b>	<b>N/A</b>	<b>N/A</b>	<b>1.68</b>	<b>05/01/2020</b>
Bloomberg Gold Sub Index (TR)			-3.88	1.29	10.87	-1.38	8.06	2.55	1.42	
Excess Return			0.16	-3.01	-4.56	0.26	N/A	N/A	0.26	

Performance shown is net of fees and is annualized for periods greater than one year.

Composite: Total Fund  
Asset Allocation & Performance - Net of Fees

As of September 30, 2023

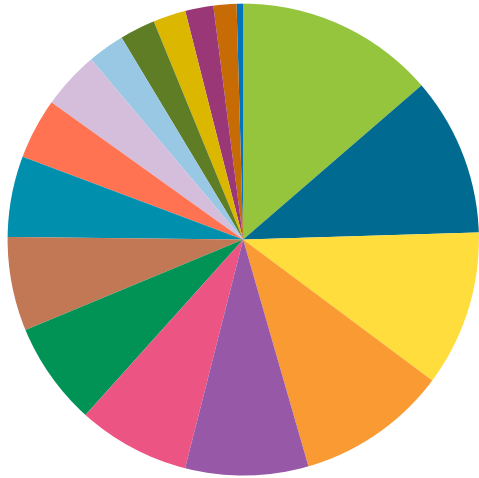
	Allocation		Rate of Return (%)							
	Market Value (\$)	%	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	Since Incep.	Inception Date
<b>US Dollar Instruments</b>										
<b>Agincourt 1-3 Month Treasury (SA)</b>	<b>114,460,965</b>	<b>3.85</b>	<b>1.30</b>	<b>3.64</b>	<b>4.51</b>	<b>1.68</b>	<b>N/A</b>	<b>N/A</b>	<b>1.57</b>	<b>05/01/2019</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	1.63	
Excess Return			-0.04	-0.07	-0.12	-0.07	N/A	N/A	-0.06	
<b>Mellon Government STIF (CF)</b>	<b>1,797,197</b>	<b>0.06</b>	<b>1.31</b>	<b>3.64</b>	<b>4.53</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.90</b>	<b>02/01/2021</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	1.96	
Excess Return			-0.03	-0.07	-0.10	N/A	N/A	N/A	-0.06	
<b>COAERS USD (SA)</b>	<b>1,015,809</b>	<b>0.03</b>	<b>0.37</b>	<b>1.07</b>	<b>1.34</b>	<b>0.52</b>	<b>N/A</b>	<b>N/A</b>	<b>0.46</b>	<b>05/01/2020</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	1.55	
Excess Return			-0.97	-2.64	-3.29	-1.23	N/A	N/A	-1.09	
<b>BNYM Money Market Fund (SA)</b>	<b>2,099,031</b>	<b>0.07</b>	<b>1.27</b>	<b>3.49</b>	<b>4.35</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.80</b>	<b>01/01/2022</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	2.99	
Excess Return			-0.07	-0.22	-0.28	N/A	N/A	N/A	-0.19	
<b>NISA Cash and Carry (SA)</b>	<b>66,871,519</b>	<b>2.25</b>	<b>1.28</b>	<b>3.79</b>	<b>3.93</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.78</b>	<b>09/01/2022</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	4.46	
Excess Return			-0.06	0.08	-0.70	N/A	N/A	N/A	1.32	
<b>Other Currencies</b>										
<b>NISA ST Sovereigns (SA)</b>	<b>49,045,351</b>	<b>1.65</b>	<b>1.23</b>	<b>3.72</b>	<b>4.66</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>3.07</b>	<b>01/01/2022</b>
Bloomberg US T-Bills 1-3 Mo Index			1.34	3.71	4.63	1.75	1.71	1.09	2.99	
Excess Return			-0.11	0.01	0.03	N/A	N/A	N/A	0.08	

Performance shown is net of fees and is annualized for periods greater than one year.

# Global Equity Composite



Asset Allocation by Manager: \$1,698,162,775



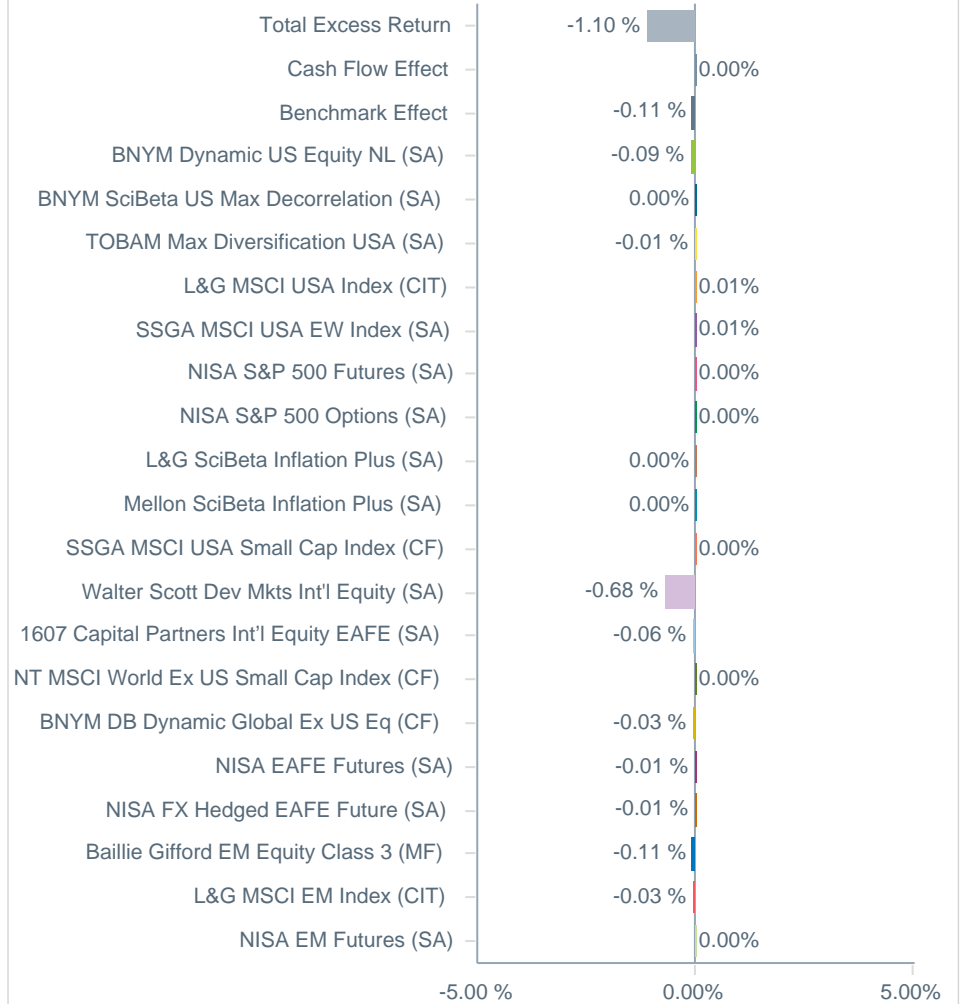
	Market Value (\$)	Allocation (%)
BNYM Dynamic US Equity NL (SA)	231,860,033	13.65
SSGA MSCI USA EW Index (SA)	184,465,464	10.86
Walter Scott Dev Mkts Int'l Equity (SA)	181,176,307	10.67
L&G MSCI USA Index (CIT)	175,835,213	10.35
1607 Capital Partners Int'l Equity EAFE (SA)	143,091,355	8.43
BNYM SciBeta US Max Decorrelation (SA)	130,769,057	7.70
Baillie Gifford EM Equity Class 3 (MF)	120,200,232	7.08
TOBAM Max Diversification USA (SA)	109,366,163	6.44
Mellon SciBeta Inflation Plus (SA)	93,912,455	5.53
L&G MSCI EM Index (CIT)	70,798,881	4.17
NISA S&P 500 Futures (SA)	67,160,427	3.95
SSGA MSCI USA Small Cap Index (CF)	42,914,262	2.53
NT MSCI World Ex US Small Cap Index (CF)	41,424,743	2.44
NISA FX Hedged EAFE Future (SA)	38,013,059	2.24
NISA EAFE Futures (SA)	32,837,441	1.93
BNYM DB Dynamic Global Ex US Eq (CF)	26,621,975	1.57
NISA EM Futures (SA)	7,648,056	0.45
NISA S&P 500 Options (SA)	64,219	0.00
L&G SciBeta Inflation Plus (SA)	3,434	0.00

Rate of Return

QTD

Composite	-4.51
Benchmark	-3.40
Excess Return	-1.11

Attribution by Manager



Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions. Market value shown for L&G SciBeta Inflation Plus (SA) represents residual cash from liquidation.



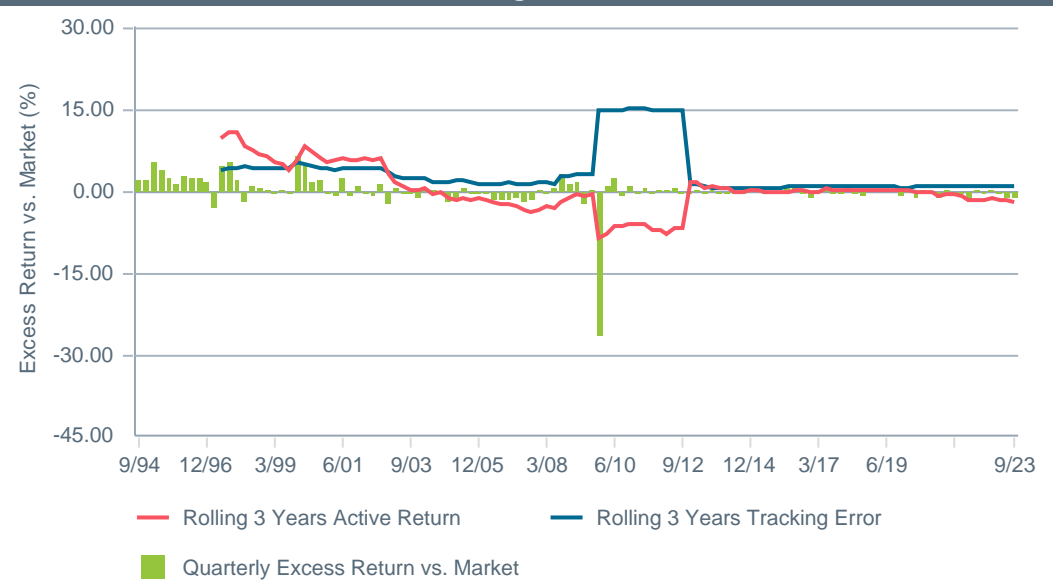
Rate of Return

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-4.51	6.42	17.26	4.86	4.97	7.45	6.85	-19.42	16.24	16.04	26.61	8.64	06/01/1988
Benchmark	-3.40	9.39	20.16	6.88	6.09	8.32	7.39	-18.40	18.22	16.25	26.35	N/A	
Excess Return	-1.11	-2.97	-2.90	-2.02	-1.12	-0.87	-0.54	-1.02	-1.98	-0.21	0.26	N/A	

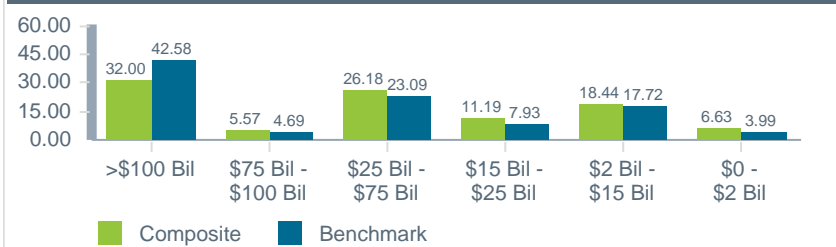
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	223,632	357,872
Median Mkt. Cap (\$M)	2,608	1,765
Price/Earnings Ratio	16.48	16.91
Price/Book Ratio	3.10	3.24
5 Yr. EPS Growth Rate (%)	14.14	15.32
Current Yield (%)	2.50	2.29
Beta (5 Years, Monthly)	0.98	1.00
Number of Securities	7,567	9,216
Active Share	29.32	N/A

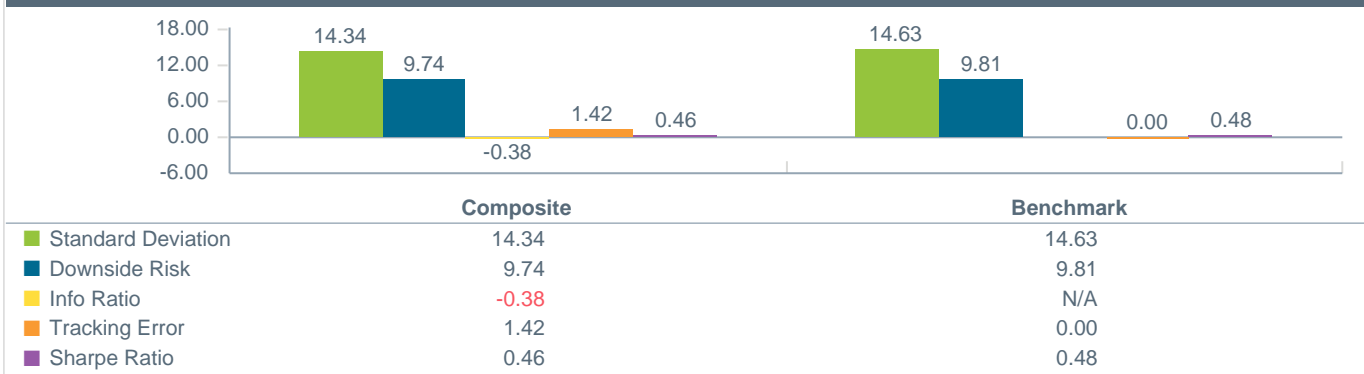
Rolling Return



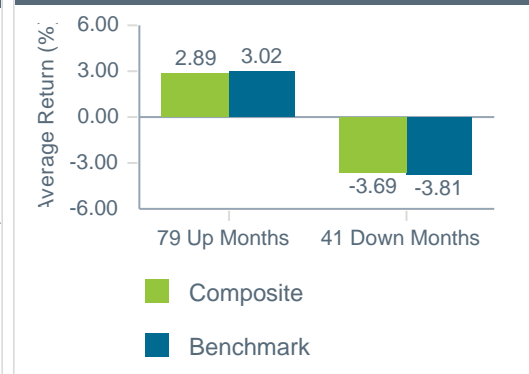
Distribution of Market Capitalization (%)



Historical Statistics - 10 Years

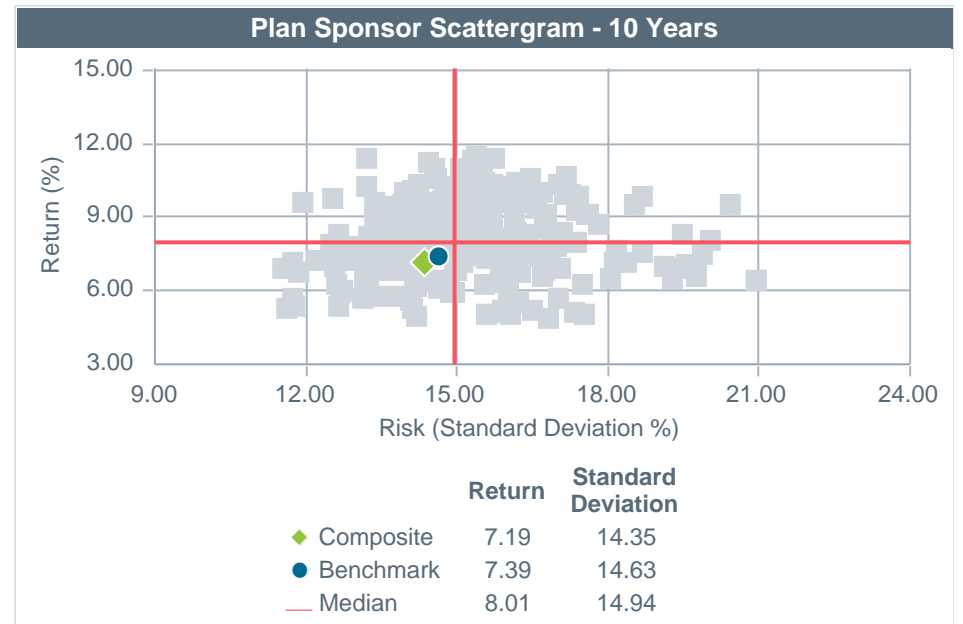
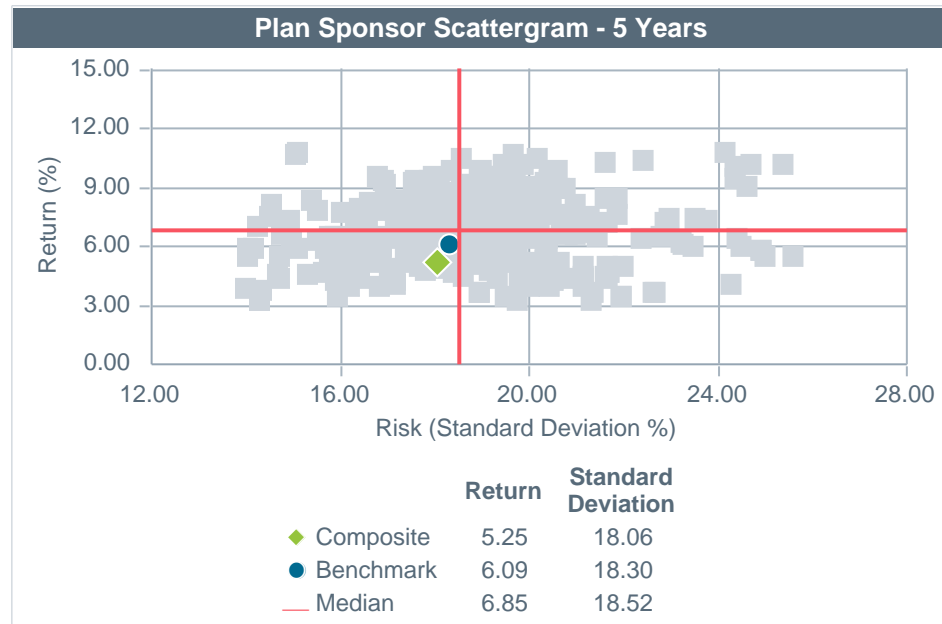
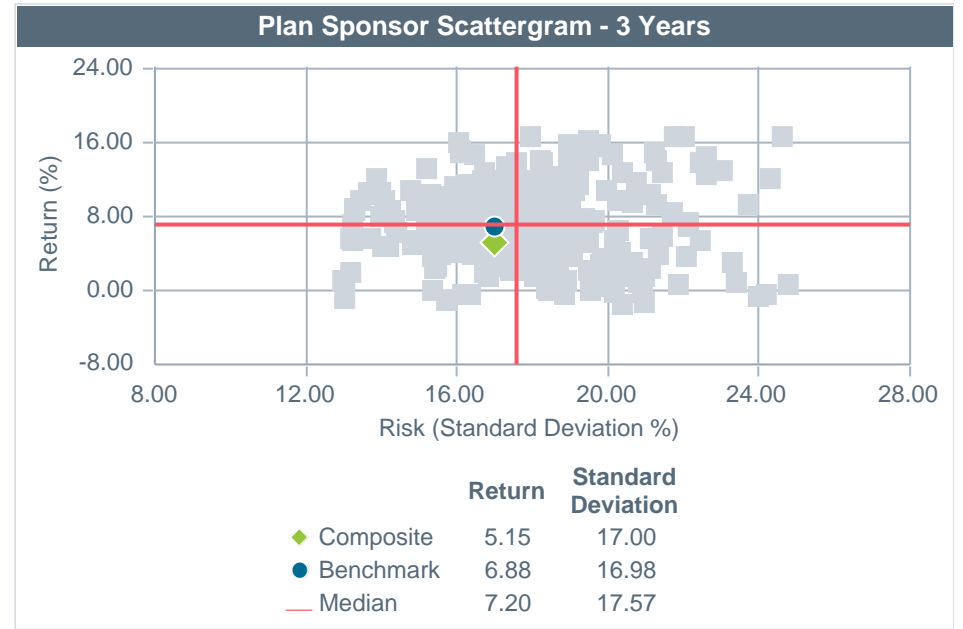
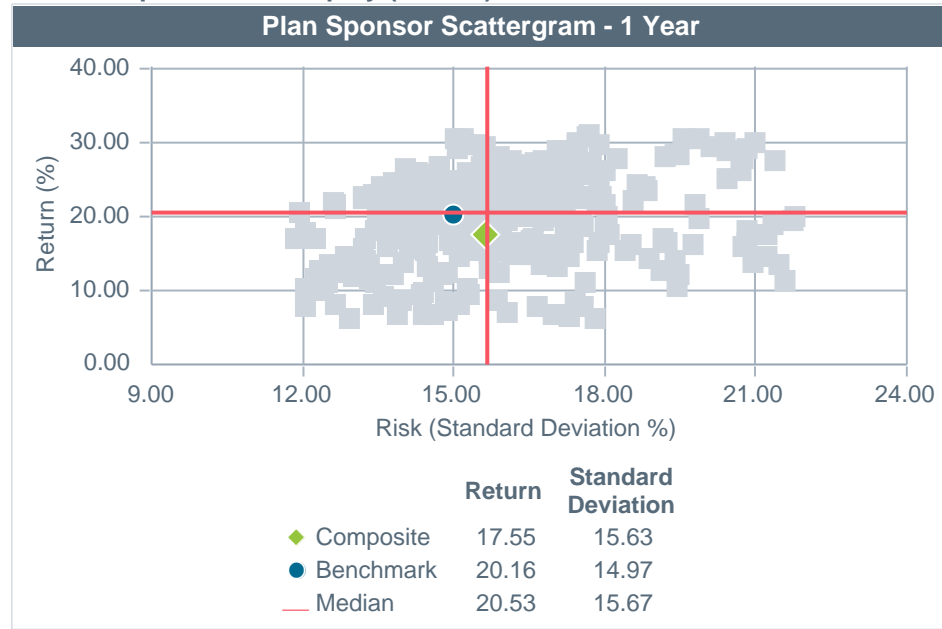


Up/Down Markets - 10 Years

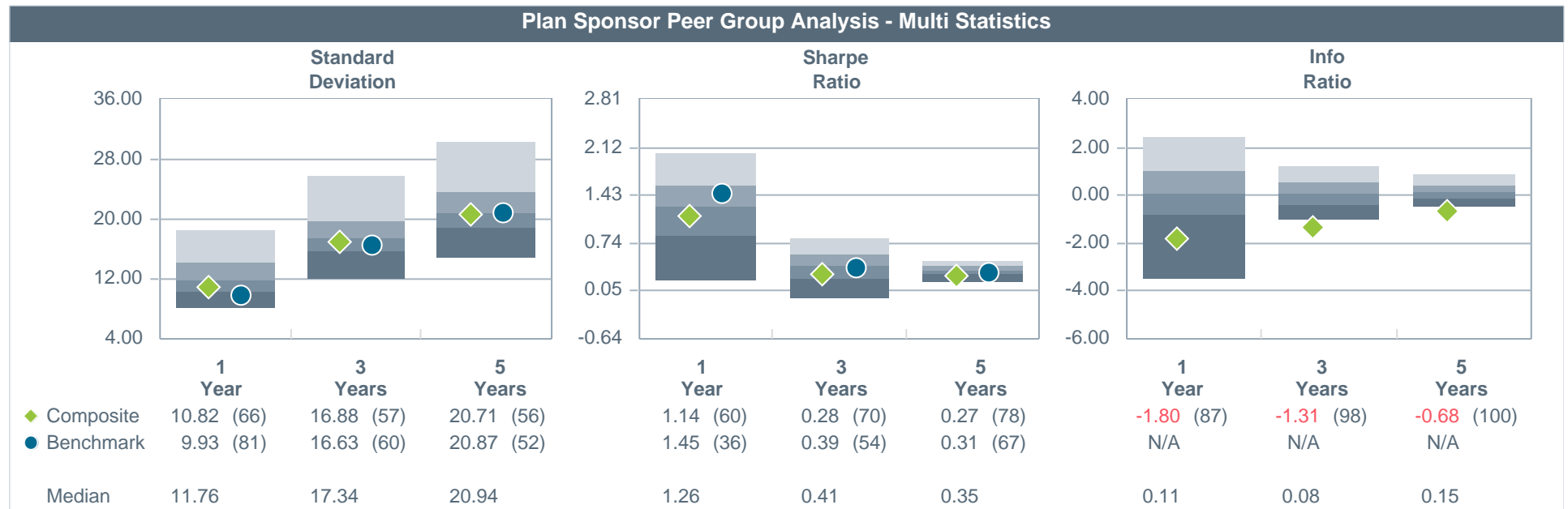
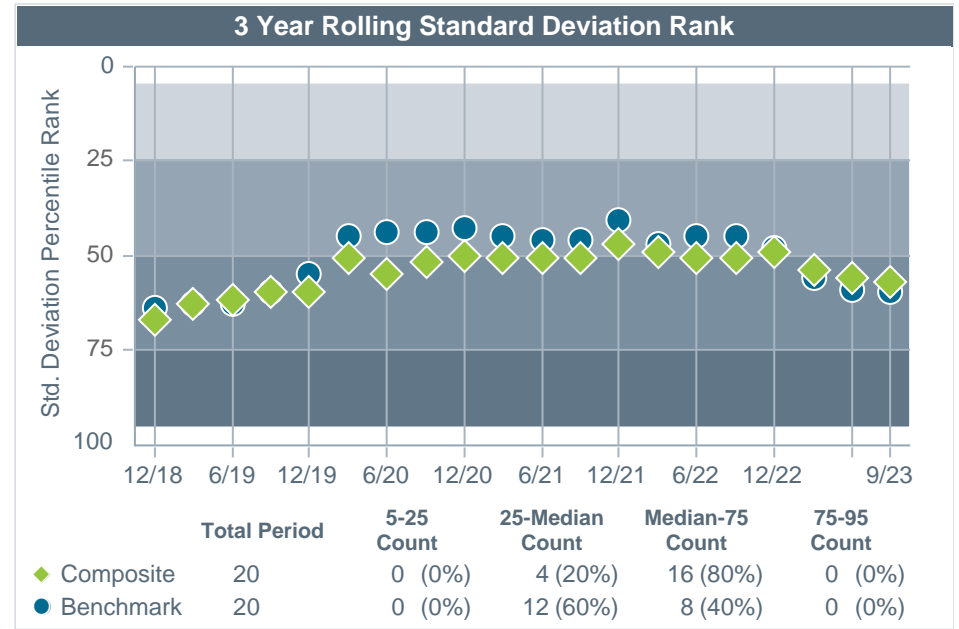
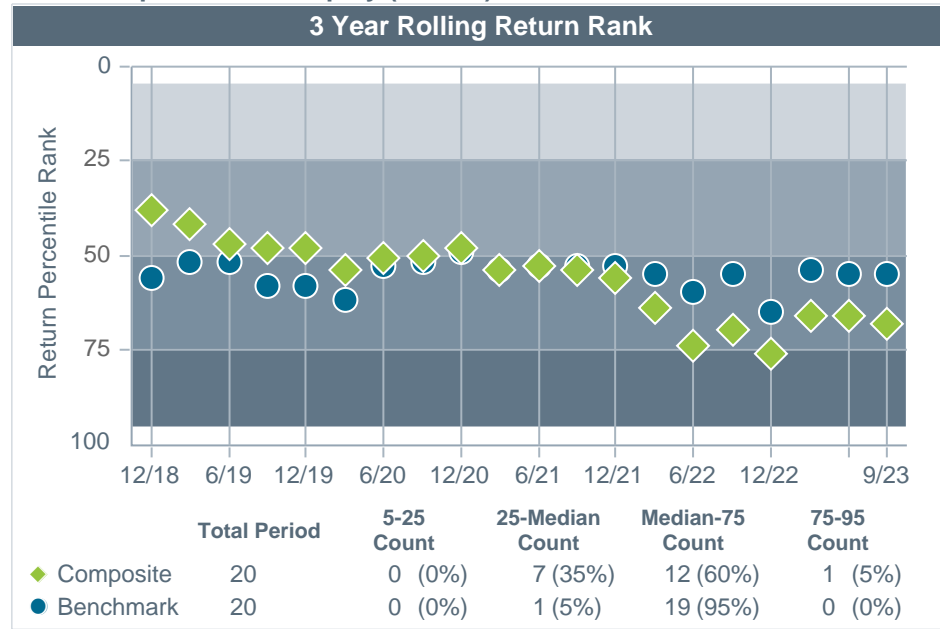


Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Distribution of Market Capitalization Ranges: Small Cap: \$0 - \$2 Billion; Mid Cap: \$2 - \$10 Billion; Large Cap: > \$10 Billion. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page.

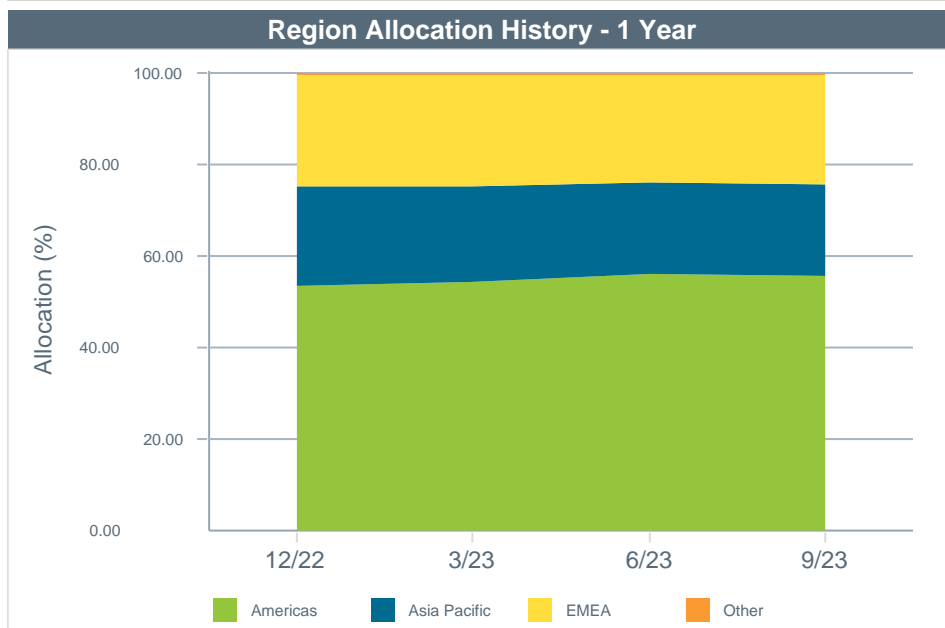
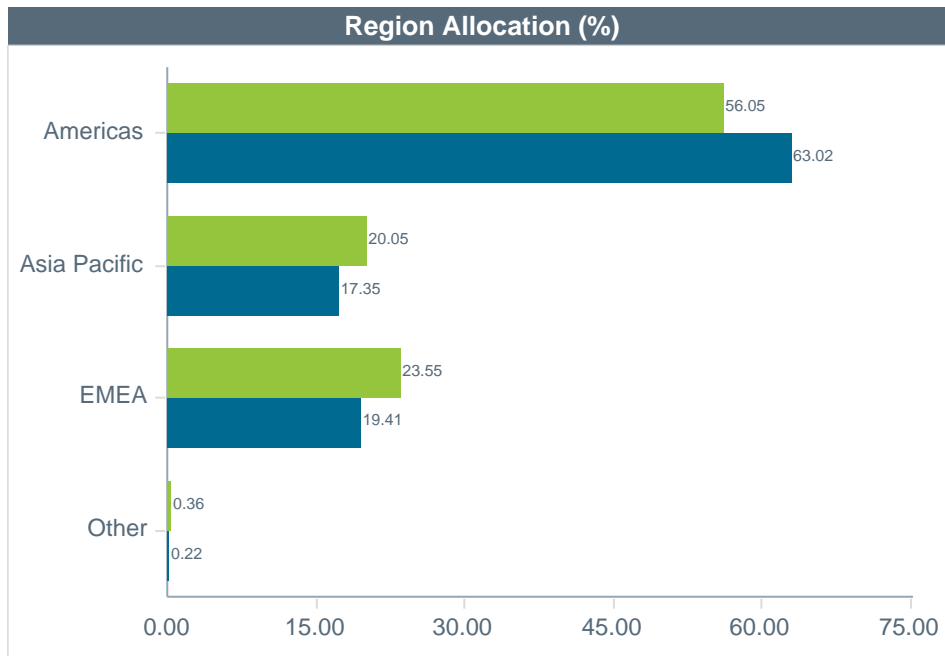




Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity.

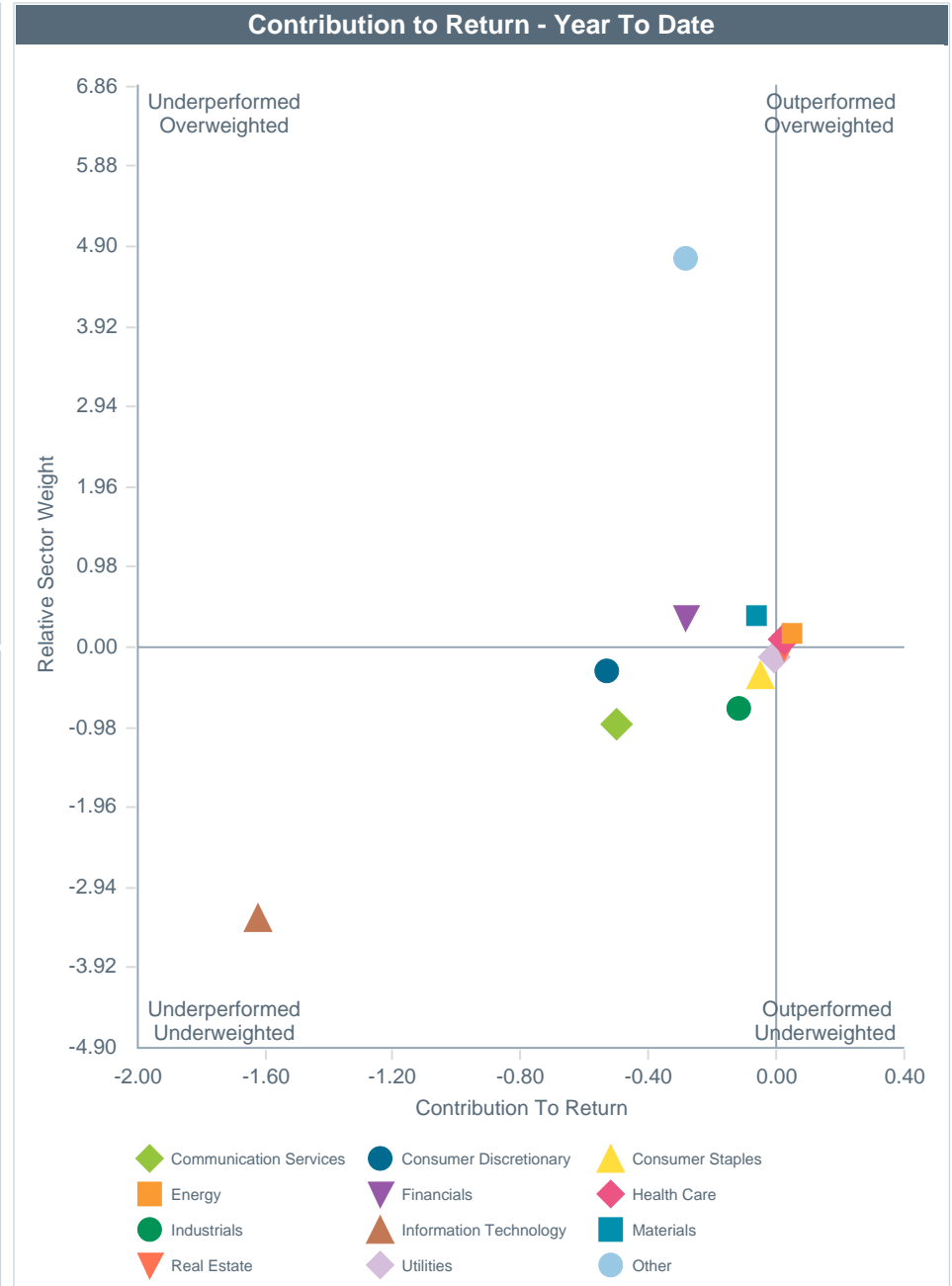
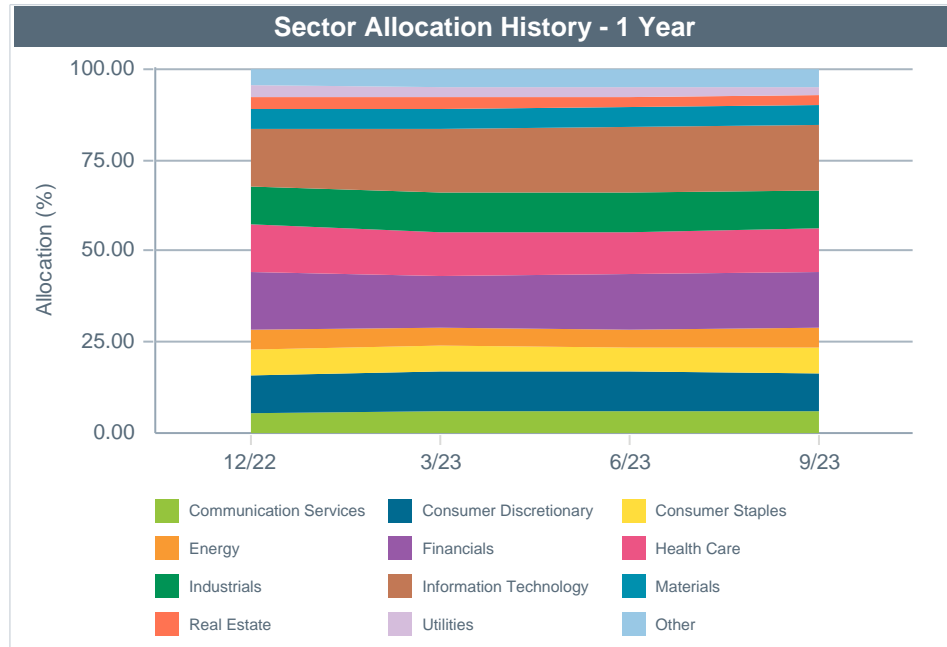
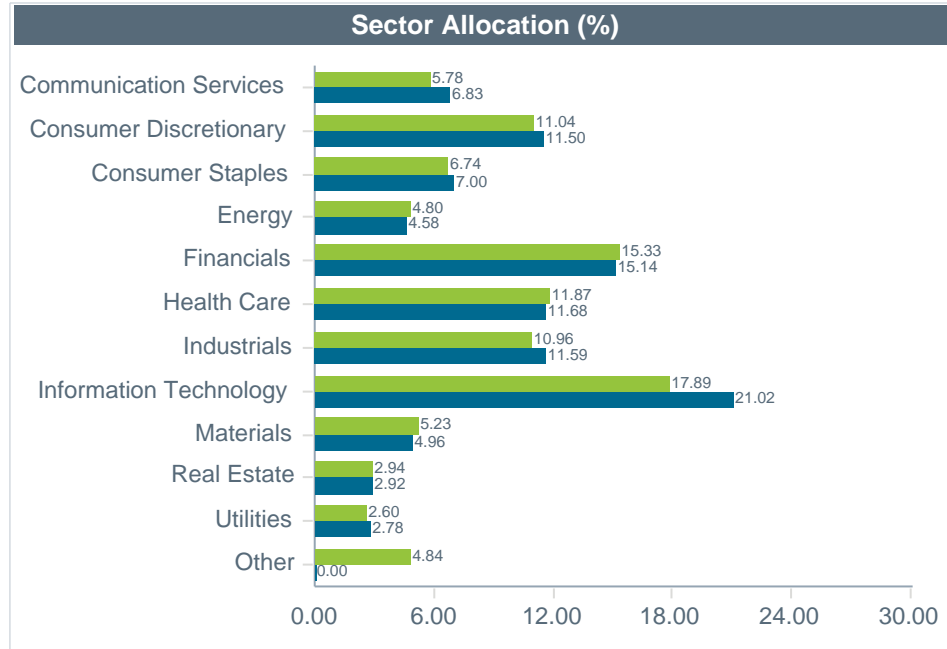


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Information Ratio shown is relative to the benchmark specified at the top of the page.



Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.





Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. Allocation to "Other" consists of ETF and CEF holdings.

# US Equity Composite



Asset Allocation by Manager: \$1,036,350,727

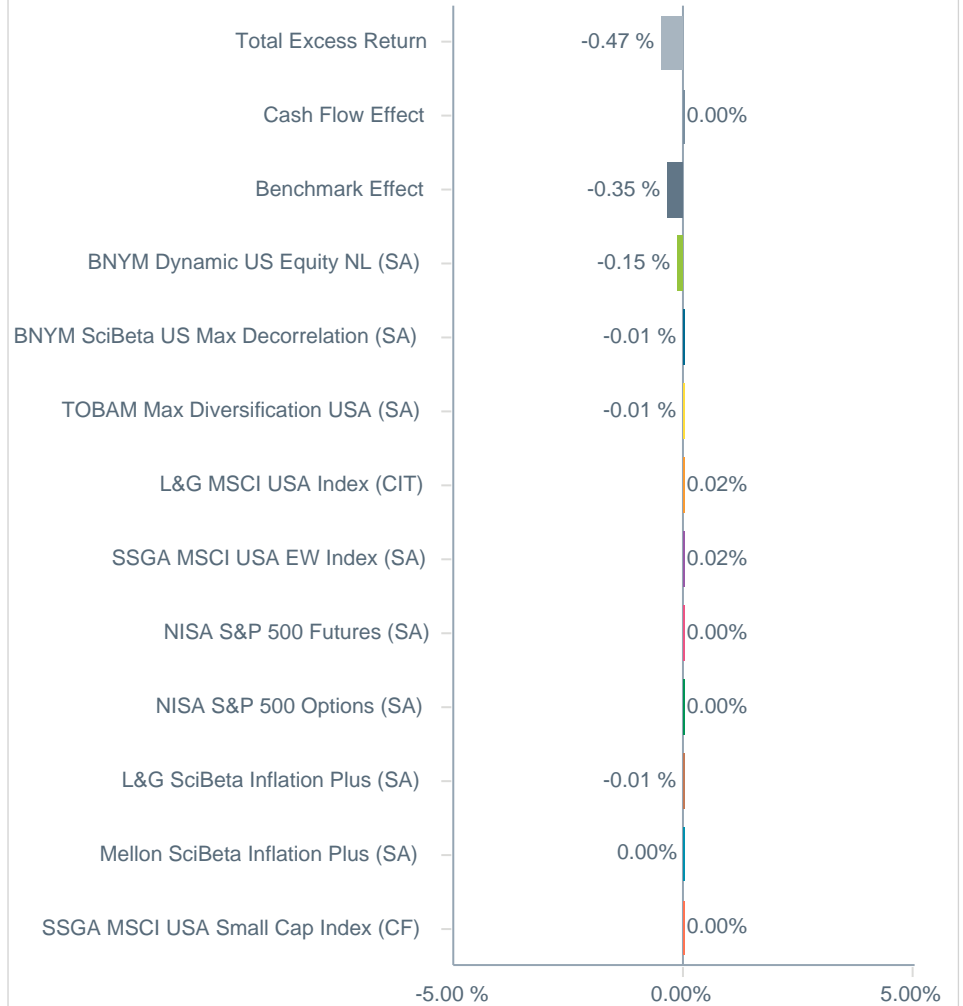


	Market Value (\$)	Allocation (%)
BNYM Dynamic US Equity NL (SA)	231,860,033	22.37
SSGA MSCI USA EW Index (SA)	184,465,464	17.80
L&G MSCI USA Index (CIT)	175,835,213	16.97
BNYM SciBeta US Max Decorrelation (SA)	130,769,057	12.62
TOBAM Max Diversification USA (SA)	109,366,163	10.55
Mellon SciBeta Inflation Plus (SA)	93,912,455	9.06
NISA S&P 500 Futures (SA)	67,160,427	6.48
SSGA MSCI USA Small Cap Index (CF)	42,914,262	4.14
NISA S&P 500 Options (SA)	64,219	0.01
L&G SciBeta Inflation Plus (SA)	3,434	0.00

Rate of Return

	QTD
Composite	-3.65
Benchmark	-3.18
Excess Return	-0.47

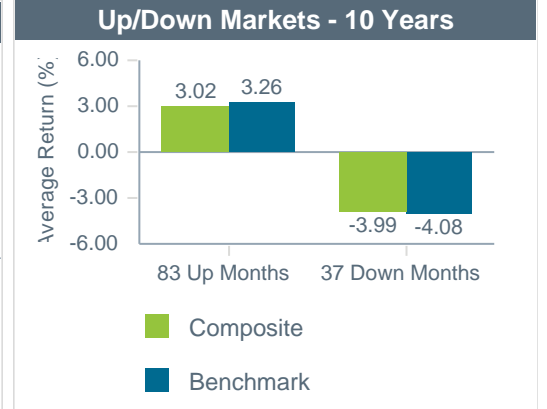
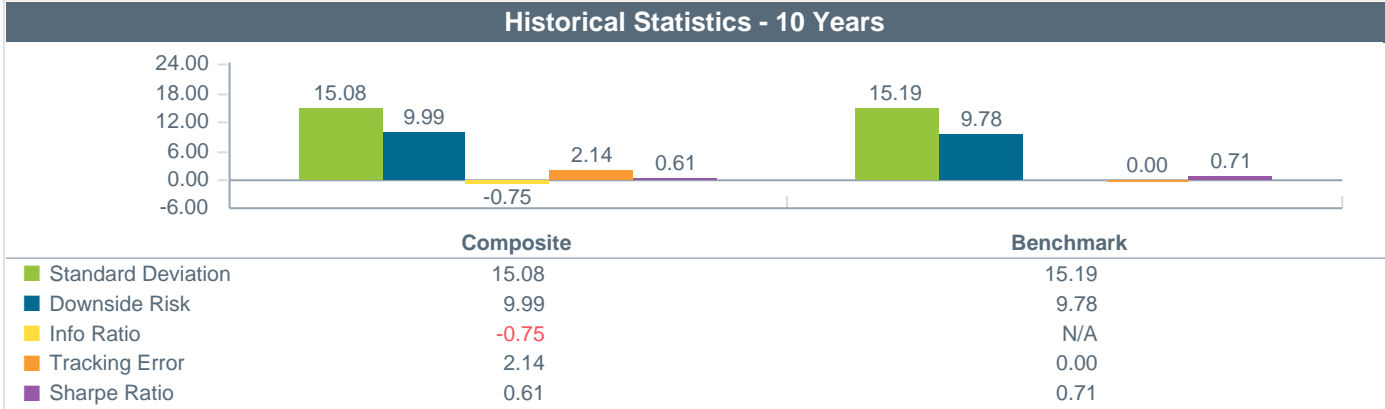
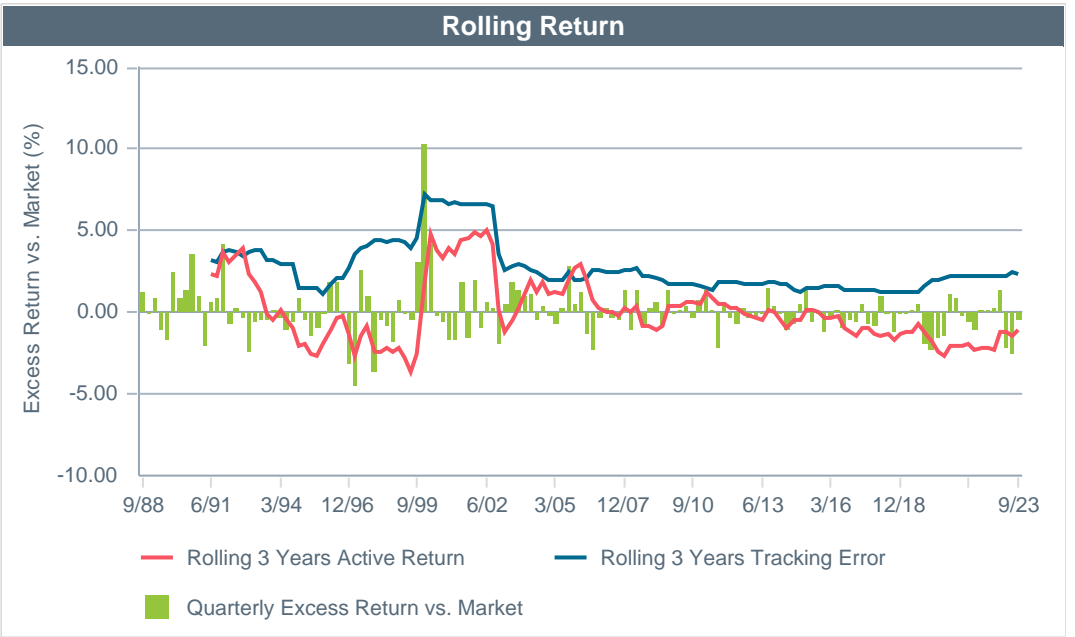
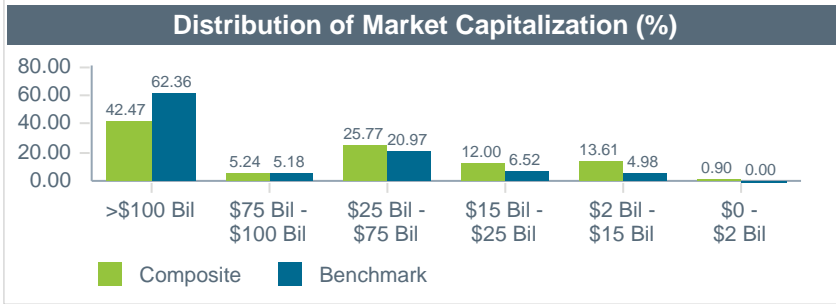
Attribution by Manager



Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions. Market value shown for L&G SciBeta Inflation Plus (SA) represents residual cash from liquidation.

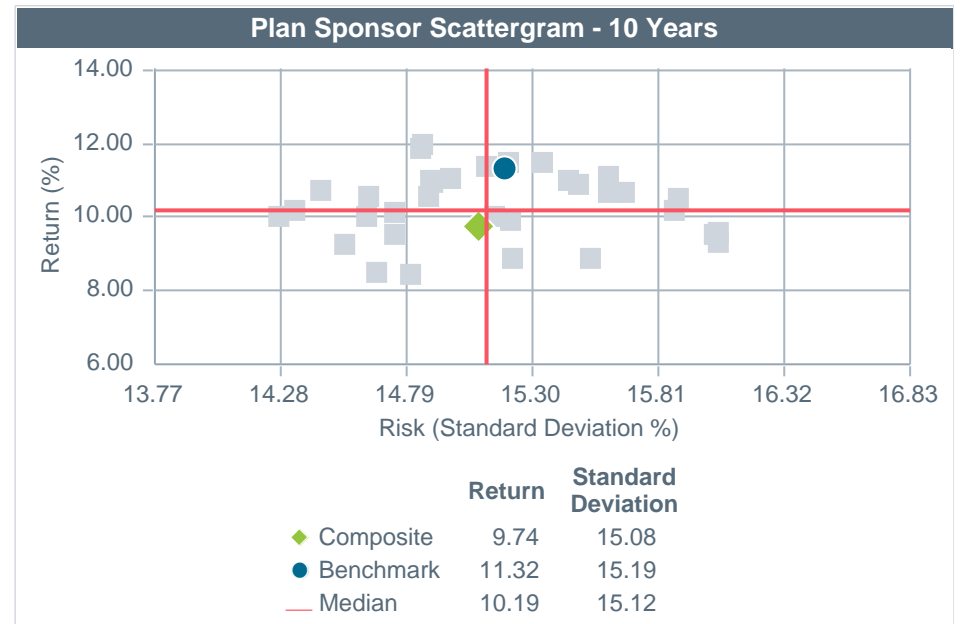
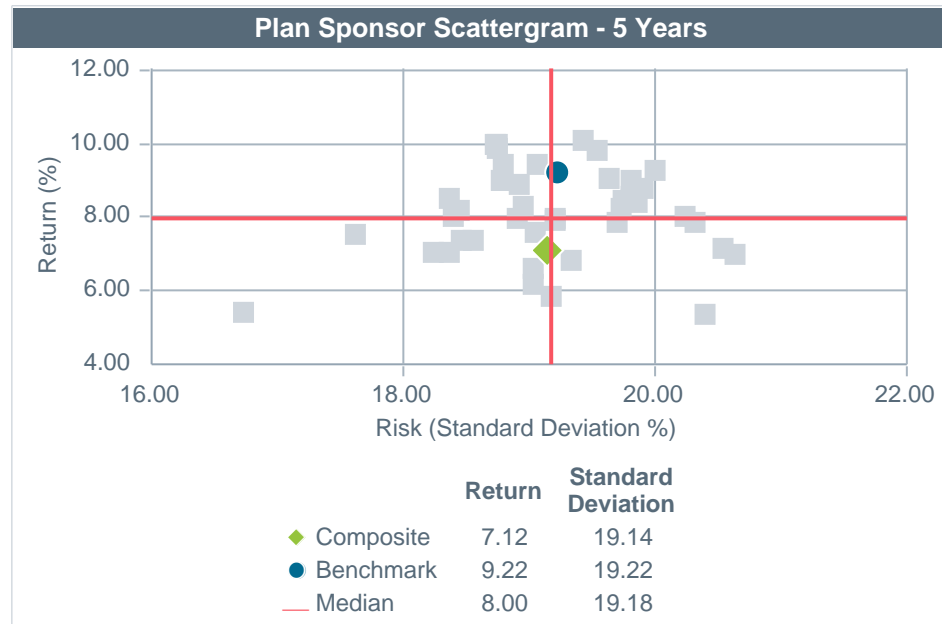
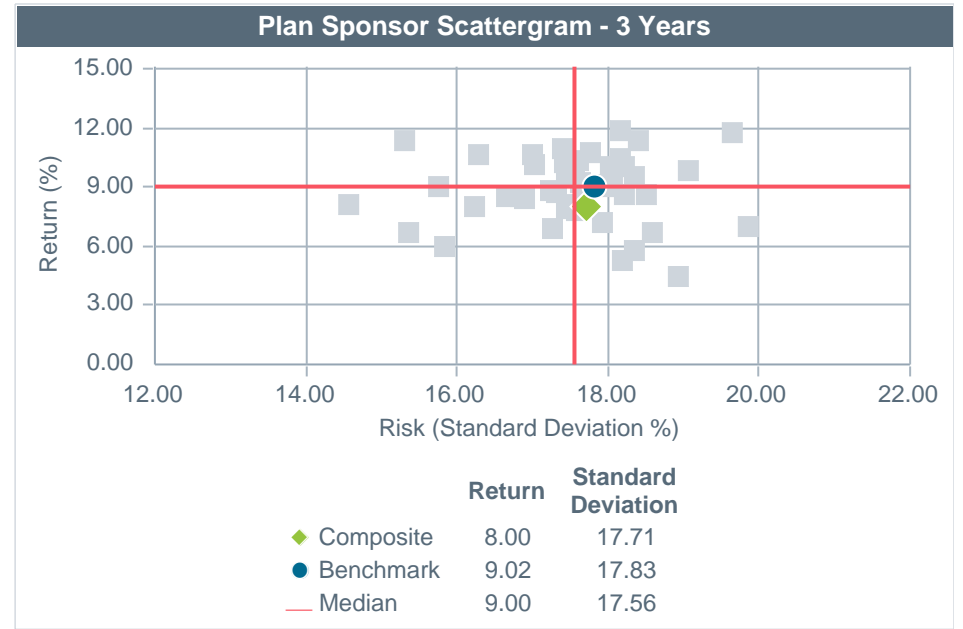
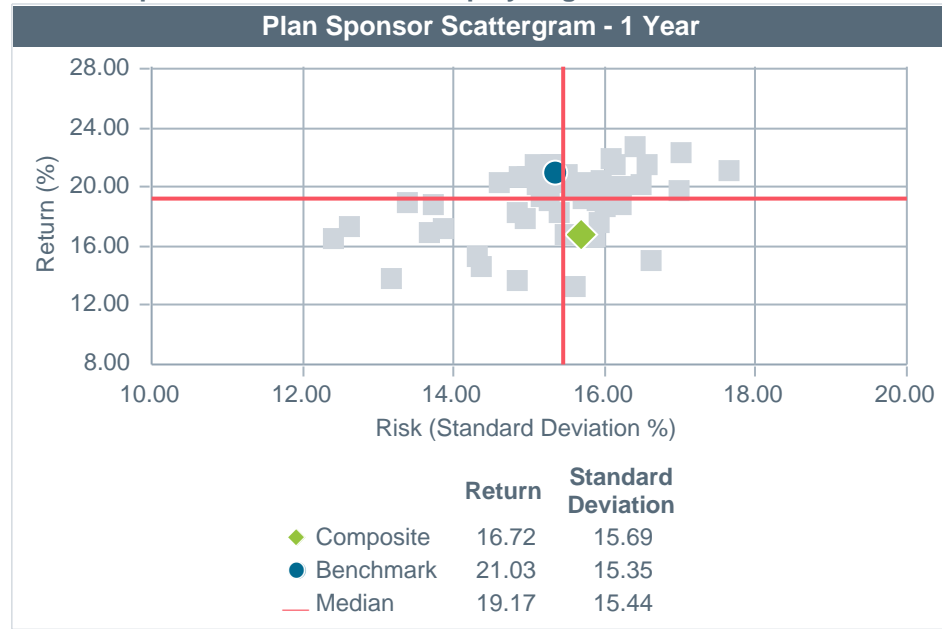
Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-3.65	7.59	16.55	7.84	6.98	9.67	9.57	-18.38	25.10	15.15	29.49	10.33	06/01/1988
Benchmark	-3.18	13.13	21.03	9.02	9.22	11.70	11.32	-19.85	26.45	20.73	31.02	10.50	
Excess Return	-0.47	-5.54	-4.48	-1.18	-2.24	-2.03	-1.75	1.47	-1.35	-5.58	-1.53	-0.17	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	357,346	595,466
Median Mkt. Cap (\$M)	2,721	23,420
Price/Earnings Ratio	19.61	21.89
Price/Book Ratio	3.64	4.35
5 Yr. EPS Growth Rate (%)	16.67	18.60
Current Yield (%)	1.80	1.61
Beta (5 Years, Monthly)	0.99	1.00
Number of Securities	2,498	627
Active Share	21.44	N/A

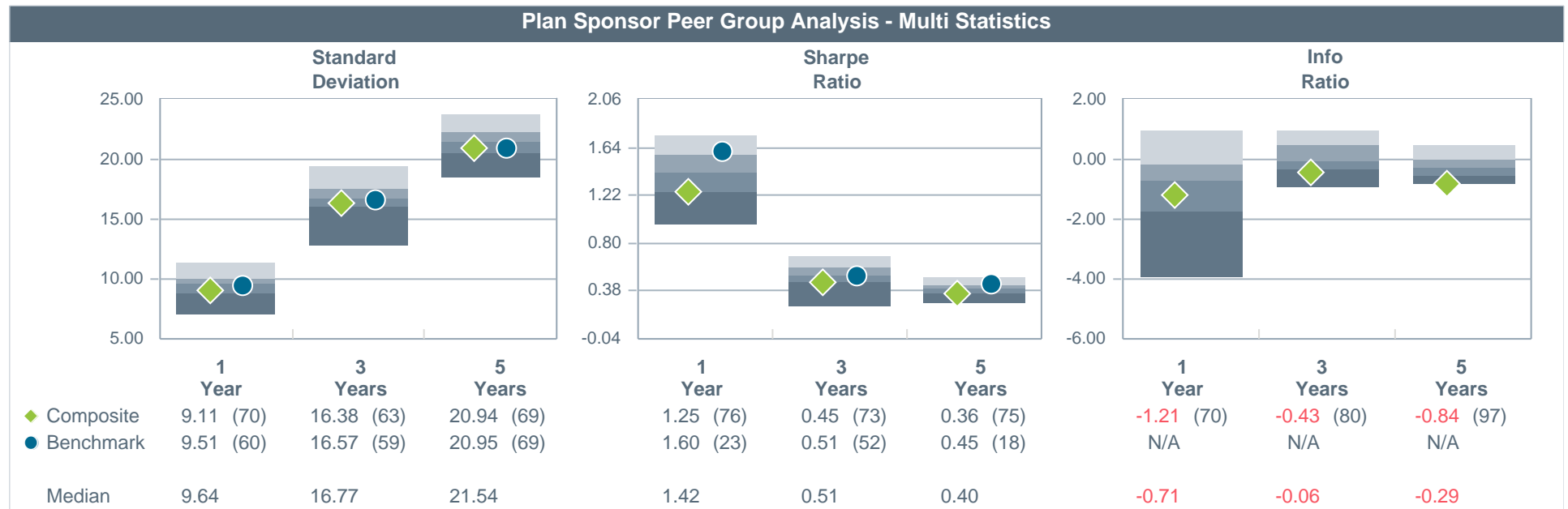
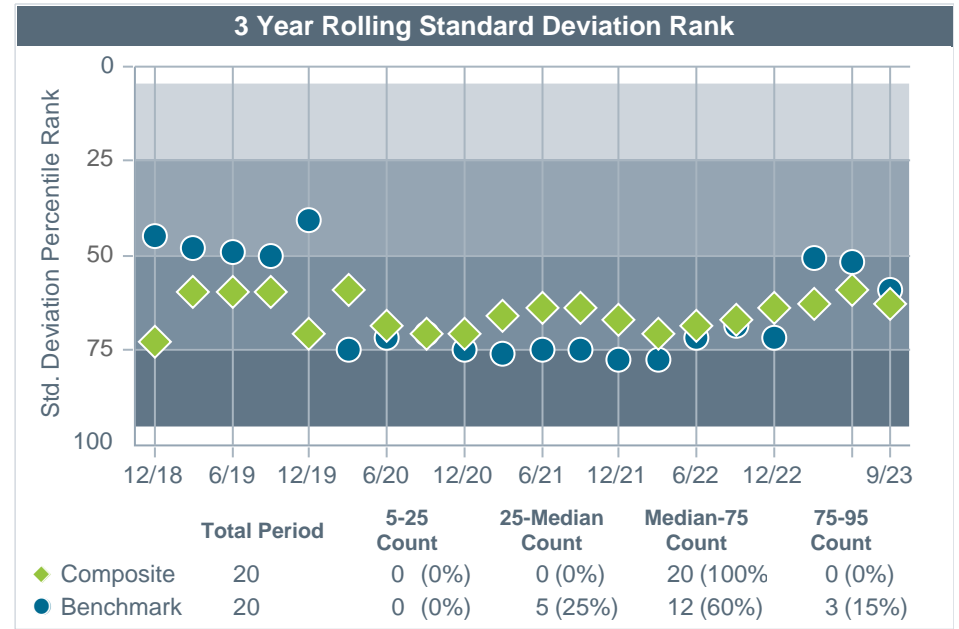
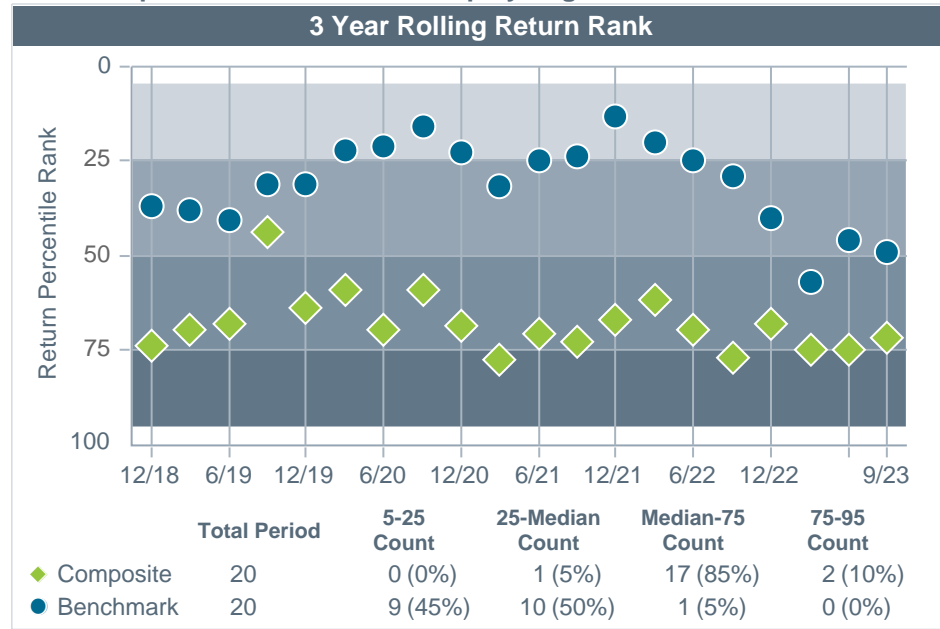


Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Distribution of Market Capitalization Ranges: Small Cap: \$0 - \$2 Billion; Mid Cap: \$2 - \$10 Billion; Large Cap: > \$10 Billion. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page. For illustrative purposes US Equity holdings are shown against the MSCI USA (Net).

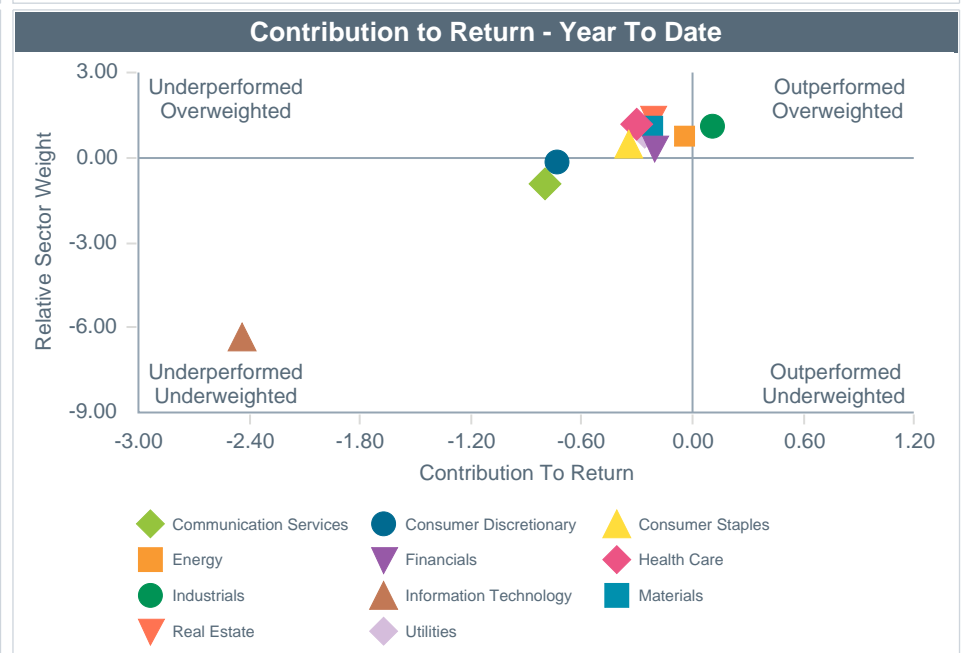
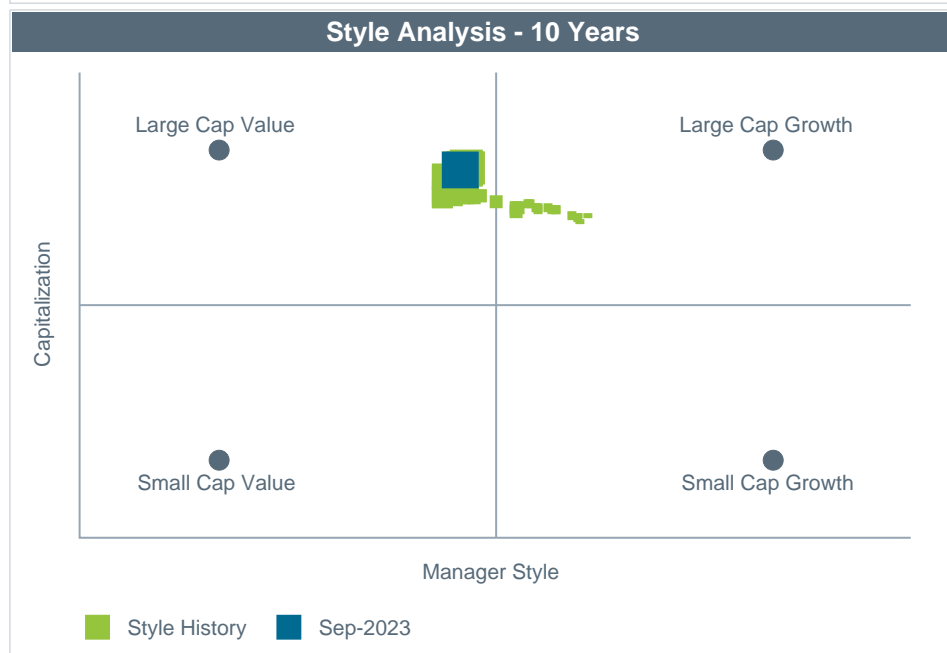
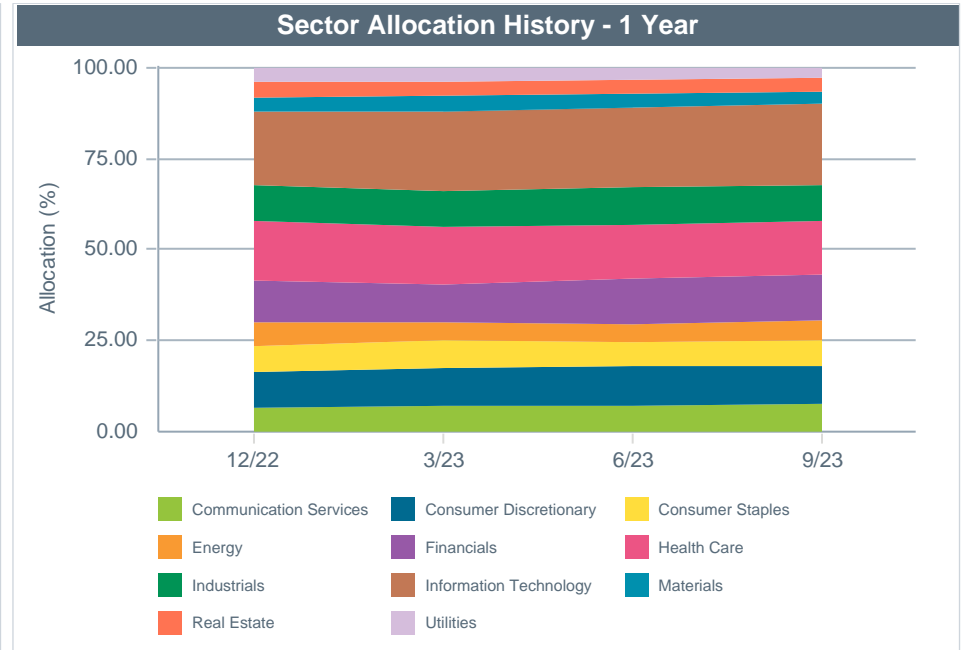
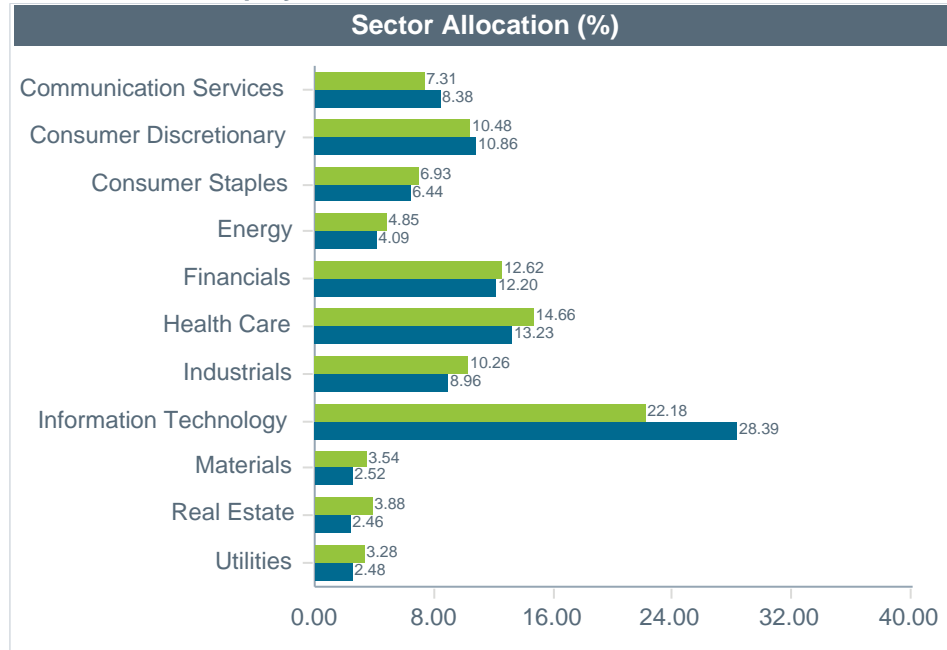




Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Information Ratio shown is relative to the benchmark specified at the top of the page.

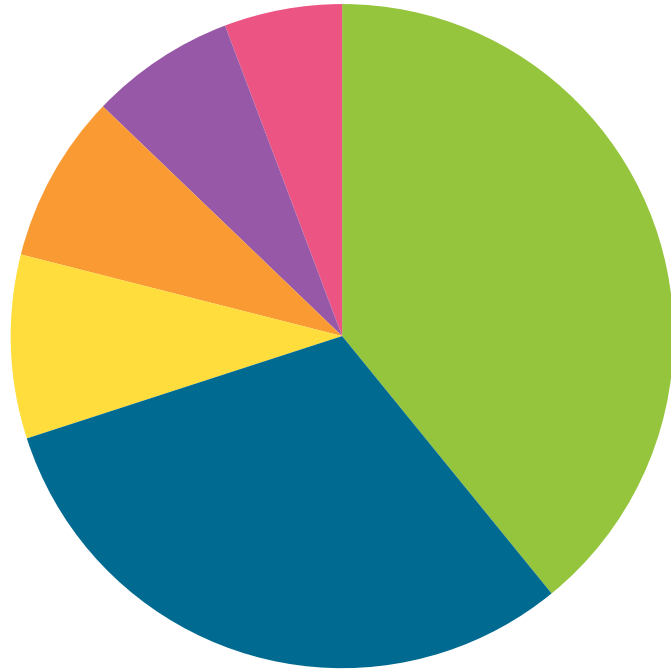


Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. For illustrative purposes US Equity holdings are shown against the MSCI USA (Net).

# Developed Markets Equity Composite



Asset Allocation by Manager: \$463,164,880

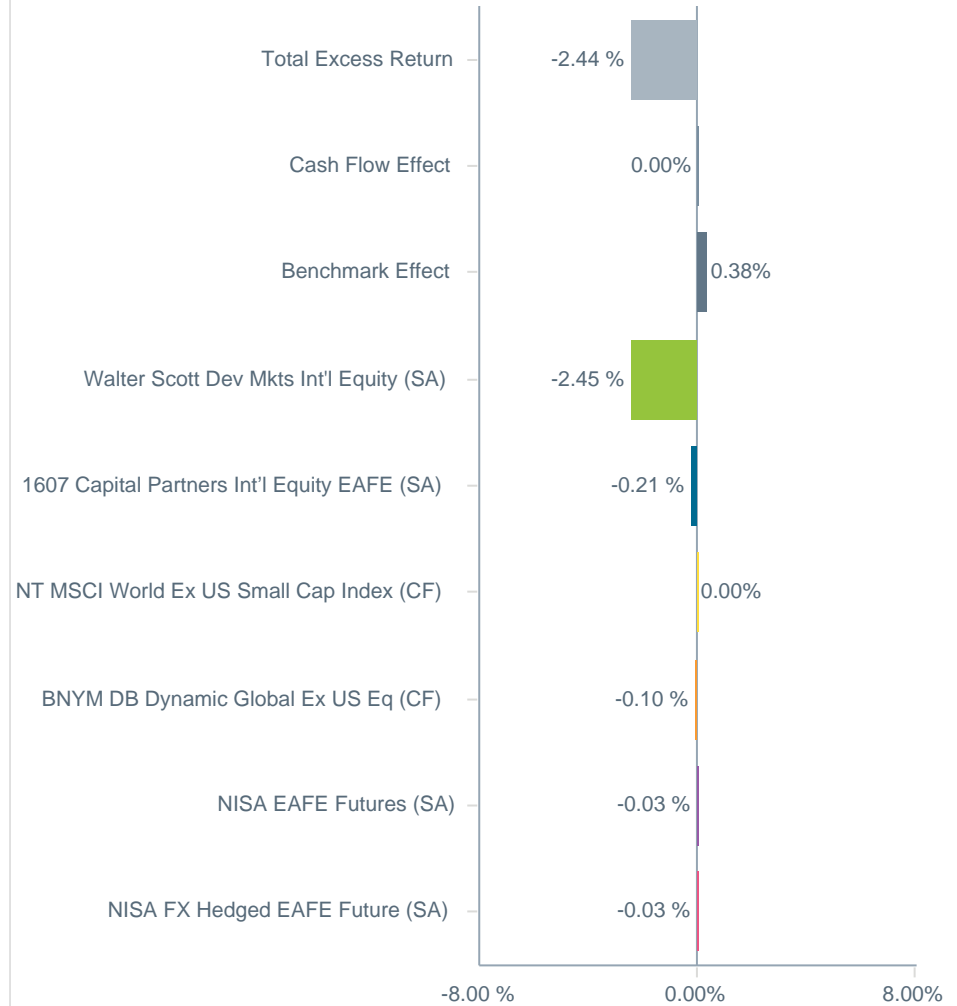


	Market Value (\$)	Allocation (%)
Walter Scott Dev Mkts Int'l Equity (SA)	181,176,307	39.12
1607 Capital Partners Int'l Equity EAFE (SA)	143,091,355	30.89
NT MSCI World Ex US Small Cap Index (CF)	41,424,743	8.94
NISA FX Hedged EAFE Future (SA)	38,013,059	8.21
NISA EAFE Futures (SA)	32,837,441	7.09
BNYM DB Dynamic Global Ex US Eq (CF)	26,621,975	5.75

Rate of Return

	QTD
Composite	-6.54
Benchmark	-4.10
Excess Return	-2.44

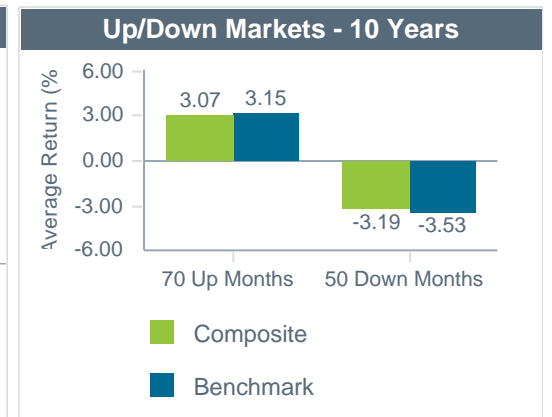
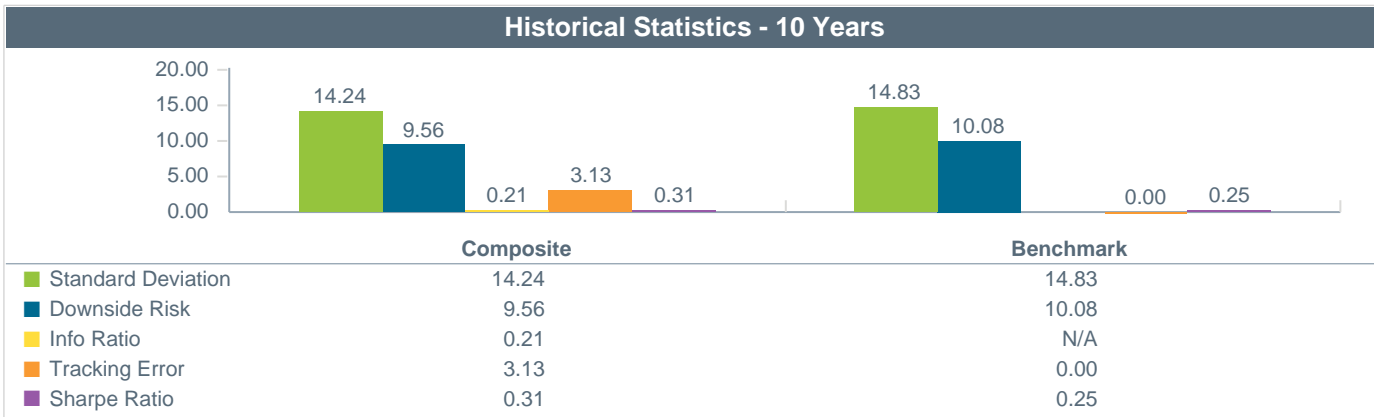
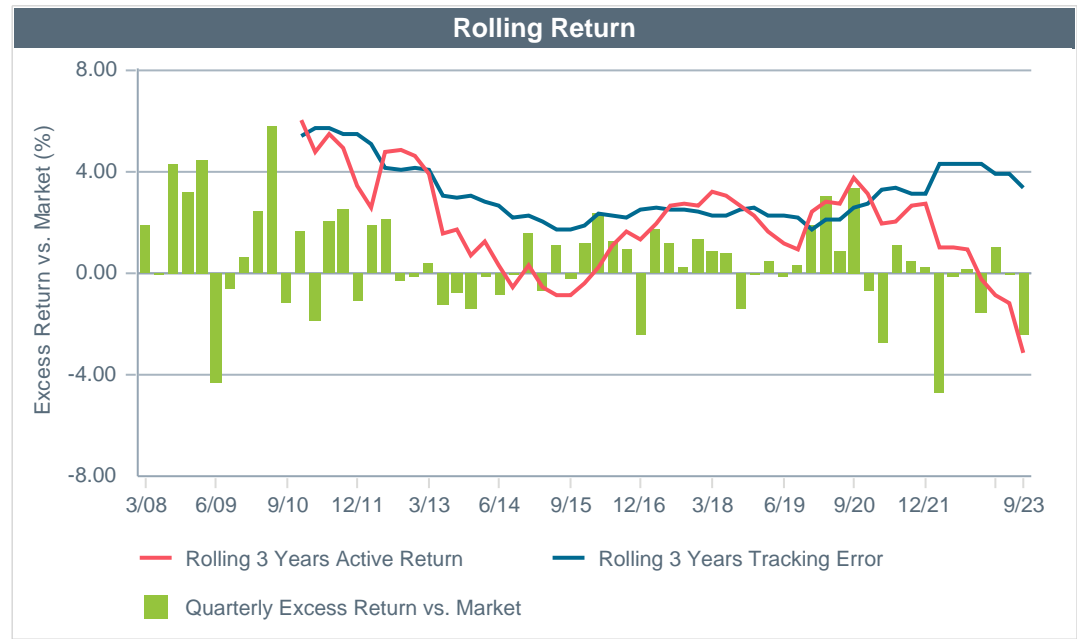
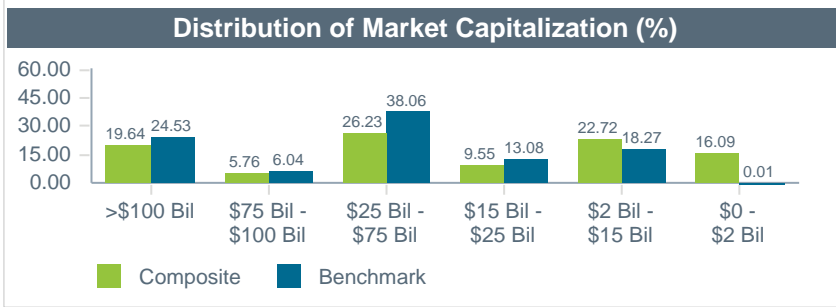
Attribution by Manager



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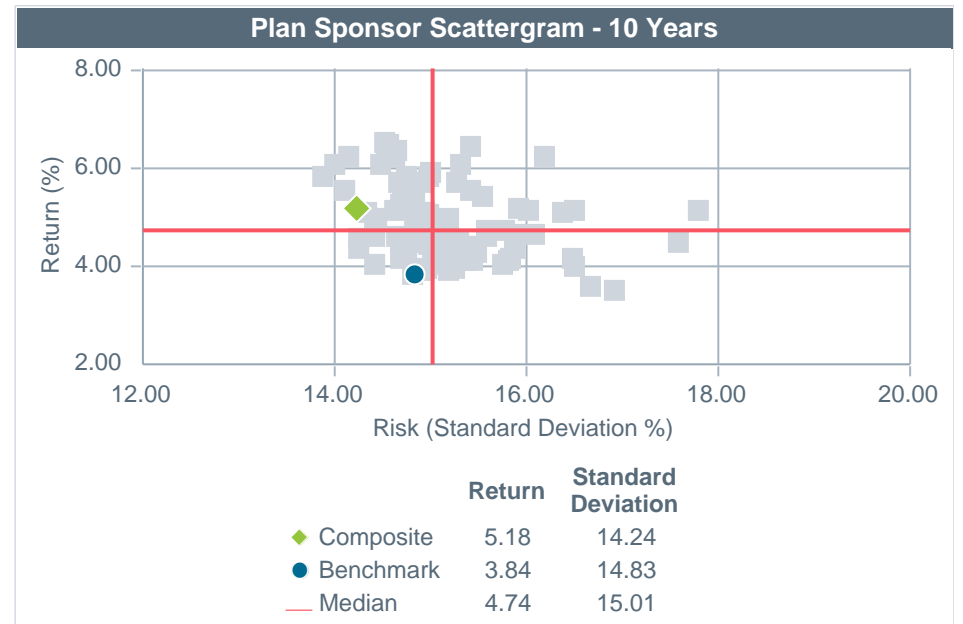
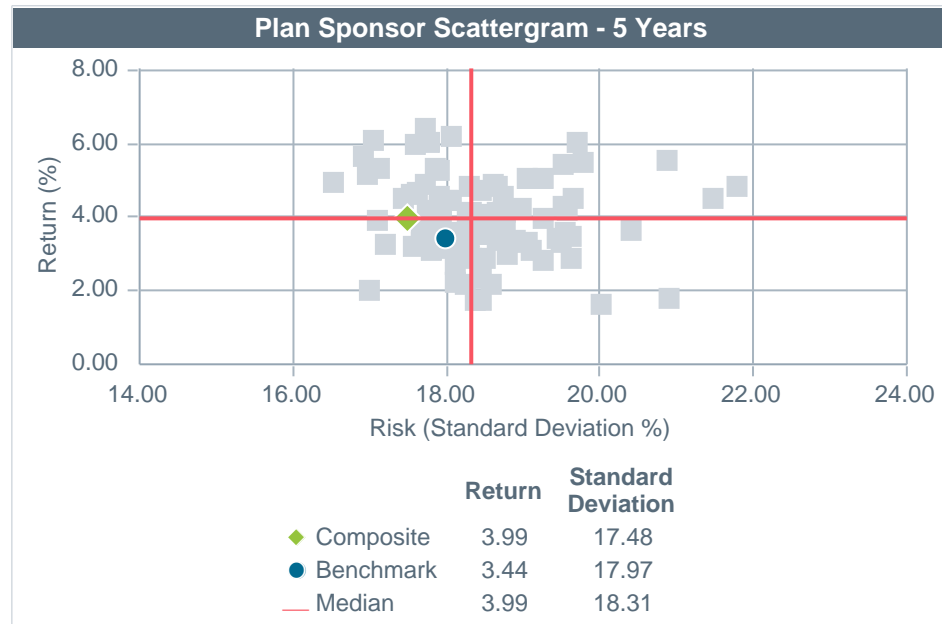
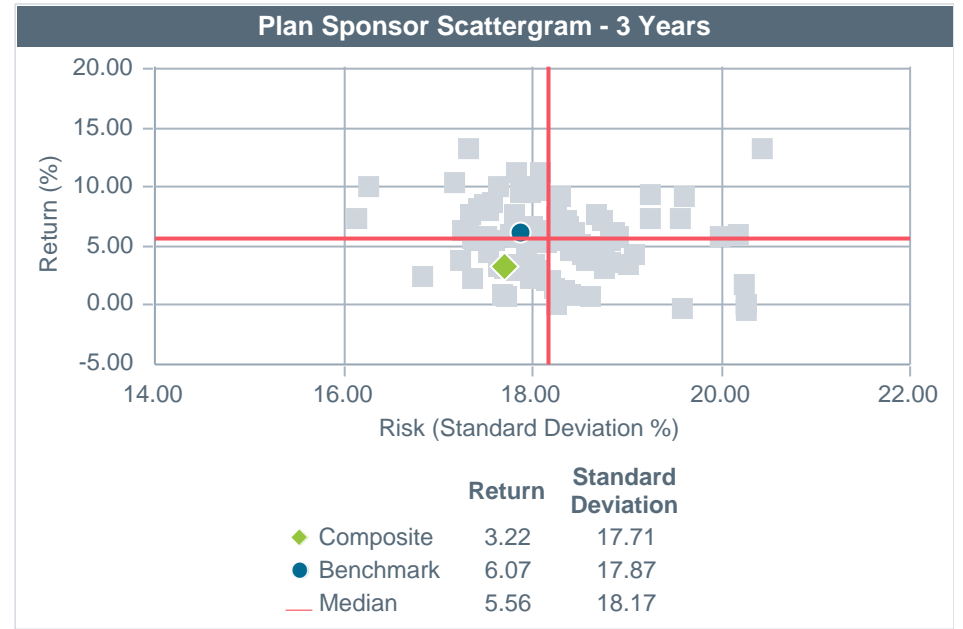
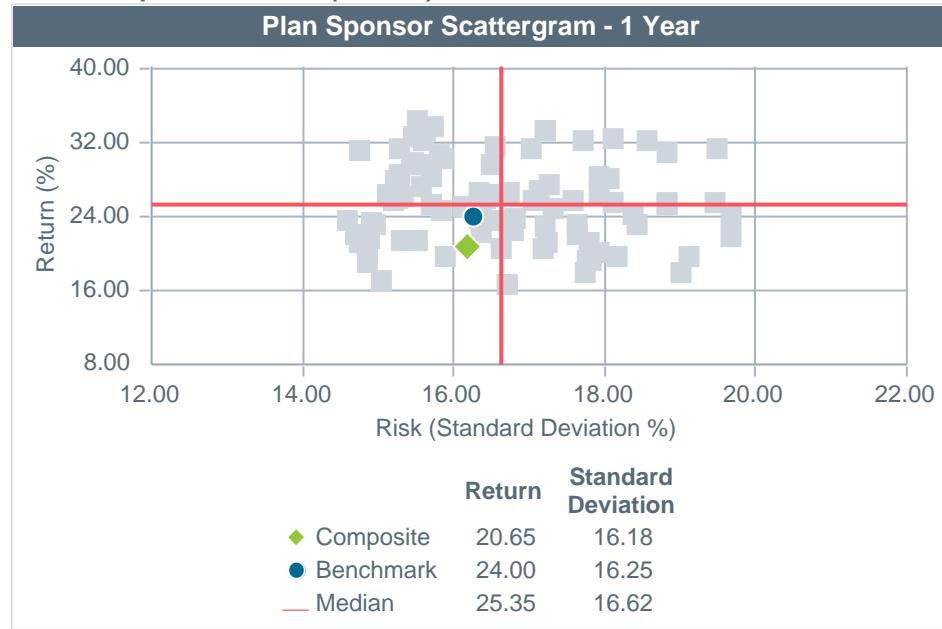
Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-6.54	4.92	20.22	2.71	3.53	5.75	4.63	-19.65	11.60	15.65	25.38	4.40	01/01/2008
Benchmark	-4.10	6.73	24.00	6.07	3.44	5.38	3.84	-14.29	12.62	7.59	22.49	2.18	
Excess Return	-2.44	-1.81	-3.78	-3.36	0.09	0.37	0.79	-5.36	-1.02	8.06	2.89	2.22	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	69,398	77,862
Median Mkt. Cap (\$M)	2,461	12,307
Price/Earnings Ratio	14.47	13.11
Price/Book Ratio	2.63	2.35
5 Yr. EPS Growth Rate (%)	9.29	9.23
Current Yield (%)	3.08	3.49
Beta (5 Years, Monthly)	0.95	1.00
Number of Securities	4,767	883
Active Share	51.99	N/A

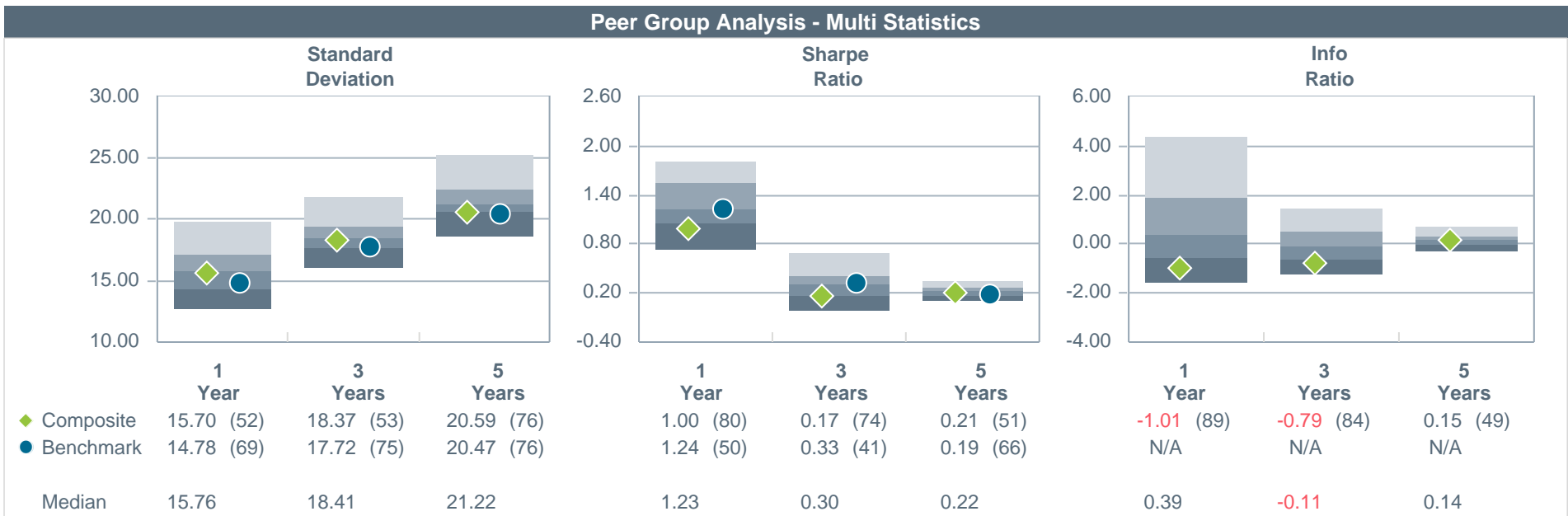
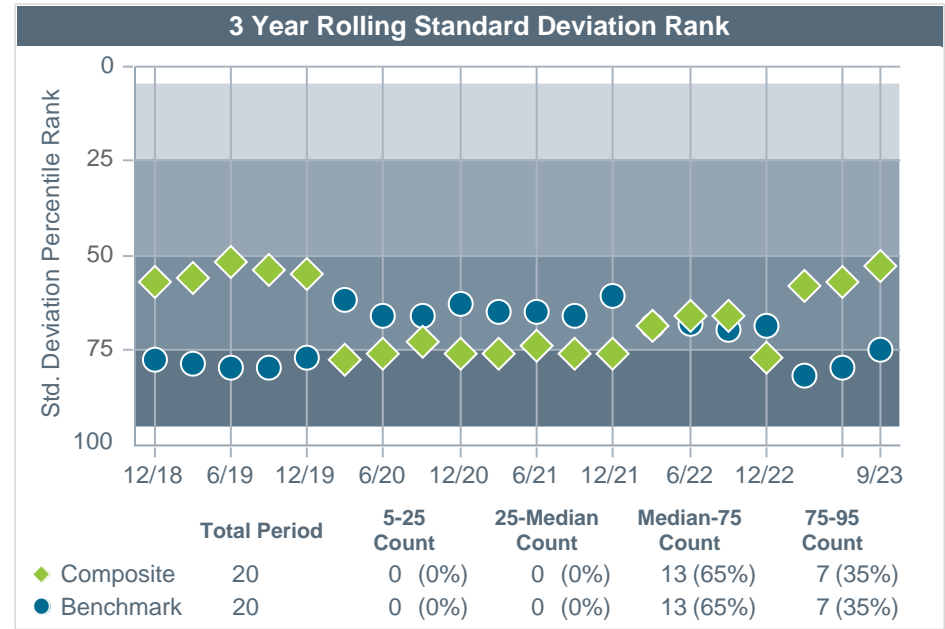
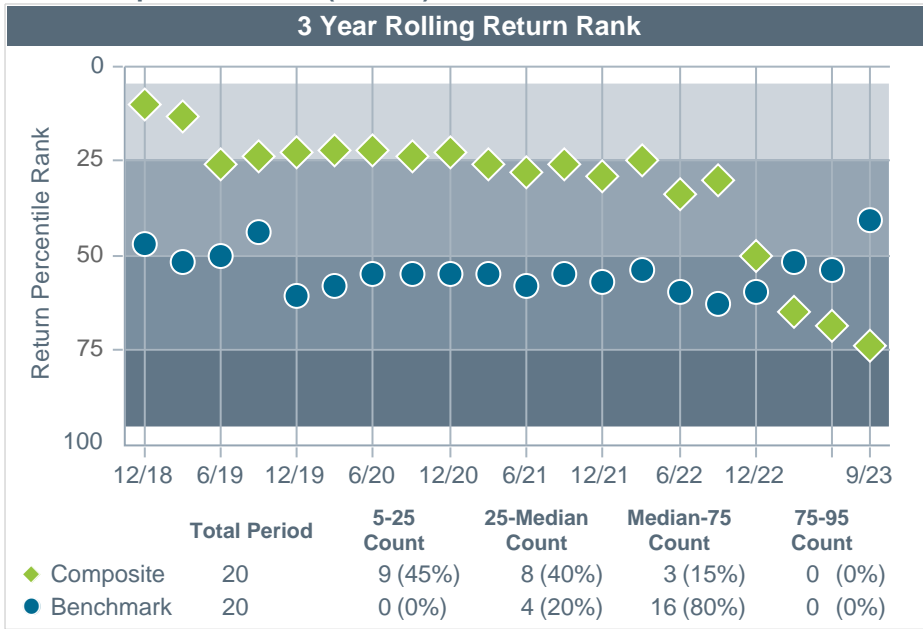


Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Distribution of Market Capitalization Ranges: Small Cap: \$0 - \$2 Billion; Mid Cap: \$2 - \$10 Billion; Large Cap: > \$10 Billion. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page.



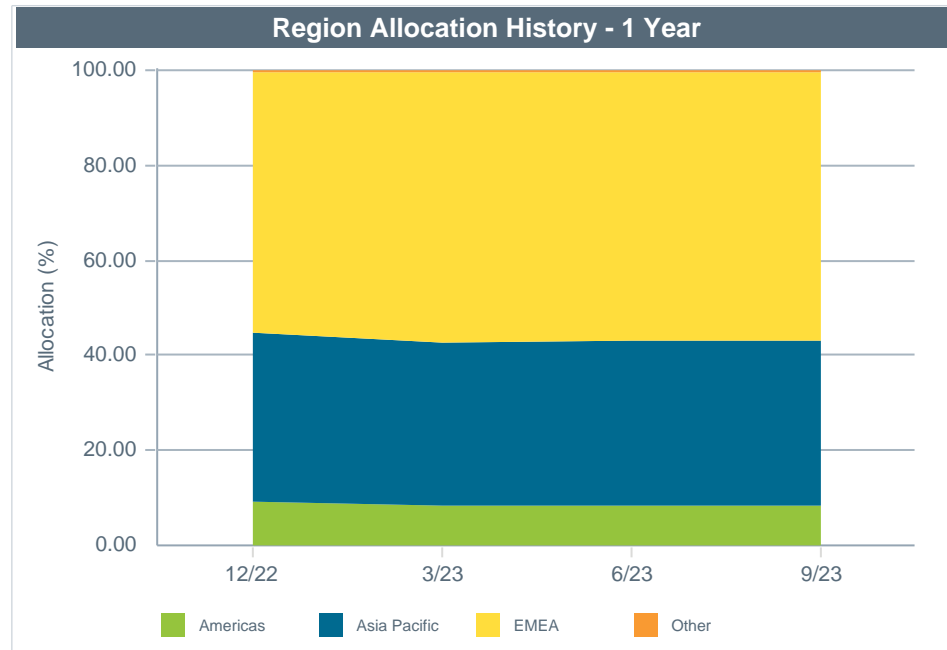
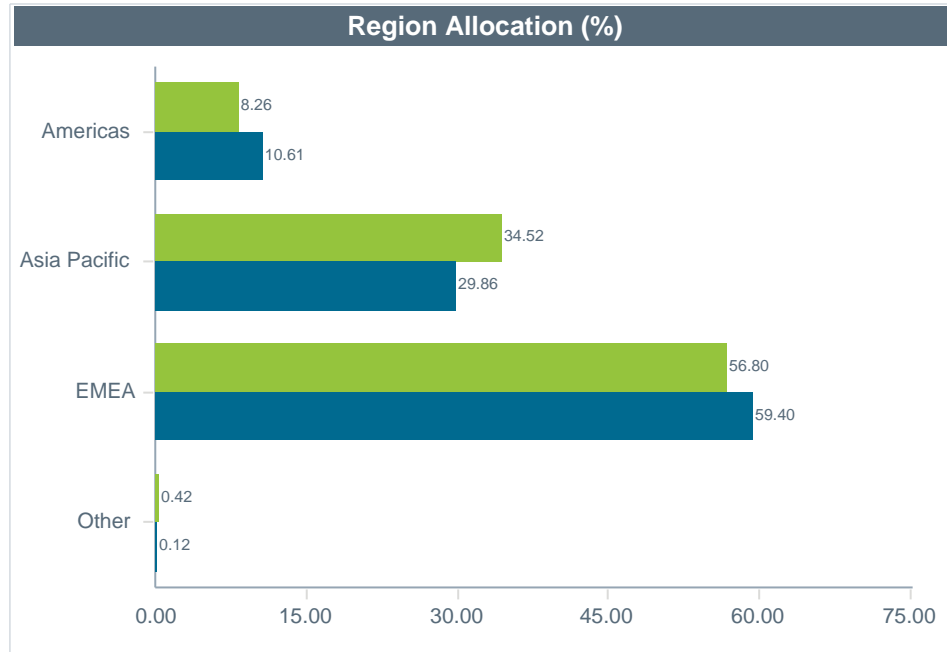


Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Information Ratio shown is relative to the benchmark specified at the top of the page.

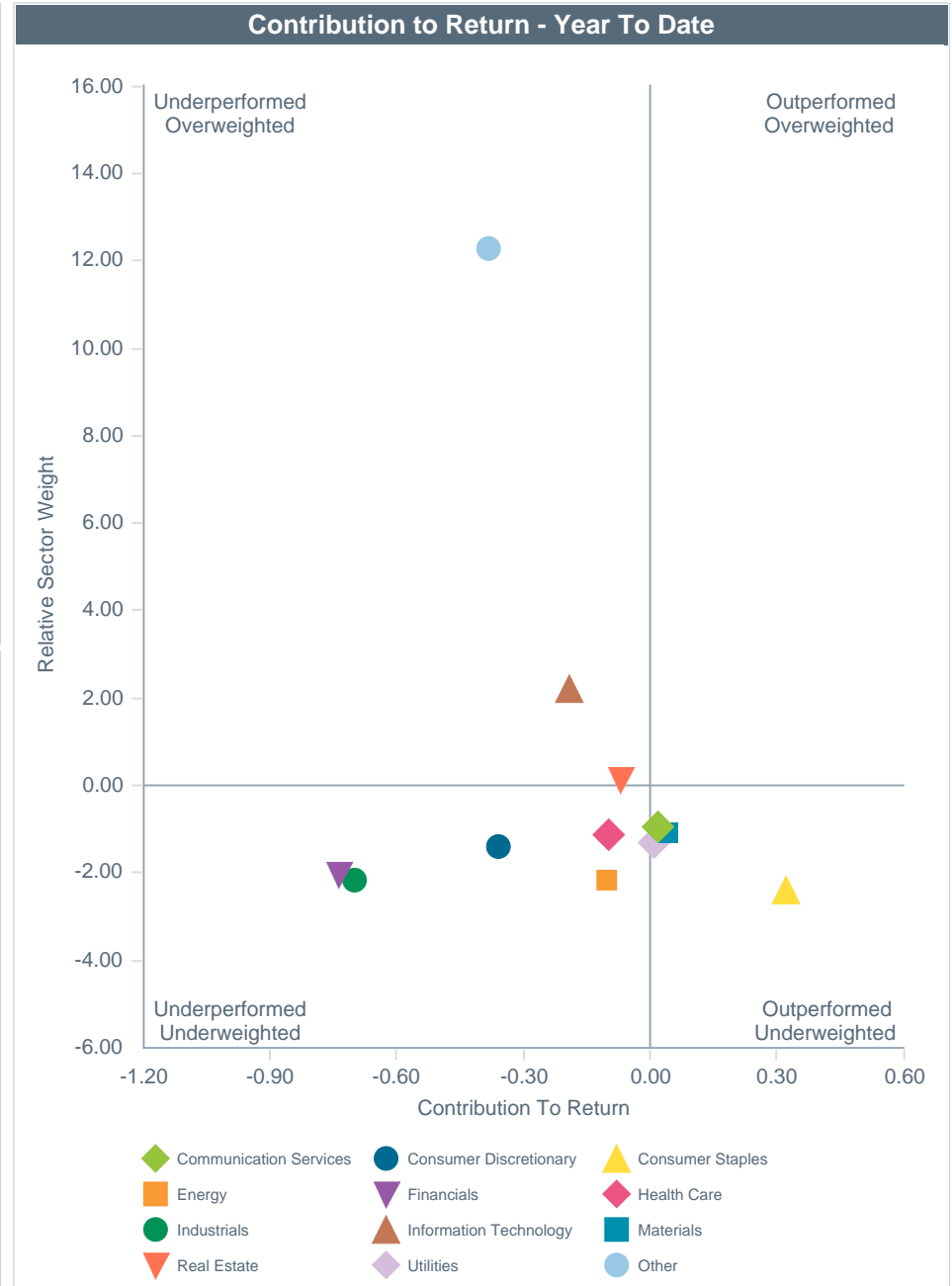
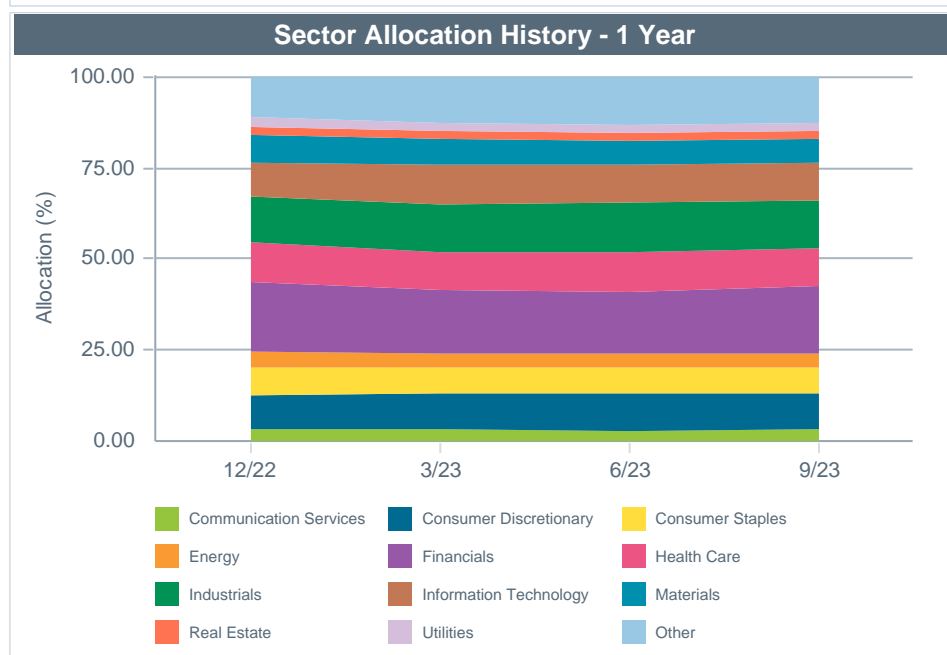
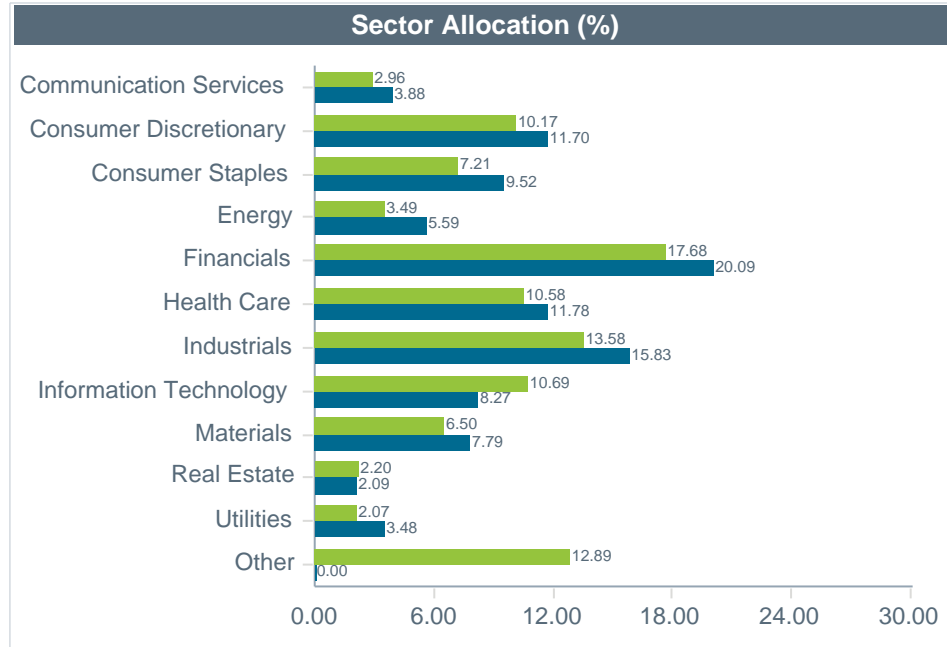




Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

**Composite: Developed Markets Equity**  
**Benchmark: Developed Market Equity Benchmark**

As of September 30, 2023



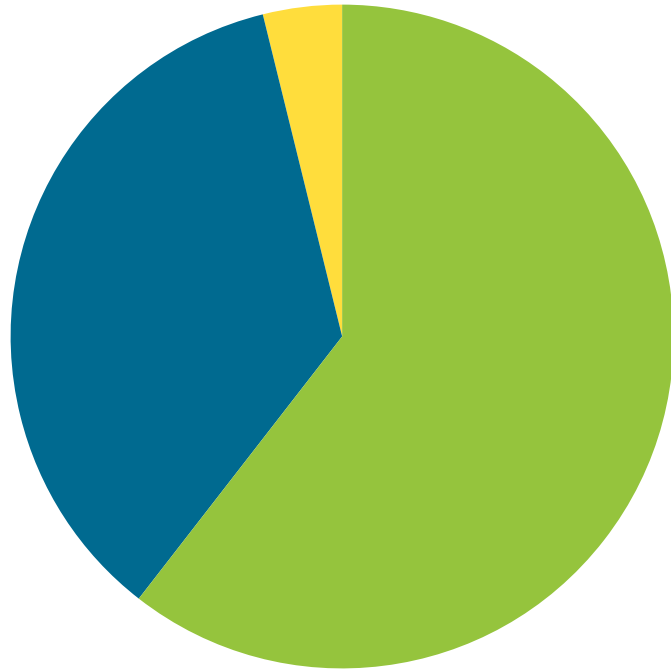
Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. Allocation to "Other" consists of ETF and CEF holdings.



# Emerging Markets Equity Composite



**Asset Allocation by Manager: \$198,647,168**

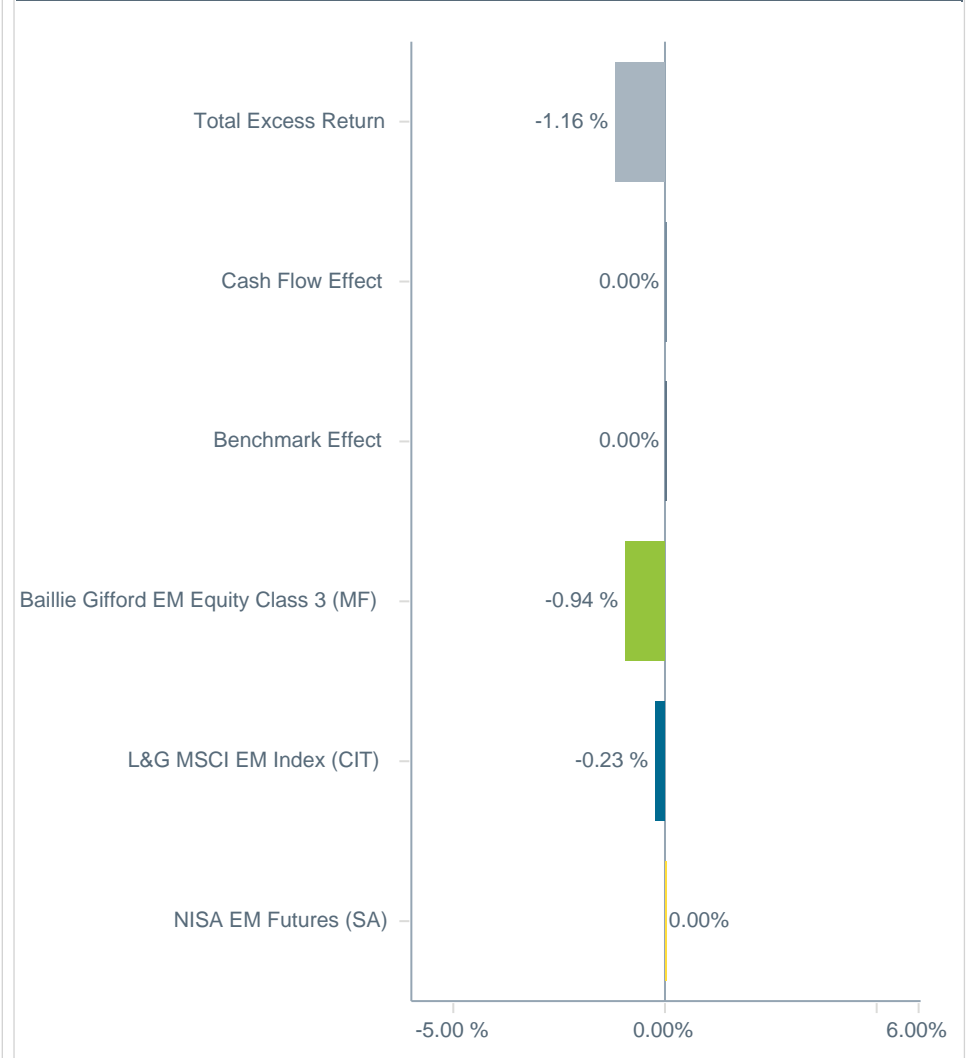


	Market Value (\$)	Allocation (%)
Baillie Gifford EM Equity Class 3 (MF)	120,200,232	60.51
L&G MSCI EM Index (CIT)	70,798,881	35.64
NISA EM Futures (SA)	7,648,056	3.85

**Rate of Return**

	QTD
Composite	-4.09
Benchmark	-2.93
Excess Return	-1.16

**Attribution by Manager**



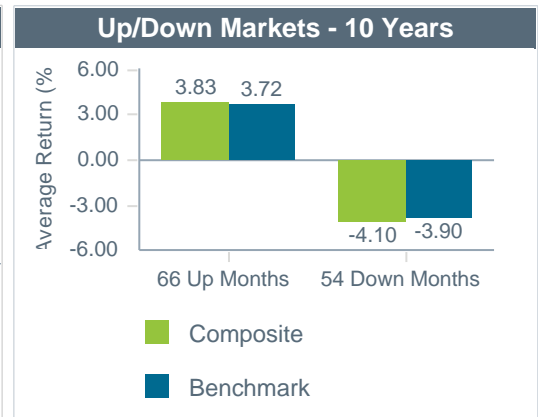
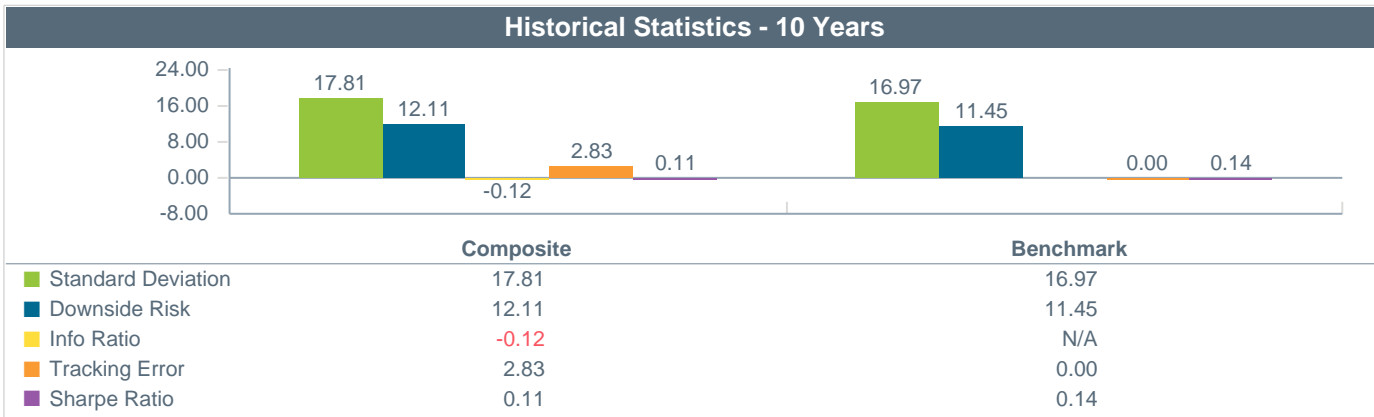
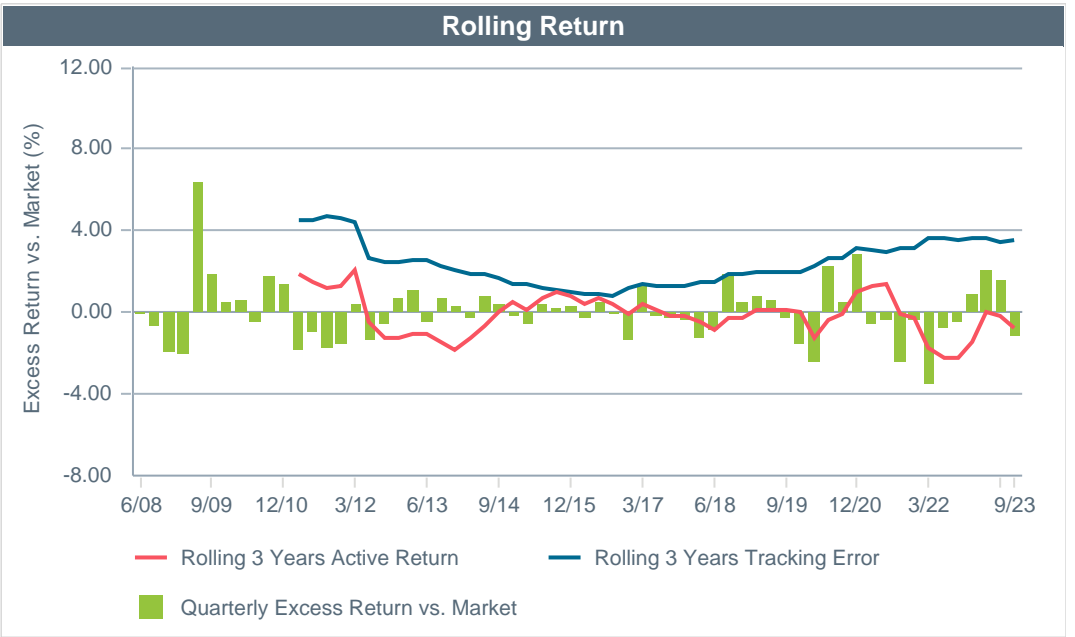
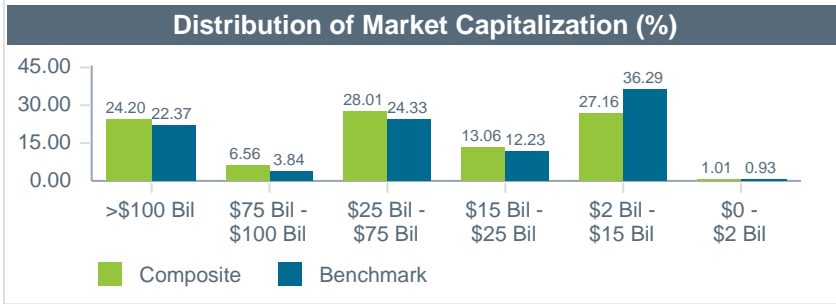
Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions.

**Composite: Emerging Markets Equity**  
**Benchmark: Emerging Market Equity Benchmark**

As of September 30, 2023

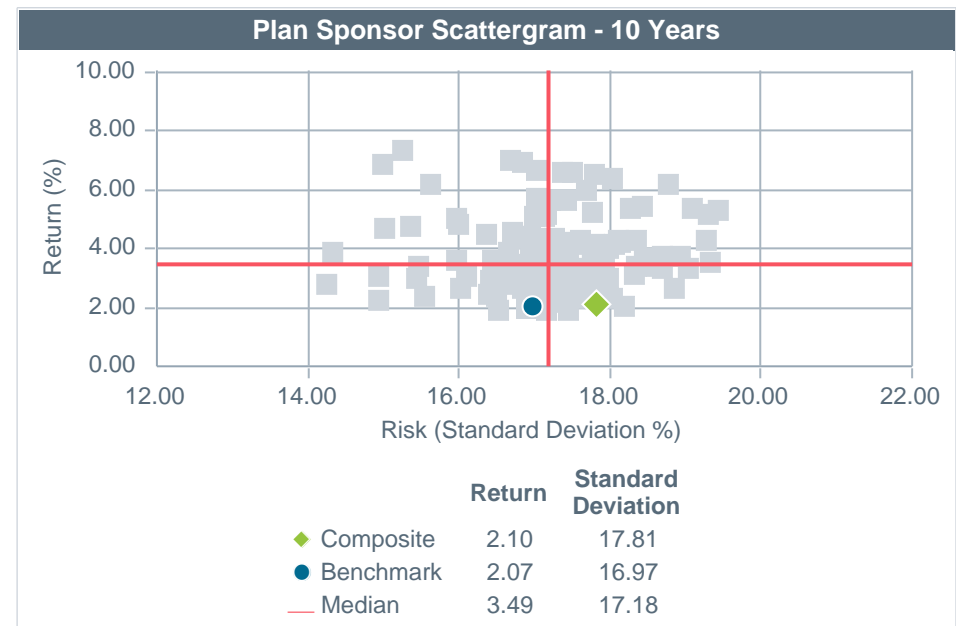
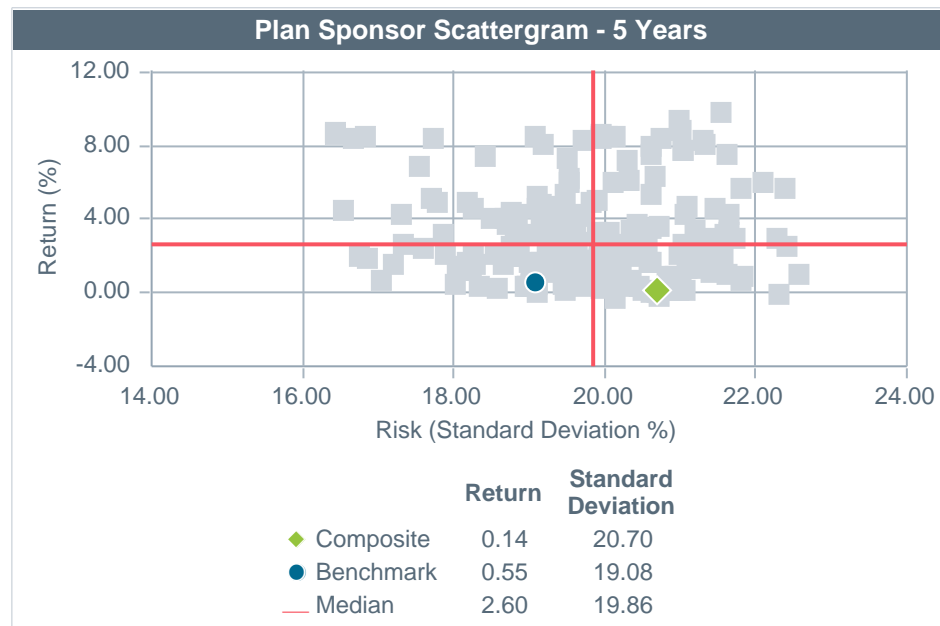
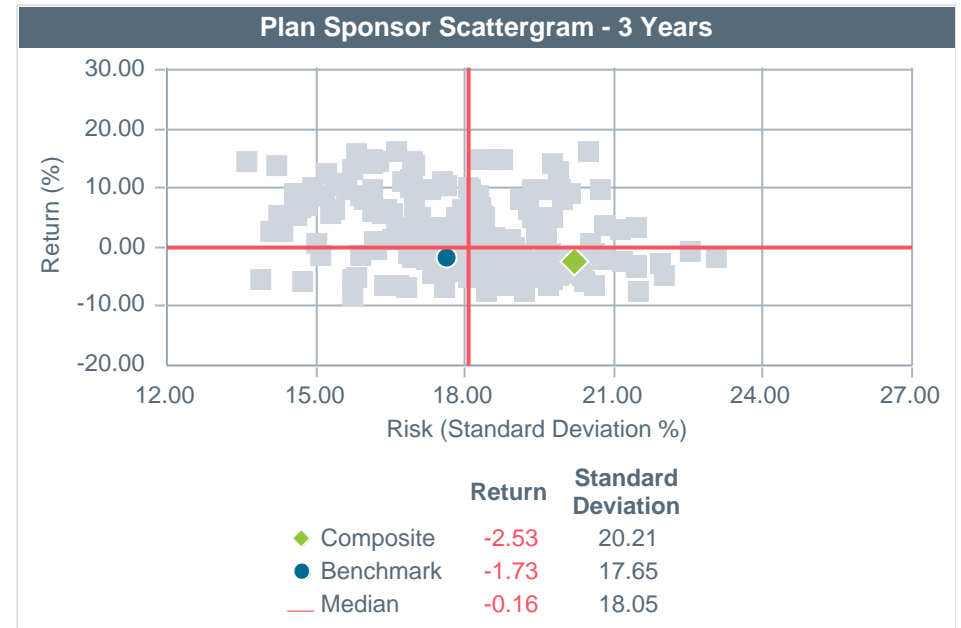
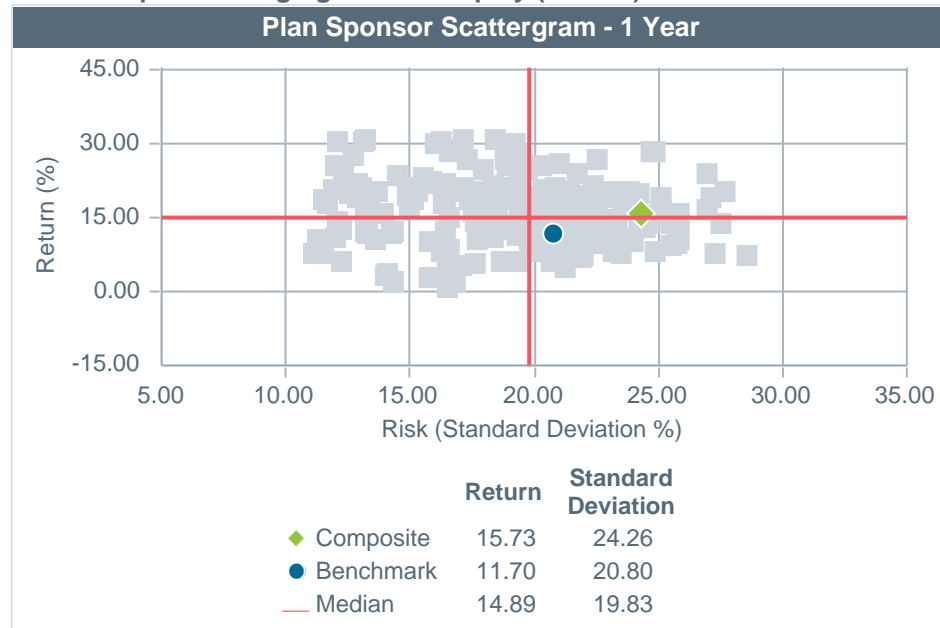
Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
<b>Composite</b>	<b>-4.09</b>	<b>4.16</b>	<b>15.17</b>	<b>-3.00</b>	<b>-0.37</b>	<b>2.31</b>	<b>1.57</b>	<b>-23.64</b>	<b>-6.39</b>	<b>20.13</b>	<b>18.00</b>	<b>0.58</b>	<b>03/01/2008</b>
Benchmark	-2.93	1.82	11.70	-1.73	0.55	3.22	2.07	-20.09	-2.54	18.31	18.42	1.14	
Excess Return	-1.16	2.34	3.47	-1.27	-0.92	-0.91	-0.50	-3.55	-3.85	1.82	-0.42	-0.56	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	111,683	93,495
Median Mkt. Cap (\$M)	6,361	6,341
Price/Earnings Ratio	11.64	12.11
Price/Book Ratio	2.36	2.37
5 Yr. EPS Growth Rate (%)	17.95	14.19
Current Yield (%)	3.88	3.08
Beta (5 Years, Monthly)	1.07	1.00
Number of Securities	1,529	1,437
Active Share	50.15	N/A

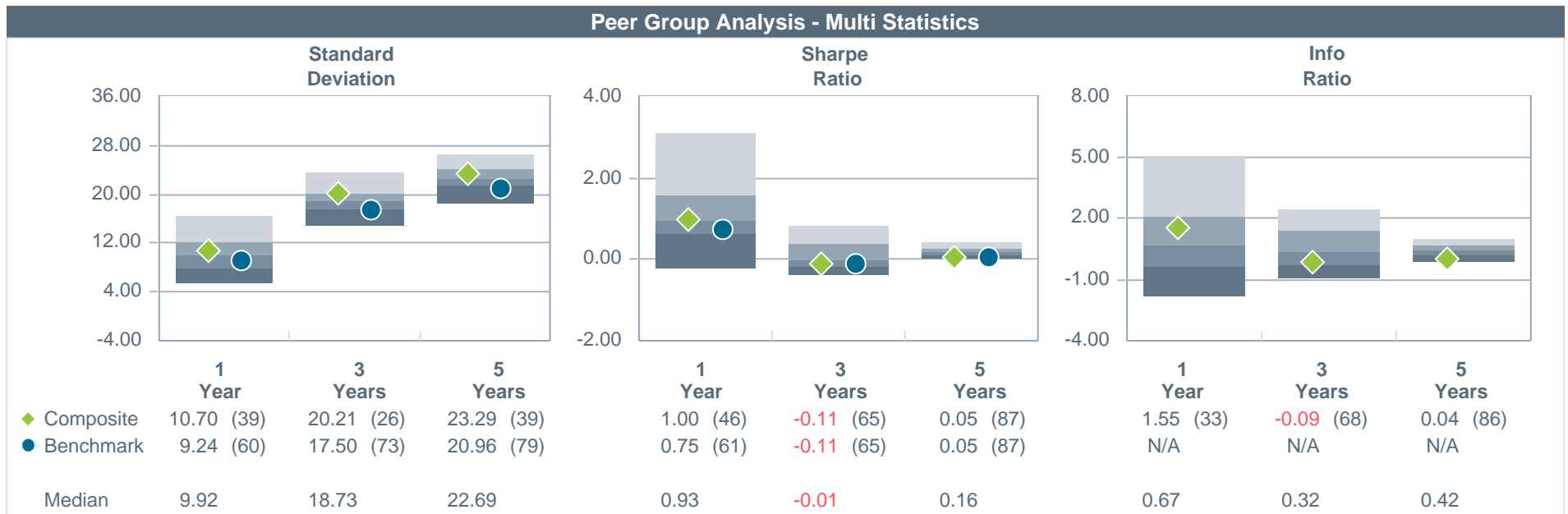
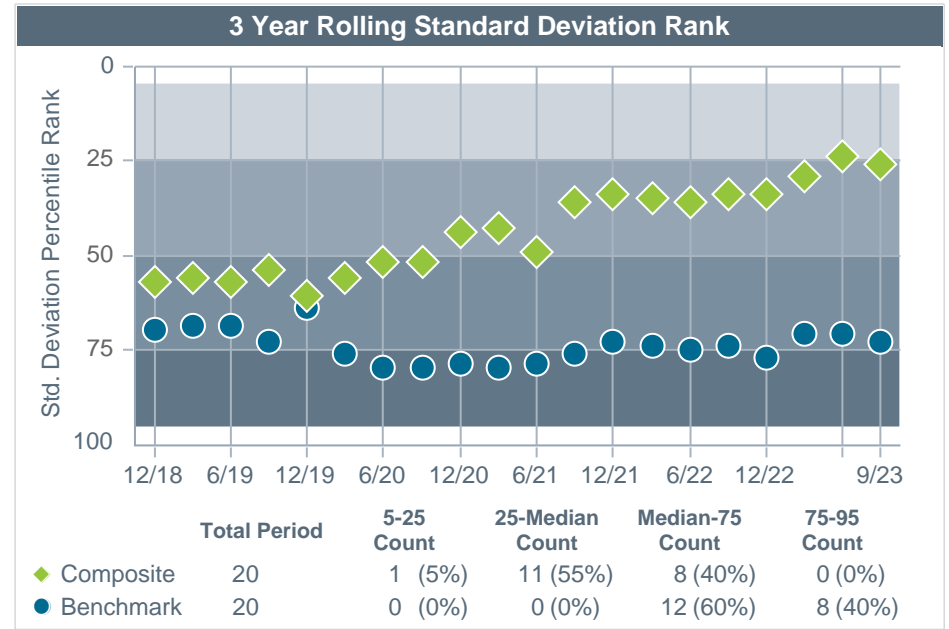
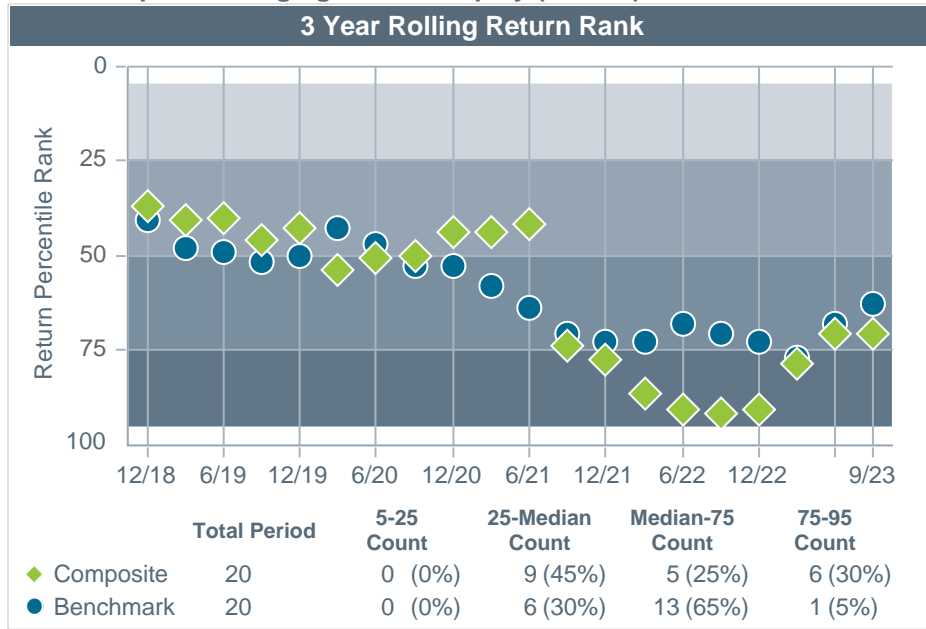


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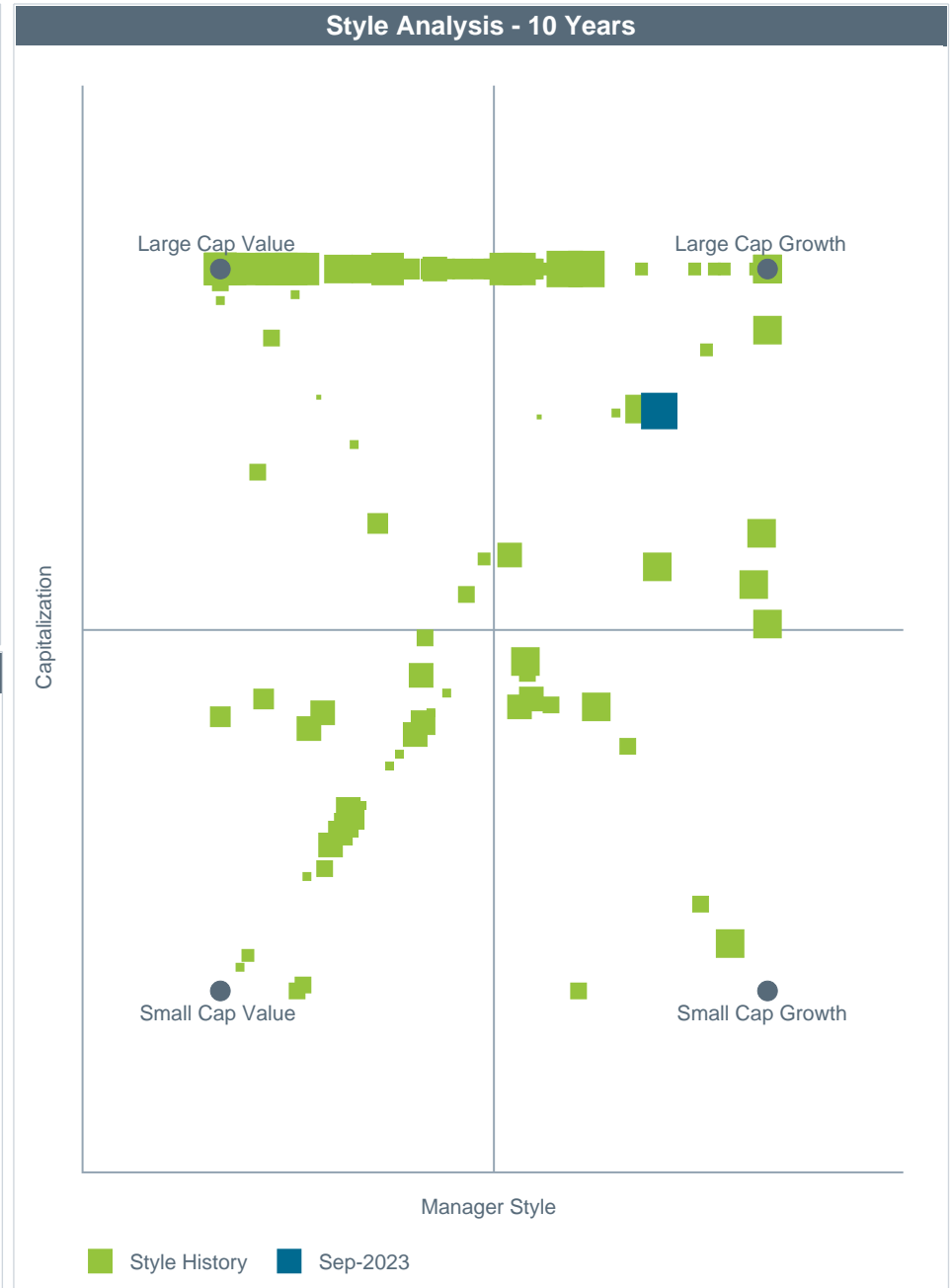
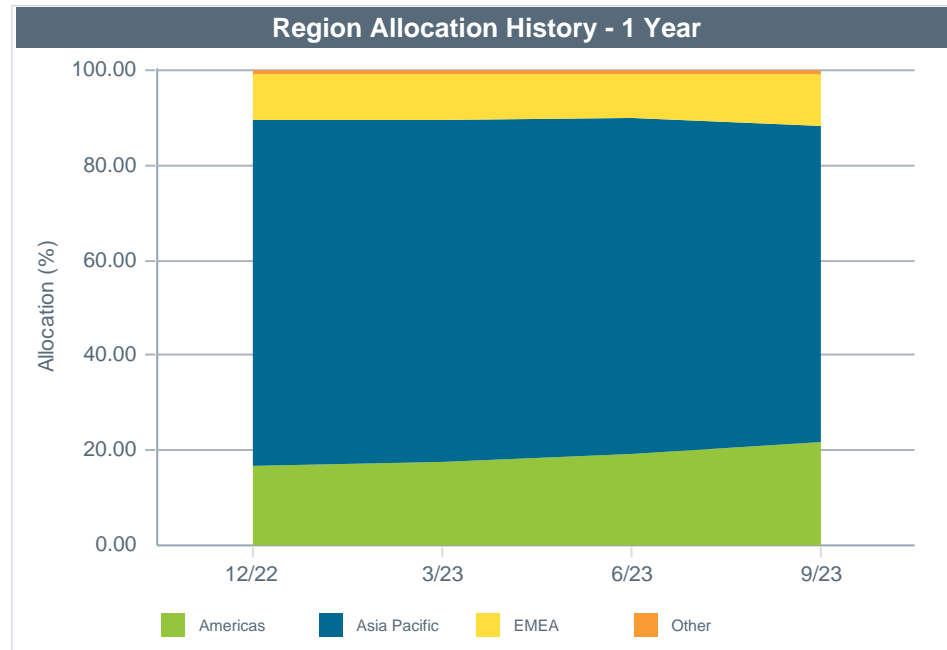
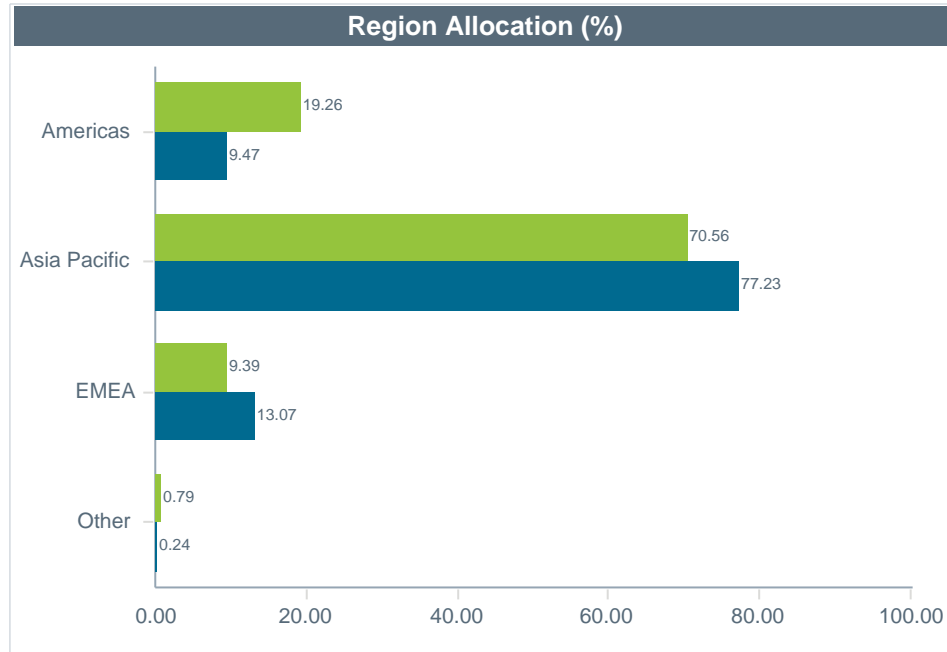




Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity.



Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Information Ratio shown is relative to the benchmark specified at the top of the page.

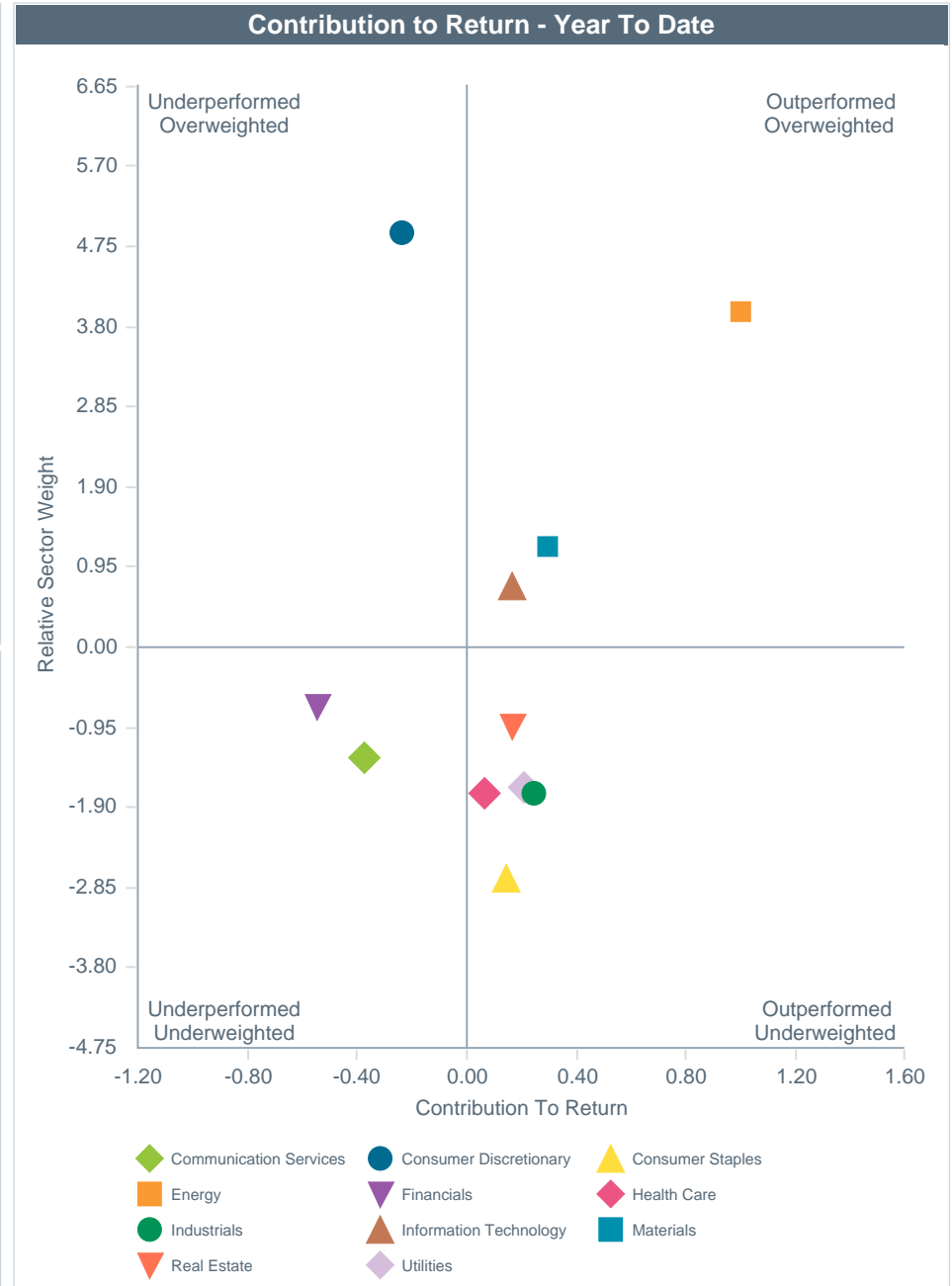
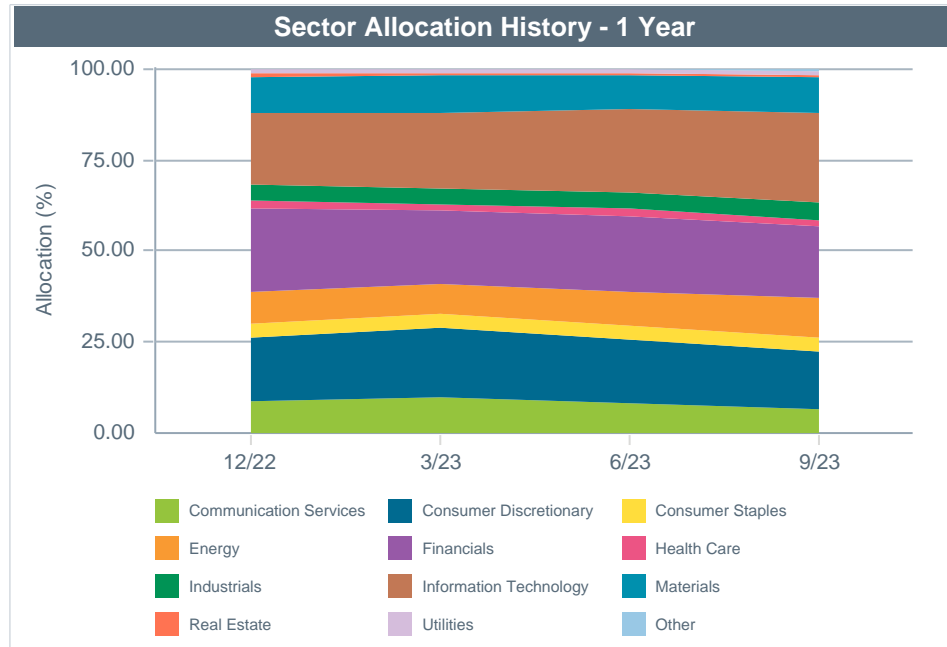
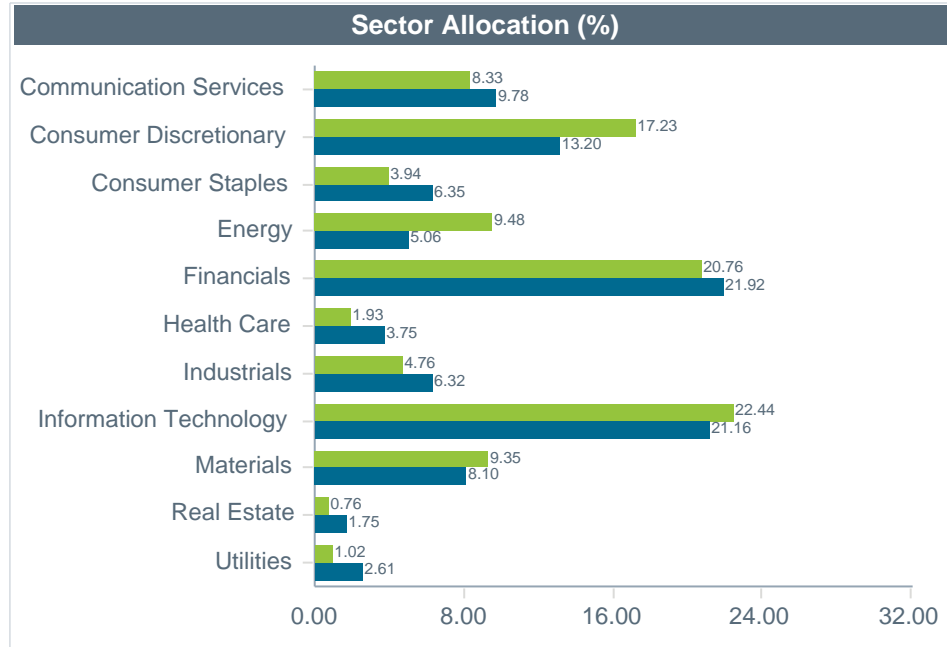


Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.



**Composite: Emerging Markets Equity**  
**Benchmark: Emerging Market Equity Benchmark**

As of September 30, 2023

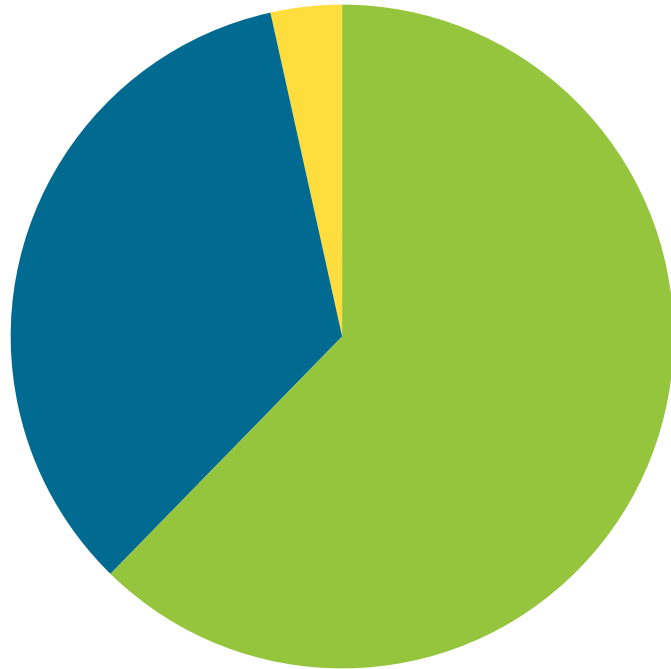


Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

# Real Estate Composite



**Asset Allocation by Manager: \$270,062,708**

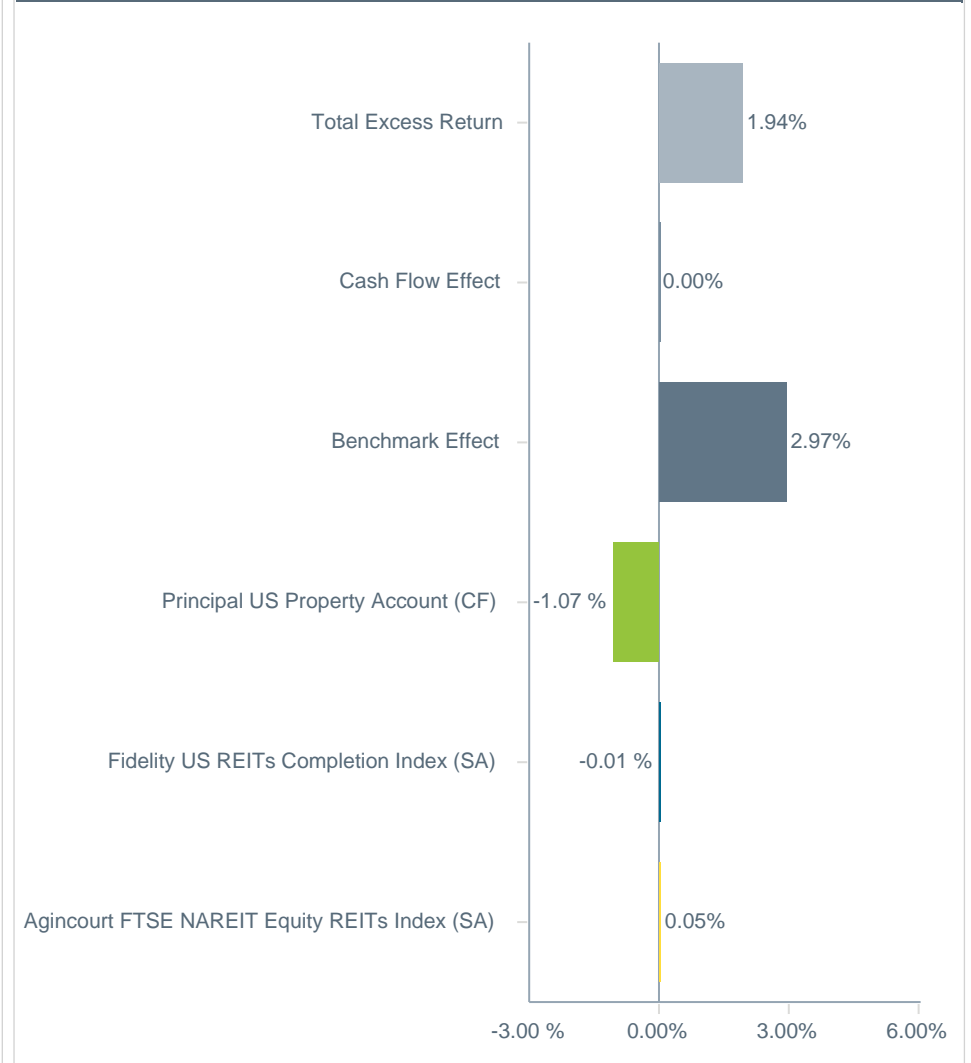


	Market Value (\$)	Allocation (%)
Principal US Property Account (CF)	168,300,792	62.32
Fidelity US REITs Completion Index (SA)	92,370,480	34.20
Agincourt FTSE NAREIT Equity REITs Index (SA)	9,391,435	3.48

**Rate of Return**

	QTD
Composite	-5.19
Benchmark	-7.13
Excess Return	1.94

**Attribution by Manager**

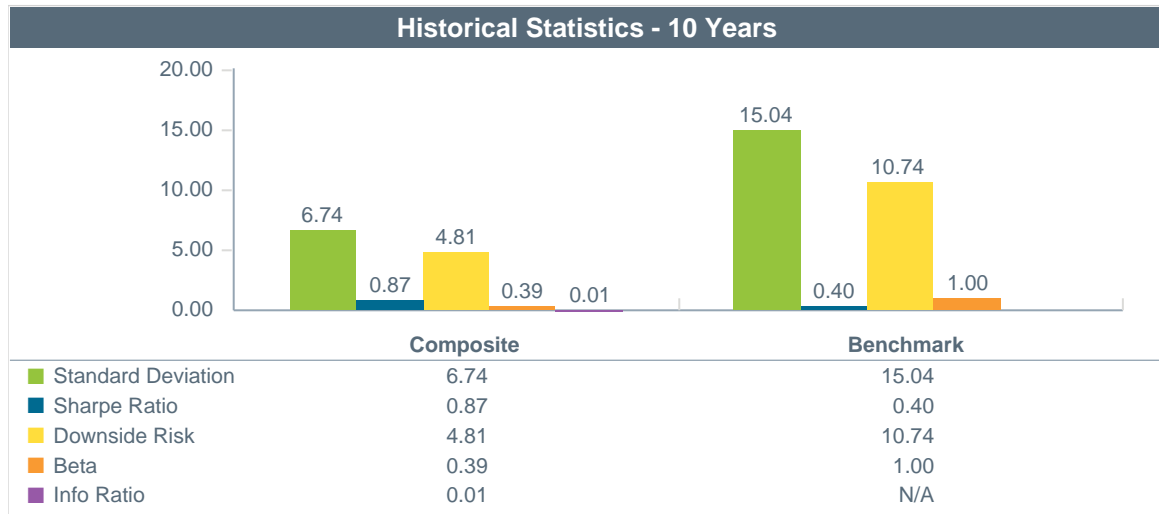


Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions.

**Composite: Real Estate Equity**  
**Benchmark: Real Estate Equity Benchmark**

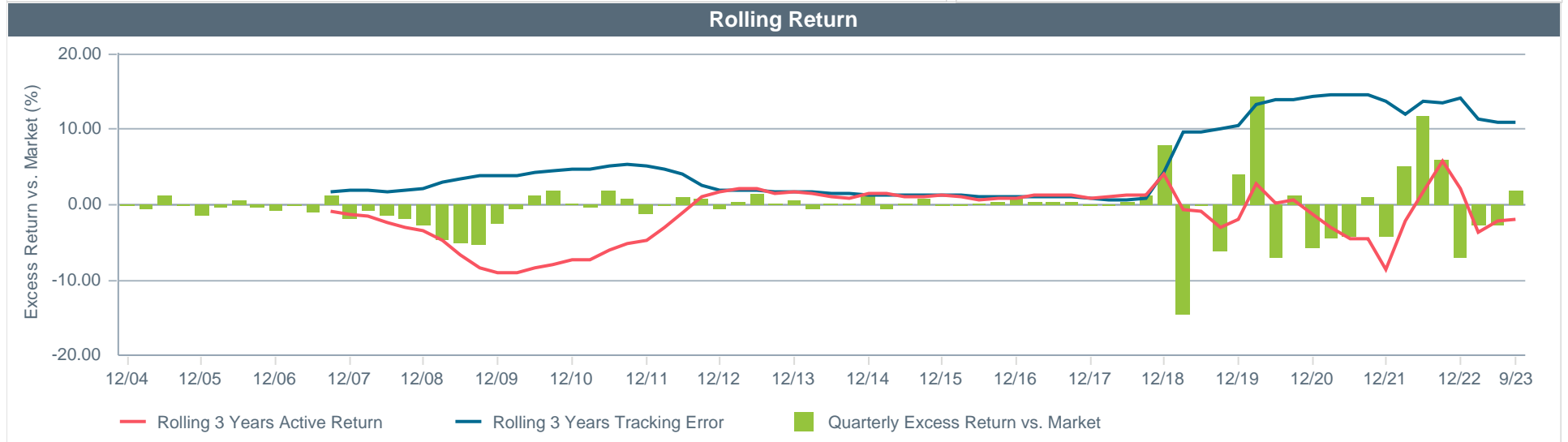
As of September 30, 2023

Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-5.19	-5.54	-7.27	5.14	3.58	5.08	7.16	-9.41	28.40	-1.05	8.28	6.38	09/01/2004
Benchmark	-7.13	-2.14	2.99	5.76	2.77	3.94	6.10	-24.37	43.24	-8.00	26.00	7.27	
Excess Return	1.94	-3.40	-10.26	-0.62	0.81	1.14	1.06	14.96	-14.84	6.95	-17.72	-0.89	



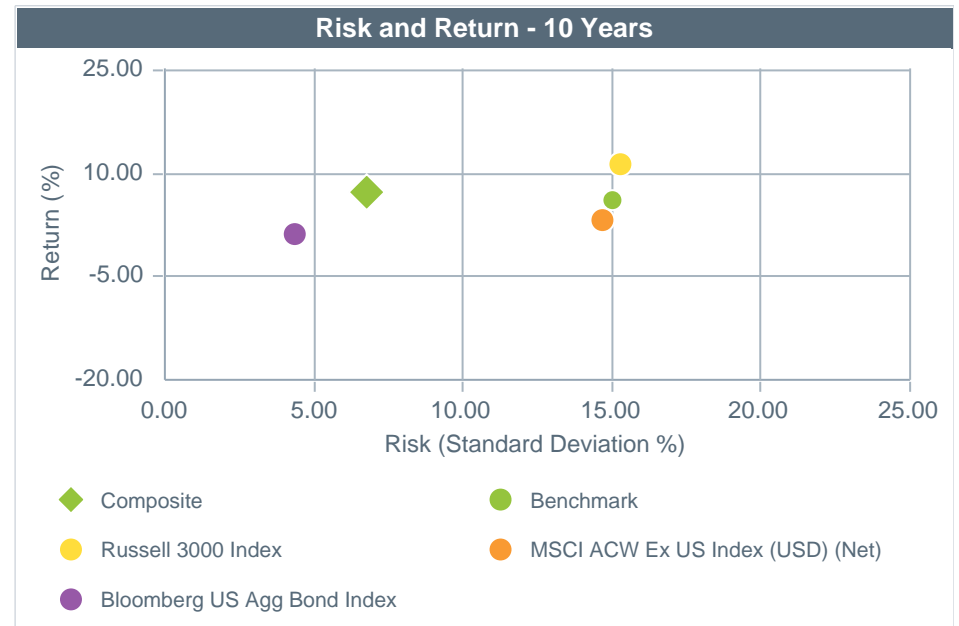
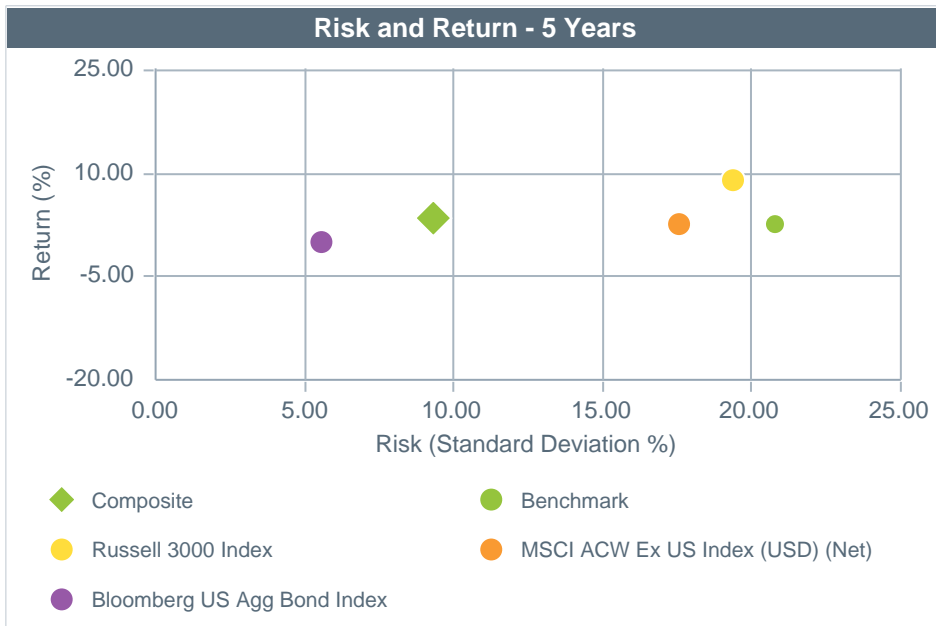
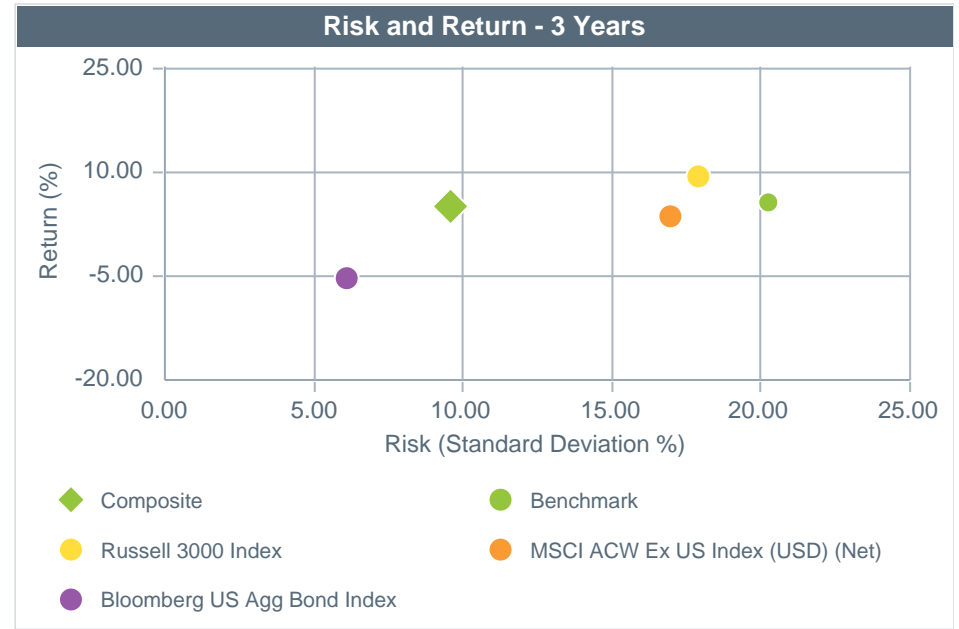
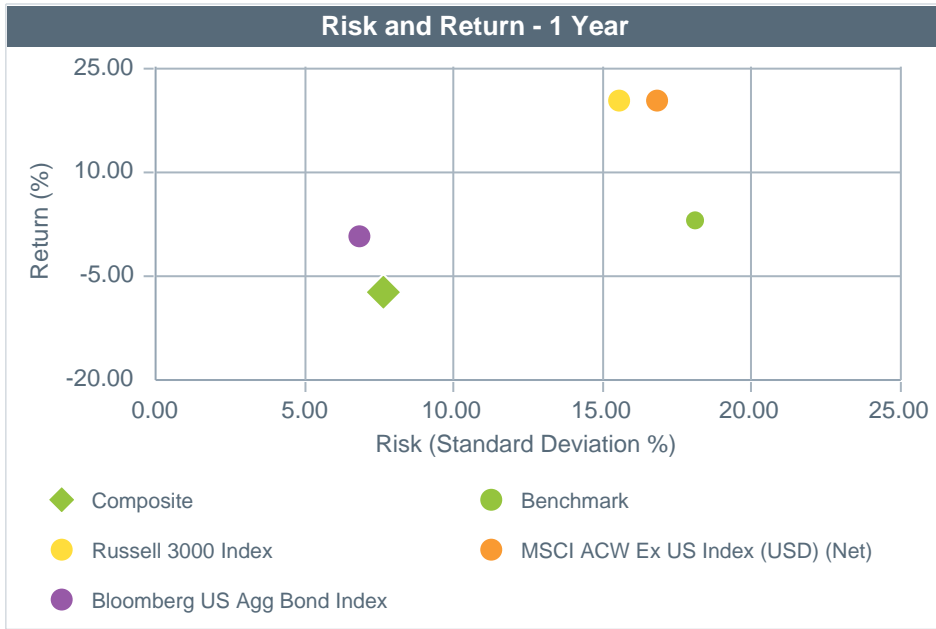
### Actual Correlation - 10 Years

	Actual Correlation
Benchmark	0.87
S&P 500 Index (Market Cap Weighted)	0.65
Russell 2000 Index	0.60
MSCI EAFE Index (USD) (Net)	0.55
MSCI Emerging Markets Index (USD) (Net)	0.40
Bloomberg US Agg Bond Index	0.30
Bloomberg US Trsy US TIPS Index	0.42
Wilshire US REIT Index	0.71
HFN FOF Multi-Strat Index (Net)	0.55
Bloomberg Cmdb Index (TR)	0.37
ICE BofAML 3 Mo US T-Bill Index	-0.41
Consumer Price Index	0.05



Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page.



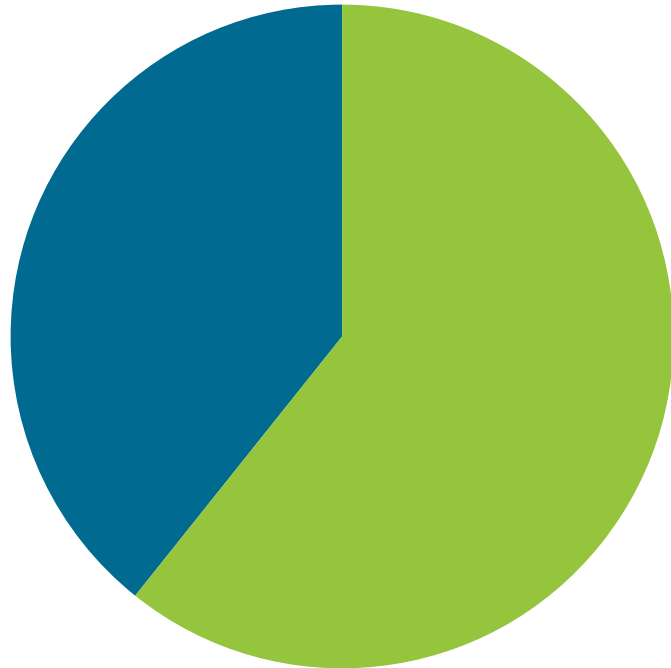


Performance shown is net of fees. The composite will not appear in the chart when there is less performance history than the specified time period.

# Infrastructure Equity Composite



**Asset Allocation by Manager: \$153,466,666**

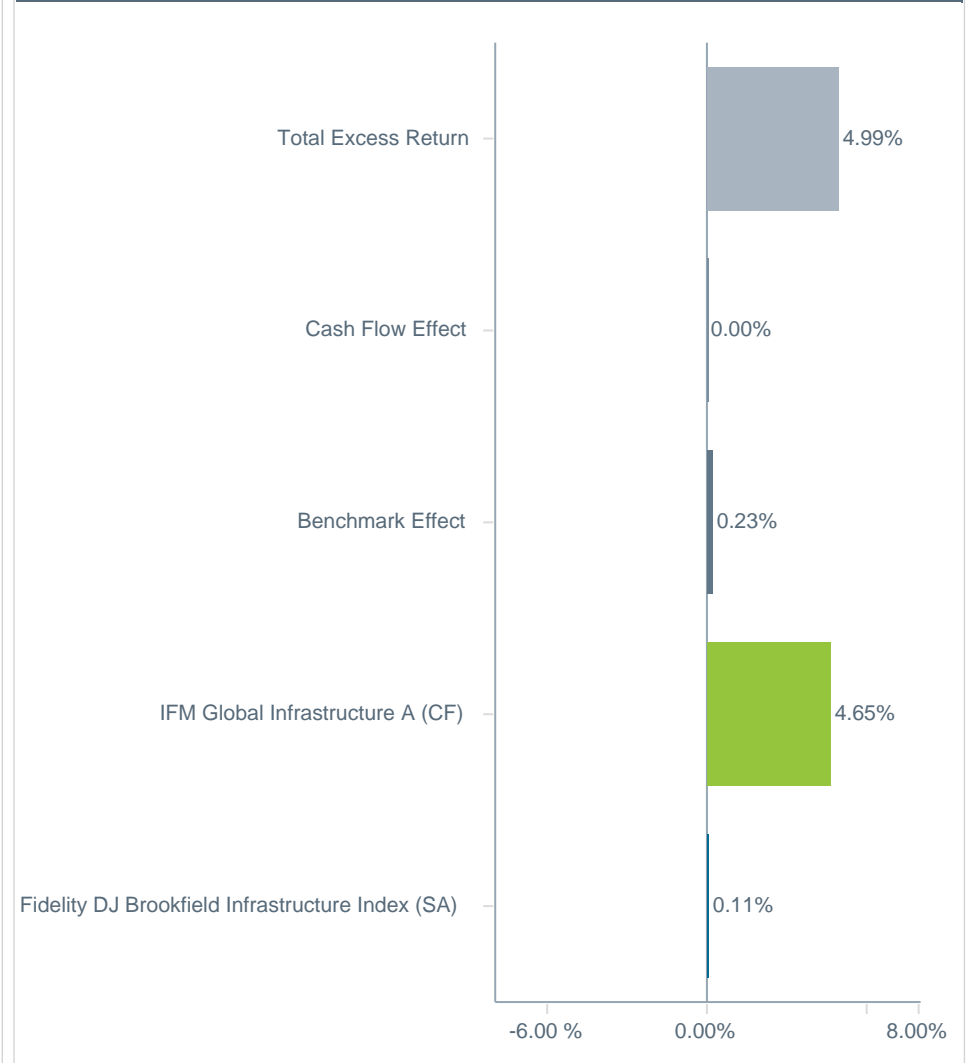


	Market Value (\$)	Allocation (%)
IFM Global Infrastructure A (CF)	93,199,633	60.73
Fidelity DJ Brookfield Infrastructure Index (SA)	60,267,032	39.27

**Rate of Return**

	QTD
Composite	-2.51
Benchmark	-7.50
Excess Return	4.99

**Attribution by Manager**

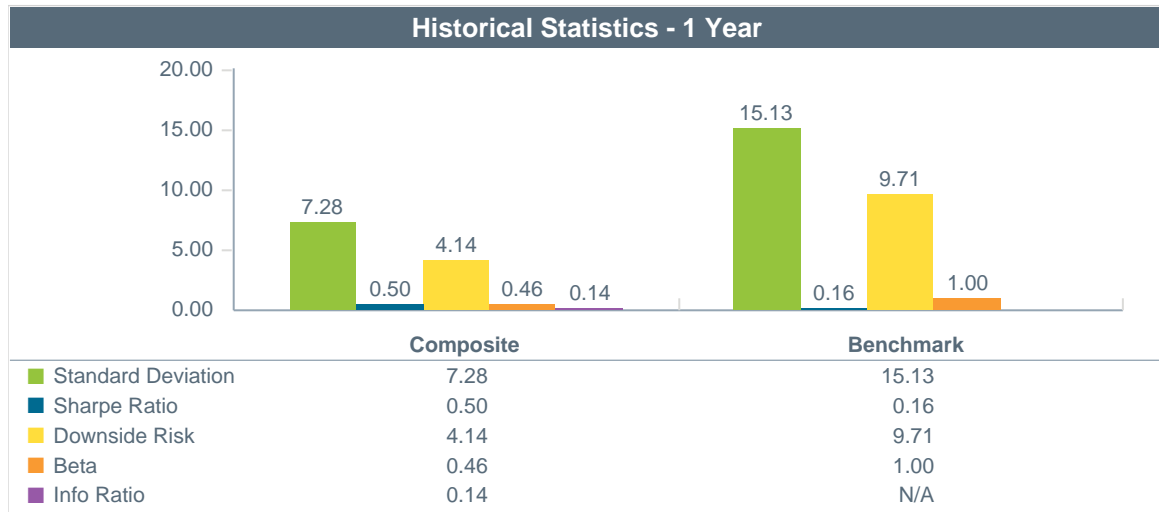


Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions.

**Composite: Infrastructure Equity**  
**Benchmark: Infrastructure Equity Benchmark**

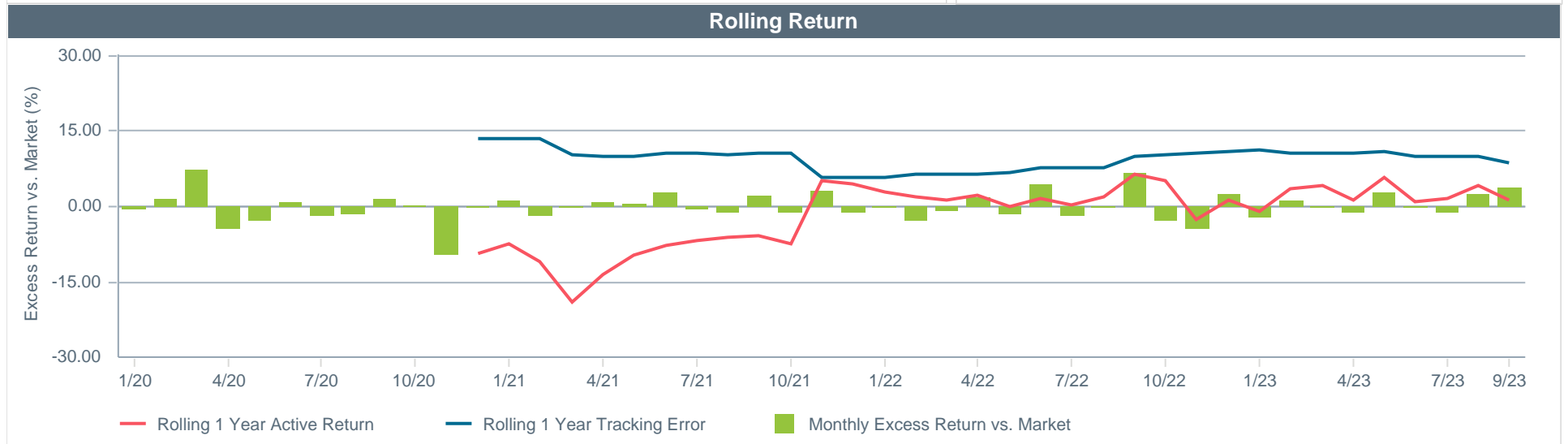
As of September 30, 2023

Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-2.51	1.70	8.06	8.14	1.11	-0.15	N/A	1.64	16.43	-12.19	0.00	1.49	01/01/2020
Benchmark	-7.50	-4.45	5.90	6.45	3.18	3.38	4.20	-0.99	11.04	-6.49	25.75	-0.48	
Excess Return	4.99	6.15	2.16	1.69	-2.07	-3.53	N/A	2.63	5.39	-5.70	-25.75	1.97	



### Actual Correlation - 1 Year

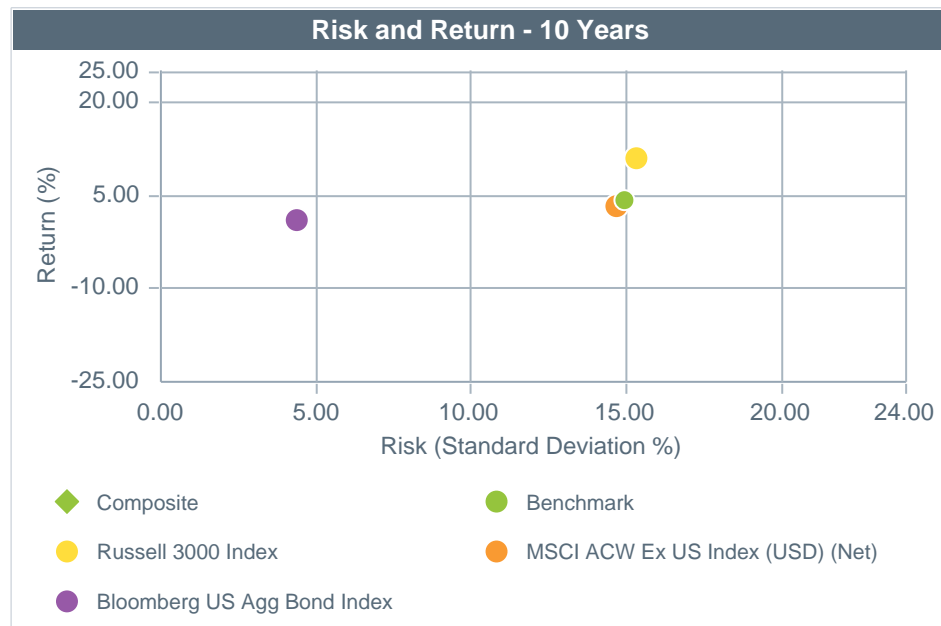
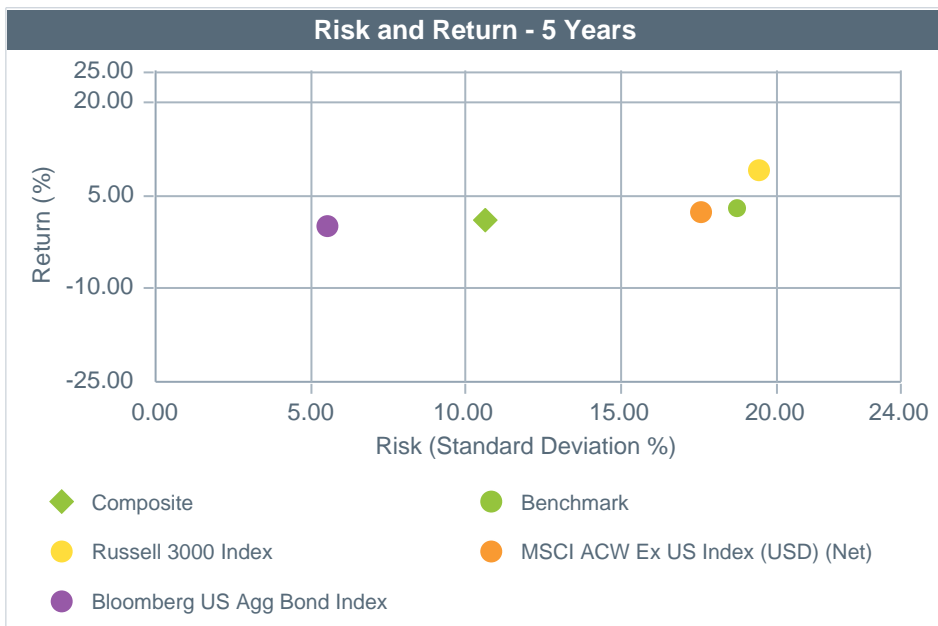
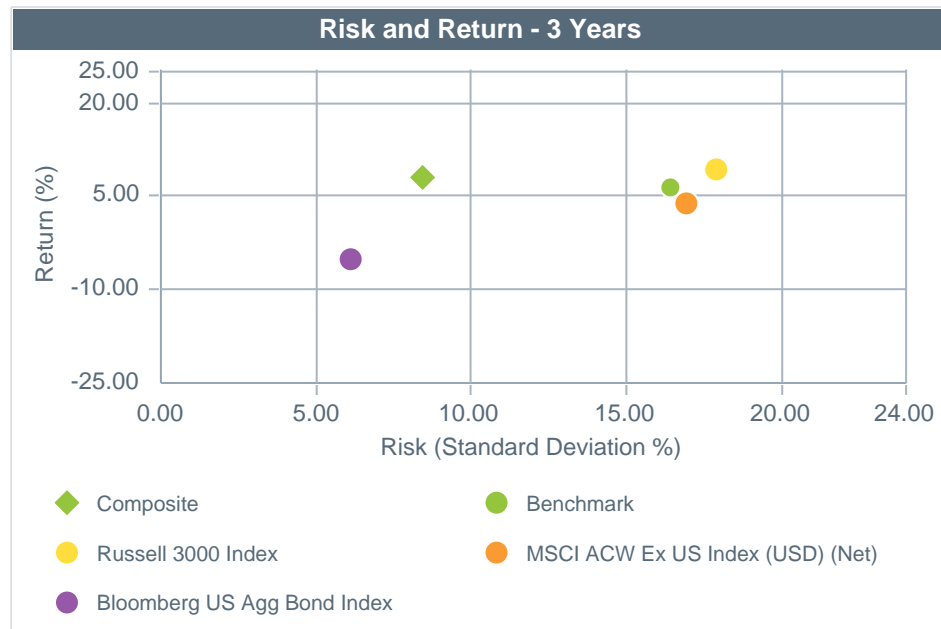
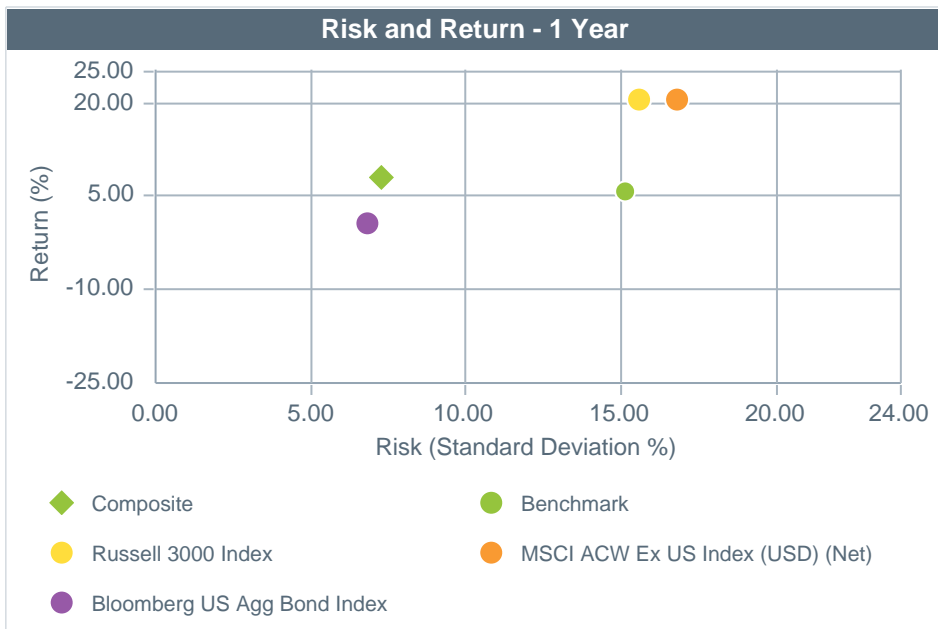
	Actual Correlation
Benchmark	0.95
S&P 500 Index (Market Cap Weighted)	0.75
Russell 2000 Index	0.58
MSCI EAFE Index (USD) (Net)	0.93
MSCI Emerging Markets Index (USD) (Net)	0.74
Bloomberg US Agg Bond Index	0.71
Bloomberg US Trsy US TIPS Index	0.78
Wilshire US REIT Index	0.75
HFN FOF Multi-Strat Index (Net)	0.44
Bloomberg Comdty Index (TR)	0.65
ICE BofAML 3 Mo US T-Bill Index	-0.33
Consumer Price Index	-0.04



Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page.







Performance shown is net of fees. The composite will not appear in the chart when there is less performance history than the specified time period.

# Global Fixed Income Composite



Asset Allocation by Manager: \$498,603,708

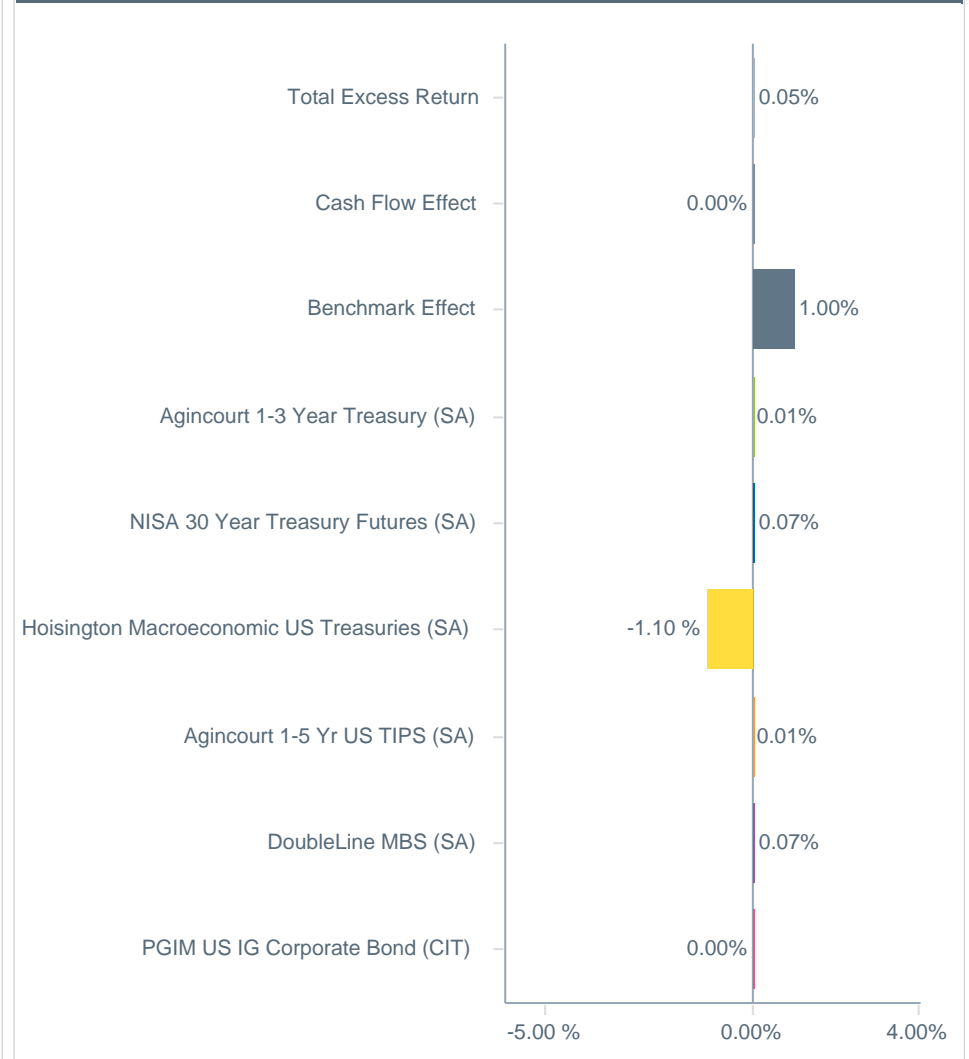


	Market Value (\$)	Allocation (%)
Agincourt 1-3 Year Treasury (SA)	186,555,582	37.42
PGIM US IG Corporate Bond (CIT)	77,828,419	15.61
DoubleLine MBS (SA)	67,562,244	13.55
Agincourt 1-5 Yr US TIPS (SA)	63,439,756	12.72
NISA 30 Year Treasury Futures (SA)	54,203,898	10.87
Hoisington Macroeconomic US Treasuries (SA)	49,013,810	9.83

Rate of Return

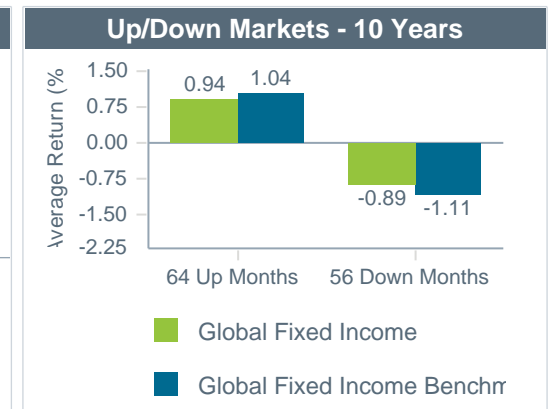
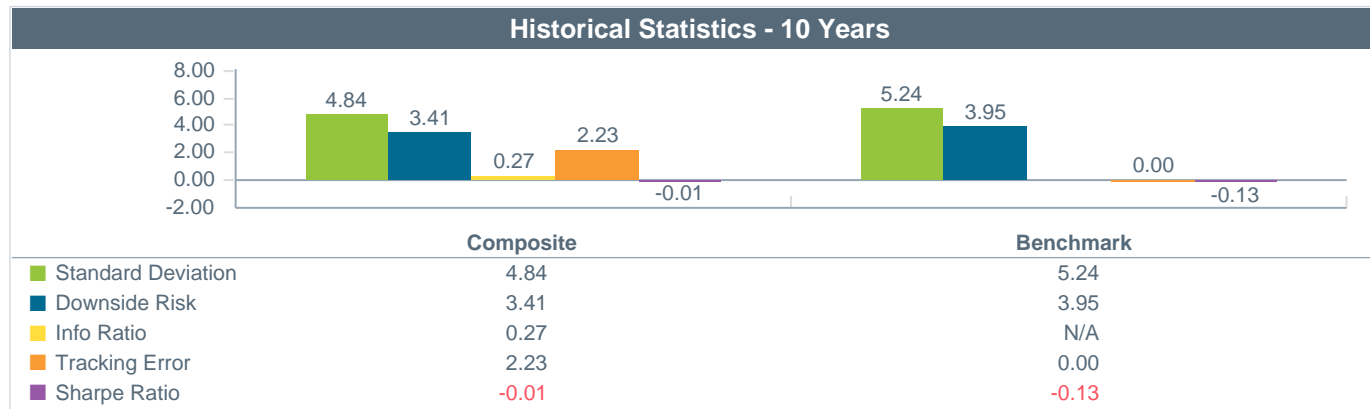
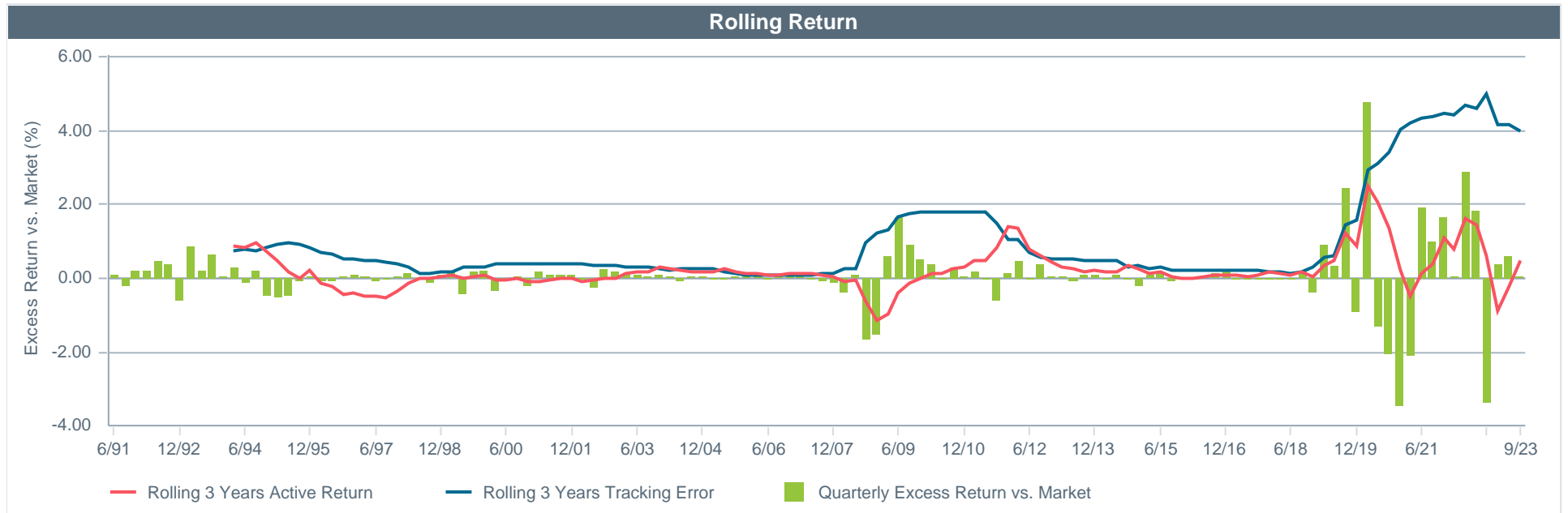
	QTD
Composite	-3.54
Benchmark	-3.59
Excess Return	0.05

Attribution by Manager

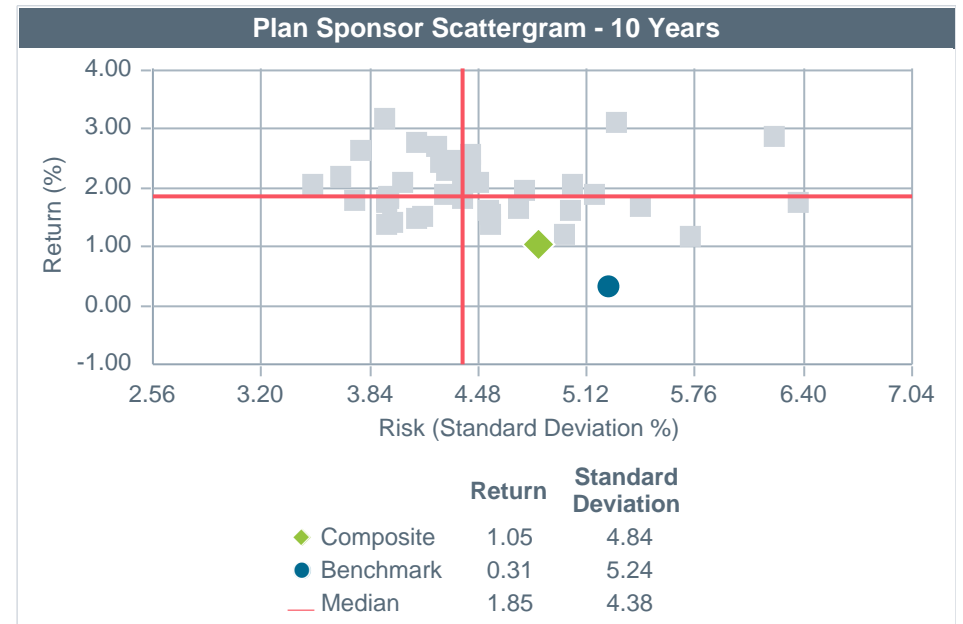
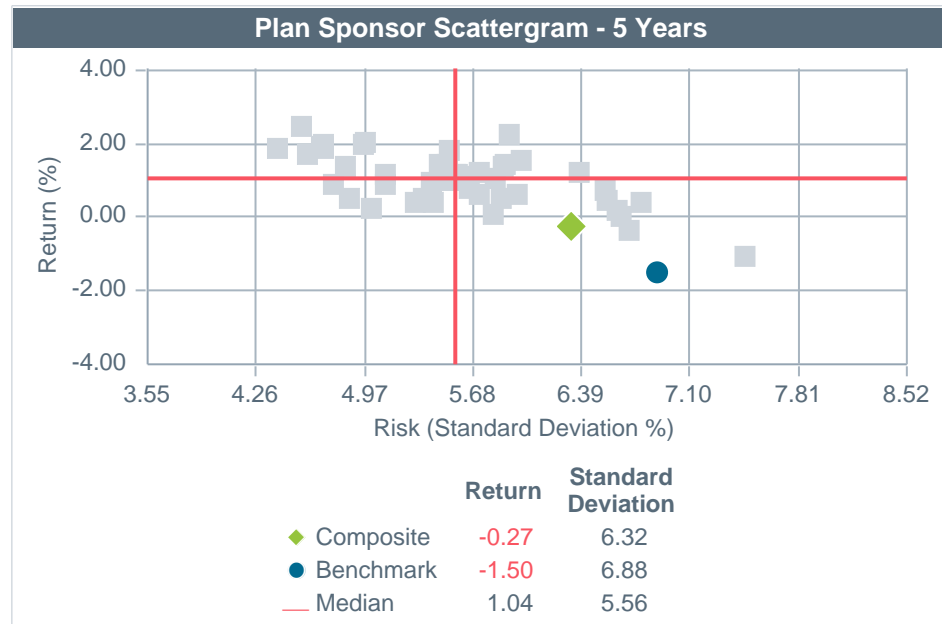
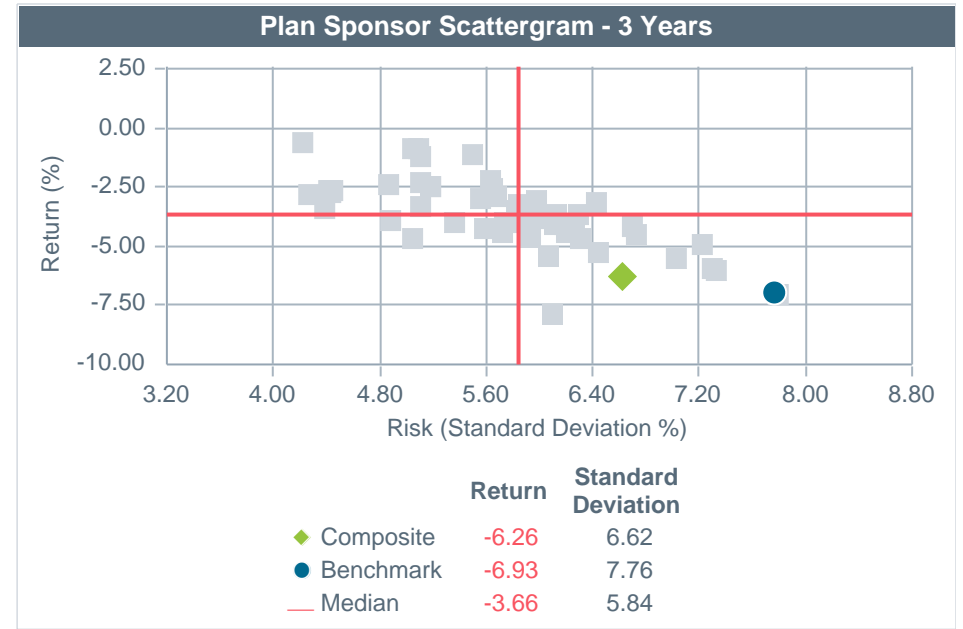
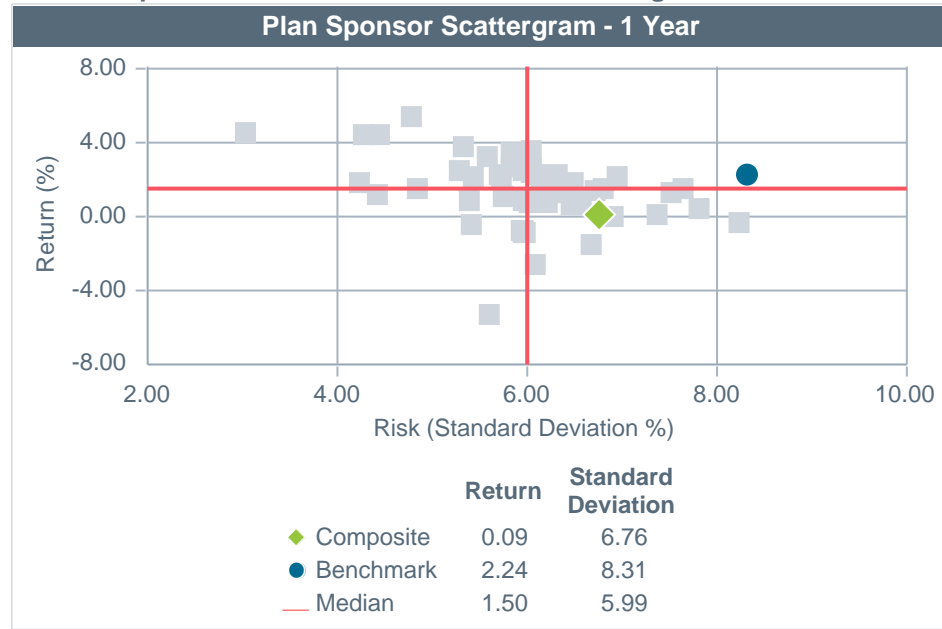


Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions.

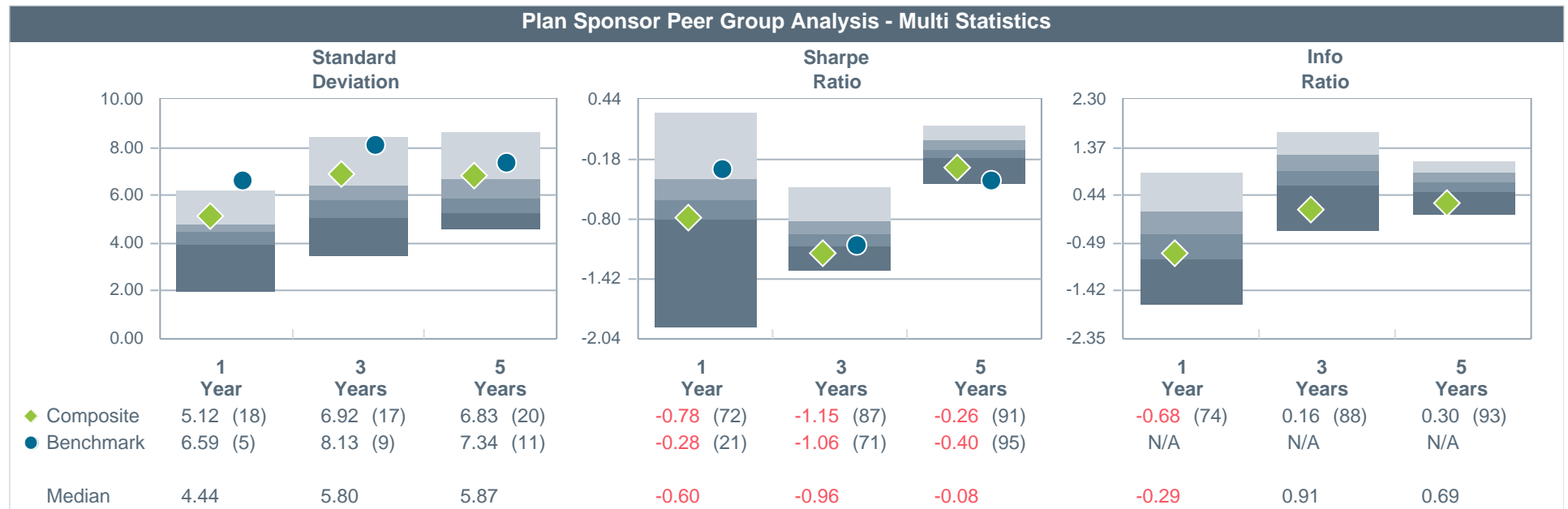
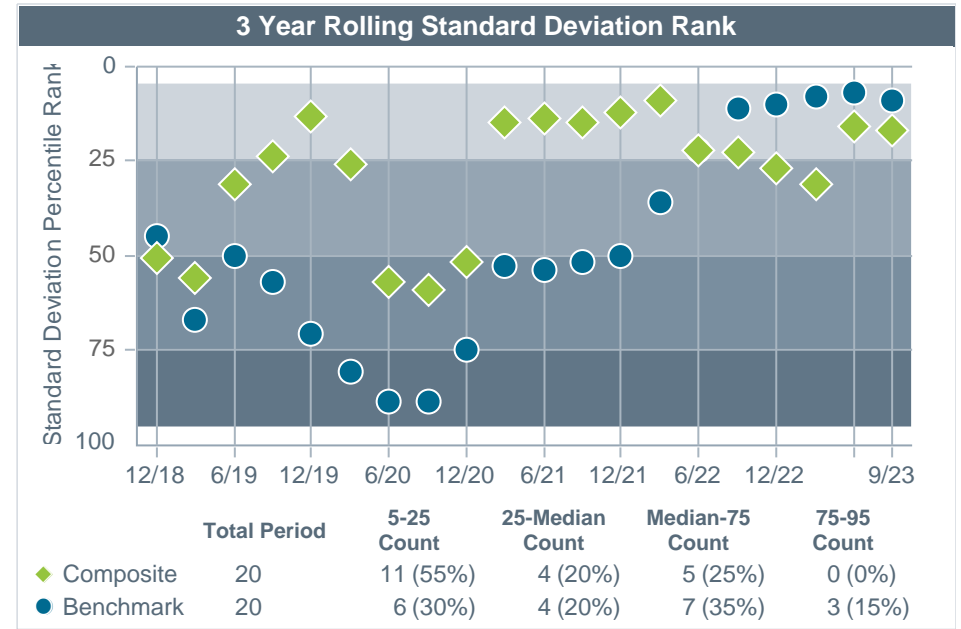
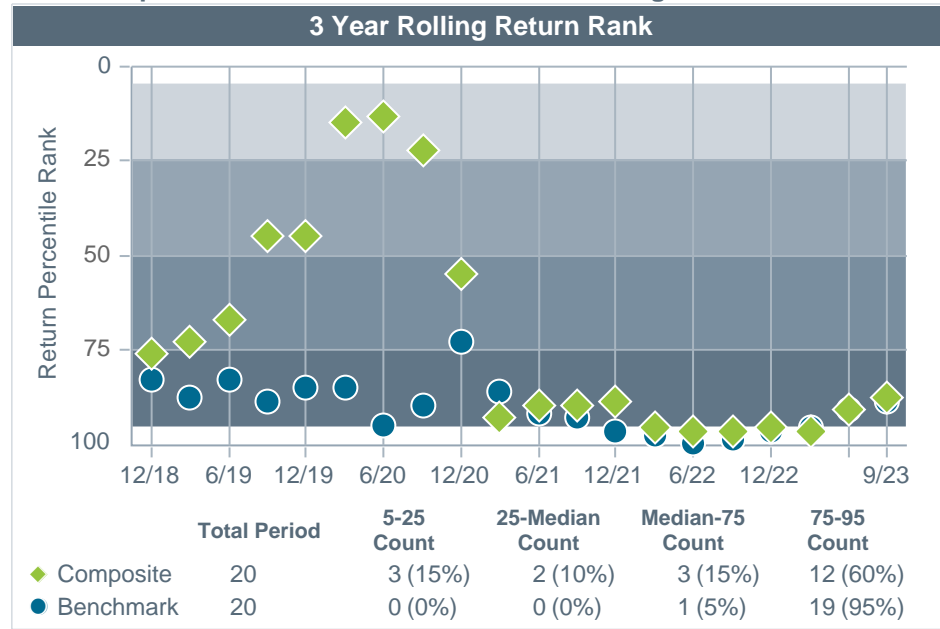
Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-3.54	-1.17	-0.01	-6.39	-0.41	-0.40	0.93	-14.73	-2.46	6.99	9.84	4.80	02/01/1991
Benchmark	-3.59	-2.21	2.24	-6.93	-1.50	-1.24	0.31	-16.25	-4.71	9.20	6.84	4.54	
Excess Return	0.05	1.04	-2.25	0.54	1.09	0.84	0.62	1.52	2.25	-2.21	3.00	0.26	



Performance shown is net of fees. Calculation is based on monthly periodicity. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page.



Performance shown is gross of fees and is annualized for periods greater than one year. Calculation is based on monthly periodicity.

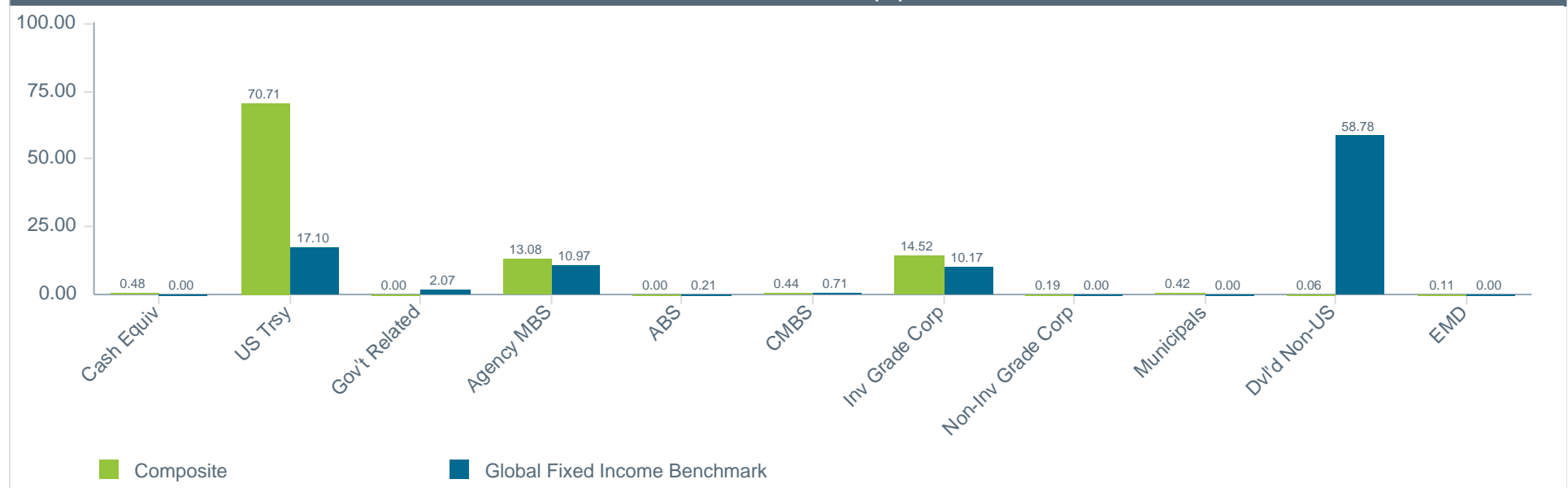


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Information Ratio shown is relative to the benchmark specified at the top of the page.

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.23	6.56
Spread Duration	N/A	N/A
Avg. Maturity	9.54	8.45
Avg. Quality	Aa1	N/A
Yield To Maturity (%)	5.41	4.22
Coupon Rate (%)	2.56	2.54
Current Yield (%)	N/A	N/A

Sector Distribution (%)

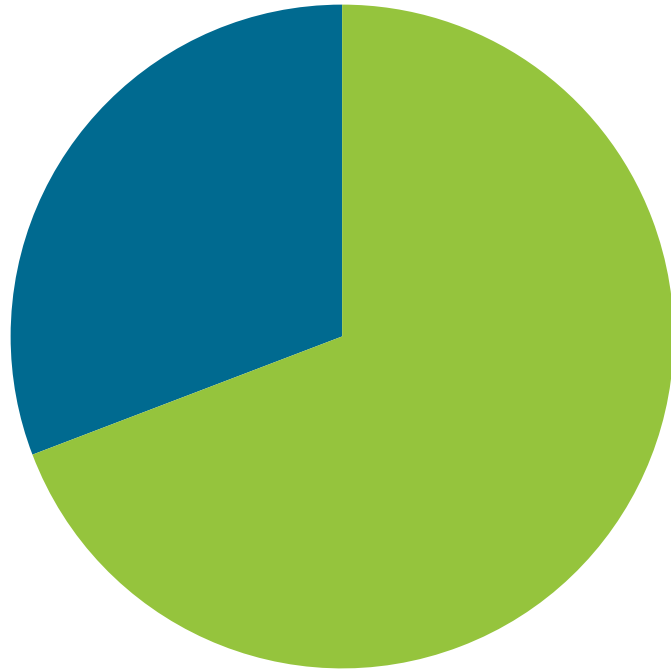


# Multi-Asset Composite





**Asset Allocation by Manager: \$121,072,223**



	Market Value (\$)	Allocation (%)
Agincourt Passive Index (SA)	83,787,362	69.20
NISA Gold Futures (SA)	37,284,861	30.80

**Rate of Return**

	QTD
Composite	-3.13
Benchmark	-3.46
Excess Return	0.33

**Attribution by Manager**

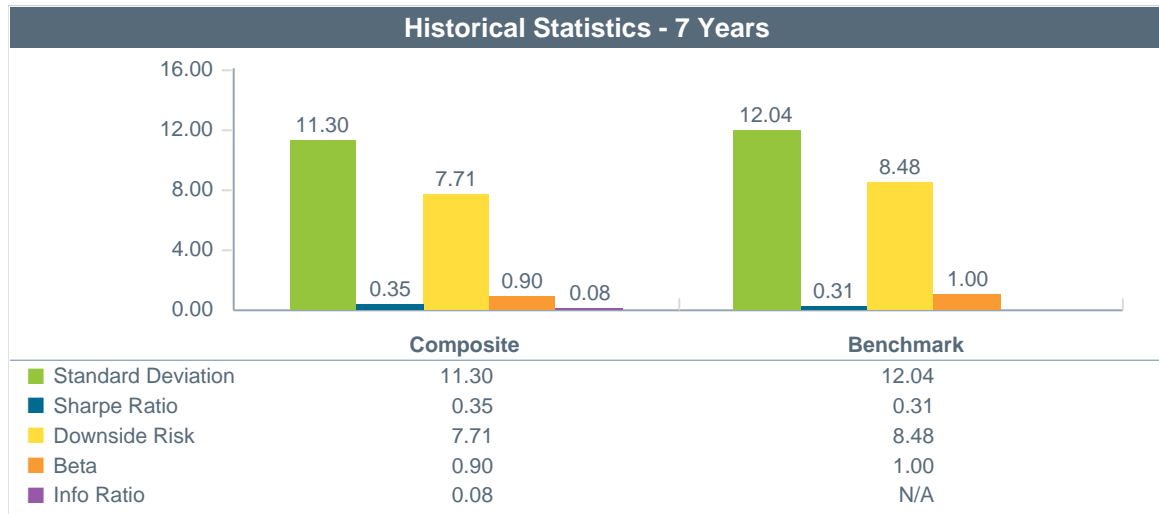


Performance shown is net of fees. Calculation is based on monthly periodicity. Allocations shown may not sum up to 100% exactly due to rounding. See glossary for calculation definitions.

**Composite: Multi-Asset**  
**Benchmark: Multi-Asset Benchmark**

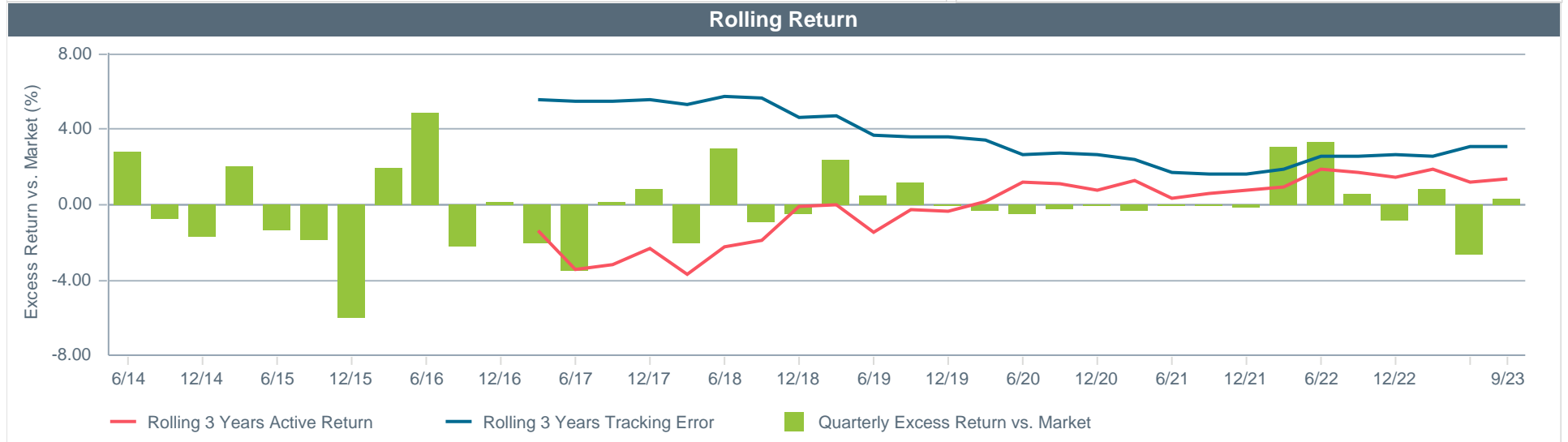
As of September 30, 2023

Rate of Return													
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	Since Incep.	Inception Date
Composite	-3.13	3.54	10.68	4.41	4.78	4.97	N/A	-11.43	10.65	9.56	23.25	4.37	02/01/2014
Benchmark	-3.46	5.05	13.18	2.75	3.35	4.59	4.44	-17.33	11.25	10.91	18.66	4.37	
Excess Return	0.33	-1.51	-2.50	1.66	1.43	0.38	N/A	5.90	-0.60	-1.35	4.59	0.00	



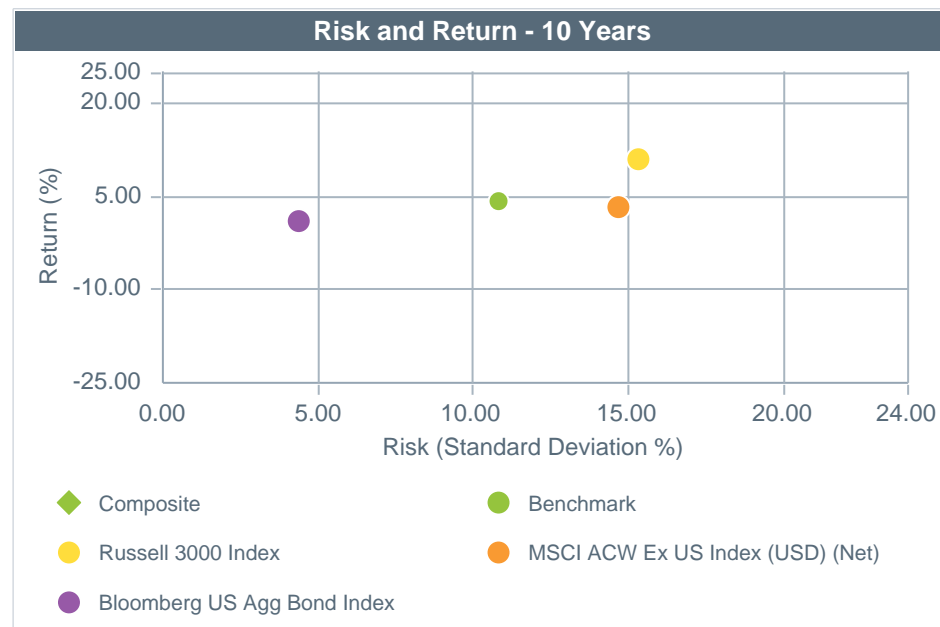
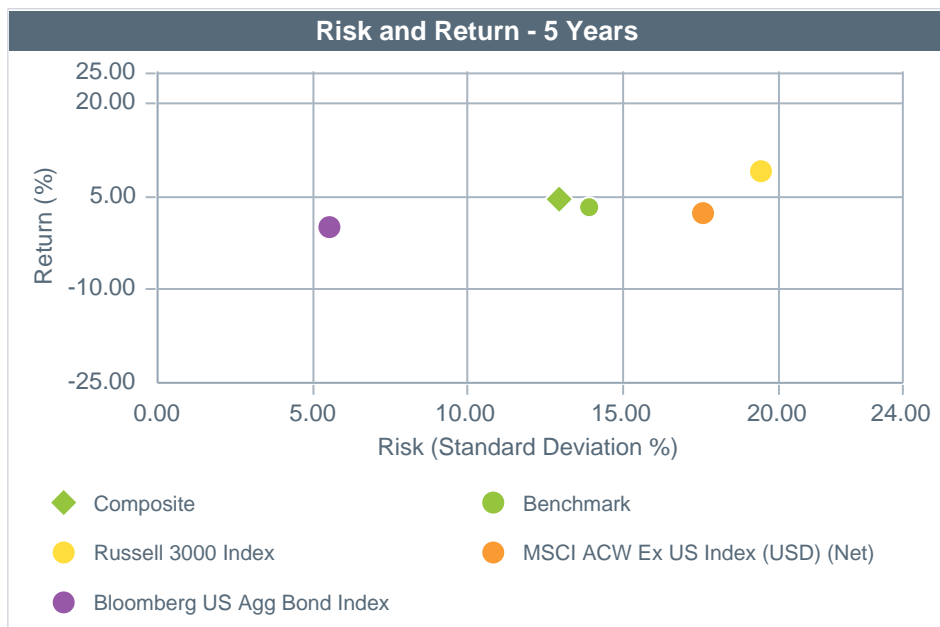
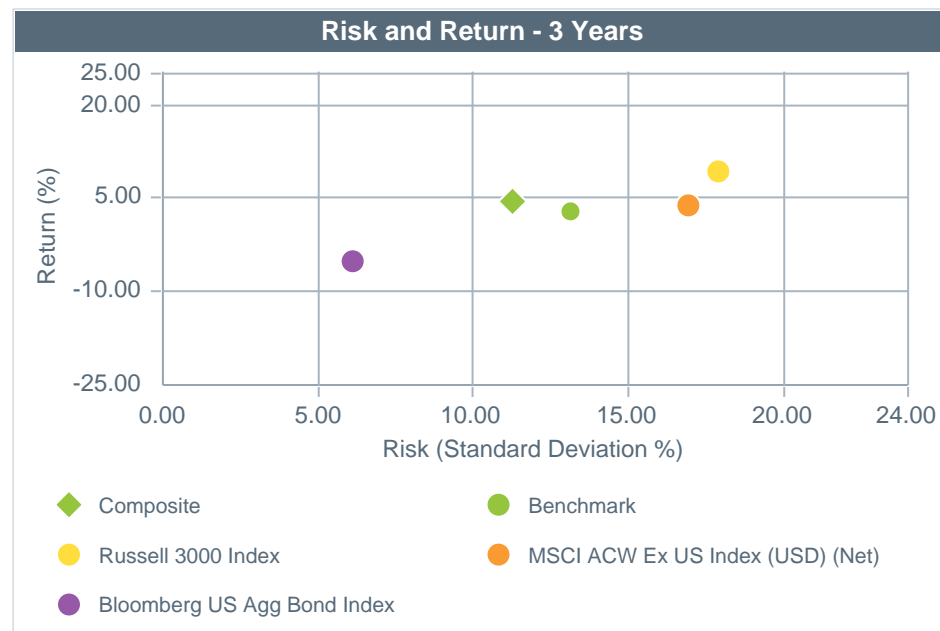
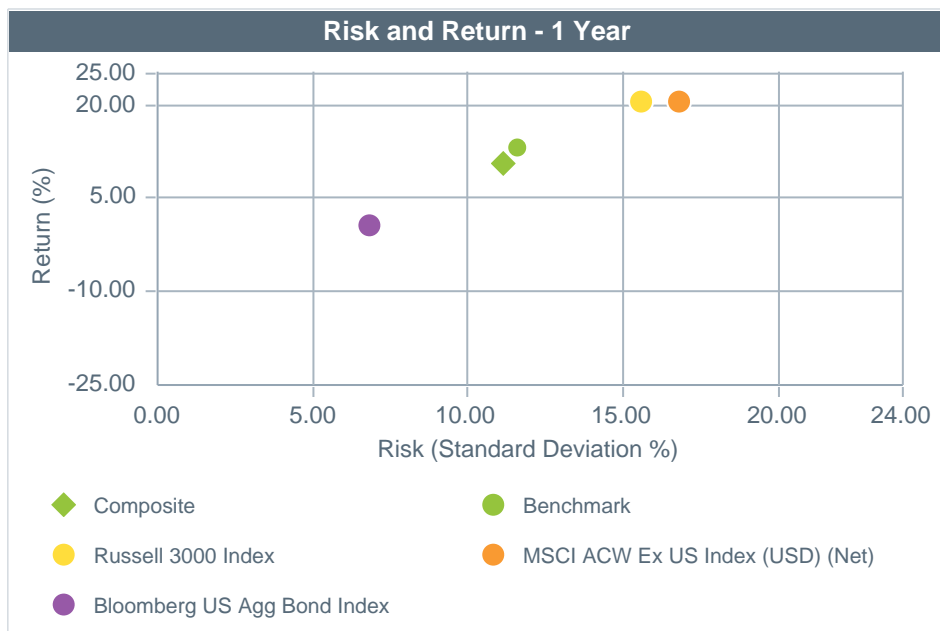
### Actual Correlation - 7 Years

	Actual Correlation
Multi-Asset Benchmark	0.96
S&P 500 Index (Market Cap Weighted)	0.89
Russell 2000 Index	0.81
MSCI EAFE Index (USD) (Net)	0.90
MSCI Emerging Markets Index (USD) (Net)	0.80
Bloomberg US Agg Bond Index	0.51
Bloomberg US Trsy US TIPS Index	0.61
Wilshire US REIT Index	0.82
HFN FOF Multi-Strat Index (Net)	0.79
Bloomberg Cmdb Index (TR)	0.55
ICE BofAML 3 Mo US T-Bill Index	-0.13
Consumer Price Index	-0.07
Multi-Asset	1.00



Performance shown is net of fees. Calculation is based on monthly periodicity. Performance is annualized for periods greater than one year. Downside Risk, Information Ratio, and Tracking Error shown are relative to the benchmark specified at the top of the page.



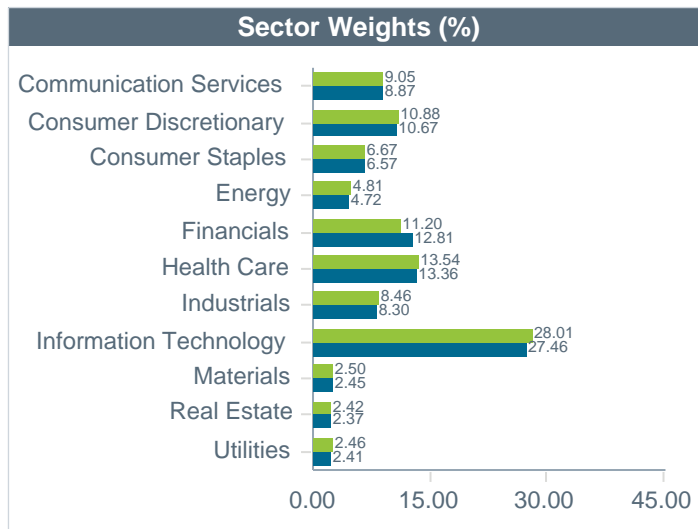
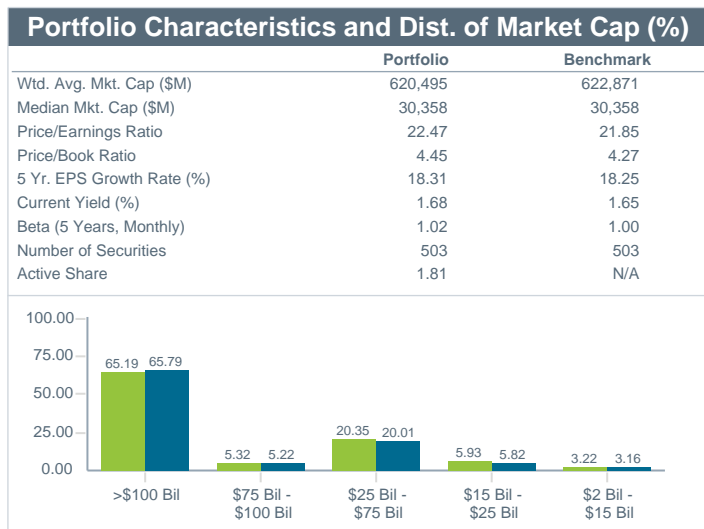
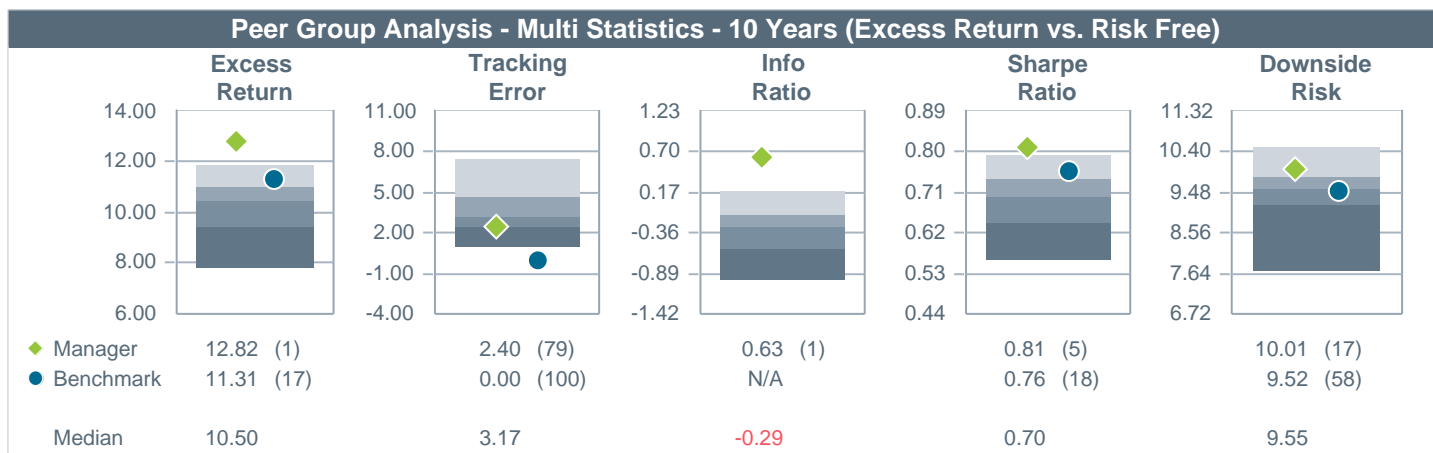
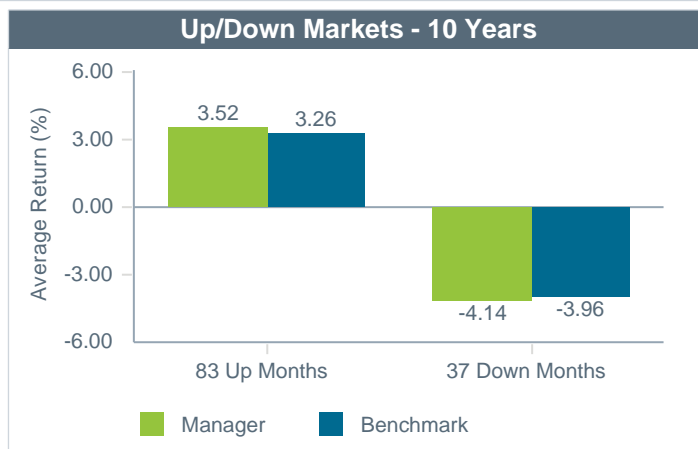
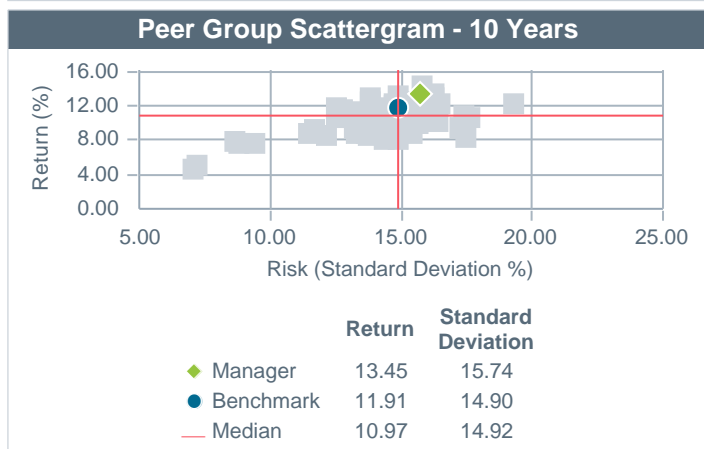


Performance shown is net of fees. The composite will not appear in the chart when there is less performance history than the specified time period.

# Investment Manager Profiles

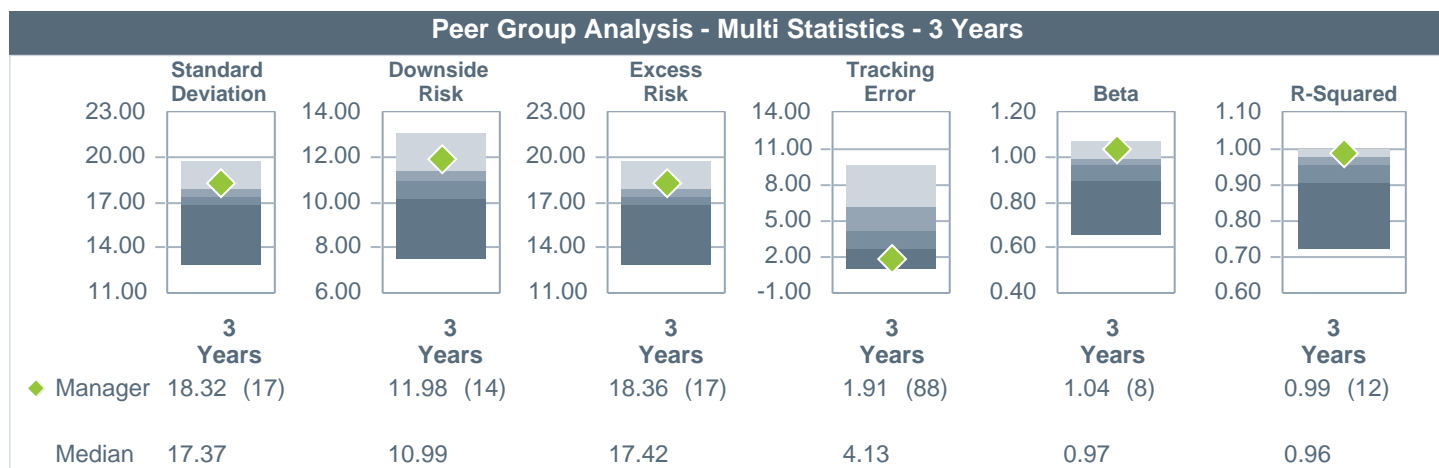
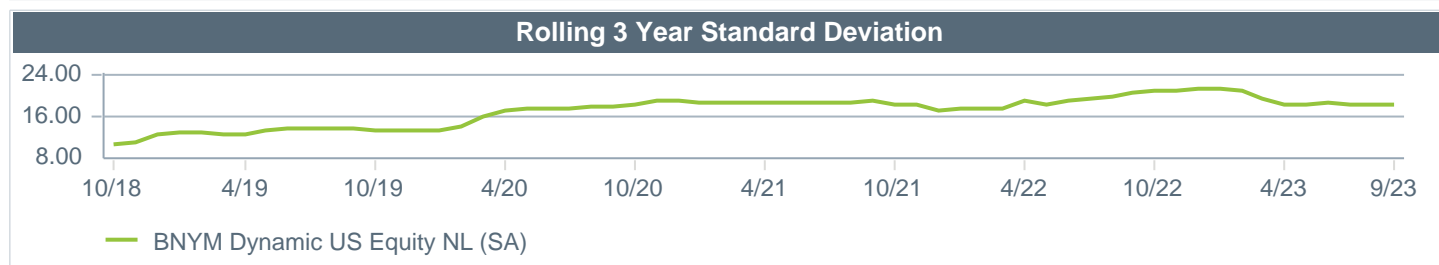
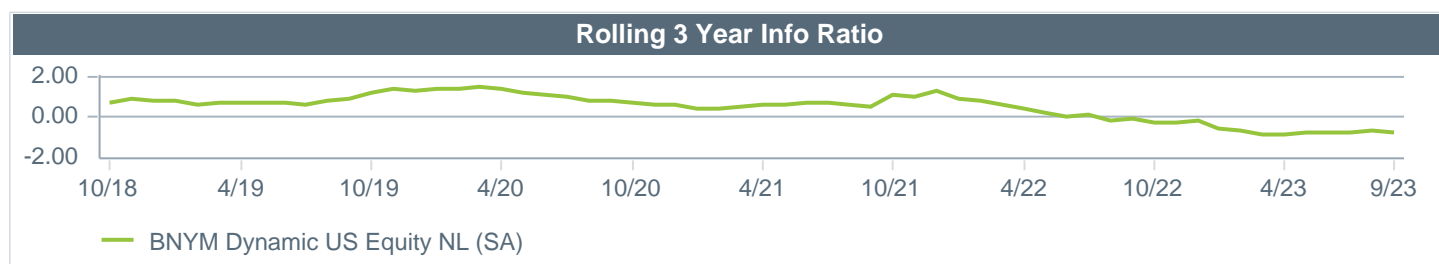
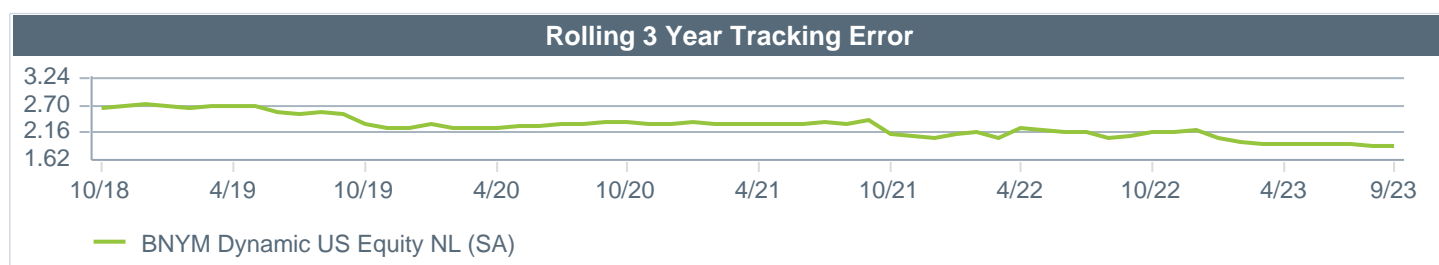
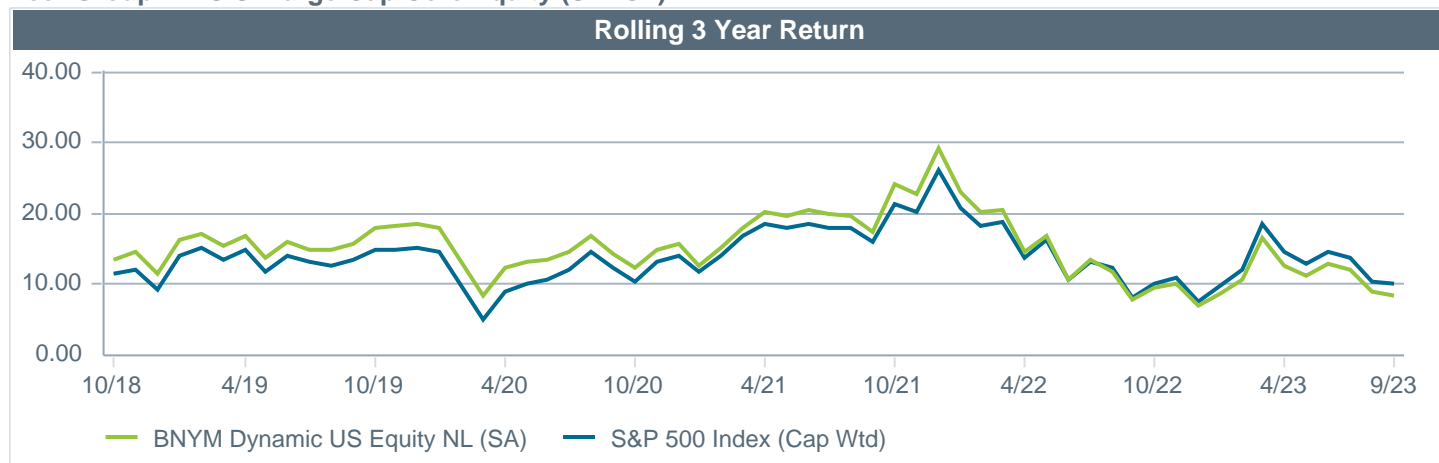


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
<b>Manager</b>	<b>-3.86</b>	<b>18.85</b>	<b>8.56</b>	<b>9.84</b>	<b>12.81</b>	<b>13.45</b>	<b>-21.43</b>	<b>30.92</b>	<b>19.59</b>	<b>38.20</b>	<b>-6.23</b>
Benchmark	-3.27	21.62	10.15	9.92	12.24	11.91	-18.11	28.71	18.40	31.49	-4.38
Difference	-0.59	-2.77	-1.59	-0.08	0.57	1.54	-3.32	2.21	1.19	6.71	-1.85
Peer Group Median	-3.02	19.95	9.08	8.53	11.18	10.97	-16.96	26.89	15.80	29.43	-5.65
Rank	82	59	63	21	11	1	92	16	33	4	60
Population	189	188	177	169	153	127	212	215	218	231	229



Performance shown is net of fees and client specific. Prior to the 11/2020 SA transition, performance is represented by product specific CF returns. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Portfolio characteristics and sector weight data shown is solely representative of the fund's long-only equity holdings.

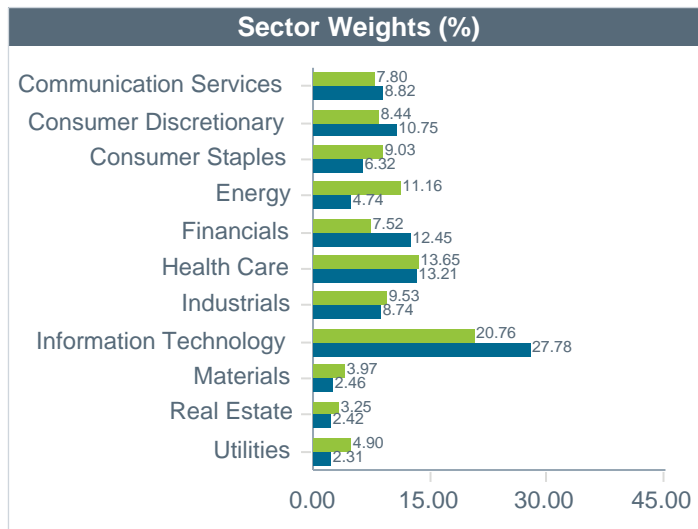
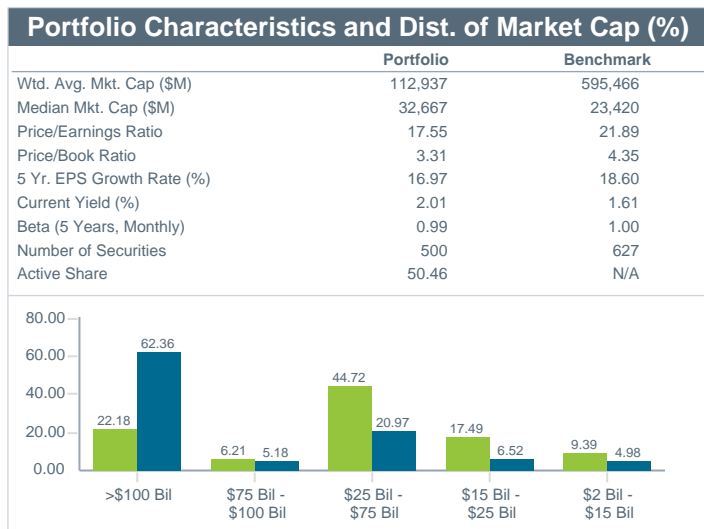
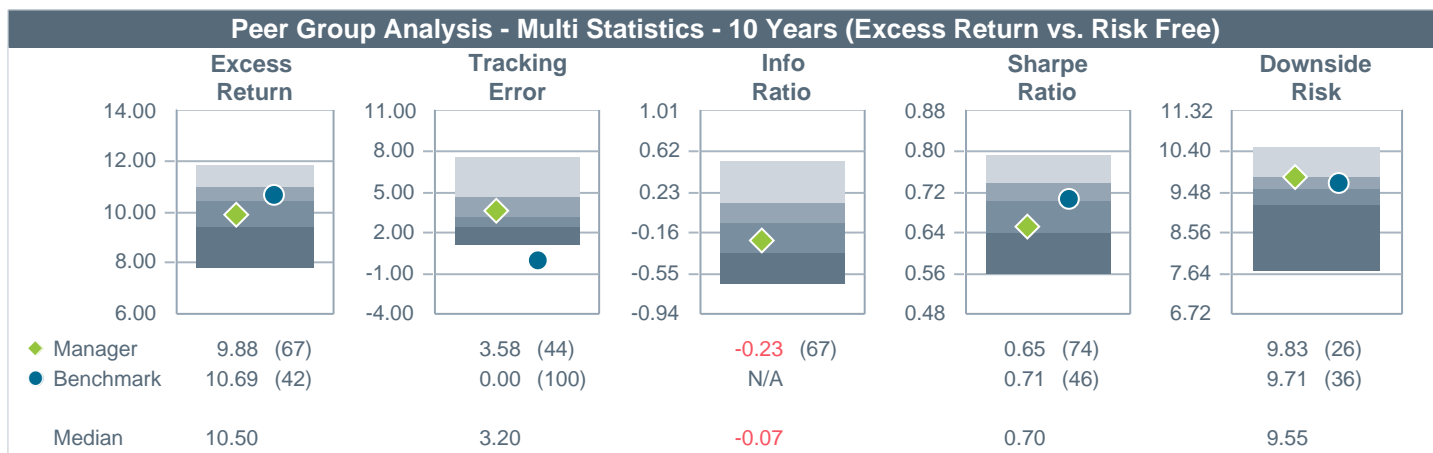
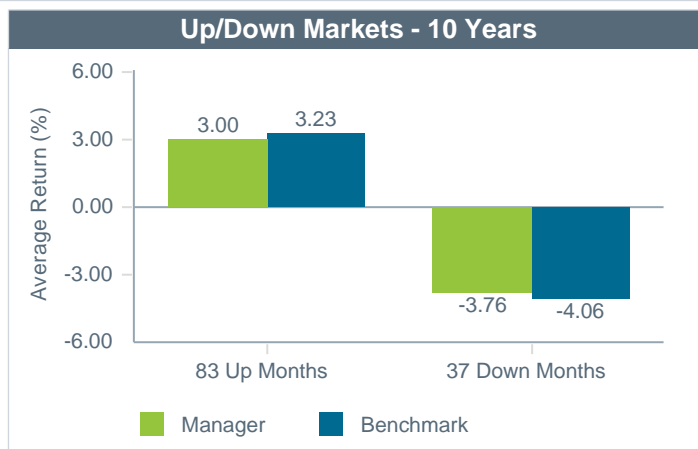
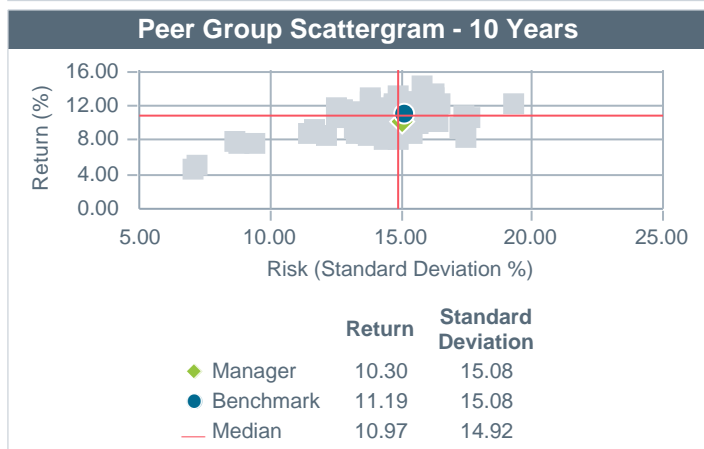




Performance shown is net of fees and client specific. Prior to the 11/2020 SA transition, performance is represented by product specific CF returns. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

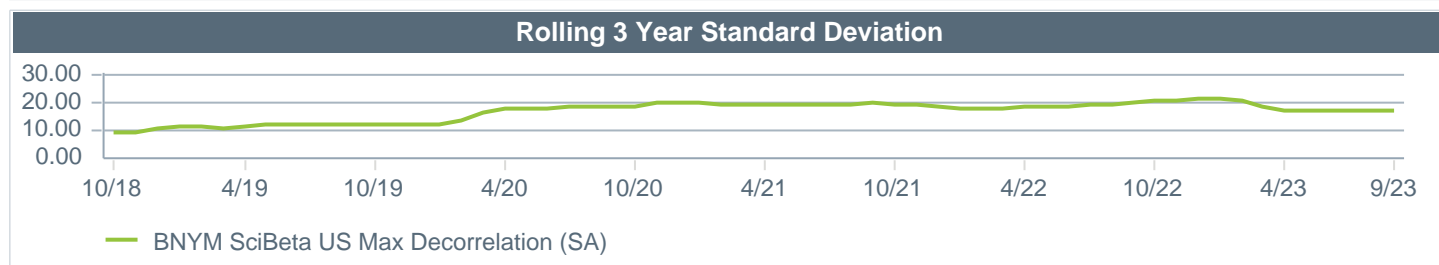
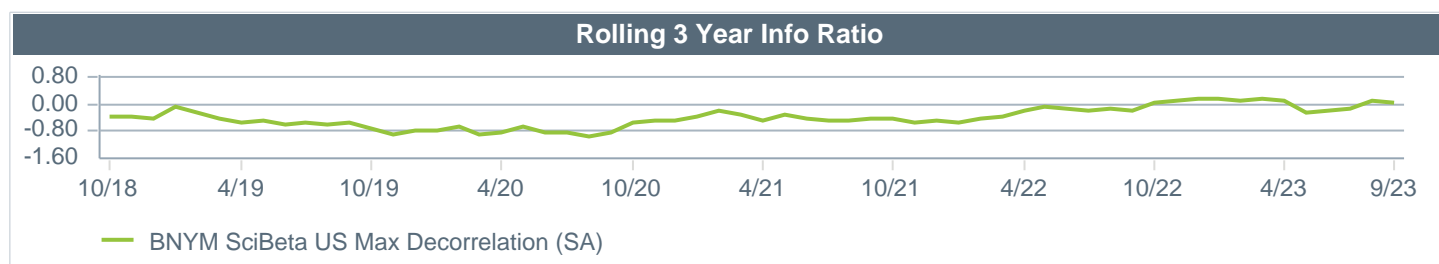
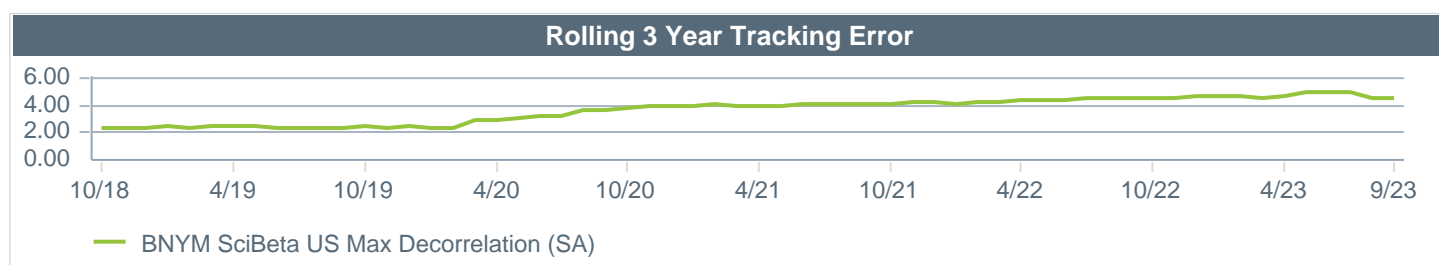
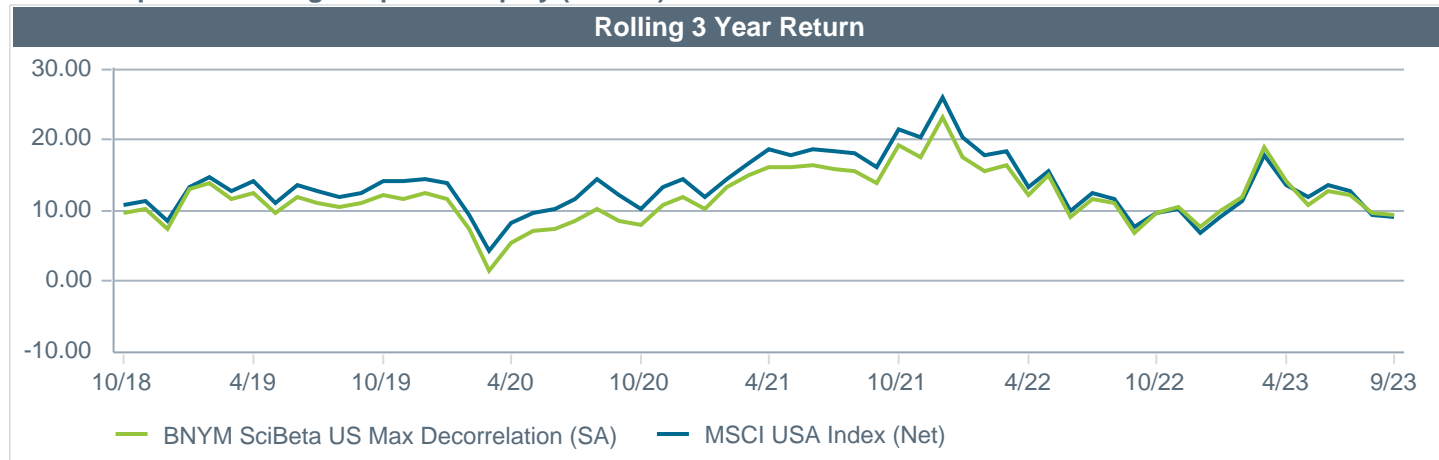


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.05	14.92	9.32	7.51	9.76	10.30	-13.31	23.99	16.09	29.69	-6.70
Benchmark	-3.18	21.03	9.02	9.32	11.60	11.19	-19.85	26.45	20.73	30.88	-5.04
Difference	0.13	-6.11	0.30	-1.81	-1.84	-0.89	6.54	-2.46	-4.64	-1.19	-1.66
Peer Group Median	-3.02	19.95	9.08	8.53	11.18	10.97	-16.96	26.89	15.80	29.43	-5.65
Rank	51	79	48	73	75	68	28	76	49	45	67
Population	189	188	177	169	153	127	212	215	218	231	229



Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with representative strategy index returns adjusted by the expense ratio at inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



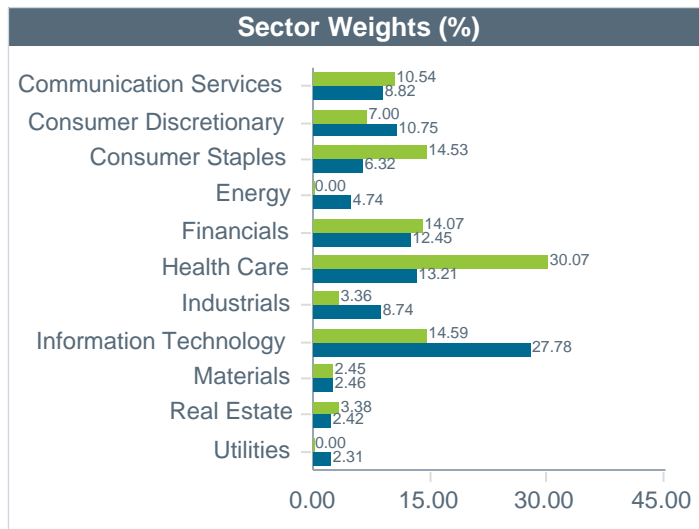
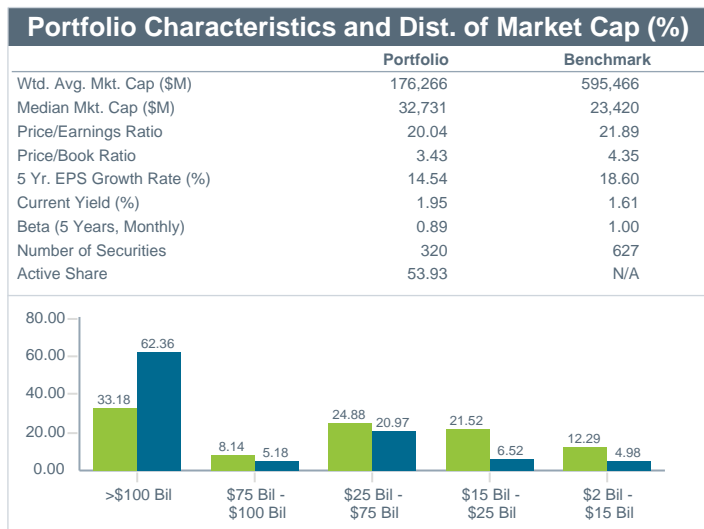
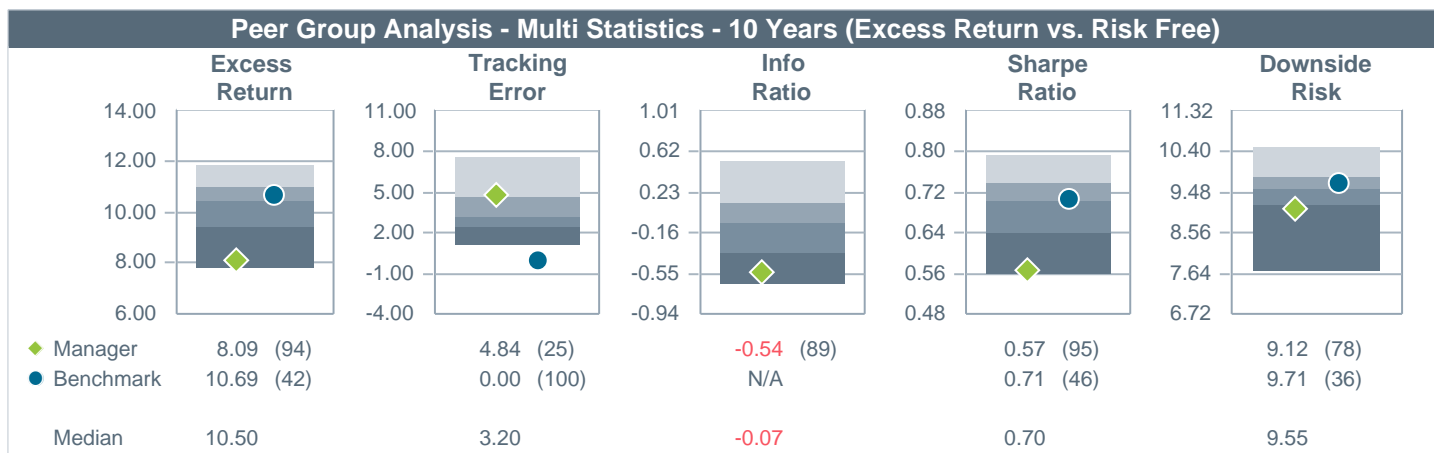
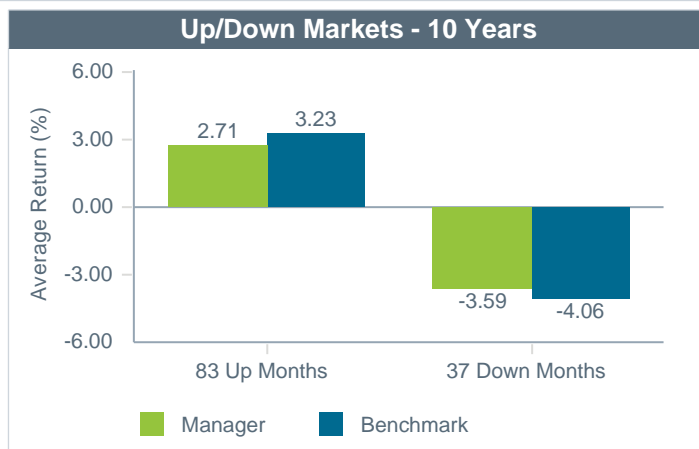
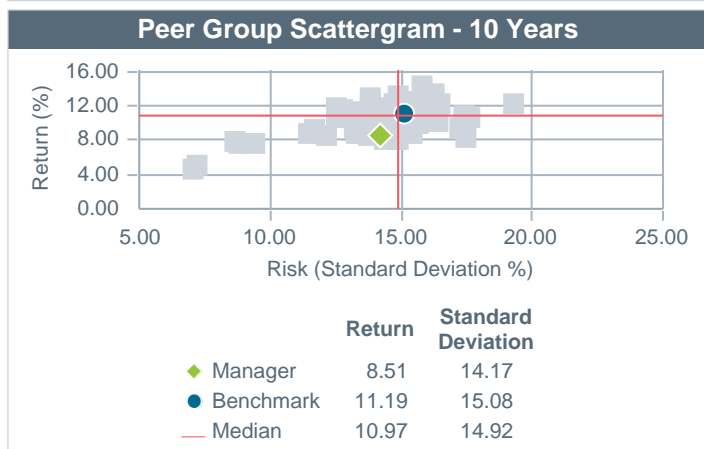


Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with representative strategy index returns adjusted by the expense ratio at inception. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.



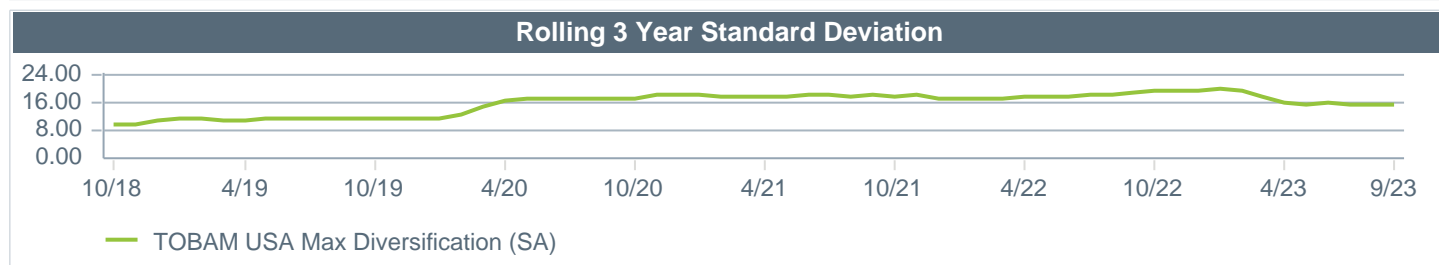
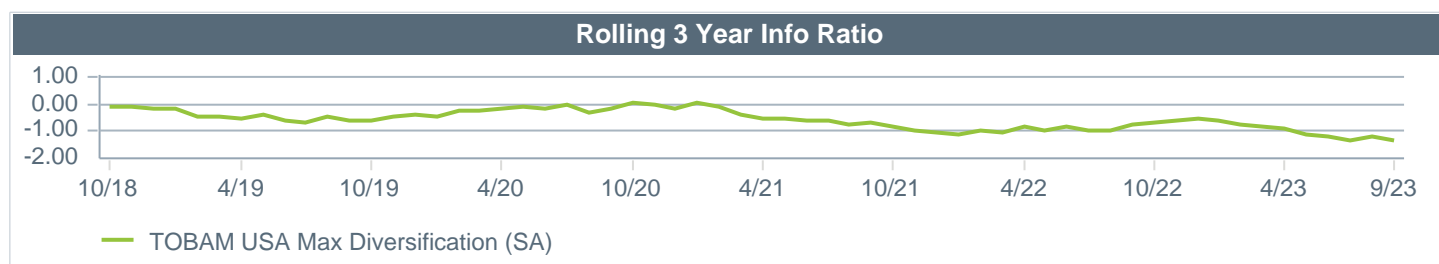
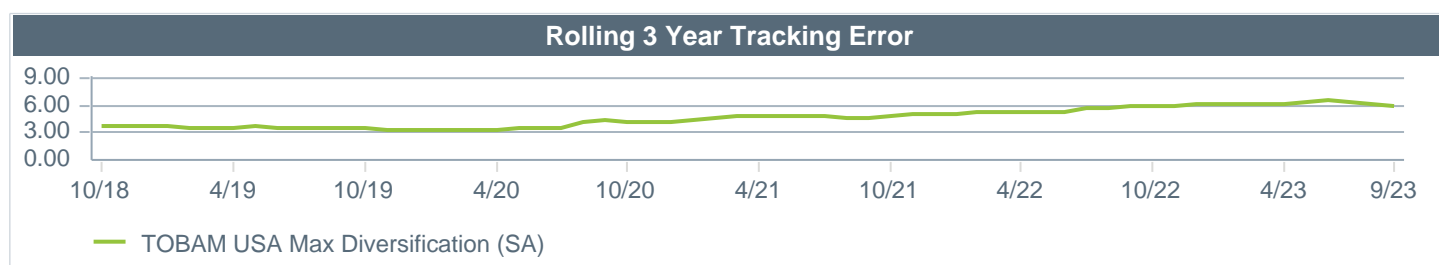
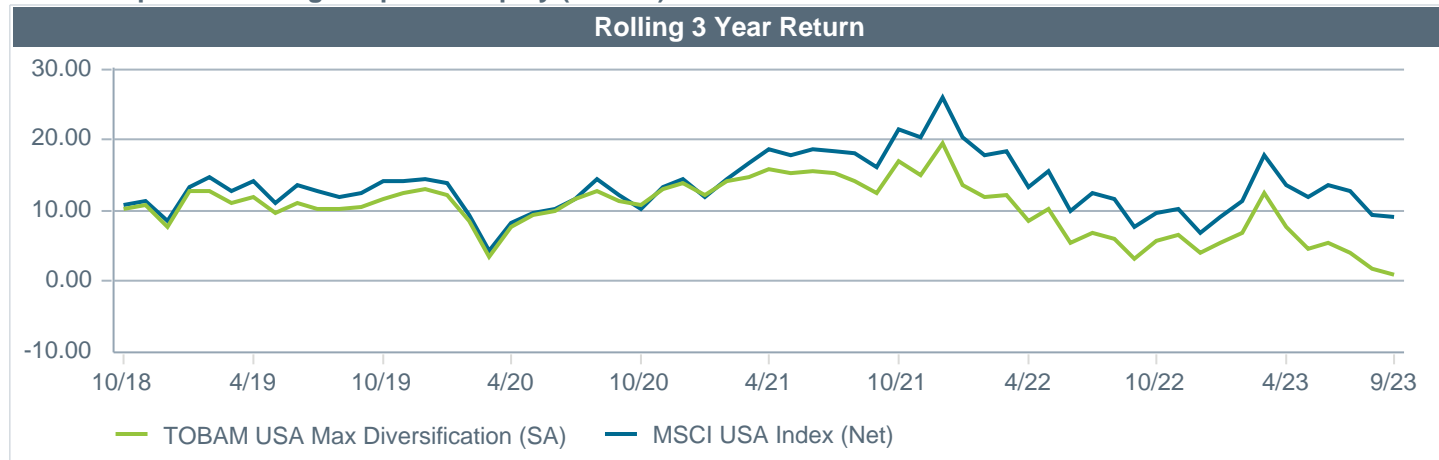


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-5.01	7.97	1.02	3.69	6.92	8.51	-16.30	10.81	21.76	26.78	-4.33
Benchmark	-3.18	21.03	9.02	9.32	11.60	11.19	-19.85	26.45	20.73	30.88	-5.04
Difference	-1.83	-13.06	-8.00	-5.63	-4.68	-2.68	3.55	-15.64	1.03	-4.10	0.71
Peer Group Median	-3.02	19.95	9.08	8.53	11.18	10.97	-16.96	26.89	15.80	29.43	-5.65
Rank	94	99	99	98	97	94	45	100	23	72	32
Population	189	188	177	169	153	127	212	215	218	231	229



Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with representative strategy index returns adjusted by the expense ratio at inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

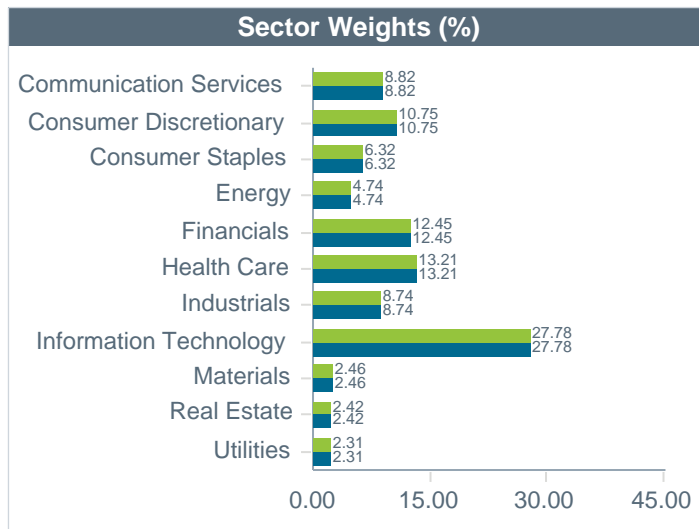
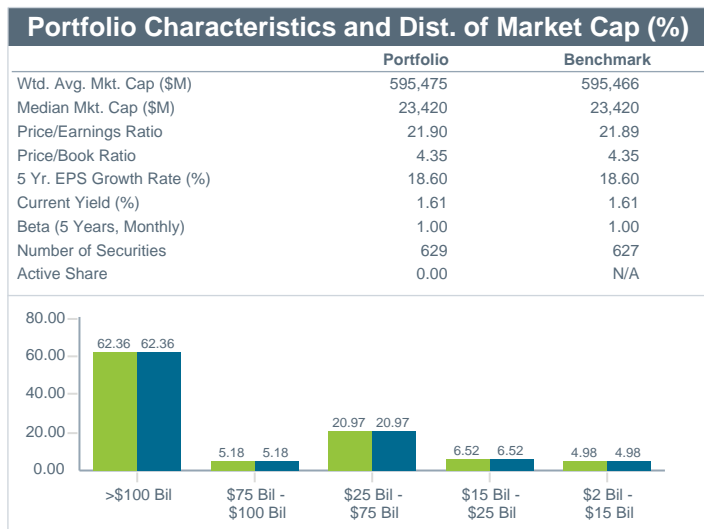
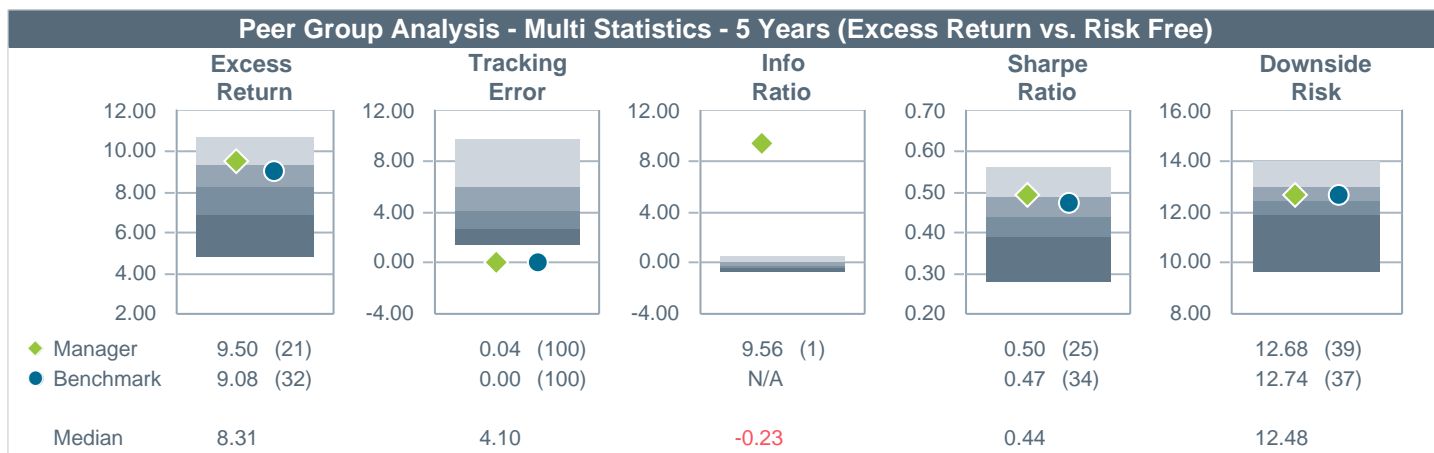
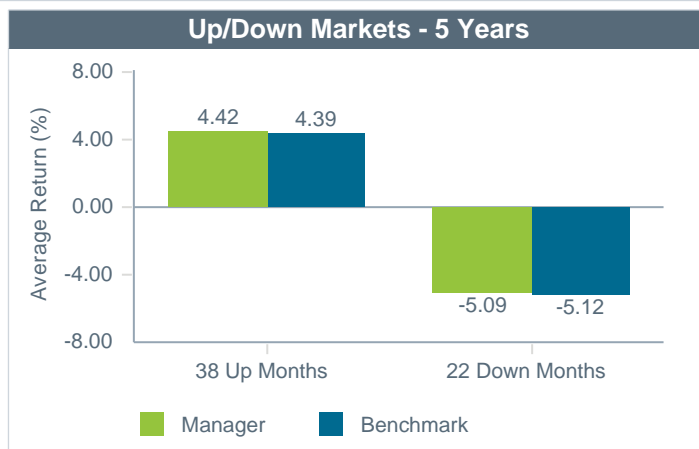
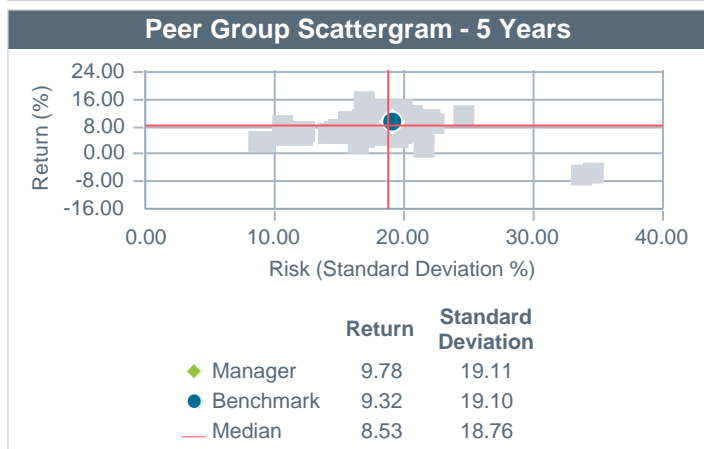




Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with representative strategy index returns adjusted by the expense ratio at inception. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

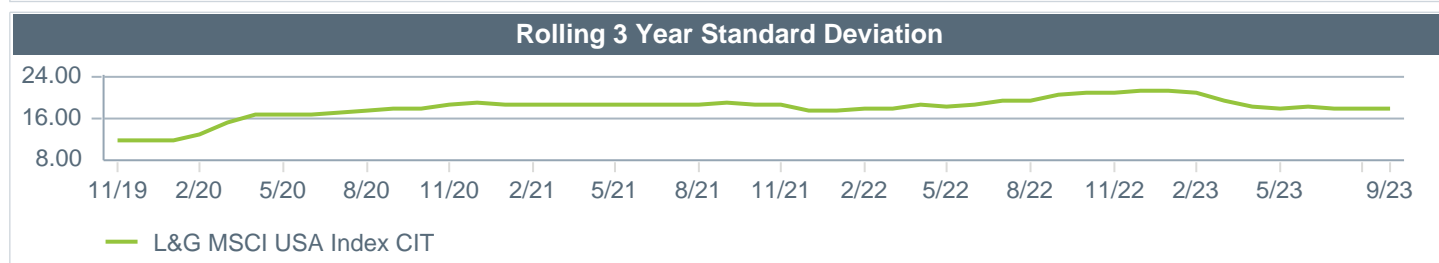
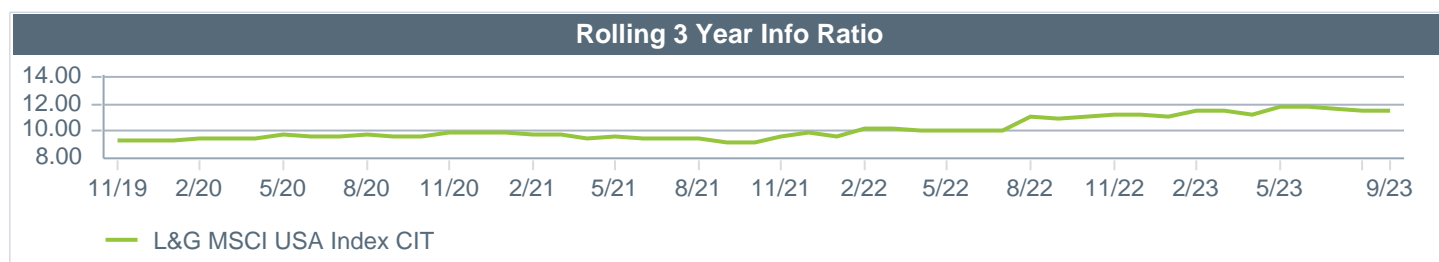
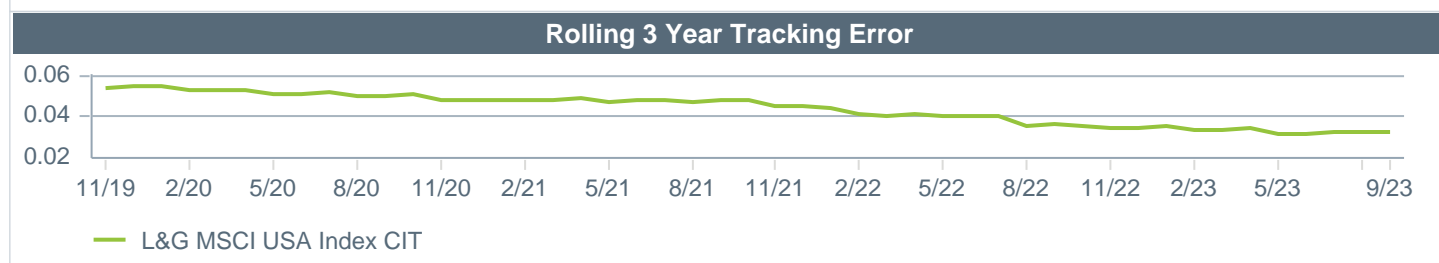
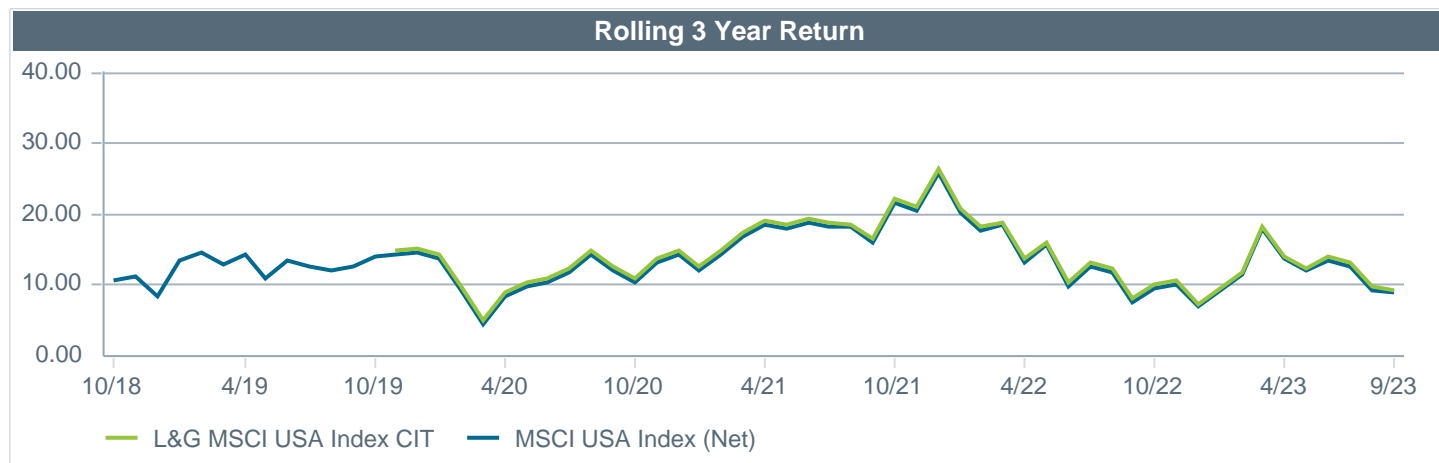


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.08	21.51	9.43	9.78	N/A	N/A	-19.52	26.88	21.26	31.56	-4.61
Benchmark	-3.18	21.03	9.02	9.32	11.60	11.19	-19.85	26.45	20.73	30.88	-5.04
Difference	0.10	0.48	0.41	0.46	N/A	N/A	0.33	0.43	0.53	0.68	0.43
Peer Group Median	-3.02	19.95	9.08	8.53	11.18	10.97	-16.96	26.89	15.80	29.43	-5.65
Rank	52	29	46	22	N/A	N/A	78	51	24	25	36
Population	189	188	177	169	153	127	212	215	218	231	229



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





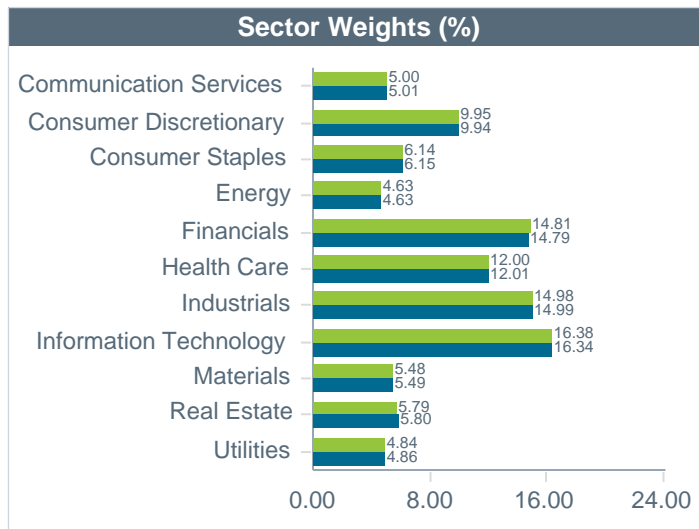
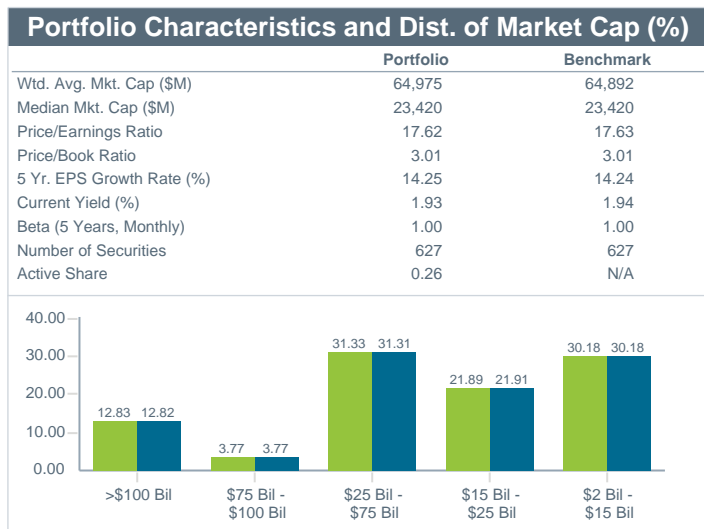
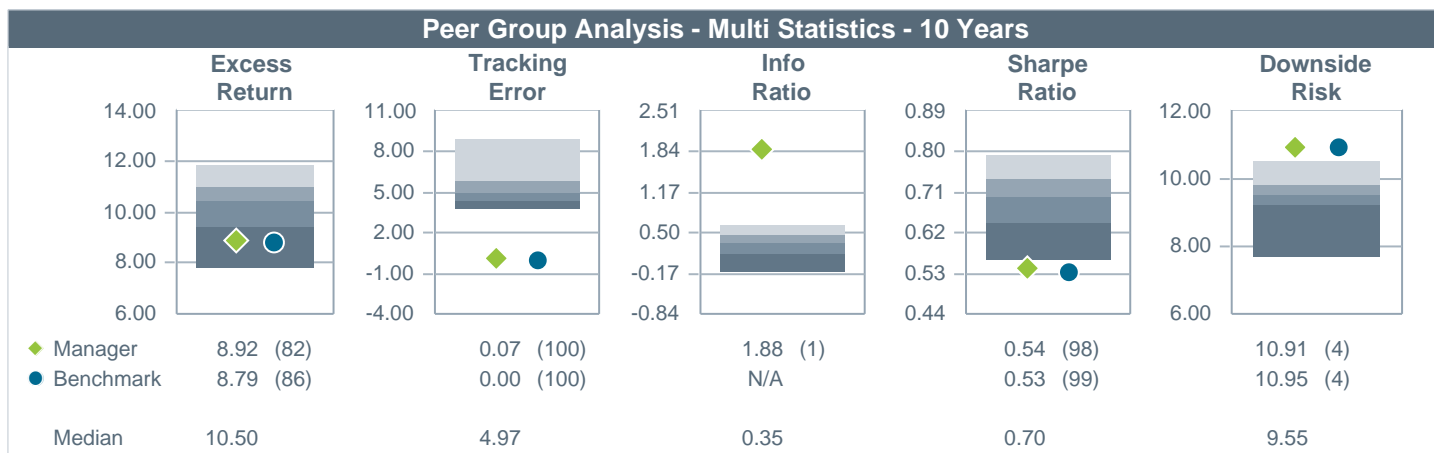
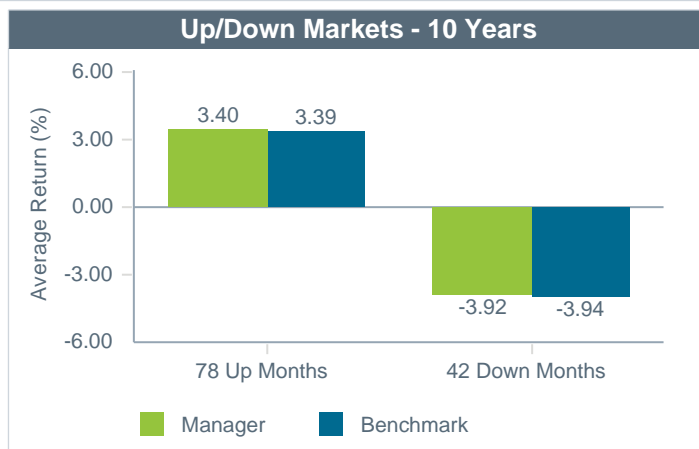
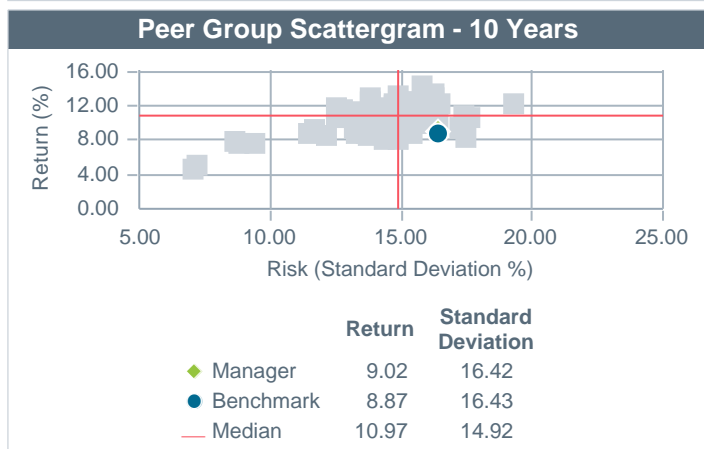
### Peer Group Analysis - Multi Statistics - 3 Years



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

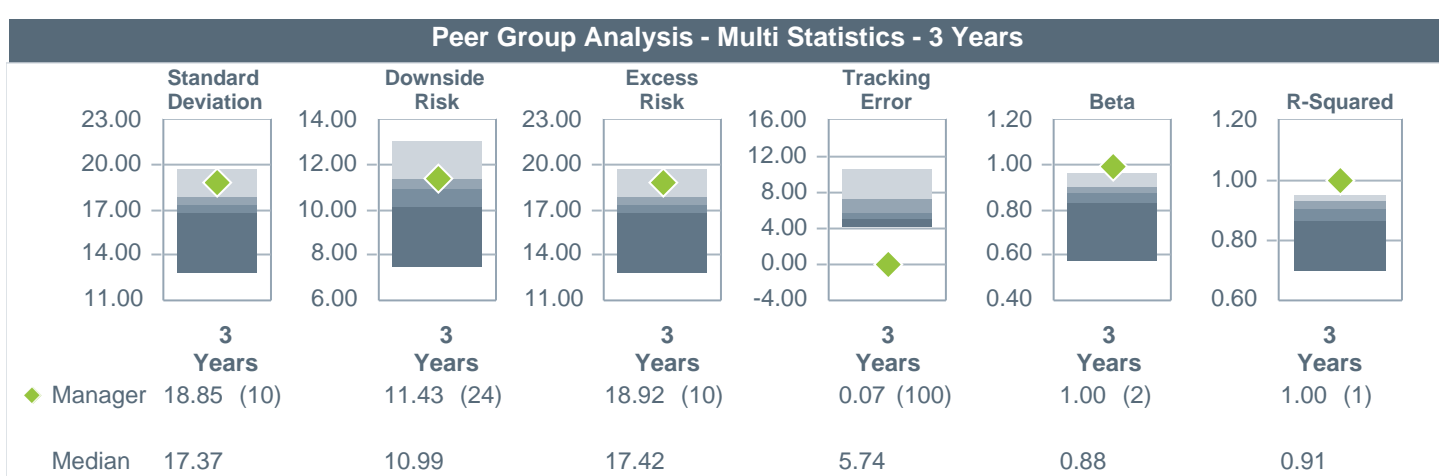
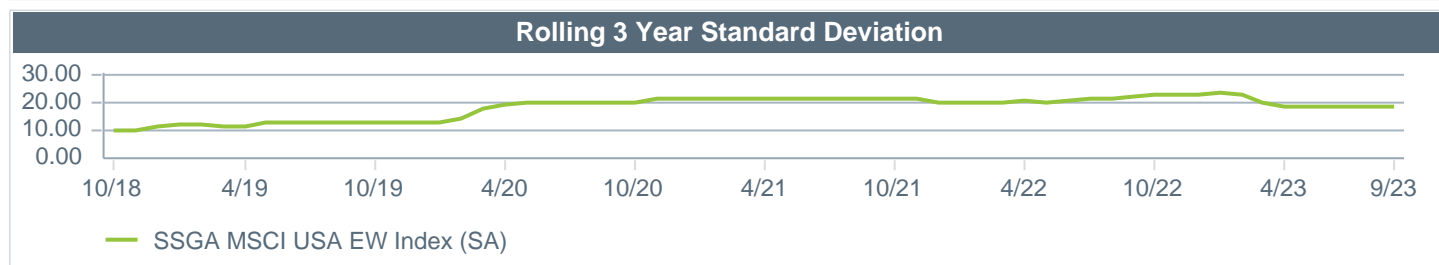
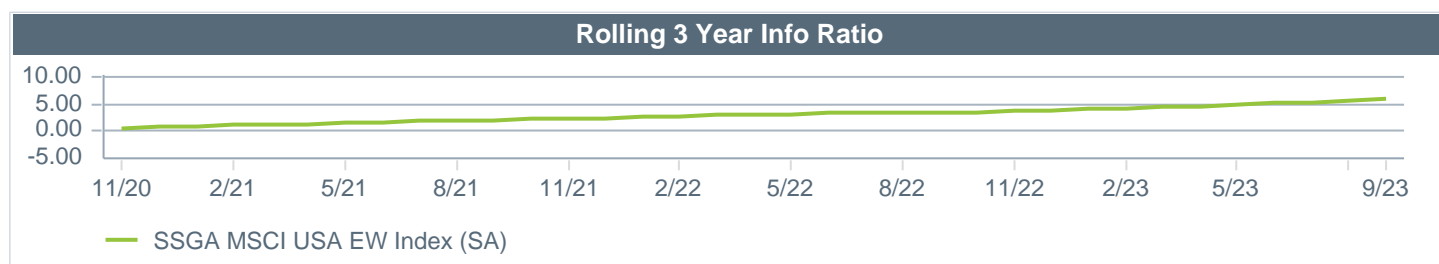
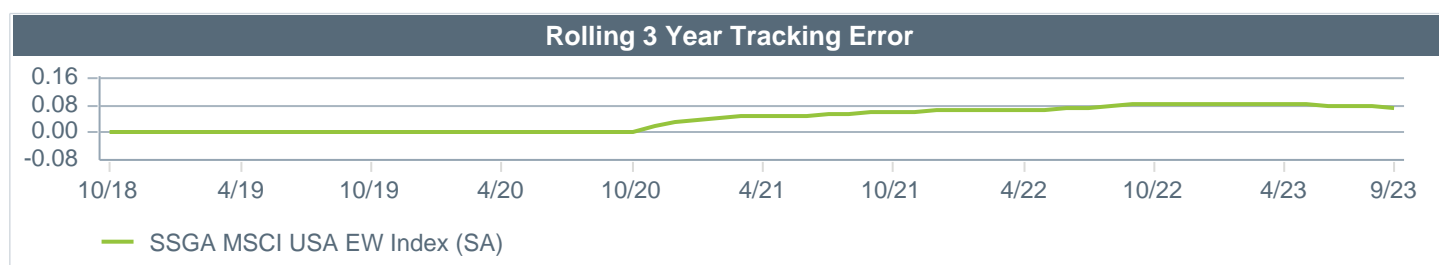
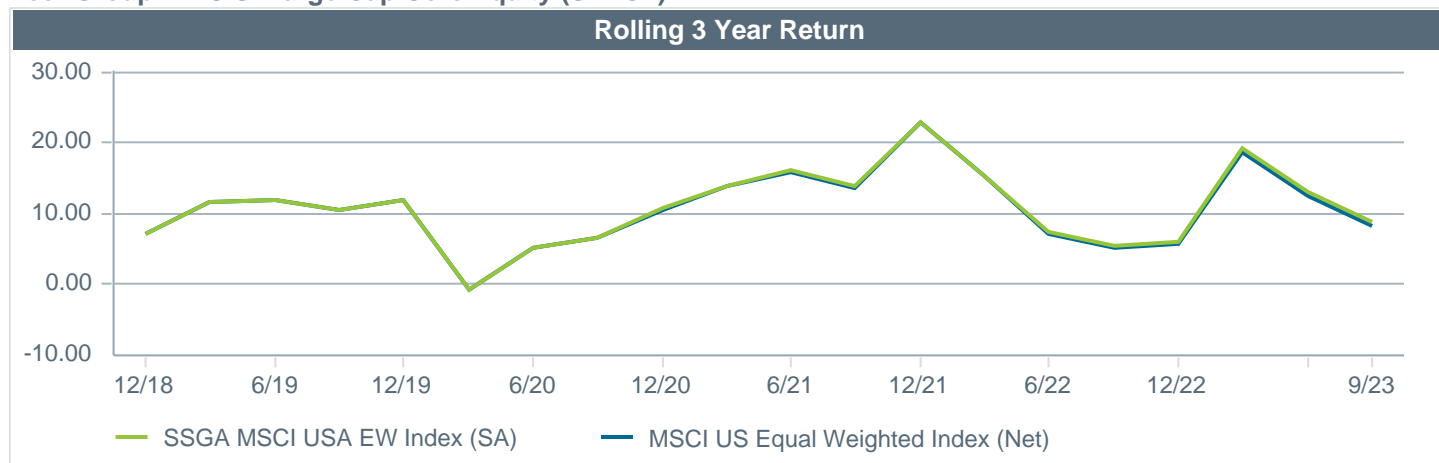


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
<b>Manager</b>	<b>-4.04</b>	<b>14.46</b>	<b>8.83</b>	<b>6.57</b>	<b>8.85</b>	<b>9.02</b>	<b>-16.97</b>	<b>25.61</b>	<b>14.71</b>	<b>29.34</b>	<b>-8.55</b>
Benchmark	-4.16	13.90	8.34	6.28	8.63	8.87	-17.42	25.13	14.62	29.34	-8.55
Difference	0.12	0.56	0.49	0.29	0.22	0.15	0.45	0.48	0.09	0.00	0.00
Peer Group Median	-3.02	19.95	9.08	8.53	11.18	10.97	-16.96	26.89	15.80	29.43	-5.65
Rank	84	80	56	85	88	88	51	60	61	52	87
Population	189	188	177	169	153	127	212	215	218	231	229



Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with MSCI USA Equal Weighted Index (Net) returns. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

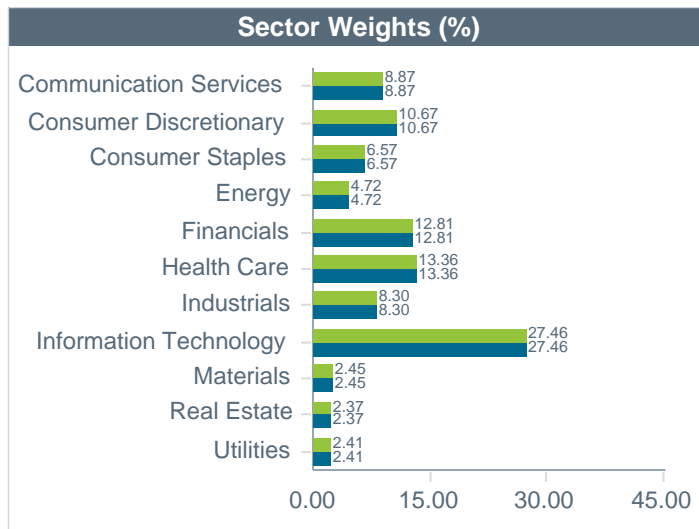
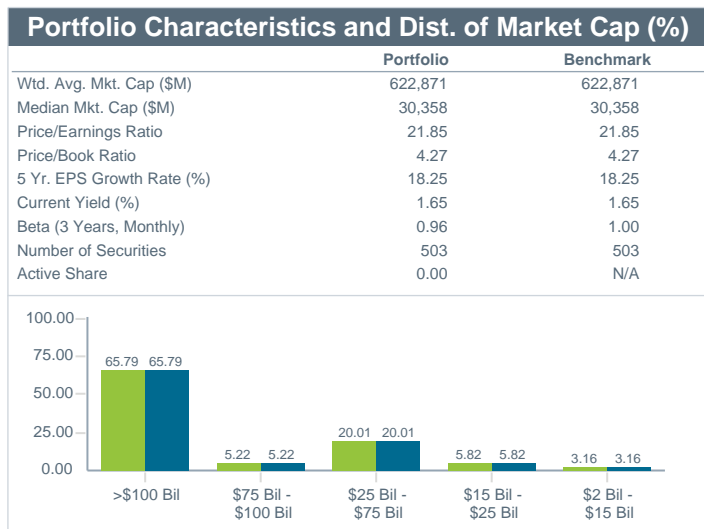
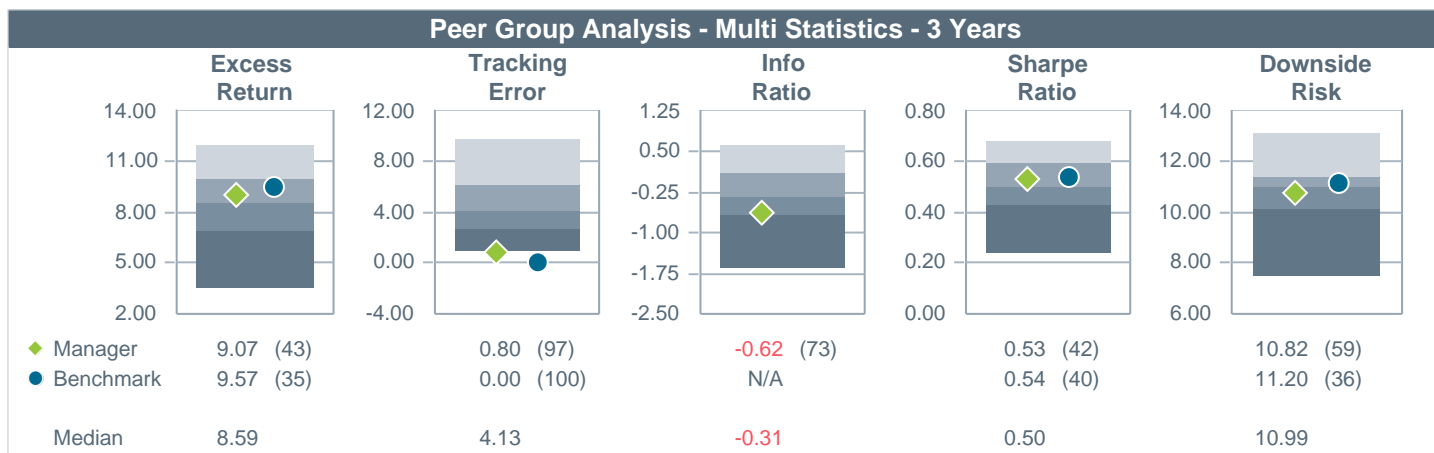
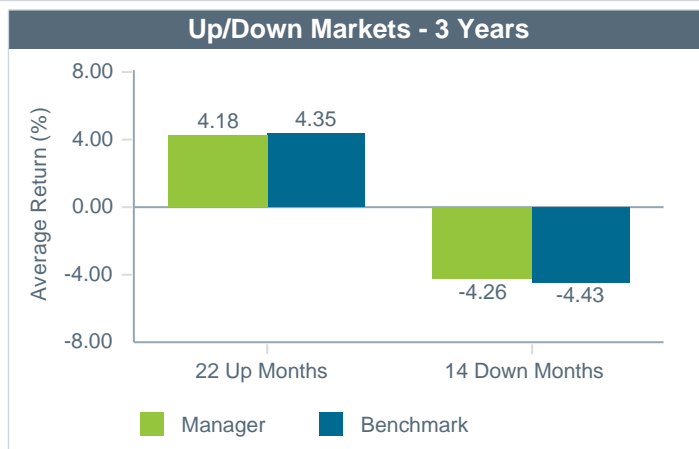
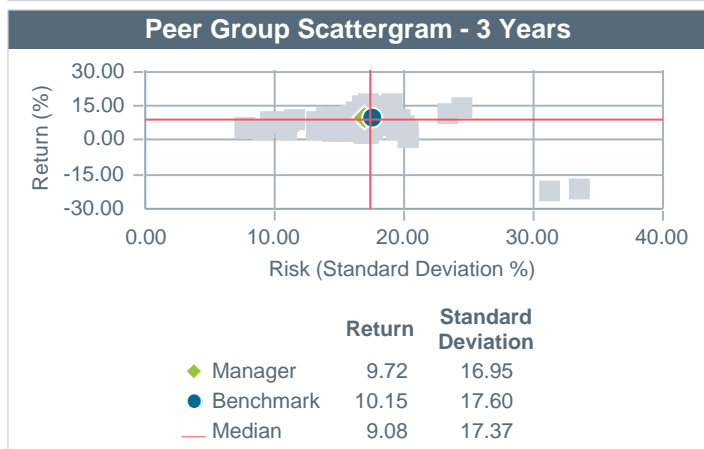




Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with MSCI USA Equal Weighted Index (Net) returns. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

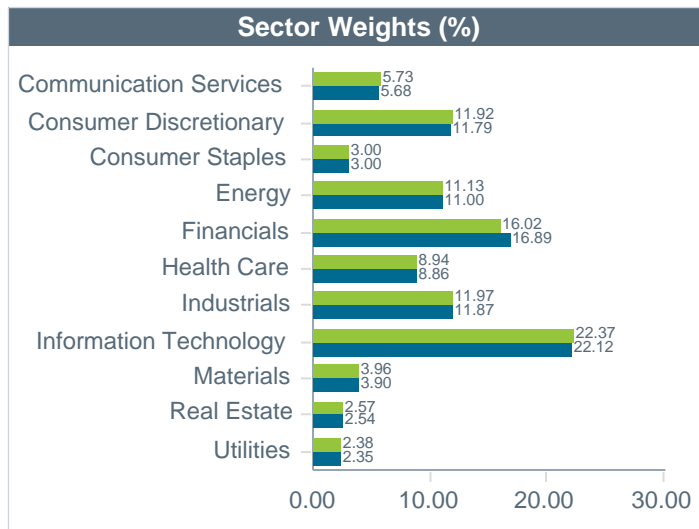
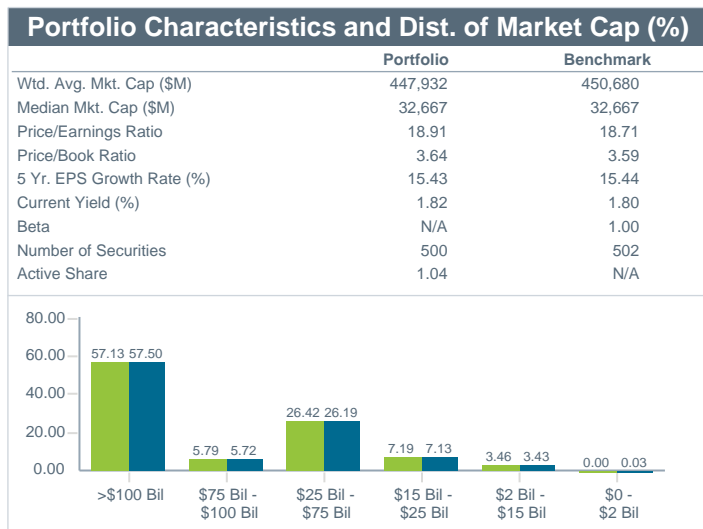
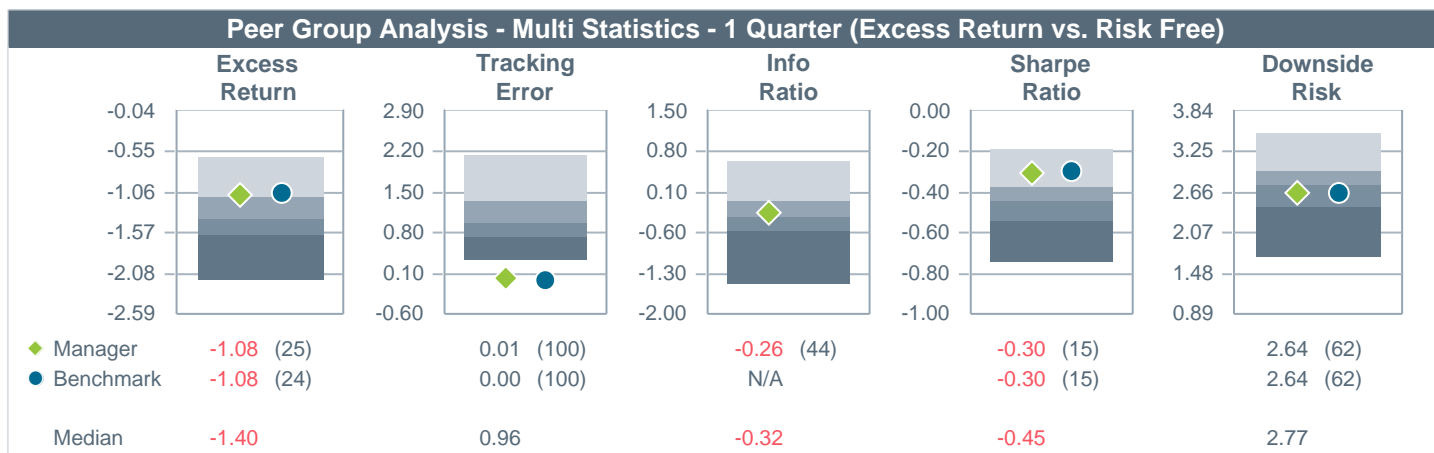
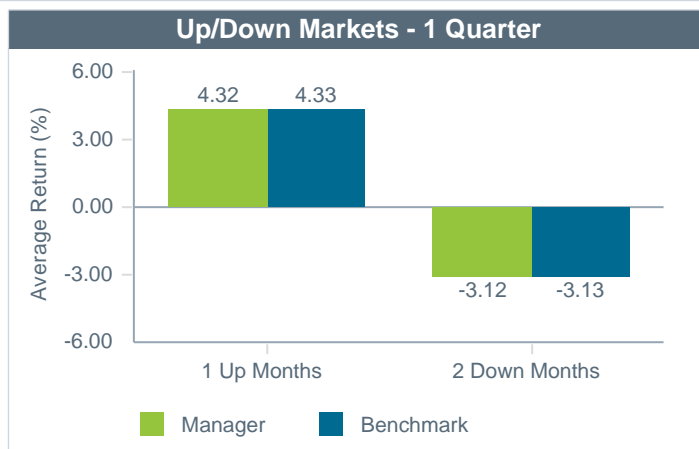
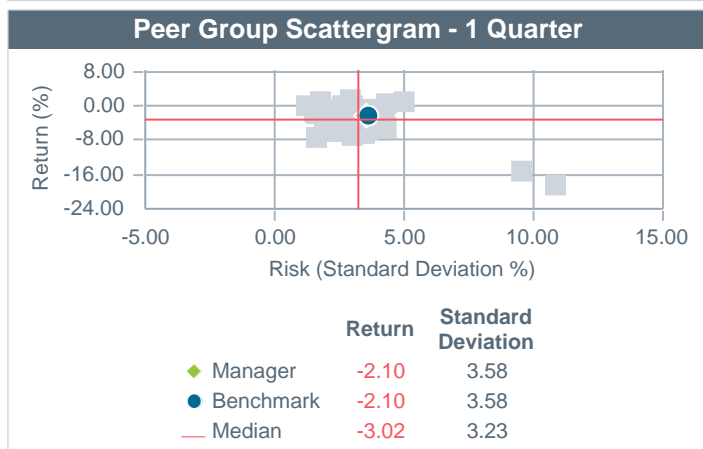


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.23	19.98	9.72	N/A	N/A	N/A	-17.92	28.14	N/A	N/A	N/A
Benchmark	-3.27	21.62	10.15	9.92	12.24	11.91	-18.11	28.71	18.40	31.49	-4.38
Difference	0.04	-1.64	-0.43	N/A	N/A	N/A	0.19	-0.57	N/A	N/A	N/A
Peer Group Median	-3.02	19.95	9.08	8.53	11.18	10.97	-16.96	26.89	15.80	29.43	-5.65
Rank	60	50	43	N/A	N/A	N/A	58	38	N/A	N/A	N/A
Population	189	188	177	169	153	127	212	215	218	231	229



Performance shown is net 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	2022	2021	2020	2019	2018
Manager	-2.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benchmark	-2.10	17.67	N/A	N/A	N/A	N/A	-16.31	N/A	N/A	N/A	N/A
Difference	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Peer Group Median	-2.10	17.67	N/A	N/A	N/A	N/A	-16.31	N/A	N/A	N/A	N/A
Difference	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

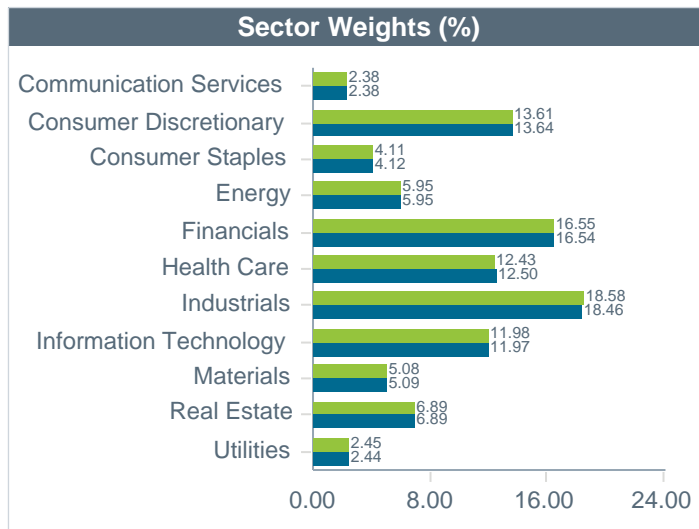
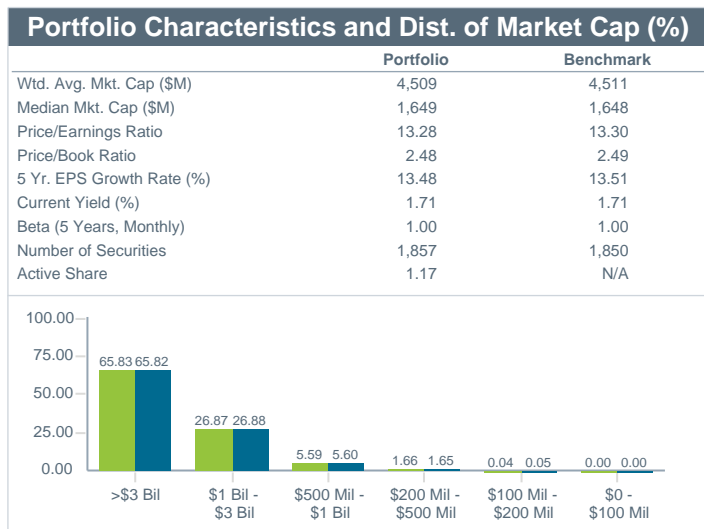
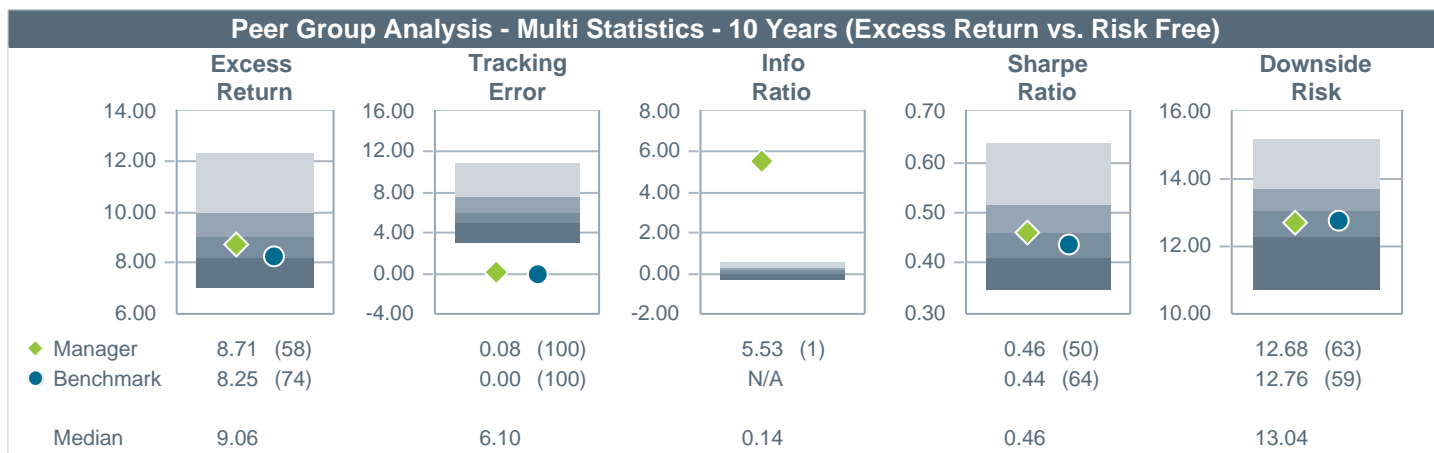
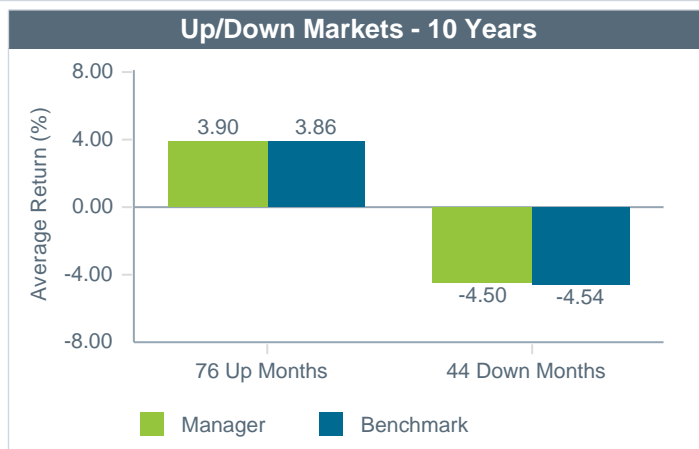
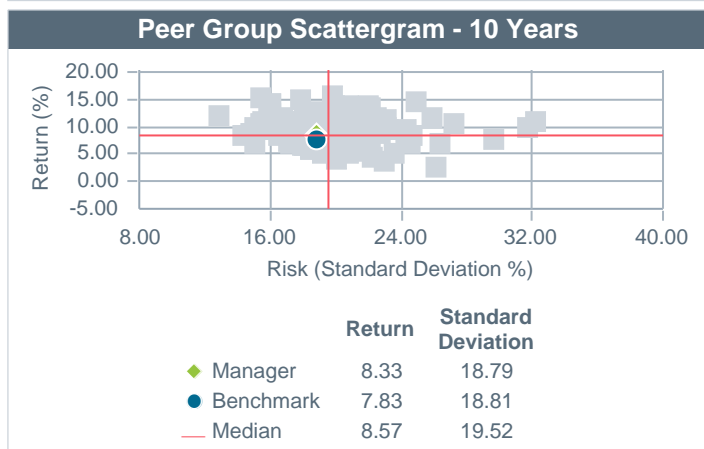


Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

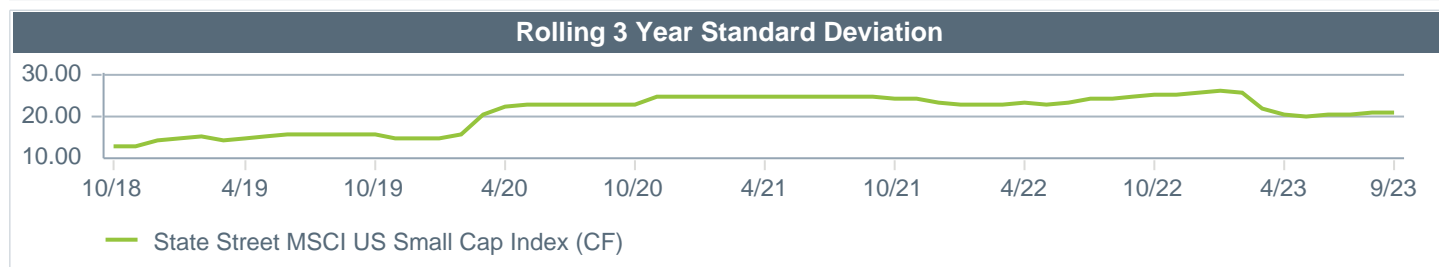
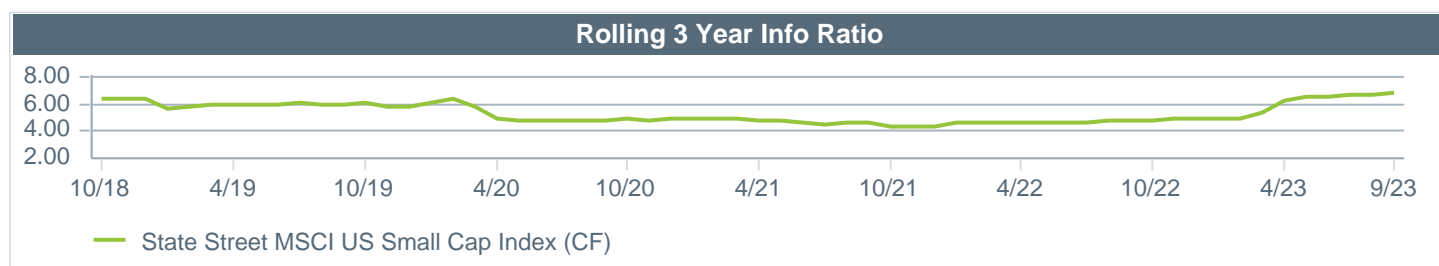
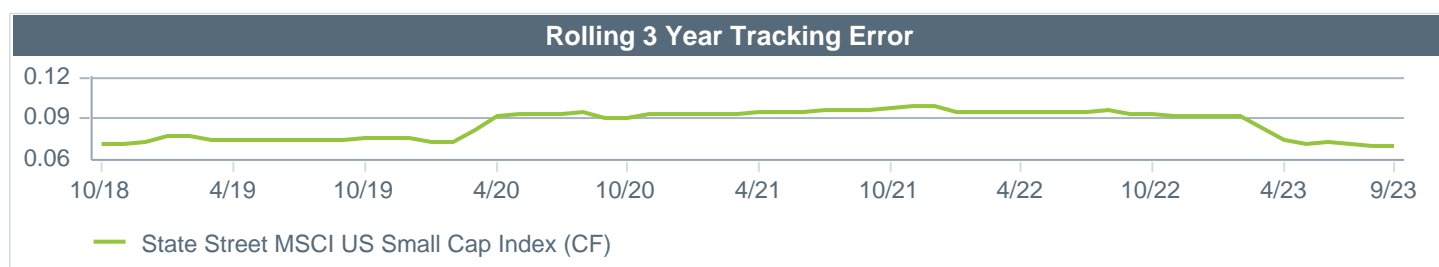
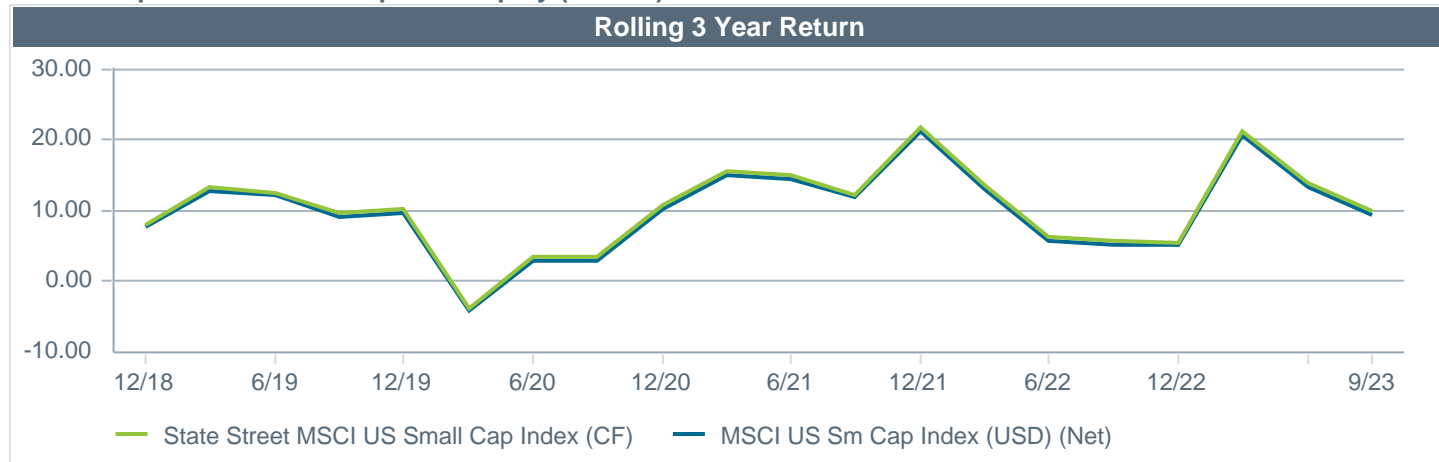




Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-4.89	12.38	9.95	4.86	8.42	8.33	-17.11	19.58	18.89	27.31	-9.98
Benchmark	-4.99	11.81	9.43	4.36	7.92	7.83	-17.55	19.11	18.32	26.74	-10.40
Difference	0.10	0.57	0.52	0.50	0.50	0.50	0.44	0.47	0.57	0.57	0.42
Peer Group Median	-4.34	12.83	11.14	5.11	8.85	8.57	-16.55	23.76	17.43	25.80	-10.30
Rank	59	54	57	55	58	56	54	64	48	39	49
Population	439	439	429	415	405	380	495	521	551	575	623



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



### Peer Group Analysis - Multi Statistics - 3 Years

	Standard Deviation	Downside Risk	Excess Risk	Tracking Error	Beta	R-Squared
23.67	15.62	23.67	8.00	1.08	1.04	
22.84	14.68	22.84	5.00	1.04	1.00	
22.01	13.74	22.01	2.00	1.00	0.96	
21.18	12.80	21.18	-1.00	0.96	0.92	
20.35	11.86	20.35		0.92		
19.52	10.92	19.52				
<b>3 Years</b>	<b>3 Years</b>	<b>3 Years</b>	<b>3 Years</b>	<b>3 Years</b>	<b>3 Years</b>	<b>3 Years</b>
◆ Manager 21.06 (85)	12.31 (92)	21.15 (85)	0.07 (100)	1.00 (82)	1.00 (1)	
Median 22.05	13.21	22.14	4.02	1.02	0.97	

Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

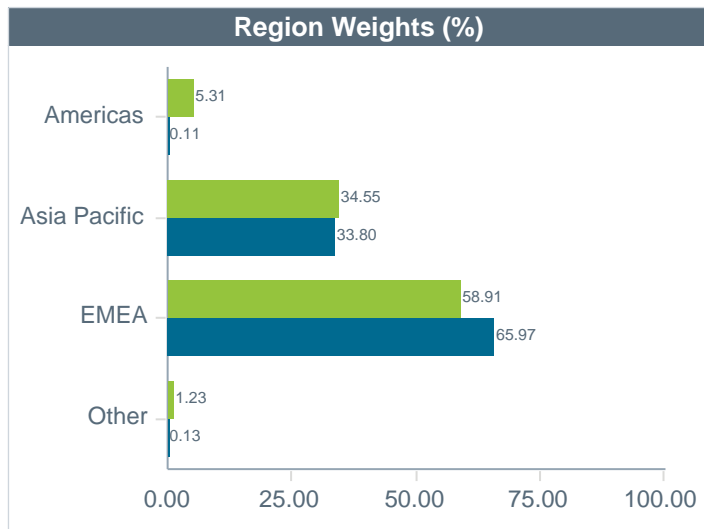
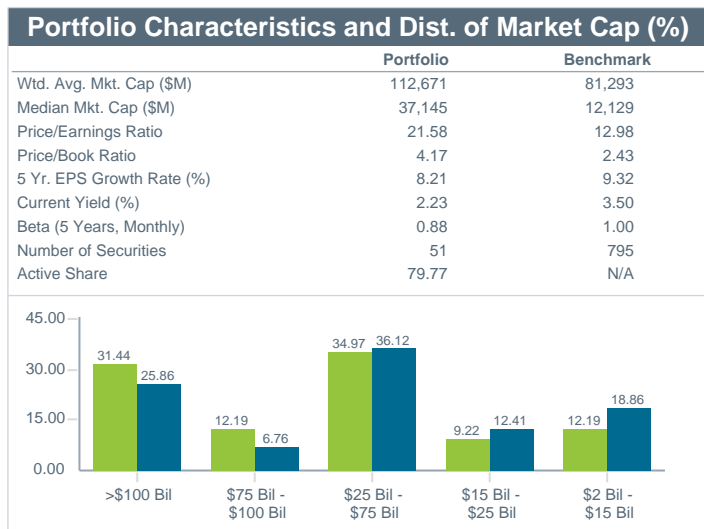
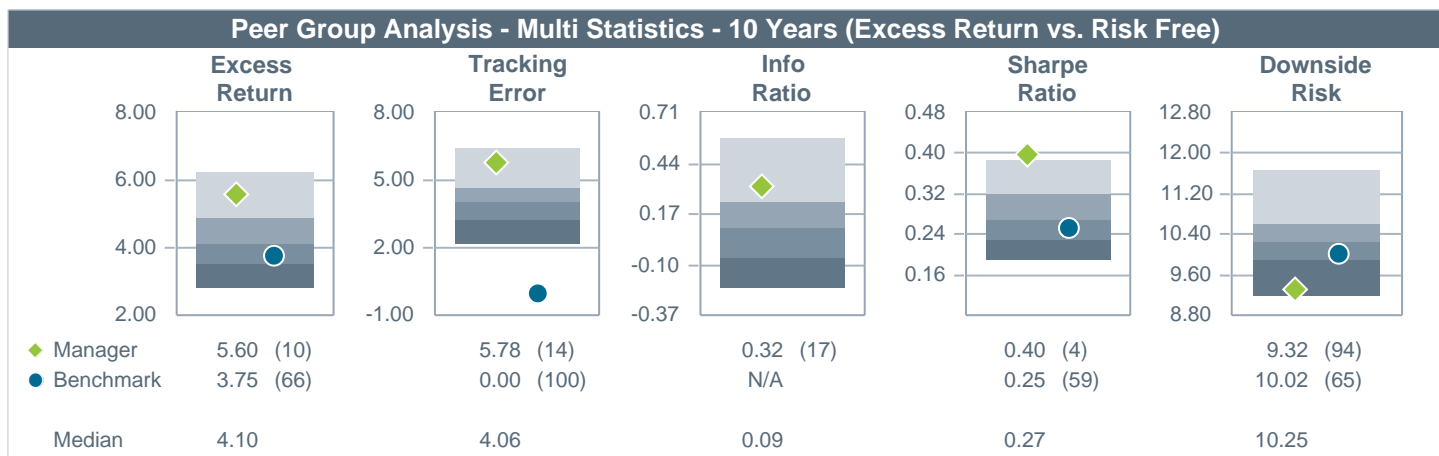
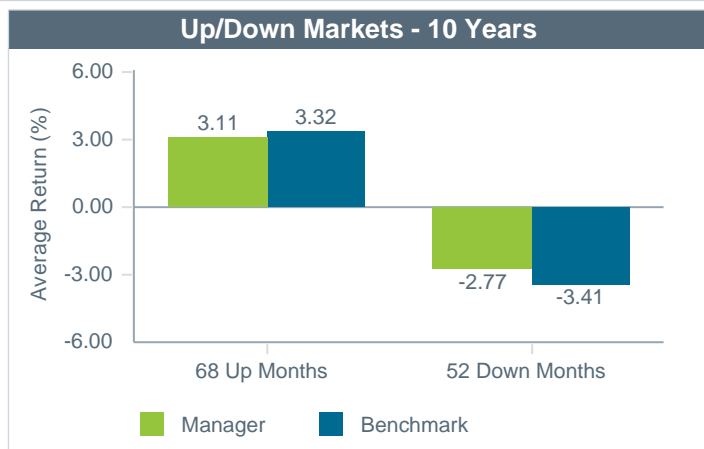
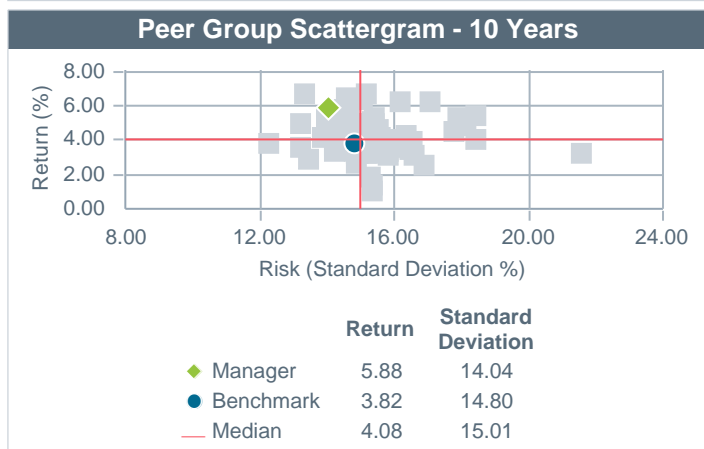
Manager: Walter Scott Dev Mkts Int'l Equity (SA)

As of September 30, 2023

Benchmark: MSCI EAFE Index (USD) (Net)

Peer Group: IM All EAFE (SA+CF)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-10.14	19.56	0.38	5.01	6.98	5.88	-22.80	12.72	21.06	28.30	-7.00
Benchmark	-4.11	25.65	5.75	3.24	5.29	3.82	-14.45	11.26	7.82	22.01	-13.79
Difference	-6.03	-6.09	-5.37	1.77	1.69	2.06	-8.35	1.46	13.24	6.29	6.79
Peer Group Median	-4.48	24.65	5.10	3.08	5.17	4.08	-15.44	11.89	8.97	22.39	-15.10
Rank	95	82	89	13	11	7	90	40	12	12	1
Population	100	100	100	100	95	92	112	120	125	135	136



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

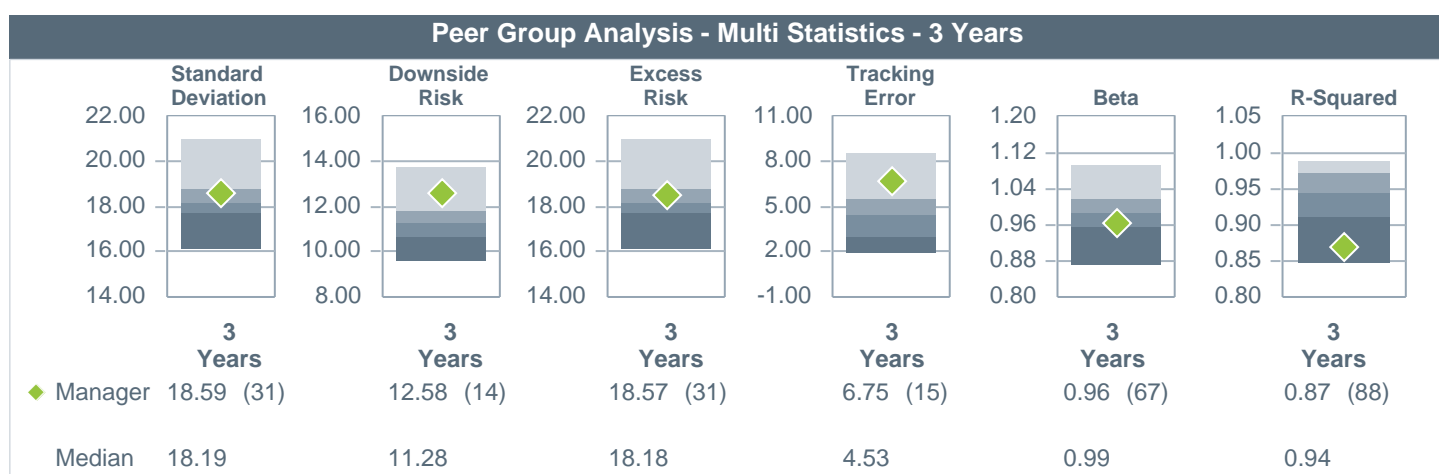
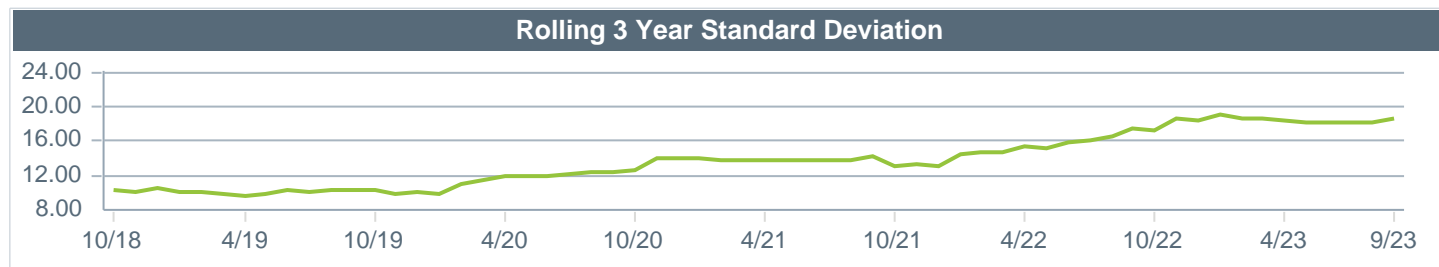
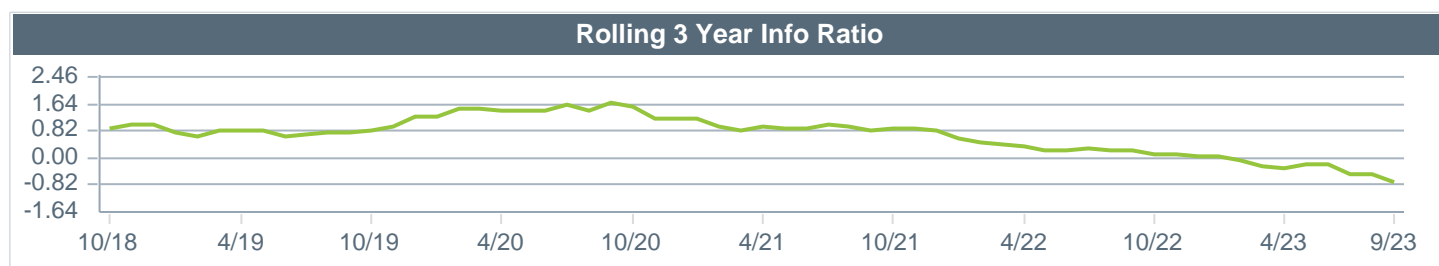
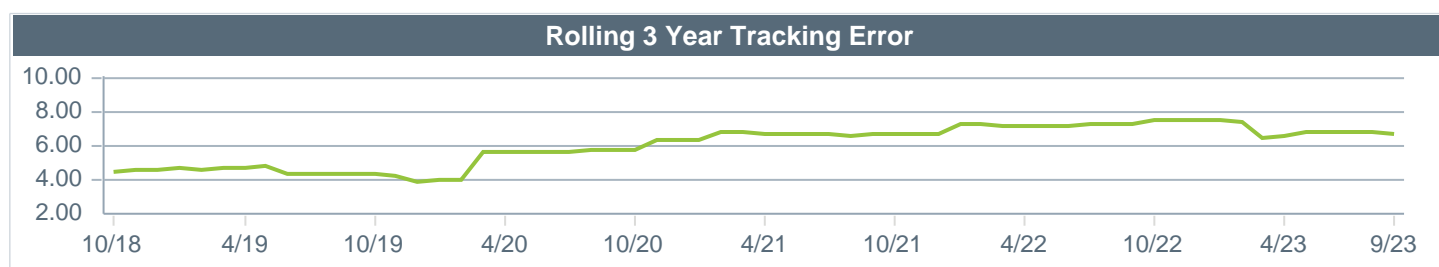
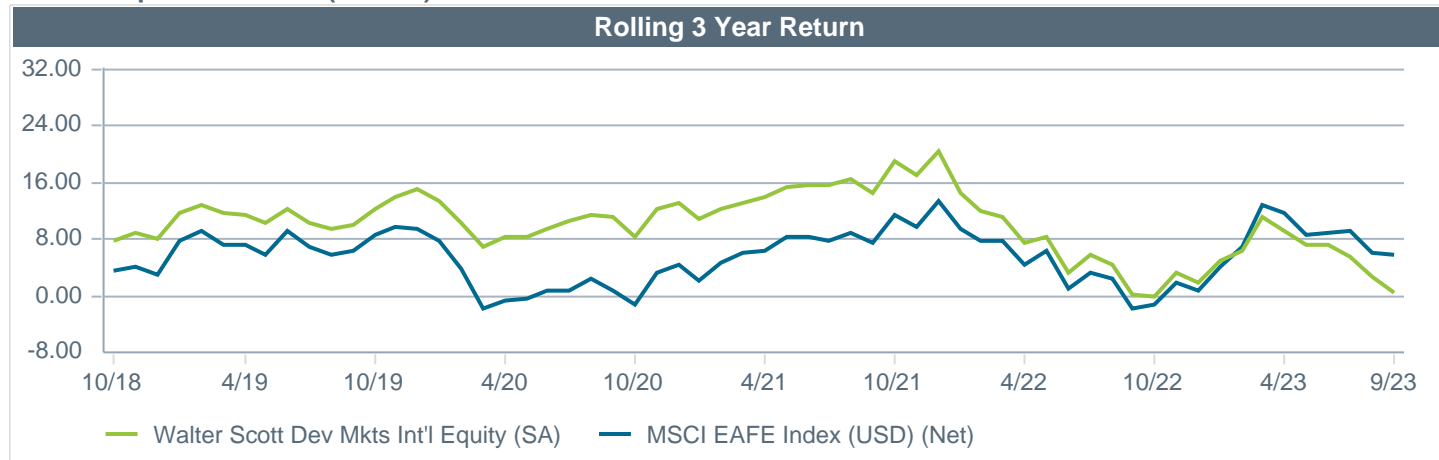


Manager: Walter Scott Dev Mkts Int'l Equity (SA)

As of September 30, 2023

Benchmark: MSCI EAFE Index (USD) (Net)

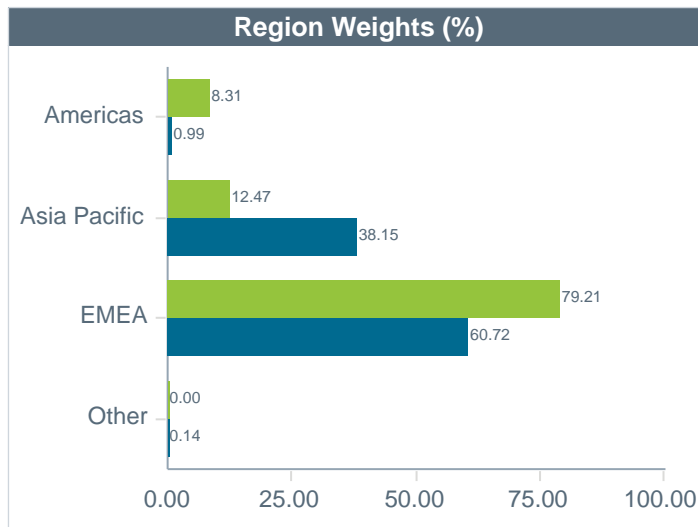
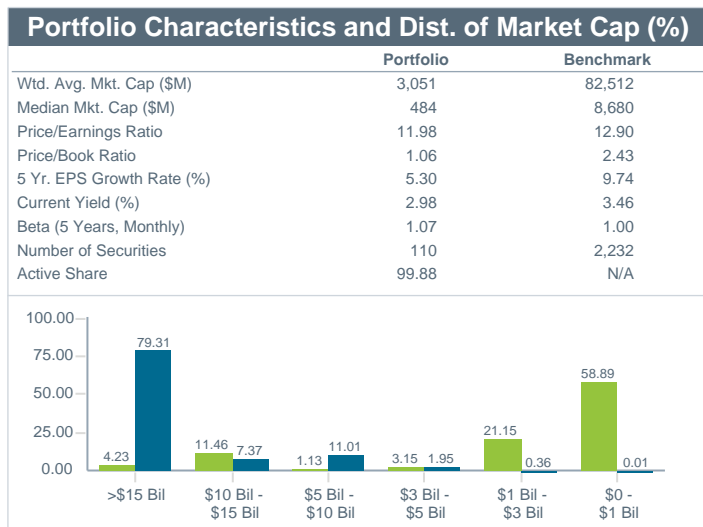
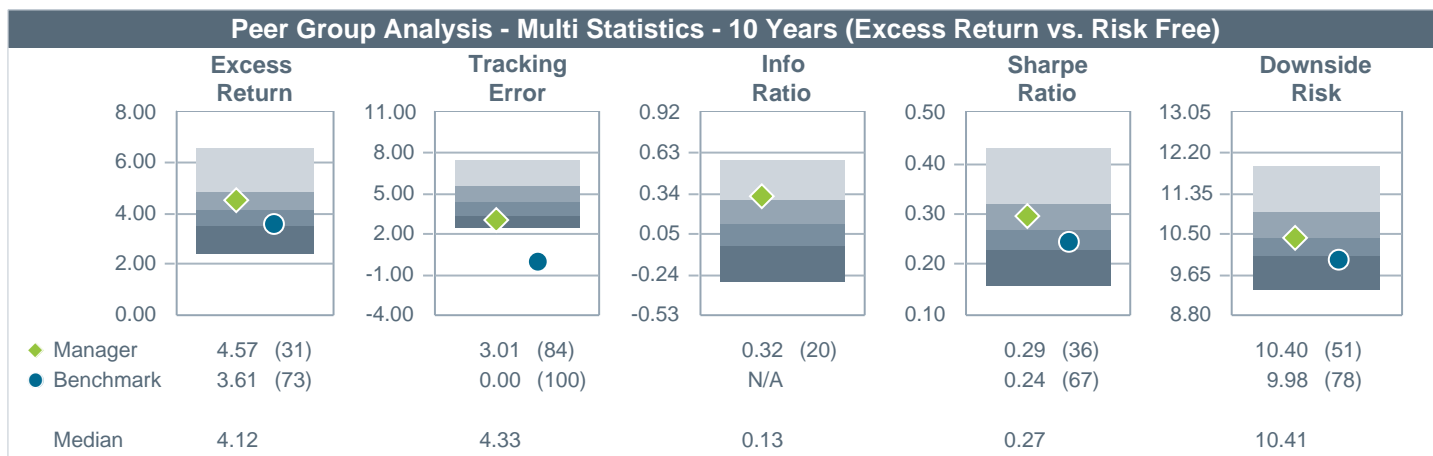
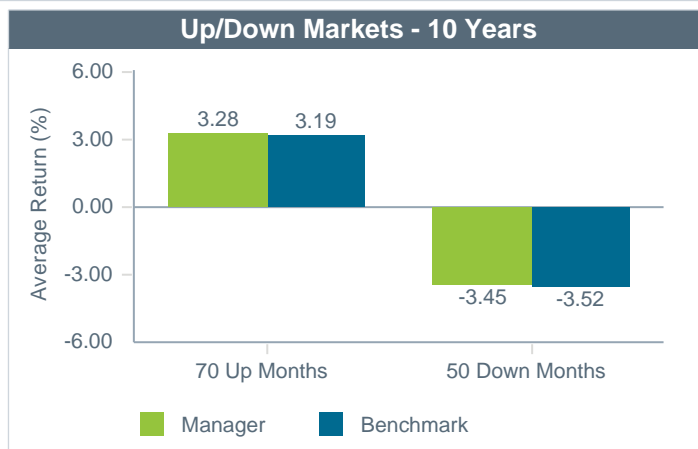
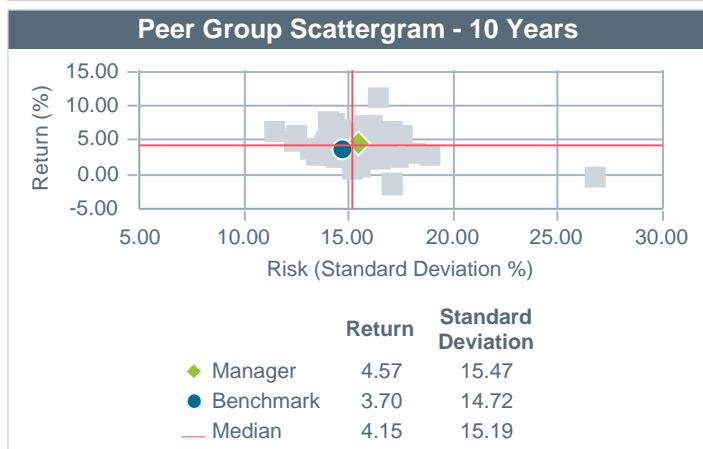
Peer Group: IM All EAFE (SA+CF)



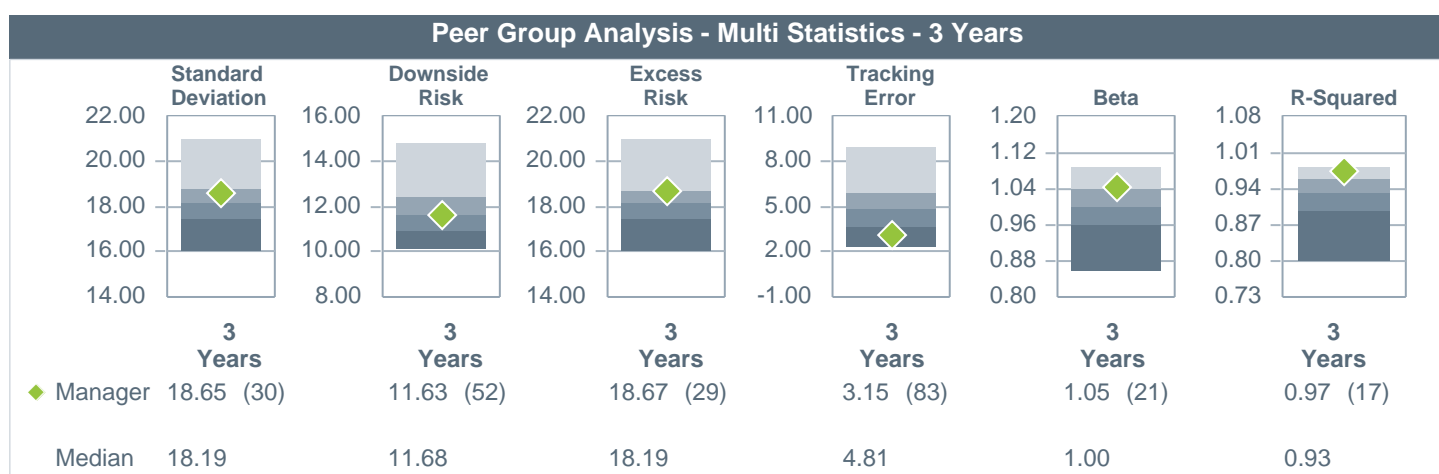
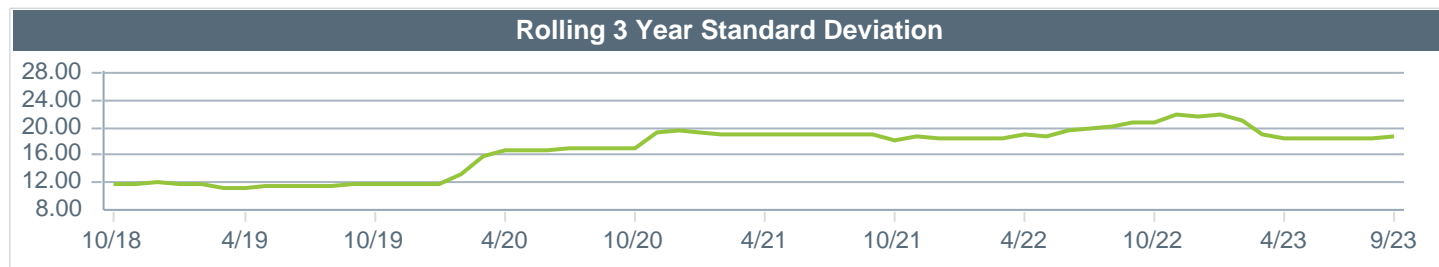
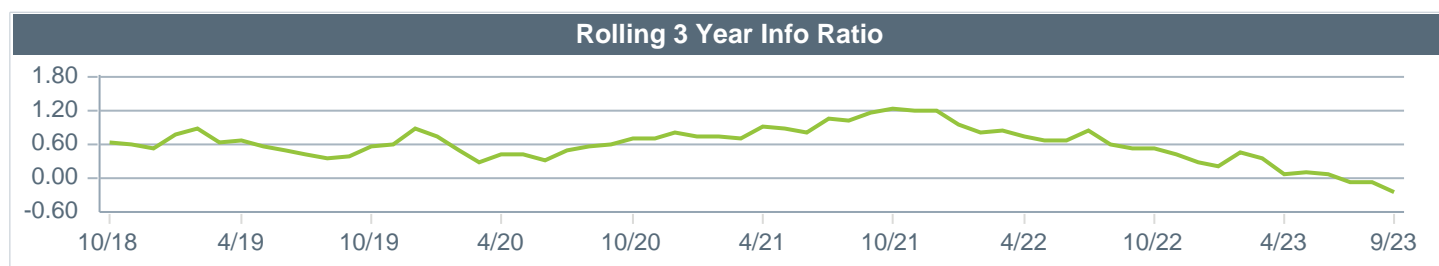
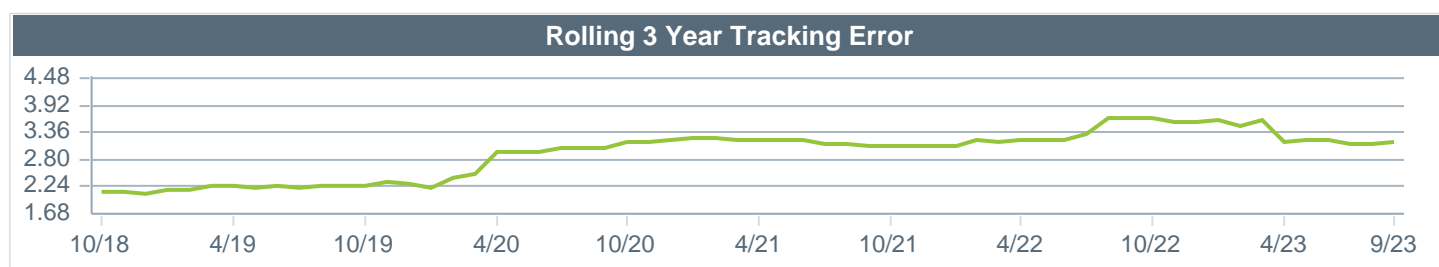
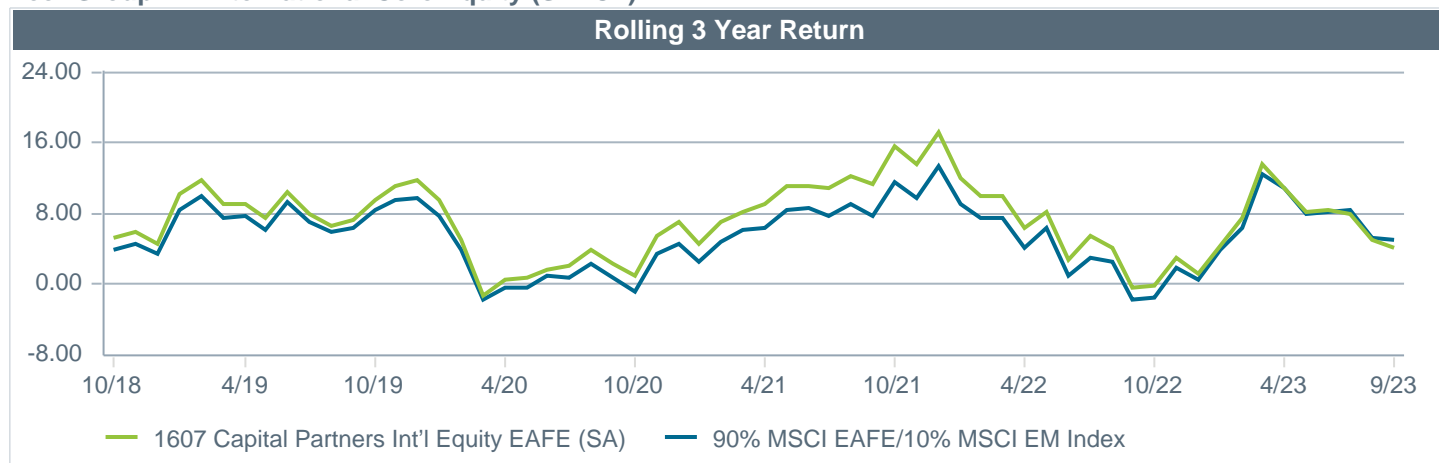
Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-4.68	21.18	4.07	3.38	5.82	4.57	-19.65	11.74	15.44	24.78	-14.99
Benchmark	-3.99	24.26	5.05	3.02	5.13	3.70	-14.97	9.85	8.91	21.67	-13.85
Difference	-0.69	-3.08	-0.98	0.36	0.69	0.87	-4.68	1.89	6.53	3.11	-1.14
Peer Group Median	-4.48	21.31	4.00	2.84	4.97	4.15	-17.32	11.65	11.58	23.35	-15.76
Rank	51	53	49	27	22	33	65	49	33	38	42
Population	212	210	204	196	182	150	230	239	249	263	265



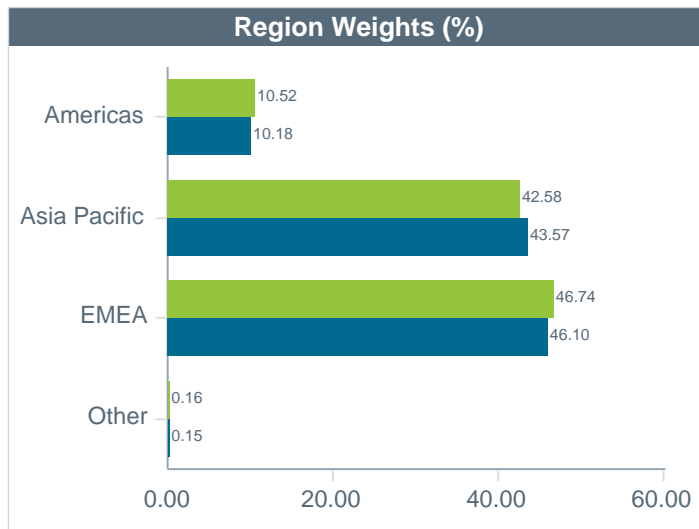
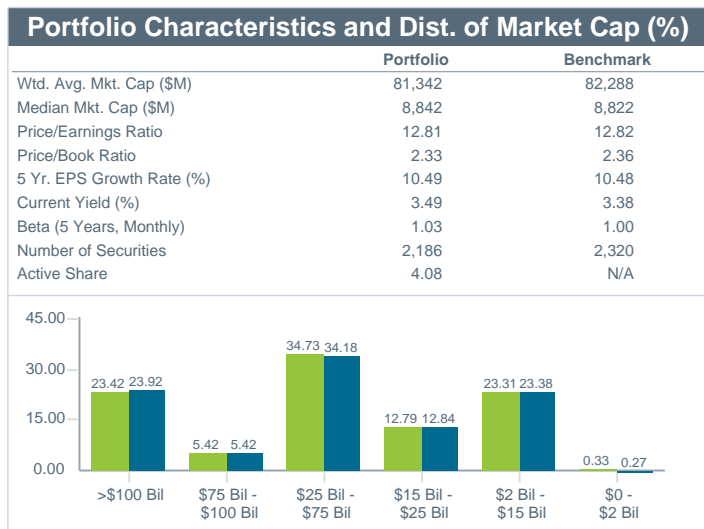
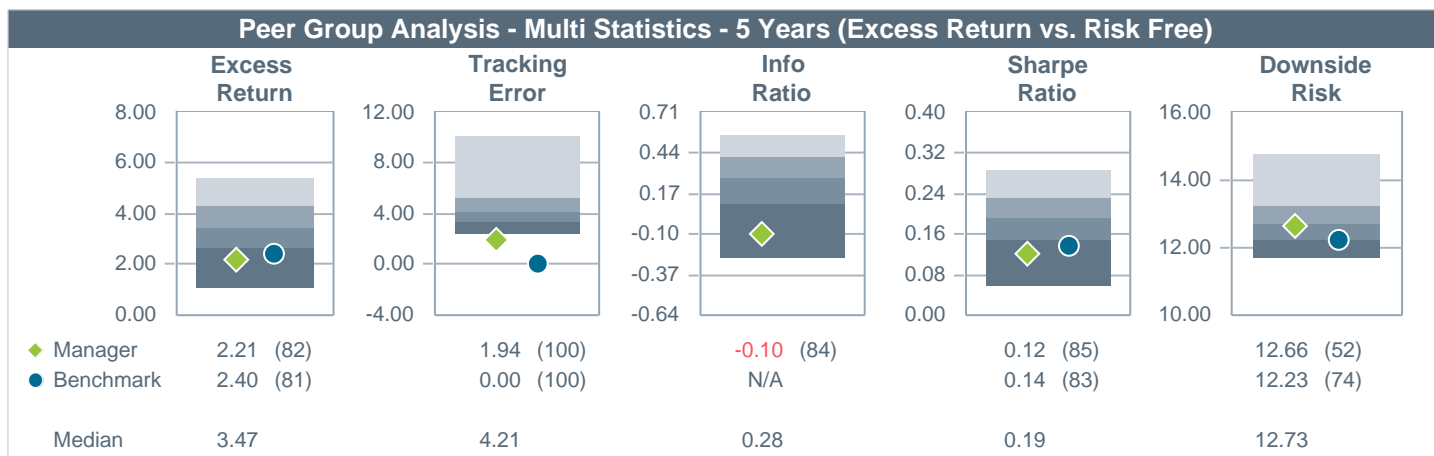
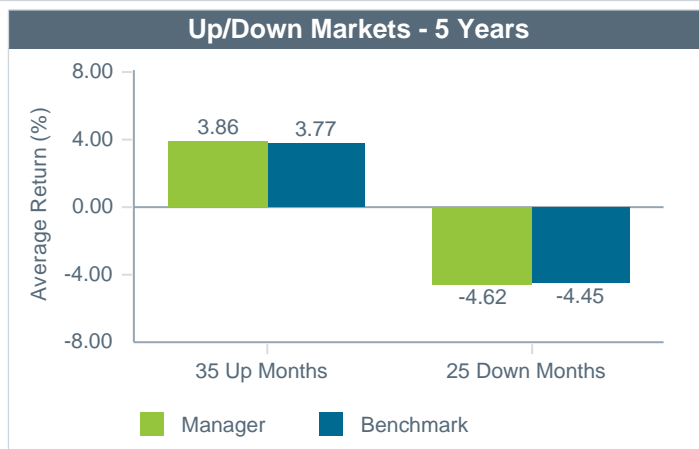
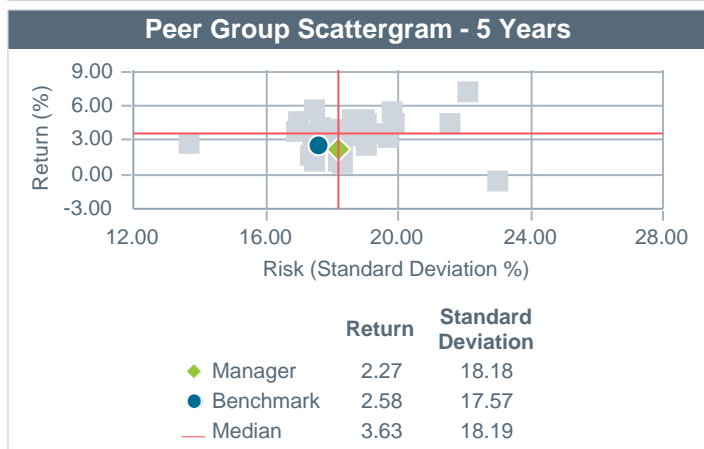
Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

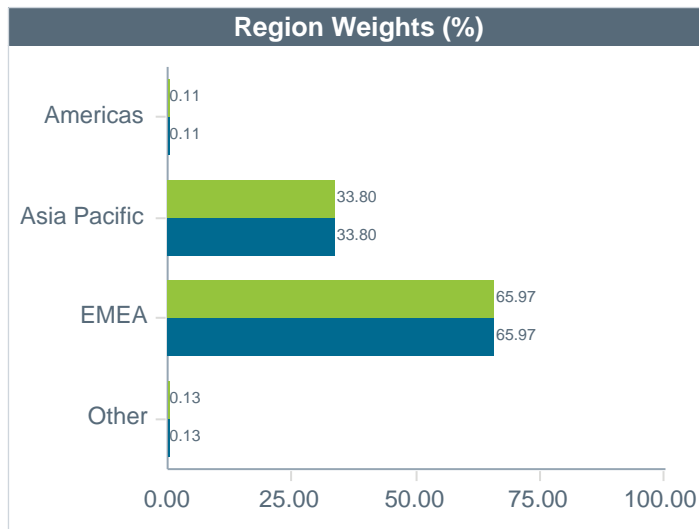
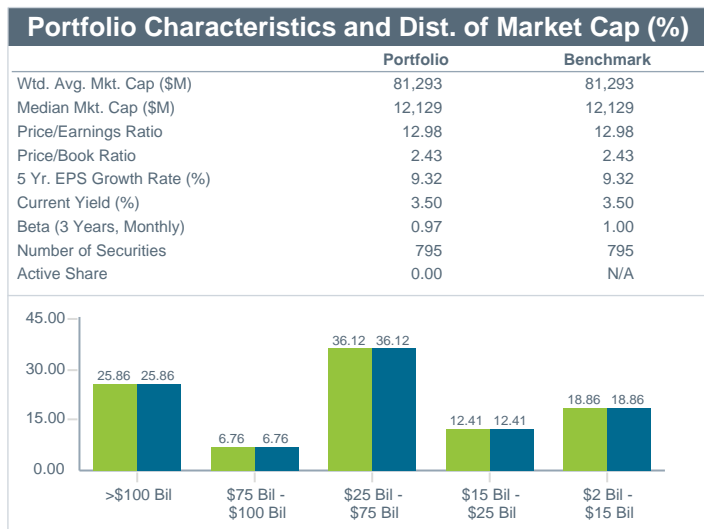
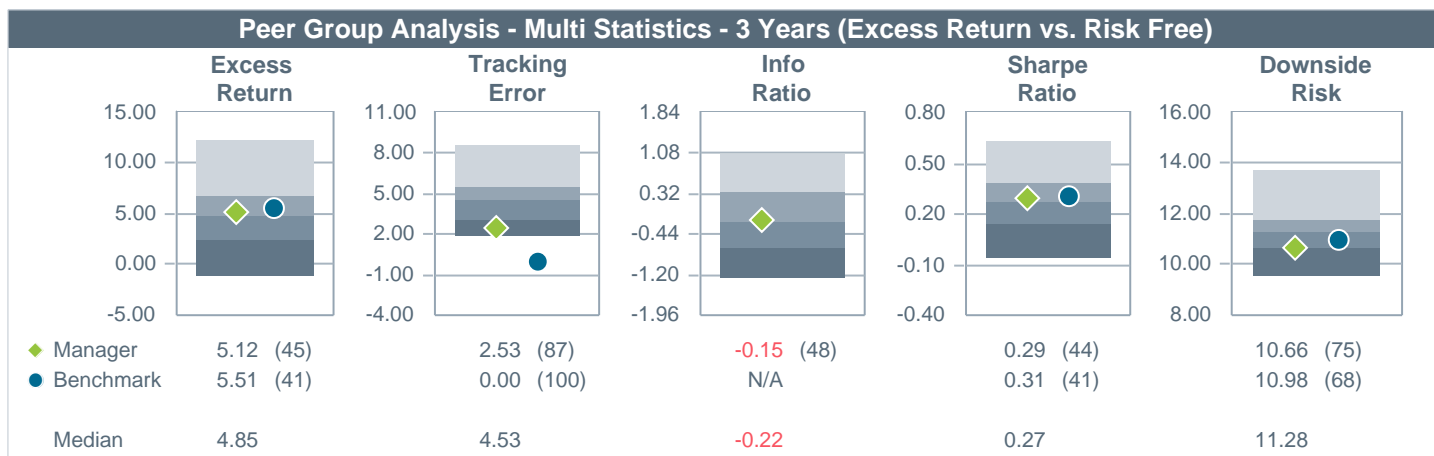
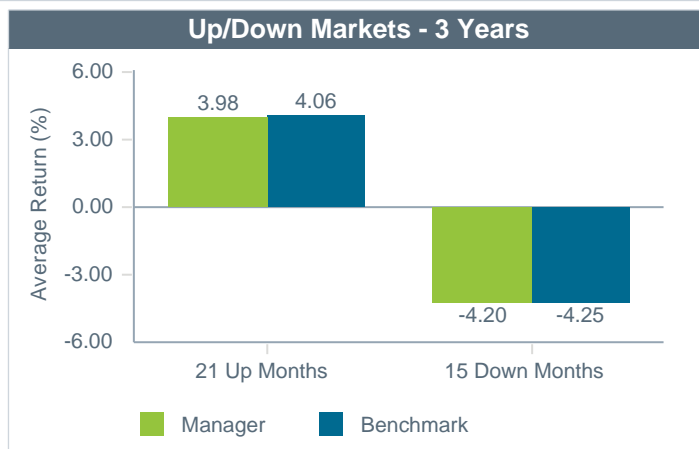
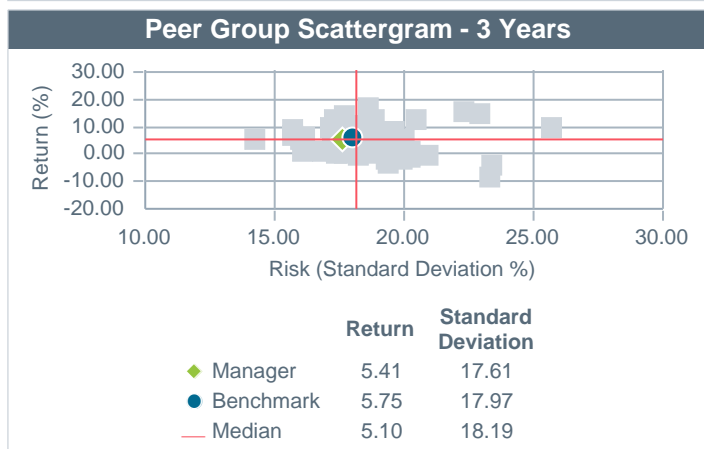


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-5.41	18.88	1.90	2.27	N/A	N/A	-18.91	7.49	10.75	27.55	N/A
Benchmark	-3.77	20.39	3.74	2.58	4.73	3.35	-16.00	7.82	10.65	21.51	-14.20
Difference	-1.64	-1.51	-1.84	-0.31	N/A	N/A	-2.91	-0.33	0.10	6.04	N/A
Peer Group Median	-4.31	21.46	3.66	3.63	5.57	4.16	-17.69	10.08	15.66	24.58	-14.37
Rank	78	81	83	85	N/A	N/A	62	78	59	27	N/A
Population	36	36	36	36	36	32	36	37	40	42	44



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

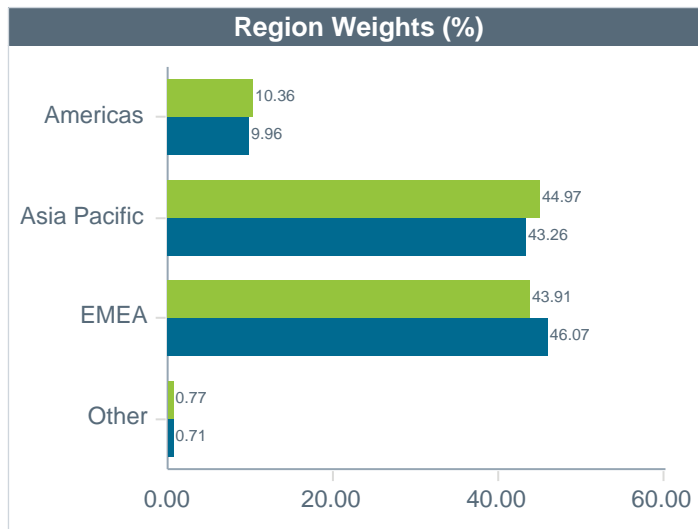
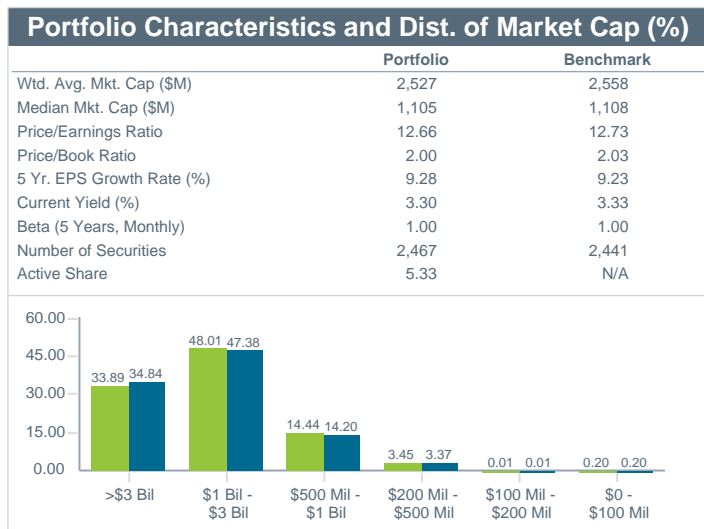
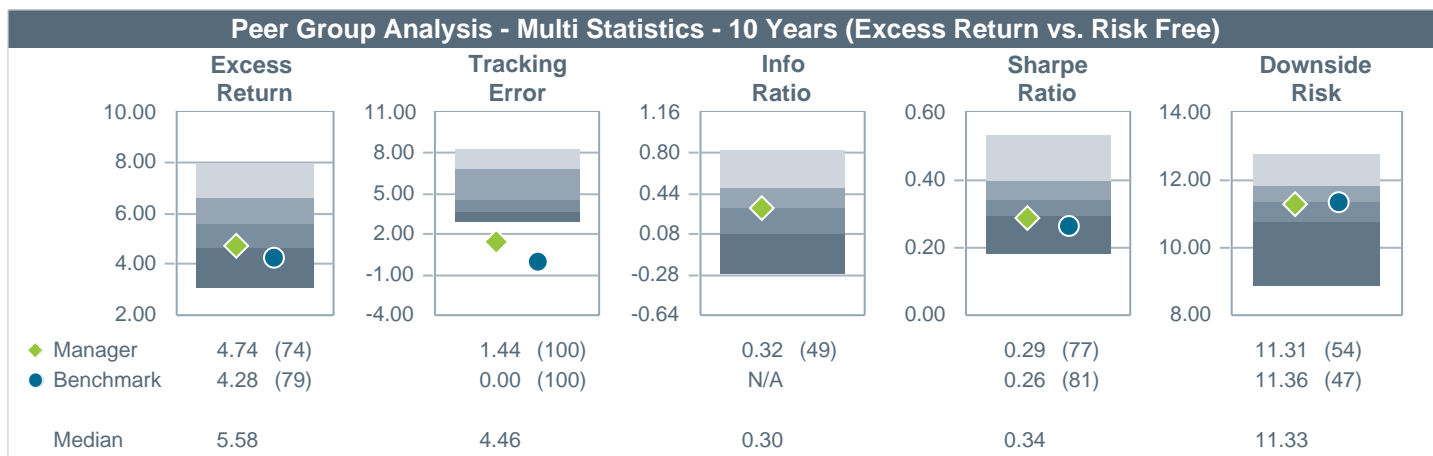
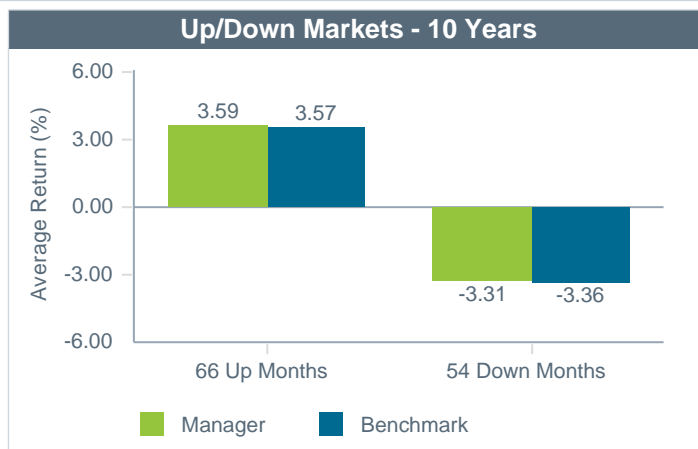
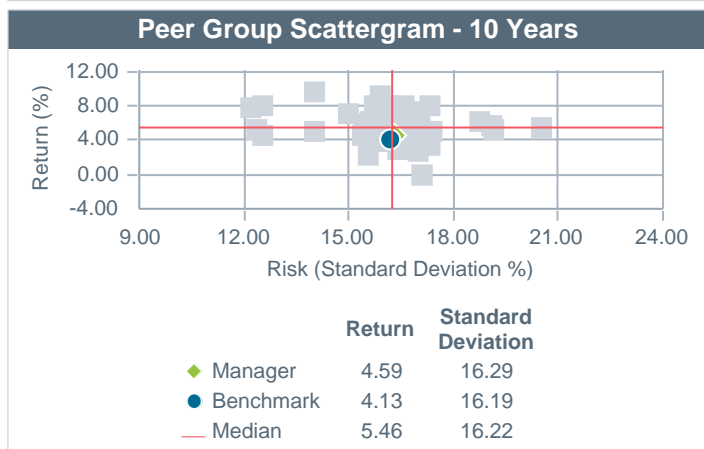
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
<b>Manager</b>	<b>-4.54</b>	<b>24.31</b>	<b>5.41</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-14.04</b>	<b>10.99</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Benchmark	-4.11	25.65	5.75	3.24	5.29	3.82	-14.45	11.26	7.82	22.01	-13.79
Difference	-0.43	-1.34	-0.34	N/A	N/A	N/A	0.41	-0.27	N/A	N/A	N/A
Peer Group Median	-4.48	24.65	5.10	3.08	5.17	4.08	-15.44	11.89	8.97	22.39	-15.10
Rank	51	53	44	N/A	N/A	N/A	39	64	N/A	N/A	N/A
Population	100	100	100	100	95	92	112	120	125	135	136



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

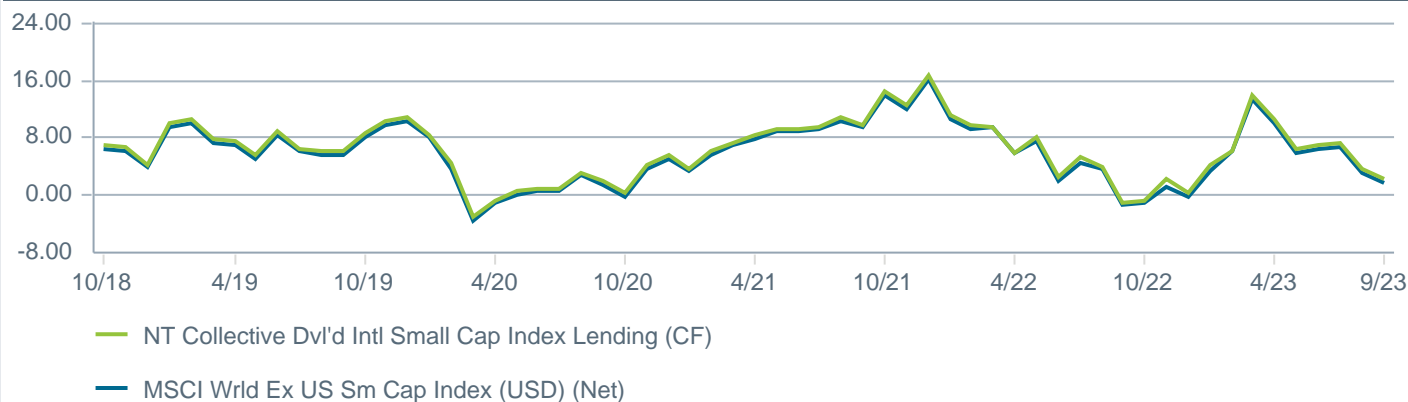


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.41	18.64	2.34	1.77	4.62	4.59	-19.67	11.42	13.27	25.82	-17.39
Benchmark	-3.48	17.32	1.85	1.28	4.13	4.13	-20.59	11.14	12.78	25.41	-18.07
Difference	0.07	1.32	0.49	0.49	0.49	0.46	0.92	0.28	0.49	0.41	0.68
Peer Group Median	-3.72	20.06	2.58	2.66	5.40	5.46	-21.48	13.78	13.73	24.78	-17.85
Rank	46	57	52	62	68	76	41	65	53	39	44
Population	110	109	104	98	88	71	122	120	130	131	137

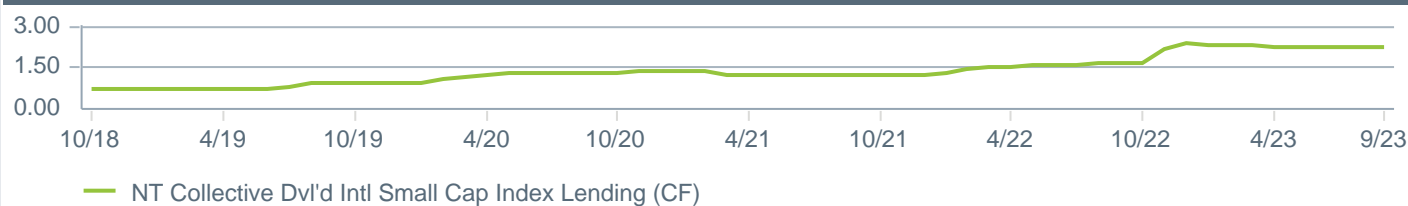


Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

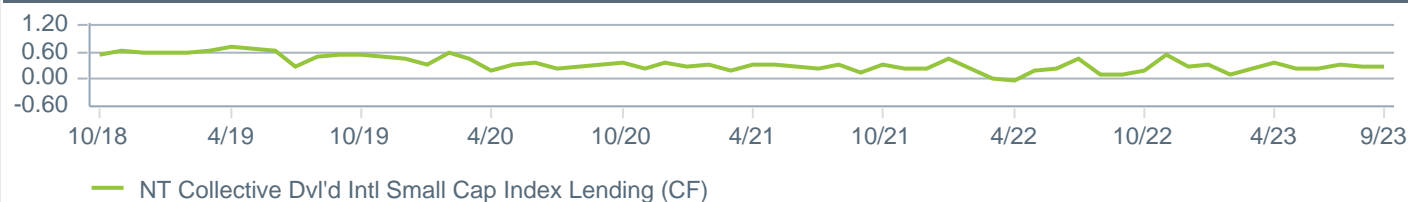
**Rolling 3 Year Return**



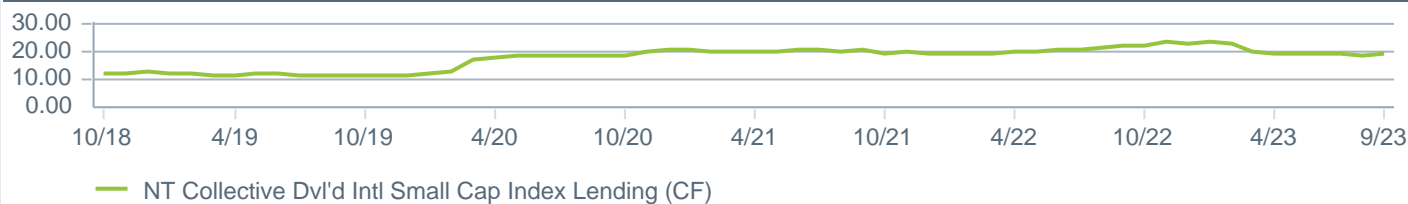
**Rolling 3 Year Tracking Error**



**Rolling 3 Year Info Ratio**



**Rolling 3 Year Standard Deviation**



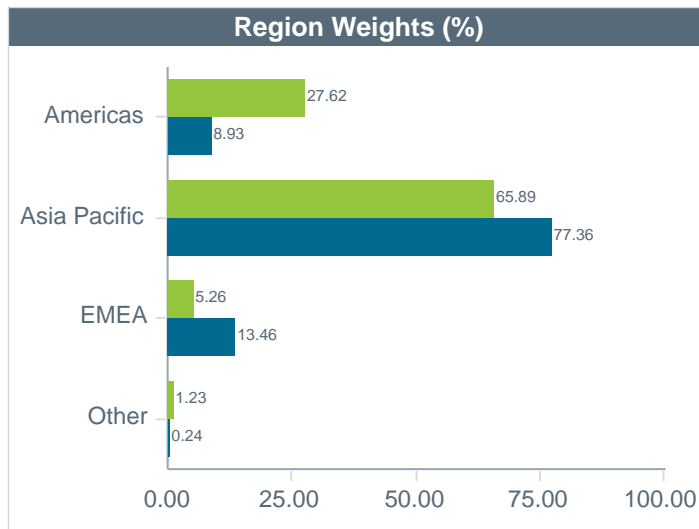
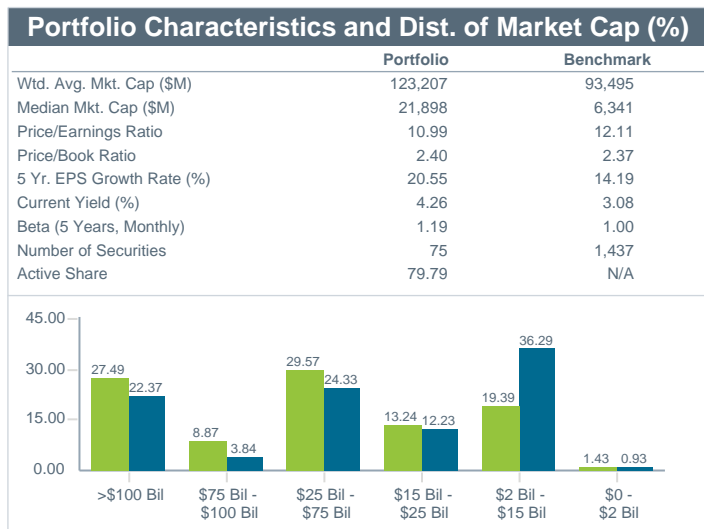
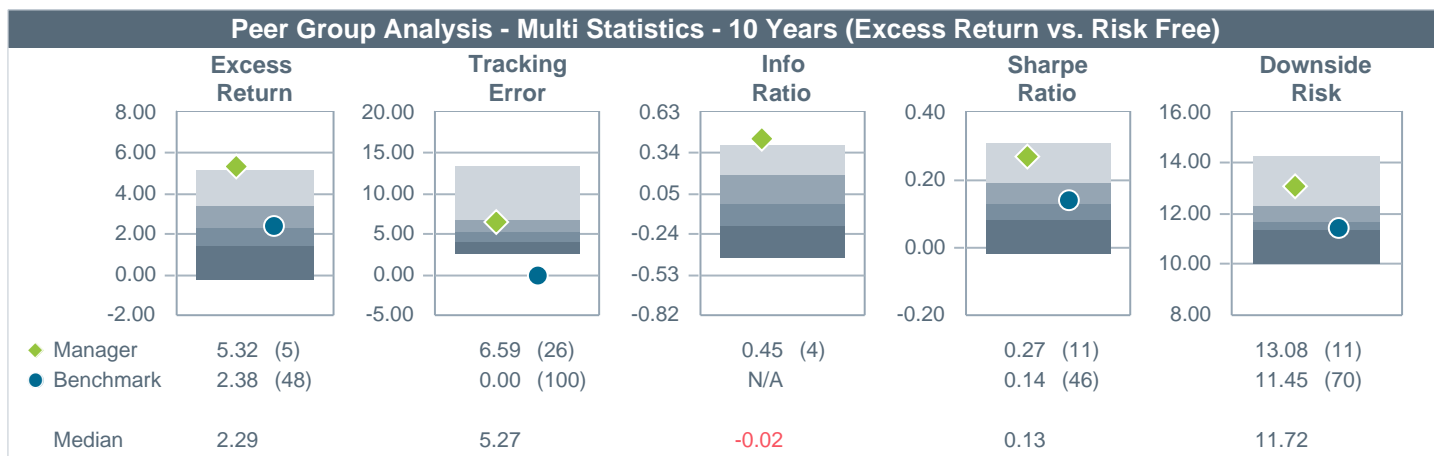
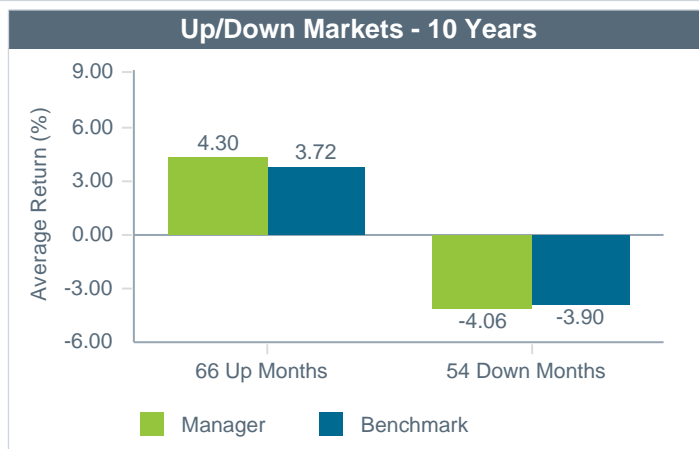
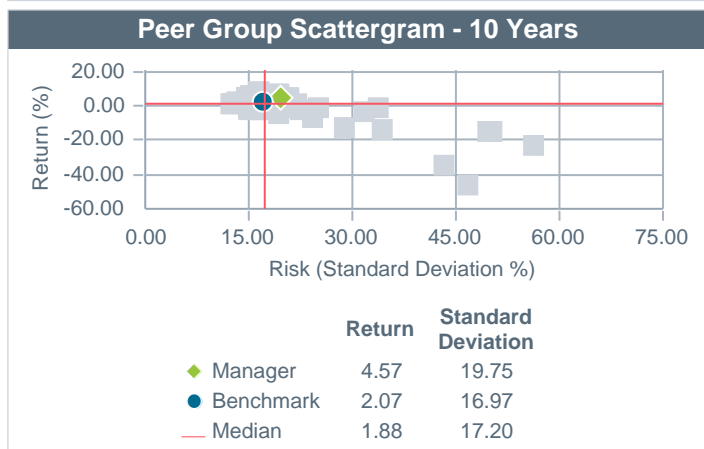
**Peer Group Analysis - Multi Statistics - 3 Years**



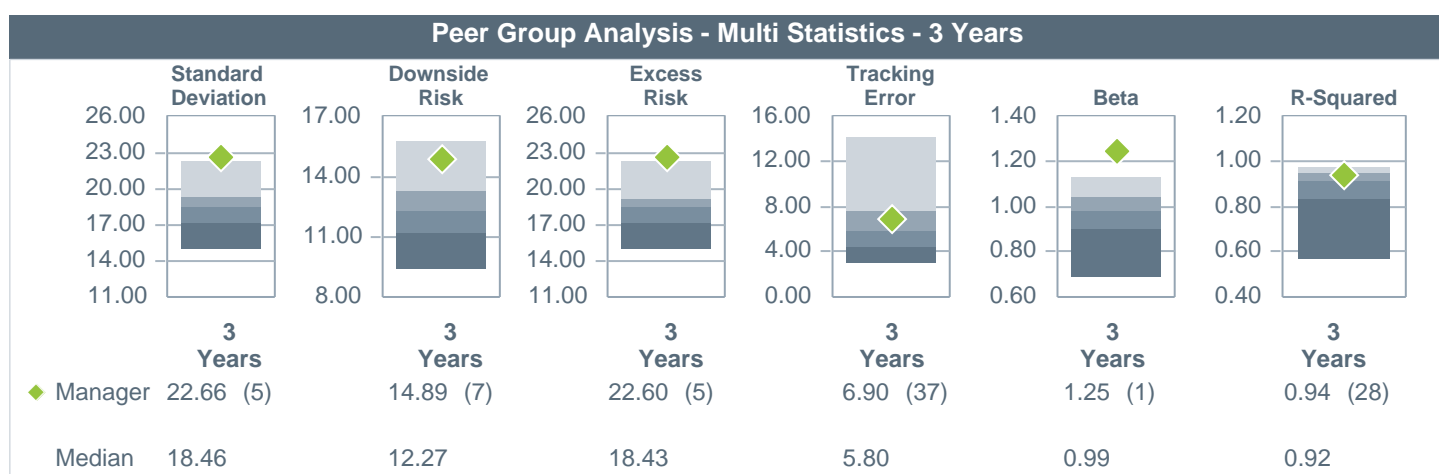
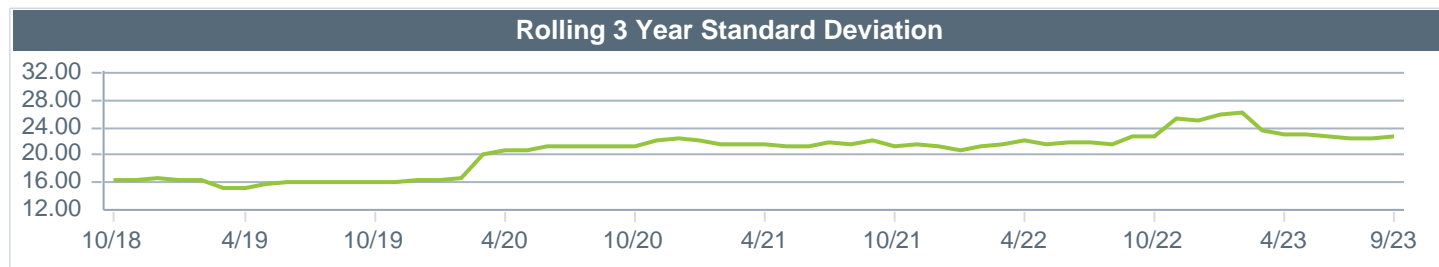
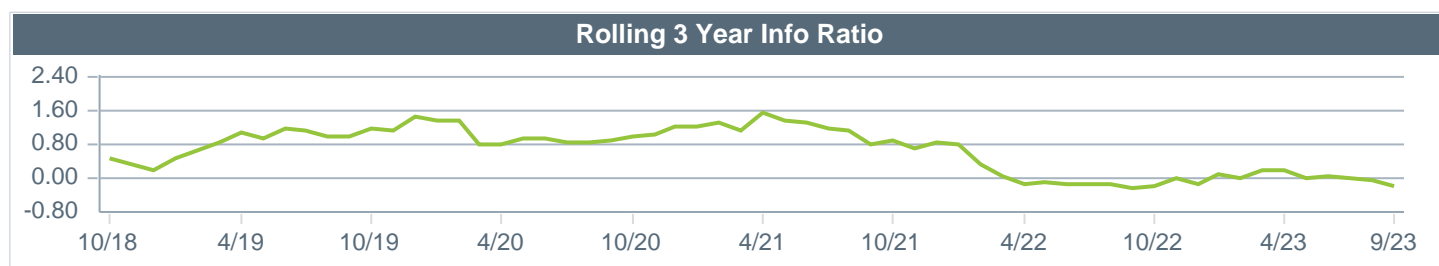
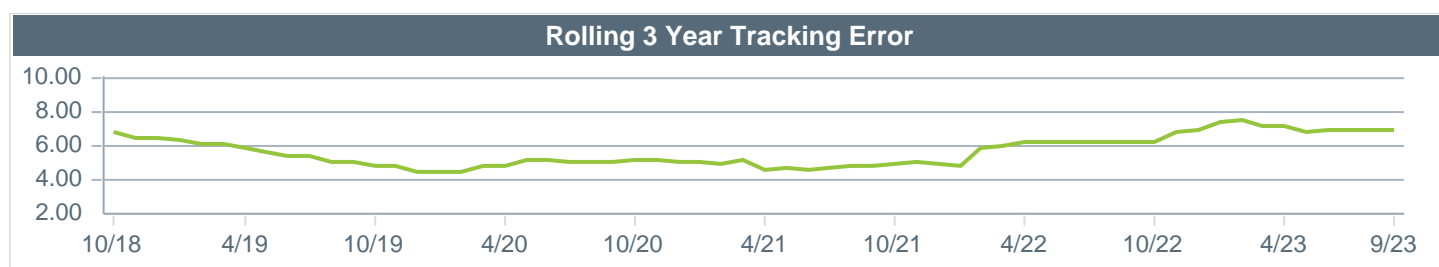
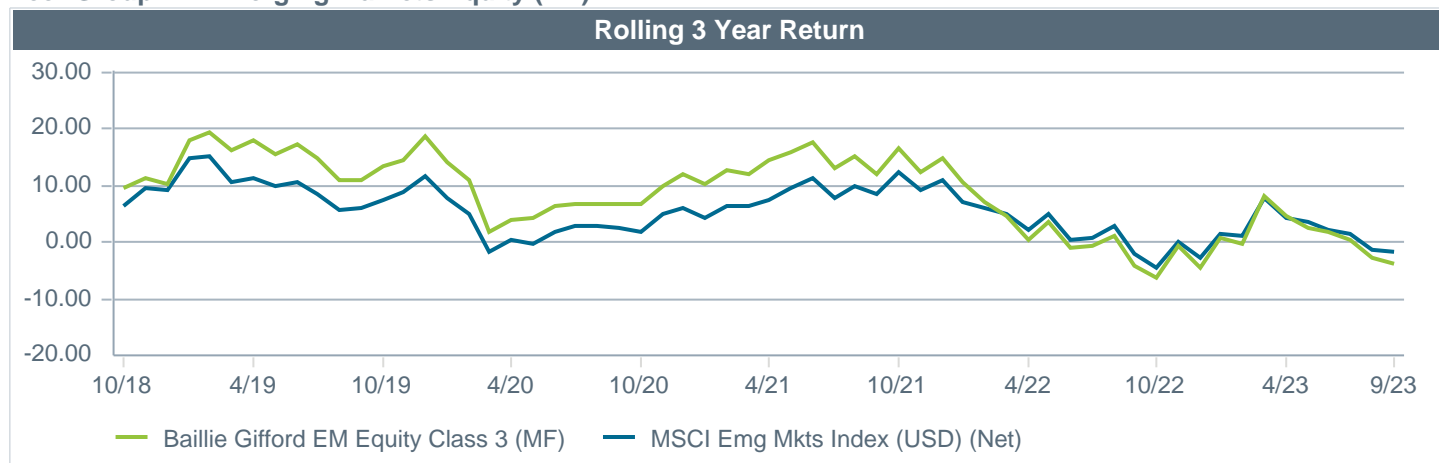
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-4.47	18.41	-3.81	1.59	5.18	4.57	-26.39	-9.03	29.64	28.09	-14.92
Benchmark	-2.93	11.70	-1.73	0.55	3.22	2.07	-20.09	-2.54	18.31	18.42	-14.57
Difference	-1.54	6.71	-2.08	1.04	1.96	2.50	-6.30	-6.49	11.33	9.67	-0.35
Peer Group Median	-3.79	13.05	-2.37	0.77	2.94	1.88	-22.47	-1.61	17.68	20.17	-16.46
Rank	61	16	63	36	15	8	75	87	18	12	36
Population	815	782	681	614	516	362	773	766	781	822	819



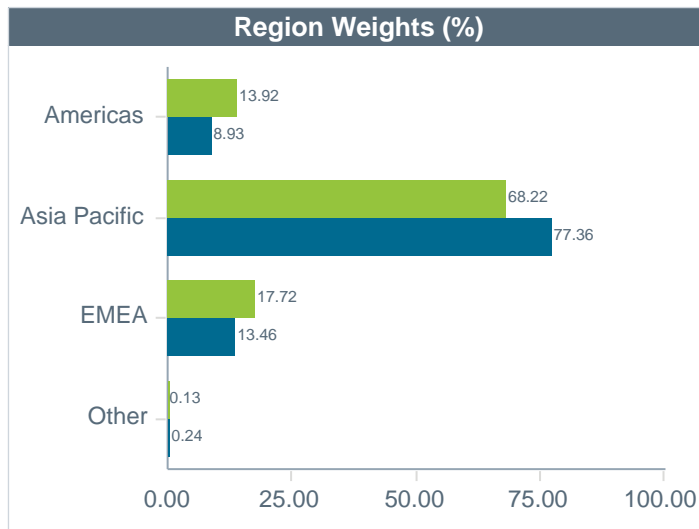
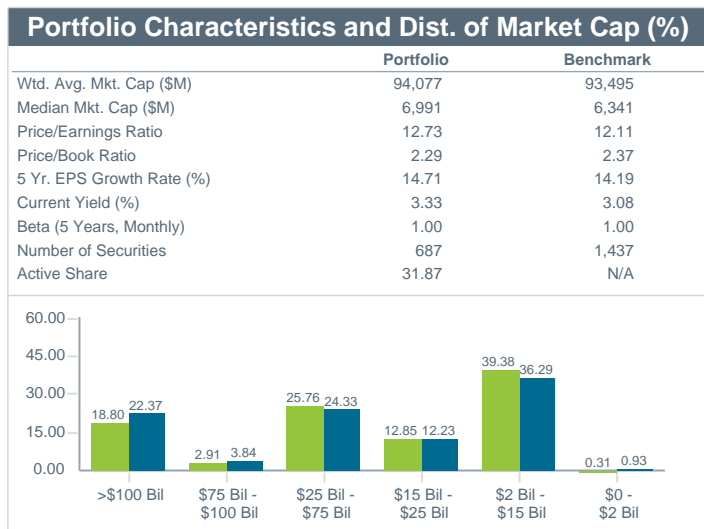
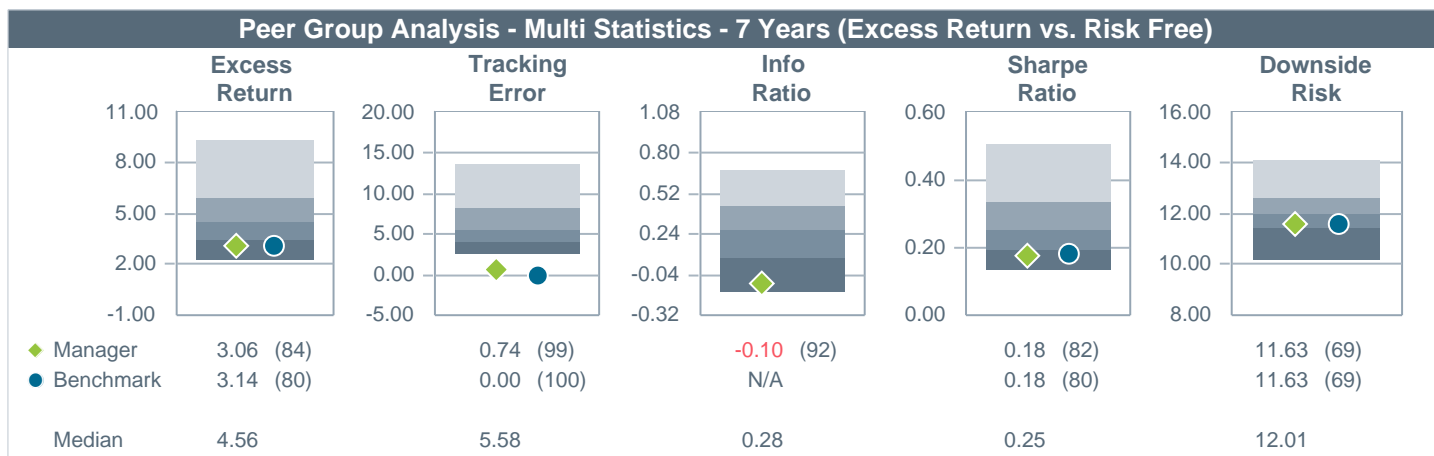
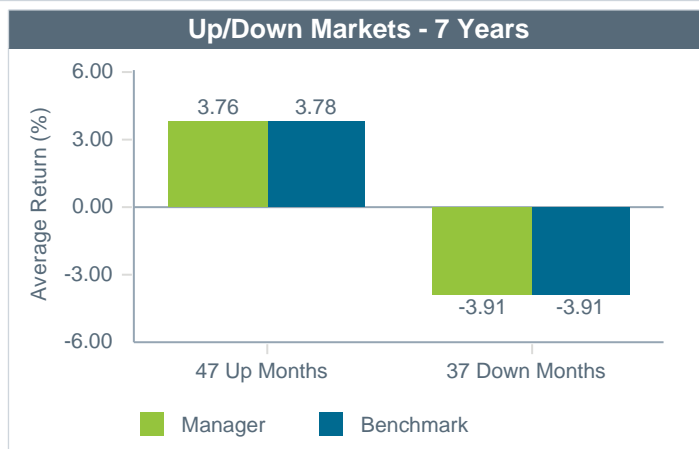
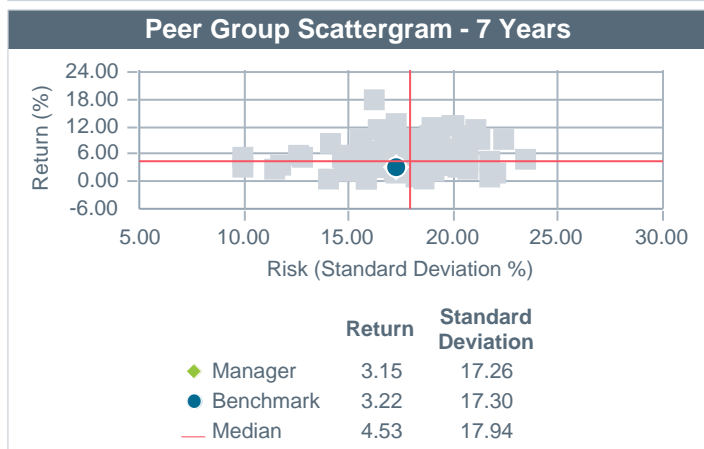
Performance shown is net of fees and product specific. Prior to 01/01/2019, performance is represented by the Class 2 share class. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Region allocation to "Other" consists of Cyprus.



Performance shown is net of fees and product specific. Prior to 01/01/2019, performance is represented by the Class 2 share class. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

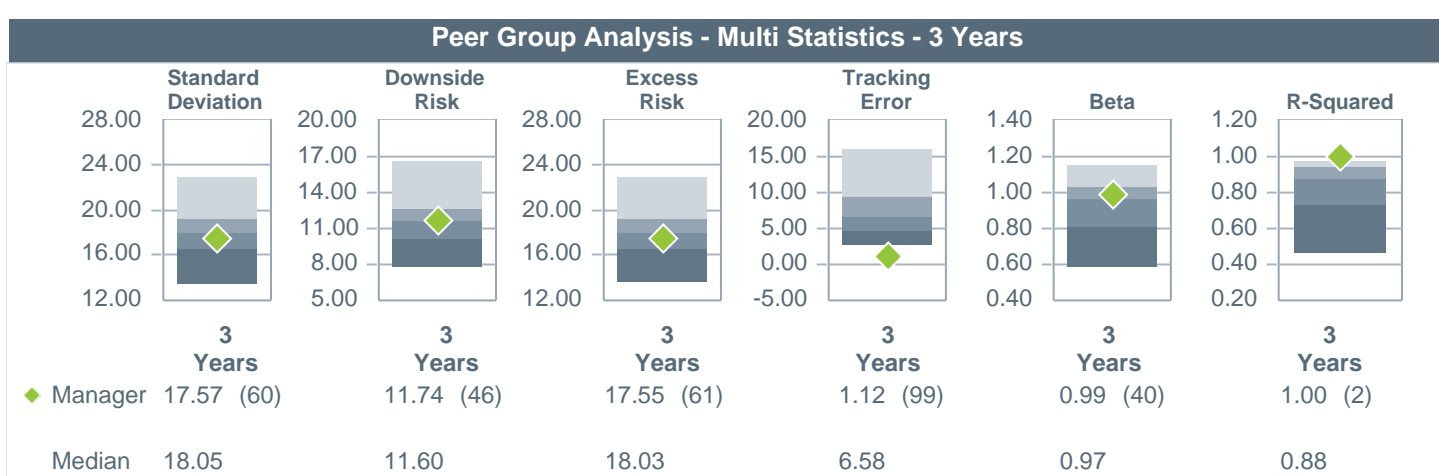
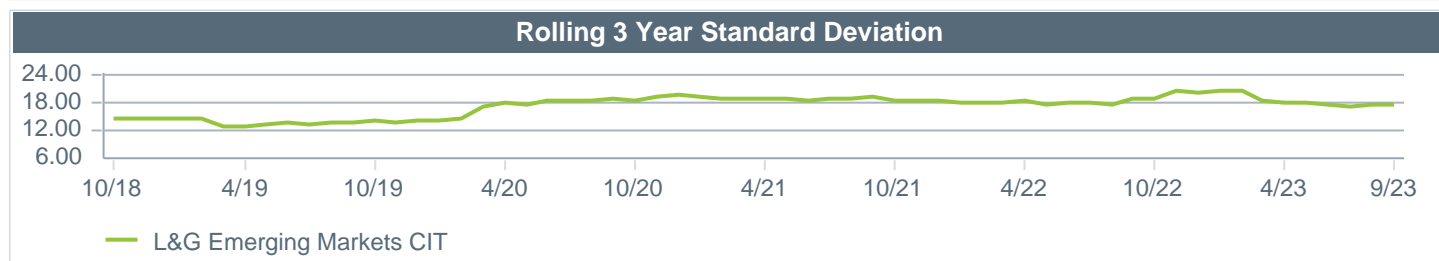
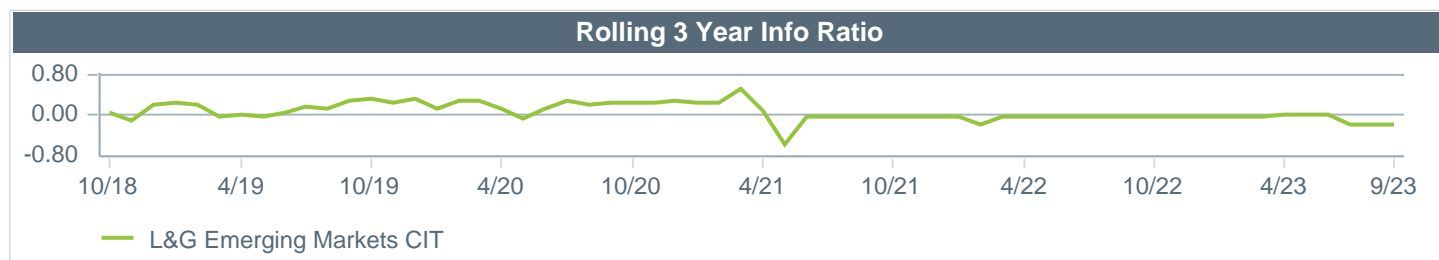
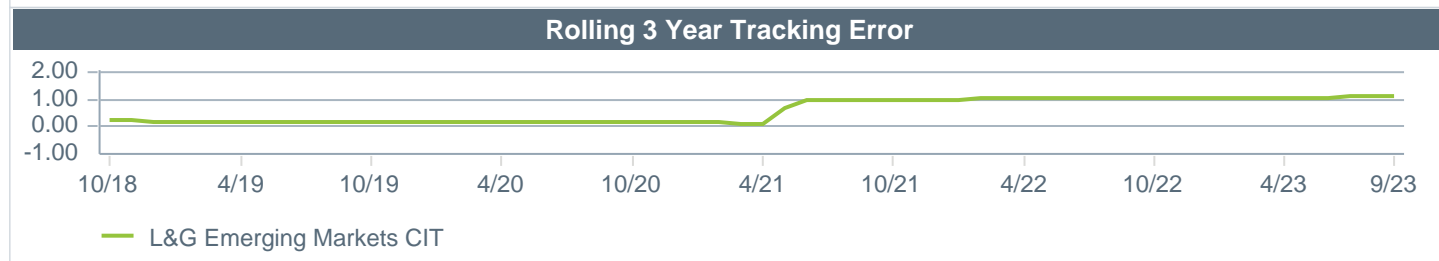
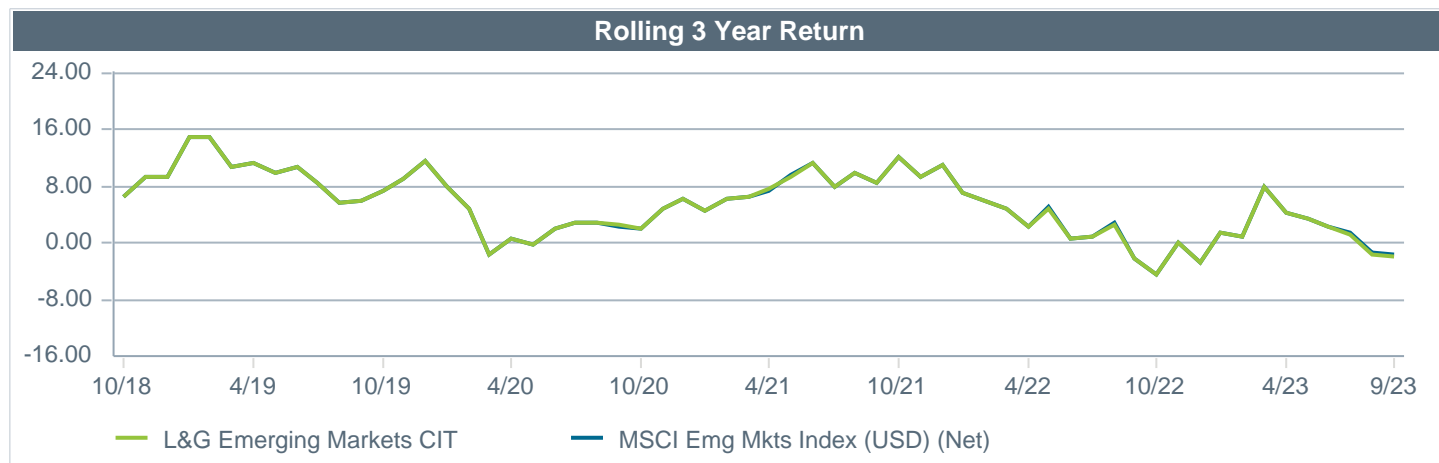


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.54	11.08	-1.93	0.44	3.15	N/A	-20.09	-2.59	18.26	18.44	-14.44
Benchmark	-2.93	11.70	-1.73	0.55	3.22	2.07	-20.09	-2.54	18.31	18.42	-14.57
Difference	-0.61	-0.62	-0.20	-0.11	-0.07	N/A	0.00	-0.05	-0.05	0.02	0.13
Peer Group Median	-2.96	14.89	-0.16	2.60	4.53	3.49	-19.50	0.94	18.28	20.15	-15.20
Rank	61	71	67	86	82	N/A	54	66	51	63	41
Population	299	293	271	249	228	191	314	324	350	372	373



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

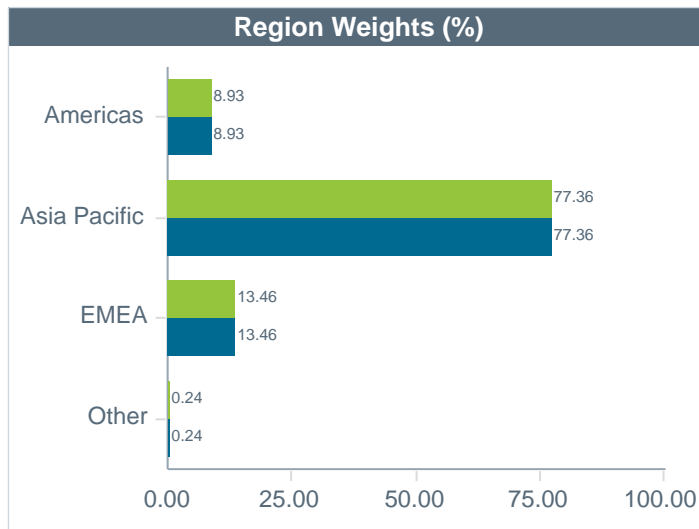
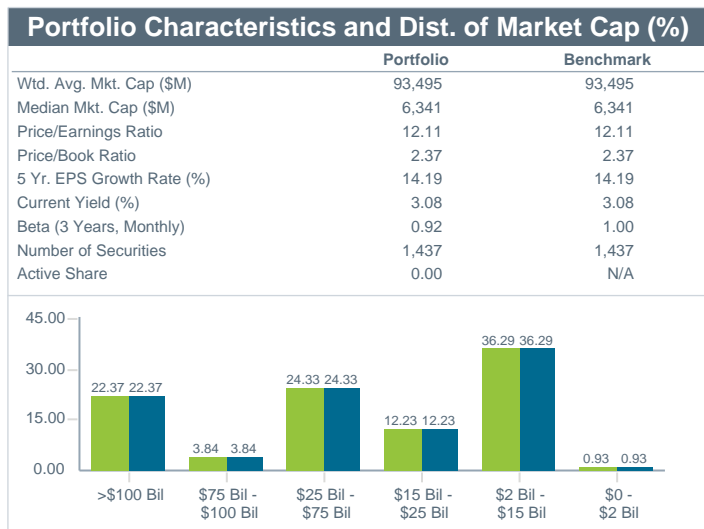
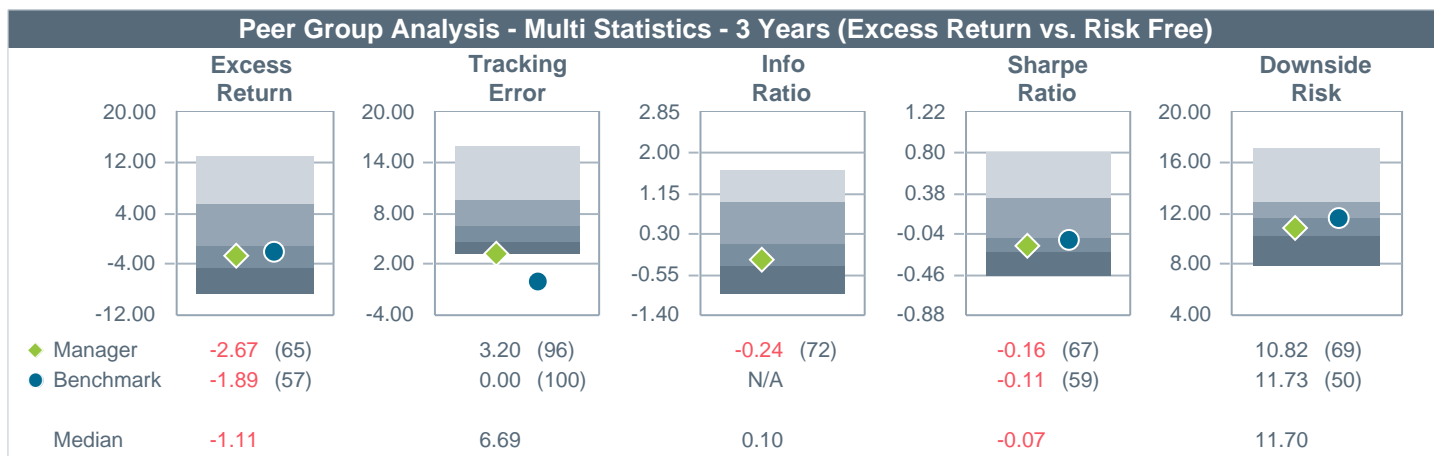
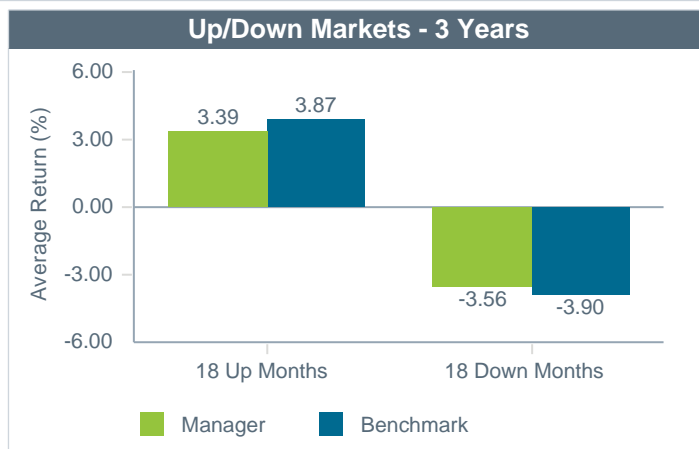
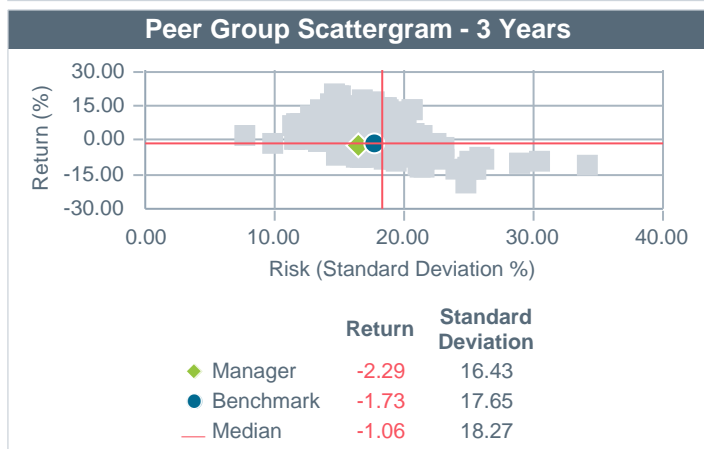




Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

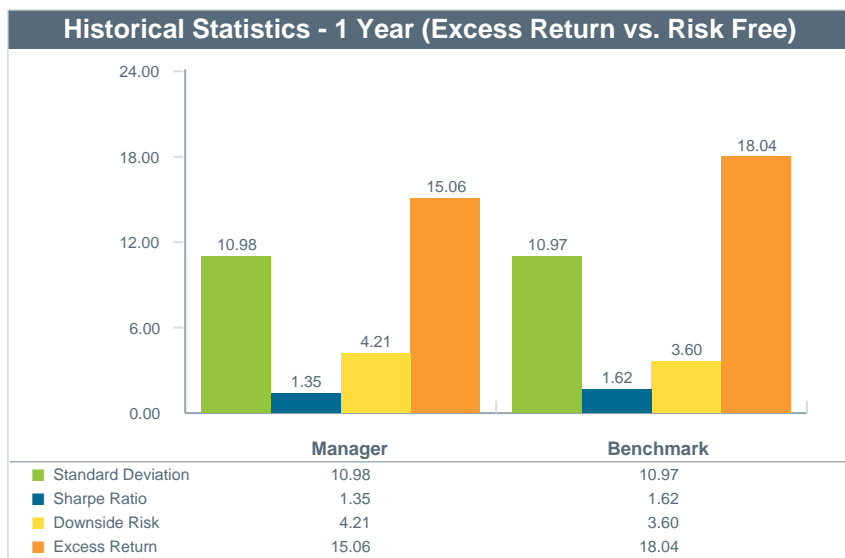


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-2.82	10.87	-2.29	N/A	N/A	N/A	-20.19	-3.09	N/A	N/A	N/A
Benchmark	-2.93	11.70	-1.73	0.55	3.22	2.07	-20.09	-2.54	18.31	18.42	-14.57
Difference	0.11	-0.83	-0.56	N/A	N/A	N/A	-0.10	-0.55	N/A	N/A	N/A
Peer Group Median	-3.29	14.01	-1.06	1.66	3.72	2.71	-20.17	0.20	18.05	19.05	-16.04
Rank	45	67	63	N/A	N/A	N/A	51	66	N/A	N/A	N/A
Population	273	265	243	220	188	147	283	286	297	308	299



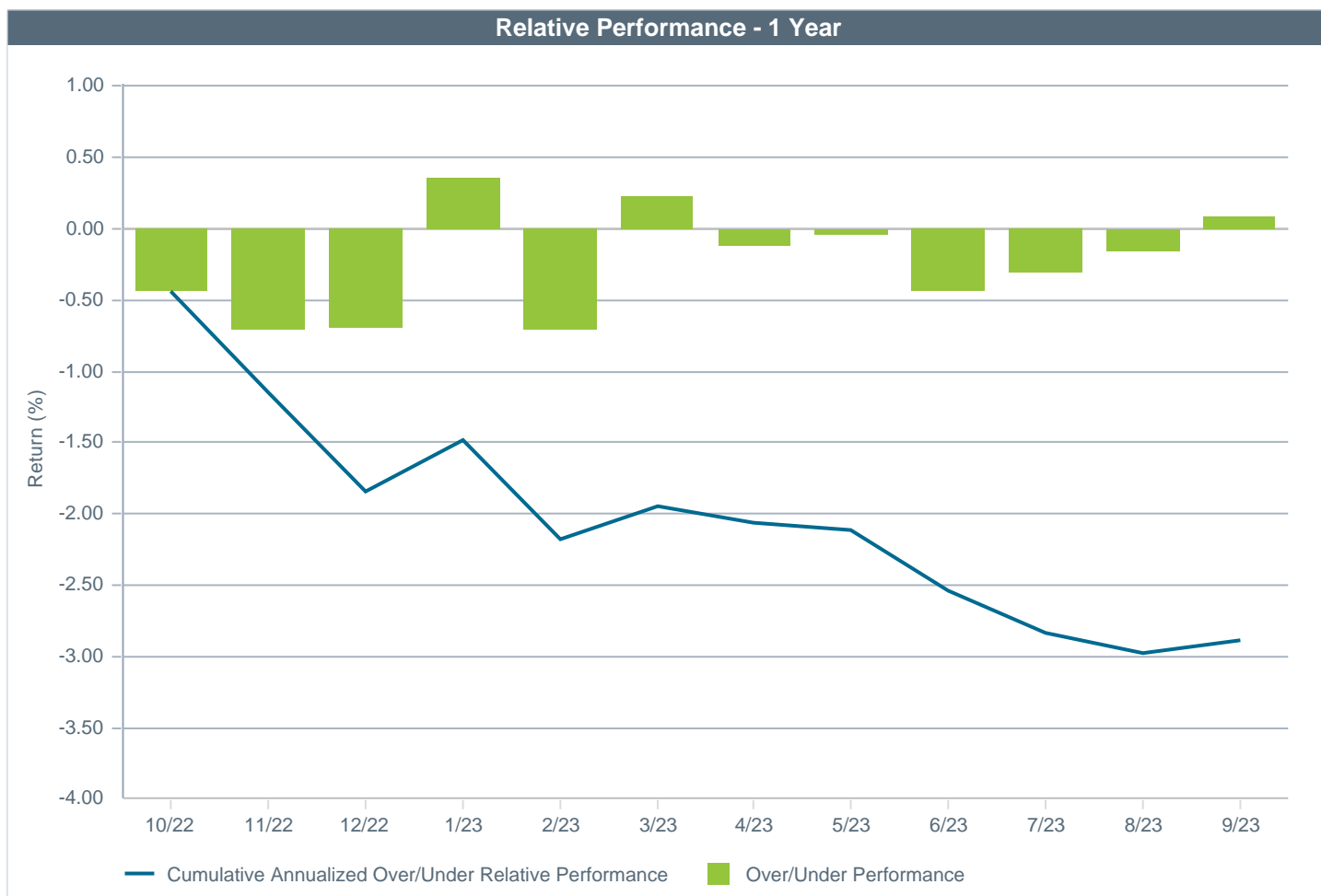
Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-0.90	20.57	N/A	N/A	N/A	N/A	-5.76	N/A	N/A	N/A	N/A
Benchmark	-0.54	24.15	12.98	7.81	9.43	8.17	-4.61	19.43	2.50	24.64	-8.96
Difference	-0.36	-3.58	N/A	N/A	N/A	N/A	-1.15	N/A	N/A	N/A	N/A



### Actual Correlation - 1 Year

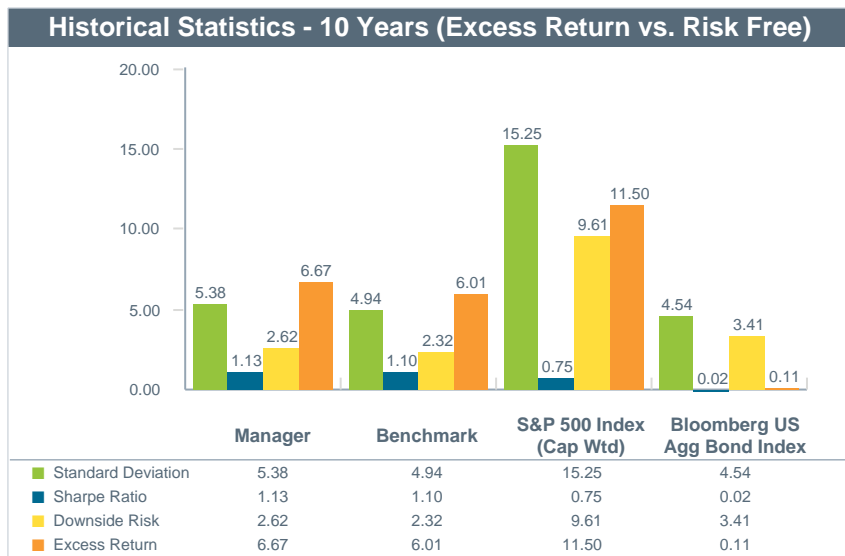
	Actual Correlation
MSCI EAFE Index (USD) (Net) (Hedged)	0.99



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

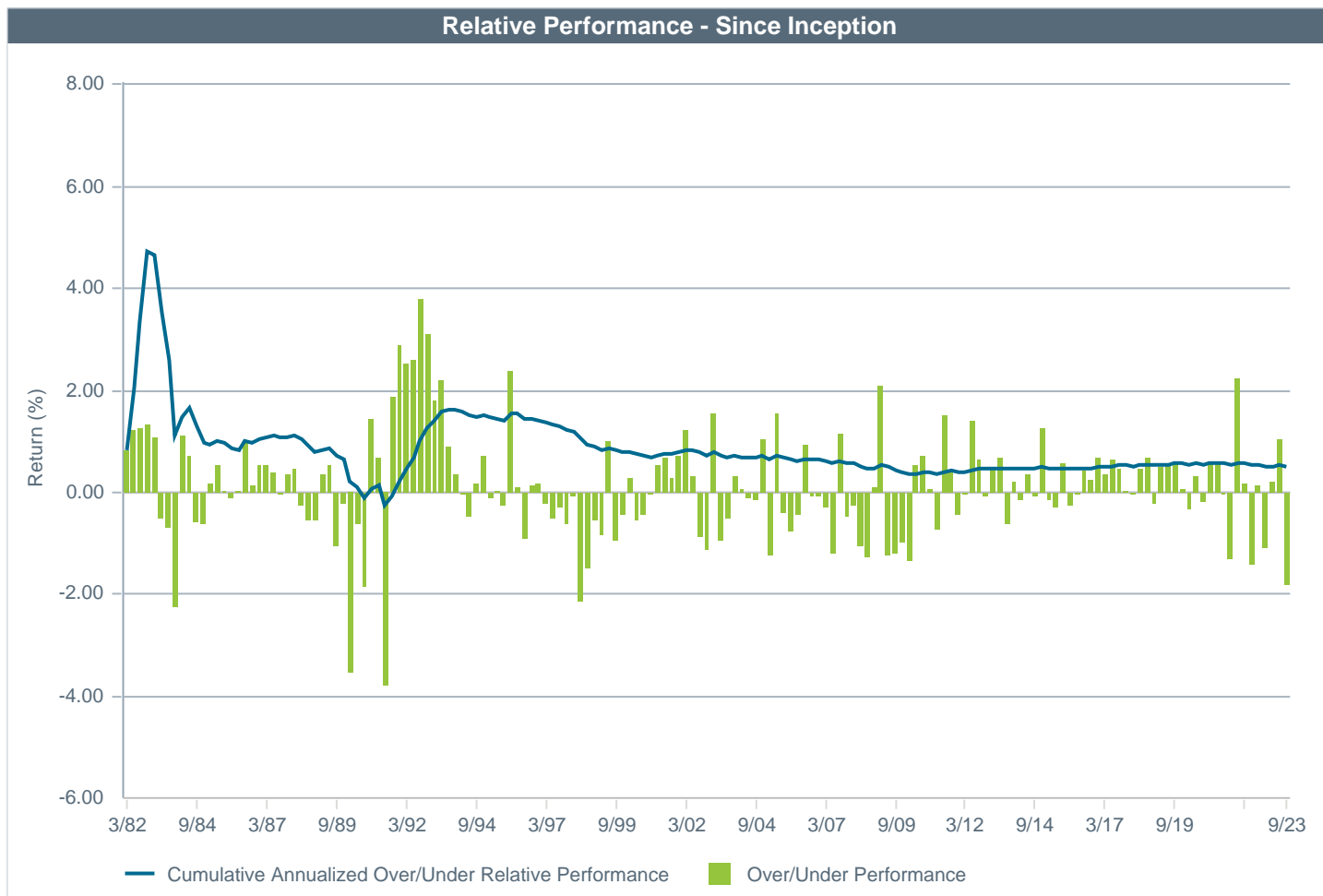


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.85	-14.28	5.99	4.89	6.04	7.86	4.27	22.83	0.81	6.22	8.32
Benchmark	-2.10	-12.88	6.19	4.72	5.43	7.19	6.55	21.02	0.34	4.39	7.36
Difference	-1.75	-1.40	-0.20	0.17	0.61	0.67	-2.28	1.81	0.47	1.83	0.96



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Net)	0.96
S&P 500 Index (Cap Wtd)	-0.08
Russell 2000 Index	-0.10
MSCI EAFE Index (USD) (Net)	-0.25
MSCI Emg Mkts Index (USD) (Net)	-0.25
Bloomberg US Agg Bond Index	-0.20
Bloomberg US Trsy US TIPS Index	-0.11
Wilshire US REIT Index	0.18
HFRI FOF Comp Index	-0.15
Bloomberg Cmdty Index (TR)	0.10
ICE BofAML 3 Mo US T-Bill Index	-0.70
Cons Price Index (Unadjusted)	0.21
NCREIF ODCE Index (AWA) (Gross)	0.97



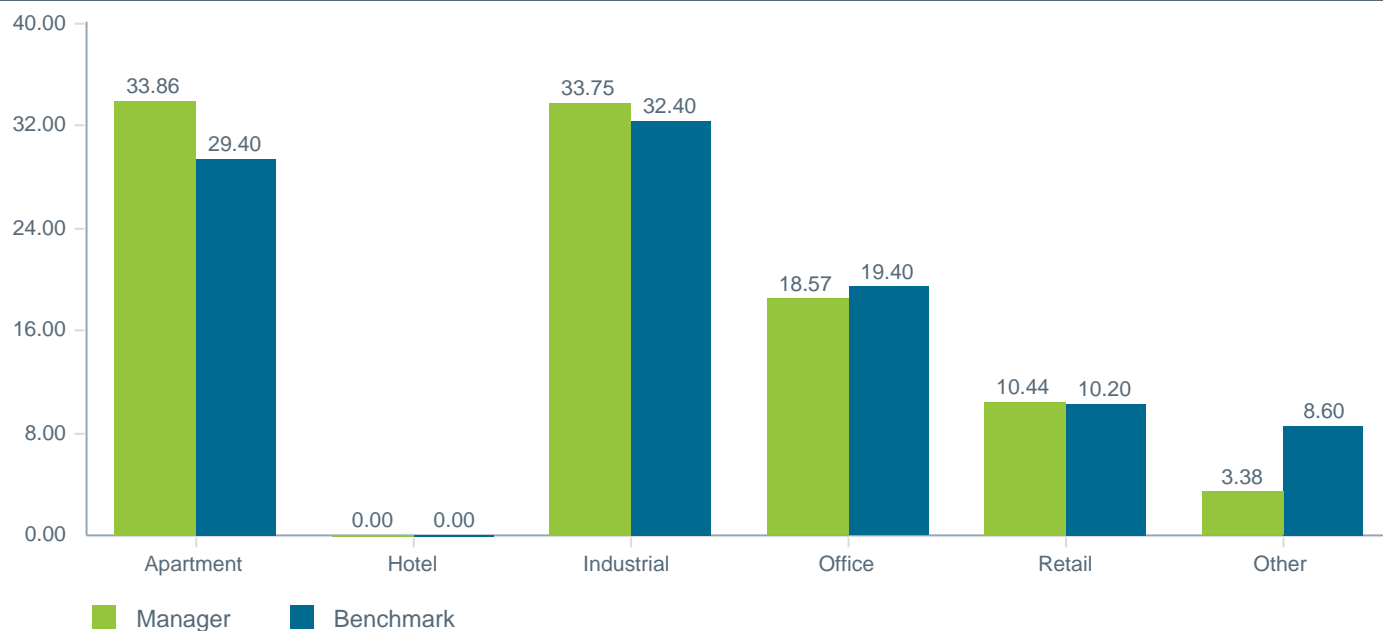
**Investment Strategy**

The Principal U.S. Property Account is a core real estate account designed to have a low to moderate risk profile consistent with other open-end real estate funds comprising the NFI-ODCE. This risk profile has two components: 1) a low to moderate real estate property risk profile; and 2) a low to moderate risk portfolio level operating profile. Low to moderate real estate property risk is accomplished by investing primarily in well-leased properties on an unleveraged basis. Low to moderate portfolio level risk is accomplished by operating with limited portfolio level obligations and a well-diversified portfolio. The Account invests in the traditional real estate property types; multifamily, office, industrial, and retail.

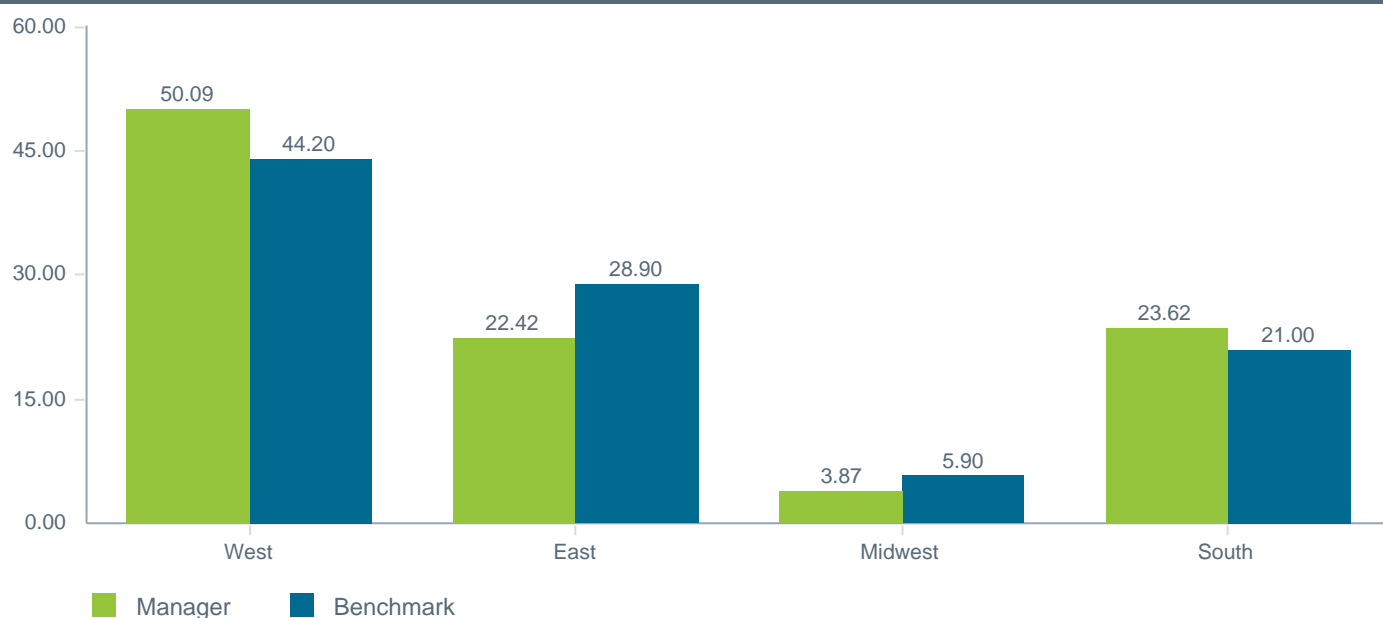
**Investment Profile**

Fund Inception	1982
Legal Structure	Insurance SA
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	12,975
Fund Leverage %	24.87
Portfolio Occupancy %	91.79
Cash Reserve %	1.86
Number of Investments	159
Number of Limited Partners	4,662

**Property Type Allocation (%)**

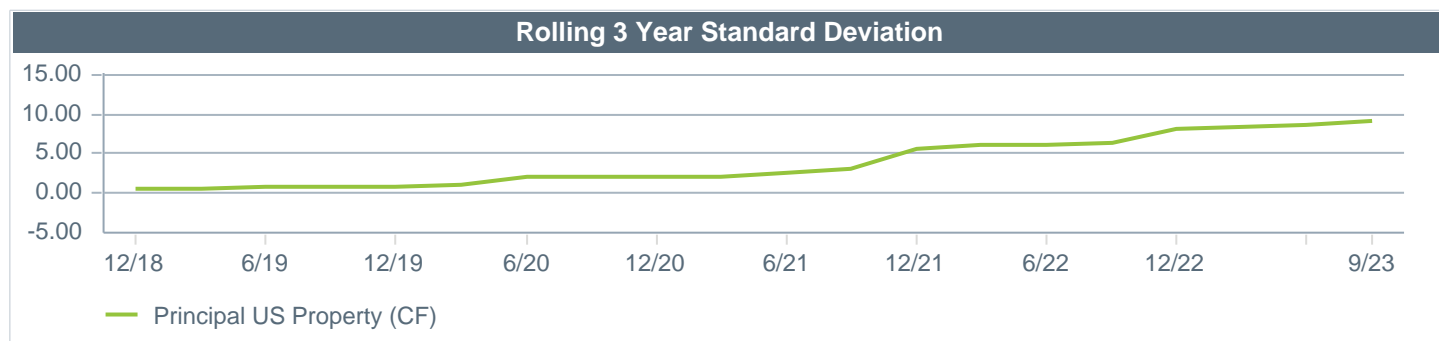
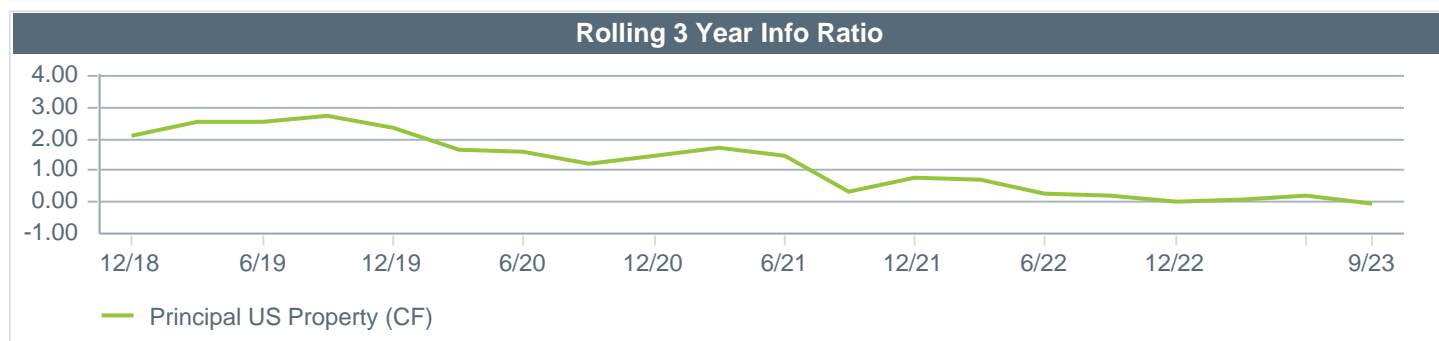
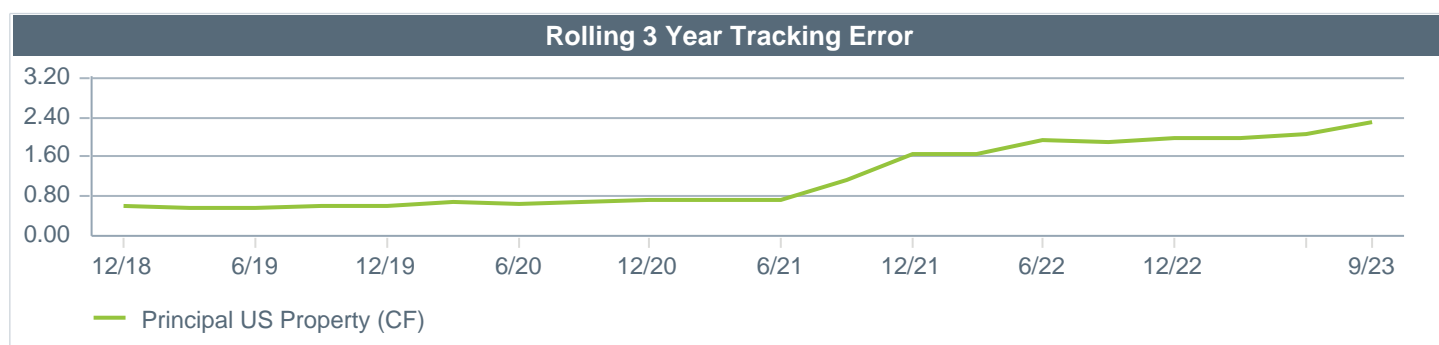
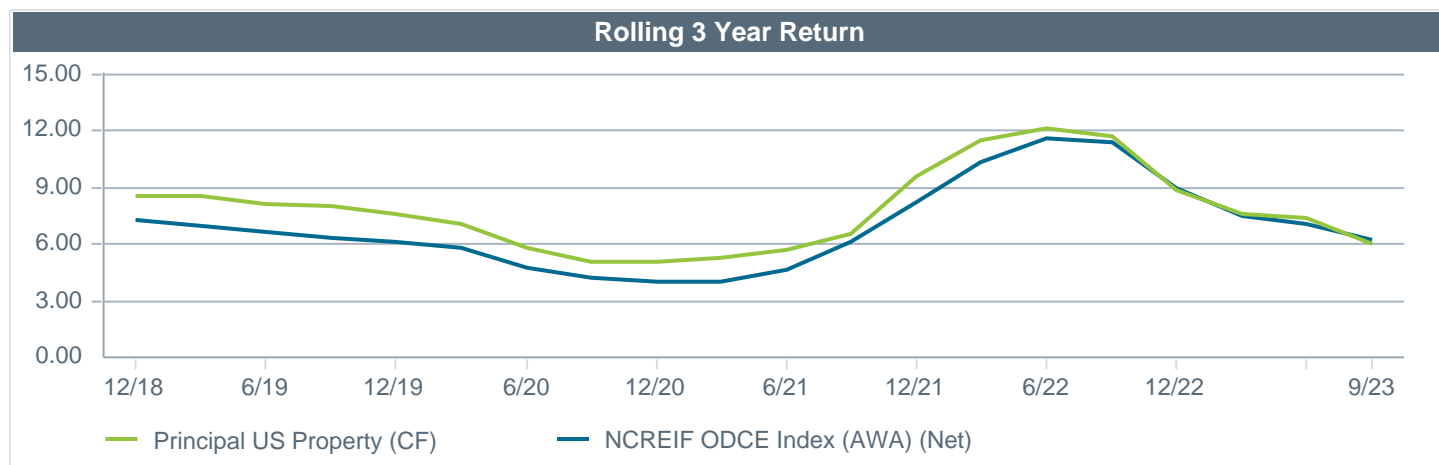


**Geographic Allocation (%)**



Performance shown is net 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 land, self storage, and data centers. 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.





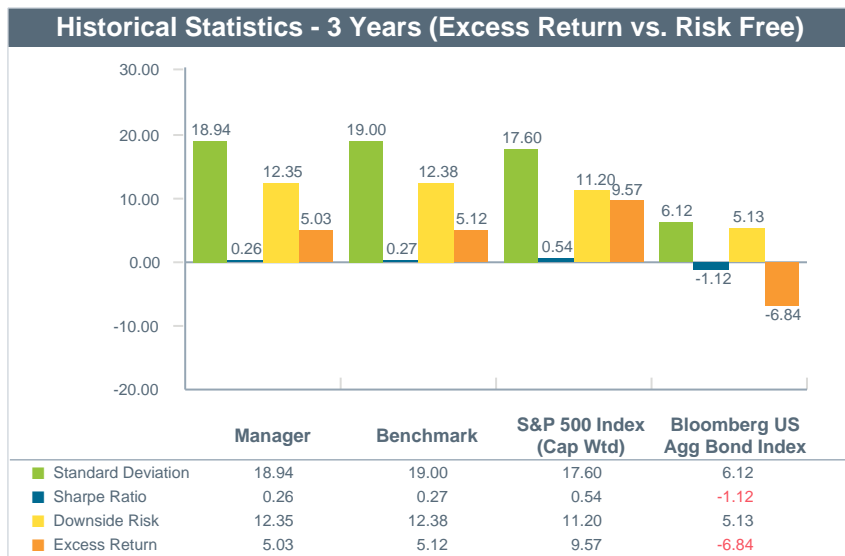
### Multi Statistics - 3 Years

	Standard Deviation	Downside Risk	Excess Risk	Tracking Error	Beta	R-Squared
Manager	9.13	4.71	9.98	2.30	1.06	0.94
Benchmark	8.36	4.12	9.22	0.00	1.00	1.00

Performance shown is net of fees and product specific. Calculation is based on quarterly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

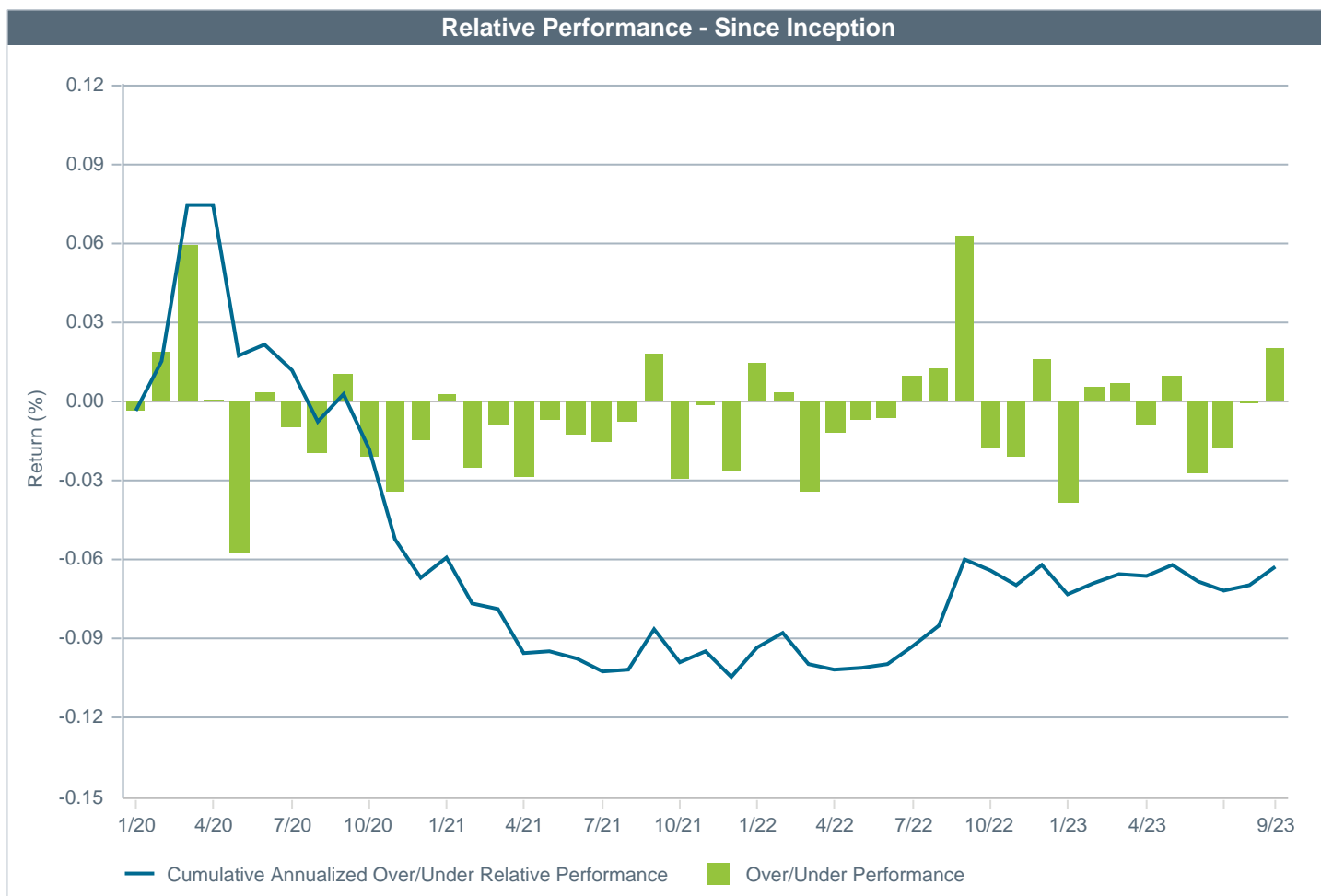


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-7.31	4.03	5.04	N/A	N/A	N/A	-20.12	32.73	-2.83	N/A	N/A
Benchmark	-7.31	4.10	5.12	N/A	N/A	N/A	-20.13	32.91	-2.76	N/A	N/A
Difference	0.00	-0.07	-0.08	N/A	N/A	N/A	0.01	-0.18	-0.07	N/A	N/A



### Actual Correlation - 3 Years

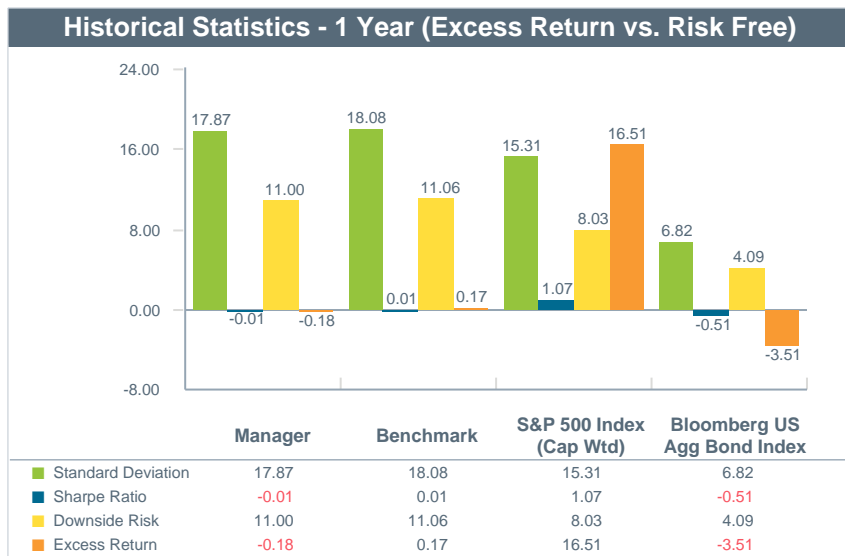
	Actual Correlation
Fidelity REITs Completion Index	1.00
NCREIF ODCE Index (AWA) (Net)	0.16
S&P 500 Index (Cap Wtd)	0.90
Russell 2000 Index	0.77
MSCI EAFE Index (USD) (Net)	0.82
MSCI Emg Mkts Index (USD) (Net)	0.63
Bloomberg US Agg Bond Index	0.61
Bloomberg US Trsy US TIPS Index	0.70
Wilshire US REIT Index	0.98
HFRI FOF Comp Index	0.69
Bloomberg Cmdty Index (TR)	0.47
ICE BofAML 3 Mo US T-Bill Index	-0.19
Cons Price Index (Unadjusted)	0.02
FTSE NAREIT Comp Index (TR)	0.99



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

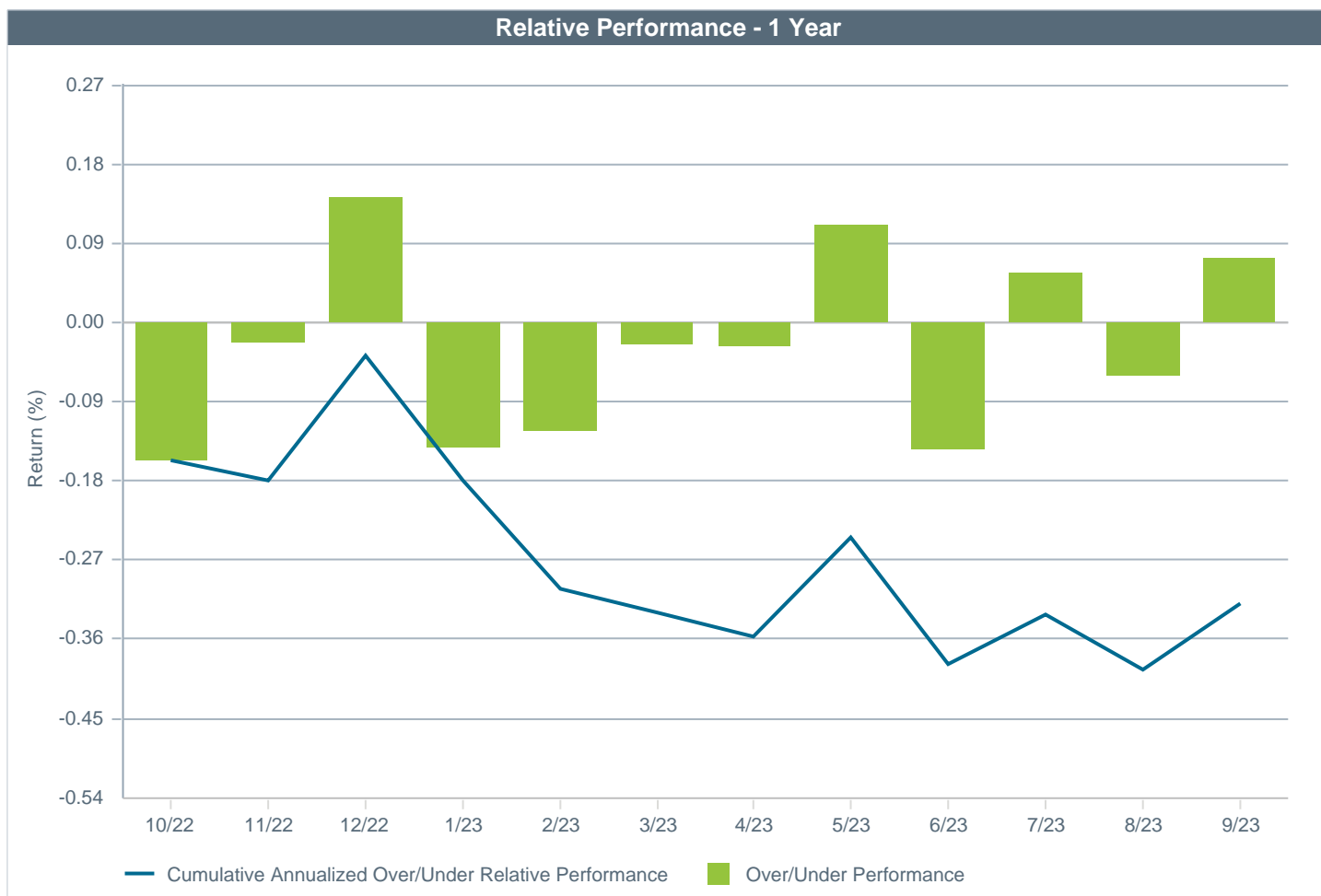


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-7.07	2.66	N/A	N/A	N/A	N/A	-23.48	N/A	N/A	N/A	N/A
Benchmark	-7.13	2.99	5.76	2.77	2.61	5.96	-24.37	43.24	-8.00	26.00	-4.62
Difference	0.06	-0.33	N/A	N/A	N/A	N/A	0.89	N/A	N/A	N/A	N/A



### Actual Correlation - 1 Year

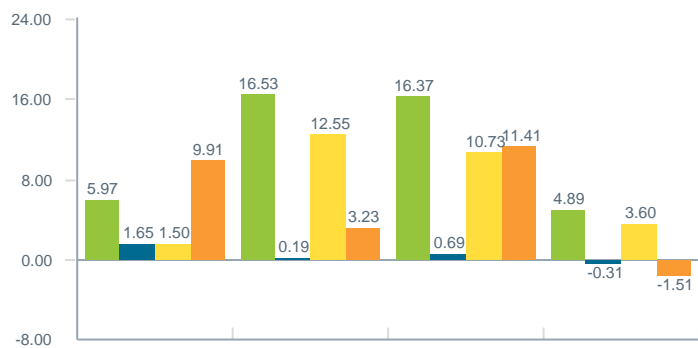
	Actual Correlation
FTSE NAREIT Eq REITs Index (TR)	1.00
NCREIF ODCE Index (AWA) (Net)	0.37
S&P 500 Index (Cap Wtd)	0.88
Russell 2000 Index	0.88
MSCI EAFE Index (USD) (Net)	0.87
MSCI Emg Mkts Index (USD) (Net)	0.70
Bloomberg US Agg Bond Index	0.63
Bloomberg US Trsy US TIPS Index	0.64
Wilshire US REIT Index	1.00
HFRI FOF Comp Index	0.88
Bloomberg Cmnty Index (TR)	0.58
ICE BofAML 3 Mo US T-Bill Index	-0.43
Cons Price Index (Unadjusted)	0.30
FTSE NAREIT Comp Index (TR)	0.99



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

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	0.47	9.87	11.81	10.27	11.88	N/A	8.17	17.66	2.88	14.60	18.11
Benchmark	-7.50	5.90	6.45	3.18	3.38	4.20	-0.99	11.04	-6.49	25.75	-10.37
Difference	7.97	3.97	5.36	7.09	8.50	N/A	9.16	6.62	9.37	-11.15	28.48

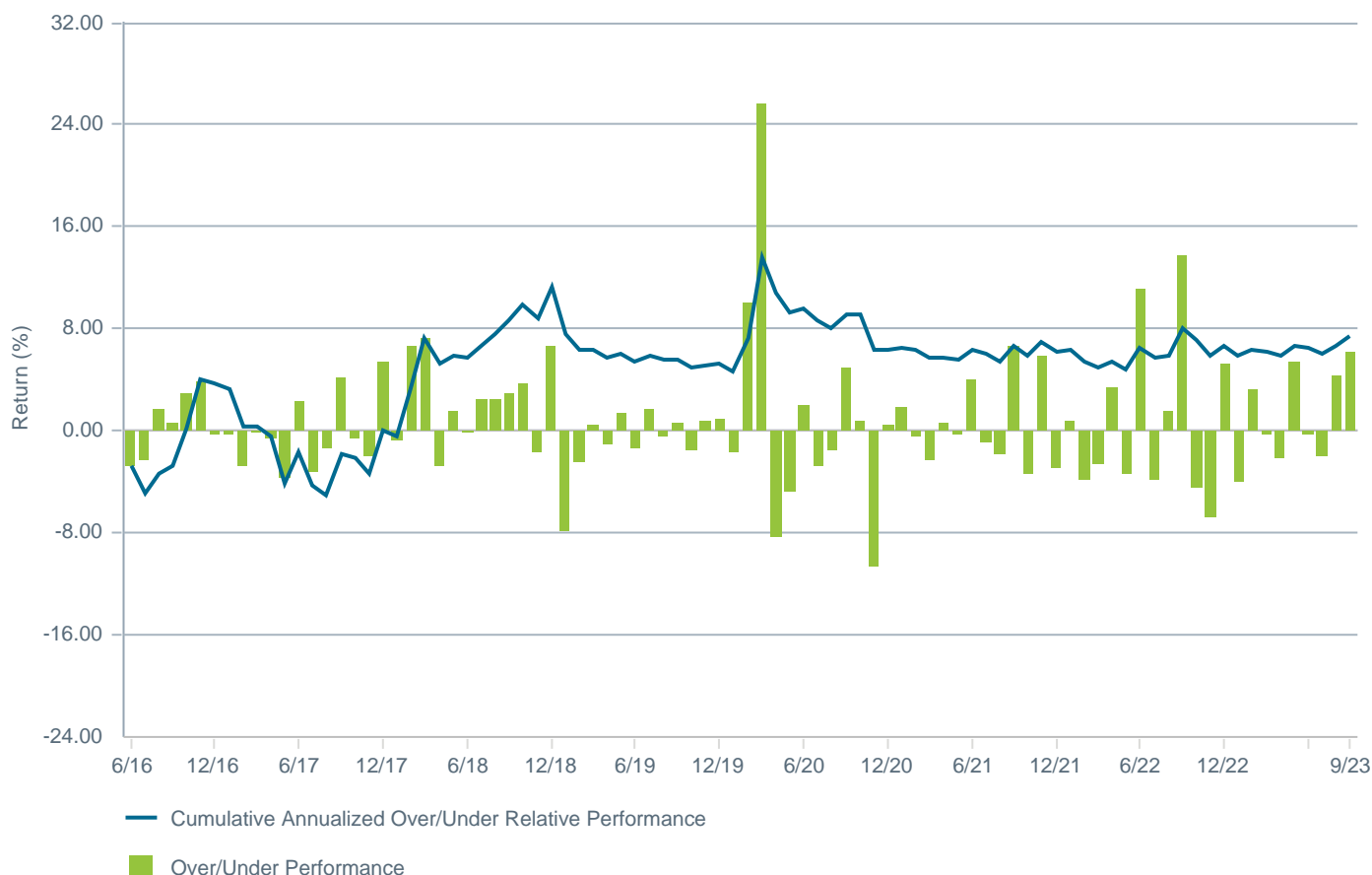
### Historical Statistics - 7 Years (Excess Return vs. Risk Free)



### Actual Correlation - 7 Years

	Actual Correlation
S&P Gbl Infrastructure Index (Net)	0.27
S&P 500 Index (Cap Wtd)	0.10
Russell 2000 Index	0.11
MSCI EAFE Index (USD) (Net)	0.22
MSCI Emg Mkts Index (USD) (Net)	0.22
Bloomberg US Agg Bond Index	0.08
Bloomberg US Trsy US TIPS Index	0.03
Wilshire US REIT Index	0.20
HFRI FOF Comp Index	0.24
Bloomberg Comdty Index (TR)	0.17
ICE BofAML 3 Mo US T-Bill Index	-0.05
Cons Price Index (Unadjusted)	-0.02

### Relative Performance - Since Inception



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-6.67	5.48	6.43	N/A	N/A	N/A	-4.53	20.80	-8.70	N/A	N/A
Benchmark	-6.93	4.50	5.79	2.97	3.03	4.20	-4.91	20.23	-9.51	26.53	-8.54
Difference	0.26	0.98	0.64	N/A	N/A	N/A	0.38	0.57	0.81	N/A	N/A

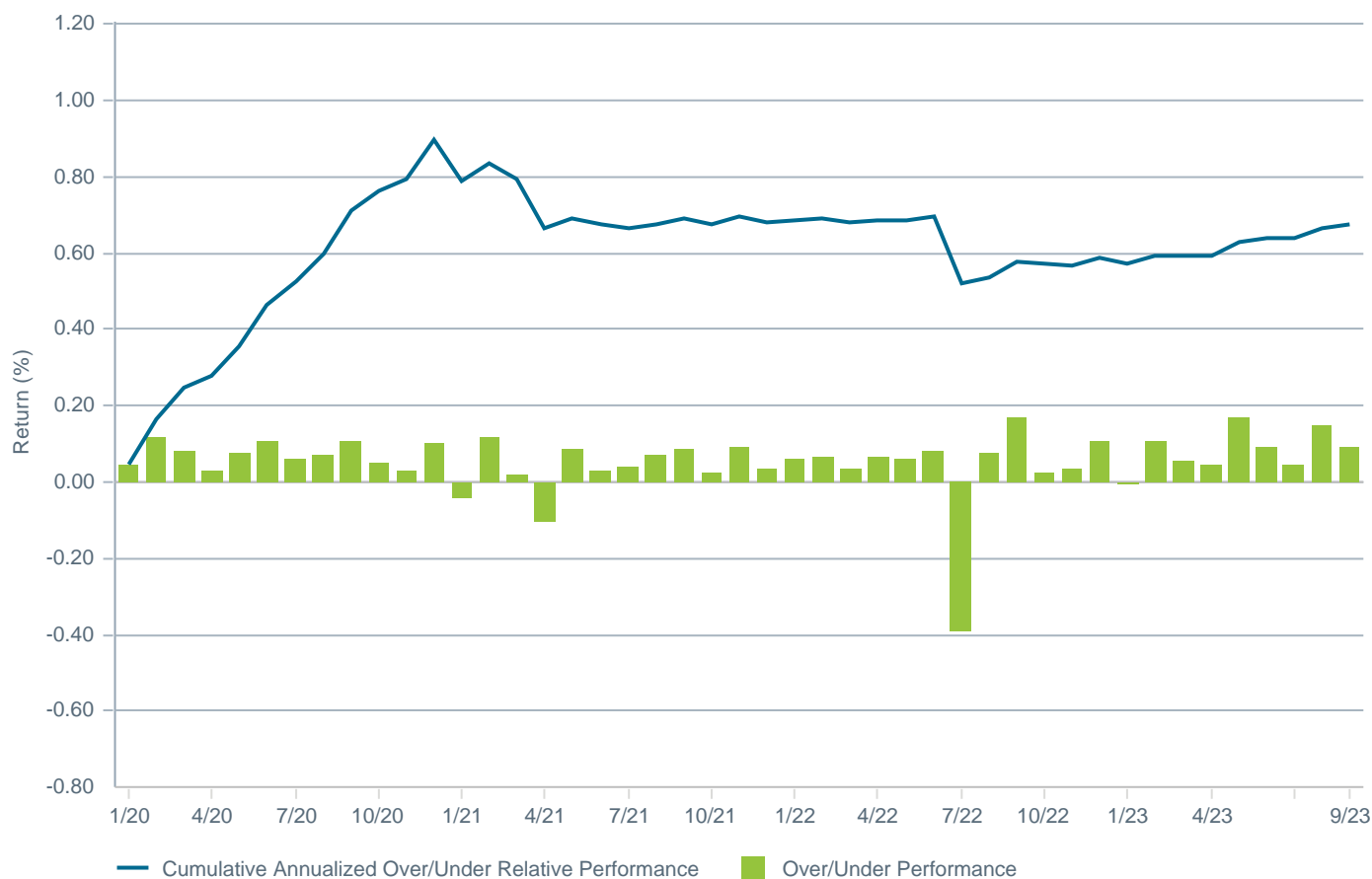
Historical Statistics - 3 Years (Excess Return vs. Risk Free)



Actual Correlation - 3 Years

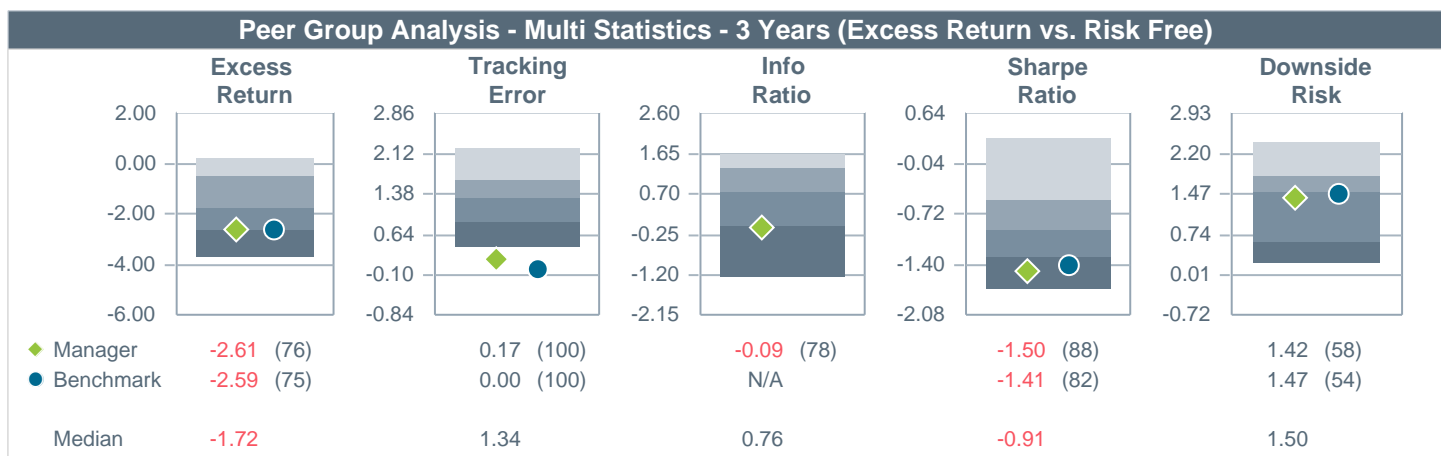
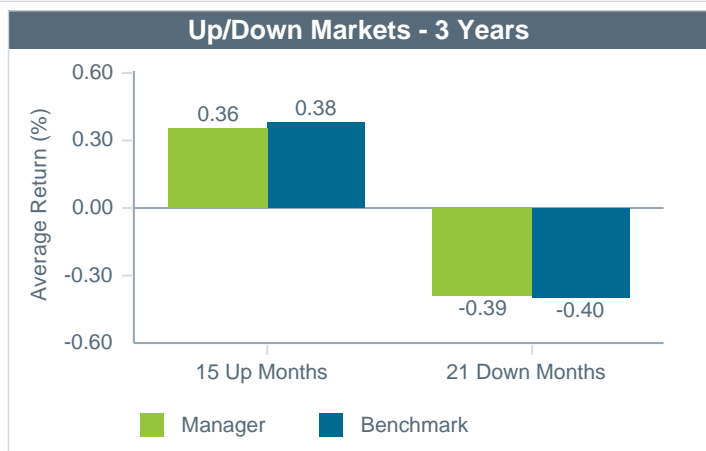
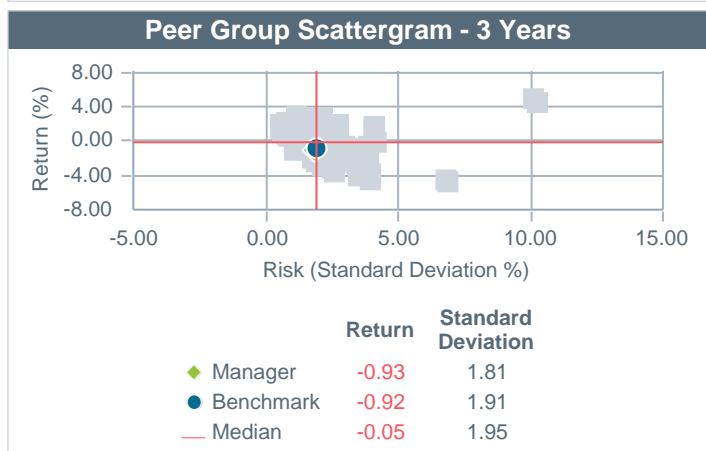
	Actual Correlation
DJ Brookfield Gbl Infra Comp Idx	1.00
Consumer Price Index+5%	0.04
S&P 500 Index (Cap Wtd)	0.85
Russell 2000 Index	0.70
MSCI EAFE Index (USD) (Net)	0.88
MSCI Emg Mkts Index (USD) (Net)	0.67
Bloomberg US Agg Bond Index	0.59
Bloomberg US Trsy US TIPS Index	0.67
Wilshire US REIT Index	0.84
HFRI FOF Comp Index	0.52
Bloomberg Cmnty Index (TR)	0.56
ICE BofAML 3 Mo US T-Bill Index	-0.20
Cons Price Index (Unadjusted)	0.04

Relative Performance - Since Inception



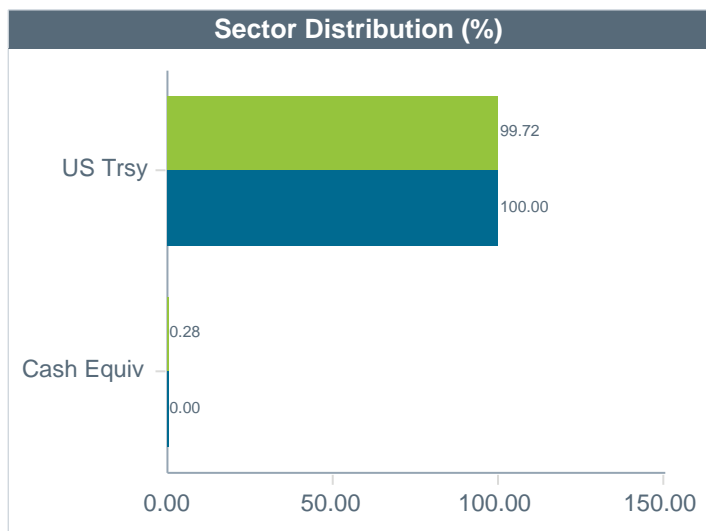
Performance shown is net of fees and client specific. Calculation is based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
<b>Manager</b>	<b>0.74</b>	<b>2.42</b>	<b>-0.93</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.75</b>	<b>-0.73</b>	<b>3.14</b>	<b>N/A</b>	<b>N/A</b>
Benchmark	0.71	2.44	-0.92	1.03	0.77	0.79	-3.82	-0.60	3.16	3.59	1.56
Difference	0.03	-0.02	-0.01	N/A	N/A	N/A	0.07	-0.13	-0.02	N/A	N/A
Peer Group Median	0.94	3.92	-0.05	1.38	1.22	1.13	-3.87	-0.06	3.11	3.82	1.19
Rank	67	84	76	N/A	N/A	N/A	46	79	49	N/A	N/A
Population	670	648	596	538	467	380	644	655	650	654	633



### Portfolio Characteristics

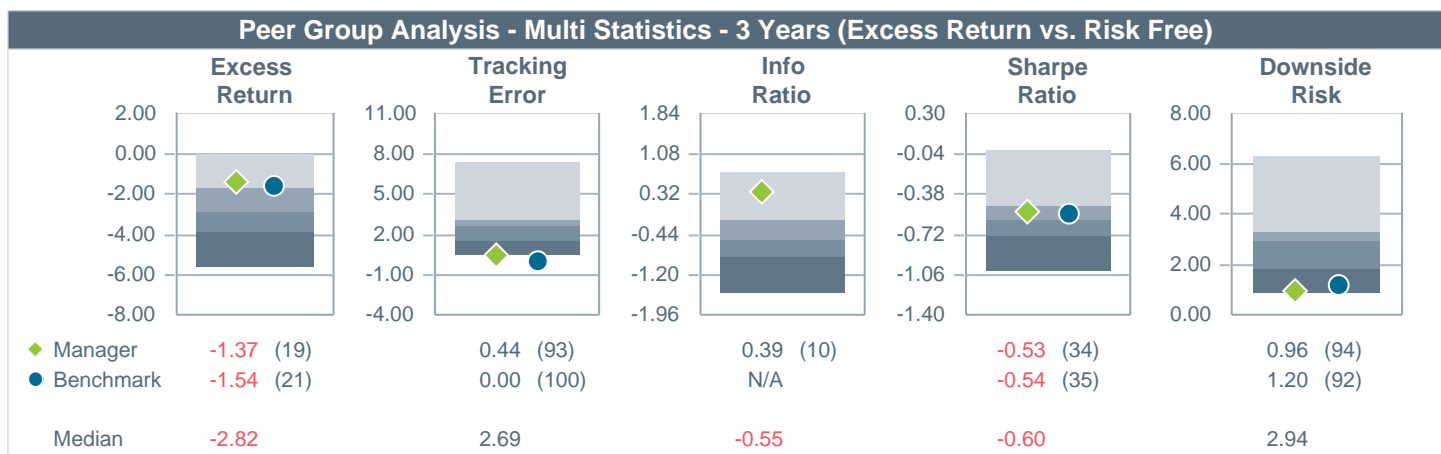
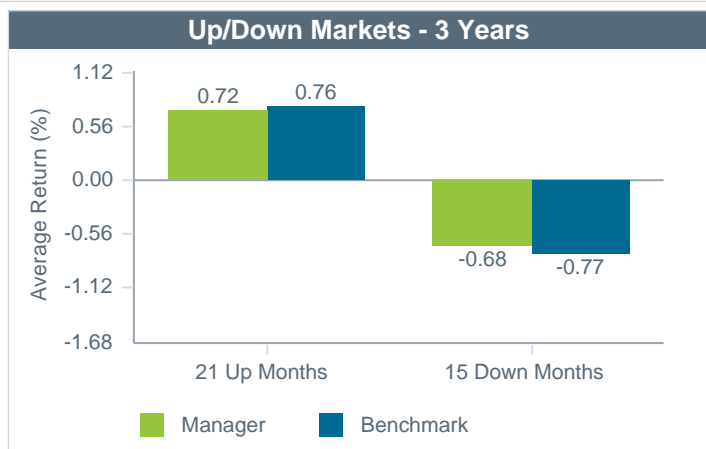
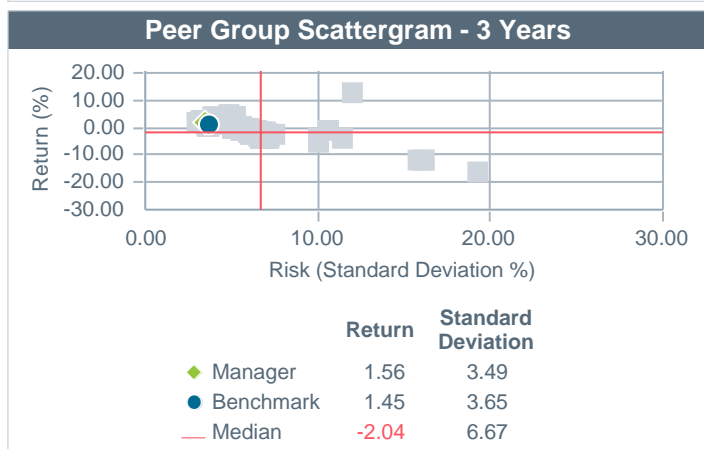
	Portfolio	Benchmark
Effective Duration	1.78	1.87
Spread Duration	0.00	1.87
Avg. Maturity	1.88	1.96
Avg. Quality	Aaa	Aa1
Yield To Maturity (%)	5.17	5.11
Coupon Rate (%)	1.74	2.28
Current Yield (%)	1.85	N/A
Holdings Count	3	97



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

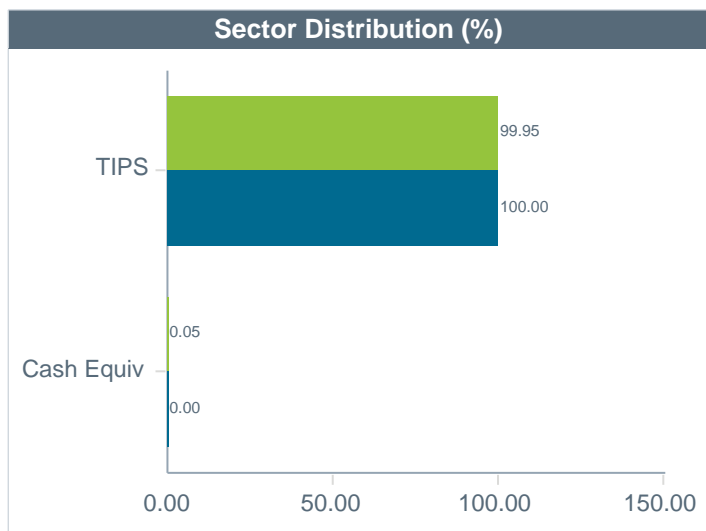


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	0.31	3.02	1.56	N/A	N/A	N/A	-3.49	5.23	5.85	N/A	N/A
Benchmark	0.24	2.84	1.45	2.67	2.06	1.63	-3.96	5.53	5.70	5.08	0.41
Difference	0.07	0.18	0.11	N/A	N/A	N/A	0.47	-0.30	0.15	N/A	N/A
Peer Group Median	-2.21	1.44	-2.04	1.94	1.36	1.39	-11.71	5.26	9.70	7.36	-1.57
Rank	10	17	16	N/A	N/A	N/A	9	52	81	N/A	N/A
Population	209	206	190	186	163	126	201	201	199	214	221



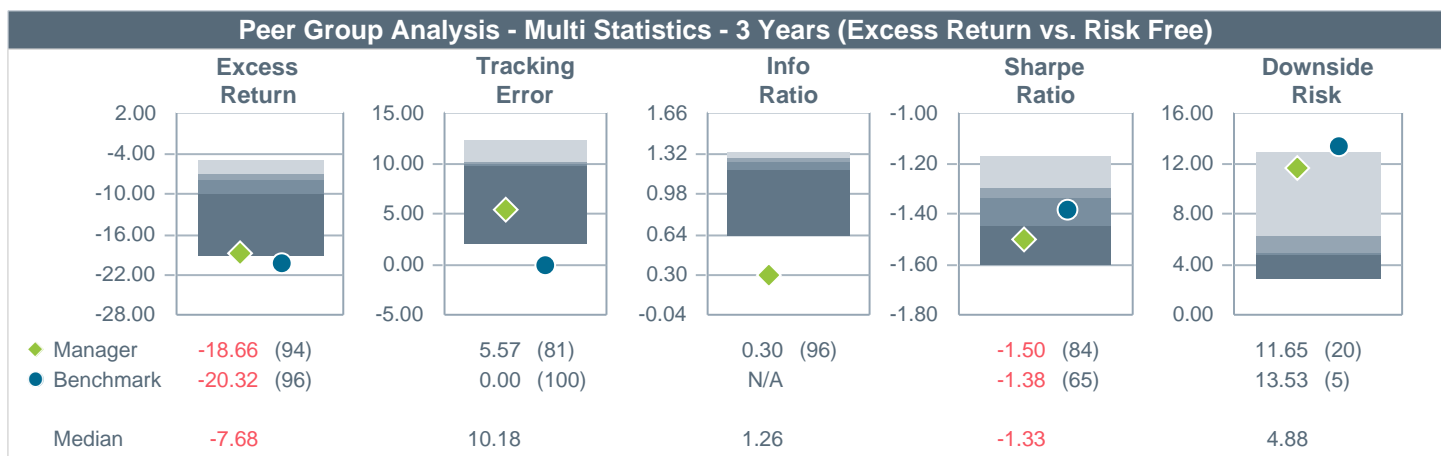
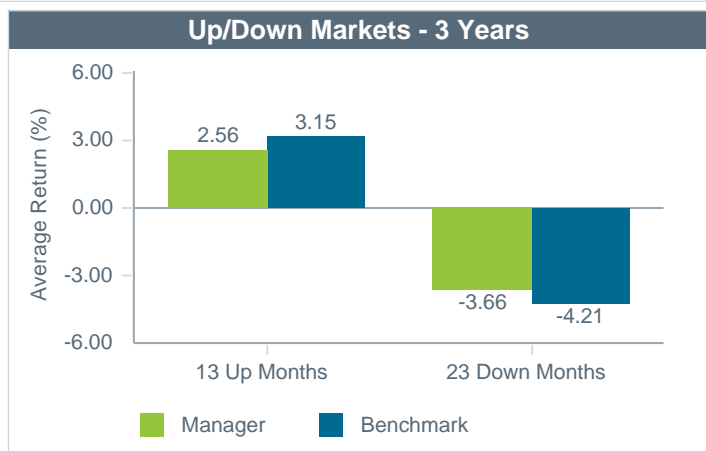
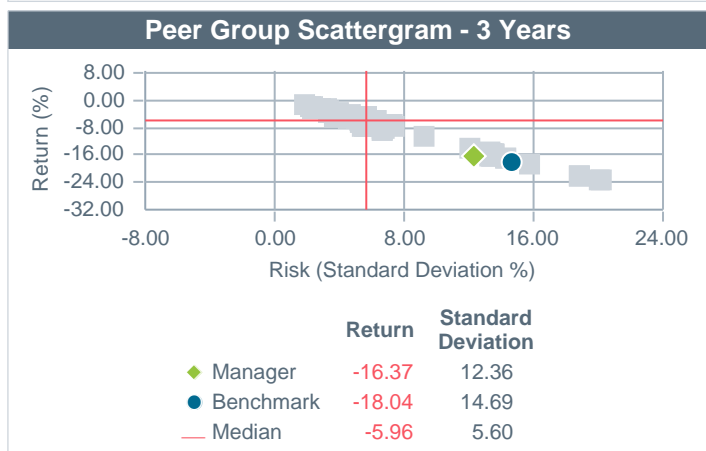
### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	2.11	2.33
Spread Duration	0.00	N/A
Avg. Maturity	2.87	2.92
Avg. Quality	Aaa	Aa1
Yield To Maturity (%)	5.47	5.12
Coupon Rate (%)	0.79	0.71
Current Yield (%)	0.57	N/A
Holdings Count	5	21



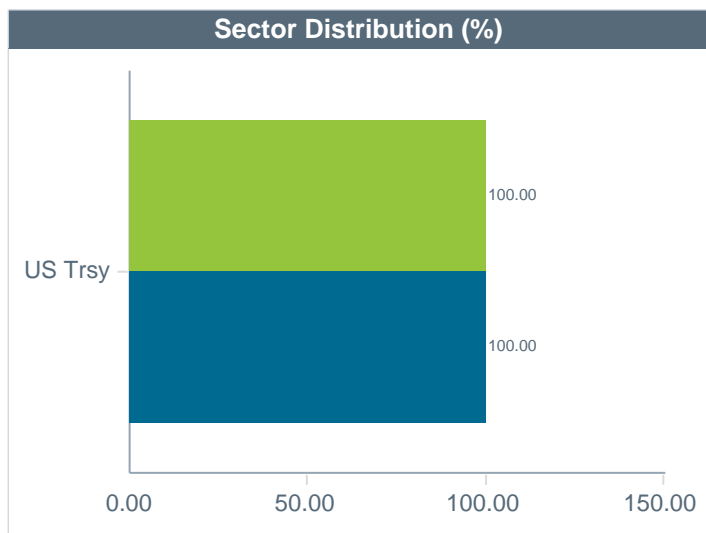
Performance shown is net and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-12.15	-17.10	-16.37	N/A	N/A	N/A	-29.95	-5.04	N/A	N/A	N/A
Benchmark	-12.72	-12.05	-18.04	-3.73	-4.44	0.28	-33.29	-4.62	18.72	16.43	-2.72
Difference	0.57	-5.05	1.67	N/A	N/A	N/A	3.34	-0.42	N/A	N/A	N/A
Peer Group Median	-3.36	-1.67	-5.96	-0.78	-1.04	0.43	-12.69	-2.56	7.73	6.10	0.24
Rank	92	99	94	N/A	N/A	N/A	93	93	N/A	N/A	N/A
Population	148	133	118	104	96	85	124	121	113	121	121



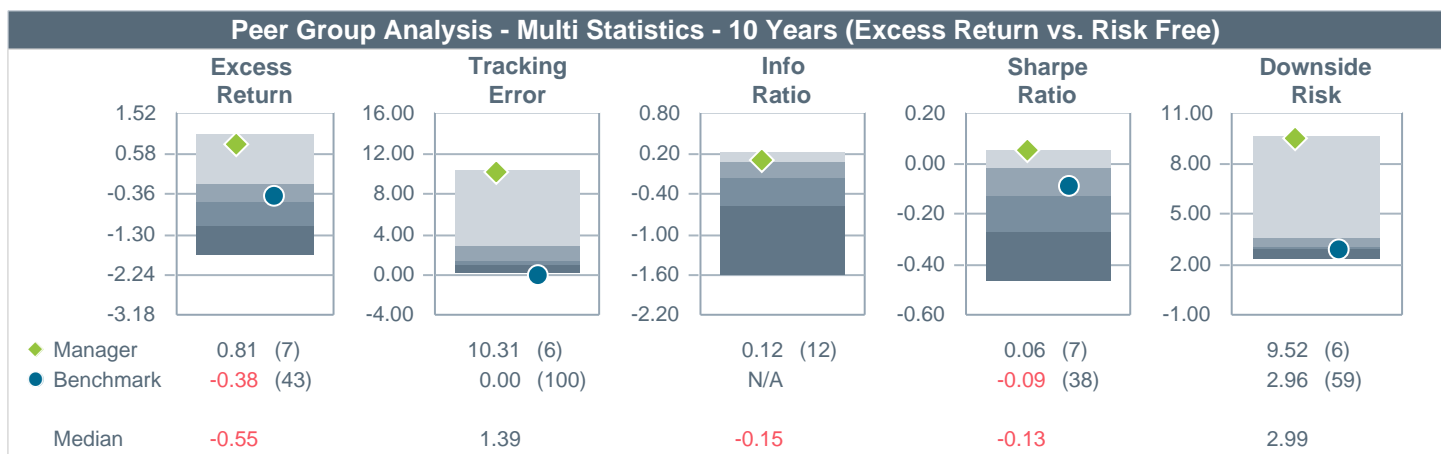
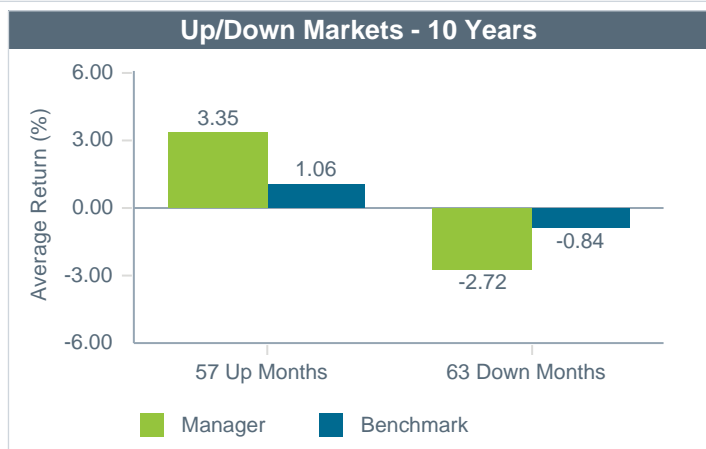
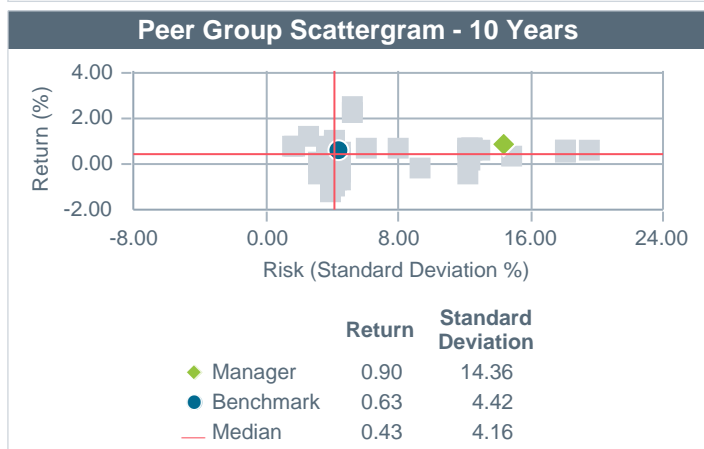
### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	16.16	16.16
Spread Duration	N/A	N/A
Avg. Maturity	29.87	29.87
Avg. Quality	Aaa	Aa1
Yield To Maturity (%)	4.70	4.70
Coupon Rate (%)	4.13	4.13
Current Yield (%)	N/A	N/A
Holdings Count	1	1



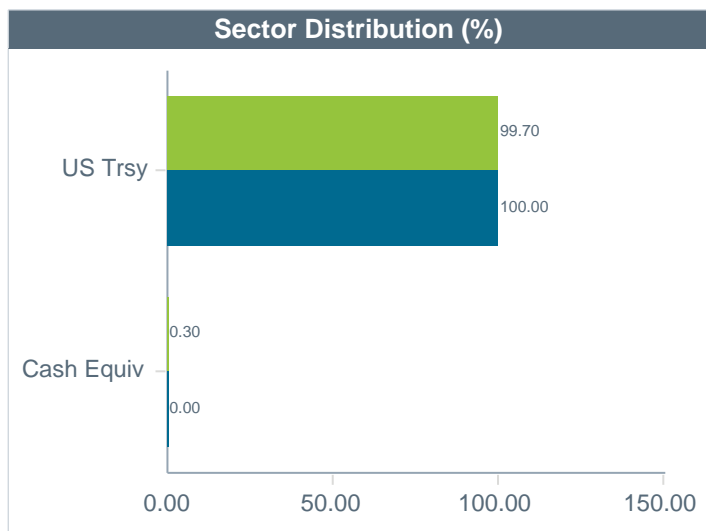
Performance shown is net and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-13.13	-10.48	-17.75	-3.21	-4.02	0.90	-32.50	-5.65	20.43	17.68	-3.01
Benchmark	-3.06	-0.81	-5.83	-0.07	-0.52	0.63	-12.46	-2.32	8.00	6.86	0.86
Difference	-10.07	-9.67	-11.92	-3.14	-3.50	0.27	-20.04	-3.33	12.43	10.82	-3.87
Peer Group Median	-1.24	2.48	-2.04	1.18	1.00	1.77	-9.72	-0.11	6.48	8.41	0.04
Rank	100	100	100	100	100	92	100	100	2	9	87
Population	1,181	1,178	1,114	1,069	1,010	911	1,284	1,322	1,379	1,398	1,440

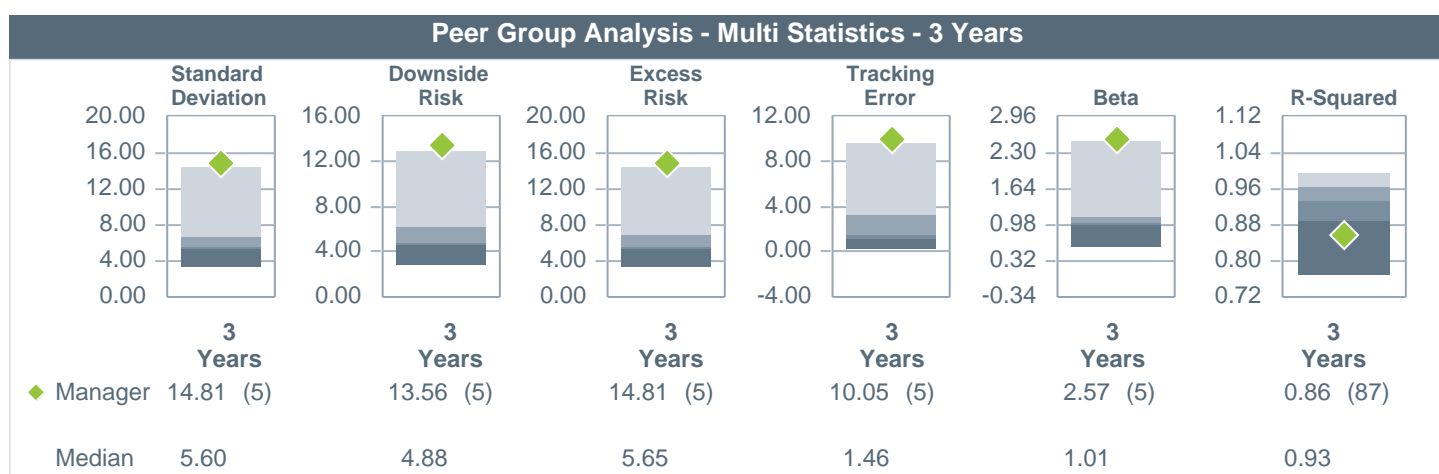
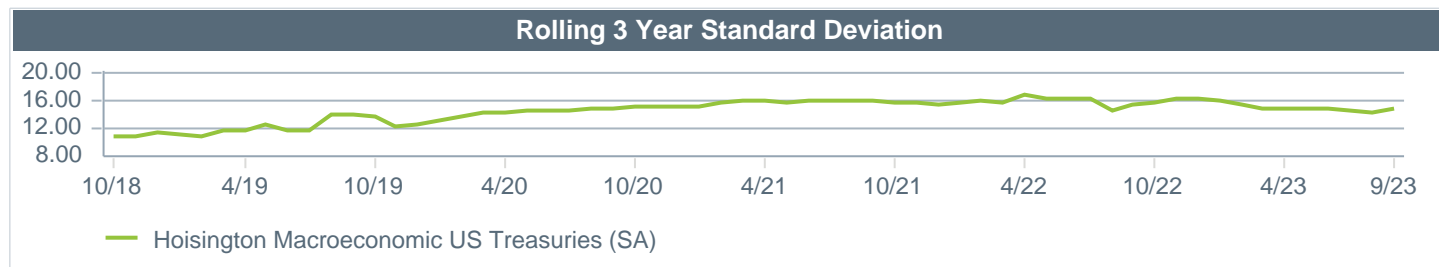
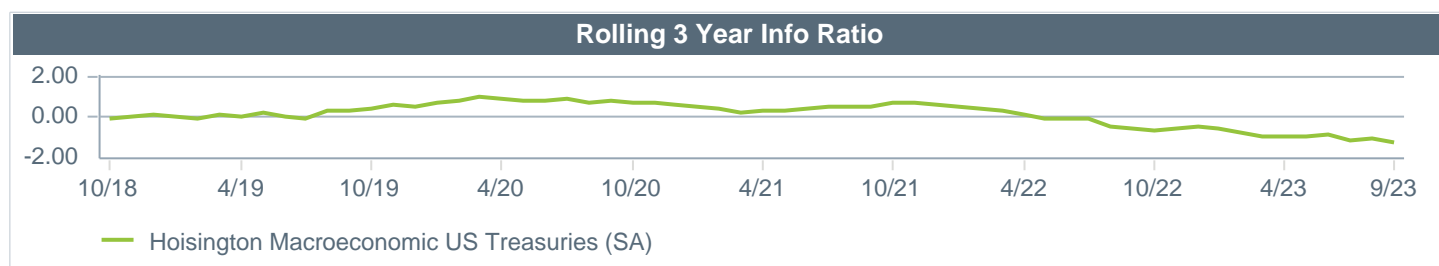
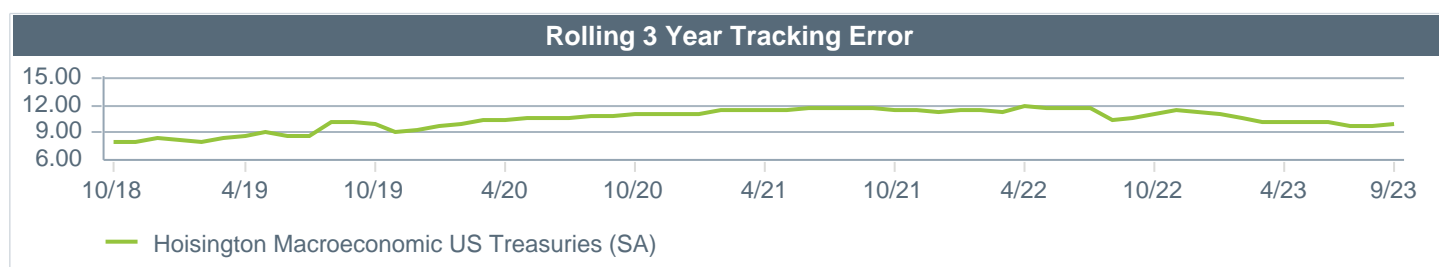
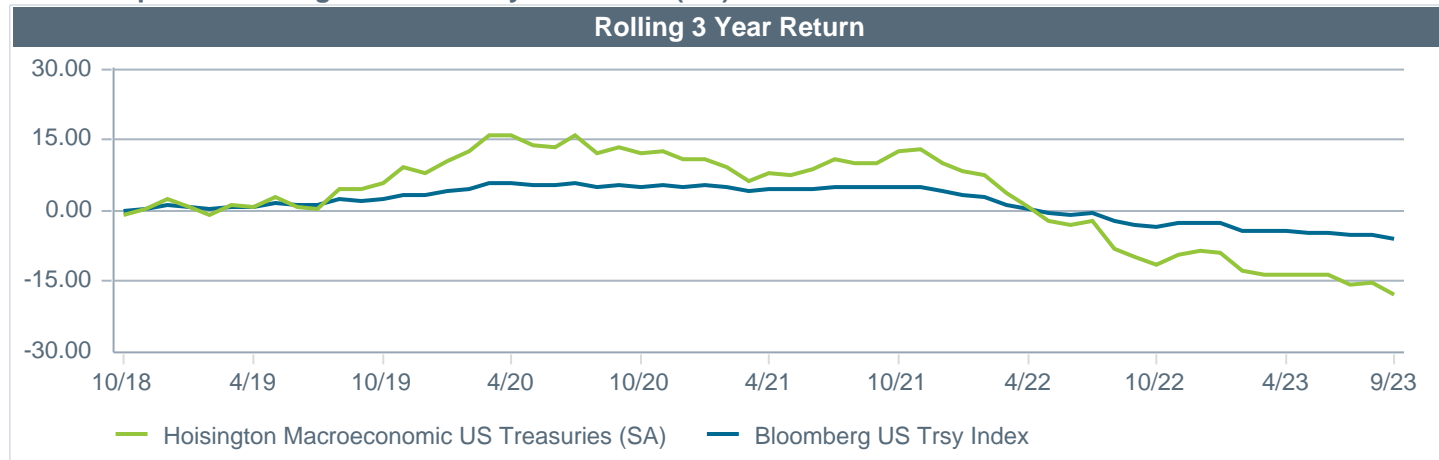


### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	17.23	5.86
Spread Duration	N/A	5.85
Avg. Maturity	23.87	7.58
Avg. Quality	Aaa	Aa1
Yield To Maturity (%)	4.88	4.85
Coupon Rate (%)	2.05	2.39
Current Yield (%)	3.36	N/A
Holdings Count	5	284



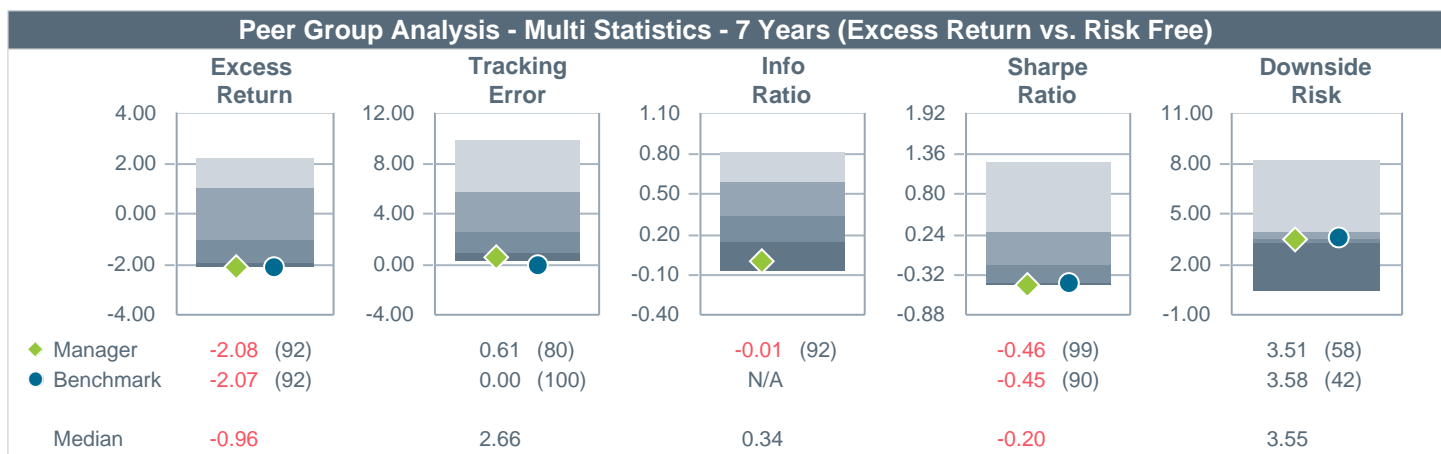
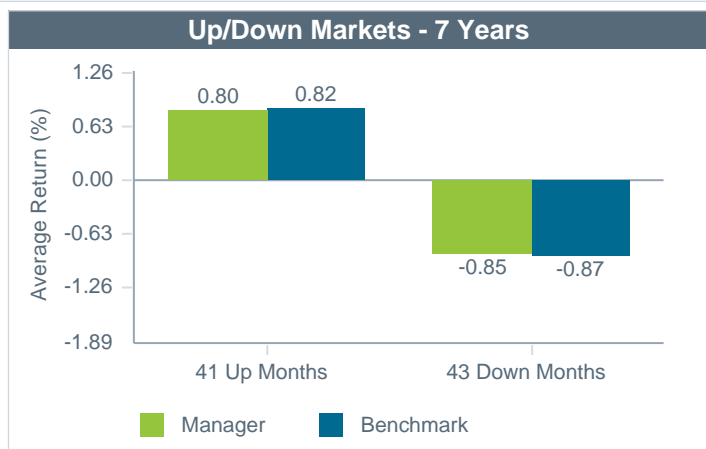
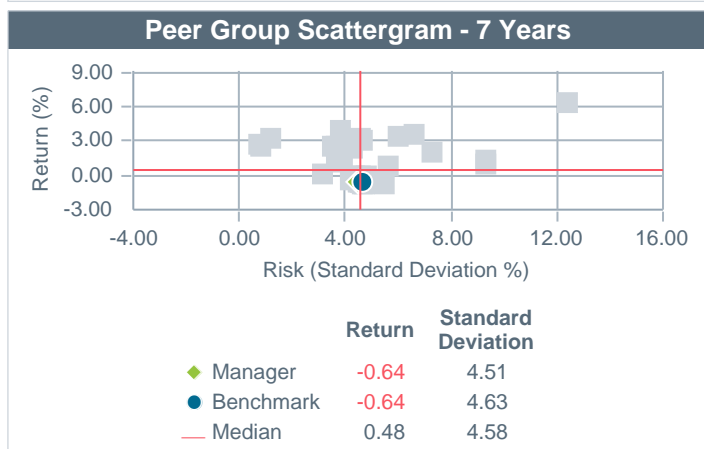
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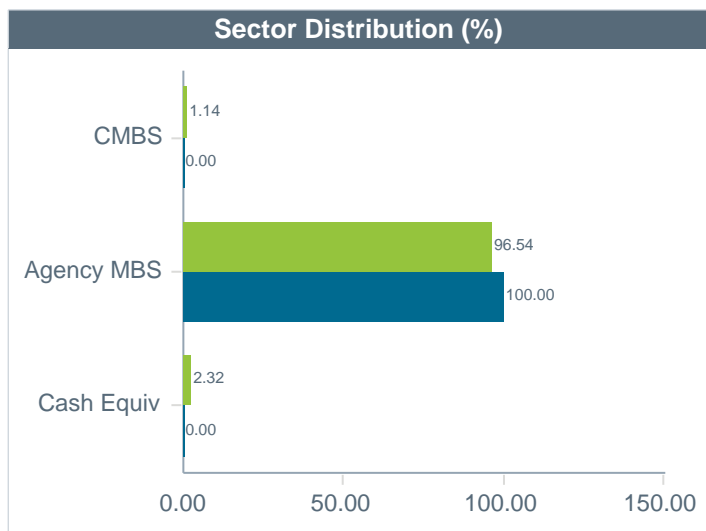


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.56	0.16	-4.90	-0.67	-0.64	N/A	-11.94	-1.15	3.91	6.07	1.18
Benchmark	-4.05	-0.17	-5.09	-0.77	-0.64	0.61	-11.81	-1.04	3.87	6.35	0.99
Difference	0.49	0.33	0.19	0.10	0.00	N/A	-0.13	-0.11	0.04	-0.28	0.19
Peer Group Median	-2.84	0.30	-3.41	-0.33	0.48	1.25	-11.09	-0.20	3.79	6.29	1.78
Rank	65	52	67	76	92	N/A	68	80	48	61	60
Population	40	40	40	38	36	33	45	48	50	50	50



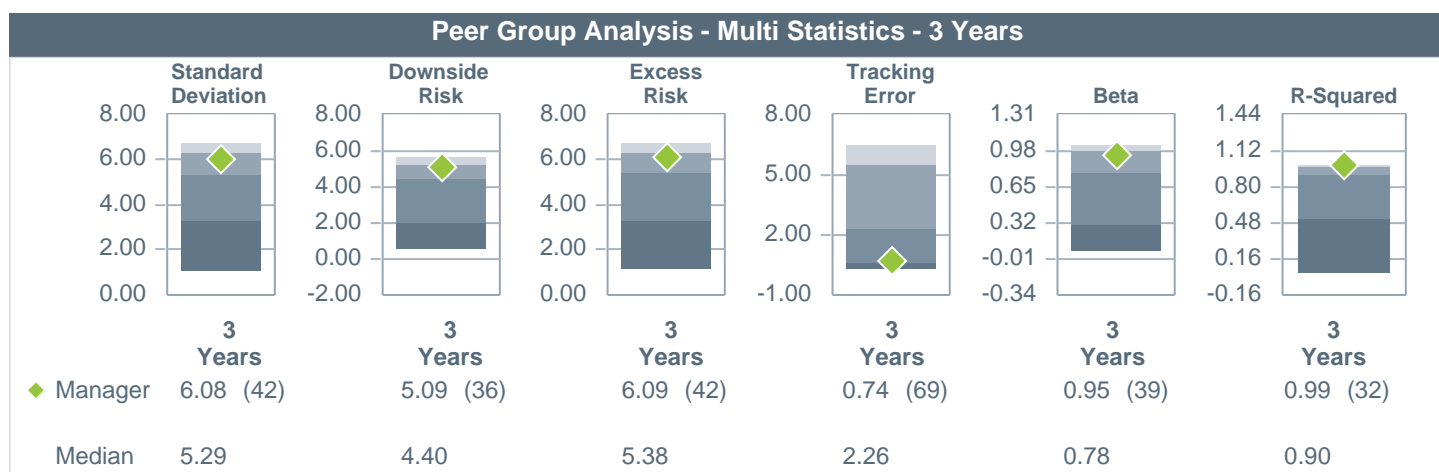
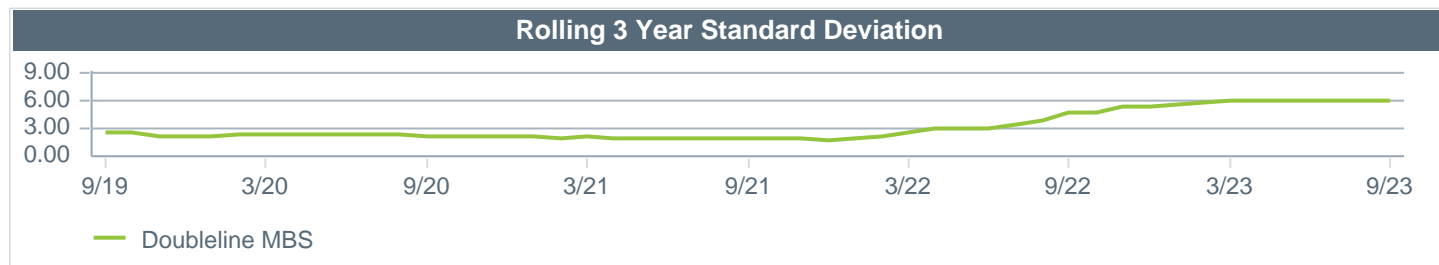
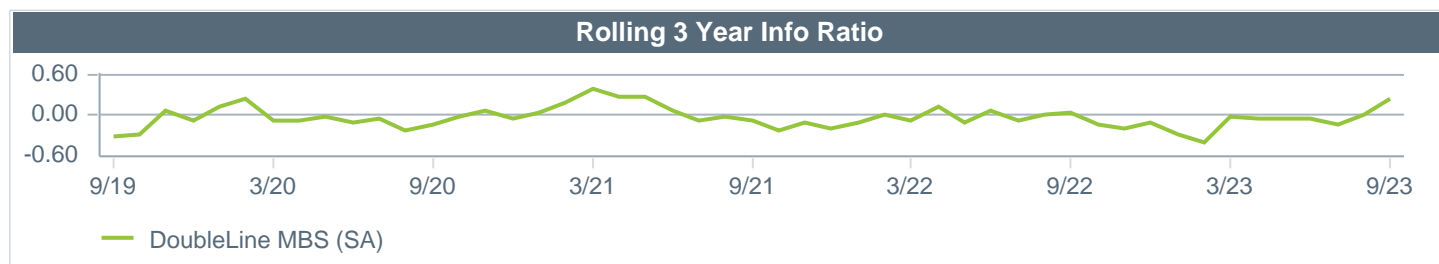
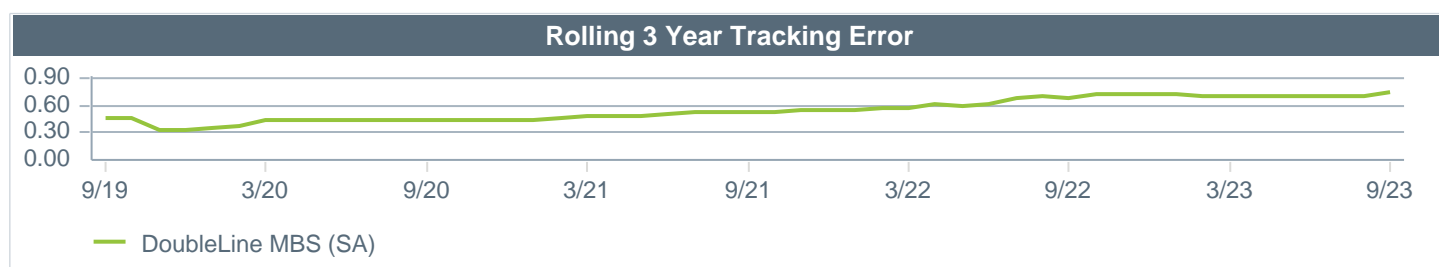
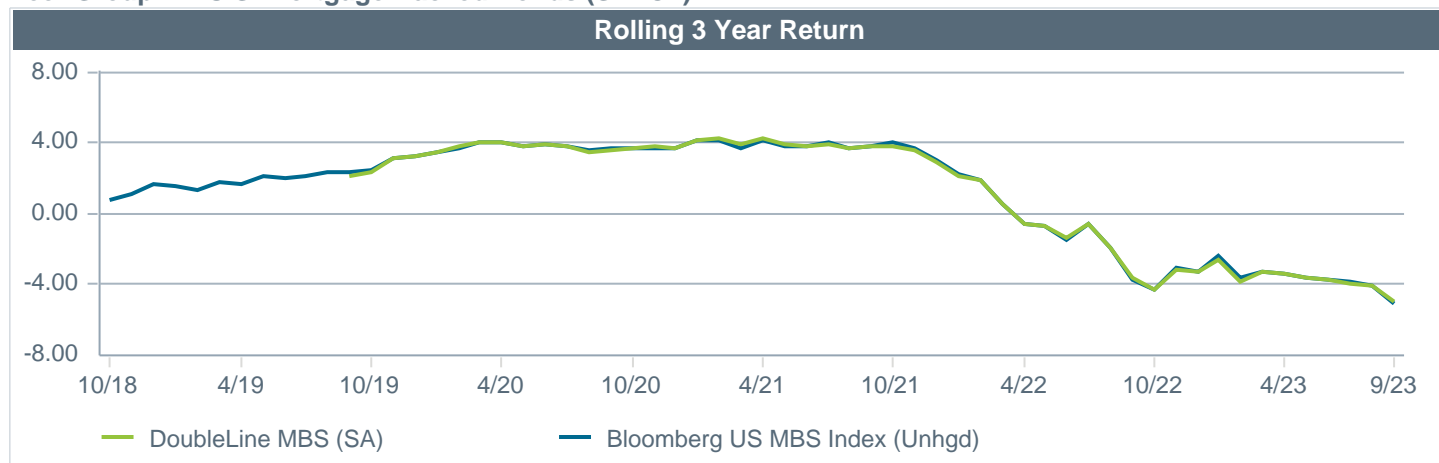
### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	5.75	6.42
Spread Duration	N/A	5.98
Avg. Maturity	7.94	8.38
Avg. Quality	Aaa	Aa1
Yield To Maturity (%)	5.80	5.57
Coupon Rate (%)	4.14	2.97
Current Yield (%)	3.86	N/A
Holdings Count	105	937



Performance shown is net and client specific. Returns prior to client inception are backfilled with product specific net returns. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

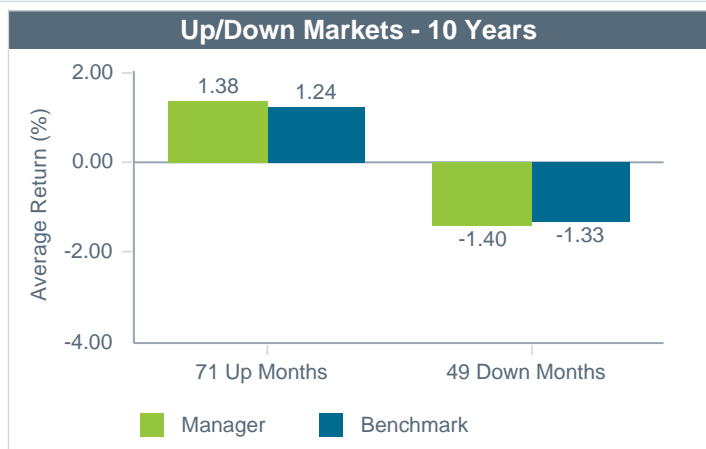
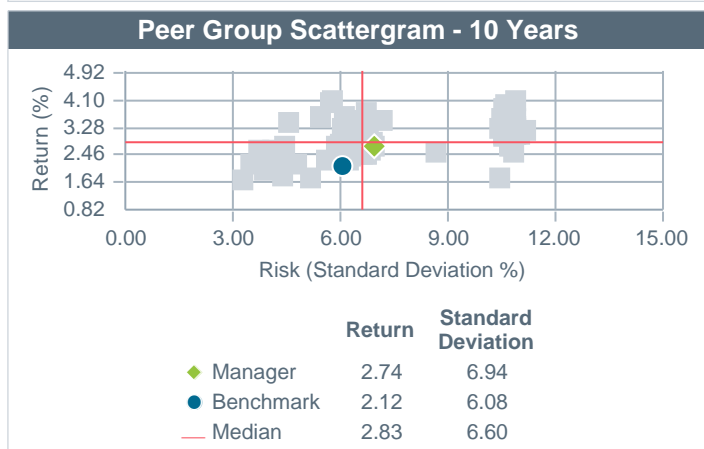




Performance shown is net and client specific. Returns prior to client inception are backfilled with product specific net returns. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

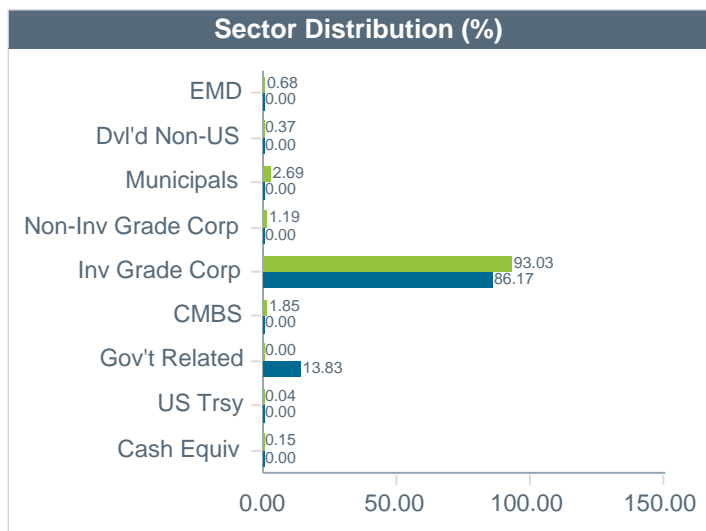


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-2.97	4.47	-4.32	1.46	1.27	2.74	-16.25	-0.13	10.82	15.51	-2.69
Benchmark	-3.01	3.47	-4.83	0.86	0.73	2.12	-15.26	-1.08	9.35	13.80	-2.11
Difference	0.04	1.00	0.51	0.60	0.54	0.62	-0.99	0.95	1.47	1.71	-0.58
Peer Group Median	-2.96	3.72	-4.51	1.39	1.26	2.83	-15.93	-0.55	11.27	15.08	-2.37
Rank	53	25	37	48	47	59	59	26	60	41	60
Population	116	116	116	114	105	94	125	133	141	143	146

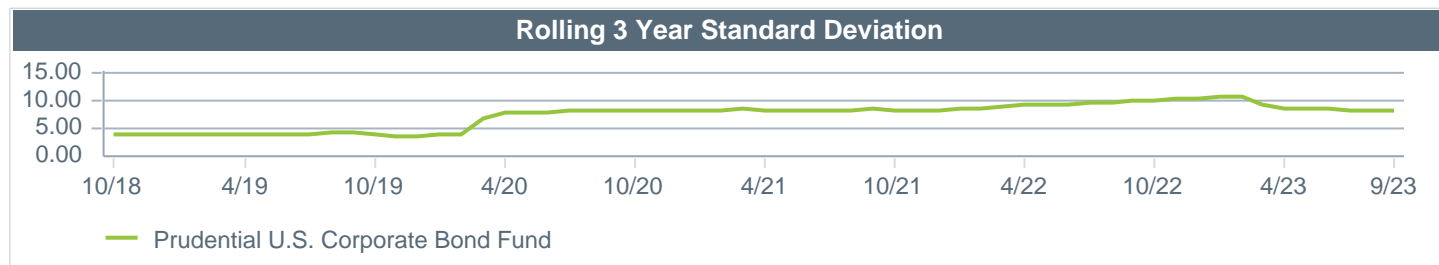
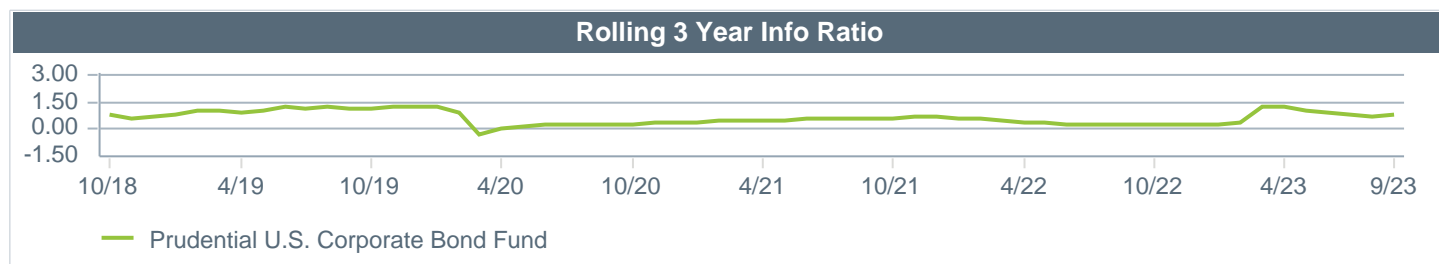
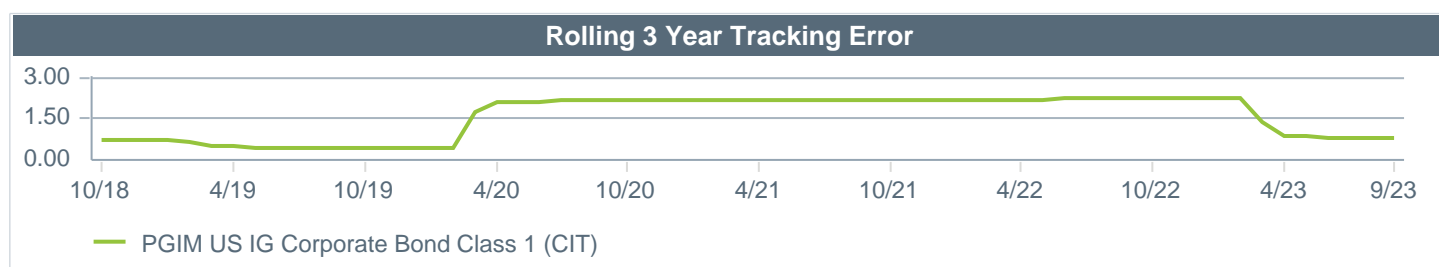
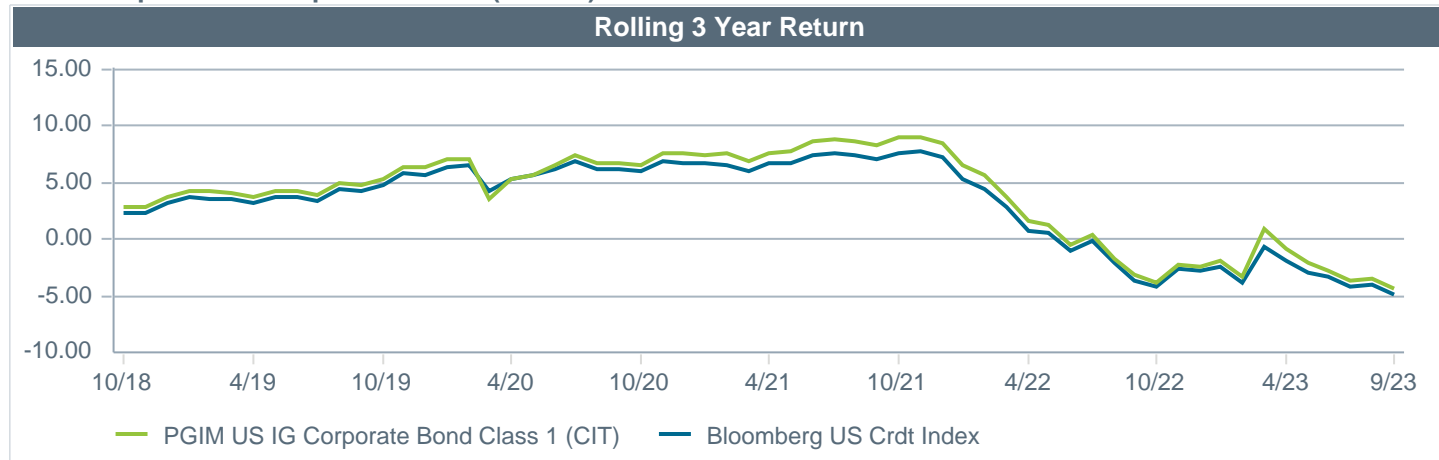


### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.80	6.60
Spread Duration	6.91	6.68
Avg. Maturity	11.56	10.38
Avg. Quality	Baa1	A2/A3
Yield To Maturity (%)	6.43	5.95
Coupon Rate (%)	3.84	3.87
Current Yield (%)	4.43	N/A
Holdings Count	604	8,538



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

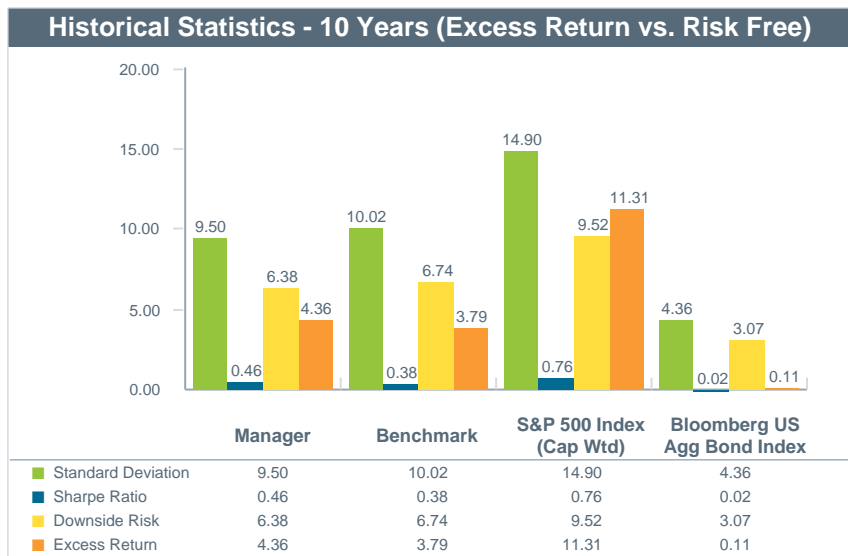


Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.



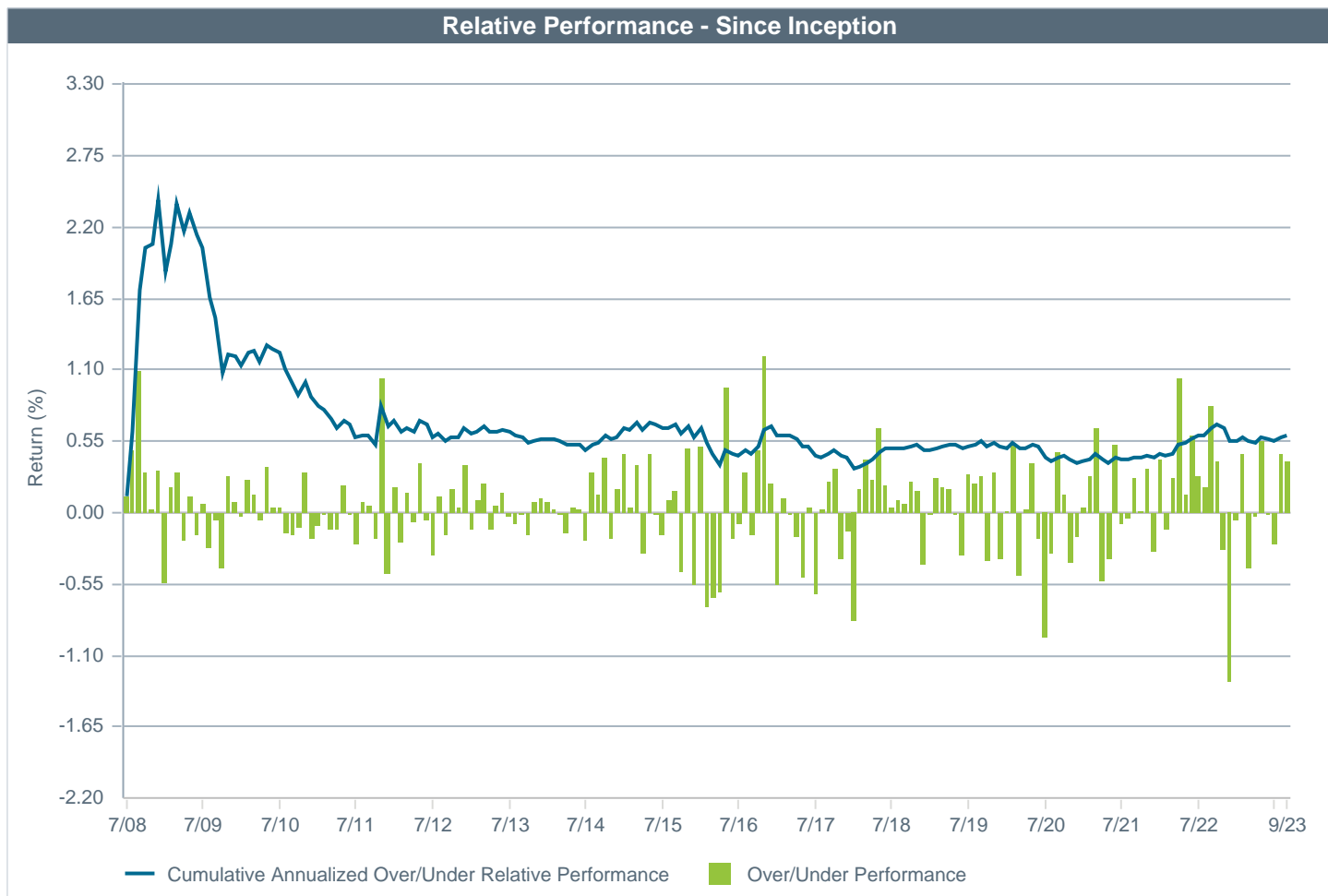


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-2.87	13.03	2.65	4.28	5.47	5.13	-15.30	9.66	12.99	19.36	-4.99
Benchmark	-3.46	13.18	1.33	3.44	4.66	4.49	-17.33	8.78	14.05	18.55	-5.99
Difference	0.59	-0.15	1.32	0.84	0.81	0.64	2.03	0.88	-1.06	0.81	1.00



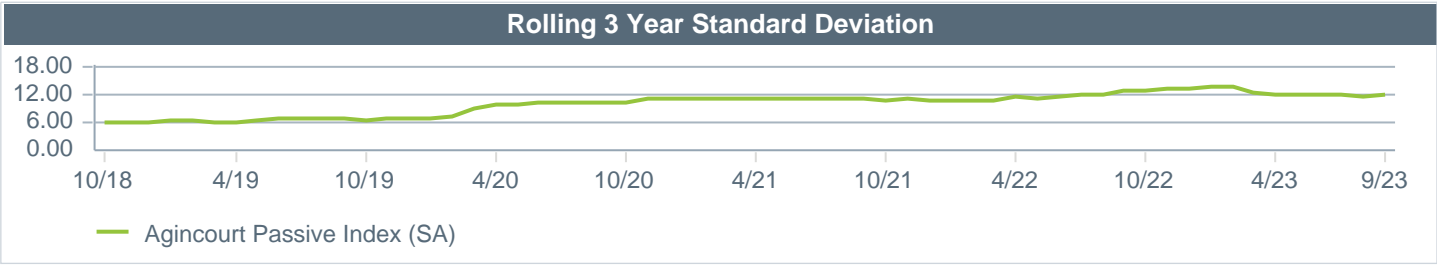
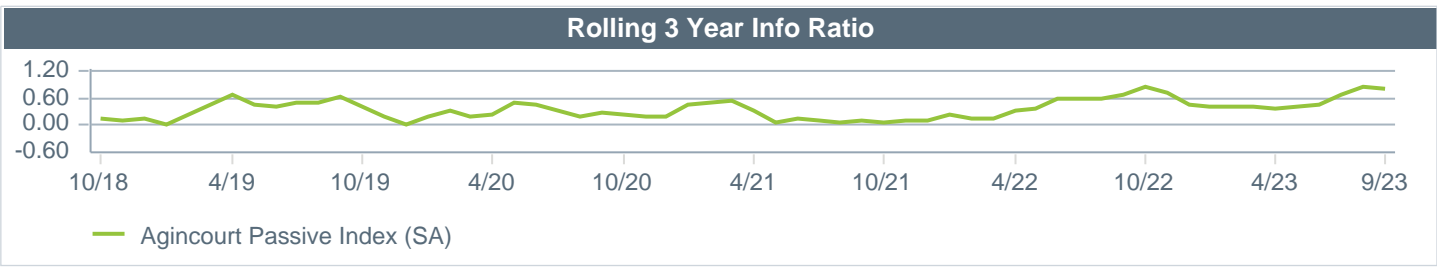
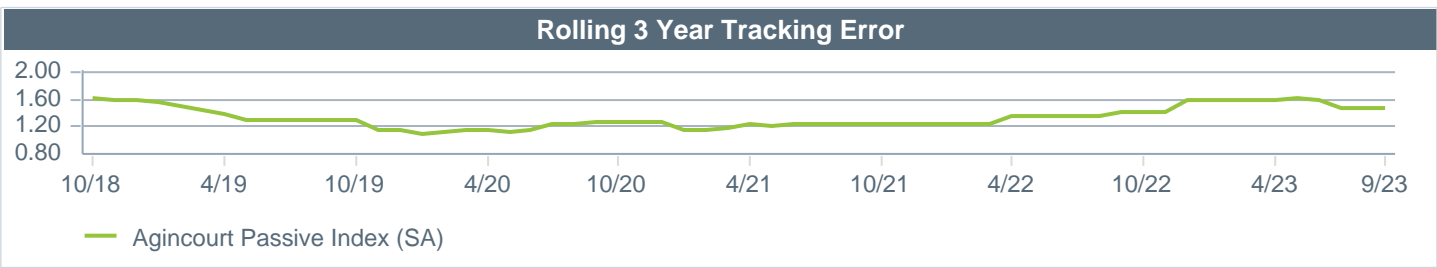
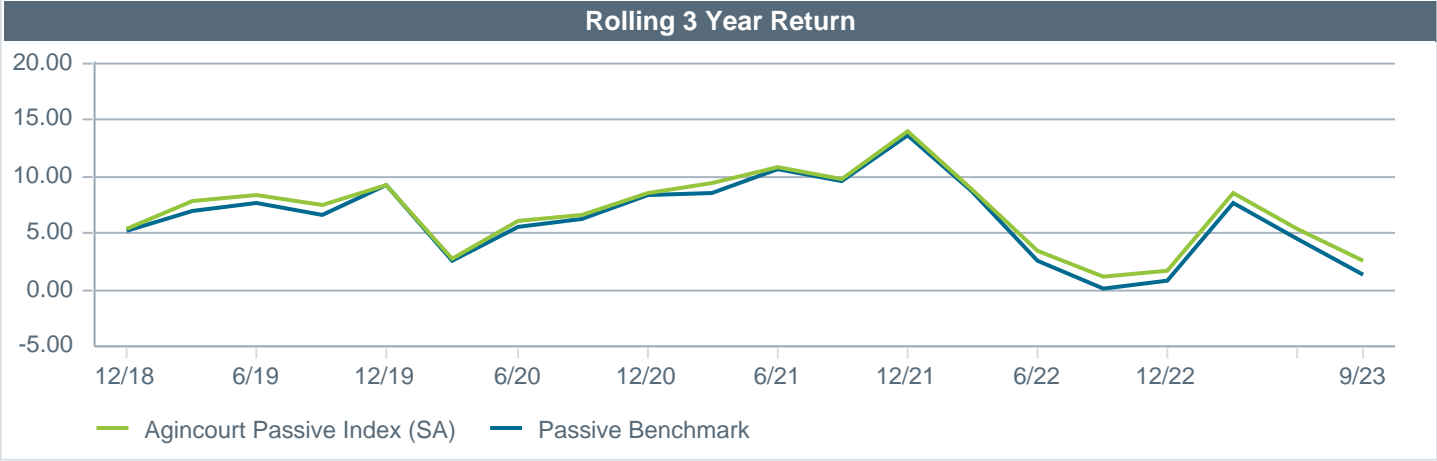
### Actual Correlation - 10 Years

	Actual Correlation
Passive Benchmark	0.99
Consumer Price Index+5%	-0.04
S&P 500 Index (Cap Wtd)	0.96
Russell 2000 Index	0.84
MSCI EAFE Index (USD) (Net)	0.93
MSCI Emg Mkts Index (USD) (Net)	0.81
Bloomberg US Agg Bond Index	0.47
Bloomberg US Trsy US TIPS Index	0.57
Wilshire US REIT Index	0.75
HFRI FOF Comp Index	0.79
Bloomberg Cmdb Index (TR)	0.48
ICE BofAML 3 Mo US T-Bill Index	-0.08
Cons Price Index (Unadjusted)	-0.04



Performance shown is net of fees and client specific. Returns prior to client to inception are backfilled with strategy specific returns. Calculation is based on monthly periodicity.





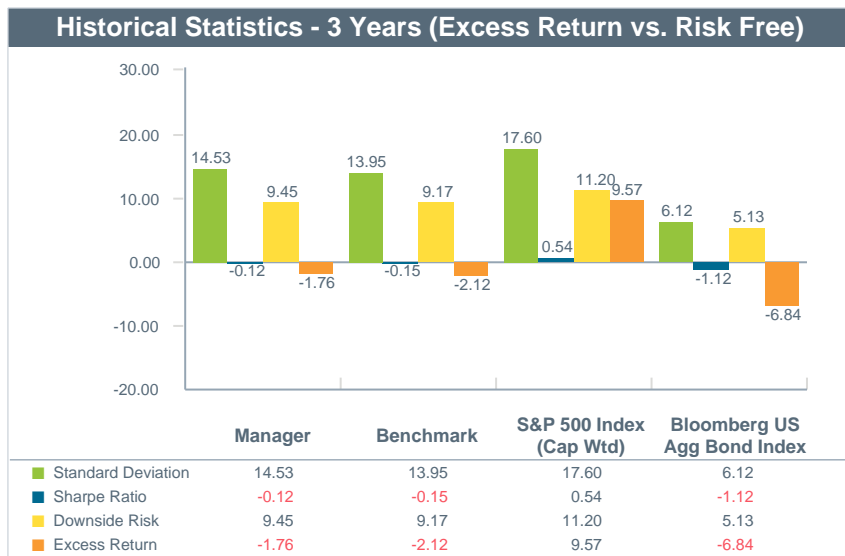
### Peer Group Analysis - Multi Statistics - 3 Years

	Standard Deviation	Downside Risk	Excess Risk	Tracking Error	Beta	R-Squared
◆ Manager	11.74 (52)	7.88 (47)	11.76 (52)	1.50 (100)	0.93 (36)	0.99 (1)
Median	11.87	7.68	11.89	5.49	0.85	0.86

Performance shown is net of fees and client specific. Returns prior to client inception are backfilled with strategy specific returns. Calculation is based on monthly periodicity. All statistics shown are relative to the benchmark specified at the top of the page.

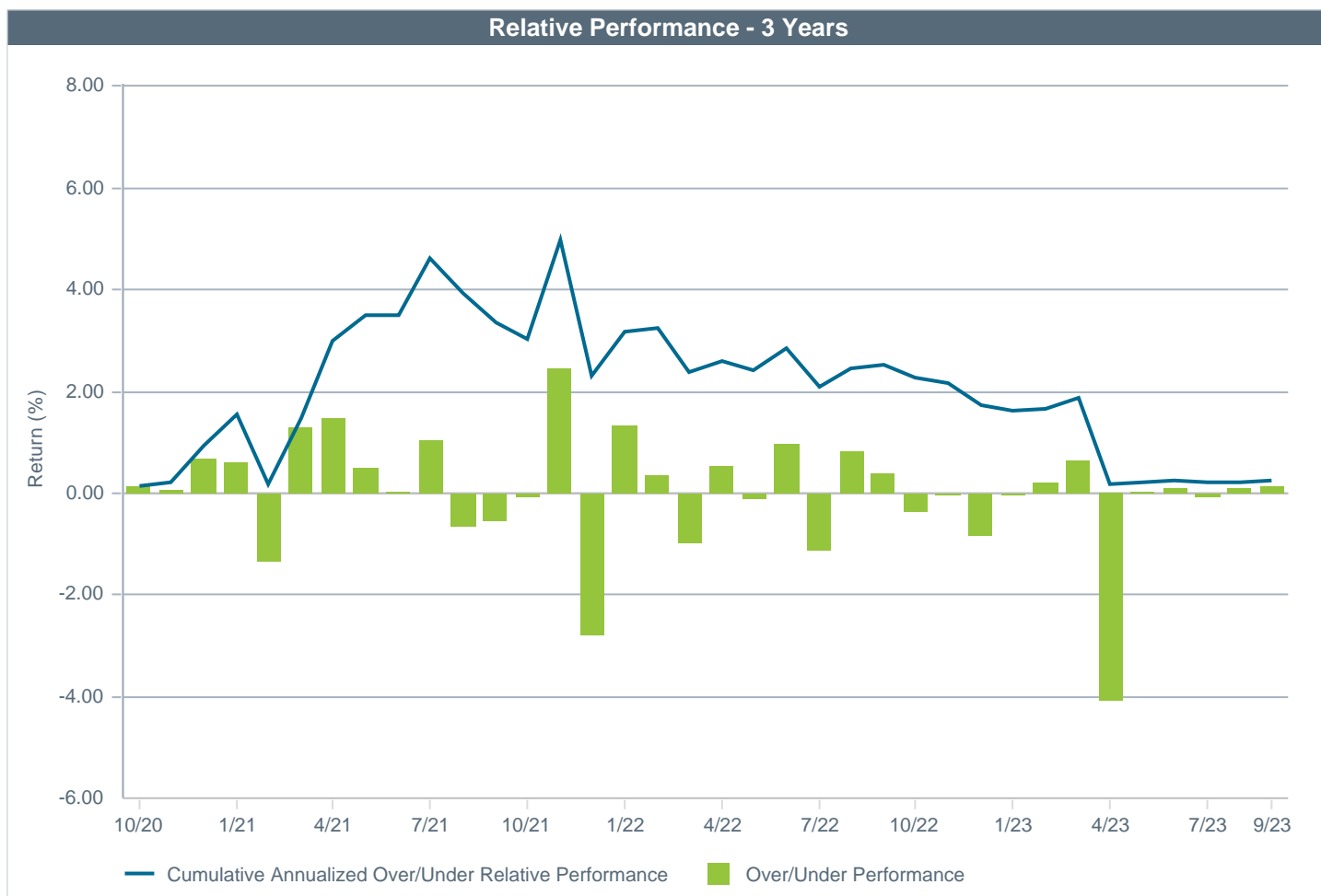


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	-3.72	6.31	-1.12	N/A	N/A	N/A	0.24	-2.42	N/A	N/A	N/A
Benchmark	-3.88	10.87	-1.38	8.06	3.99	2.55	-0.74	-4.28	20.95	18.03	-2.81
Difference	0.16	-4.56	0.26	N/A	N/A	N/A	0.98	1.86	N/A	N/A	N/A



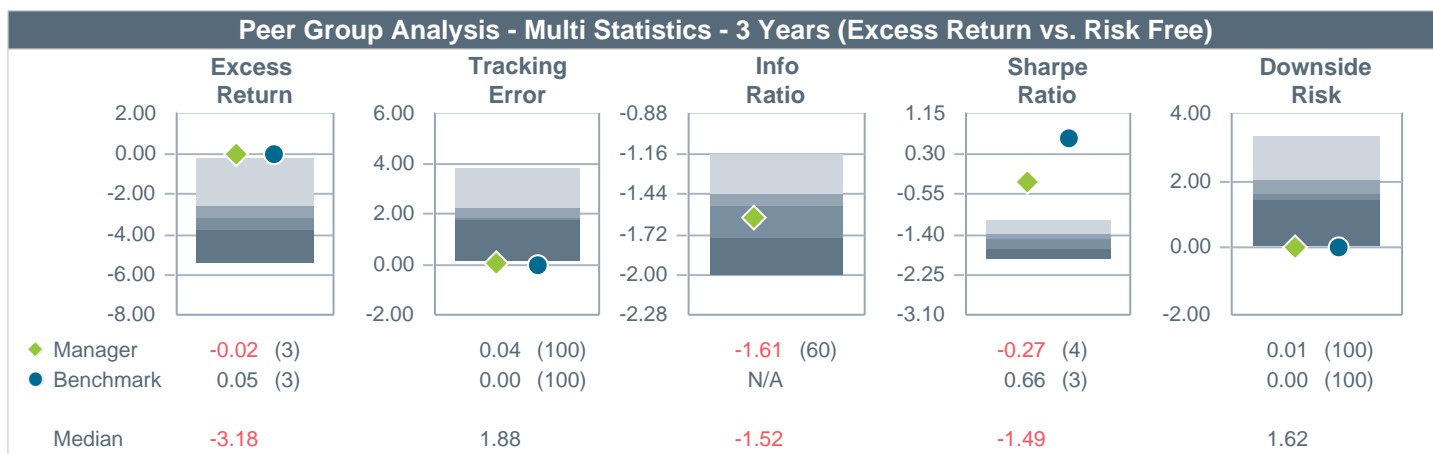
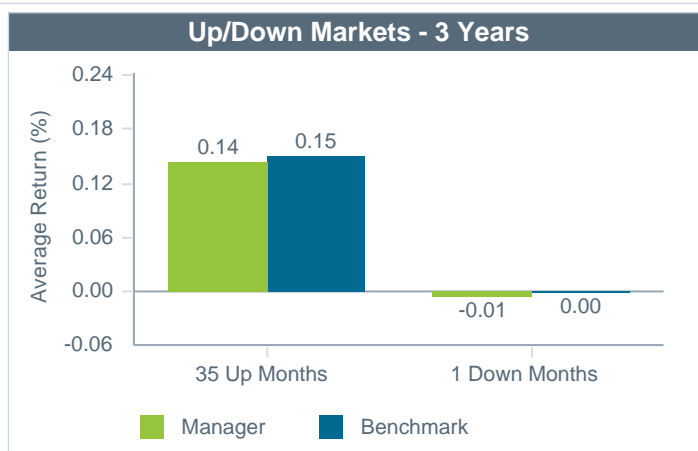
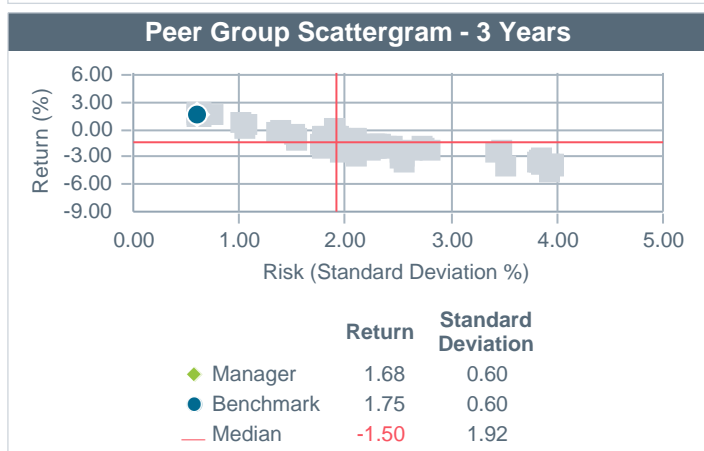
### Actual Correlation - 3 Years

	Actual Correlation
Bloomberg Gold Sub Index (TR)	0.96
Consumer Price Index+5%	0.02
S&P 500 Index (Cap Wtd)	0.14
Russell 2000 Index	-0.04
MSCI EAFE Index (USD) (Net)	0.23
MSCI Emg Mkts Index (USD) (Net)	0.35
Bloomberg US Agg Bond Index	0.42
Bloomberg US Trsy US TIPS Index	0.42
Wilshire US REIT Index	0.20
HFRI FOF Comp Index	0.06
Bloomberg Cmdb Index (TR)	0.12
ICE BofAML 3 Mo US T-Bill Index	0.05
Cons Price Index (Unadjusted)	0.02



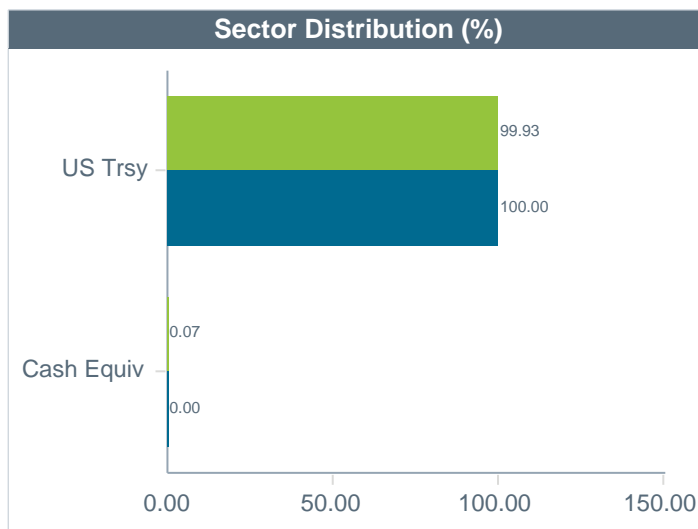
Performance shown is net of fees and client specific. Calculation is based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018
Manager	1.30	4.51	1.68	N/A	N/A	N/A	1.44	-0.02	0.51	N/A	N/A
Benchmark	1.34	4.63	1.75	1.71	1.53	1.09	1.52	0.04	0.54	2.21	1.82
Difference	-0.04	-0.12	-0.07	N/A	N/A	N/A	-0.08	-0.06	-0.03	N/A	N/A
Peer Group Median	0.52	2.03	-1.50	0.54	0.39	0.48	-4.41	-1.11	3.43	3.14	1.10
Rank	10	6	3	N/A	N/A	N/A	3	4	95	N/A	N/A
Population	121	112	103	98	92	82	112	111	103	115	123



### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	0.11	0.15
Spread Duration	0.00	N/A
Avg. Maturity	0.12	0.16
Avg. Quality	Aaa	Aa1
Yield To Maturity (%)	5.43	5.43
Coupon Rate (%)	0.00	0.00
Current Yield (%)	0.00	N/A
Holdings Count	7	17



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

# Addendum & Glossary



**Performance Related Comments:**

- Market values and performance shown are preliminary and subject to change.
- Performance is not adjusted for risk.
- Performance is annualized for periods greater than one year.
- The inception date shown indicates the first full month of performance following initial funding.
- Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.
- RVK began monitoring the assets of City of Austin Employees' Retirement System on 07/01/2017. Prior historical data was provided by the custodian and previous consultant.
- NCREIF ODCE Index (AWA) (Net) performance is available quarterly; interim month returns assume a 0.00% return.
- Northern Trust Government STIF (CF) performance shown is product specific.
- Cash & Equivalents composite includes securities lending income received.
- Performance shown for BNYM Dynamic US Equity NL (SA) is represented by BNYM Dynamic US Equity NL (CF) through 10/2020. 11/2020 performance for the account references the transition of vehicle type from CF to SA.

**Composite Benchmark Comments:**

- **Policy Benchmark:** The Policy Benchmark is calculated monthly and currently consists of 56% MSCI ACW IM Index (USD) (Net), 10% FTSE NAREIT Eq REITs Index (TR), 5% S&P Gbl Infrastructure Index (Net), 21% Bloomberg Gbl Agg Bond Index, 7% Multi-Asset Benchmark, and 1% Bloomberg US T-Bills 1-3 Mo Index. Historical composition on following pages.
- **Policy Benchmark (IDP):** The Policy Benchmark (IDP) is calculated monthly and consists of the Policy Benchmark from inception to 11/30/2018, 32% Russell 3000 Index, 15% MSCI Wrld Ex US Index (USD) (Net), 8% MSCI Emg Mkts Index (USD) (Net), 20% Bloomberg Gbl Agg Bond Index, 10% FTSE NAREIT Eq REITs Index (TR), 5% S&P Gbl Infrastructure Index (Net), 5% BlackRock Strategic Partnership Custom Index, and 5% S&P Risk Parity Index (10% Vol) to 11/30/2019, 32% MSCI USA (Net), 15% MSCI Wrld Ex US Index (USD) (Net), 8% MSCI Emg Mkts Index (USD) (Net), 20% Bloomberg Gbl Agg Bond Index, 10% FTSE NAREIT Eq REITs Index (TR), 5% S&P Gbl Infrastructure Index (Net), 5% BlackRock Strategic Partnership Custom Index, 4% Multi-Asset Benchmark and 1% Bloomberg US T-Bills 1-3 Mo Index to 03/31/2021, and 33% MSCI USA (Net), 15% MSCI Wrld Ex US Index (USD) (Net), 8% MSCI Emg Mkts Index (USD) (Net), 10% FTSE NAREIT Eq REITs Index (TR), 5% S&P Gbl Infrastructure Index (Net), 21% Bloomberg Gbl Agg Bond Index, 5% Multi-Asset Benchmark, 2% Bloomberg Commodity Index (TR) and 1% Bloomberg US T-Bills 1-3 Mo Index thereafter.
- **Passive Benchmark:** The Passive Benchmark is calculated monthly consists of 60% MSCI ACW Index (USD) (Gross) / 40% Bloomberg Gbl Agg Bond Index from inception to 12/31/2000, and 60% MSCI ACW Index (USD) (Net) / 40% Bloomberg Gbl Agg Bond Index thereafter.
- **Global Equity Benchmark:** The Global Equity Benchmark consists of 100% MSCI ACW IM Index (USD) (Net).
- **US Equity Benchmark:** The US Equity Benchmark is calculated monthly and consists of 100% Russell 3000 Index from inception to 11/30/2019 and 100% MSCI USA (Net) thereafter.
- **Developed Market Equity Benchmark:** The Developed Market Equity Benchmark consists of 100% MSCI Wrld Ex US Index (USD) (Net).
- **Emerging Market Equity Benchmark:** The Emerging Market Equity Benchmark consists of 100% MSCI Emerging Markets Index (USD) (Net).
- **Real Assets Benchmark:** The Real Assets Benchmark is calculated monthly and consists of 34% S&P Gbl Infrastructure Index (Net) and 66% FTSE NAREIT Eq REITs Index (TR).
- **Real Estate Equity Benchmark:** The Real Estate Equity Benchmark is calculated monthly and consists of 100% NCREIF Property Index from inception to 12/31/2017, 100% NCREIF ODCE Index (AWA) (Net) to 06/30/2018, and 100% FTSE NAREIT Eq REITs Index (TR) thereafter.
- **Infrastructure Equity Benchmark:** The Infrastructure Equity Benchmark consists of 100% S&P Gbl Infrastructure Index (Net).
- **Global Fixed Income Benchmark:** The Global Fixed Income Benchmark is calculated monthly and consists of 100% Bloomberg US Agg Bond Index from inception to 11/30/2018, and 100% Bloomberg Gbl Agg Bond Index thereafter.
- **US Treasuries Benchmark:** The US Treasuries Benchmark consists of 100% Bloomberg US Trsy Index.
- **US Mortgages Benchmark:** The US Mortgages Benchmark consists of 100% Bloomberg US MBS Index (Unhgd).
- **US Credit Benchmark:** The US Credit Benchmark consists of 100% Bloomberg US Crdt Index.
- **Multi-Asset Benchmark:** The Multi-Asset Benchmark is calculated monthly and consists of 60% MSCI AC World (Net) / 40% BB Global Aggregate from inception to 11/30/2019, 60.4% MSCI ACW IM Index (USD) (Net), 22% Bloomberg Gbl Agg Bond Index, 11% FTSE NAREIT Eq REITs Index (TR), 5.5% S&P Gbl Infrastructure Index (Net), and 1.1% Bloomberg US T-Bills 1-3 Mo Index to 03/31/2021, and 60% MSCI ACW Index (USD) (Net) / 40% Bloomberg Gbl Agg Bond Index thereafter.
- **Commodities & Other Benchmark:** The Commodities & Other Benchmark consists of 100% of the Bloomberg Commodity Index (TR).
- **Cash & Equivalents Benchmark:** The Cash & Equivalents Benchmark consists of 100% Bloomberg US T-Bills 1-3 Mo Index.

**Manager Fee Schedules**

- BNYM Dynamic US Equity NL (CF) - 0.35% on the first \$300M, 0.30% on the next \$200M, and 0.25% thereafter. Minimum fee of \$10,000.
- BNYM SciBeta US Max Decorrelation (SA) - 0.13% on all assets.
- TOBAM Max Diversification USA (SA) - 0.25% on all assets.
- L&G MSCI USA Index (CIT) - 0.03% on all assets.
- SSGA MSCI USA EW Index (SA) - 0.08% on all assets.
- NISA S&P 500 Futures (SA) - 0.06% on all assets.
- SSGA MSCI USA Small Cap Index (CF) - 0.05% on all assets.
- Walter Scott Dev Mkts Int'l Equity (SA) - 0.50% on the first \$100M; 0.35% thereafter.
- 1607 Capital Partners Int'l Equity EAFE (SA) - 0.25% Annual Base Fee Rate. Annual Performance Fee Rate is equal to 22% of 3-year excess return with a 0.25% hurdle rate.
- BNYM DB Dynamic Global Ex US Eq (CF) - 0.35% on all assets.
- NISA EAFE Futures (SA) - 0.06% on all assets.
- NT MSCI World ex US Small Cap Index (CF) - 0.04% on all assets.
- Baillie Gifford EM Equity Class 3 (MF) - 0.76% on all assets.
- L&G MSCI EM Index (CIT) - 0.10% on all assets.
- NISA EM Futures (SA) - 0.06% on all assets.
- Principal US Property Account (CF) - 0.80% on all assets.
- Fidelity US REITs Completion Index (SA) - 0.07% on all assets.
- Agincourt FTSE NAREIT Equity REITs Index (SA) - 0.12% on all assets.
- IFM Global Infrastructure A (CF) - 0.77% of invested capital, performance fee of 10% over an 8% hurdle.
- Fidelity DJ Brookfield Infrastructure Index (SA) - 0.09% on all assets.
- Agincourt 1-3 Year Treasury (SA) - 0.04% on all assets.
- Agincourt 1-5 Year US TIPS (SA) - 0.04% on all assets.
- NISA 30 Year Treasury Futures (SA) - 0.06% on all assets.
- Hoisington Macroeconomic US Treasuries - 0.45% on the first \$10M, 0.35% on the next \$40M, 0.25% on the next \$50M, 0.15% on the next \$400M, and 0.05% thereafter.
- DoubleLine MBS (SA) - 0.20% on all assets.
- PGIM US IG Corporate Bond (CIT) - 0.28% on the first \$50M, 0.19% on the next \$150M, and 0.15% thereafter.
- Agincourt Passive Index (SA) - 0.12% on all assets.
- NISA Gold Futures (SA) - 0.06% on all assets.
- Agincourt 1-3 Month Treasury (SA) - 0.04% on all assets.
- Mellon Government STIF (CF) - 0.10% on all assets.
- COAERS USD (SA) - 0.00% on all assets.
- NISA FX Hedged EAFE Futures (SA) - 0.06% on the first \$500M.
- L&G SciBeta Inflation Plus (SA) - 0.08% on all assets.
- NISA ST Sovereigns (SA) - 0.06% on all assets.
- BNYM Money Market Fund (SA) - 0.00% on all assets.
- Mellon SciBeta Inflation Plus (SA) - 0.06% on all assets

**Abbreviations Used for Investment Vehicles:**

- **CF** = Commingled Fund
- **CIT** = Collective Investment Trust
- **MF** = Mutual Fund
- **SA** = Separate Account

**Annual Asset Class Performance Proxies**

- US Large Cap - S&P 500 Index (Cap Wtd)
- US Small Cap - Russell 2000 Index
- Int'l Dev - MSCI EAFE Index (USD) (Net)
- Int'l SC - MSCI EAFE Sm Cap Index (USD) (Net)
- Emg Mkts - MSCI Emerging Markets Index (USD) (Net)
- US Agg Bond - Bloomberg US Agg Bond Index
- US Hi Yield - Bloomberg US Corp Hi Yield Index
- US TIPS - Bloomberg US Trsy US TIPS Index
- US Gov/Credit - Bloomberg US Gov't Crdt Lng Trm Bond Index
- Real Estate - NCREIF ODCE Index (AWA) (Gross)
- REITs - Wilshire US REIT Index
- Hedge Funds - HFRI FOF Comp Index
- Commodities - Bloomberg Cmdty Index (TR)
- Cash Equivalents - ICE BofA ML 3 Month US T-Bill Index



**City of Austin Employees' Retirement System  
Policy Benchmark Historical Composition**

**As of September 30, 2023**

	(%)		(%)
<b>April-2021</b>		<b>Sep-2015</b>	
MSCI ACW IM Index (USD) (Net)	56.00	Russell 3000 Index	30.00
FTSE NAREIT Eq REITs Index (TR)	10.00	MSCI ACW Ex US Index (USD) (Net)	30.00
S&P Global Infrastructure Index (Net)	5.00	Bloomberg US Agg Bond Index	24.50
Bloomberg Gbl Agg Bond Index	21.00	60% MSCI AC World (Net) / 40% BB Global Agg.	5.00
Multi-Asset Benchmark	7.00	Alerian MLP Index	4.00
Bloomberg US T-Bills 1-3 Mo Index	1.00	NCREIF Property Index	5.50
		Bloomberg Cmdty Index (TR)	1.00
<b>Dec-2019</b>		<b>Sep-2014</b>	
MSCI ACW IM Index (USD) (Net)	55.00	S&P 500 (Market Cap Weighted)	25.00
Bloomberg Gbl Agg Bond Index	20.00	Russell 2000 Index	6.00
FTSE NAREIT Eq REITs Index (TR)	10.00	MSCI ACW Ex US Index (USD) (Gross)	31.00
S&P Global Infrastructure Index (Net)	5.00	Bloomberg US Agg Bond Index	24.50
Multi-Asset Benchmark	9.00	NCREIF Property Index	6.00
Bloomberg US T-Bills 1-3 Mo Index	1.00	60% MSCI AC World (Net) / 40% BB Global Agg.	5.00
		Alerian MLP Index	1.50
		Bloomberg Cmdty Index (TR)	1.00
<b>Dec-2018</b>		<b>Aug-2014</b>	
MSCI ACW IM Index (USD) (Net)	55.00	S&P 500 (Market Cap Weighted)	27.00
Bloomberg Gbl Agg Bond Index	20.00	Russell 2000 Index	8.00
FTSE NAREIT Eq REITs Index (TR)	10.00	MSCI ACW Ex US Index (USD) (Gross)	31.00
S&P Global Infrastructure Index (Net)	5.00	Bloomberg US Agg Bond Index	21.50
60% MSCI AC World (Net) / 40% BB Global Agg.	10.00	NCREIF Property Index	5.00
		60% MSCI AC World (Net) / 40% BB Global Agg.	5.00
		Alerian MLP Index	1.50
		Bloomberg Cmdty Index (TR)	1.00
<b>Jul-2018</b>		<b>May-2014</b>	
Russell 3000 Index	29.00	S&P 500 (Market Cap Weighted)	27.00
MSCI ACW Ex US Index (USD) (Net)	19.00	Russell 2000 Index	8.00
MSCI Emerging Markets Index (USD) (Net)	9.00	MSCI ACW Ex US Index (USD) (Gross)	31.00
Bloomberg US Agg Bond Index	22.50	Bloomberg US Agg Bond Index	22.50
FTSE NAREIT Eq REITs Index (TR)	5.50	NCREIF Property Index	5.00
S&P Global Infrastructure Index (Net)	4.00	60% MSCI AC World (Net) / 40% BB Global Agg.	5.00
Bloomberg Cmdty Index (TR)	1.00	Alerian MLP Index	1.50
BlackRock Strategic Partnership Custom Index	5.00	Bloomberg Cmdty Index (TR)	1.00
60% MSCI AC World (Net) / 40% BB Global Agg.	5.00		
		<b>Mar-2014</b>	
<b>Jan-2018</b>		S&P 500 (Market Cap Weighted)	27.00
Russell 3000 Index	30.00	Russell 2000 Index	8.00
MSCI ACW Ex US Index (USD) (Net)	30.00	MSCI ACW Ex US Index (USD) (Gross)	31.00
Bloomberg US Agg Bond Index	24.50	Bloomberg US Agg Bond Index	25.00
60% MSCI AC World (Net) / 40% BB Global Agg.	5.00	NCREIF Property Index	5.00
Alerian MLP Index	4.00	60% MSCI AC World (Net) / 40% BB Global Agg.	2.50
NCREIF ODCE Index (AWA) (Net)	5.50	Alerian MLP Index	1.50
Bloomberg Cmdty Index (TR)	1.00		

**City of Austin Employees' Retirement System  
Policy Benchmark Historical Composition**

**As of September 30, 2023**

	(%)		(%)
<b>Feb-2014</b>		<b>Dec-2007</b>	
S&P 500 (Market Cap Weighted)	24.50	S&P 500 (Market Cap Weighted)	33.00
Russell 2000 Index	8.00	Russell 2500 Index	16.00
MSCI ACW Ex US Index (USD) (Gross)	32.50	MSCI EAFE Index (USD) (Net)	16.00
Bloomberg US Agg Bond Index	30.00	Bloomberg US Agg Bond Index	30.00
NCREIF Property Index	5.00	NCREIF Property Index	5.00
<b>Jan-2013</b>		<b>Apr-2005</b>	
S&P 500 (Market Cap Weighted)	24.50	S&P 500 (Market Cap Weighted)	33.00
Russell 2000 Index	8.00	Russell 2500 Index	16.00
MSCI ACW Ex US Index (USD) (Gross)	32.50	MSCI EAFE Index (USD) (Net)	16.00
Bloomberg US Agg Bond Index	30.00	Bloomberg US Agg Bond Index	30.00
NCREIF Property Index	5.00	NCREIF Property Index	5.00
<b>Oct-2012</b>		<b>Jan-2003</b>	
S&P 500 (Market Cap Weighted)	22.75	S&P 500 (Market Cap Weighted)	33.00
Russell 2000 Index	9.75	Russell 2500 Index	16.00
MSCI ACW Ex US Index (USD) (Gross)	32.50	MSCI EAFE Index (USD) (Net)	16.00
Bloomberg US Agg Bond Index	30.00	Bloomberg US Agg Bond Index	35.00
NCREIF Property Index	5.00		
<b>Jan-2010</b>		<b>Oct-2001</b>	
S&P 500 (Market Cap Weighted)	22.75	S&P 500 (Market Cap Weighted)	33.00
Russell 2500 Index	9.75	Russell 2500 Index	14.00
MSCI ACW Ex US Index (USD) (Gross)	32.50	MSCI EAFE Index (USD) (Net)	15.00
Bloomberg US Agg Bond Index	30.00	Bloomberg US Agg Bond Index	38.00
NCREIF Property Index	5.00		
<b>Apr-2009</b>		<b>Sep-2000</b>	
S&P 500 (Market Cap Weighted)	22.75	S&P 500 (Market Cap Weighted)	33.00
Russell 2500 Index	9.75	Russell 2500 Index	14.00
MSCI EAFE Index (USD) (Net)	32.50	MSCI EAFE Index (USD) (Net)	15.00
Bloomberg US Agg Bond Index	30.00	Bloomberg US Agg Bond Index	38.00
NCREIF Property Index	5.00		
<b>Jul-2008</b>		<b>Jan-1986</b>	
S&P 500 (Market Cap Weighted)	29.00	S&P 500 (Market Cap Weighted)	33.00
Russell 2500 Index	10.00	Russell 2500 Growth Index	14.00
MSCI EAFE Index (USD) (Net)	26.00	FTSE World Ex US Index (USD) (Gross)	15.00
Bloomberg US Agg Bond Index	30.00	Bloomberg US Agg Bond Index	38.00
NCREIF Property Index	5.00		

## 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. Attribution to "other" is the result of securities based in industries that do not fit into any GICS classification.

**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. Attribution to "EMEA" represents securities based in Europe, the Middle East, and Africa. Attribution to "Other" is the result of securities based in countries/regions that do not fit into any MSCI classification.

**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.

## Glossary

### Capital Markets Review -

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

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

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

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

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

**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.

## Glossary

**Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

**Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

**Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.

**Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.

**Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.

**Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

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

**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.



## Glossary

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

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<u>Liquid Investments</u>		<u>Less Liquid Investments</u>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	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	5
US SMid Cap Equity	85	Private Credit	5
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.



## Glossary

**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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