



Kentucky Public Pensions Authority
County Employees Retirement System (CERS)
Quarterly Executive Summary

March 31, 2022

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Capital Market Update

Market Commentary

U.S. Equity

The U.S. stock market was down -4.9% for the first quarter of 2022. Sector performance was mixed as Energy (+39.0%) and Utilities (+4.8%) were up, supported by surging commodities prices. The worst performing sectors this quarter were Communication Services (-11.9%), Consumer Discretionary (-9.0%) and Technology (-8.4%). From a size perspective, large-cap outperformed small-cap while growth stocks underperformed value.

Geopolitical events shook the globe during the quarter as Russia invaded neighboring Ukraine. While the humanitarian fallout is of greatest importance, it is also necessary to understand the economic and market impacts that stem from these destabilizing events. Perhaps the most important tensions came from accelerating inflationary pressures the conflict imposed on the Federal Reserve. The Fed had already signaled it would soon raise the Fed Funds Rate and inflation for the first two months of the year had already climbed 1.4% (not annualized). The 10-year breakeven inflation rate pushed toward 3% and fed fund futures pricing implied an overnight rate of 2.25% by the end of the year.

Non-U.S. Equity

The UK economy surged in January and is now back above the level that existed before the COVID pandemic. An escalating COVID outbreak in China has led to some local lockdowns and is cutting into economic growth forecasts. Russia's invasion of Ukraine led MSCI to reclassify the Russian equity market from Emerging to a Standalone Market since Russian equities are currently uninvestable.

Fixed Income

The U.S. Treasury yield curve was up across all maturities during the quarter but most sharply in the intermediate range, with pronounced flattening further out the curve. The 2-year Treasury was up 160 basis points to 2.34% while the 10-year Treasury yield also ended the quarter at 2.34%, up 83 basis points. The now nonexistent spread is as low as it has been since August 2019. The Fed raised the overnight rate off zero by 0.25% at their March meeting. Through the Fed's "dot plot," it is messaging that the current intent is for additional increases totaling 150 basis points before the end of 2022.

Secure Act 2.0

The House of Representatives passed The Securing a Strong Retirement Act of 2022 on March 29, 2022 with strong bipartisan support. The bill would meaningfully increase access to workplace retirement savings and provide further opportunities for enhanced retirement savings. It heads to the Senate next.

Headline proposals include:

- Expanding automatic enrollment in 401(k) and 403(b) retirement plans, by requiring new plans to enroll participants at initial 3% of pay and increasing it by 1% annually until 10%, unless the participant opts out — all current 401(k) and 403(b) plans are grandfathered
- Allowing 403(b) plans to participate in multiple employer plans and invest in Collective Investment Trusts
- Raising the age for required minimum distributions to 75 from 72 over the next decade
- Raising catch-up contribution limits and requiring them to be treated as Roth contributions starting in 2023
- Permitting plan sponsors to make matching contributions to a 401(k) and 403(b) plan on qualified student loan payments
- Removing the 25% cap on qualified longevity annuity contracts, or QLACs — currently retirement savers can spend up to 25% of their account on a QLAC
- Creating a national online database of lost retirement accounts to reduce the number of missing participants

Source: https://waysandmeans.house.gov/sites/democrats.waysandmeans.house.gov/files/documents/SECURE2.0_SxS_032822.pdf

March 2022 Asset Class Assumptions

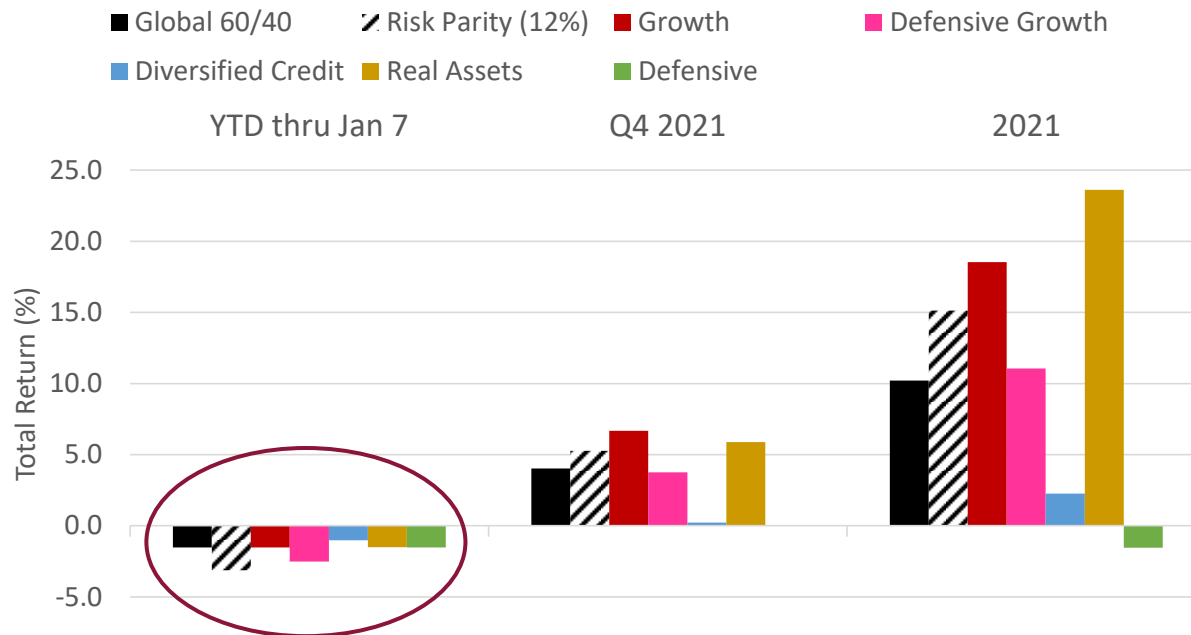
	Equity						Fixed Income					Real Assets						
	US	Dev		Global				LT				Dev ex-	Real Estate					
	Stock	ex-US	Emg	ex-US	Global	Private	Cash	Core	Core	TIPS	High	US Bond	US	Global	Private	Cmdty	Real	US
	Stock	Stock	Stock	Stock	Stock	Equity		Bond	Bond		Yield	(Hdg)	RES	RES	RE		Assets	CPI
Compound Return (%)	5.25	6.25	6.25	6.50	5.85	9.10	1.95	3.05	3.30	2.45	4.65	1.50	5.00	5.15	6.55	4.80	6.40	2.85
Expected Risk (%)	17.00	18.00	26.00	19.10	17.10	28.00	0.75	4.25	8.90	6.00	10.00	4.25	17.50	16.45	14.00	16.00	10.35	1.75
Cash Yield (%)	1.35	2.90	2.35	2.75	1.90	0.00	1.95	3.40	3.80	3.00	8.05	2.10	2.85	2.85	2.30	1.95	2.15	0.00
Growth Exposure	8.00	8.00	8.00	8.00	8.00	13.50	0.00	-0.85	-2.25	-3.00	4.00	-1.00	6.00	6.00	3.50	0.00	1.80	0.00
Inflation Exposure	-3.00	0.00	5.00	1.50	-1.25	-3.80	0.00	-2.50	-6.70	2.50	-1.00	-3.00	1.00	1.80	1.00	12.00	4.85	1.00
Correlations																		
US Stock	1.00																	
Dev ex-US Stock (USD)	0.81	1.00																
Emerging Mkt Stock	0.74	0.74	1.00															
Global ex-US Stock	0.83	0.96	0.87	1.00														
Global Stock	0.95	0.92	0.83	0.94	1.00													
Private Equity	0.74	0.64	0.62	0.67	0.74	1.00												
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
Core Bond	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT Core Bond	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.92	1.00									
TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.59	0.47	1.00								
High Yield Bond	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.17	0.18	0.26	0.10	0.66	0.65	0.39	0.26	1.00						
US RE Securities	0.58	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
Global RE Securities	0.64	0.58	0.56	0.61	0.65	0.58	-0.05	0.17	0.22	0.11	0.61	0.03	0.96	1.00				
Private Real Estate	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.77	0.75	1.00			
Commodities	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
Real Assets	0.48	0.51	0.58	0.57	0.54	0.47	-0.02	0.23	0.25	0.39	0.56	0.05	0.70	0.75	0.70	0.65	1.00	
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

2022 Environmental Risk: A Year of Payback?

If some/much of COVID market returns have been liquidity fueled, can we expect to hang on to these gains when support is withdrawn?

Revisiting the environmental risk we noted in early 2022

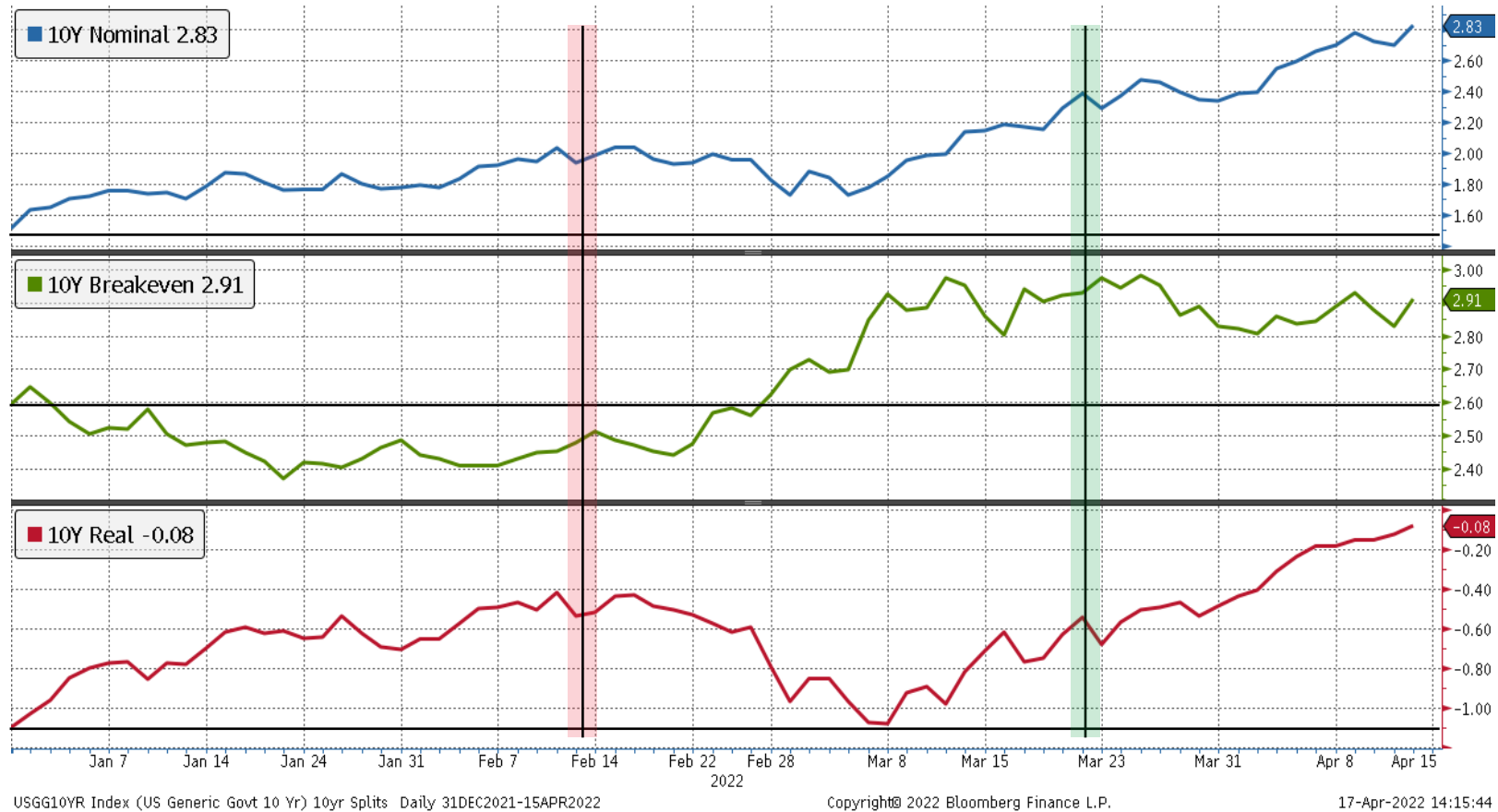
Asset Allocation & Thematic Returns



	YTD thru Jan 7	Q4 2021	2021
Global 60/40	(1.52)	4.02	10.20
Risk Parity (12%)	(3.13)	5.26	15.12
Growth	(1.52)	6.68	18.54
Defensive Growth	(2.52)	3.76	11.05
Diversified Credit	(1.02)	0.22	2.26
Real Assets	(1.51)	5.88	23.61
Defensive	(1.53)	0.01	(1.54)

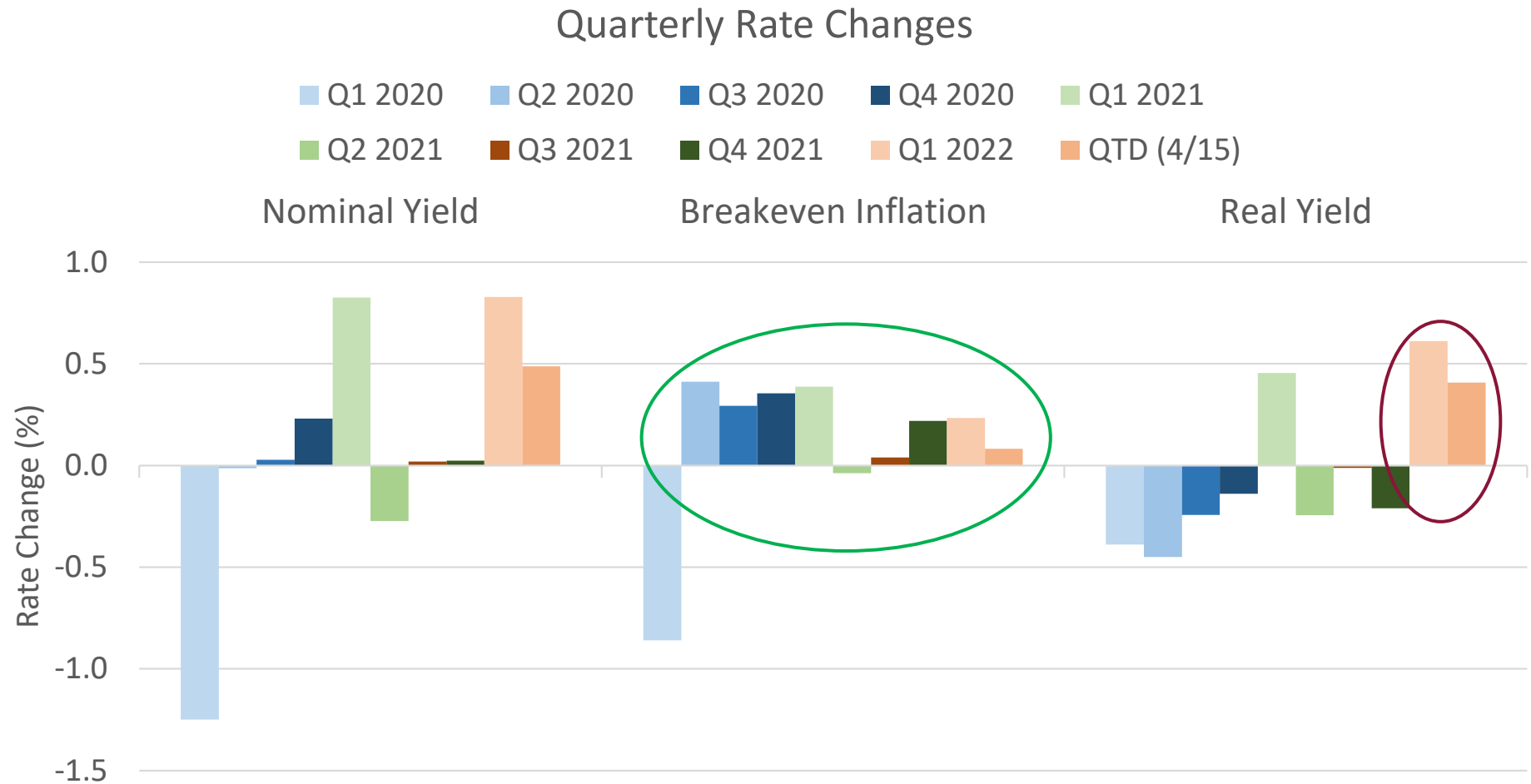
Data Source: Bloomberg, Wilshire

Q1 Rate Moves (10Y Nominal, Real & BEI)



Data Source: Bloomberg

Rate Changes (2020 – YTD 2022)



Data Source: Bloomberg

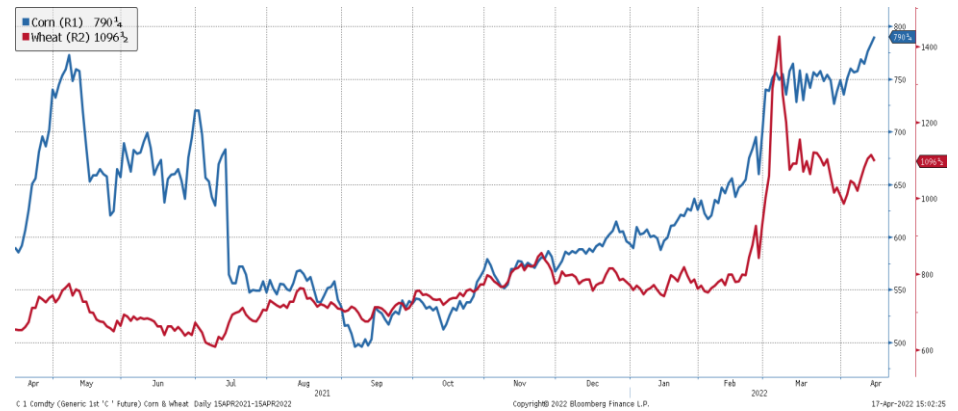
Inflation Impact

Oil prices (WTI & Brent)...



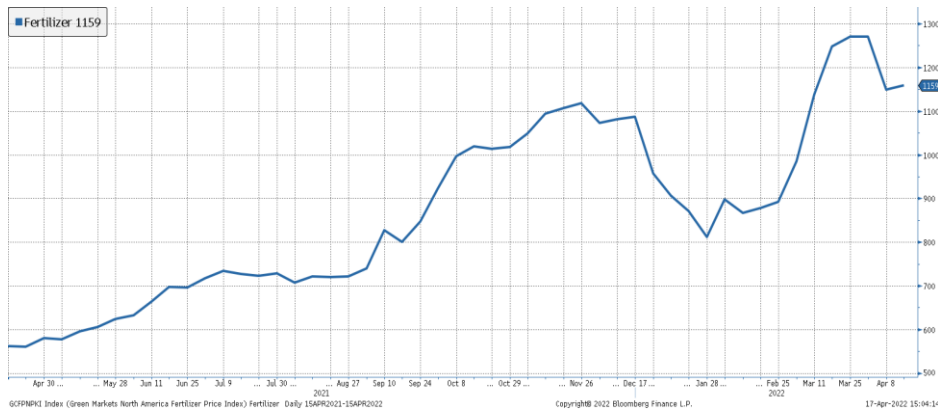
Data Source: Bloomberg

Corn & Wheat prices...



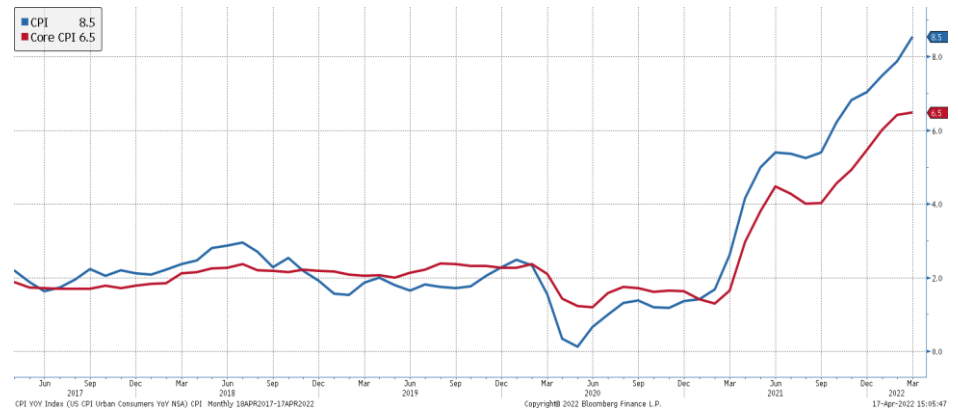
Data Source: Bloomberg

Fertilizer prices...



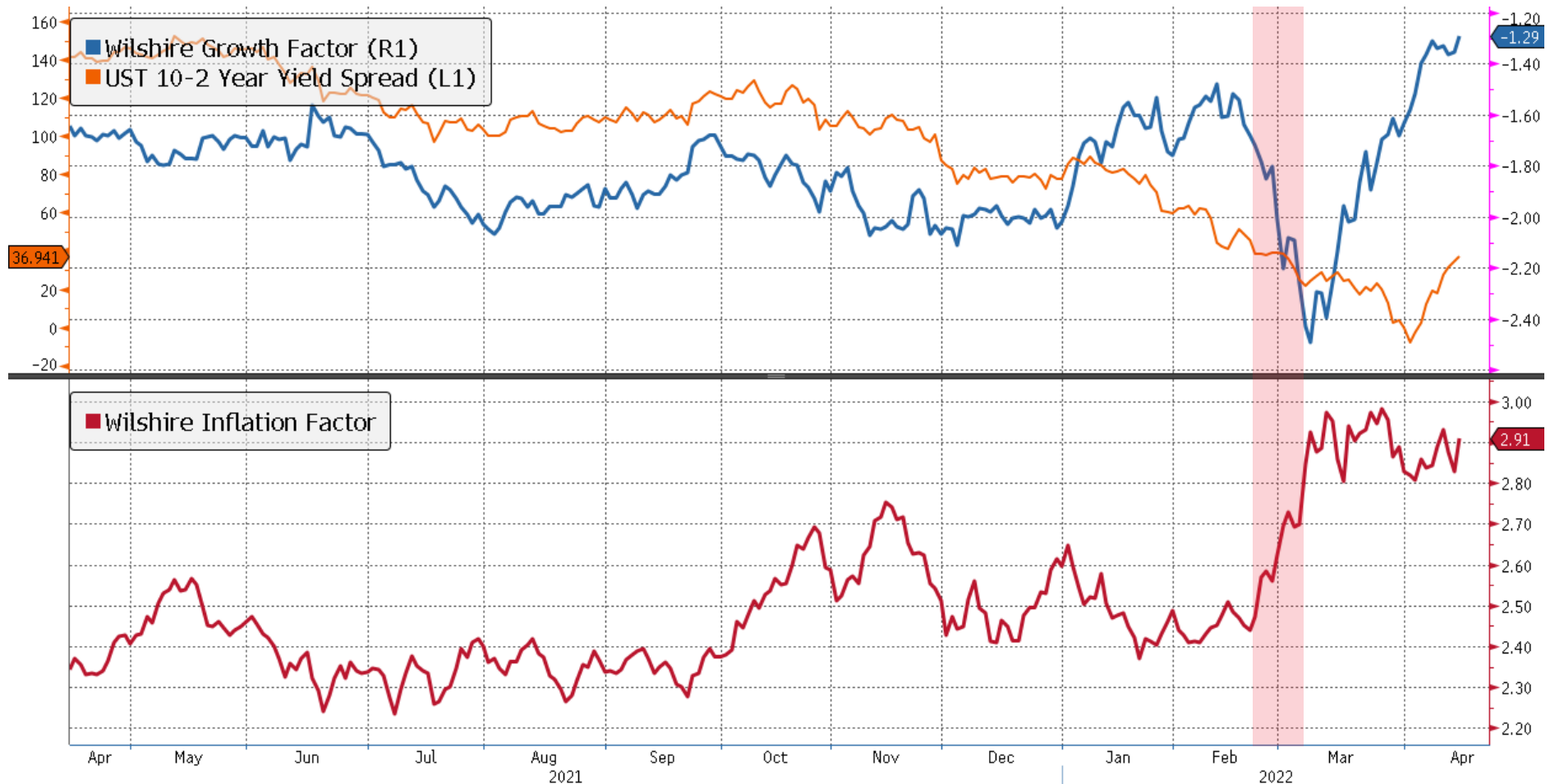
Data Source: Bloomberg

Headline & Core CPI (YoY)...



Data Source: Bloomberg

Economic Factors Proxies



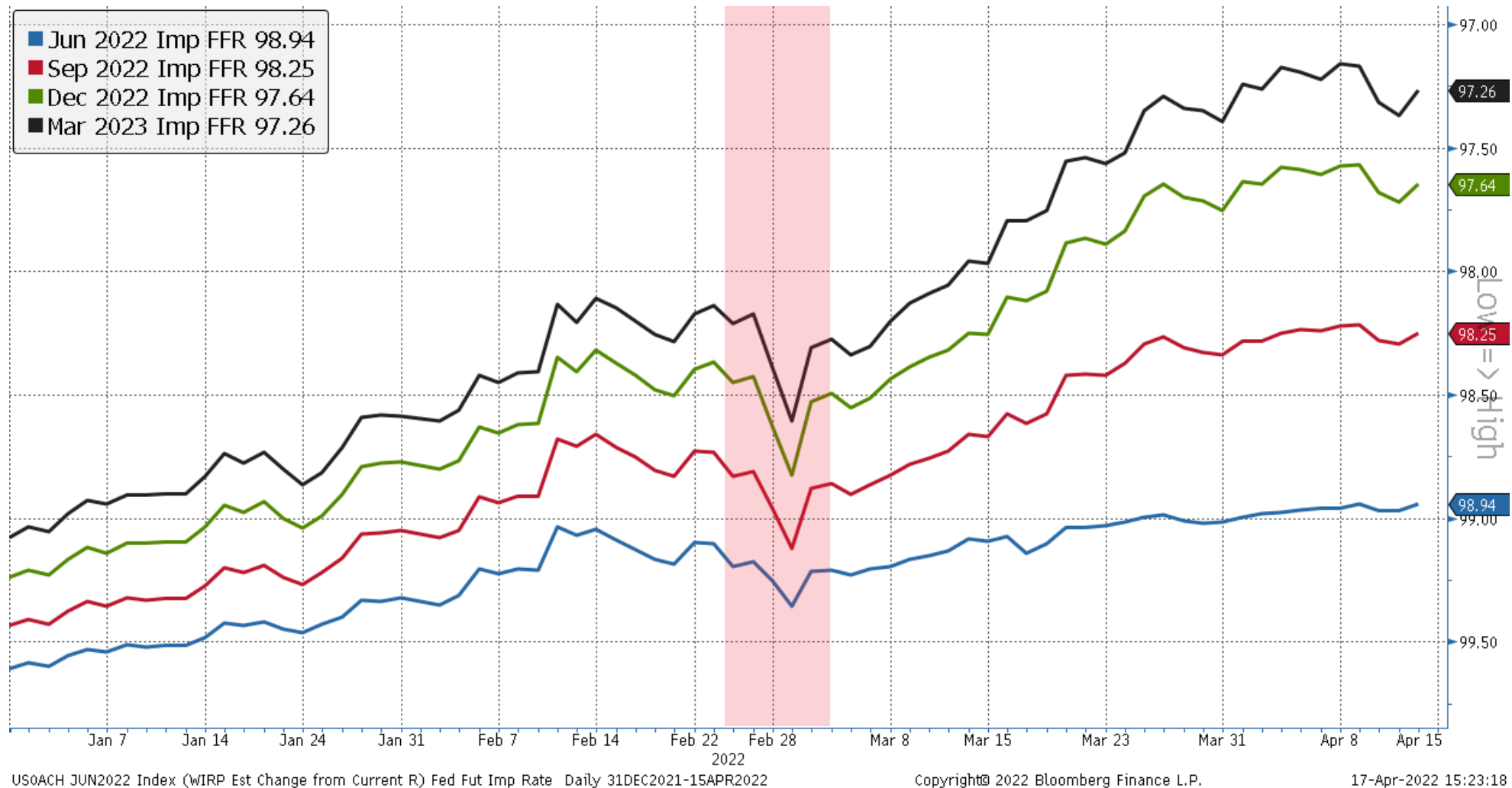
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Data Source: Bloomberg

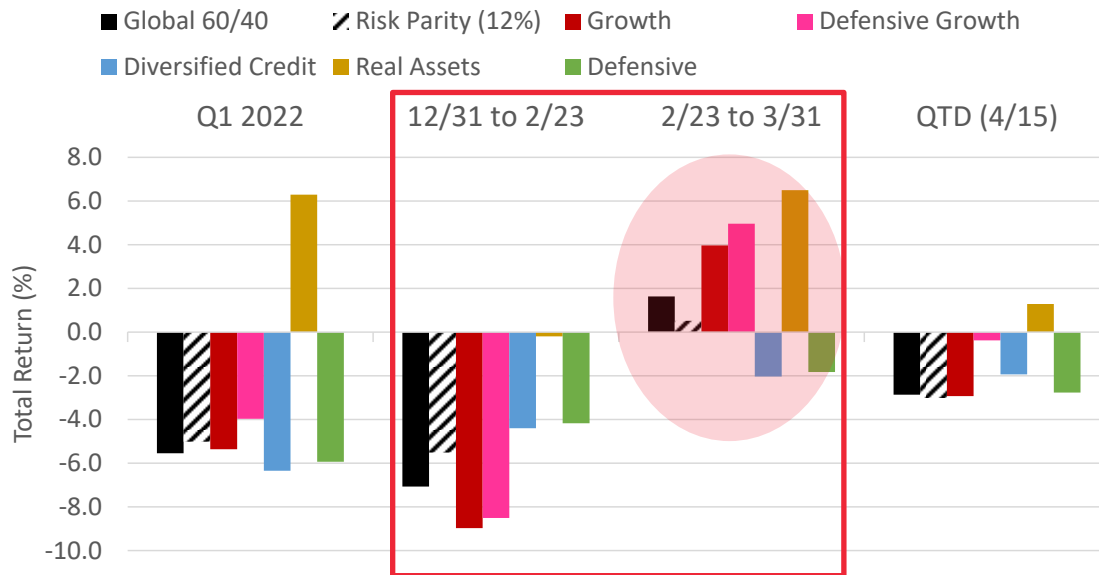
Fed Funds Discounting



Data Source: Bloomberg

Market Environment (YTD thru 4/15)

Asset Allocation & Thematic Returns

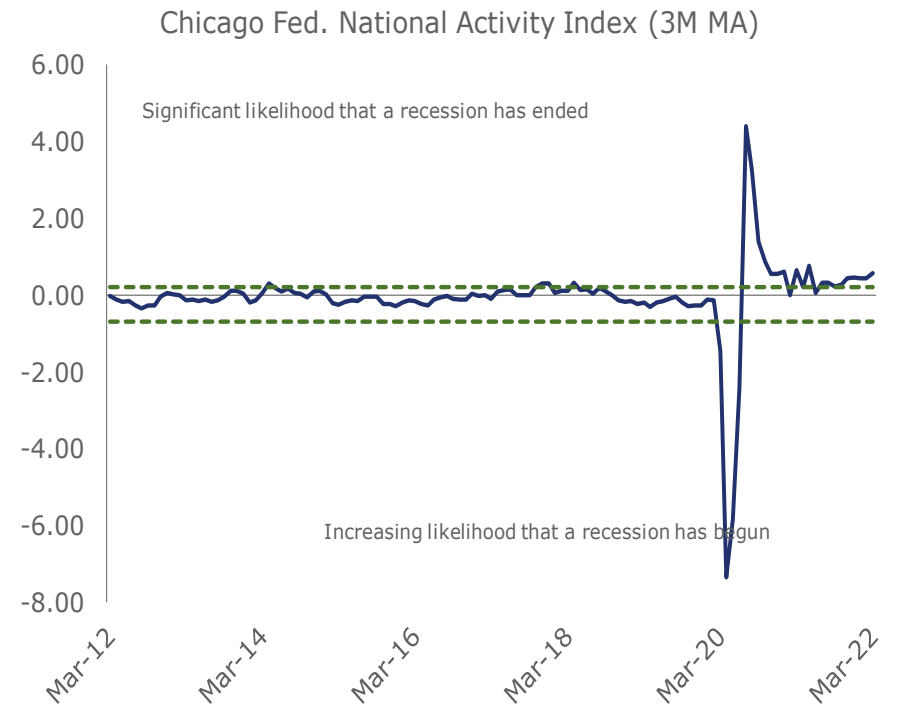
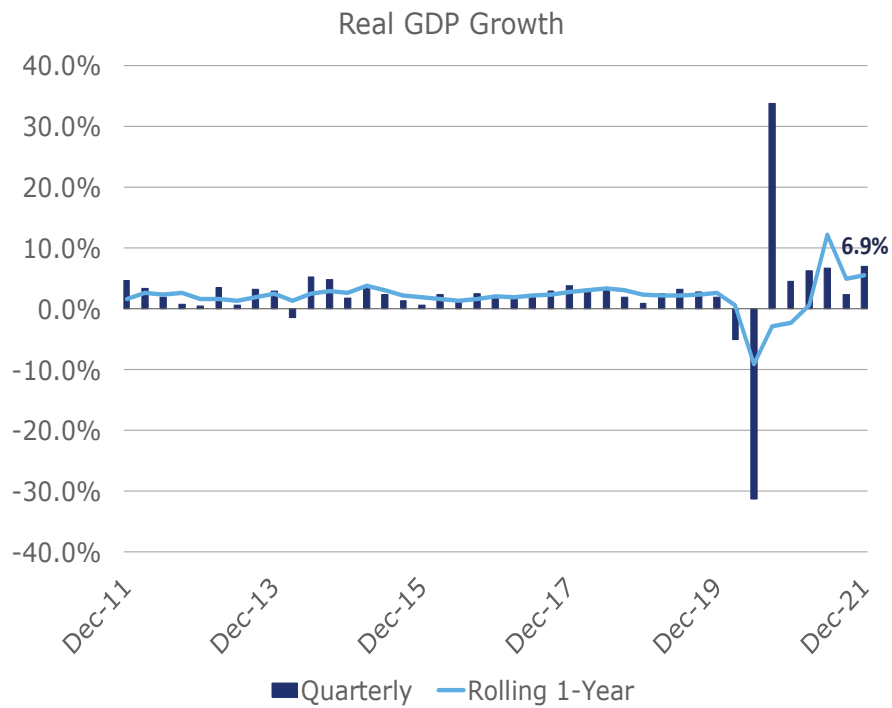


	Q1 2022	12/31 to 2/23	2/23 to 3/31	QTD (4/15)
Global 60/40	(5.55)	(7.07)	1.63	(2.87)
Risk Parity (12%)	(5.02)	(5.52)	0.53	(3.01)
Growth	(5.36)	(8.97)	3.97	(2.93)
Defensive Growth	(3.97)	(8.51)	4.97	(0.38)
Diversified Credit	(6.35)	(4.40)	(2.03)	(1.94)
Real Assets	6.30	(0.19)	6.50	1.29
Defensive	(5.93)	(4.18)	(1.83)	(2.77)

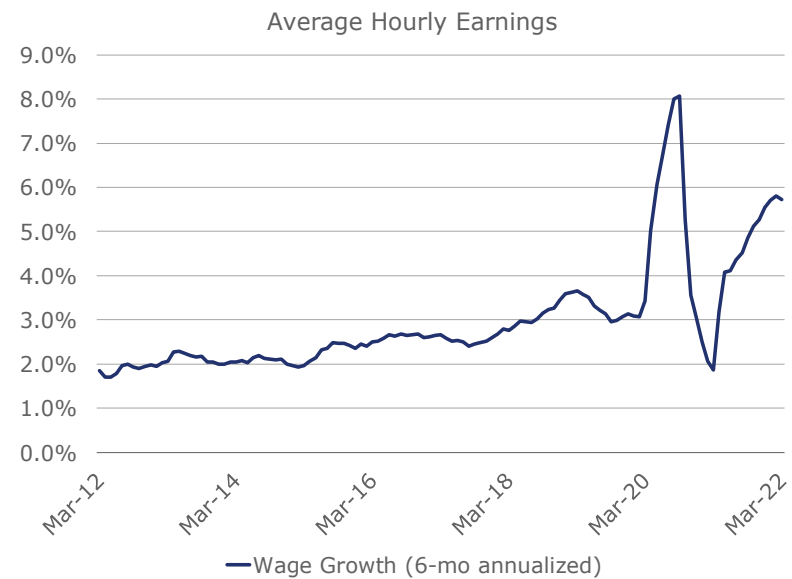
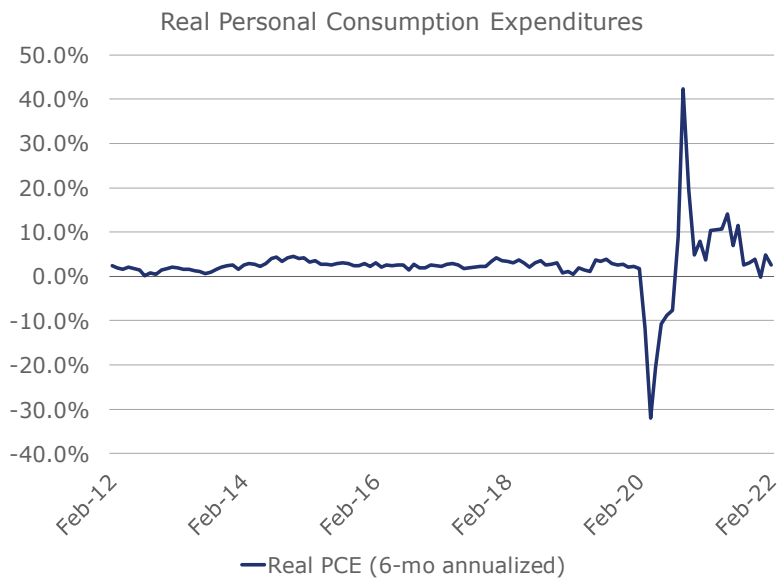
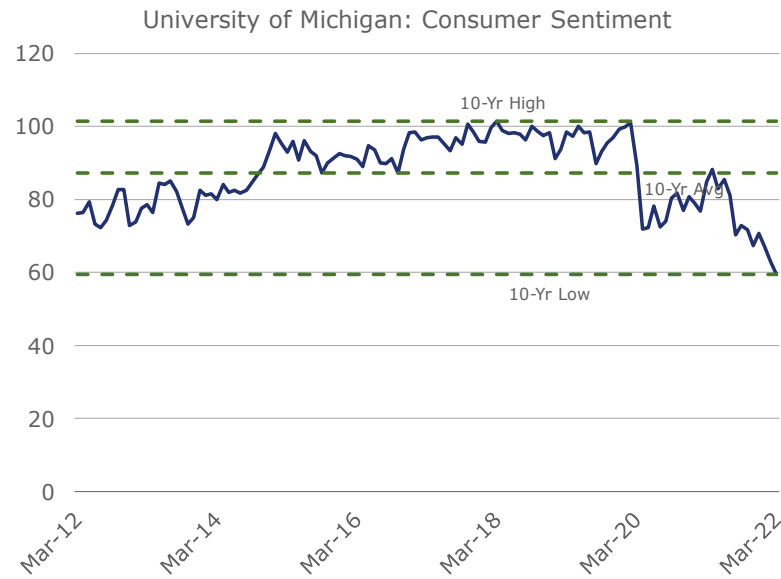
Data Source: Bloomberg

Economic/Market Activity

Economic Growth

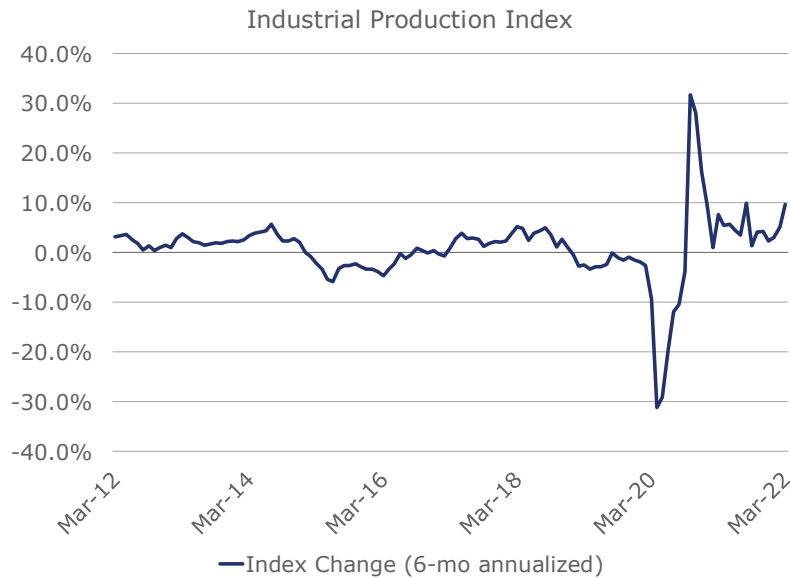
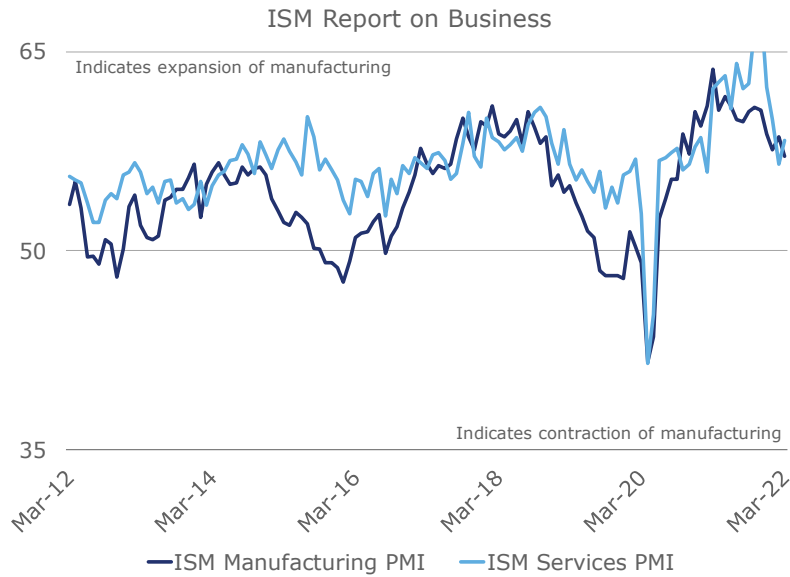


Consumer Activity



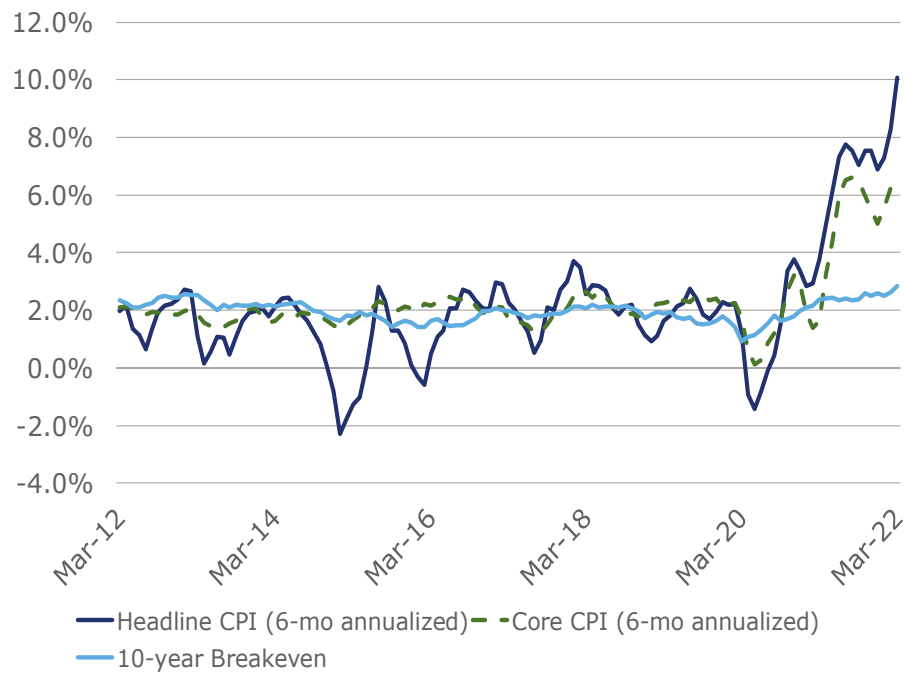
Data Sources: Bloomberg

Business Activity

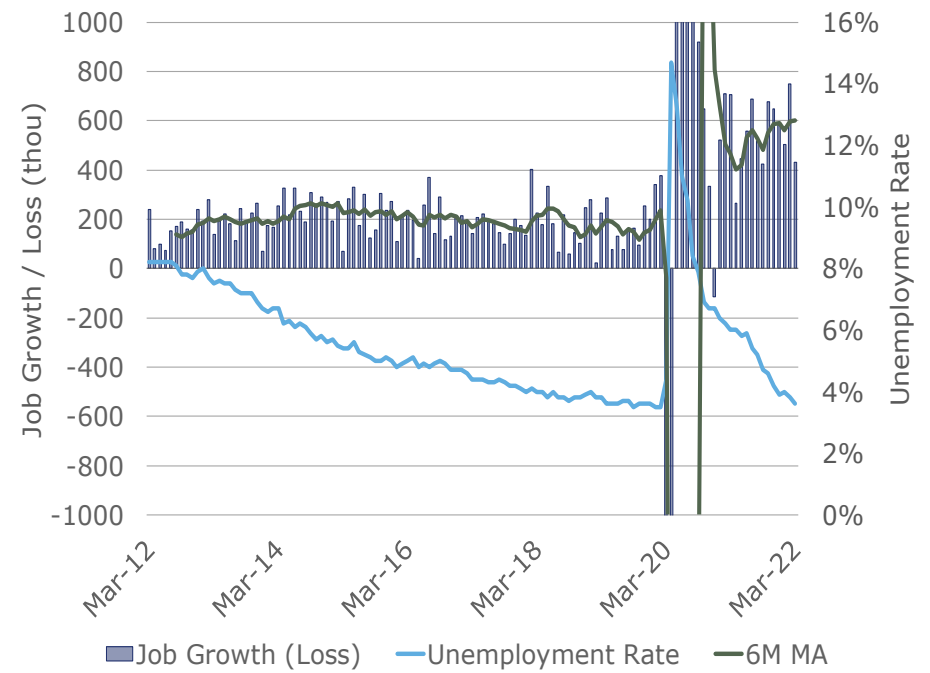


Inflation and Employment

Inflation: Actual & Expected



Employment Gains / Losses

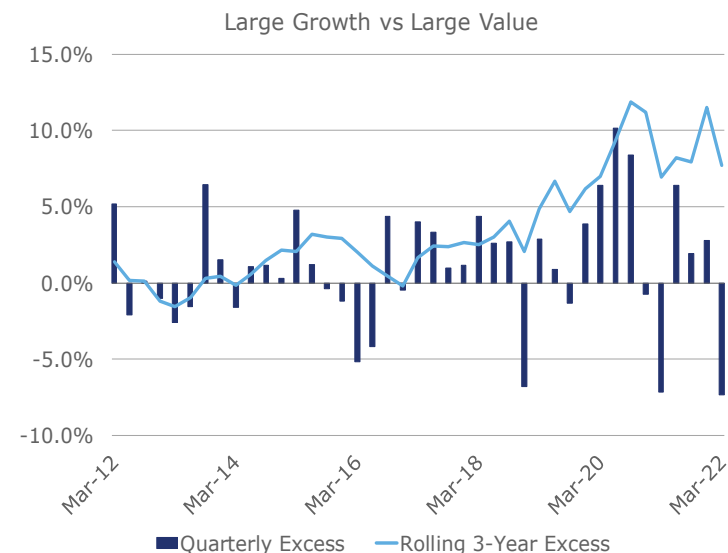
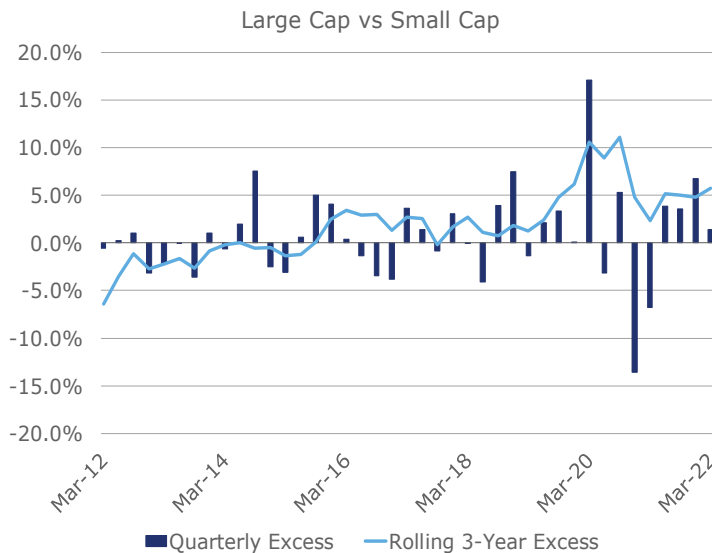
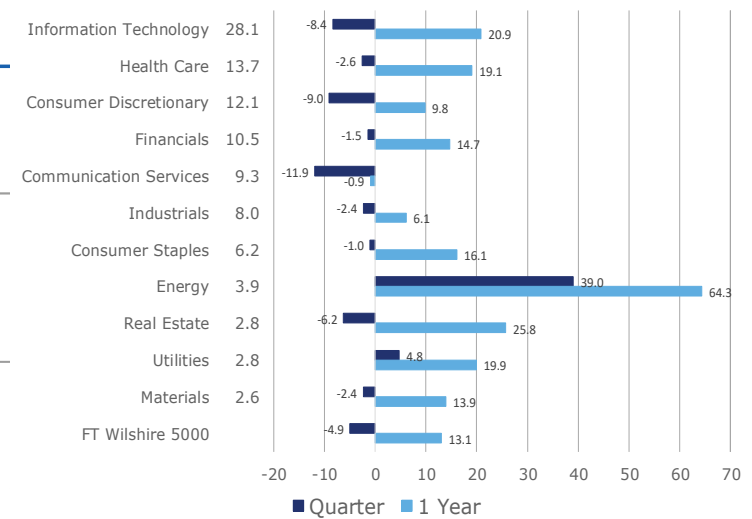


U.S. Equity Market

As of 3/31/2022

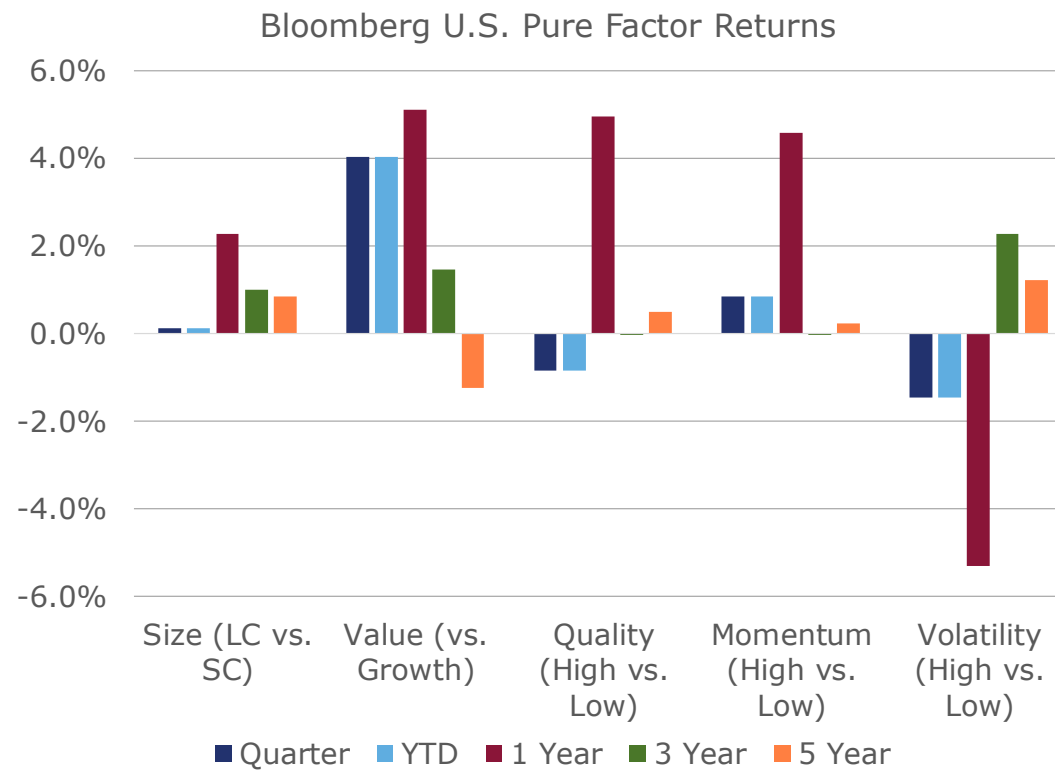
	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	-4.9	-4.9	13.1	18.7	15.7	14.4
Wilshire U.S. Large Cap	-4.8	-4.8	14.6	19.3	16.2	14.7
Wilshire U.S. Small Cap	-6.1	-6.1	-1.4	12.8	10.4	11.8
Wilshire U.S. Large Growth	-8.0	-8.0	16.3	23.5	19.9	16.8
Wilshire U.S. Large Value	-0.7	-0.7	12.6	14.7	12.3	12.5
Wilshire U.S. Small Growth	-10.3	-10.3	-9.4	12.5	11.5	11.9
Wilshire U.S. Small Value	-1.8	-1.8	7.3	13.1	9.2	11.5
Wilshire REIT Index	-3.9	-3.9	29.1	11.9	10.0	9.9
MSCI USA Min. Vol. Index	-3.8	-3.8	13.8	11.8	12.5	13.0
FTSE RAFI U.S. 1000 Index	0.1	0.1	15.1	17.5	13.5	13.6

U.S. Sector Weight and Return (%)

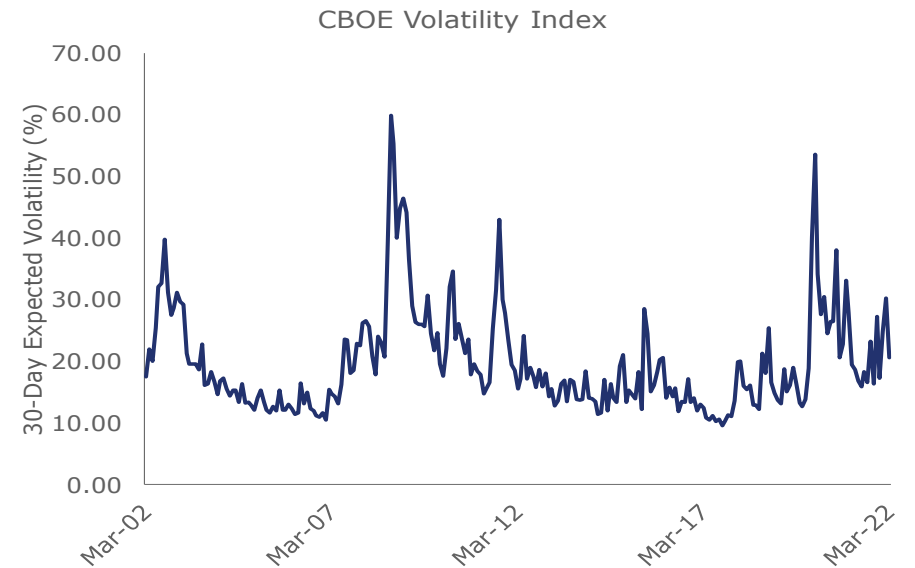
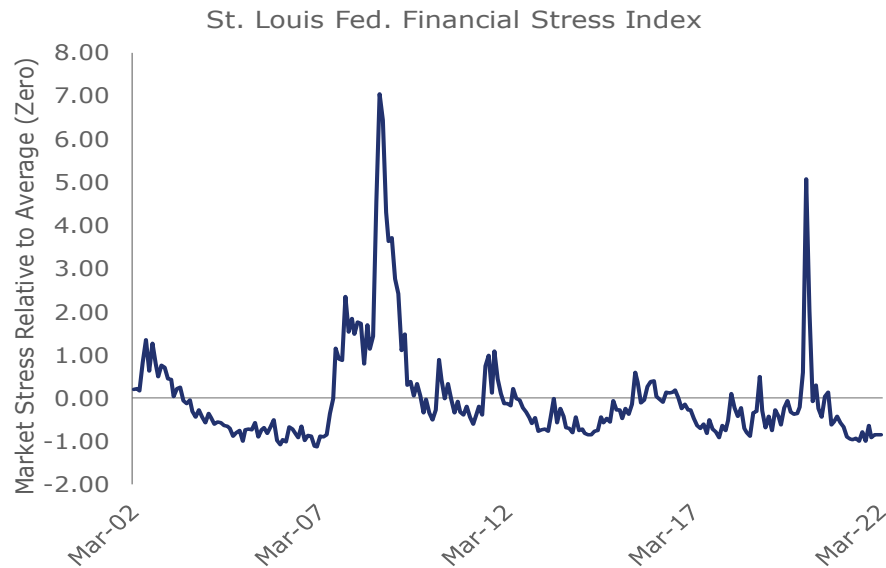
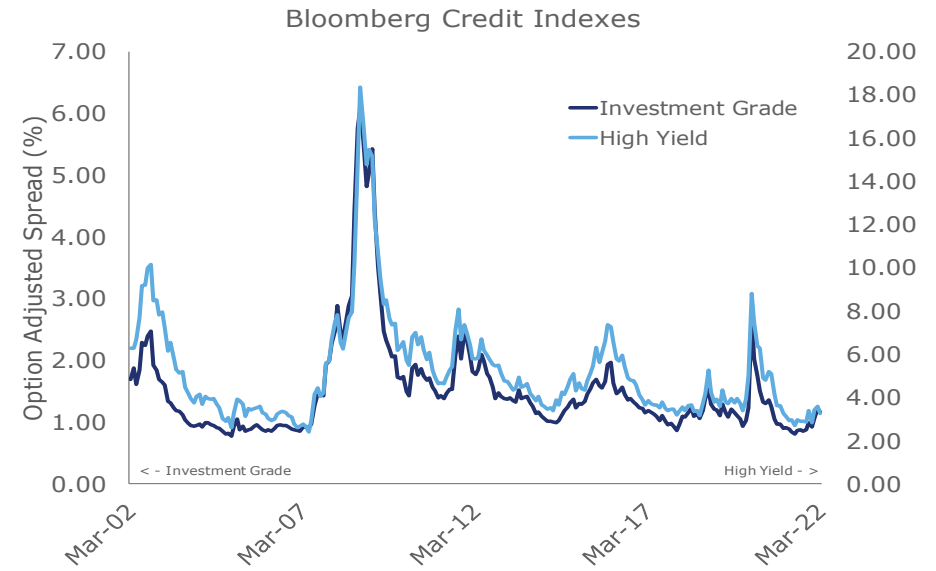
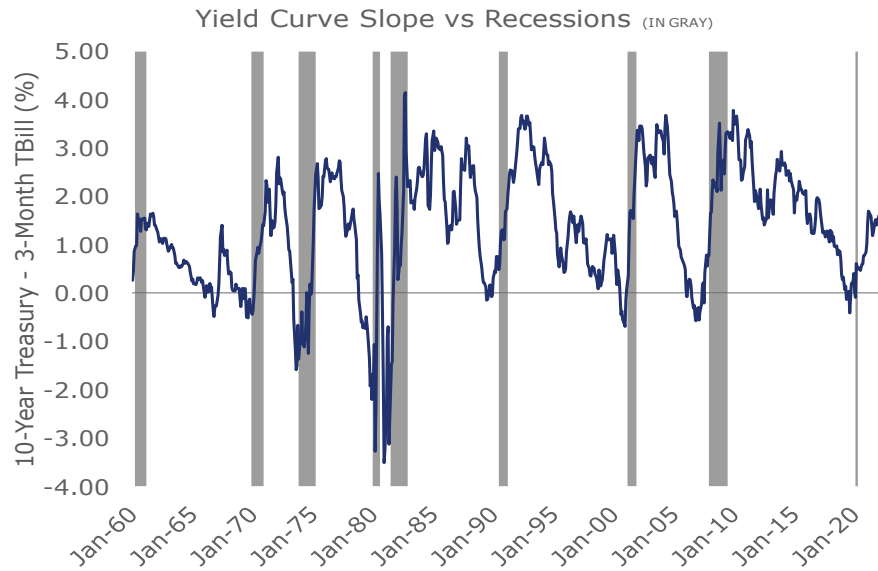


U.S. Factor Returns

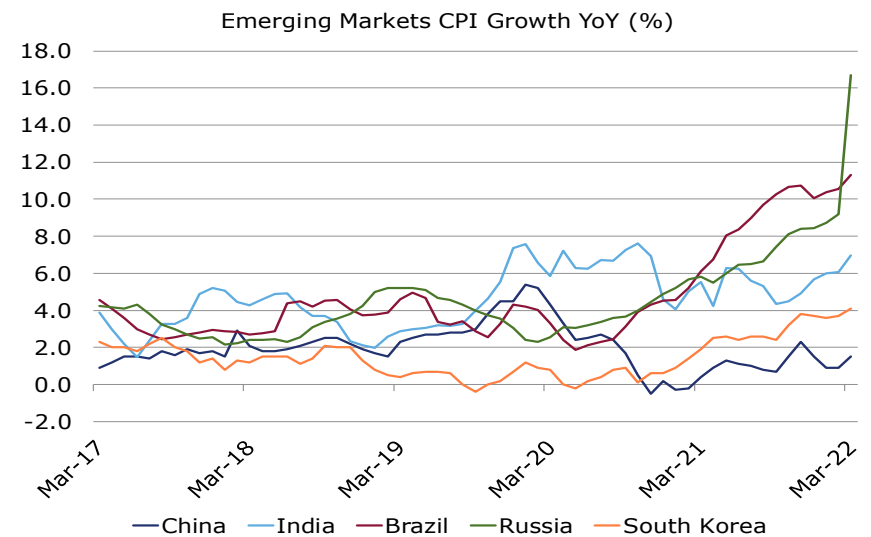
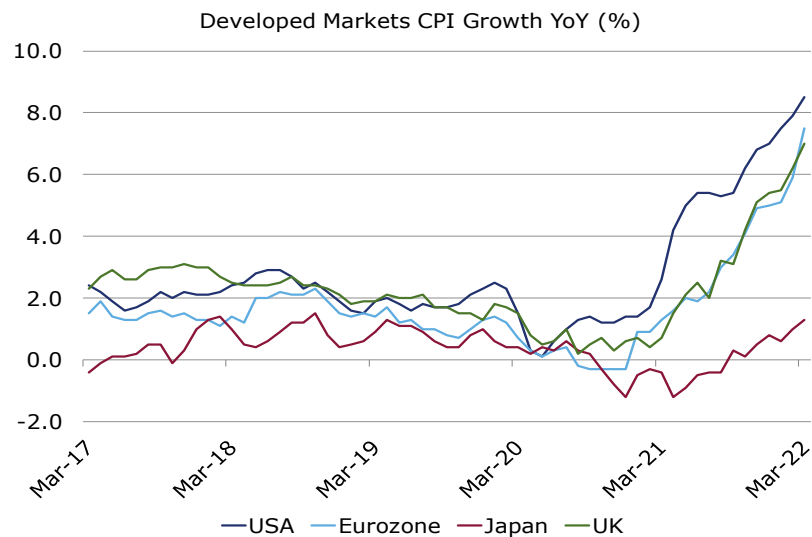
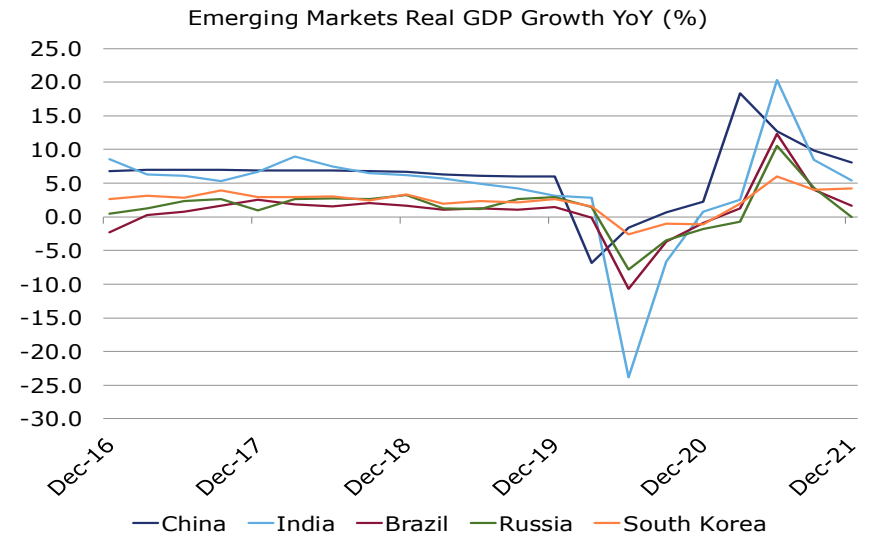
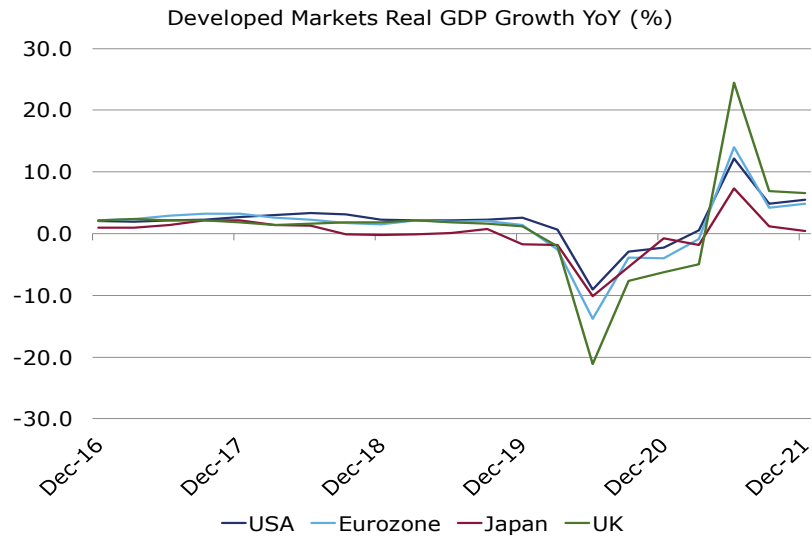
- Factor returns represent the contribution from large cap, value, etc. stocks within Bloomberg's Portfolio & Risk Analytics module
- Value stocks have rebounded during the past year



Risk Monitor



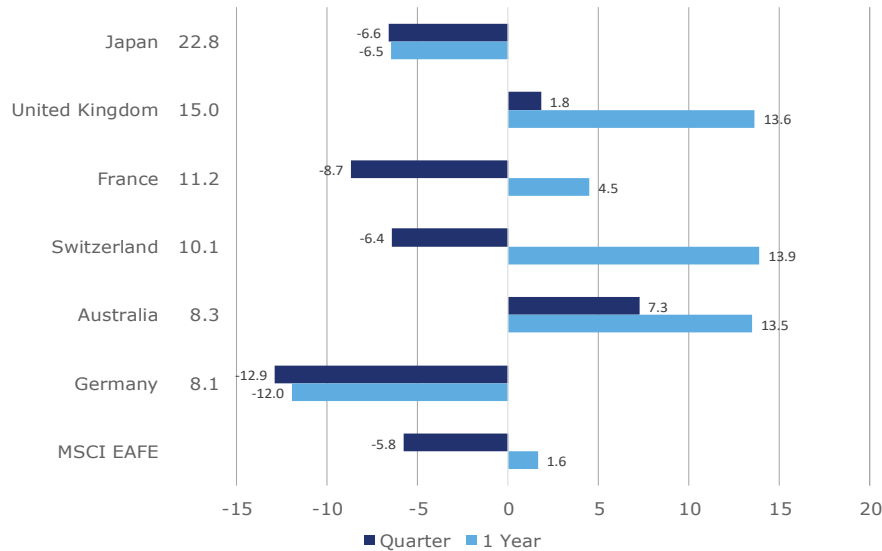
Non-U.S. Growth and Inflation



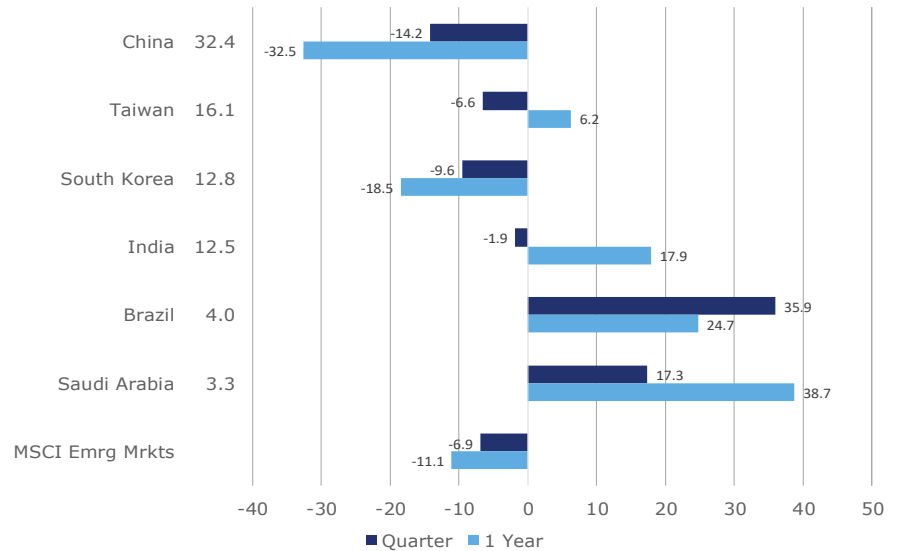
Non-U.S. Equity Market

As of 3/31/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US (\$G)	-5.3	-5.3	-1.0	8.0	7.3	6.0
MSCI EAFE (\$G)	-5.8	-5.8	1.6	8.3	7.2	6.8
MSCI Emerging Markets (\$G)	-6.9	-6.9	-11.1	5.3	6.4	3.7
MSCI Frontier Markets (\$G)	0.6	0.6	11.9	2.4	3.6	3.0
MSCI ACWI ex-US Growth (\$G)	-10.7	-10.7	-5.9	9.5	9.0	7.1
MSCI ACWI ex-US Value (\$G)	-0.1	-0.1	3.9	6.5	5.5	5.2
MSCI ACWI ex-US Small (\$G)	-6.4	-6.4	0.4	10.7	8.3	7.7
MSCI ACWI Minimum Volatility	-2.9	-2.9	9.2	8.3	9.2	9.7
MSCI EAFE Minimum Volatility	-5.3	-5.3	2.4	3.6	5.4	6.8
FTSE RAFI Developed ex-US	-1.3	-1.3	5.0	8.5	6.7	6.3
MSCI EAFE LC (G)	-3.6	-3.6	6.7	8.7	7.1	9.1
MSCI Emerging Markets LC (G)	-6.1	-6.1	-9.6	6.6	7.9	6.7

Developed Markets Weight and Return (%)



Emerging Markets Weight and Return (%)

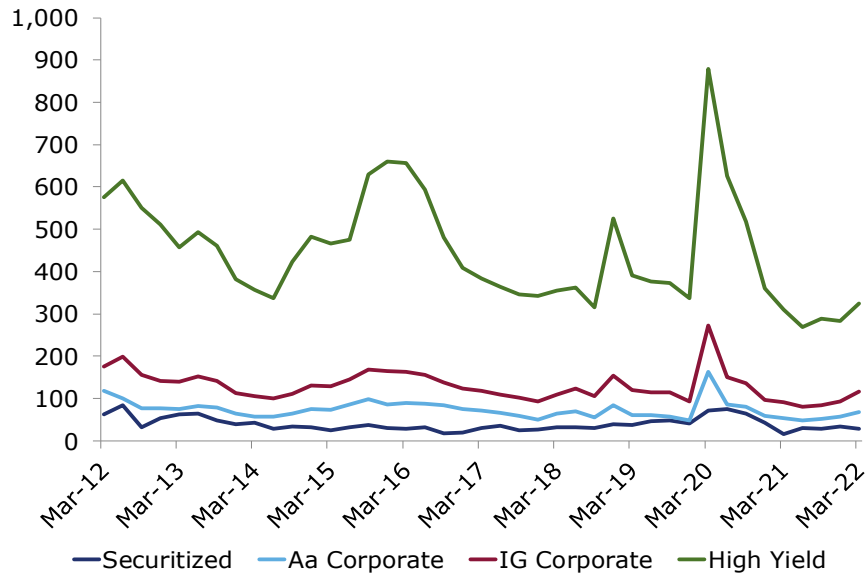


U.S. Fixed Income

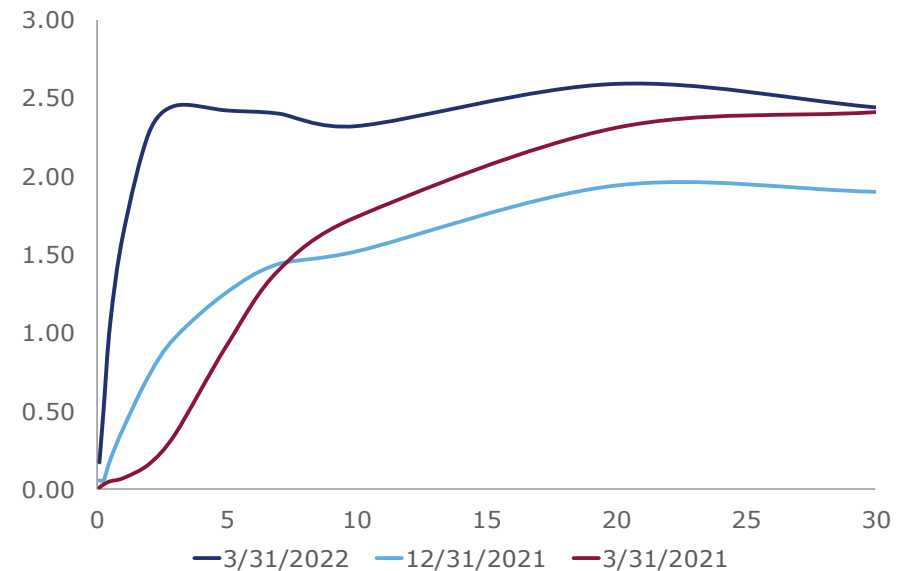
As of 3/31/2022	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	2.9	6.6	-5.9	-5.9	-4.2	1.7	2.1	2.2
Bloomberg Treasury	2.4	6.8	-5.6	-5.6	-3.7	1.4	1.8	1.7
Bloomberg Gov't-Rel.	2.9	5.9	-5.4	-5.4	-3.9	1.5	2.1	2.2
Bloomberg Securitized	3.0	5.1	-5.0	-5.0	-4.9	0.7	1.4	1.8
Bloomberg Corporate	3.6	8.1	-7.7	-7.7	-4.2	3.0	3.3	3.6
Bloomberg LT Gov't/Credit	3.4	15.7	-11.0	-11.0	-3.1	4.2	4.6	4.7
Bloomberg LT Treasury	2.6	17.8	-10.6	-10.6	-1.4	3.3	3.9	4.0
Bloomberg LT Gov't-Rel.	3.9	12.9	-9.7	-9.7	-4.0	2.7	4.0	4.3
Bloomberg LT Corporate	4.0	14.4	-11.4	-11.4	-4.3	4.6	4.9	5.2
Bloomberg U.S. TIPS *	2.4	8.1	-3.0	-3.0	4.3	6.2	4.4	2.7
Bloomberg High Yield	6.0	3.9	-4.8	-4.8	-0.7	4.6	4.7	5.7
S&P/LSTA Leveraged Loan	4.4	0.3	-0.1	-0.1	3.3	4.2	4.0	4.3
Treasury Bills	0.6	0.3	0.0	0.0	0.0	0.8	1.1	0.6

* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index

Fixed Income Option Adjusted Spread (bps)



Treasury Yield Curve (%)

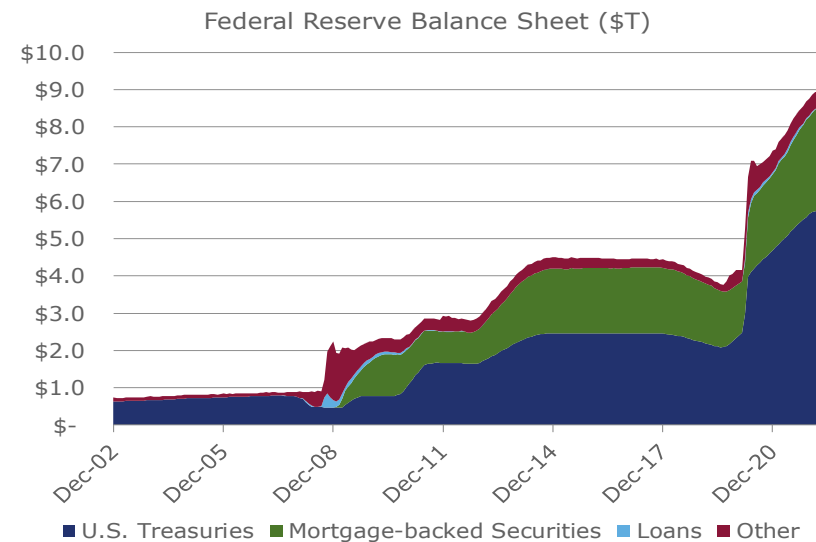
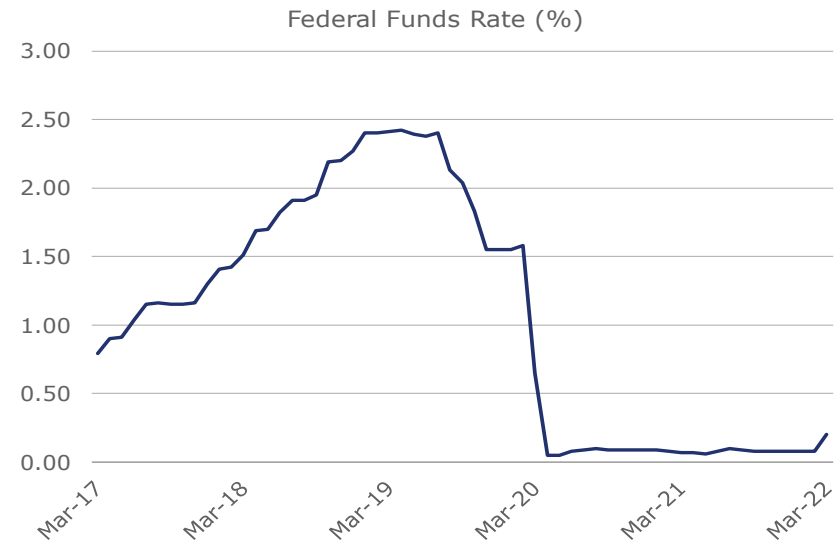


Data Sources: Bloomberg

Federal Reserve

- Current FOMC expectation is for three 25 basis point increases (or 0.75%) in the Fed-funds rate during 2022
- Federal Reserve has added more than \$4.5 trillion in assets to their balance sheet during the past 21 months
- QE4 is now larger than the 3 phases of quantitative easing – combined – following the global financial crisis

	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	\$1,403
QE2	11/3/2010	6/29/2012	\$568
QE3	9/13/2012	10/29/2014	\$1,674
QE4	3/23/2020	3/15/2022	\$4,804

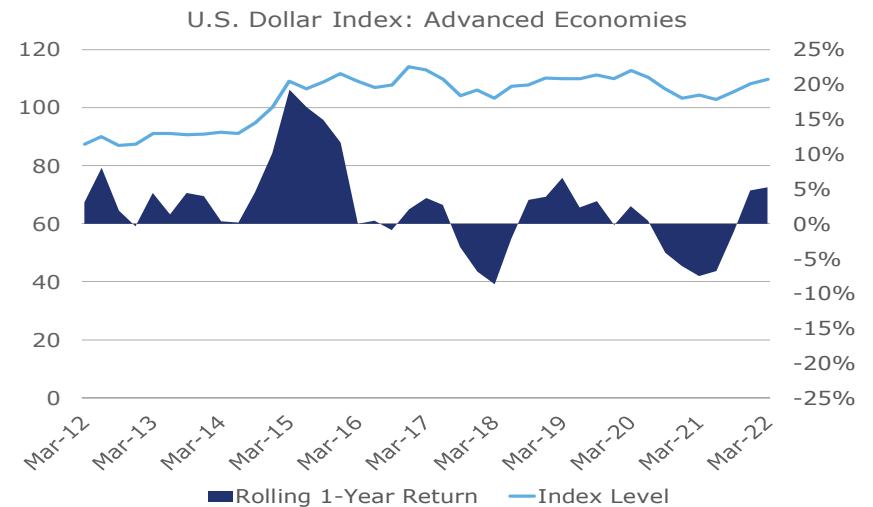
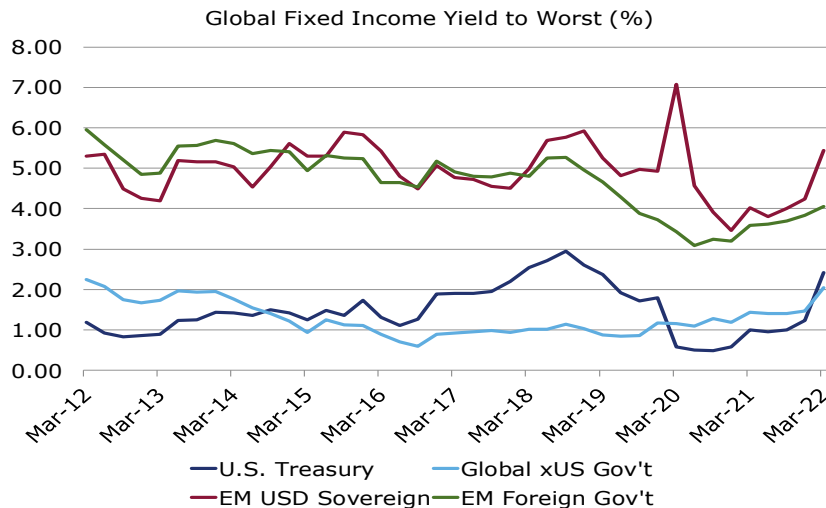


Non-U.S. Fixed Income

As of 3/31/2022

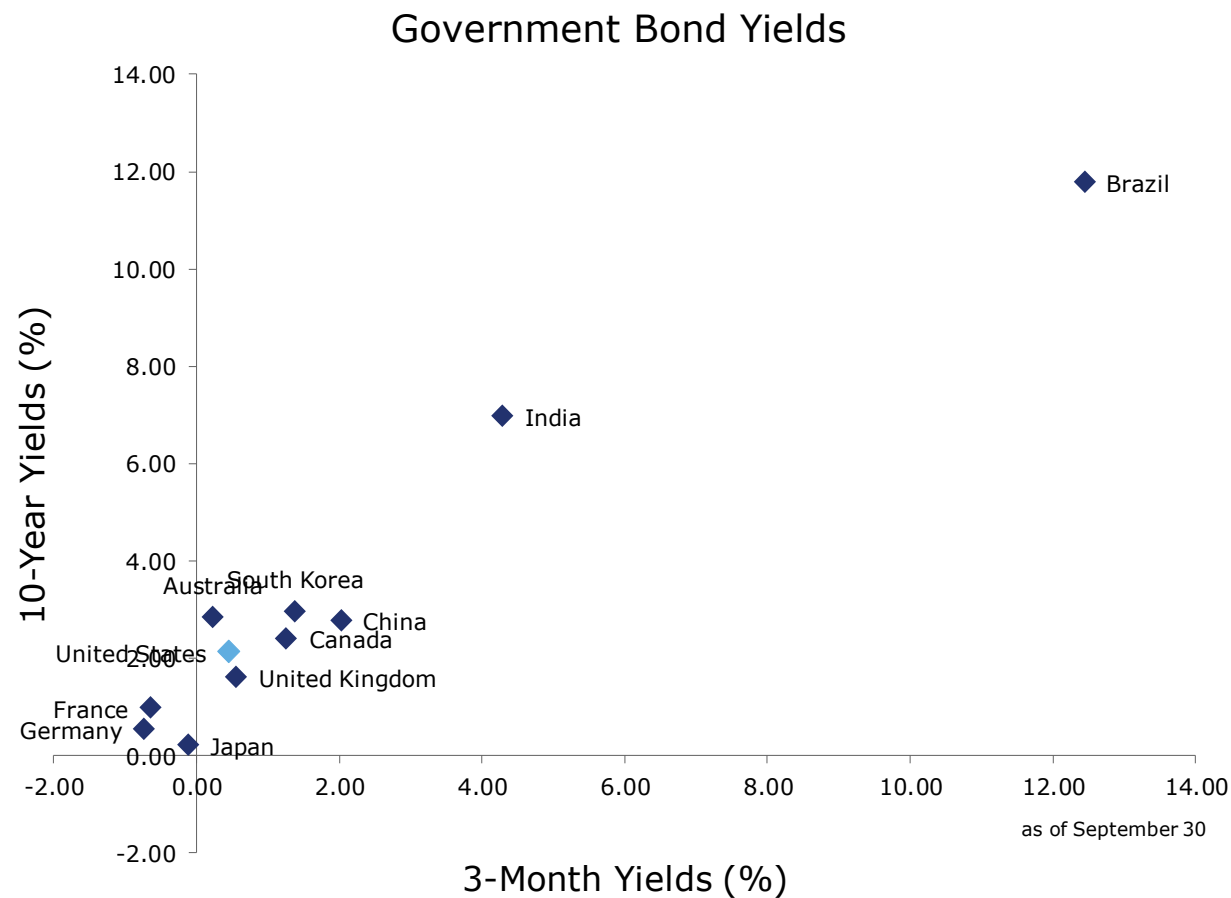
	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Developed Markets						
Bloomberg Global Aggregate xUS	-6.1	-6.1	-7.9	-0.2	1.3	0.1
Bloomberg Global Aggregate xUS *	-4.1	-4.1	-3.6	0.9	2.3	3.2
Bloomberg Global Inflation Linked xUS	-5.3	-5.3	0.0	3.8	4.1	2.7
Bloomberg Global Inflation Linked xUS *	-2.8	-2.8	5.5	4.6	4.5	5.3
Emerging Markets (Hard Currency)						
Bloomberg EM USD Aggregate	-9.2	-9.2	-7.5	0.7	1.9	3.6
Emerging Markets (Foreign Currency)						
Bloomberg EM Local Currency Gov't	-2.1	-2.1	0.0	2.8	2.8	1.7
Bloomberg EM Local Currency Gov't *	-3.5	-3.5	-2.9	1.4	2.2	2.4
Euro vs. Dollar	-2.7	-2.7	-5.7	-0.5	0.8	-1.9
Yen vs. Dollar	-5.4	-5.4	-9.0	-3.1	-1.8	-3.8
Pound vs. Dollar	-2.9	-2.9	-4.7	0.3	0.9	-2.0

* Returns are reported in terms of local market investors, which removes currency effects.



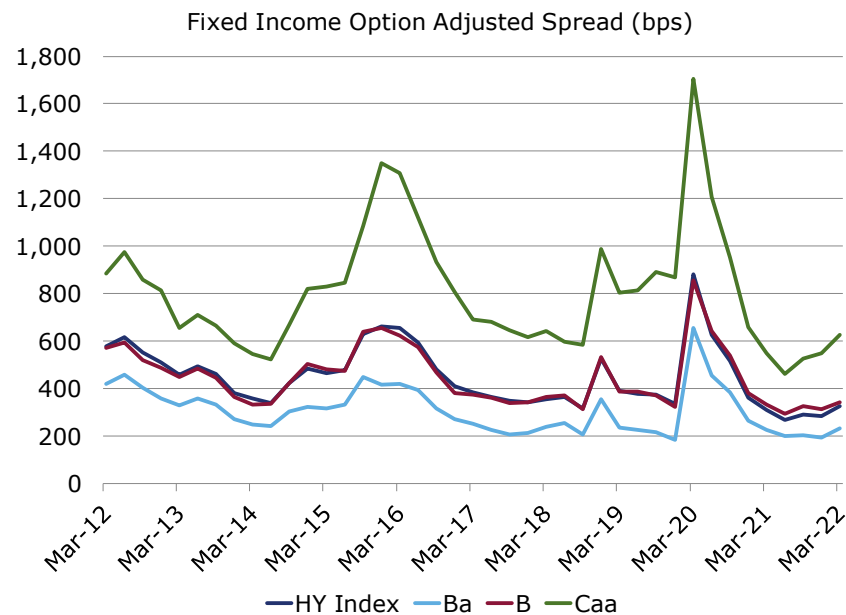
Global Interest Rates

Negative rates found in Germany and France; low but positive rates, and at similar levels, in the U.S., Australia and in the U.K.



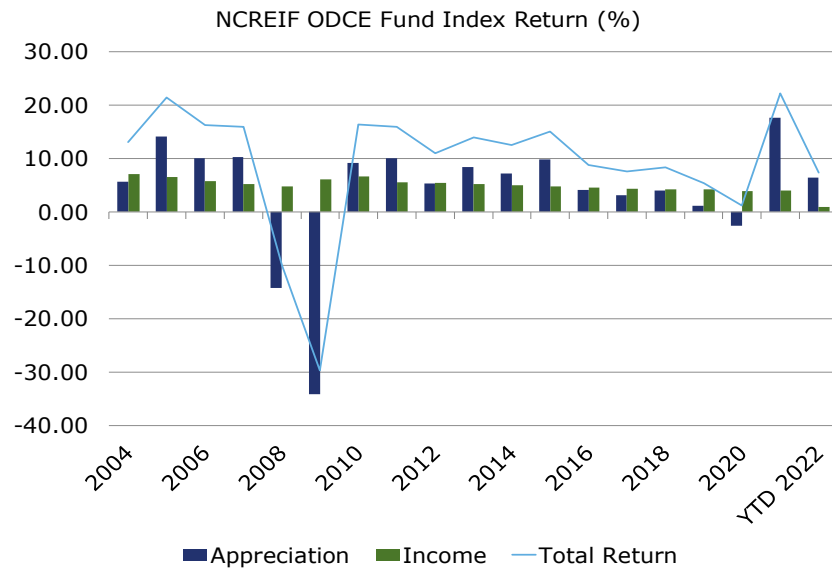
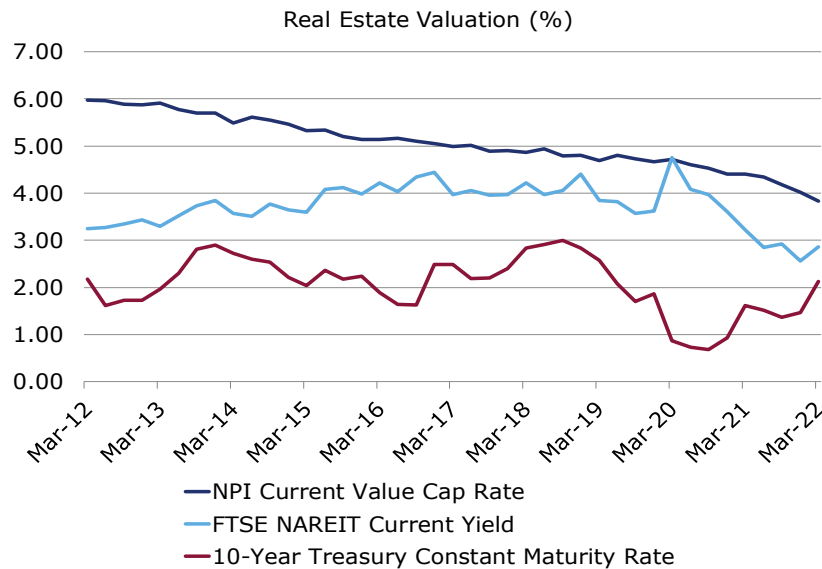
High Yield Bond Market

As of 3/31/2022		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		6.0	-4.8	-4.8	-0.7	4.6	4.7	5.7
S&P LSTA Leveraged Loan		4.4	-0.2	-0.2	2.3	3.8	3.7	3.9
High Yield Quality Distribution	Weight							
Ba U.S. High Yield	51.3%	5.0	-5.9	-5.9	-1.5	5.3	5.1	5.9
B U.S. High Yield	37.0%	6.3	-3.5	-3.5	0.0	4.2	4.5	5.4
Caa U.S. High Yield	11.5%	9.1	-3.9	-3.9	0.8	2.9	3.5	5.8
Ca to D U.S. High Yield	0.3%	30.8	-3.8	-3.8	-5.5	-1.9	2.7	-3.0
Non-Rated U.S. High Yield	0.0%	0.0	0.0	0.0	0.0	-1.4	0.8	1.6



Real Assets

As of 3/31/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg U.S. TIPS	-3.0	-3.0	4.3	6.2	4.4	2.7
Bloomberg Commodity Index	25.5	25.5	49.3	16.1	9.0	-0.7
Bloomberg Gold Index	6.6	6.6	13.1	13.0	8.1	0.7
Wilshire Global RESI Index	-3.0	-3.0	22.0	8.7	8.5	8.8
NCREIF ODCE Fund Index	7.4	7.4	28.5	11.3	9.9	10.9
NCREIF Timberland Index	3.2	3.2	11.8	4.7	4.1	5.6
FTSE Global Core Infrastructure 50/50	3.9	3.9	15.3	9.0	9.4	9.7
Alerian Midstream Energy	24.0	24.0	41.9	10.1	6.1	n.a.
Bitcoin	-1.2	-1.2	-22.4	123.6	111.8	149.7



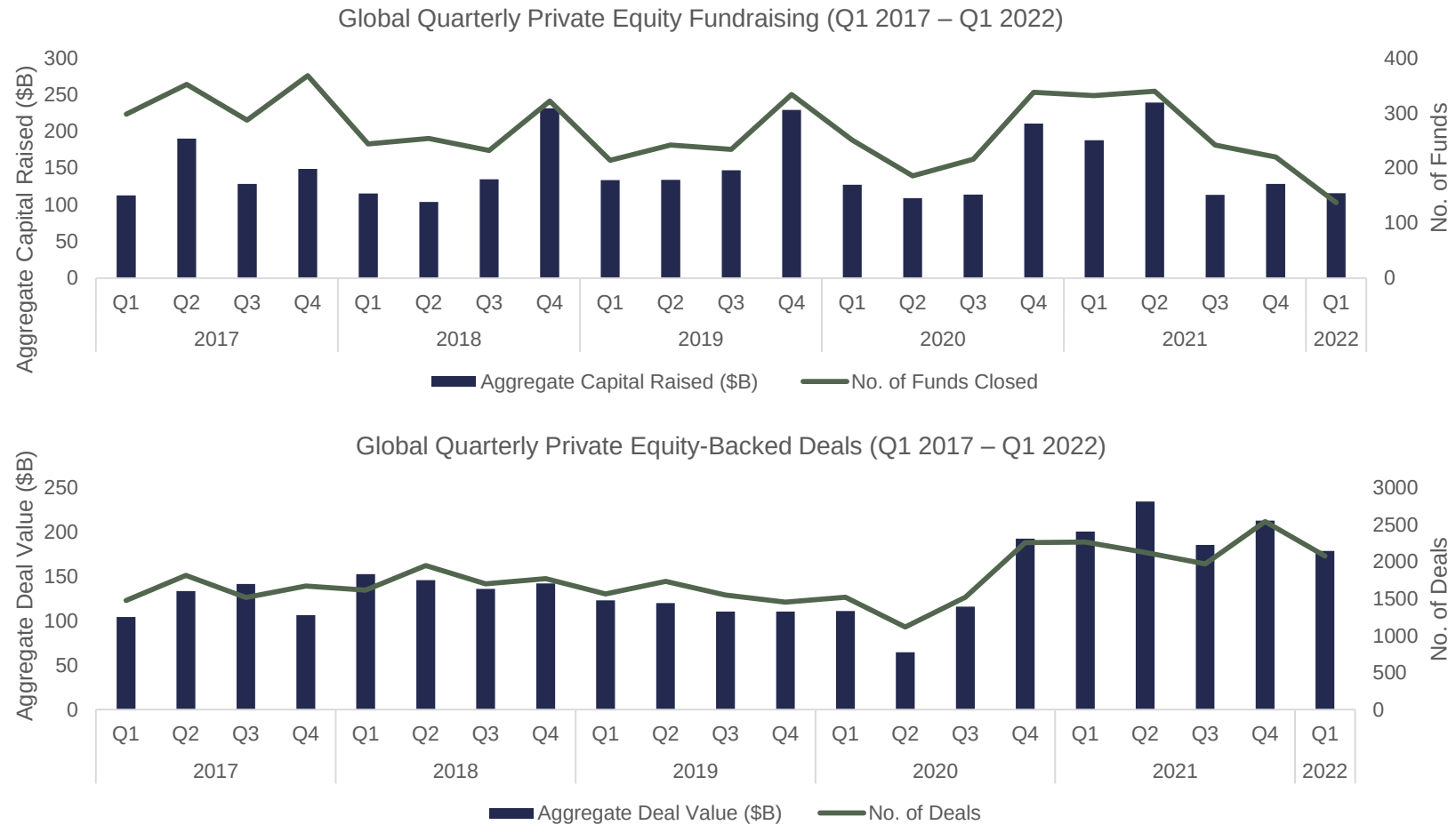
Asset Class Performance

Asset Class Returns - Best to Worst

2017	2018	2019	2020	2021	2022 YTD	Annualized 5-Year as of 3/22
Emrg Mkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	REITs 46.2%	Commodities 25.5%	U.S. Equity 15.7%
Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mkts 18.7%	Commodities 27.1%	T-Bills 0.0%	REITs 10.0%
U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	U.S. Equity 26.7%	U.S. TIPS -3.0%	Commodities 9.0%
High Yield 7.5%	High Yield -2.1%	Emrg Mkts 18.9%	Developed 8.3%	Developed 11.8%	REITs -3.9%	Developed 7.2%
REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	U.S. TIPS 6.0%	High Yield -4.8%	Emrg Mkts 6.4%
Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	High Yield 5.3%	U.S. Equity -4.9%	High Yield 4.7%
U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%	Developed -5.8%	U.S. TIPS 4.4%
Commodities 1.7%	Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Core Bond -1.5%	Core Bond -5.9%	Core Bond 2.1%
T-Bills 0.8%	Emrg Mkts -14.2%	T-Bills 2.3%	REITs -7.9%	Emrg Mkts -2.2%	Emrg Mkts -6.9%	T-Bills 1.1%

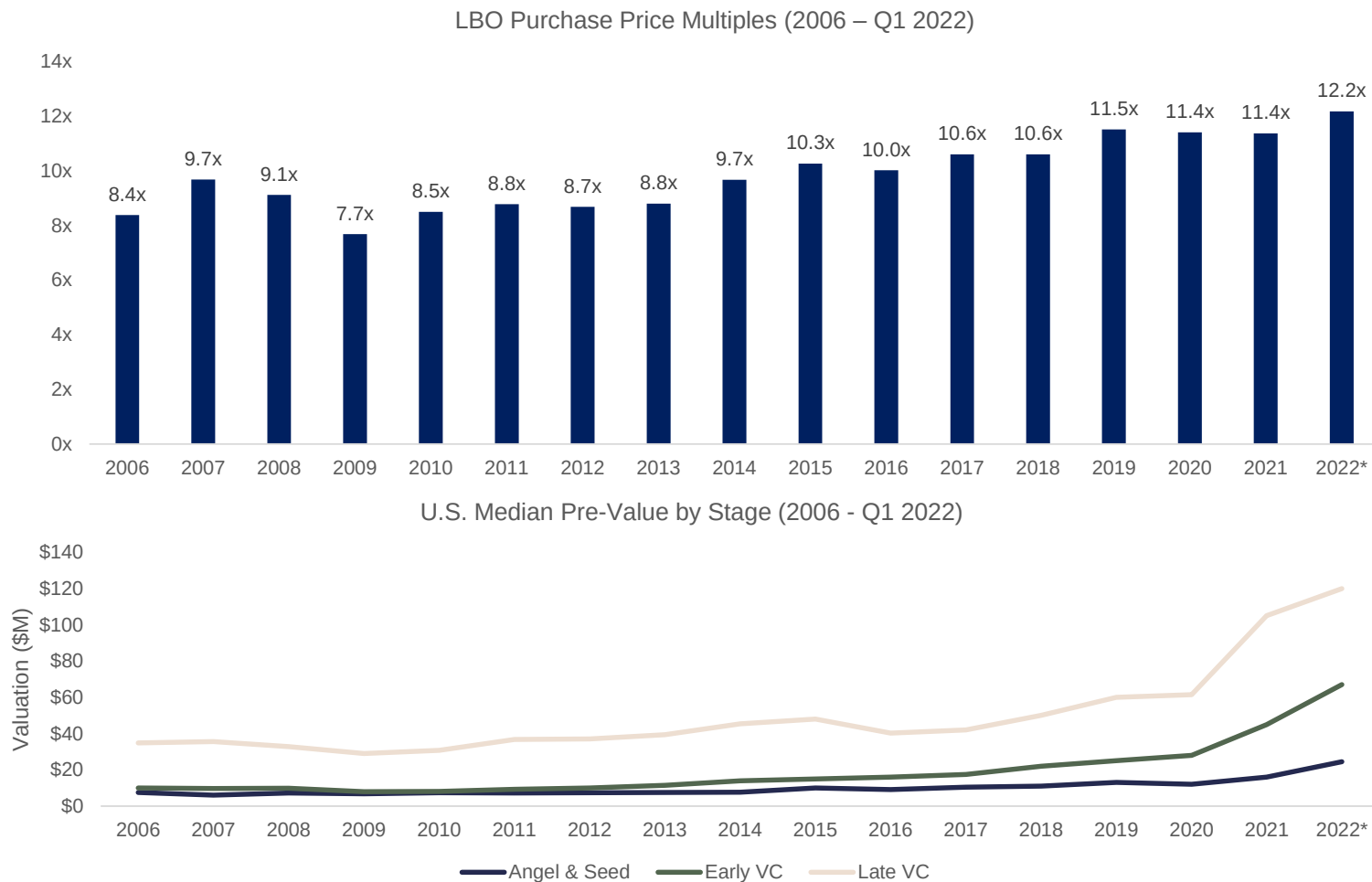
Appendix: Private Market Trends

Private Equity – Fundraising & Investment Activity



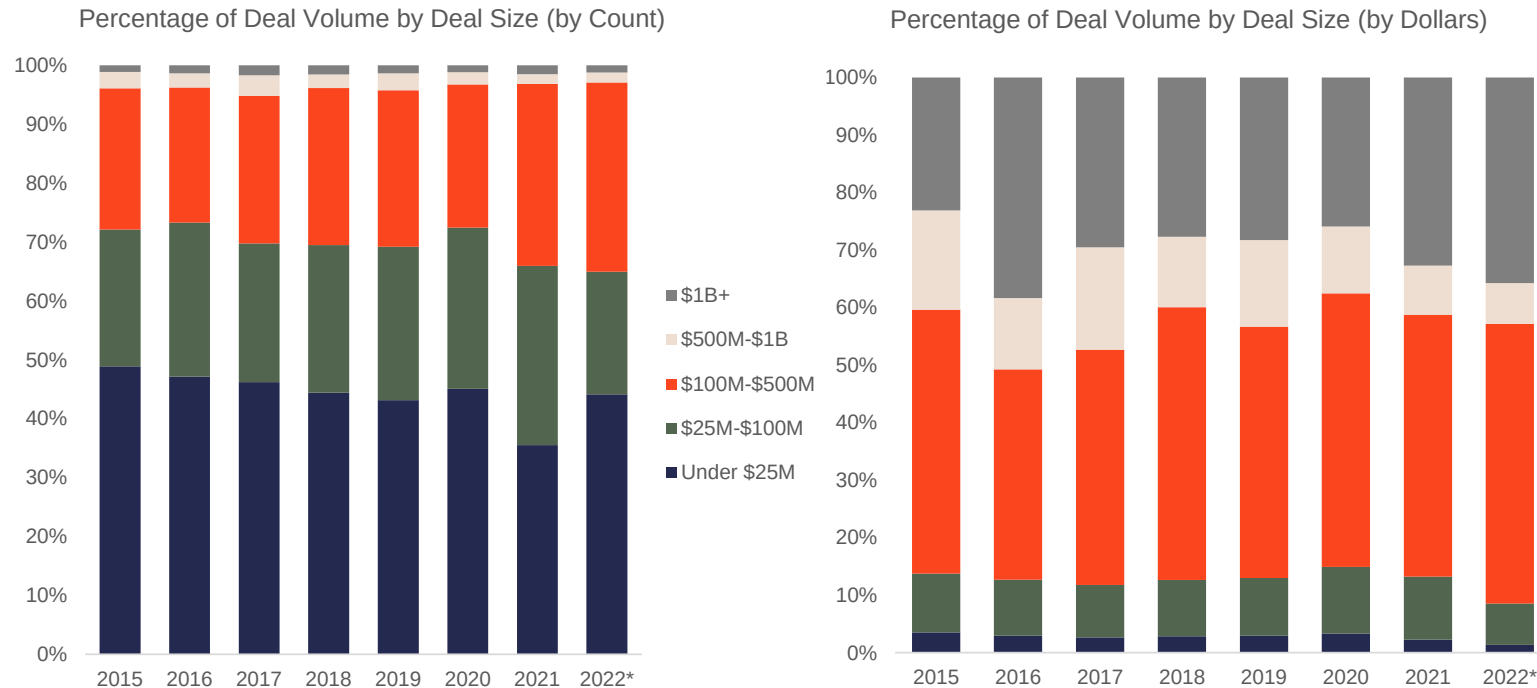
Source: Preqin, as of March 31, 2022.

Private Equity – Pricing & Valuations



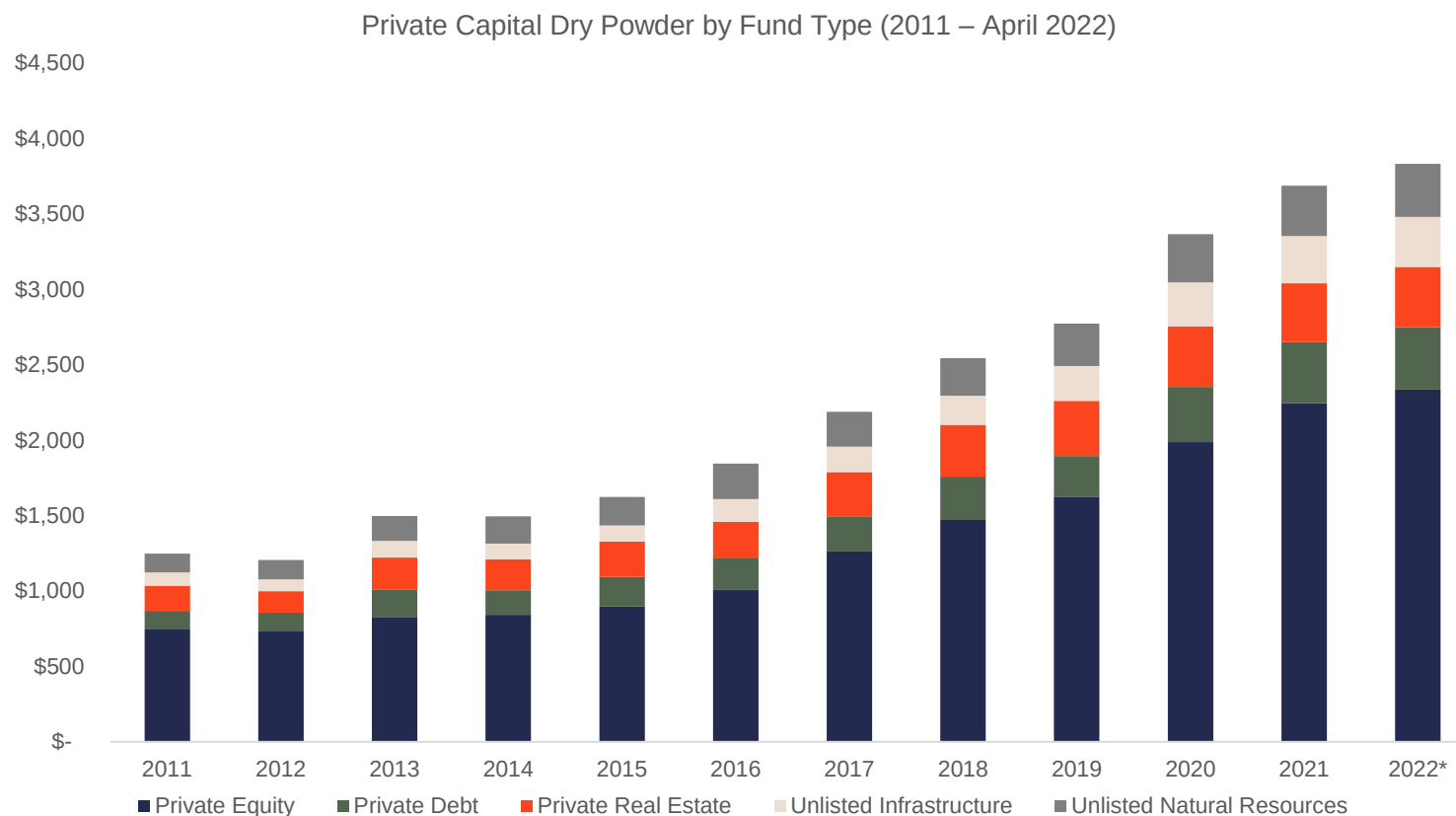
Source: S&P LBO; Pitchbook, *as of March 31, 2022.

U.S. Investment Activity by Deal Size



- Deal volume continues to be dominated by lower middle market deals with investment sizes below \$100 million through the first quarter of 2022
- However, deals with below \$100 million check sizes comprised only 9% of all deal volume by amount of capital invested through the first quarter of 2022

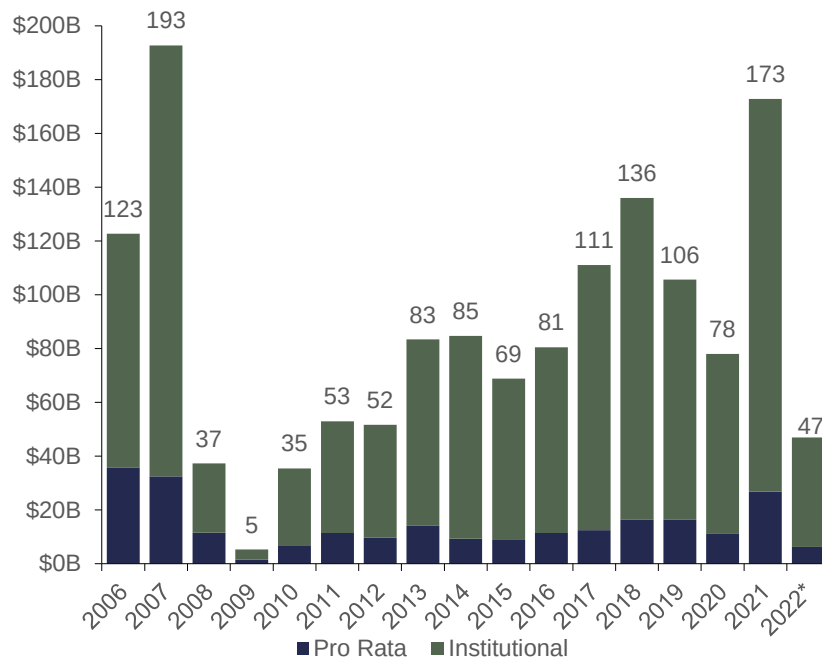
Private Capital Dry Powder



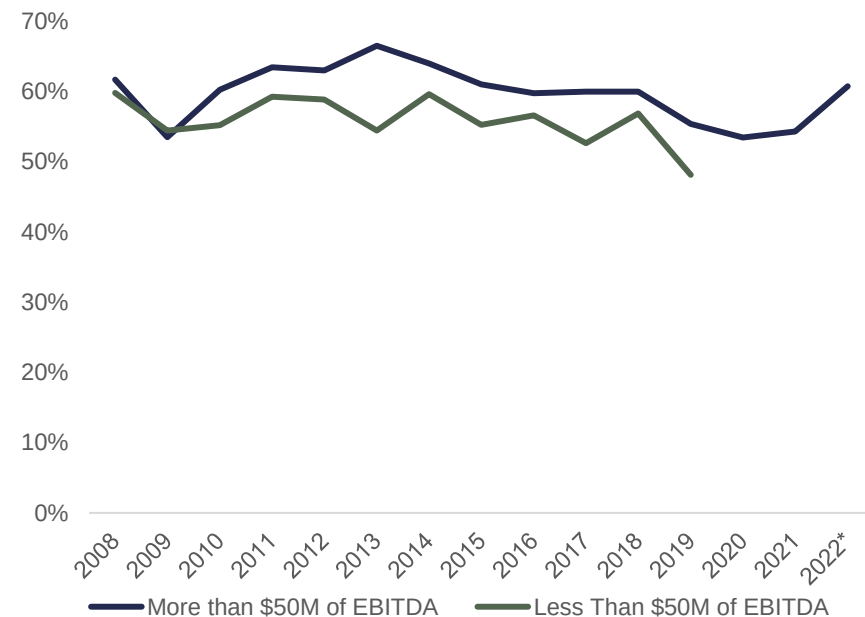
- Global private capital dry power continues to increase, topping \$3.8 trillion across all fund types
- Private equity comprises just under 61% of total dry powder in the market as of April 2022

Private Equity – U.S. Debt Markets

Total U.S. LBO Loan Volume (\$B) (2006 – Q1 2022)



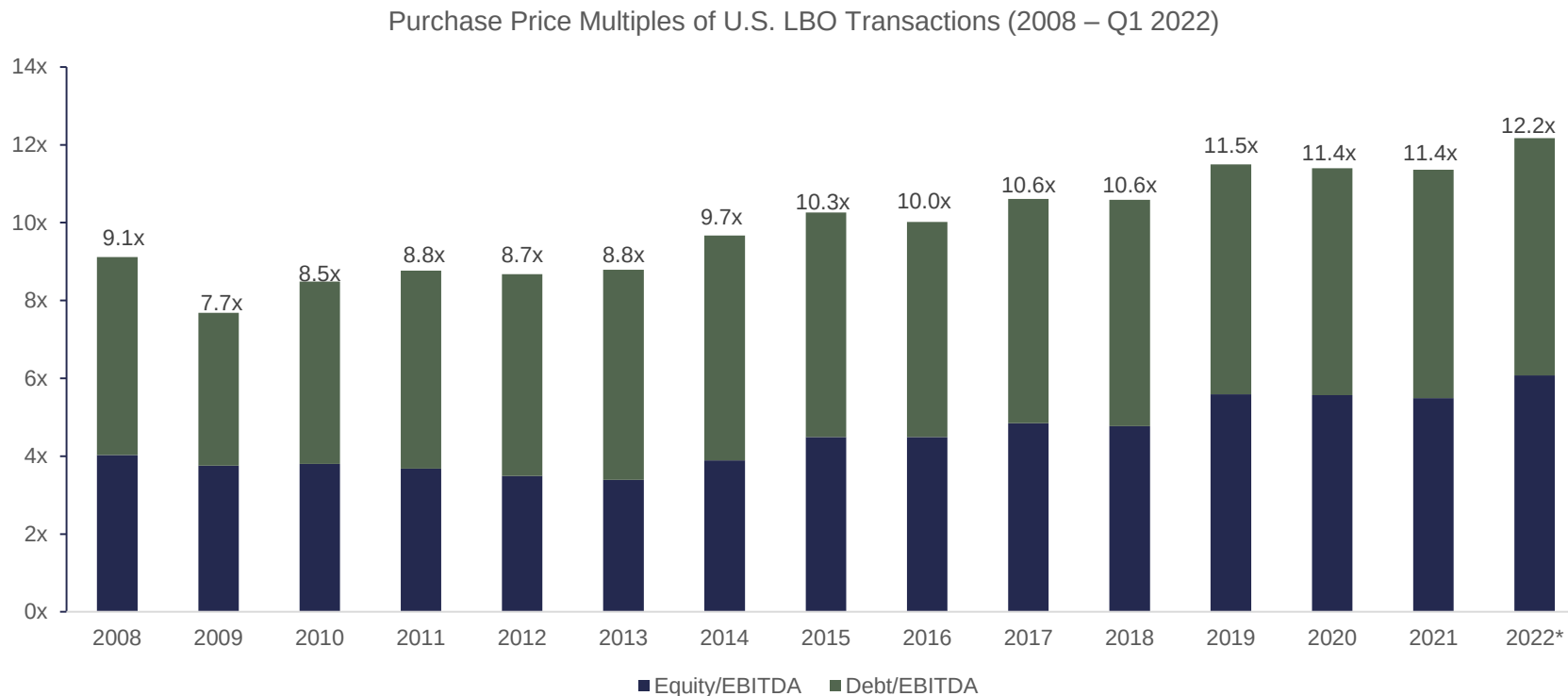
Percentage of Debt Used in LBOs (2008 – Q1 2022)



- 2022 has generated approximately \$47 billion in loan volume so far, which is on pace to surpass the loan volume from all prior years since 2008
- As debt multiples have increased, the percentage of debt used to finance leveraged buyouts through Q1 2022 has increased from the 2021 marks

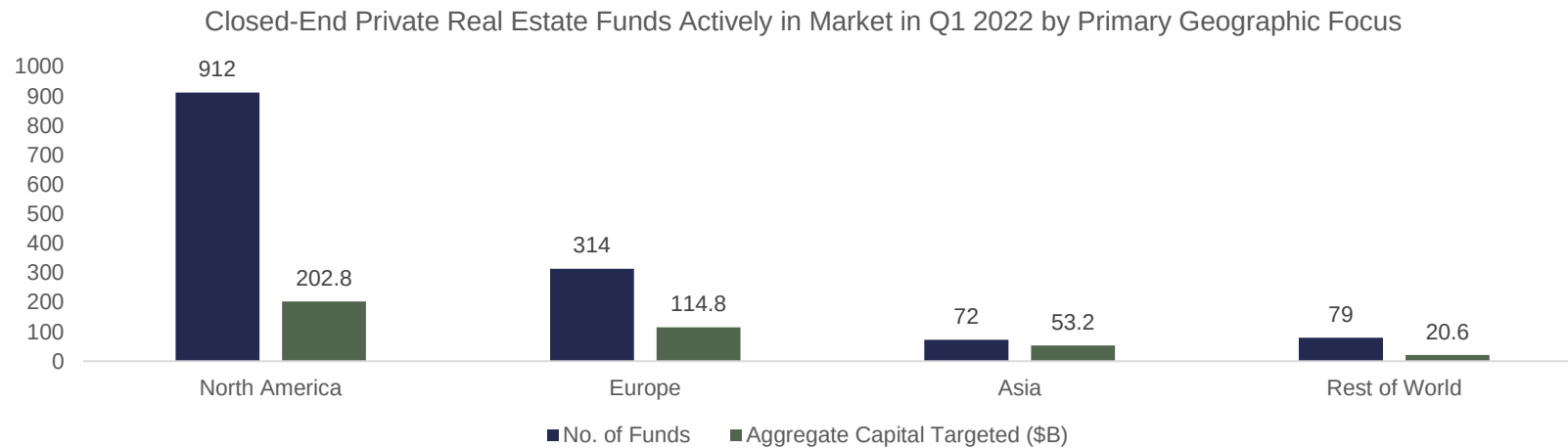
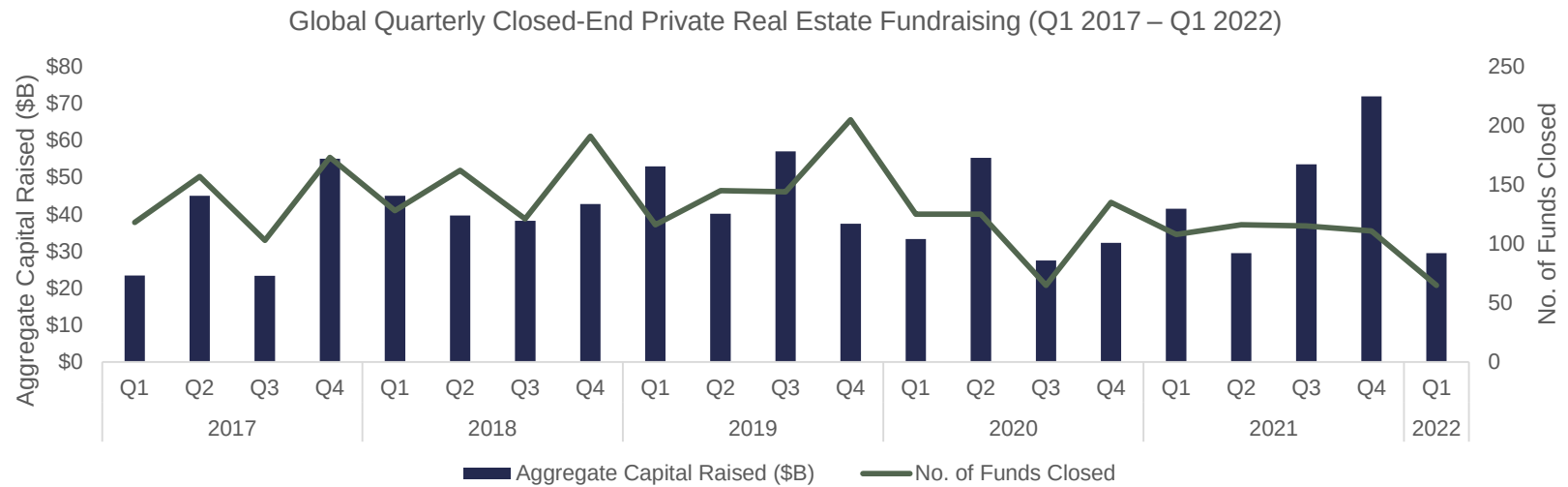
Source: S&P LBO, *as of March 31, 2022. "Less than \$50M of EBITDA" data for 2020 and 2021 not yet available.

Private Equity – U.S. LBO Purchase Price Multiples



- Purchase price multiples for U.S. LBOs have remained steady from 2019 to 2021 and have increased through Q1 2022 compared to previous years.

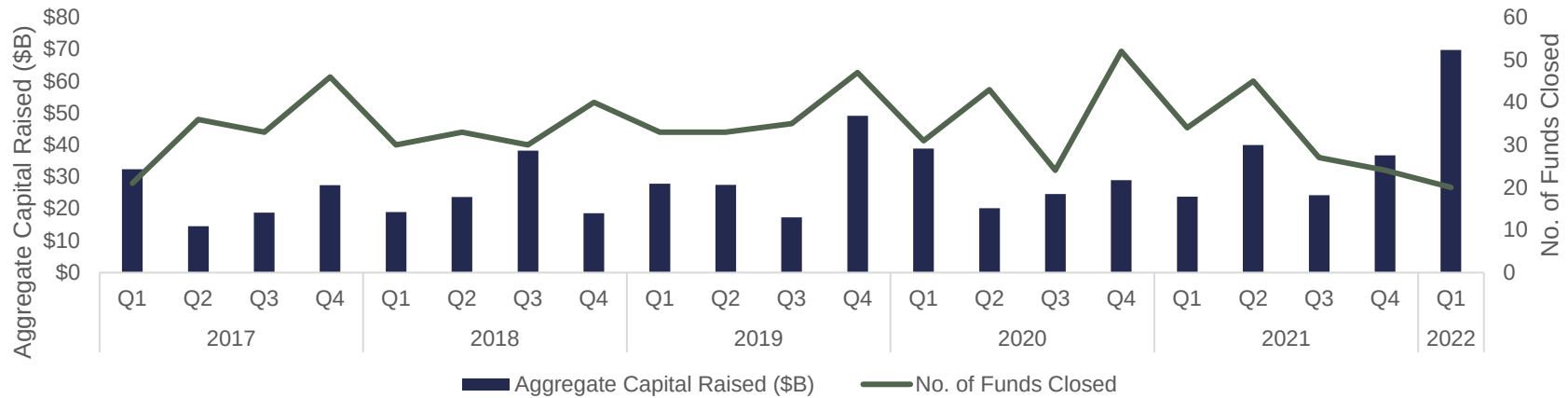
Private Real Estate – Fundraising Activity



Source: Preqin, as of March 31, 2022.

Unlisted Infrastructure – Fundraising & Investment Activity

Global Quarterly Closed-End Unlisted Infrastructure Fundraising (Q1 2017 – Q1 2022)

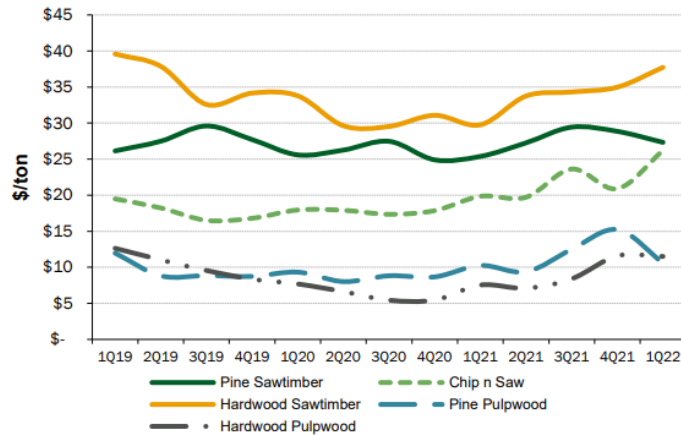


Unlisted Infrastructure Funds in Marker over Time (January 2018 - March 2022)



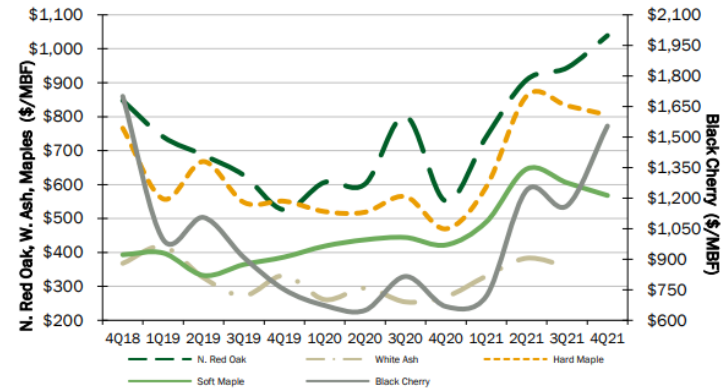
Timber Investments

Southeastern Timber Prices



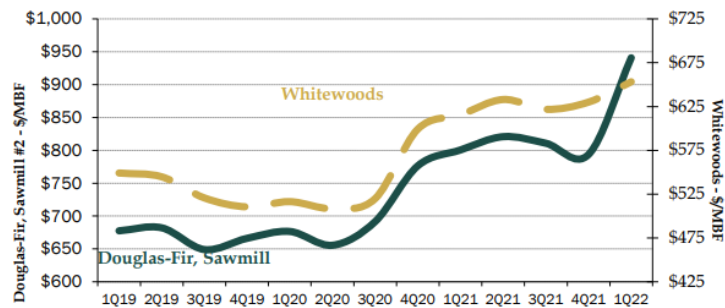
Source: Forest2Market®

Northeastern Hardwood Timber Prices



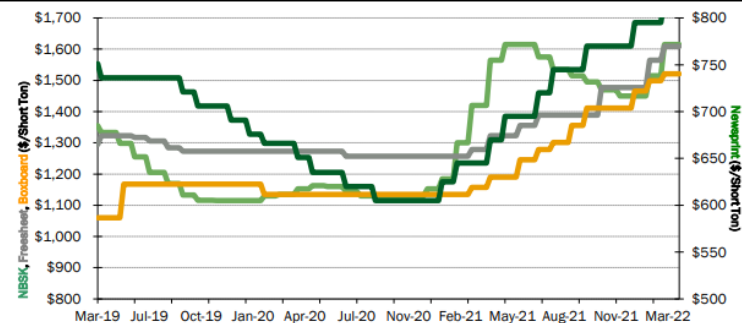
Source: Pennsylvania Woodlands Timber Market Report - Northwest Region

Pacific Northwest Timber Prices



Source: Fastmarkets RISI - Log Lines®

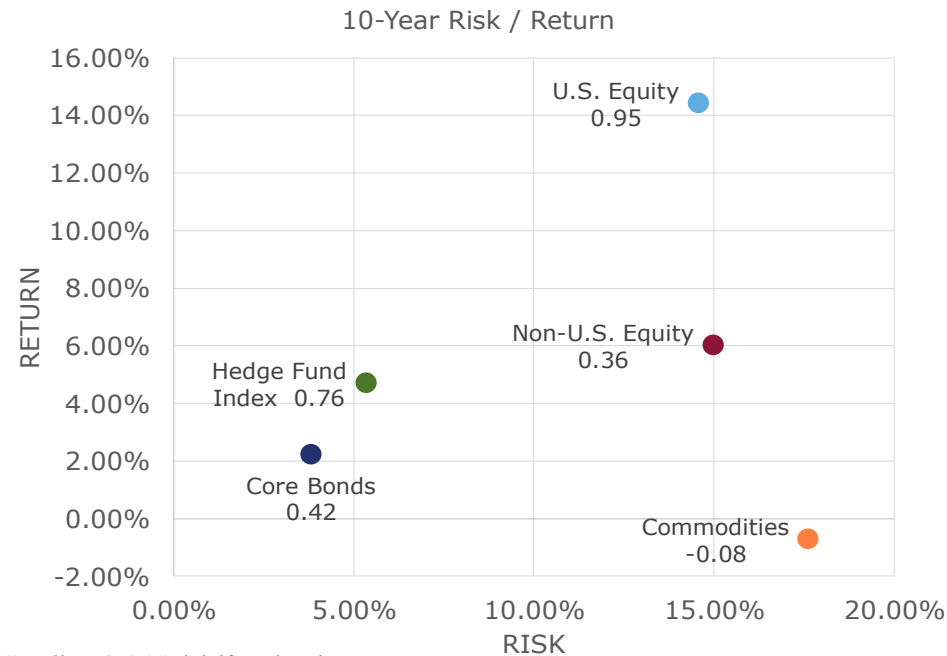
Pulp and Paper



Source: Fastmarkets RISI

Hedge Fund Performance

As of 3/31/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Credit Suisse Hedge Fund Index	2.1	2.1	7.5	7.3	5.5	4.7
Event Driven	-2.2	-2.2	3.9	6.8	4.9	4.5
Global Macro	16.2	16.2	23.9	13.4	8.8	5.8
Long/Short Equity	-3.3	-3.3	2.3	6.3	5.8	5.6
Multi-Strategy	3.1	3.1	8.0	6.6	5.1	6.0
FT Wilshire 5000	-4.9	-4.9	13.1	18.7	15.7	14.4
MSCI ACWI ex-US (\$G)	-5.3	-5.3	-1.0	8.0	7.3	6.0
Bloomberg Aggregate	-5.9	-5.9	-4.2	1.7	2.1	2.2
Bloomberg Commodity Index	25.5	25.5	49.3	16.1	9.0	-0.7



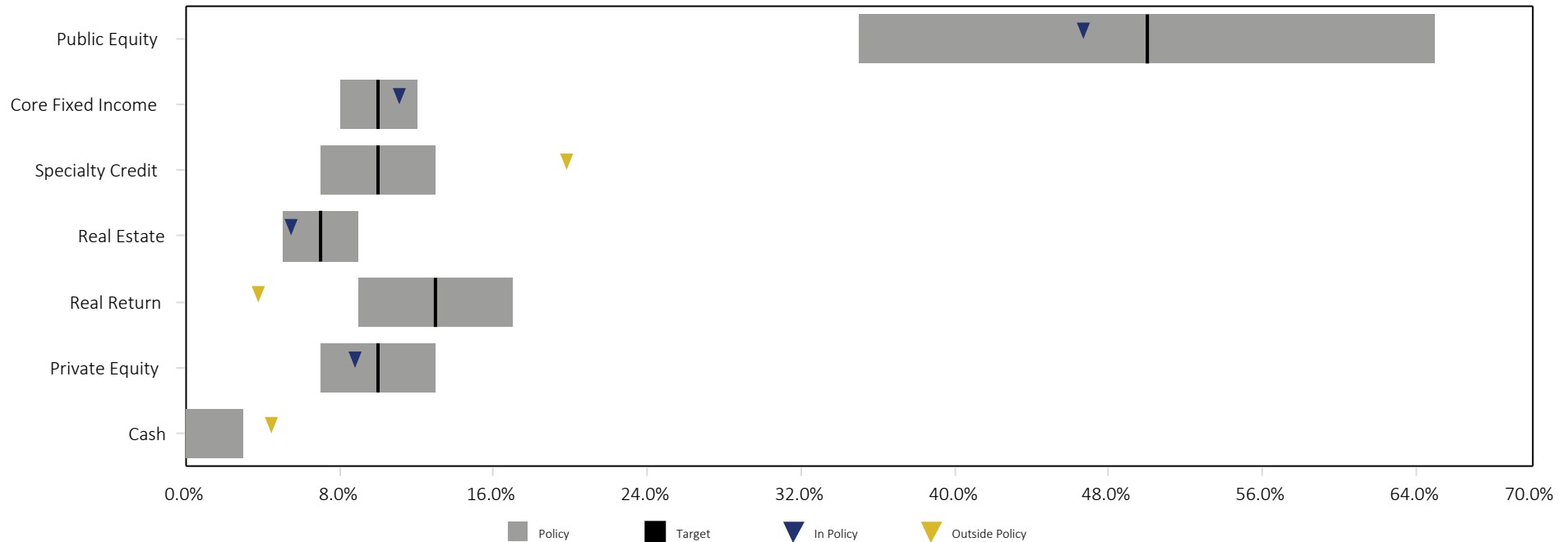
CERS Total Fund Composites

Asset Allocation Compliance

CERS Pension Plan

Periods Ended As of March 31, 2022

Executive Summary



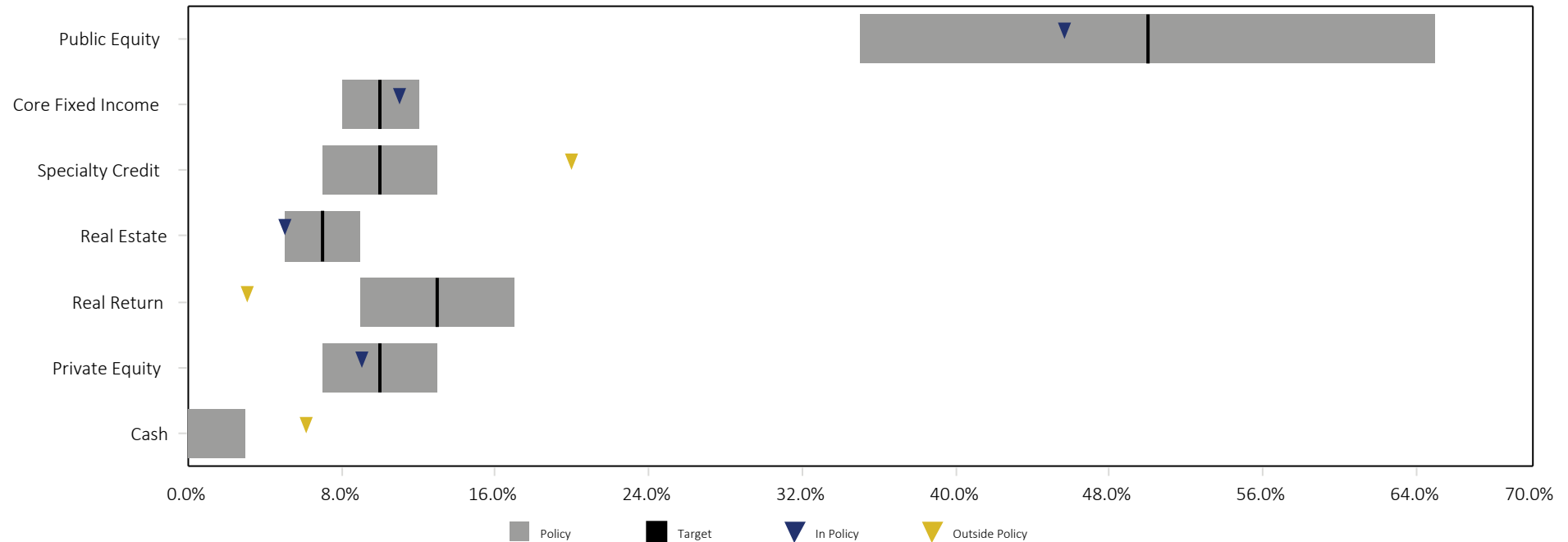
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	4,036,160,428	46.69	35.00	65.00	50.00	286,468,056
Core Fixed Income	957,697,669	11.08	8.00	12.00	10.00	-93,171,972
Specialty Credit	1,711,019,601	19.79	7.00	13.00	10.00	-846,493,904
Real Estate	473,909,032	5.48	5.00	9.00	7.00	131,258,956
Real Return	323,960,116	3.75	9.00	17.00	13.00	799,923,290
Private Equity	757,151,561	8.76	7.00	13.00	10.00	107,374,136
Cash	385,358,560	4.46	0.00	3.00	0.00	-385,358,560
Total Fund	8,645,256,968	100.00			100.00	

Asset Allocation Compliance

CERS Insurance Plan

Periods Ended As of March 31, 2022

Executive Summary



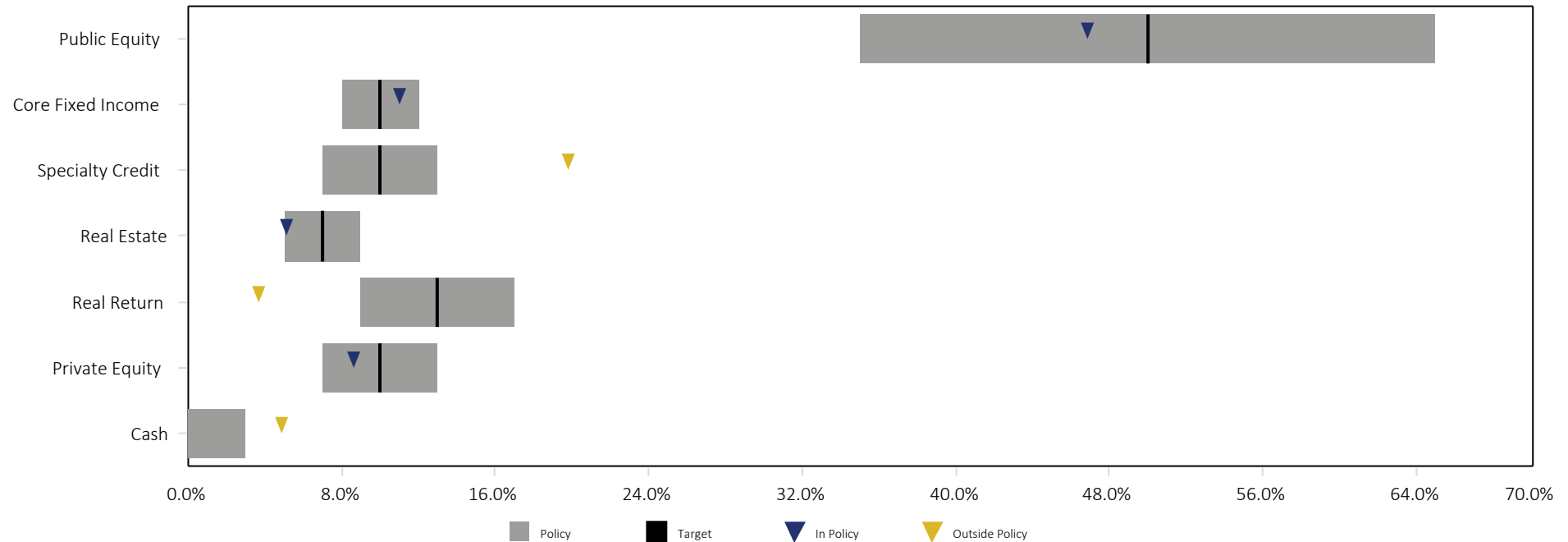
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	1,479,360,883	45.71	35.00	65.00	50.00	138,785,571
Core Fixed Income	356,101,313	11.00	8.00	12.00	10.00	-32,472,023
Specialty Credit	645,606,509	19.95	7.00	13.00	10.00	-321,977,218
Real Estate	163,612,557	5.06	5.00	9.00	7.00	62,927,946
Real Return	99,004,733	3.06	9.00	17.00	13.00	321,713,345
Private Equity	292,794,909	9.05	7.00	13.00	10.00	30,834,382
Cash	199,812,003	6.17	0.00	3.00	0.00	-199,812,003
Total Fund	3,236,292,906	100.00			100.00	

Asset Allocation Compliance

CERS (H) Pension Plan

Periods Ended As of March 31, 2022

Executive Summary



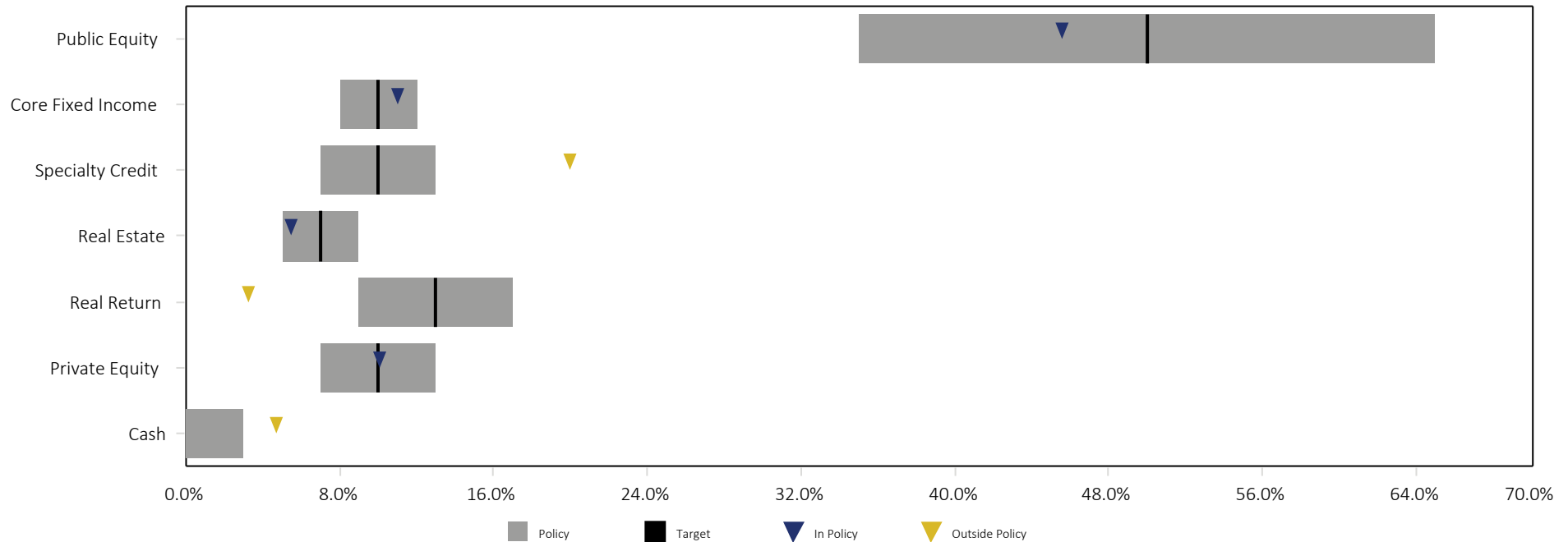
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	1,376,294,717	46.83	35.00	65.00	50.00	93,294,043
Core Fixed Income	324,394,800	11.04	8.00	12.00	10.00	-30,477,048
Specialty Credit	582,124,902	19.81	7.00	13.00	10.00	-288,207,150
Real Estate	150,908,383	5.13	5.00	9.00	7.00	54,834,043
Real Return	108,087,404	3.68	9.00	17.00	13.00	274,005,674
Private Equity	253,398,828	8.62	7.00	13.00	10.00	40,518,924
Cash	143,968,485	4.90	0.00	3.00	0.00	-143,968,485
Total Fund	2,939,177,520	100.00			100.00	

Asset Allocation Compliance

CERS (H) Insurance Plan

Periods Ended As of March 31, 2022

Executive Summary



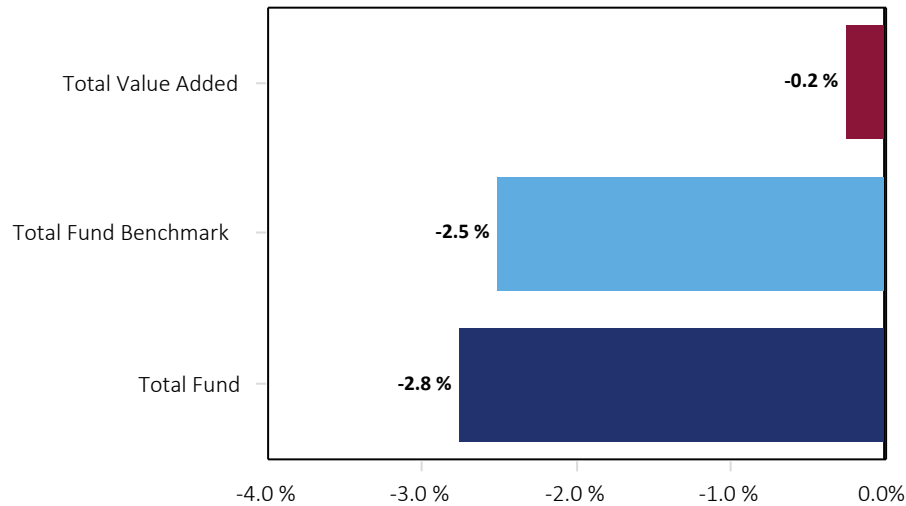
	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
Public Equity	743,706,933	45.55	35.00	65.00	50.00	72,713,405
Core Fixed Income	179,750,505	11.01	8.00	12.00	10.00	-16,466,437
Specialty Credit	325,523,093	19.94	7.00	13.00	10.00	-162,239,026
Real Estate	89,676,215	5.49	5.00	9.00	7.00	24,622,633
Real Return	52,633,564	3.22	9.00	17.00	13.00	159,635,724
Private Equity	164,854,350	10.10	7.00	13.00	10.00	-1,570,282
Cash	76,696,016	4.70	0.00	3.00	0.00	-76,696,016
Total Fund	1,632,840,676	100.00			100.00	

Total Fund Attribution

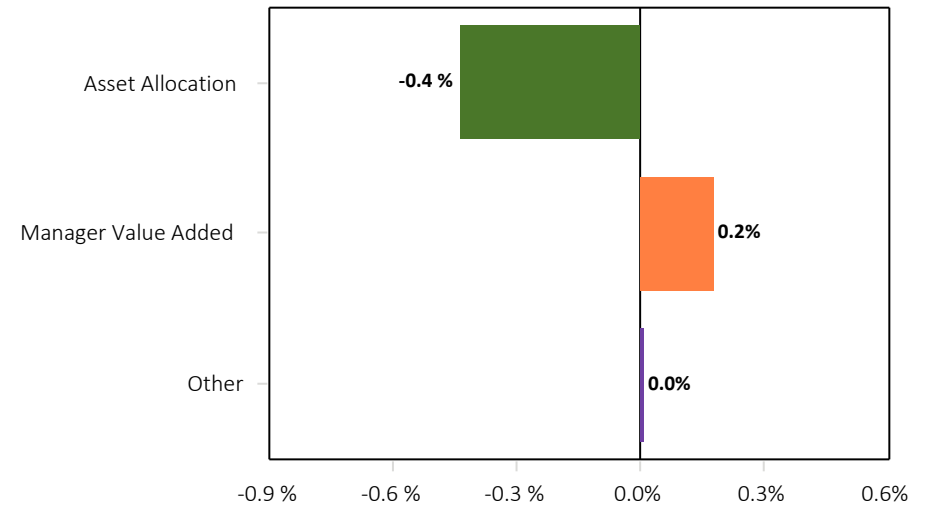
CERS Pension Plan

Periods Ended 1 Quarter Ending March 31, 2022

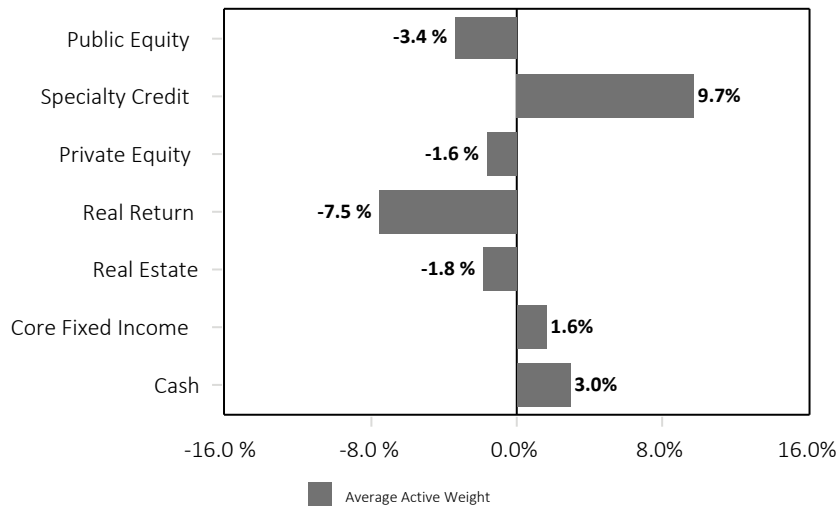
Total Fund Performance



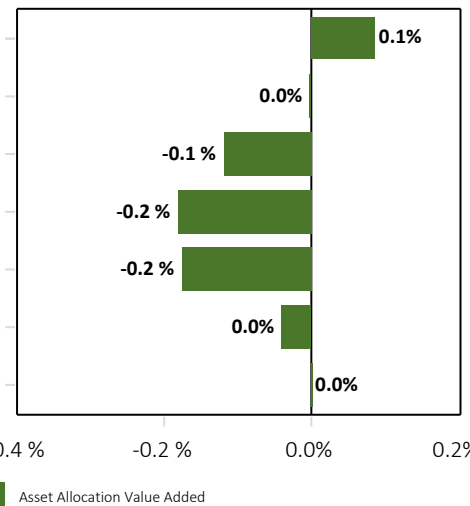
Total Value Added:-0.2 %



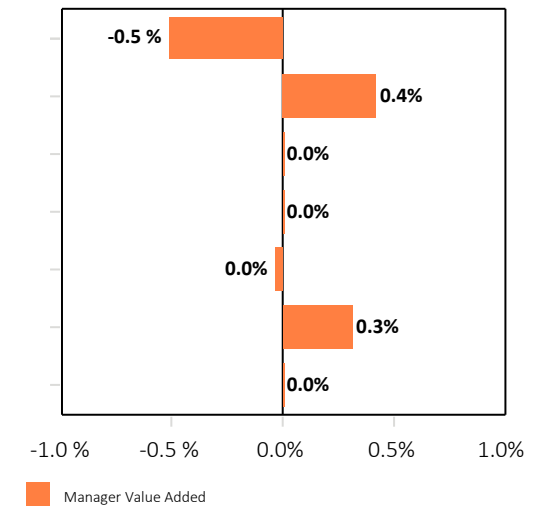
Total Asset Allocation:-0.4 %



Asset Allocation Value Added:-0.4 %



Total Manager Value Added:0.2 %

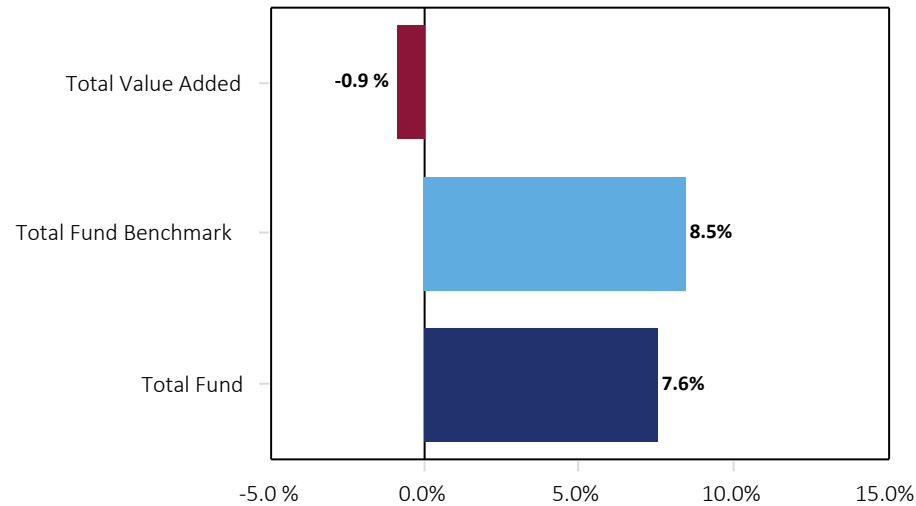


Total Fund Attribution

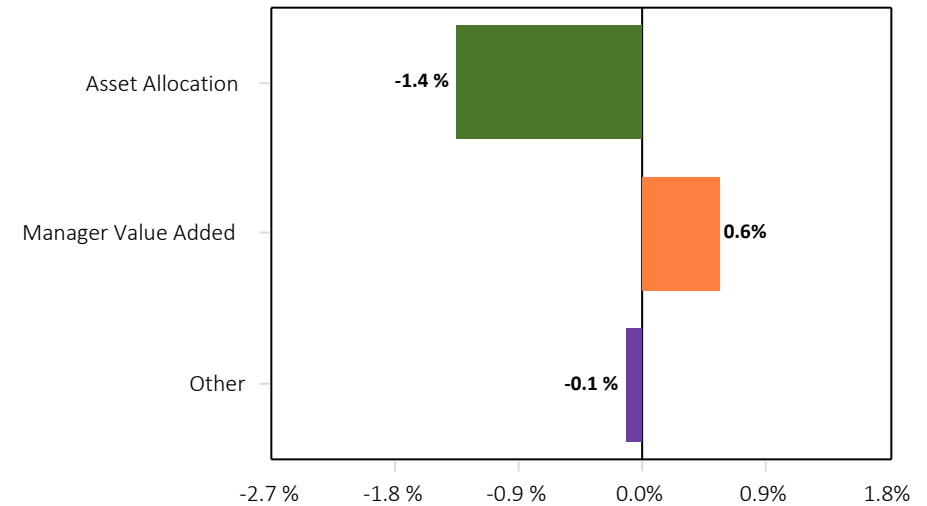
CERS Pension Plan

Periods Ended 1 Year Ending March 31, 2022

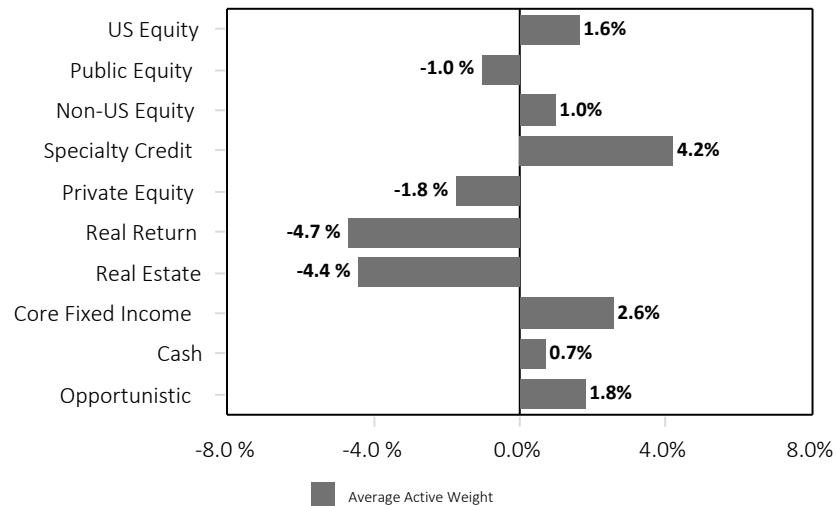
Total Fund Performance



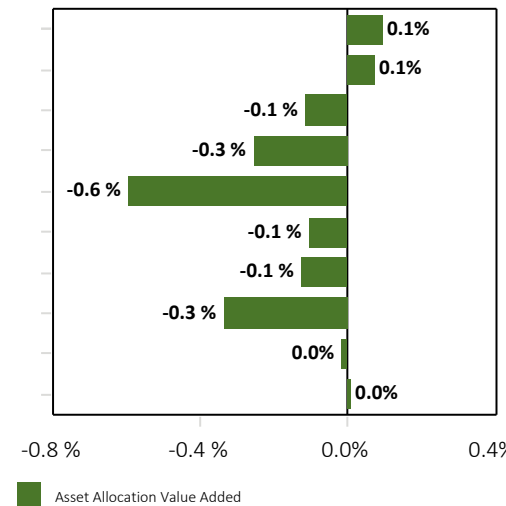
Total Value Added:-0.9 %



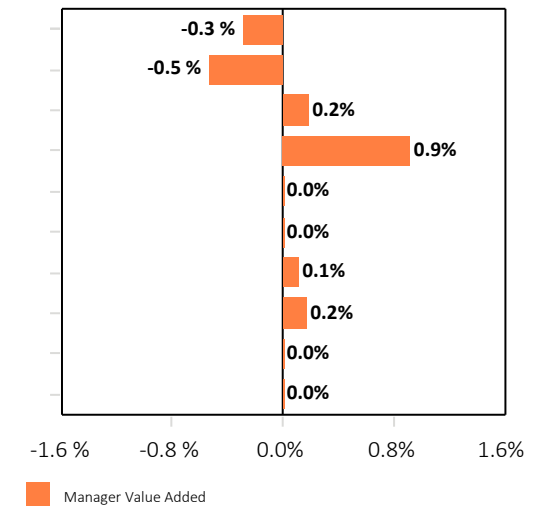
Total Asset Allocation:-1.4 %



Asset Allocation Value Added:-1.4 %



Total Manager Value Added:0.6%

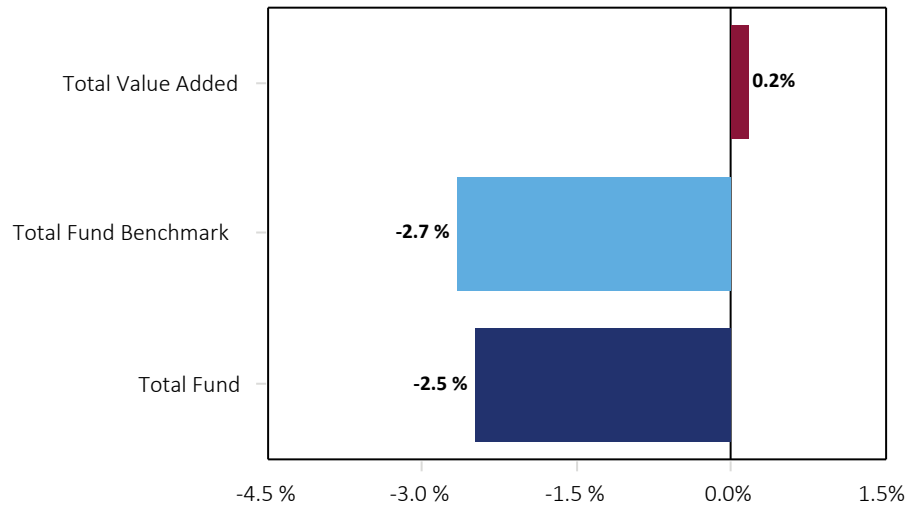


Total Fund Attribution

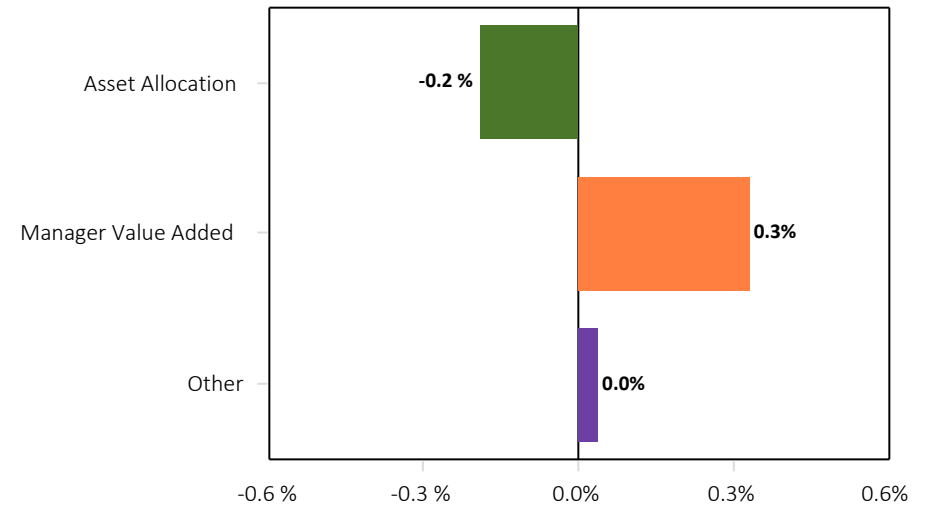
CERS Insurance Plan

Periods Ended 1 Quarter Ending March 31, 2022

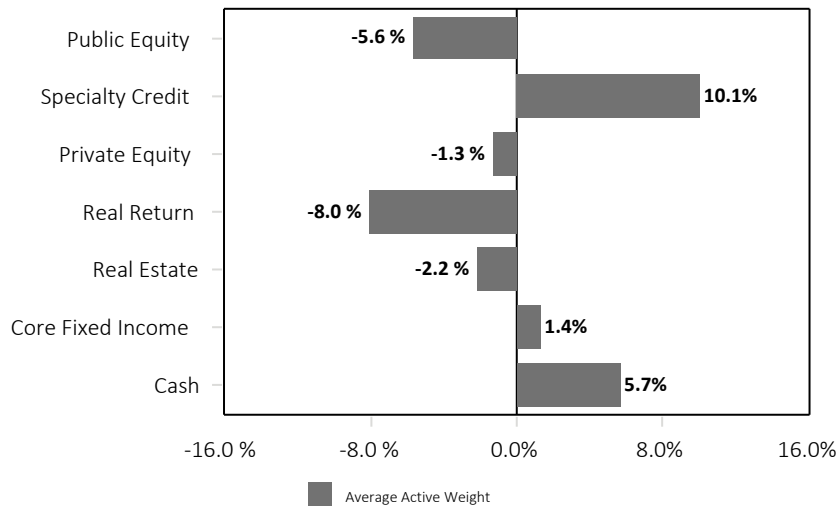
Total Fund Performance



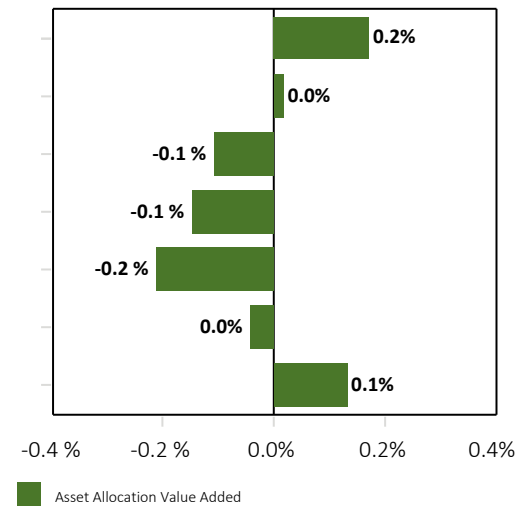
Total Value Added:0.2%



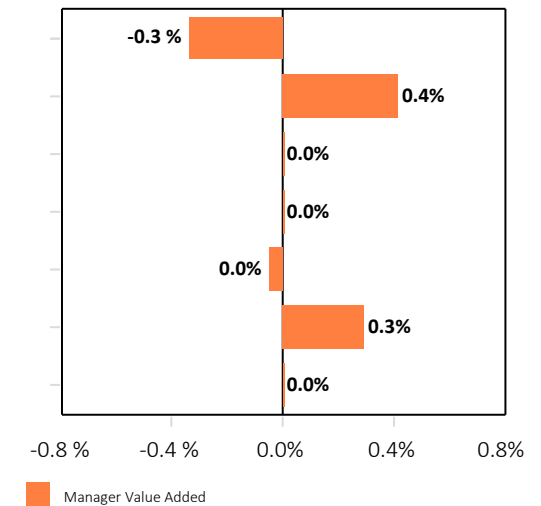
Total Asset Allocation:-0.2 %



Asset Allocation Value Added:-0.2 %



Total Manager Value Added:0.3%

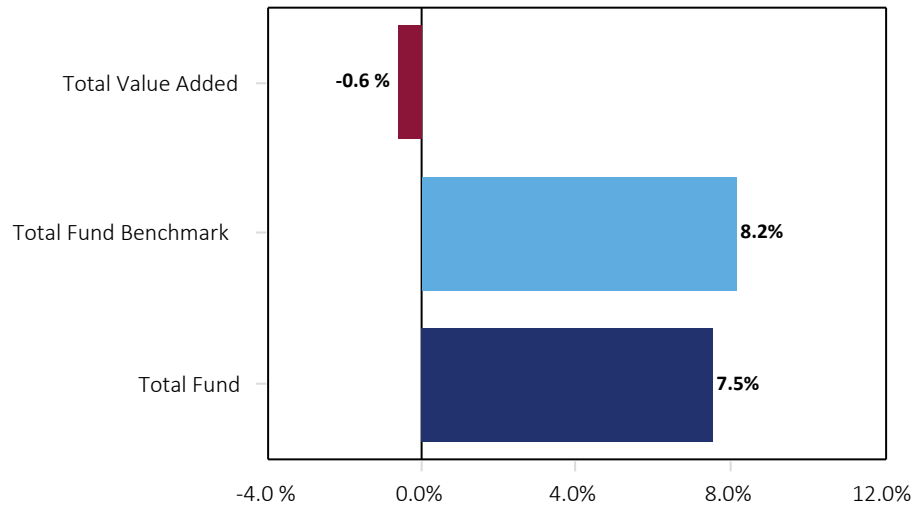


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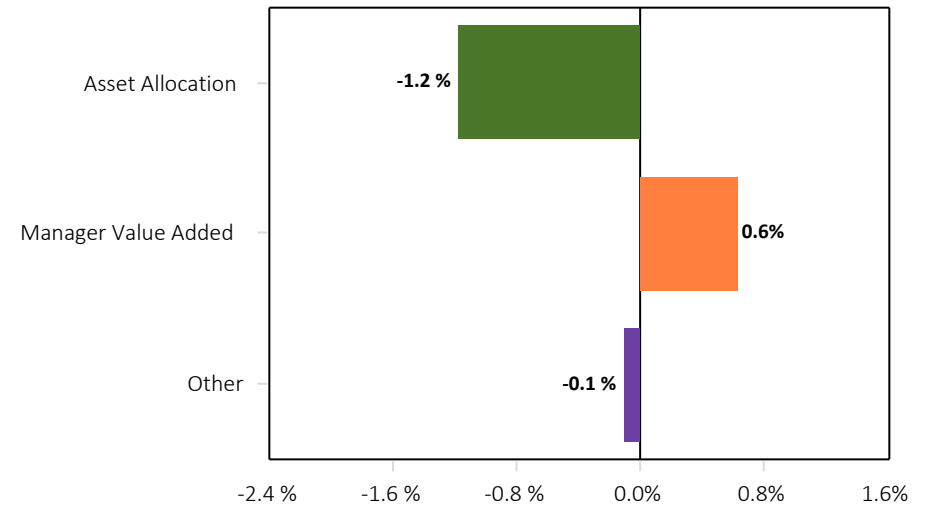
CERS Insurance Plan

Periods Ended 1 Year Ending March 31, 2022

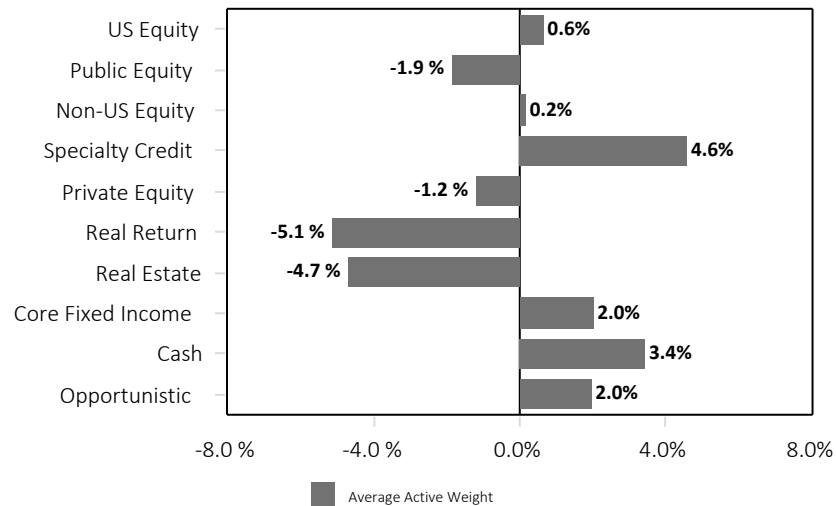
Total Fund Performance



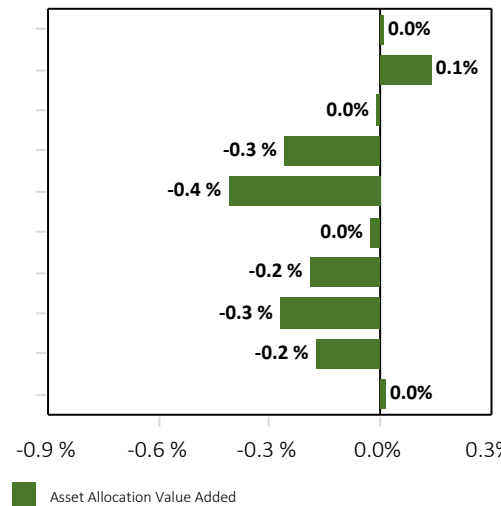
Total Value Added:-0.6 %



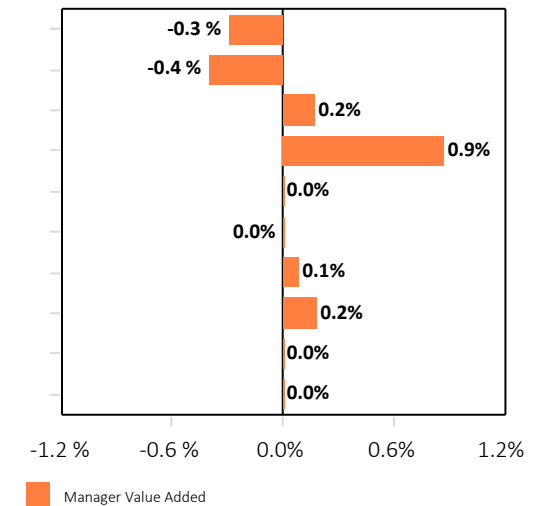
Total Asset Allocation:-1.2 %



Asset Allocation Value Added:-1.2 %



Total Manager Value Added:0.6%

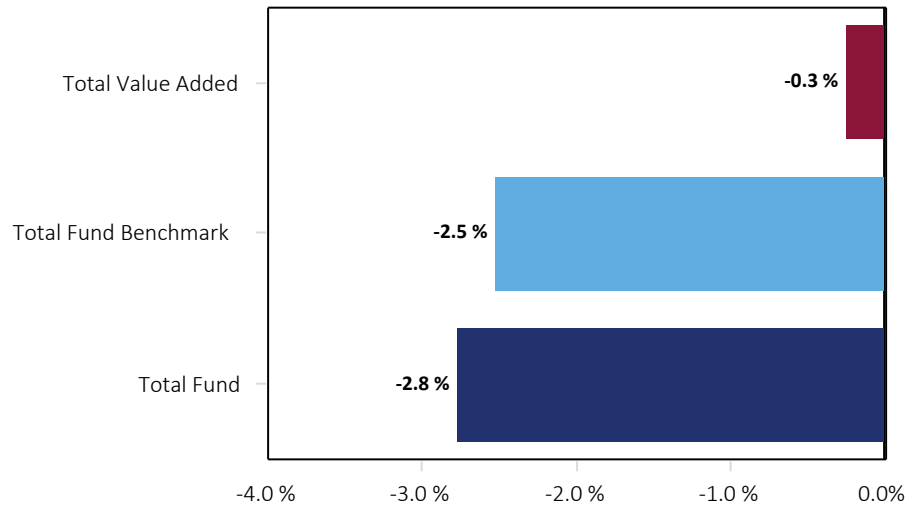


Total Fund Attribution

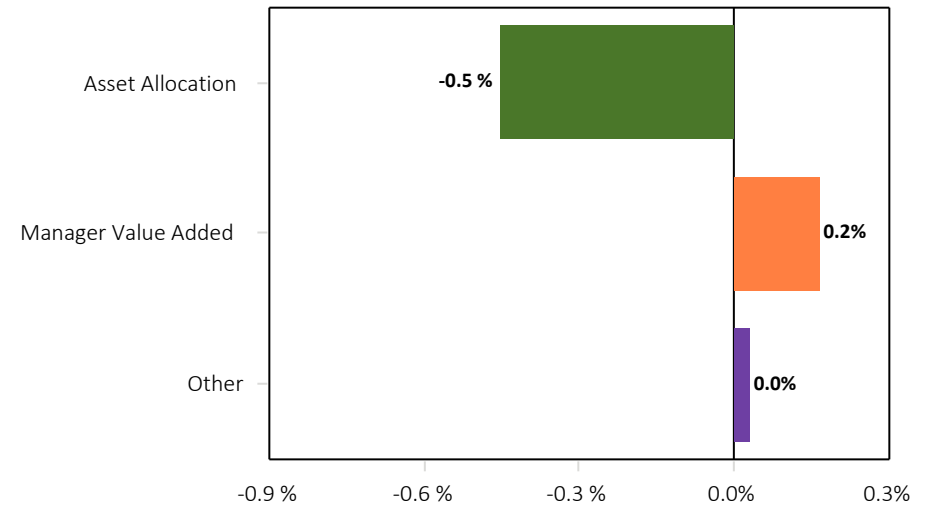
CERS (H) Pension Plan

Periods Ended 1 Quarter Ending March 31, 2022

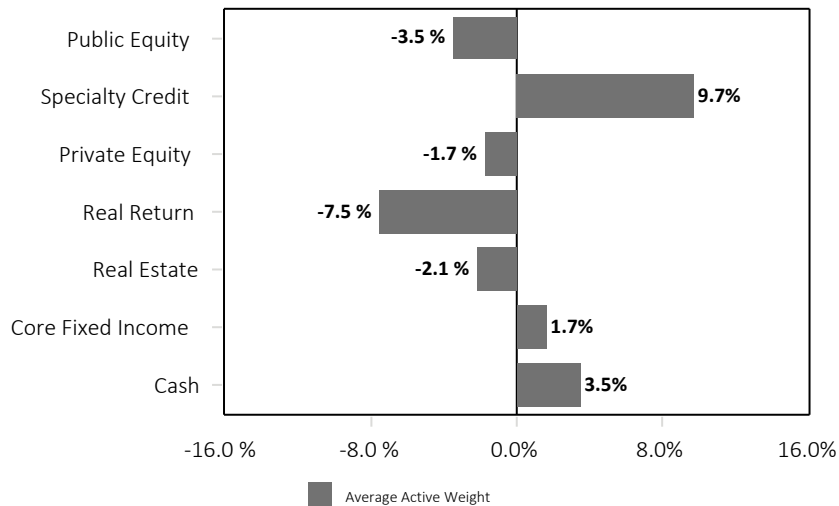
Total Fund Performance



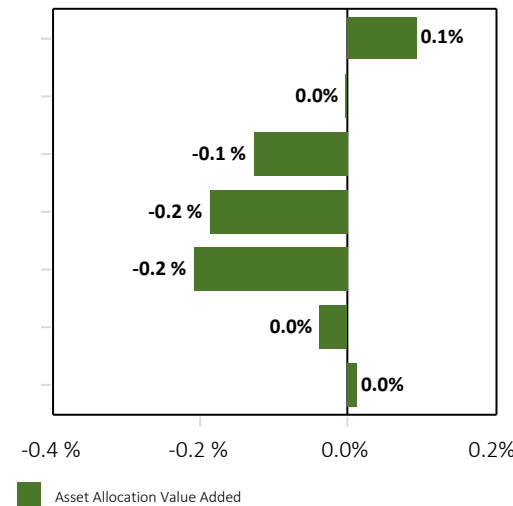
Total Value Added:-0.3 %



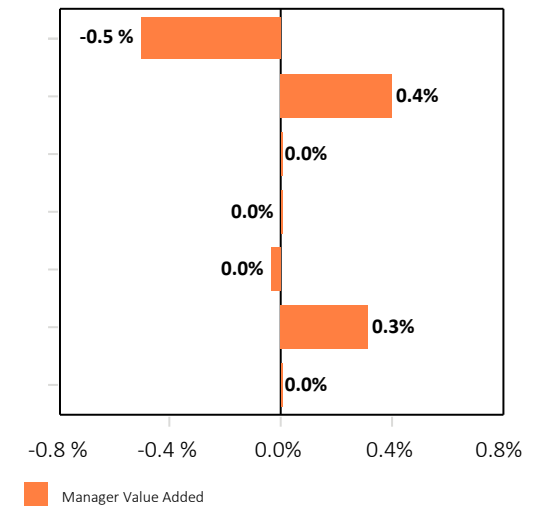
Total Asset Allocation:-0.5 %



Asset Allocation Value Added:-0.5 %



Total Manager Value Added:0.2%

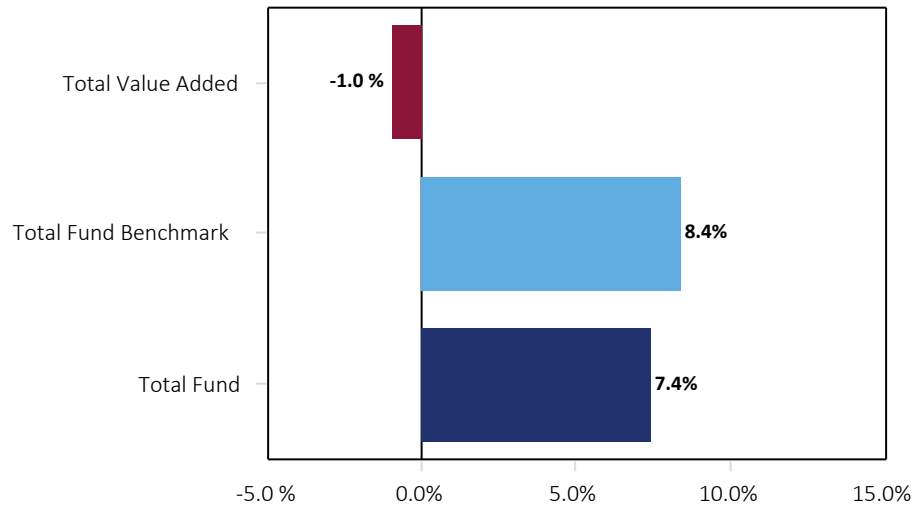


Total Fund Attribution

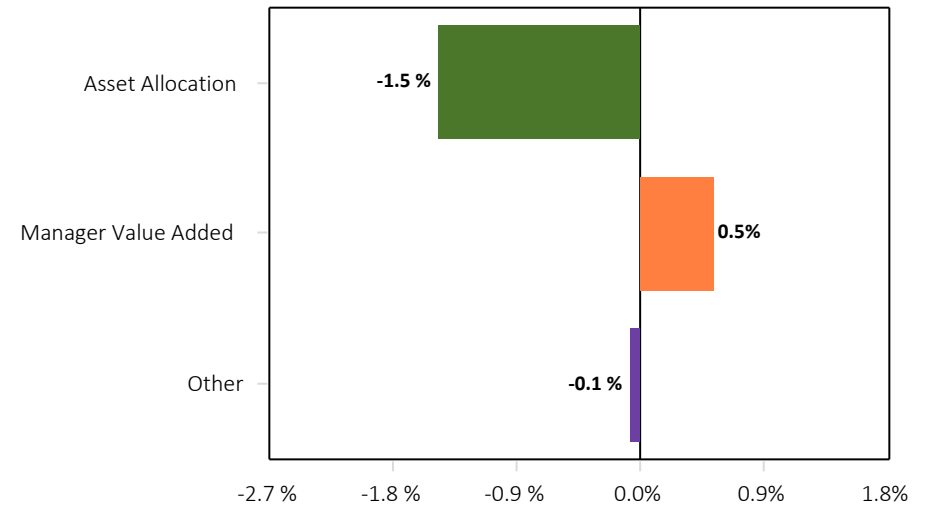
CERS (H) Pension Plan

Periods Ended 1 Year Ending March 31, 2022

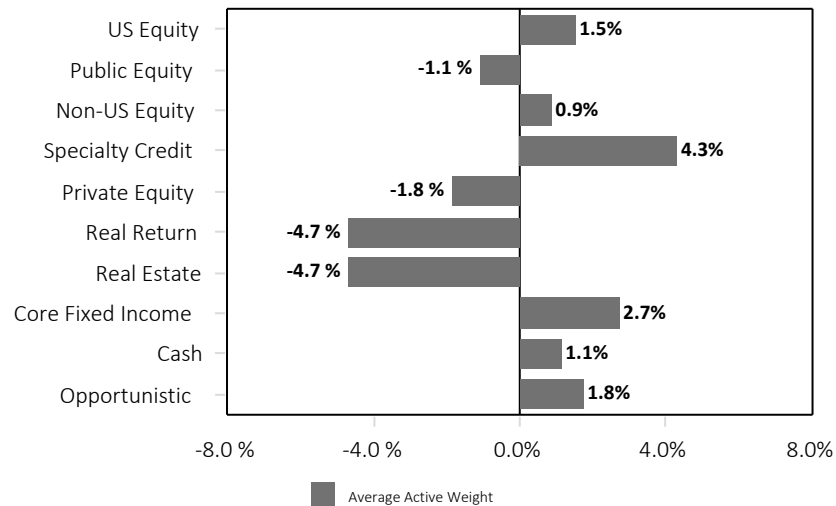
Total Fund Performance



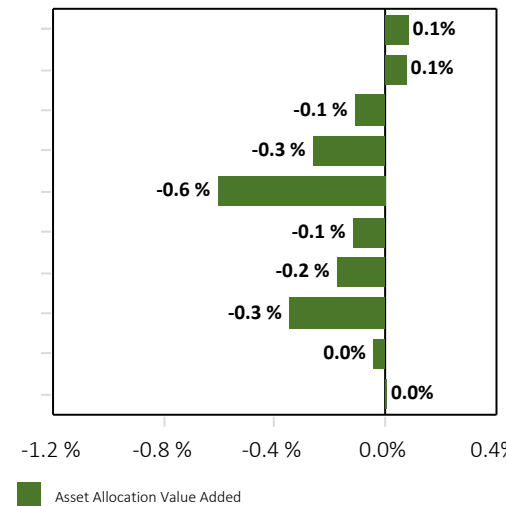
Total Value Added:-1.0 %



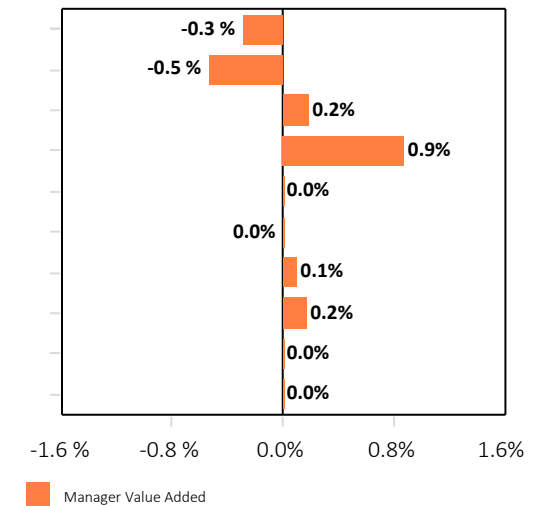
Total Asset Allocation:-1.5 %



Asset Allocation Value Added:-1.5 %



Total Manager Value Added:0.5%

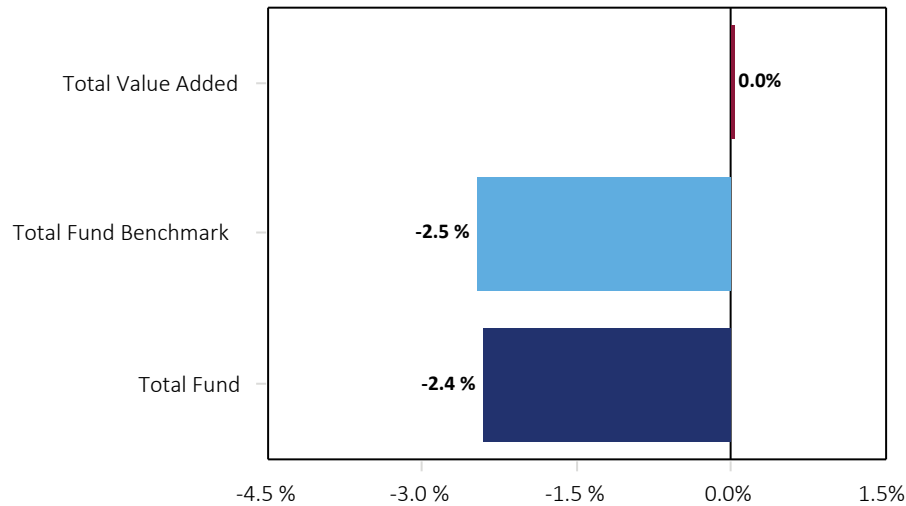


Total Fund Attribution

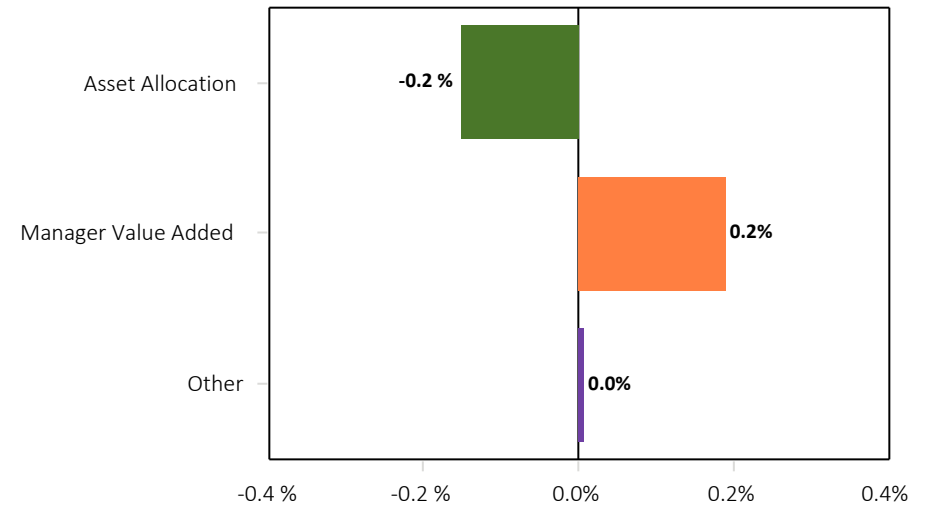
CERS (H) Insurance Plan

Periods Ended 1 Quarter Ending March 31, 2022

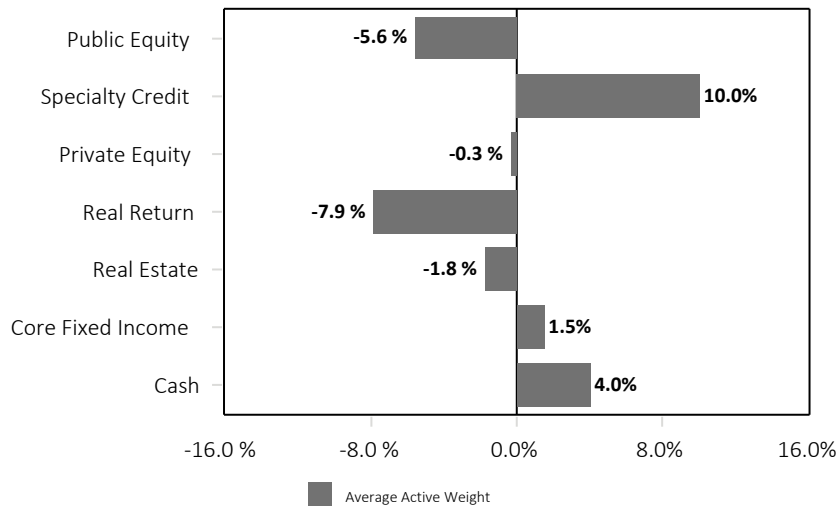
Total Fund Performance



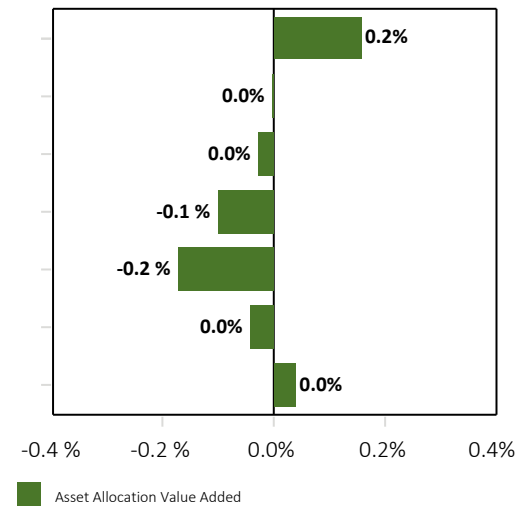
Total Value Added:0.0%



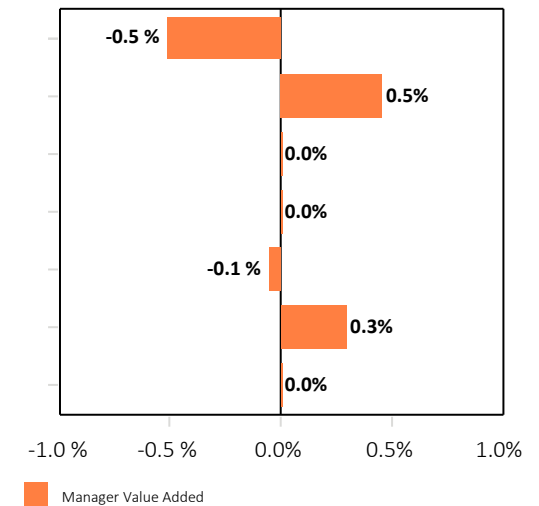
Total Asset Allocation:-0.2 %



Asset Allocation Value Added:-0.2 %



Total Manager Value Added:0.2%

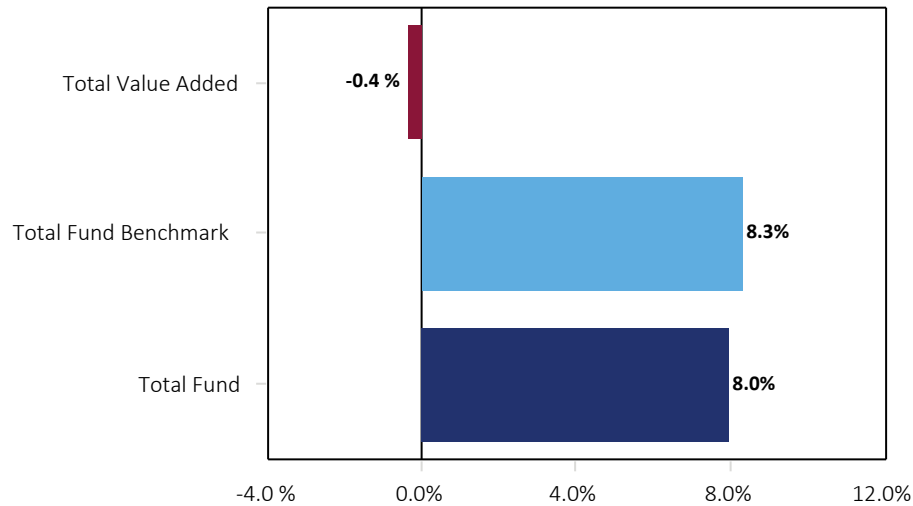


Total Fund Attribution

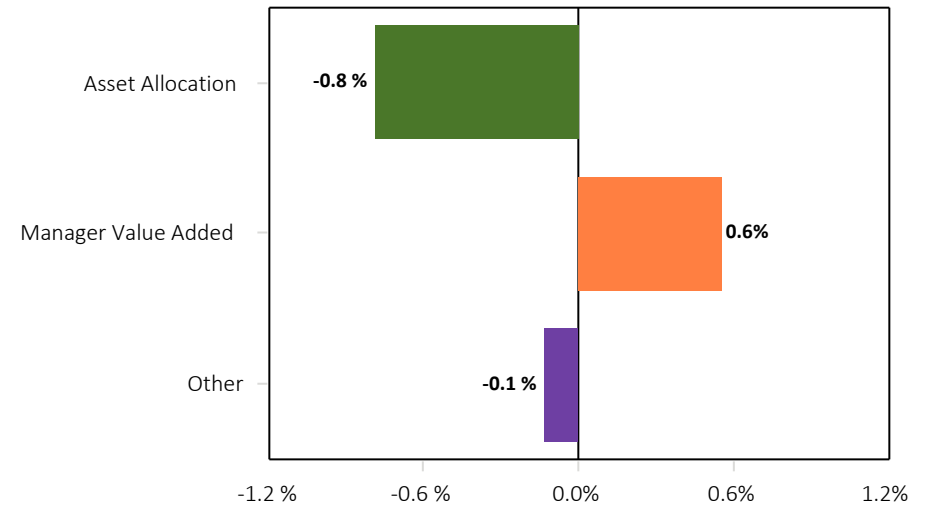
CERS (H) Insurance Plan

Periods Ended 1 Year Ending March 31, 2022

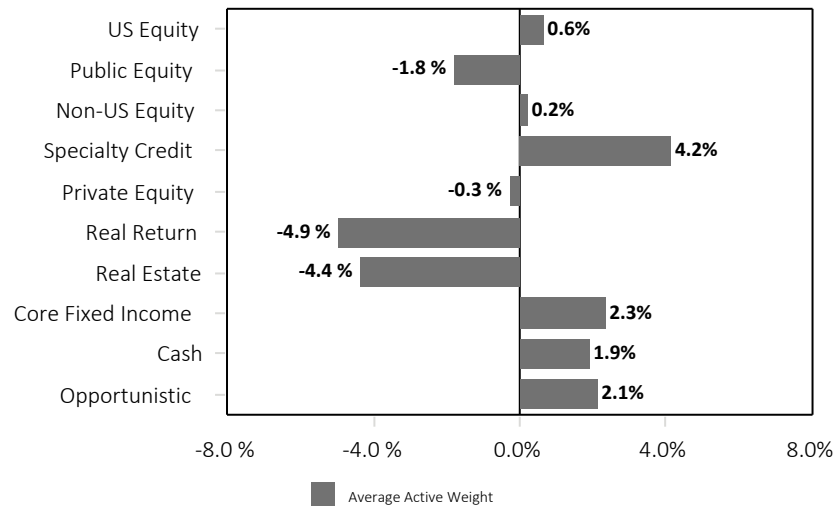
Total Fund Performance



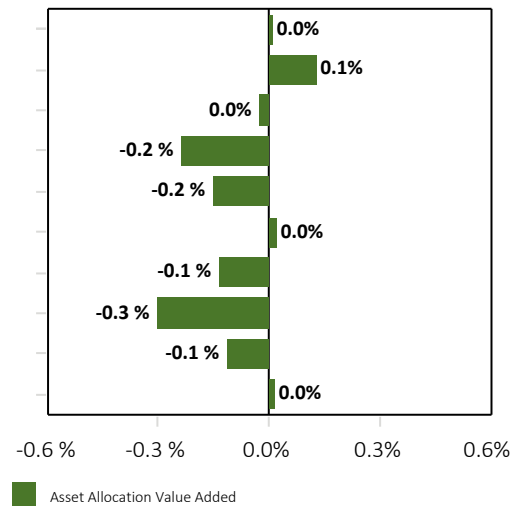
Total Value Added:-0.4 %



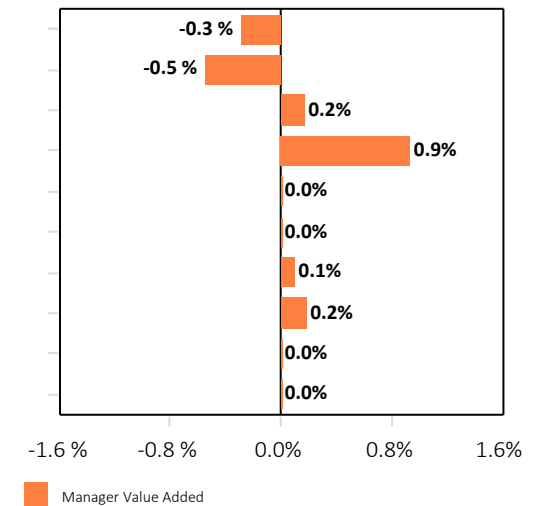
Total Asset Allocation:-0.8 %



Asset Allocation Value Added:-0.8 %



Total Manager Value Added:0.6%



Asset Allocation & Performance

Total Fund

Periods Ended March 31, 2022

	Market Value \$	Performance (%) net of fees							
		1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
CERS Pension Plan	8,645,256,968	1.13	-2.76	1.84	7.58	9.90	8.92	9.10	4/1/1984
CERS IPS Index		1.91	-2.43	2.65	8.57	9.86			
Value Added		-0.78	-0.33	-0.81	-0.99	0.04			
Assumed Rate 6.25%		0.51	1.53	4.65	6.25	6.25			
Value Added		0.62	-4.29	-2.81	1.33	3.65			
CERS Insurance Plan	3,236,292,906	1.13	-2.48	2.23	7.53	9.59	8.83	7.58	4/1/1987
CERS IPS Index		1.93	-2.48	2.88	8.32	9.71			
Value Added		-0.80	0.00	-0.65	-0.79	-0.12			
Assumed Rate 6.25%		0.51	1.53	4.65	6.25	6.25			
Value Added		0.62	-4.01	-2.42	1.28	3.34			
CERS (H) Pension Plan	2,939,177,520	1.11	-2.77	1.78	7.44	9.80	8.86	9.10	4/1/1984
CERS (H) IPS Index		1.91	-2.43	2.66	8.52	9.81			
Value Added		-0.80	-0.34	-0.88	-1.08	-0.01			
Assumed Rate 6.25%		0.51	1.53	4.65	6.25	6.25			
Value Added		0.60	-4.30	-2.87	1.19	3.55			
CERS (H) Insurance Plan	1,632,840,676	1.21	-2.41	2.55	7.96	9.73	8.95	7.60	4/1/1987
CERS (H) IPS Index		1.94	-2.46	2.90	8.32	9.68			
Value Added		-0.73	0.05	-0.35	-0.36	0.05			
Assumed Rate 6.25%		0.51	1.53	4.65	6.25	6.25			
Value Added		0.70	-3.94	-2.10	1.71	3.48			

Asset Allocation & Performance

Insurance Plan Accounts

Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Public Equity	1.67	-6.61					-2.78	12/1/2021
MSCI AC World Index	2.22	-5.26					-1.44	
Value Added	-0.55	-1.35					-1.34	
US Equity Composite	2.82	-5.03	3.46	11.48	17.80	14.70	10.39	7/1/1992
Russell 3000 Index	3.24	-5.28	3.40	11.92	18.24	15.40	10.61	
Value Added	-0.42	0.25	0.06	-0.44	-0.44	-0.70	-0.22	
S&P 500 Index	3.78	-4.59	6.44	15.43	19.20	16.24	9.05	7/1/2001
S&P 500 Index	3.71	-4.60	6.54	15.65	18.92	15.99	8.62	
value added	0.07	0.01	-0.10	-0.22	0.28	0.25	0.43	
Scientific Beta	2.69	-4.48	3.99	11.37	14.13	12.53	12.57	7/1/2016
S&P 500 Index	3.71	-4.60	6.54	15.65	18.92	15.99	16.45	
Value Added	-1.02	0.12	-2.55	-4.28	-4.79	-3.46	-3.88	
River Road FAV	0.23	-6.16	-5.00	-0.14	8.63	9.39	11.86	7/1/2016
Russell 3000 Value Index	2.77	-0.85	5.64	11.10	12.99	10.16	11.41	
Value Added	-2.54	-5.31	-10.64	-11.24	-4.36	-0.77	0.45	
Westfield Capital	2.33	-7.45	0.51	11.36	22.98	20.11	15.53	7/1/2011
Russell 3000 Growth Index	3.71	-9.25	1.33	12.86	22.68	20.16	16.36	
Value Added	-1.38	1.80	-0.82	-1.50	0.30	-0.05	-0.83	
Internal US Mid Cap	1.31	-4.90	0.92	4.47	14.49	11.67	11.33	8/1/2014
S&P MidCap 400 Index	1.38	-4.88	0.92	4.59	14.14	11.10	10.94	
Value Added	-0.07	-0.02	0.00	-0.12	0.35	0.57	0.39	
NTGI Structured	1.10	-5.99	-4.12	0.09	13.40	11.05	11.53	7/1/2011
Russell 2000 Index	1.24	-7.53	-9.66	-5.79	11.74	9.74	10.38	
Value Added	-0.14	1.54	5.54	5.88	1.66	1.31	1.15	

Asset Allocation & Performance

Insurance Plan Accounts

Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Next Century Growth	-0.54	-11.14	-8.22	2.14			46.37	11/1/2019
Russell Microcap Growth Index	0.84	-13.71	-27.80	-25.51			14.99	
Value Added	-1.38	2.57	19.58	27.65			31.38	
Non-US Equity Composite	0.23	-8.20	-9.06	-3.73	8.20	7.81	3.01	4/1/2000
MSCI ACWI ex US IMI (10/17)	0.28	-5.60	-6.50	-1.27	7.87	6.98	3.17	
Value Added	-0.05	-2.60	-2.56	-2.46	0.33	0.83	-0.16	
BlackRock World Ex US	1.16	-4.78	-2.42	3.15	8.13	7.14	7.37	6/1/2012
MSCI World ex US (11/19)	1.16	-4.81	-2.46	3.04	8.04	7.08	7.29	
value added	0.00	0.03	0.04	0.11	0.09	0.06	0.08	
American Century	1.11	-13.60	-12.63	-6.17	13.78	13.16	7.56	7/1/2014
MSCI ACWI ex US IMI (10/17)	0.28	-5.60	-6.50	-1.27	7.87	6.94	4.15	
Value Added	0.83	-8.00	-6.13	-4.90	5.91	6.22	3.41	
Franklin Templeton	0.38	-14.98	-19.22	-12.87	7.36	8.71	6.26	7/1/2014
MSCI ACWI ex US IMI (10/17)	0.28	-5.60	-6.50	-1.27	7.87	6.94	4.15	
Value Added	0.10	-9.38	-12.72	-11.60	-0.51	1.77	2.11	
Lazard Asset Mgmt	-1.46	-6.21	-8.21	-4.29	6.65	7.39	4.54	7/1/2014
MSCI ACWI ex US IMI (10/17)	0.28	-5.60	-6.50	-1.27	7.87	6.94	4.15	
Value Added	-1.74	-0.61	-1.71	-3.02	-1.22	0.45	0.39	
LSV Asset Mgmt	0.08	-3.03	-3.50	1.79	6.06	5.39	3.40	7/1/2014
MSCI ACWI ex US IMI (10/17)	0.28	-5.60	-6.50	-1.27	7.87	6.94	4.15	
Value Added	-0.20	2.57	3.00	3.06	-1.81	-1.55	-0.75	
Axiom	1.06	-17.01					-13.21	12/1/2021
MSCI AC World ex USA Small Cap (Net)	1.02	-6.52					-2.56	
Value Added	0.04	-10.49					-10.65	

Asset Allocation & Performance

Insurance Plan Accounts

Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
JP Morgan Emerging Markets	-3.54	-17.41	-25.88	-18.93			5.62	11/1/2019
MSCI Emerging Markets IMI	-1.62	-6.59	-14.16	-9.18			7.46	
Value Added	-1.92	-10.82	-11.72	-9.75			-1.84	
Pzena Emerging Markets	1.62	-0.98	-5.33	-4.68			8.73	11/1/2019
MSCI Emerging Markets (Net)	-2.26	-6.97	-15.62	-11.37			5.99	
Value Added	3.88	5.99	10.29	6.69			2.74	
Private Equity Composite	5.00	6.06	26.92	41.07	18.37	17.44	11.45	7/1/2002
KRS Short-Term PE Index	5.00	6.06	26.92	41.07	18.37	17.44	11.45	
Value Added	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Russell 3000 +3% 1 Quarter Lag	4.19	10.09	20.81	29.43	29.56	21.51	13.09	
Value Added	0.81	-4.03	6.11	11.64	-11.19	-4.07	-1.64	
Core Fixed Income Composite	-1.72	-3.36	-3.43	-2.59	2.41		3.16	10/1/2018
Blmbg. U.S. Aggregate	-2.78	-5.93	-5.87	-4.15	1.69		2.76	
Value Added	1.06	2.57	2.44	1.56	0.72		0.40	
NISA	-2.75	-5.85	-5.81	-4.03	1.66	2.17	2.67	7/1/2011
Blmbg. U.S. Aggregate	-2.78	-5.93	-5.87	-4.15	1.69	2.14	2.57	
Value Added	0.03	0.08	0.06	0.12	-0.03	0.03	0.10	
Loomis Sayles Intmd	-2.58	-4.88	-5.40	-4.53	1.75		2.15	2/1/2019
Blmbg. U.S. Intermediate Aggregate	-2.51	-4.69	-5.12	-4.38	1.19		1.58	
Value Added	-0.07	-0.19	-0.28	-0.15	0.56		0.57	
Lord Abbett	-1.30	-2.52	-2.47	-1.81	1.82		2.32	10/1/2018
ICE BofAML 1-3 Year U.S. Corporate	-1.67	-3.16	-3.52	-3.19	1.45		2.00	
Value Added	0.37	0.64	1.05	1.38	0.37		0.32	

Asset Allocation & Performance

Insurance Plan Accounts

Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Specialty Credit Composite	0.02	-0.30	3.06	6.00	6.13		6.02	10/1/2018
Specialty Credit Policy Index	-0.55	-2.48	-0.79	1.30	4.42		4.19	
Value Added	0.57	2.18	3.85	4.70	1.71		1.83	
Adams St SPC II A	0.00	0.00	6.20	12.77			11.49	6/1/2020
Adams St SPC II B	0.00	0.00	7.19	14.70			13.25	6/1/2020
Blue Torch	2.95	2.95	9.87	11.53			8.04	8/1/2020
BSP Coinvestment	1.64	1.64	4.40	7.12			6.43	10/1/2019
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26			3.98	
Value Added	1.59	1.74	2.64	3.86			2.45	
BSP Private Credit	2.04	2.04	8.42	12.28	8.29		6.13	2/1/2018
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26	4.23		3.87	
Value Added	1.99	2.14	6.66	9.02	4.06		2.26	
CapitalSpring	2.86	2.86	5.54	7.41			9.71	2/1/2020
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26			3.52	
Value Added	2.81	2.96	3.78	4.15			6.19	
Cerberus Capital Mgmt	0.82	2.93	12.67	16.96	11.69	10.39	9.69	9/1/2014
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26	4.23	4.01	3.86	
Value Added	0.77	3.03	10.91	13.70	7.46	6.38	5.83	
Columbia	-0.73	-4.22	-2.61	0.02	4.38	4.58	6.11	11/1/2011
Blmbg. U.S. Corp: High Yield	-1.15	-4.84	-3.31	-0.66	4.58	4.69	6.09	
Value Added	0.42	0.62	0.70	0.68	-0.20	-0.11	0.02	
Manulife Asset Mgmt	-0.61	-3.85	-3.79	-2.28	5.14	3.99	4.21	12/1/2011
Policy Index	-2.68	-6.11	-6.07	-4.23	1.85	2.31	1.63	
Value Added	2.07	2.26	2.28	1.95	3.29	1.68	2.58	

Asset Allocation & Performance

Insurance Plan Accounts

Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Marathon Bluegrass	-1.01	-0.73	5.41	9.92	6.71	5.55	7.16	1/1/2016
Blmbg. U.S. Corp: High Yield	-1.15	-4.84	-3.31	-0.66	4.58	4.69	6.85	
Value Added	0.14	4.11	8.72	10.58	2.13	0.86	0.31	
Shenkman Capital	0.04	-0.52	1.06	2.44	3.83	3.76	3.94	7/1/2011
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26	4.23	4.01	4.24	
Value Added	-0.01	-0.42	-0.70	-0.82	-0.40	-0.25	-0.30	
Waterfall	-2.66	-0.24	4.25	8.04	4.01	6.04	8.28	7/1/2011
Policy Index	-0.81	-3.10	-2.24	-0.49	3.36	3.66	4.21	
Value Added	-1.85	2.86	6.49	8.53	0.65	2.38	4.07	
White Oak Yield Spectrum	1.63	1.63	4.22	5.85	6.15		5.34	3/1/2018
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26	4.23		3.90	
Value Added	1.58	1.73	2.46	2.59	1.92		1.44	
Arrowmark	0.91	1.73	7.97	11.30	8.97		9.19	6/1/2018
S&P/LSTA Leverage Loan Index	0.05	-0.10	1.76	3.26	4.23		3.92	
Value Added	0.86	1.83	6.21	8.04	4.74		5.27	
H/2 Credit Partner	0.01	5.07	1.32	1.13	1.75	2.24	4.46	7/1/2011
Mesa West Core Lend	1.56	1.56	3.16	7.30	6.35	6.52	6.40	5/1/2013
Mesa West IV	2.66	2.66	8.42	11.35	8.08	7.01	6.89	3/1/2017
Cash Composite	0.01	0.02	0.06	0.07	0.79	1.19	2.46	7/1/1992
FTSE 3 Month T-Bill	0.02	0.03	0.05	0.06	0.76	1.09	2.32	
Value Added	-0.01	-0.01	0.01	0.01	0.03	0.10	0.14	
Real Estate Composite	2.00	6.97	19.53	25.44	13.63	11.71	10.03	5/1/2009
NCREIF ODCE NOF 1 Quarter Lag	7.66	7.66	18.78	21.02	8.23	7.74		
Value Added	-5.66	-0.69	0.75	4.42	5.40	3.97		

Asset Allocation & Performance

Insurance Plan Accounts

Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Baring	2.07	0.92	1.97	12.03	23.02		20.41	1/1/2019
Barings Euro RE II	10.04	8.21	32.19	9.23			-17.59	12/1/2020
Divcowest IV	18.97	18.97	37.58	45.43	17.61	17.98	20.34	3/1/2014
Fundamental Partners III	9.94	9.94	29.15	36.51	21.50		15.57	5/1/2017
Greenfield Acq VI	-10.81	-10.81	-40.61	-40.91	-45.91	-35.58	-16.73	12/1/2012
Greenfield Acq VII	16.18	16.18	33.42	33.79	21.68	18.36	15.78	7/1/2014
Harrison Street	0.00	2.67	7.02	8.62	6.68	7.56	7.74	5/1/2012
Lubert Adler VII	4.79	4.79	8.02	8.82	-3.81	2.34	-1.23	7/1/2014
Lubert Adler VII B	7.93	7.93	49.42	54.60	23.61		15.48	7/1/2017
Patron Capital	10.76	9.38	24.89	34.43	9.76	14.33	6.11	8/1/2016
Prologis Targeted US	0.00	13.62	41.90	48.50	23.59	21.45	18.72	10/1/2014
Rubenstein PF II	3.63	3.63	4.74	5.04	-1.10	5.27	8.57	7/1/2013
Stockbridge Sm/Mkts	0.00	6.17	14.02	22.39	10.34	9.50	9.68	5/1/2014
Walton St RE VI	8.37	8.37	13.79	19.22	2.35	3.73	-12.77	5/1/2009
Walton St RE VII	2.08	2.08	9.77	12.91	-2.82	0.53	6.13	7/1/2013
Real Return Composite	1.02	-0.37	3.19	8.72	6.20	4.77	4.21	7/1/2011
Real Return (I)	1.02	-0.37	3.19	8.72	6.20	4.41	3.66	
Value Added	0.00	0.00	0.00	0.00	0.00	0.36	0.55	
Putnam	-0.38	-5.74	-1.55	4.63			13.16	7/1/2020
Policy Index	0.68	-5.46	-0.80	4.57			12.93	
Value Added	-1.06	-0.28	-0.75	0.06			0.23	

Asset Allocation & Performance

Insurance Plan Accounts

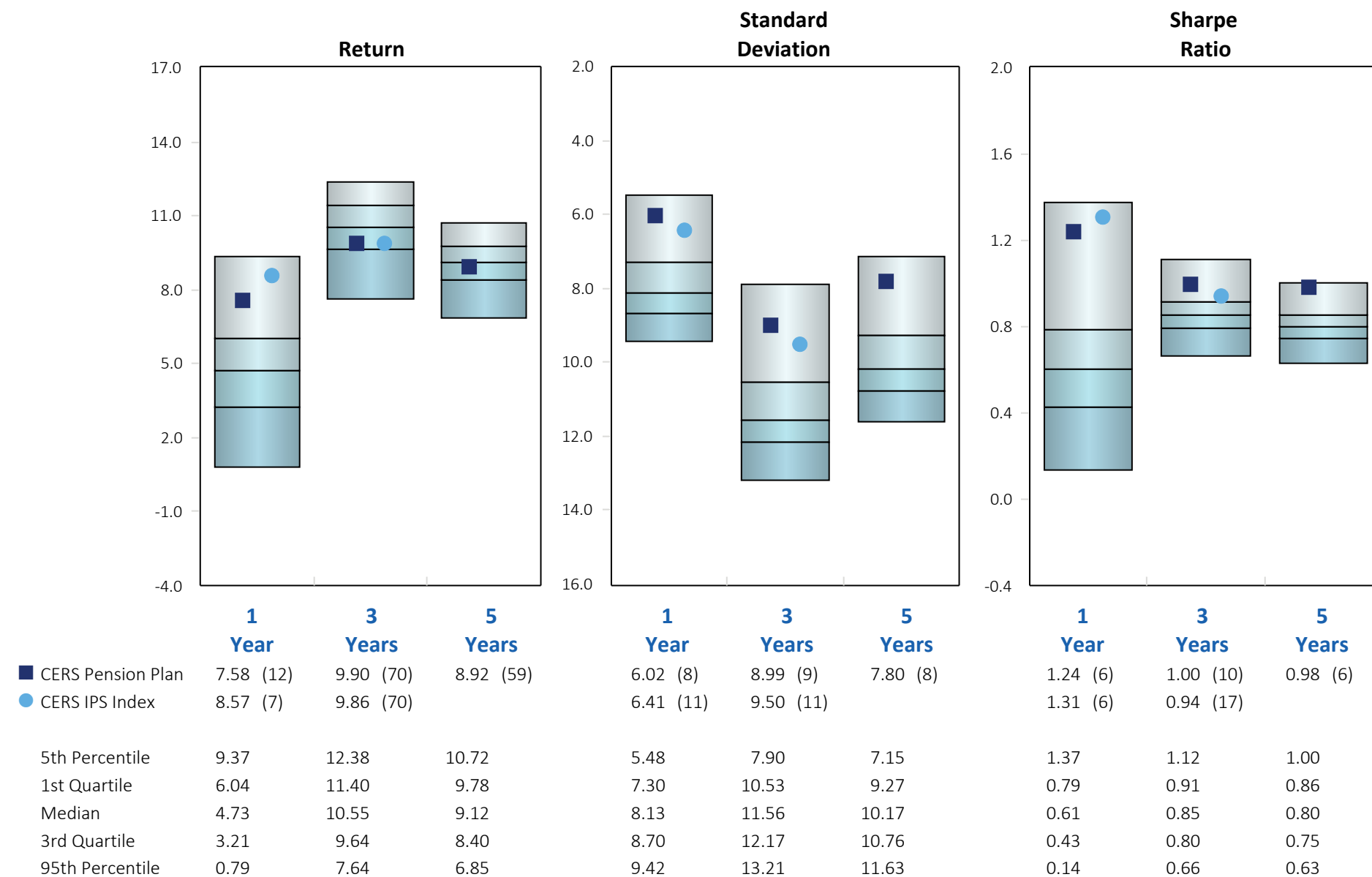
Periods Ended March 31, 2022

	Performance (%) net of fees							
	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Tortoise Capital	4.17	23.26	22.39	47.50	4.29	1.29	9.28	8/1/2009
Alerian MLP Index	2.05	18.81	12.64	36.56	2.70	-0.07	6.10	
Value Added	2.12	4.45	9.75	10.94	1.59	1.36	3.18	
Amerra AGRI Fund II	6.80	6.80	11.60	10.30	9.94	5.20	5.61	12/1/2012
Amerra AGRI Holdings	-1.72	-1.72	-1.14	-5.57	-1.61	-2.85	-1.73	8/1/2015
BTG Pactual	-3.56	-3.56	13.37	7.87	-0.54	-0.11	-4.84	12/1/2014
IFM Infrastructure	1.17	1.17	5.93	7.16			4.24	7/1/2019
Magnetar MTP EOF II	26.33	26.33	46.76	72.32	30.31	20.25	14.30	8/1/2015
Oberland Capital	1.91	1.91	11.33	11.65	19.25		14.94	8/1/2018
Taurus Mine Finance	10.95	10.95	21.43	17.92	2.84	5.93	9.32	4/1/2015
TPF II	36.77	36.77	36.34	20.90	11.21	7.02	-0.34	10/1/2008
Blackstone Strat Opp	1.22	1.20	3.86	6.13	-5.73		-2.32	8/1/2017
Luxor Capital	-0.04	-0.29	9.60	16.73	-6.48	1.83	-0.52	4/1/2014
Myriad Opportunities	-0.13	-42.82	-57.93	-56.93	-21.24	-12.13	-9.45	5/1/2016
Pine River	-0.69	0.02	0.57	2.67	11.94	6.62	4.23	5/1/2014
PRISMA Capital	-0.24	-0.28	-0.68	-1.48	-0.06	1.44	2.59	9/1/2011
SRS Partners US	0.00	0.00	-0.57	8.77	10.04		9.73	8/1/2017
Tricadia Select	0.00	0.00	0.00	0.00	0.60		-5.43	9/1/2017

Plan Sponsor Peer Group Analysis - Multi Statistics

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022

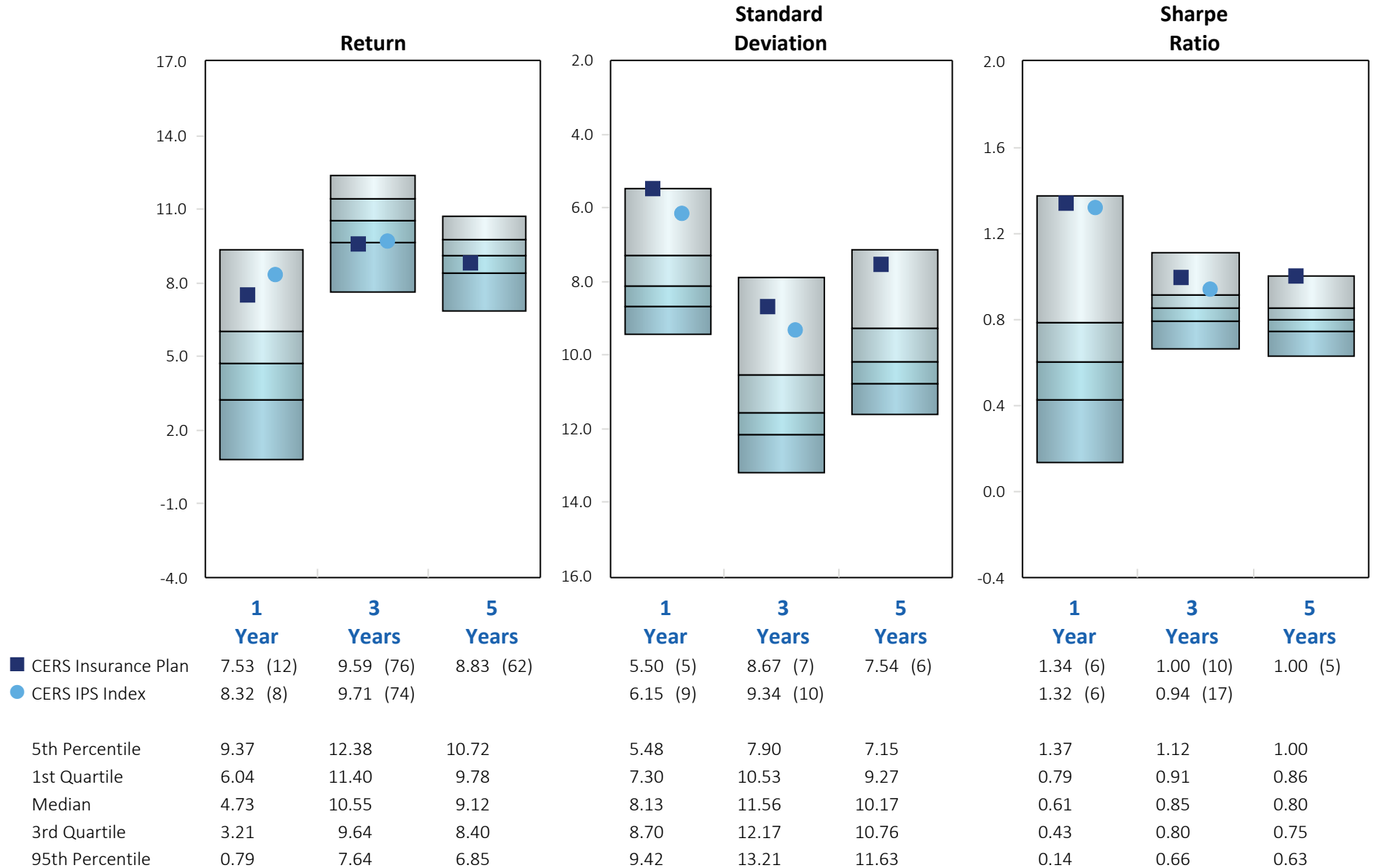


Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

CERS Insurance Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022

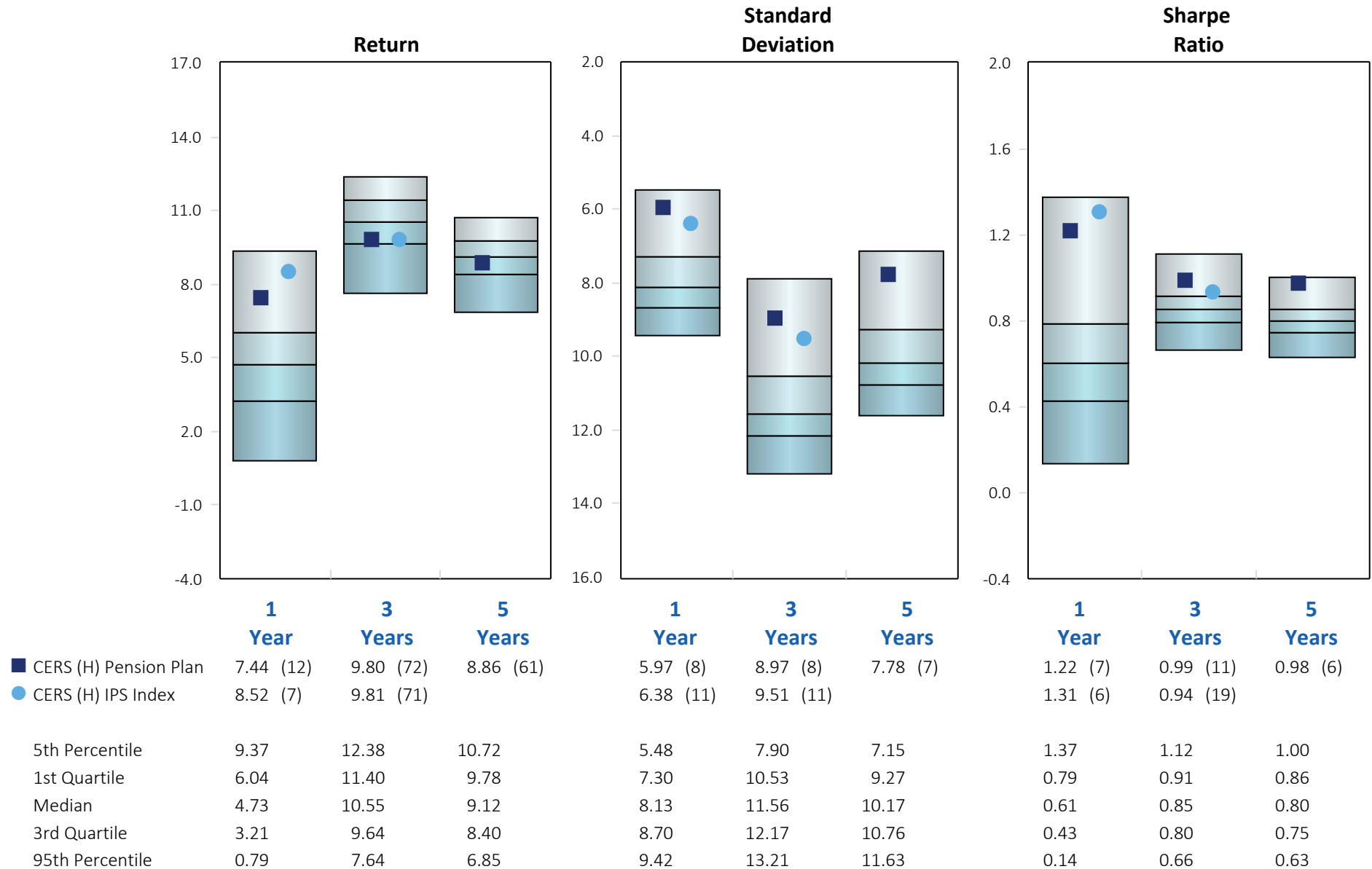


Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

CERS (H) Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022

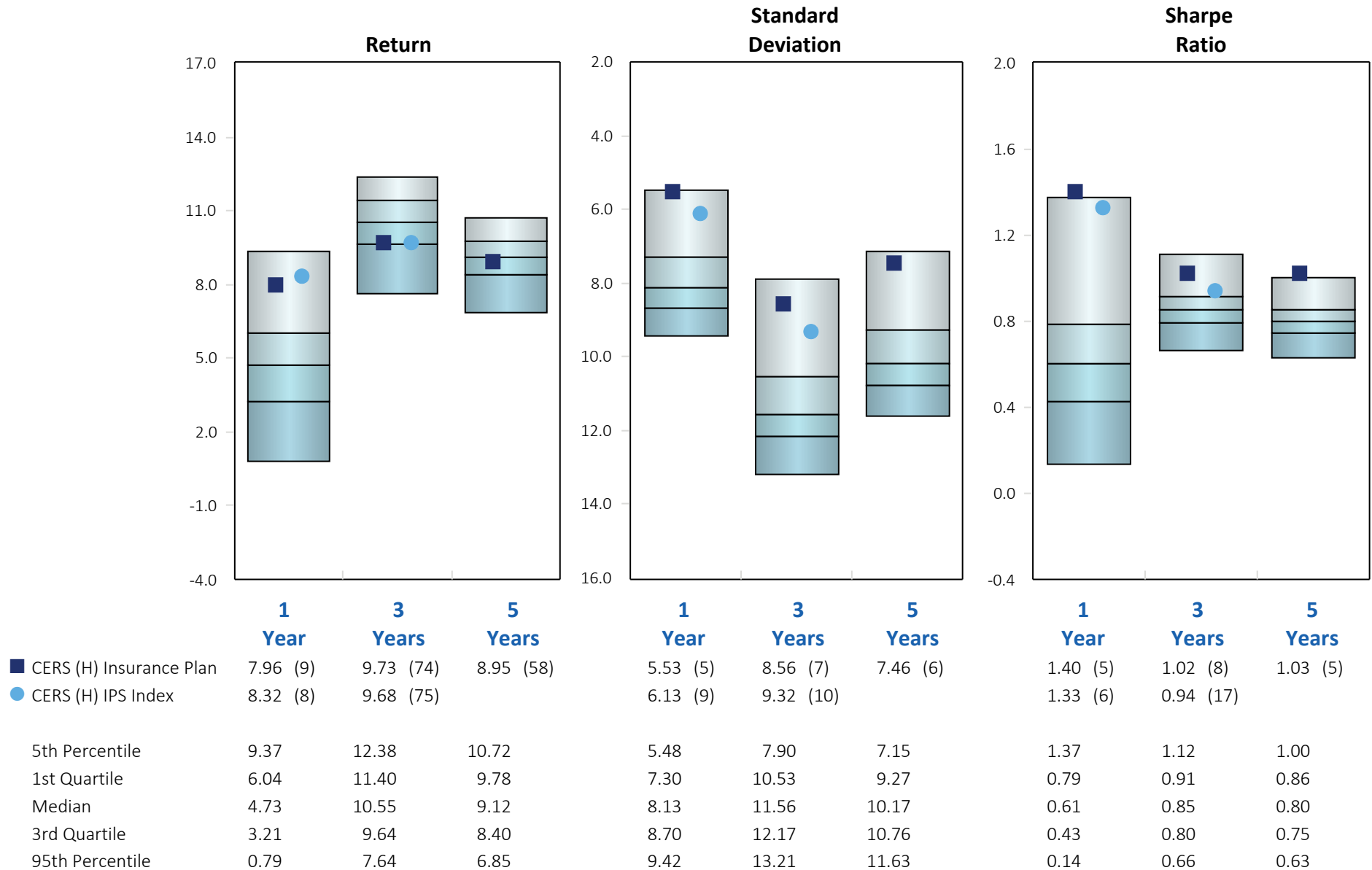


Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

CERS (H) Insurance Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022

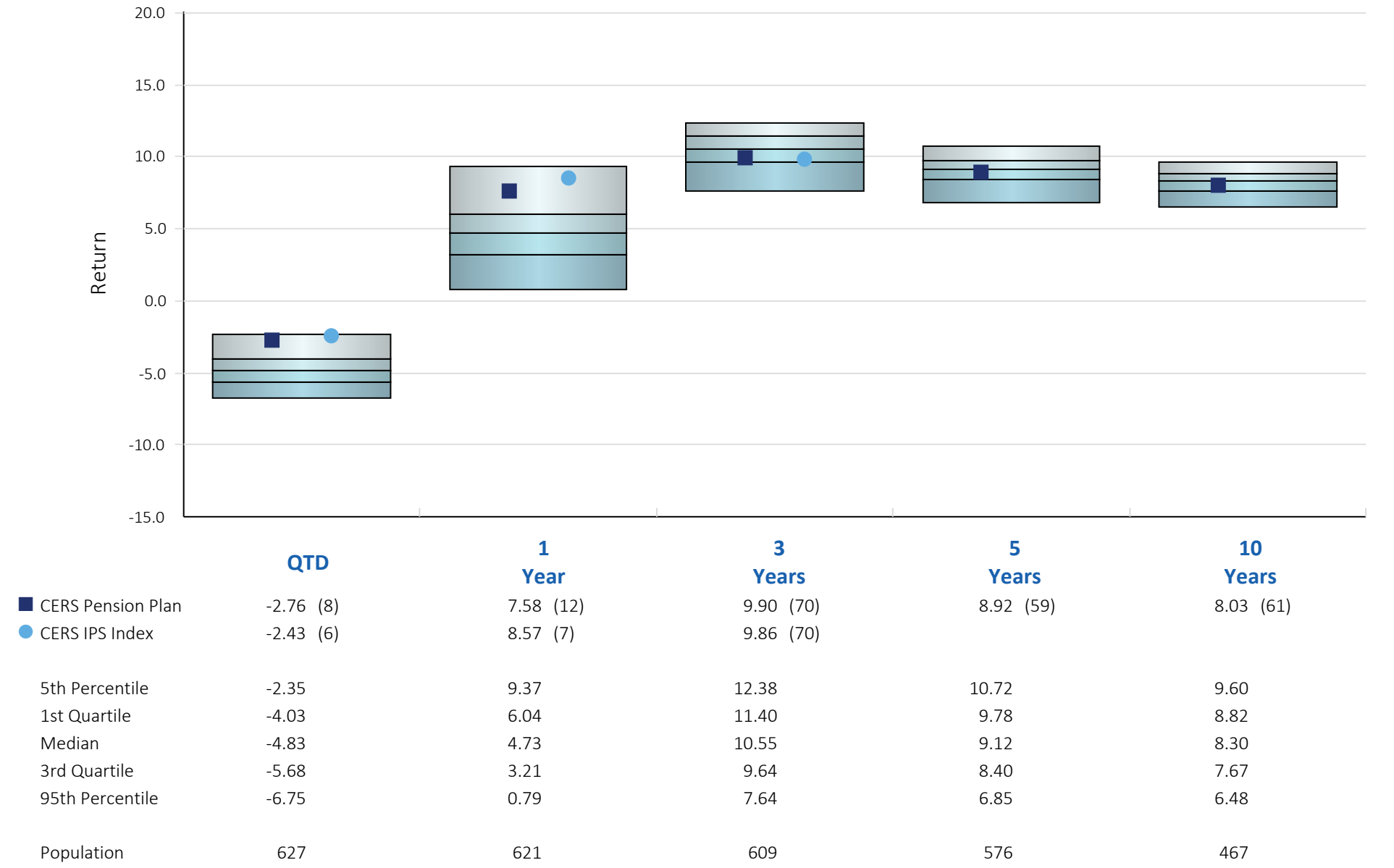


Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022

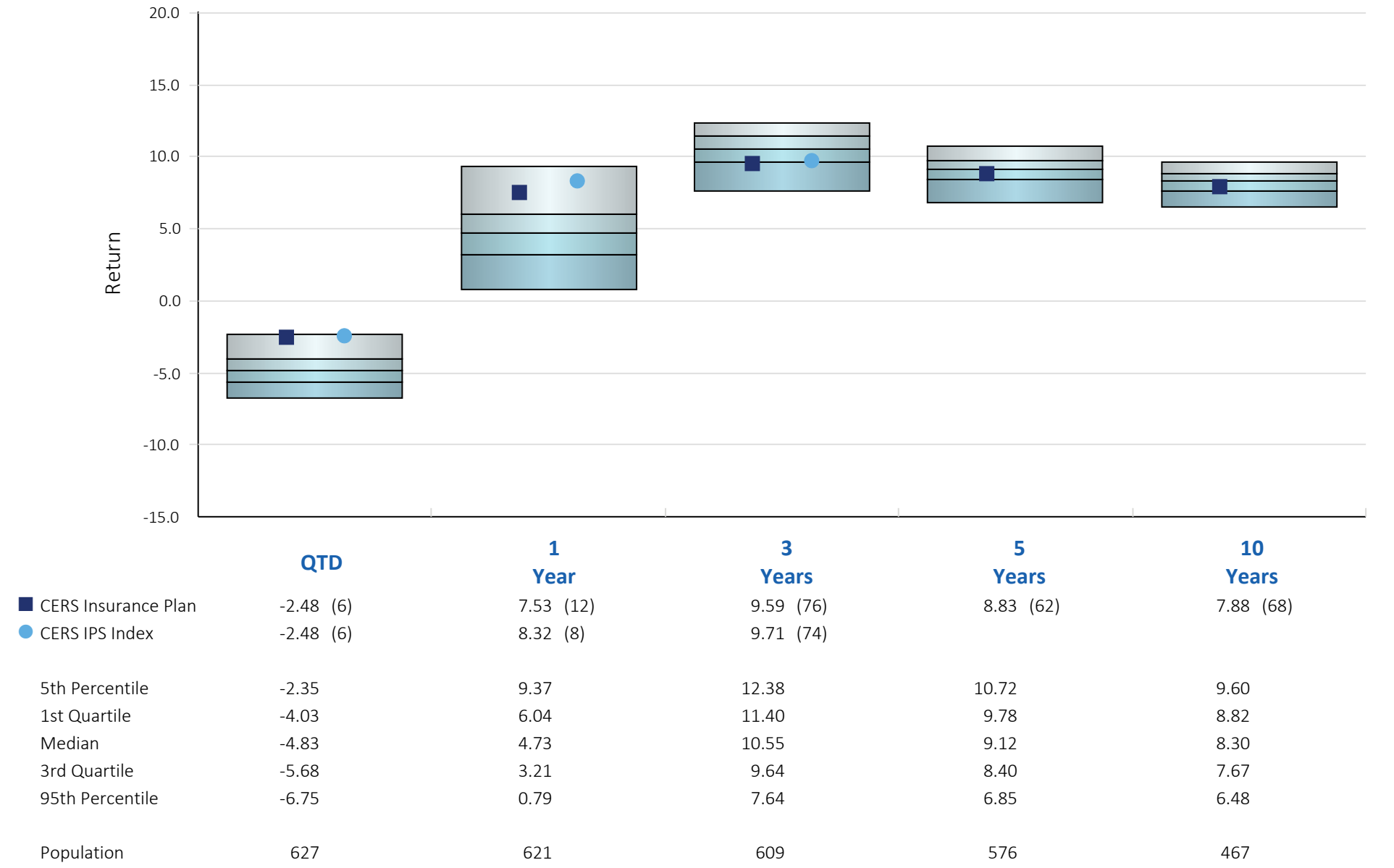


Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

CERS Insurance Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022

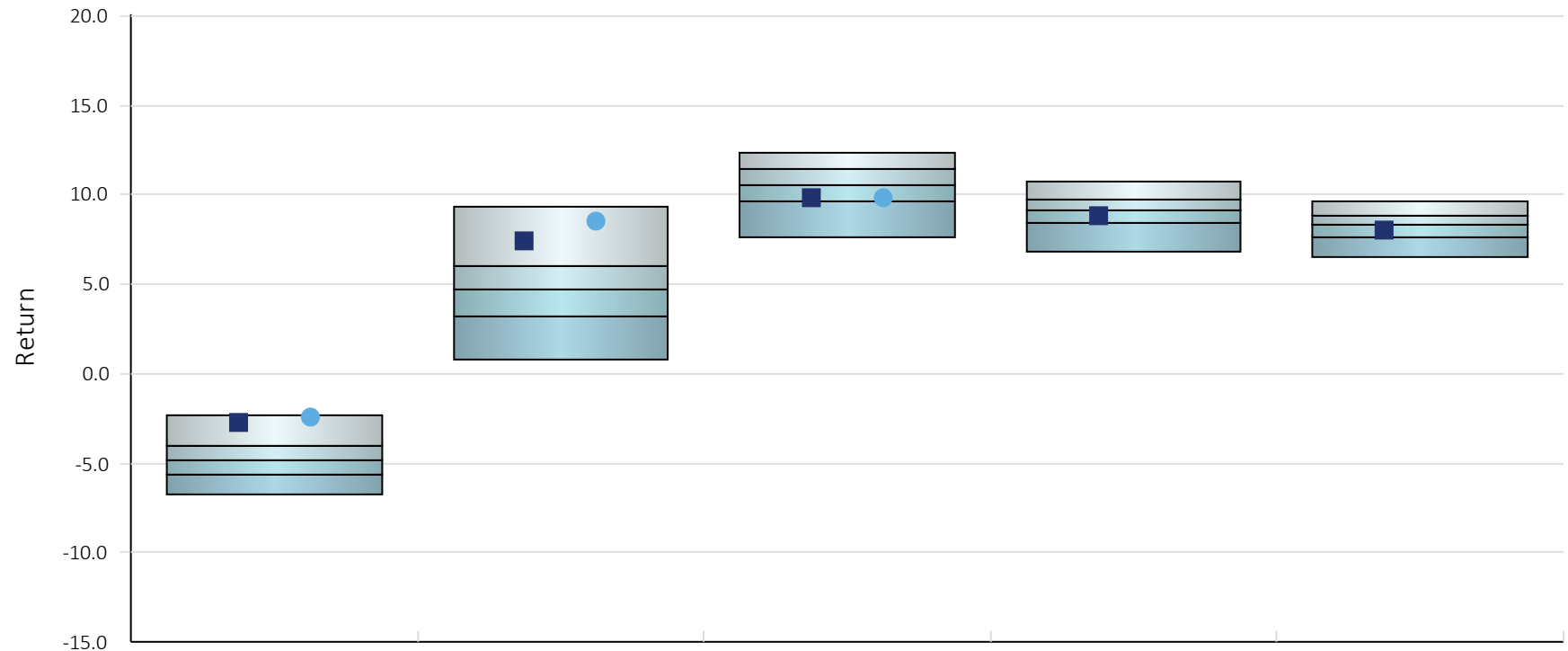


Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

CERS (H) Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022



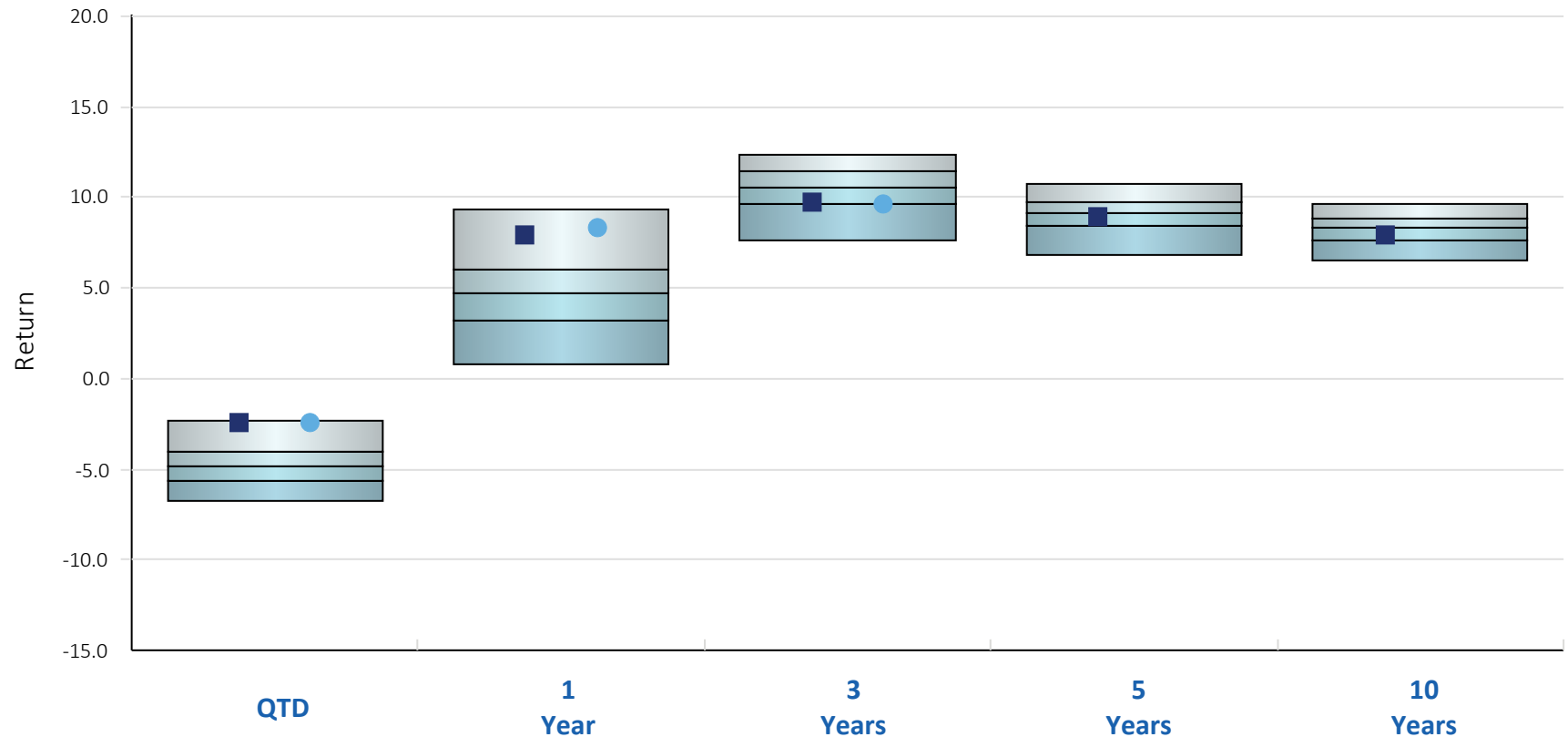
	QTD	1 Year	3 Years	5 Years	10 Years
■ CERS (H) Pension Plan	-2.77 (8)	7.44 (12)	9.80 (72)	8.86 (61)	8.01 (62)
● CERS (H) IPS Index	-2.43 (6)	8.52 (7)	9.81 (71)		
5th Percentile	-2.35	9.37	12.38	10.72	9.60
1st Quartile	-4.03	6.04	11.40	9.78	8.82
Median	-4.83	4.73	10.55	9.12	8.30
3rd Quartile	-5.68	3.21	9.64	8.40	7.67
95th Percentile	-6.75	0.79	7.64	6.85	6.48
Population	627	621	609	576	467

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis

CERS (H) Insurance Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022



■ CERS (H) Insurance Plan
● CERS (H) IPS Index

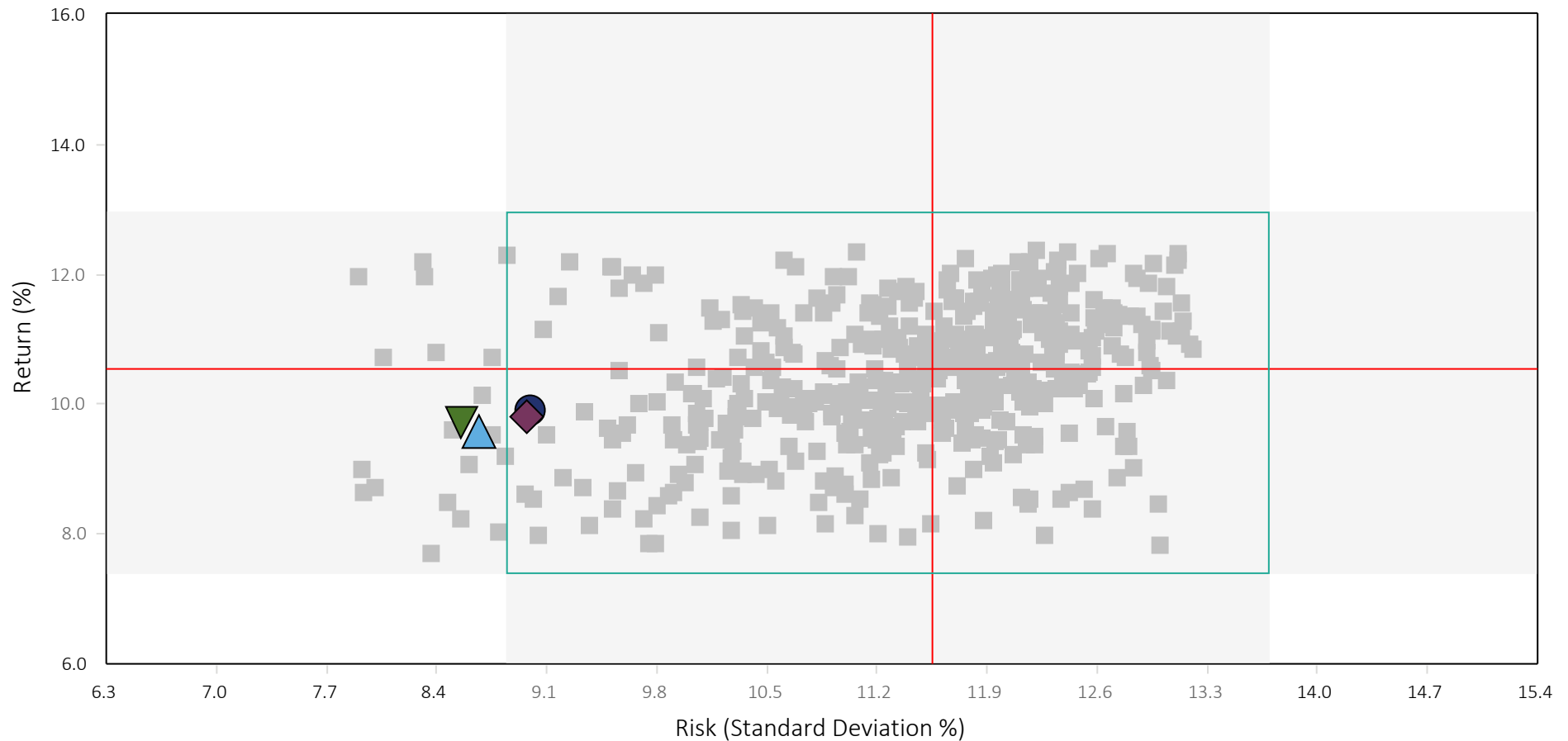
5th Percentile	-2.35	9.37	12.38	10.72	9.60
1st Quartile	-4.03	6.04	11.40	9.78	8.82
Median	-4.83	4.73	10.55	9.12	8.30
3rd Quartile	-5.68	3.21	9.64	8.40	7.67
95th Percentile	-6.75	0.79	7.64	6.86	6.48
Population	627	621	610	577	468

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Scattergram

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 3 Years Ending March 31, 2022

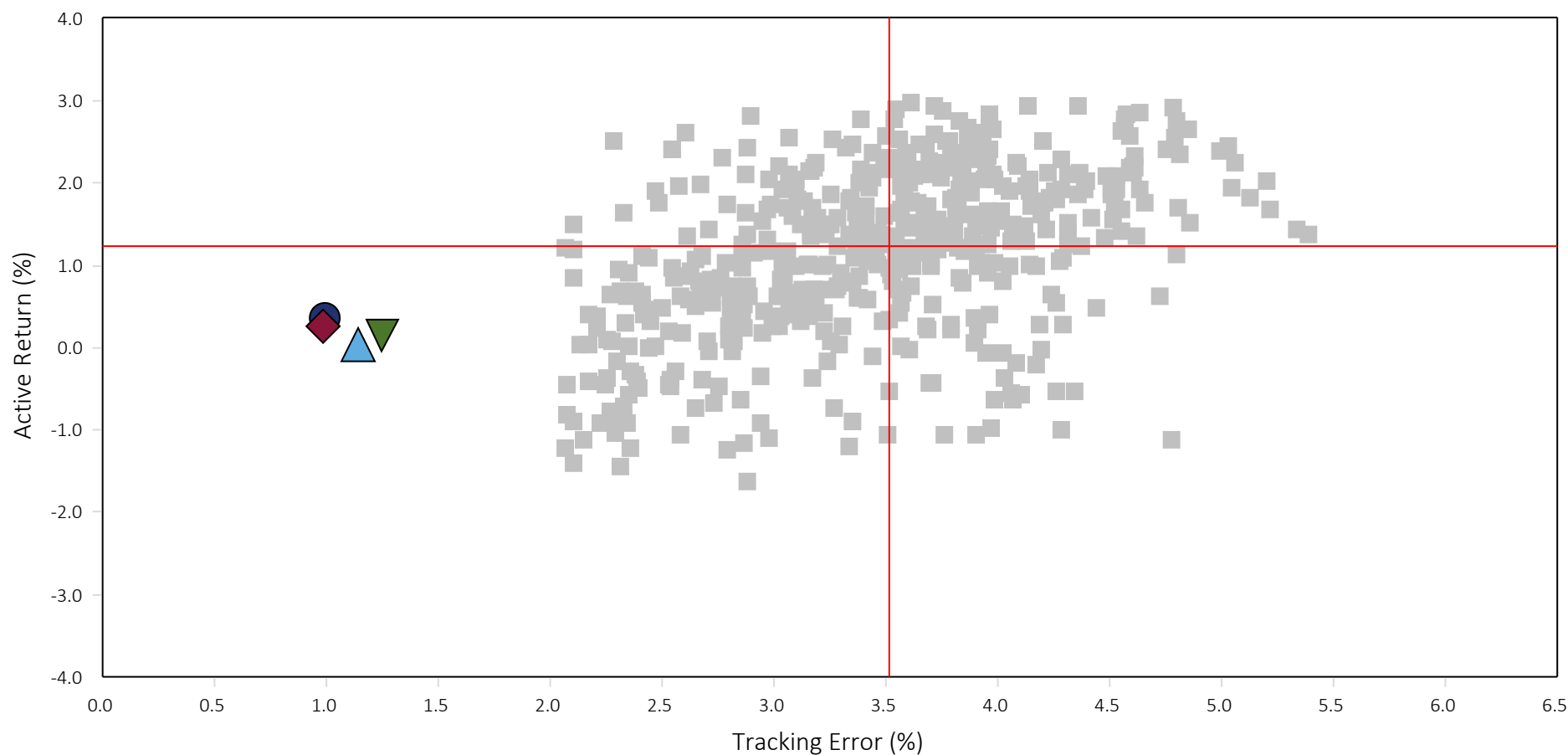


	Return	Standard Deviation
● CERS Pension Plan	9.90	8.99
▲ CERS Insurance Plan	9.59	8.67
◆ CERS (H) Pension Plan	9.80	8.97
▼ CERS (H) Insurance Plan	9.73	8.56
— Median	10.55	11.56

Plan Sponsor Scattergram

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 3 Years Ending March 31, 2022

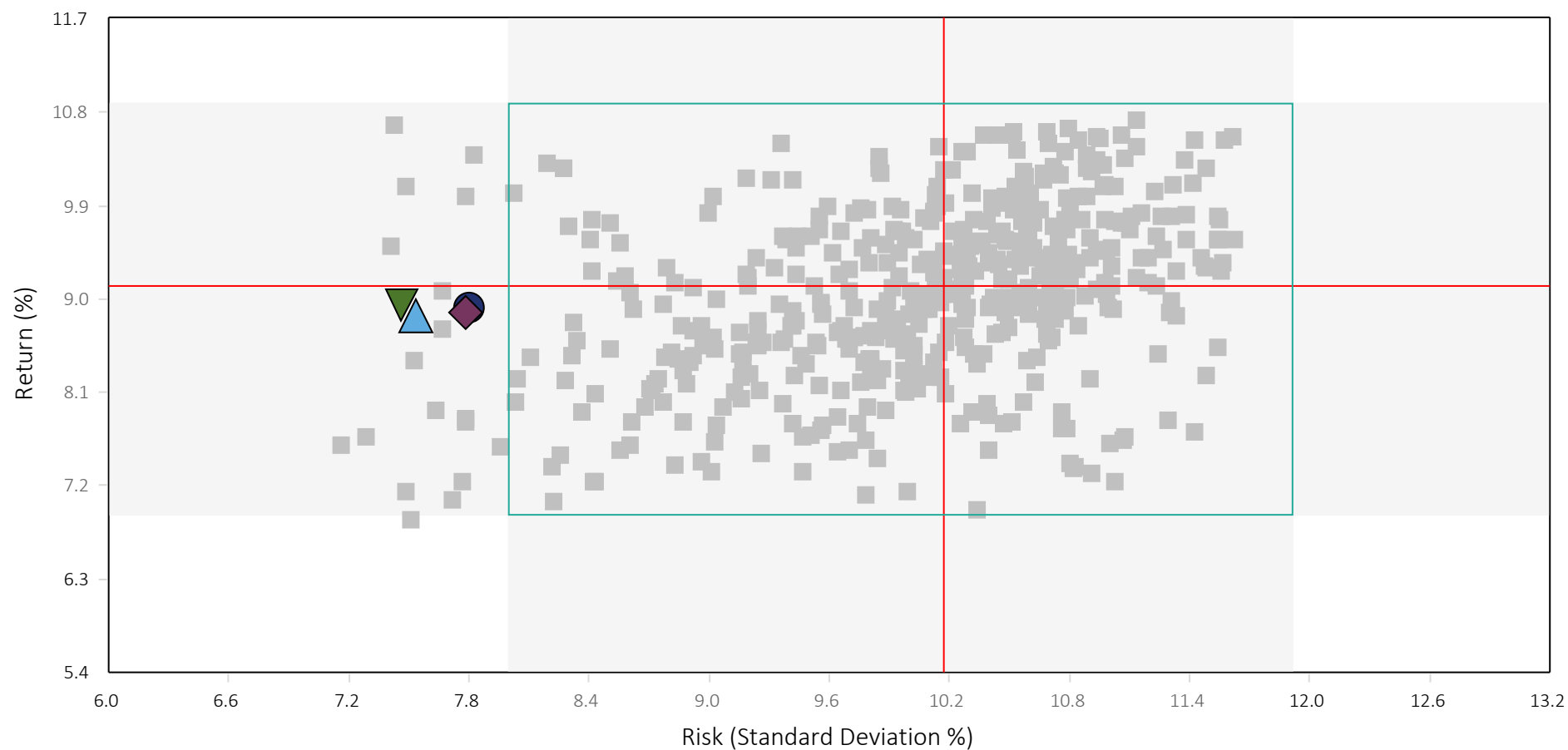


	Active Return	Tracking Error
● CERS Pension Plan	0.36	0.99
▲ CERS Insurance Plan	0.05	1.14
◆ CERS (H) Pension Plan	0.27	0.99
▼ CERS (H) Insurance Plan	0.16	1.25
— Median	1.24	3.52

Plan Sponsor Scattergram

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 5 Years Ending March 31, 2022

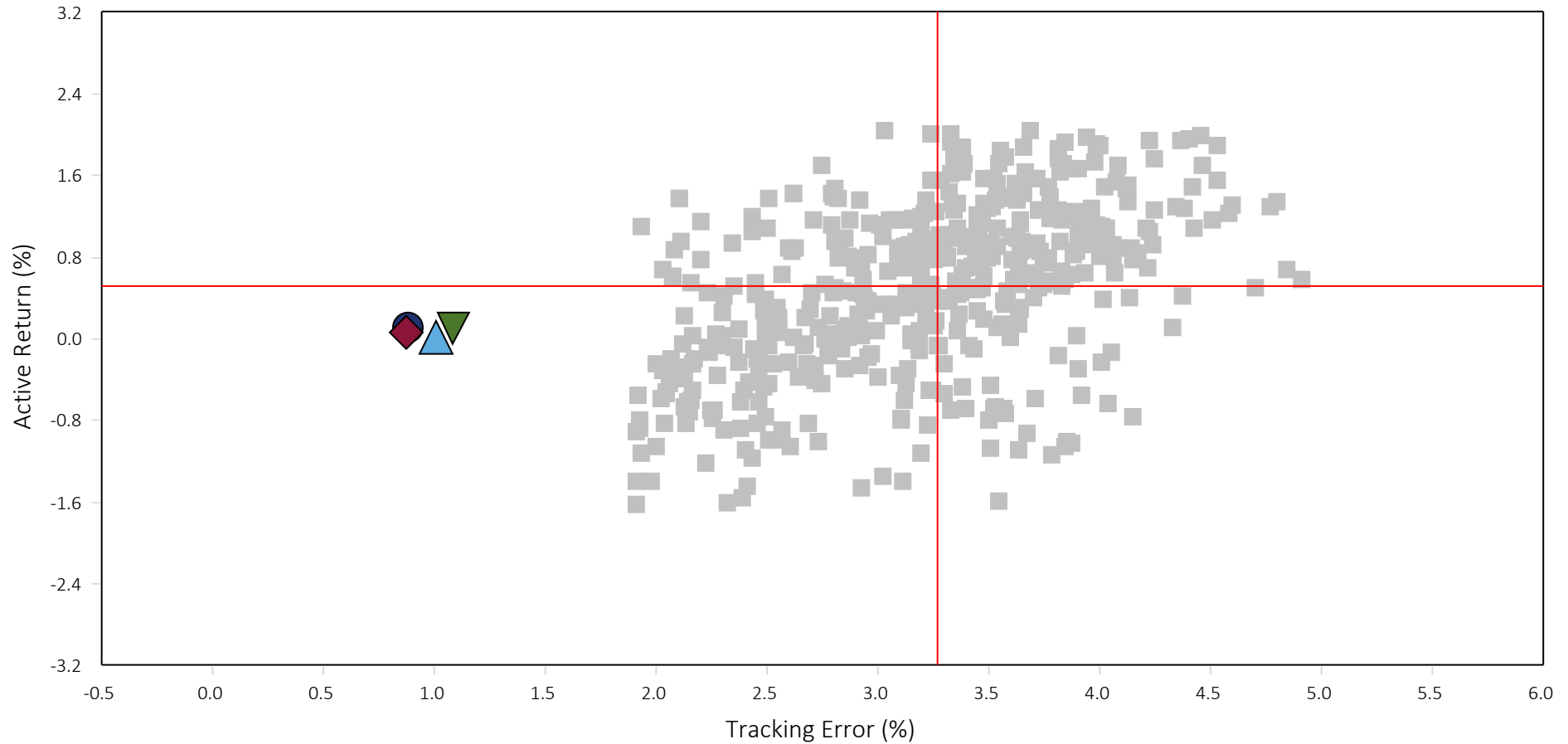


	Return	Standard Deviation
● CERS Pension Plan	8.92	7.80
▲ CERS Insurance Plan	8.83	7.54
◆ CERS (H) Pension Plan	8.86	7.78
▼ CERS (H) Insurance Plan	8.95	7.46
— Median	9.12	10.17

Plan Sponsor Scattergram

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended 5 Years Ending March 31, 2022



	Active Return	Tracking Error
● CERS Pension Plan	0.11	0.88
▲ CERS Insurance Plan	0.02	1.01
◆ CERS (H) Pension Plan	0.07	0.87
▼ CERS (H) Insurance Plan	0.12	1.08
— Median	0.53	3.27

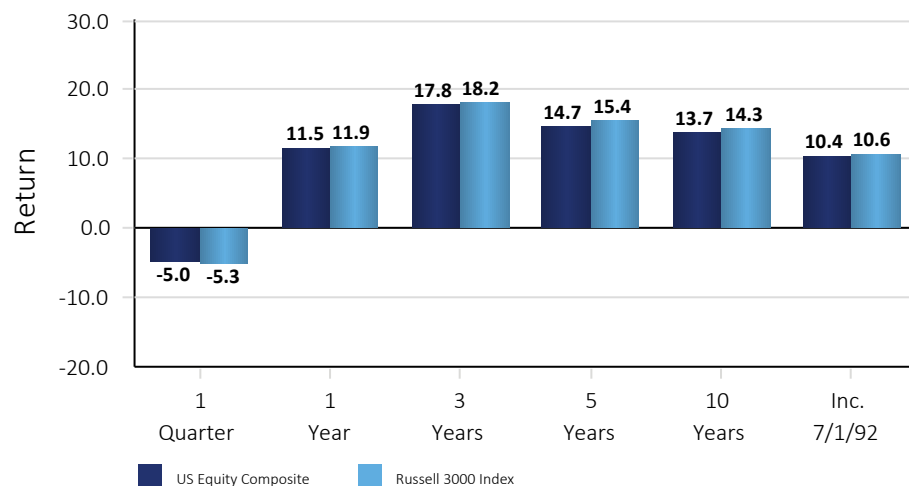
US Equity Composite

Composite Performance Summary

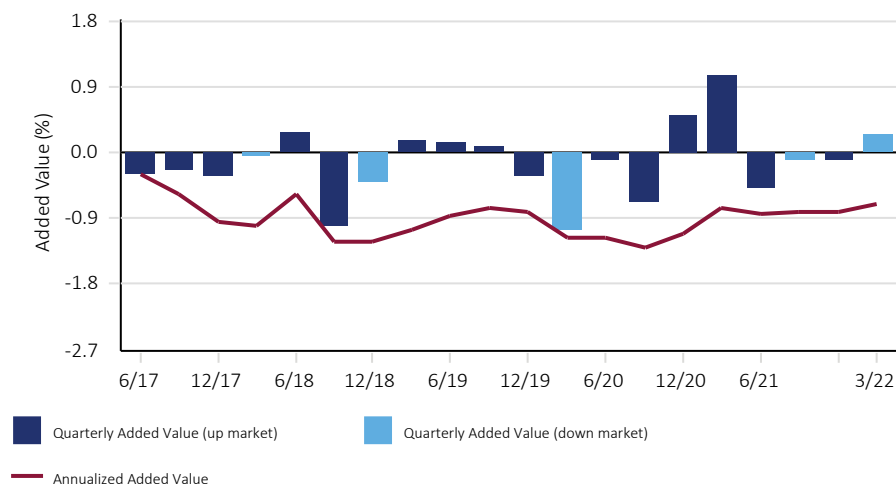
US Equity Composite

Periods Ended March 31, 2022

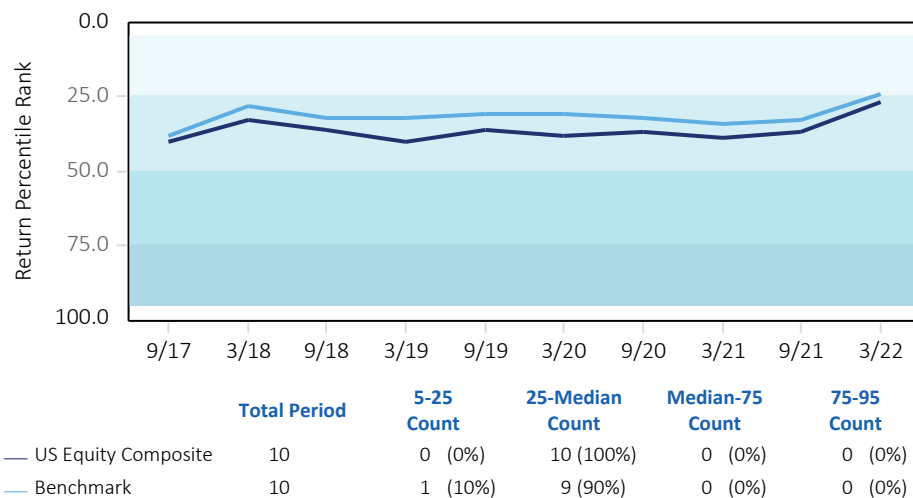
Comparative Performance



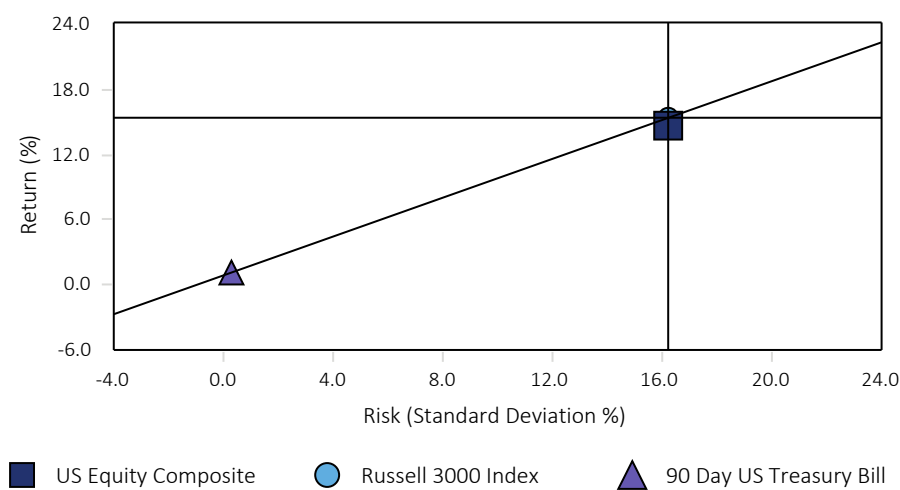
Added Value History



Rolling Percentile Rank: IM U.S. Equity (SA+CF)



Risk and Return 04/1/17 - 03/31/22

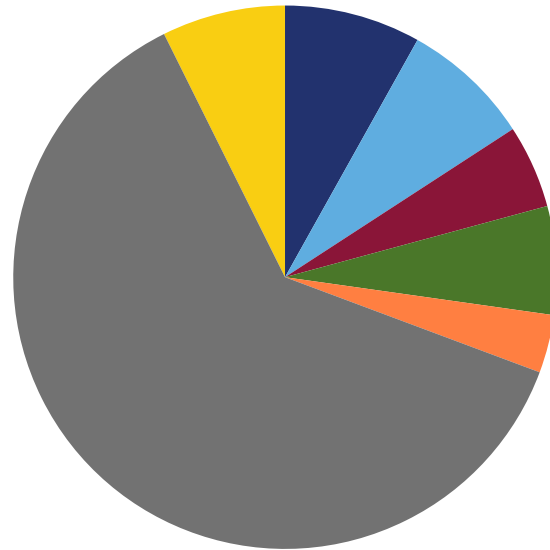


Asset Allocation By Manager

US Equity Composite

Periods Ended March 31, 2022

Mar-2022 : 1,827,905,025

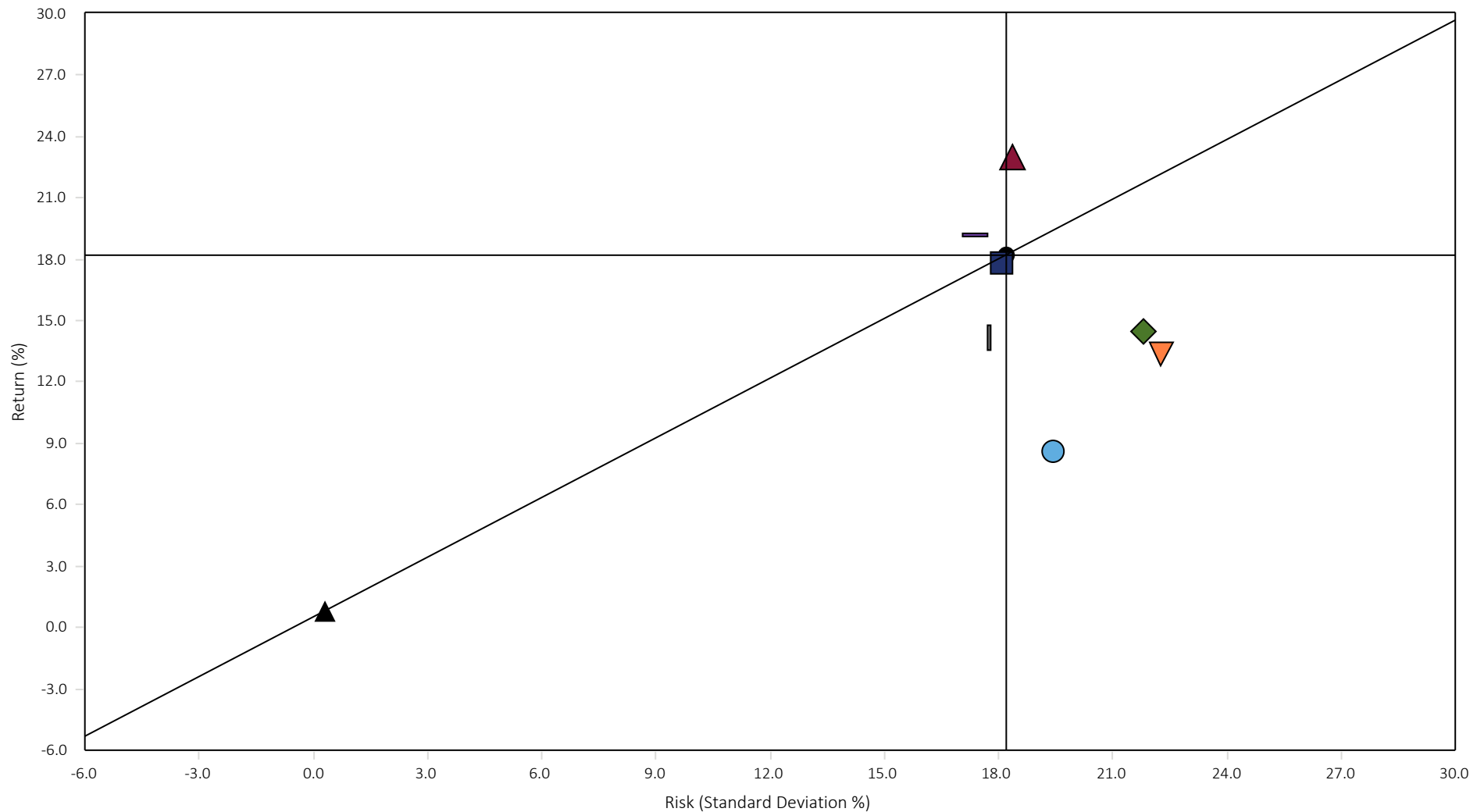


	Market Value \$	Allocation (%)
River Road FAV	148,071,948	8.1
Westfield Capital	141,108,500	7.7
Internal US Mid Cap	90,616,678	5.0
NTGI Structured	118,011,287	6.5
Next Century Growth	63,216,707	3.5
Transition Account	902	0.0
S&P 500 Index	1,132,502,906	62.0
Scientific Beta	134,358,086	7.4
Abel Noser Transition	18,012	0.0

Risk vs. Return

US Equity Composite

Periods Ended 3 Years Ending March 31, 2022



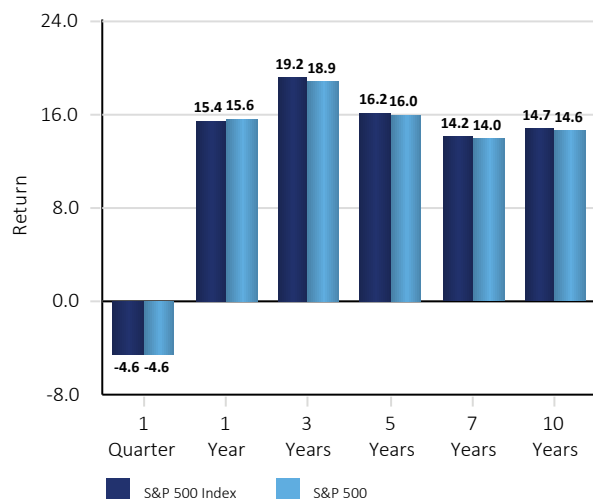
- US Equity Composite
- River Road FAV
- Westfield Capital
- Internal US Mid Cap
- NTGI Structured
- Next Century Growth
- S&P 500 Index
- Scientific Beta
- Russell 3000 Index
- 90 Day US Treasury Bill

Performance Summary

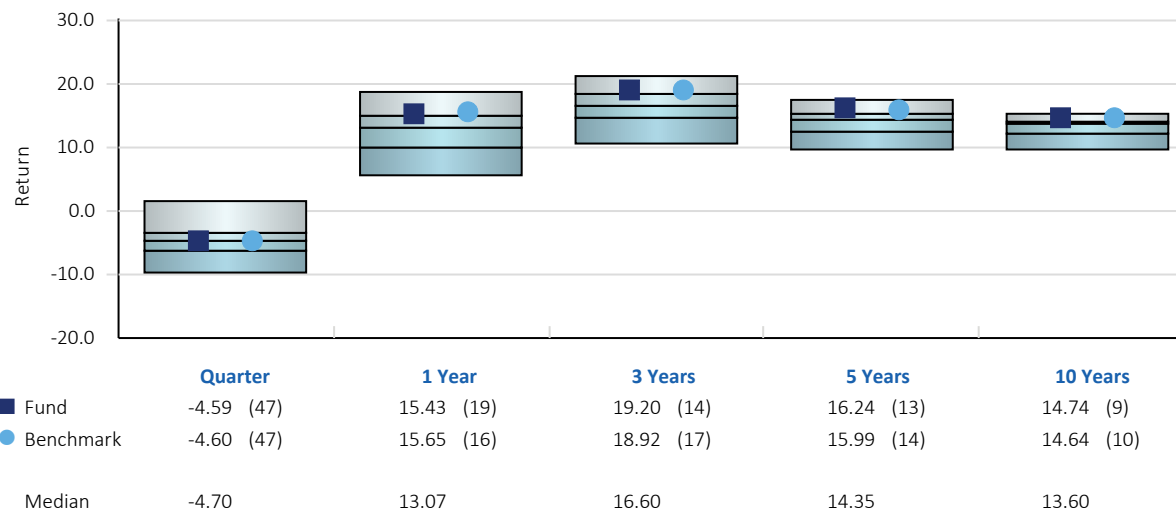
S&P 500 Index

Periods Ended March 31, 2022

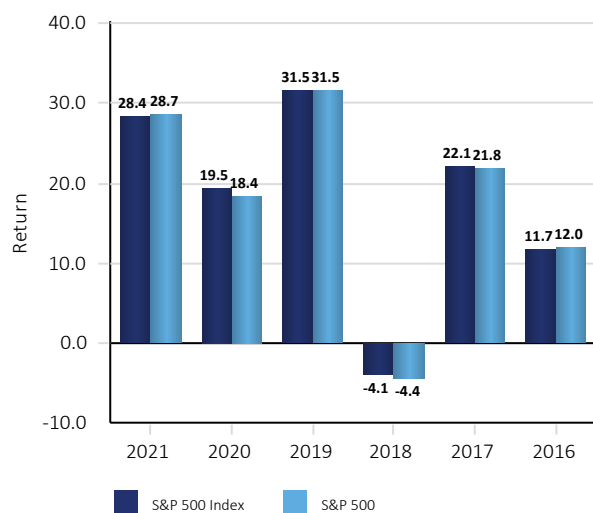
Comparative Performance



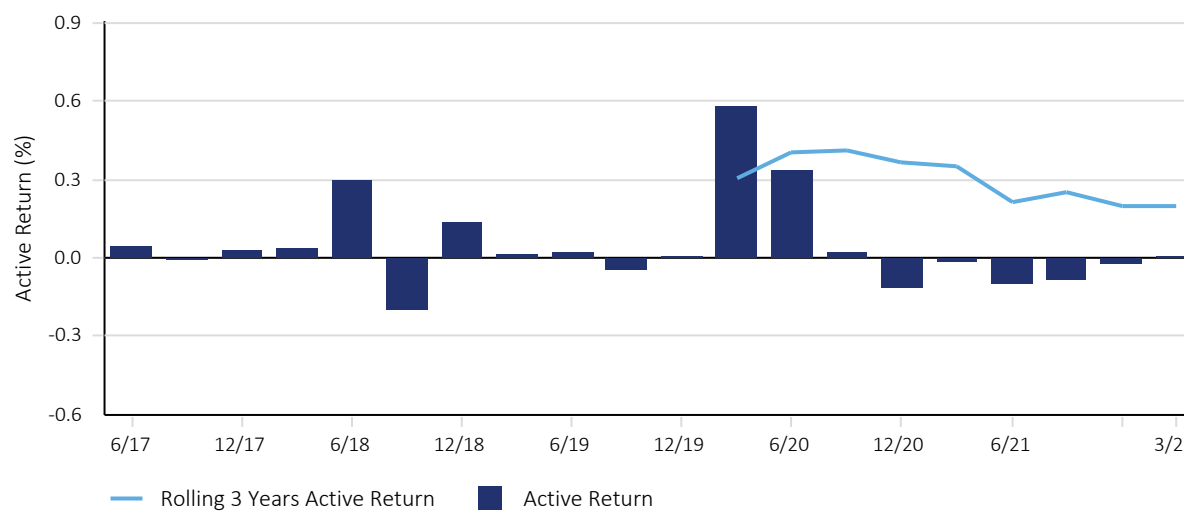
Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

S&P 500 Index

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>S&P 500 Index</u>	<u>S&P 500</u>
Maximum Return	6.99	7.01
Minimum Return	-5.24	-5.17
Return	15.43	15.65
Cumulative Return	15.43	15.65
Active Return	-0.19	0.00
Excess Return	15.22	15.41

Risk Summary Statistics

	<u>S&P 500 Index</u>	<u>S&P 500</u>
Upside Risk	3.31	3.32
Downside Risk	7.65	7.61
Beta	1.00	1.00

Risk/Return Summary Statistics

	<u>S&P 500 Index</u>	<u>S&P 500</u>
Standard Deviation	13.07	13.04
Alpha	-0.22	0.00
Active Return/Risk	-0.01	0.00
Tracking Error	0.13	0.00
Information Ratio	-1.46	
Sharpe Ratio	1.16	1.18

Correlation Statistics

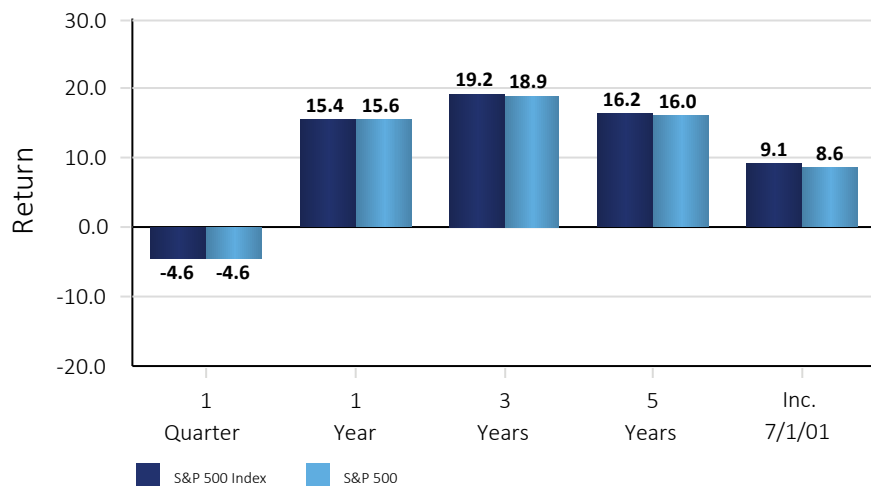
	<u>S&P 500 Index</u>	<u>S&P 500</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

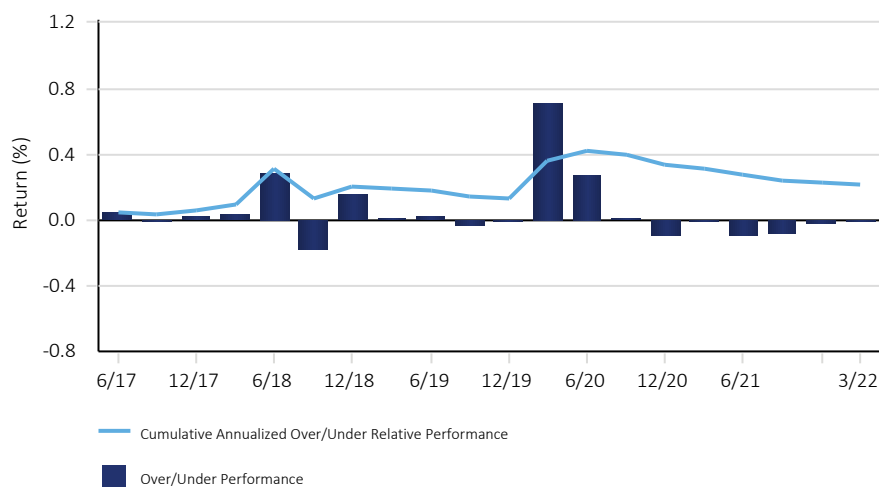
S&P 500 Index vs IM U.S. Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

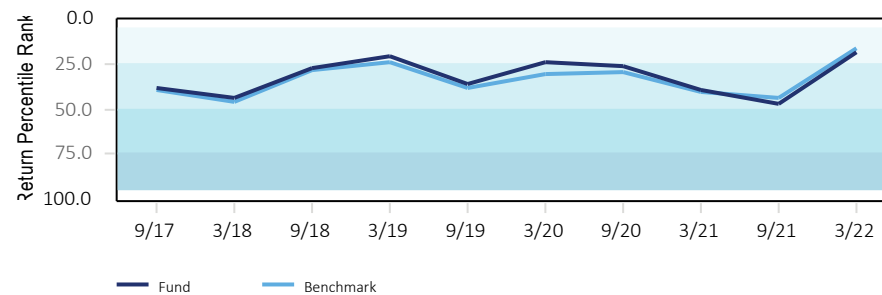
Comparative Performance



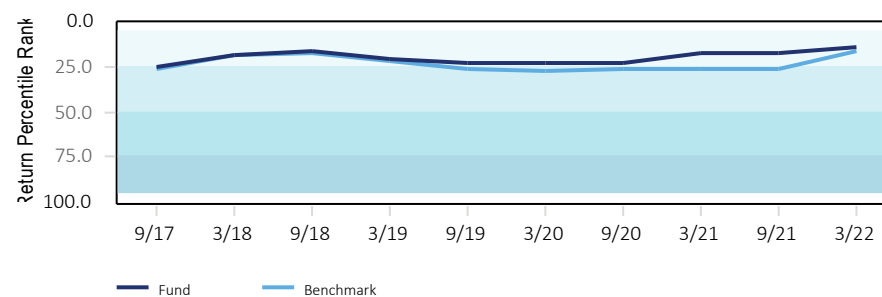
Relative Performance



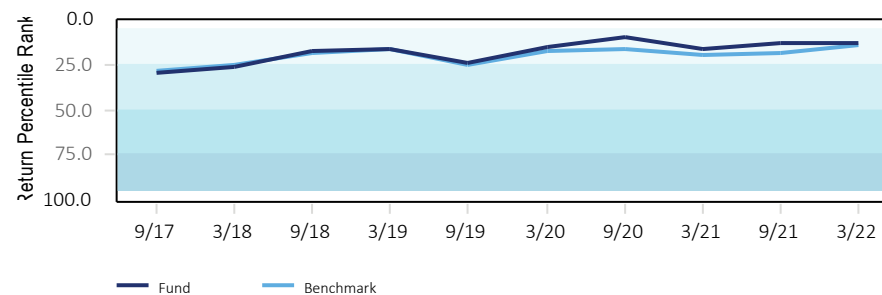
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



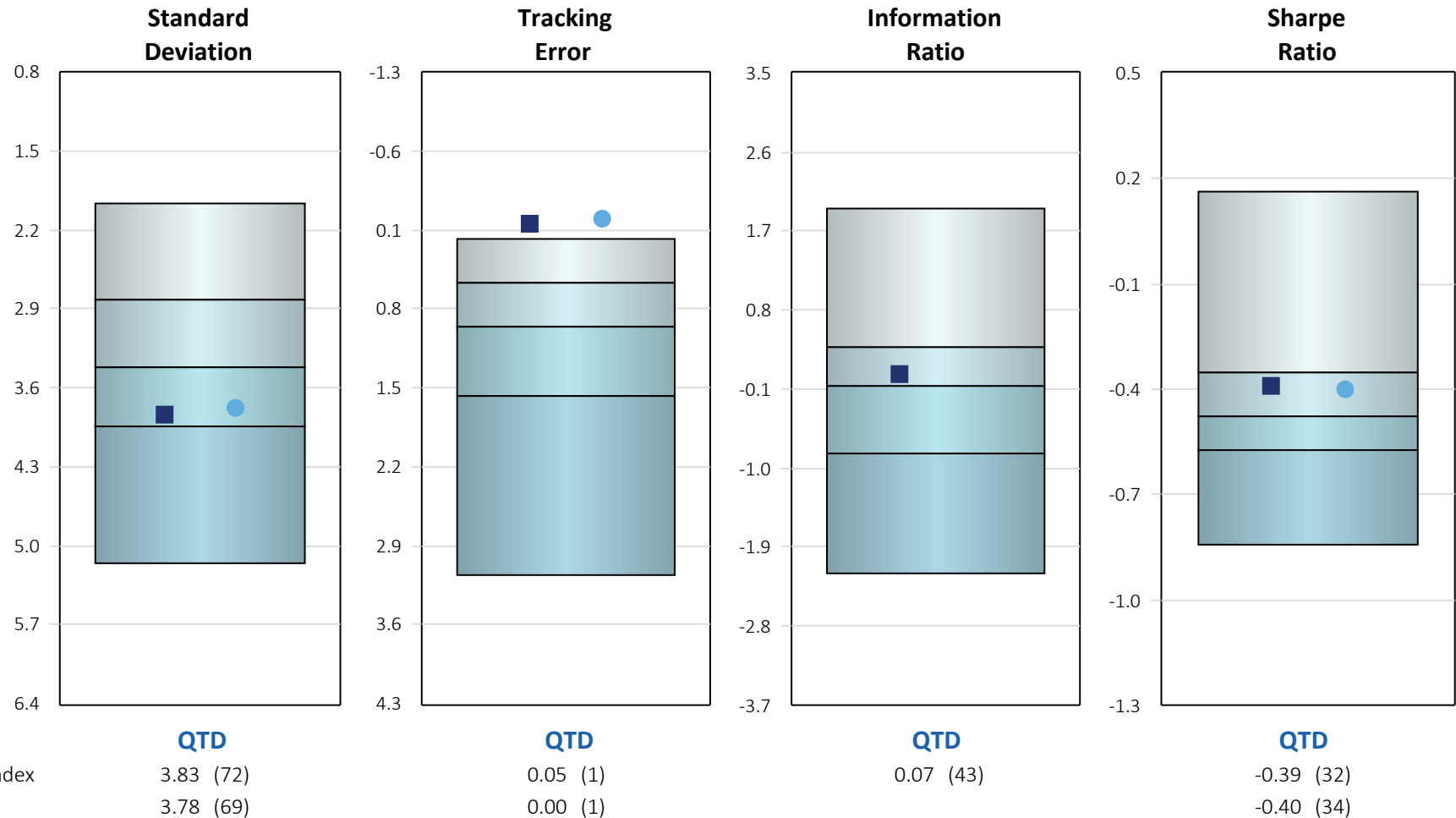
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

S&P 500 Index

Periods Ended March 31, 2022



5th Percentile	1.97
1st Quartile	2.83
Median	3.41
3rd Quartile	3.95
95th Percentile	5.15

5th Percentile	0.18
1st Quartile	0.57
Median	0.96
3rd Quartile	1.57
95th Percentile	3.16

5th Percentile	1.96
1st Quartile	0.38
Median	-0.07
3rd Quartile	-0.84
95th Percentile	-2.19

5th Percentile	0.16
1st Quartile	-0.35
Median	-0.48
3rd Quartile	-0.57
95th Percentile	-0.84

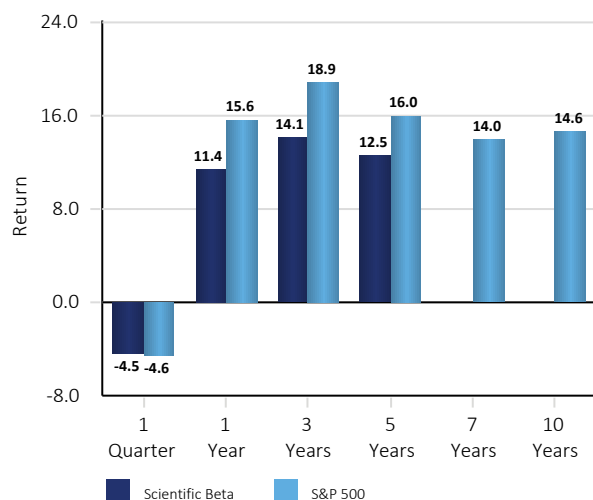
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

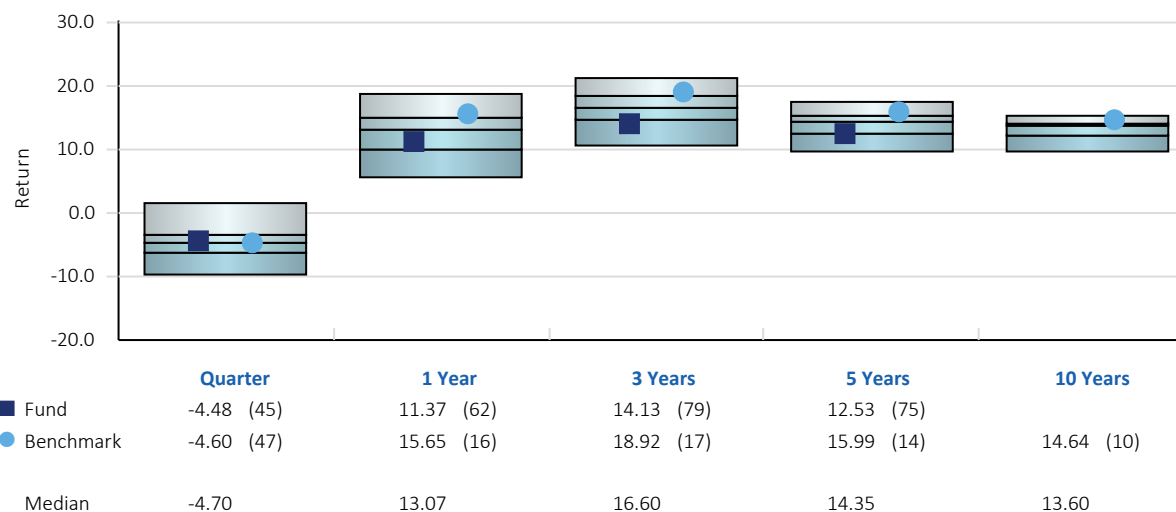
Scientific Beta

Periods Ended March 31, 2022

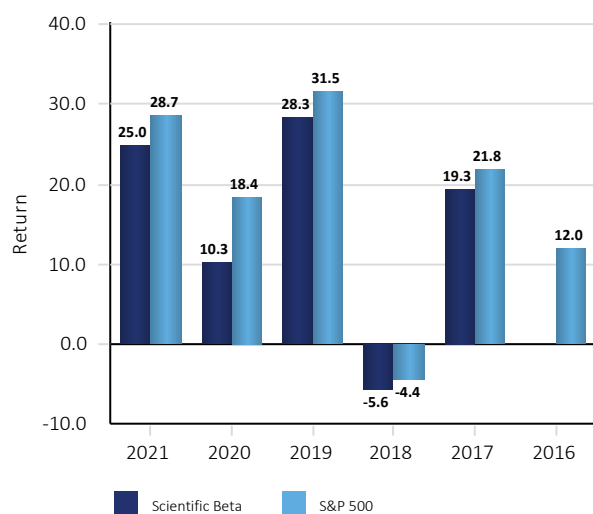
Comparative Performance



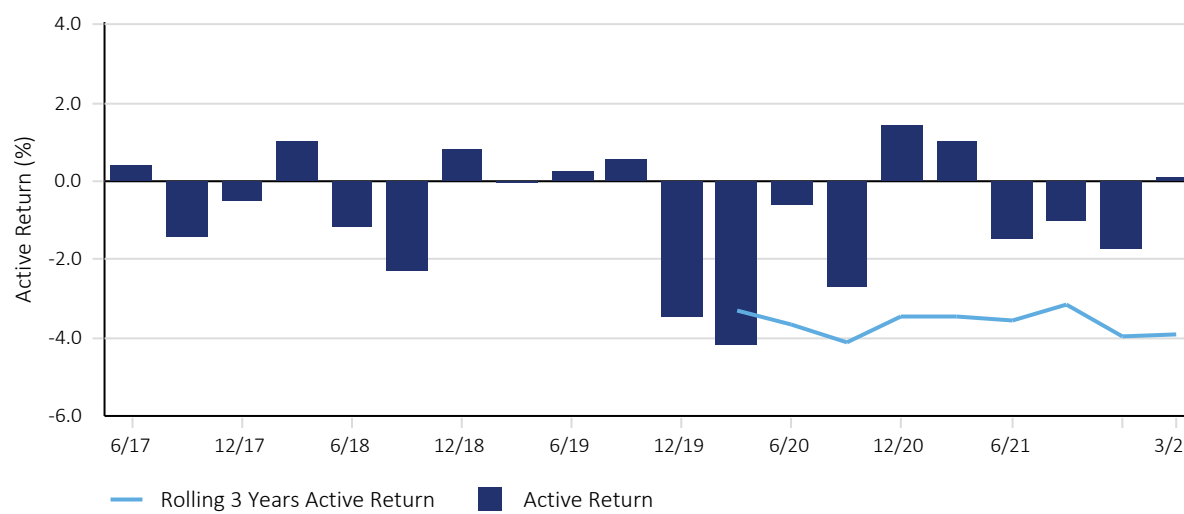
Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Scientific Beta

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Scientific Beta</u>	<u>S&P 500</u>
Maximum Return	5.84	7.01
Minimum Return	-5.03	-5.17
Return	11.37	15.65
Cumulative Return	11.37	15.65
Active Return	-3.92	0.00
Excess Return	11.49	15.41

Risk Summary Statistics

	<u>Scientific Beta</u>	<u>S&P 500</u>
Upside Risk	2.96	3.32
Downside Risk	7.34	7.61
Beta	0.90	1.00

Risk/Return Summary Statistics

	<u>Scientific Beta</u>	<u>S&P 500</u>
Standard Deviation	12.15	13.04
Alpha	-2.39	0.00
Active Return/Risk	-0.32	0.00
Tracking Error	3.23	0.00
Information Ratio	-1.21	
Sharpe Ratio	0.95	1.18

Correlation Statistics

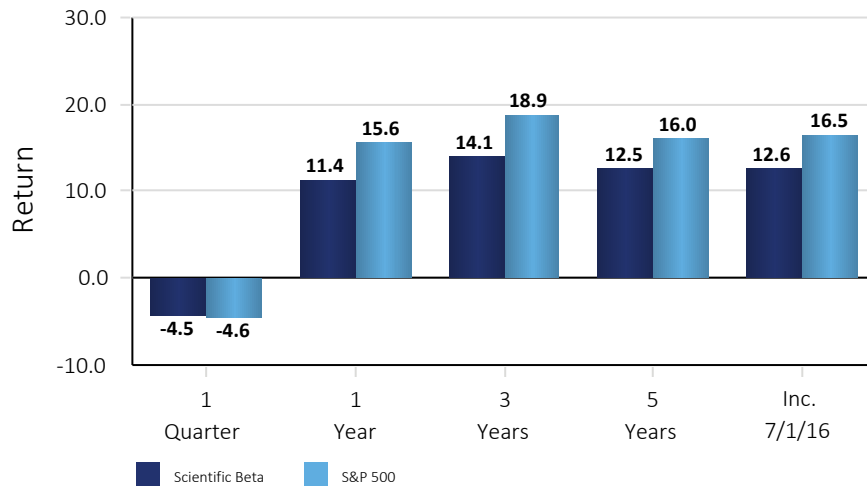
	<u>Scientific Beta</u>	<u>S&P 500</u>
R-Squared	0.94	1.00
Actual Correlation	0.97	1.00

Manager Summary

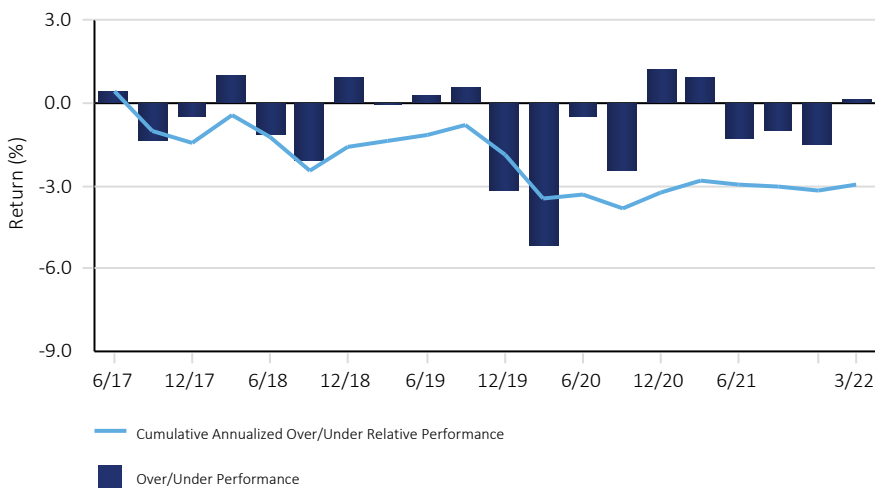
Scientific Beta vs IM U.S. Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

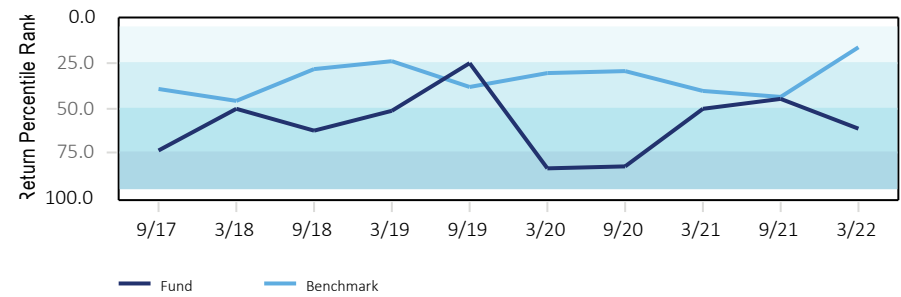
Comparative Performance



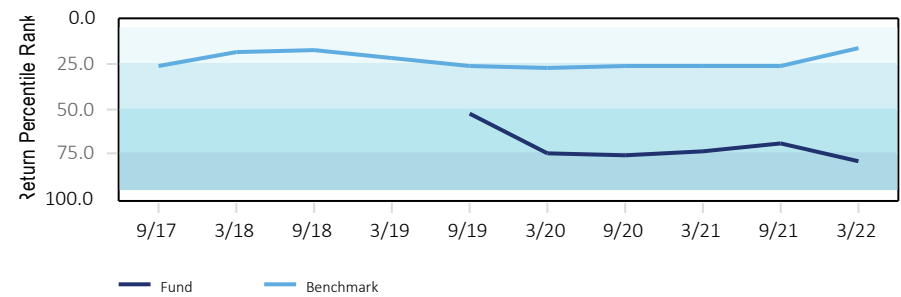
Relative Performance



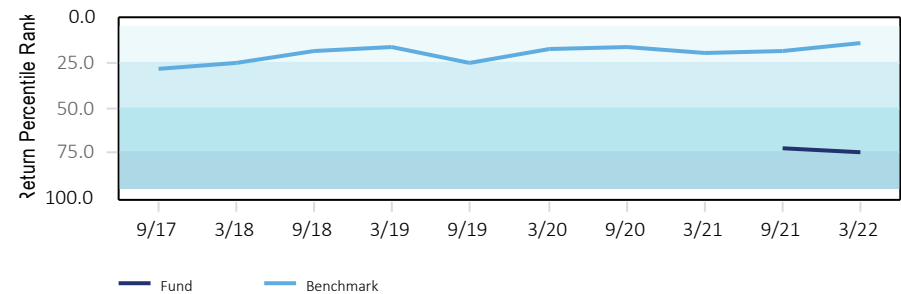
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



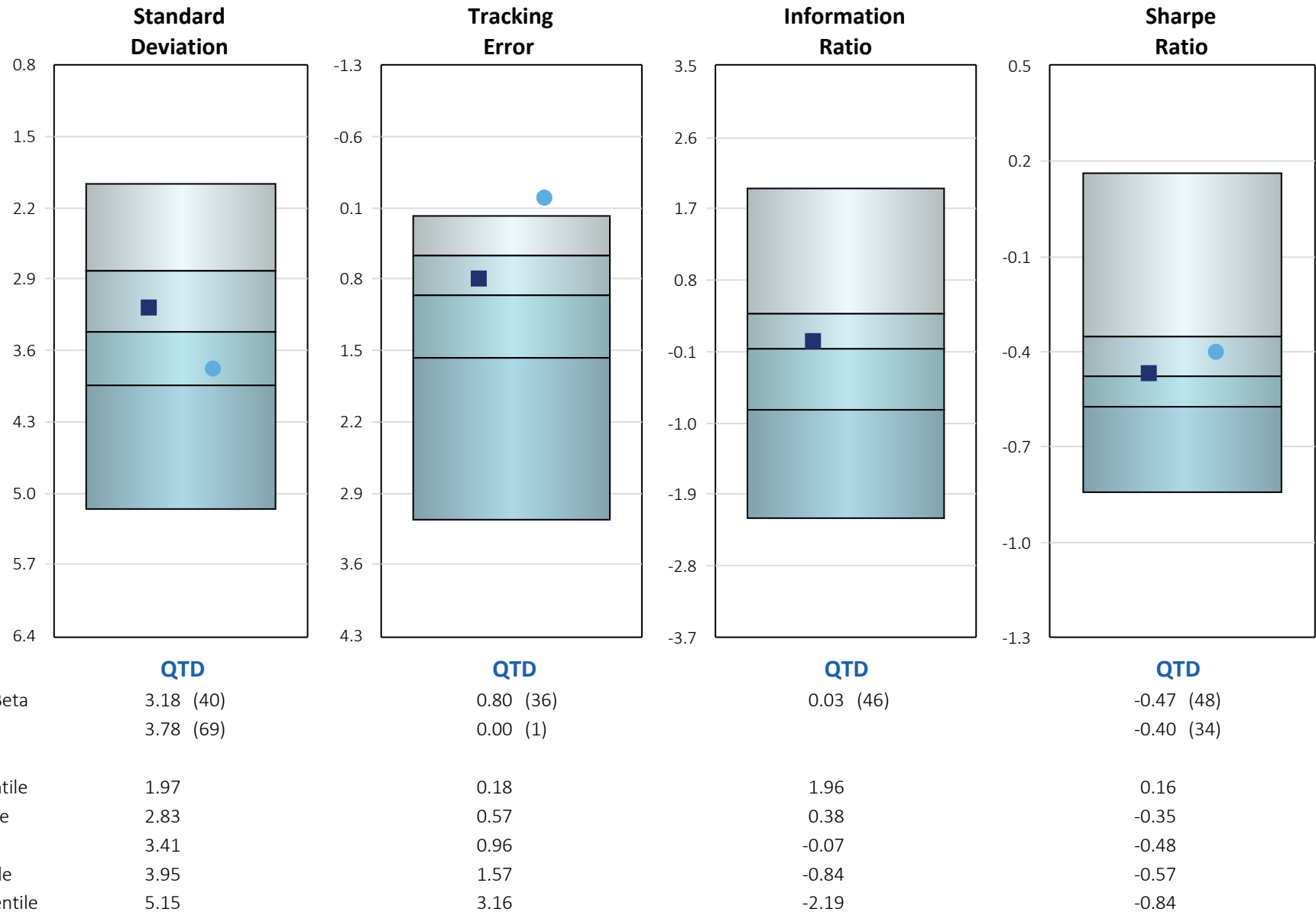
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Scientific Beta

Periods Ended March 31, 2022



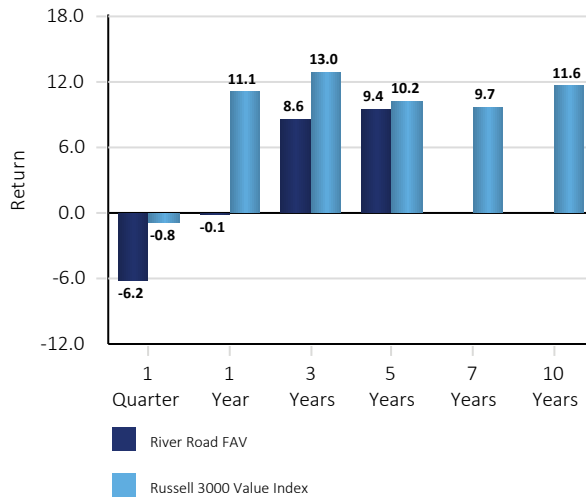
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

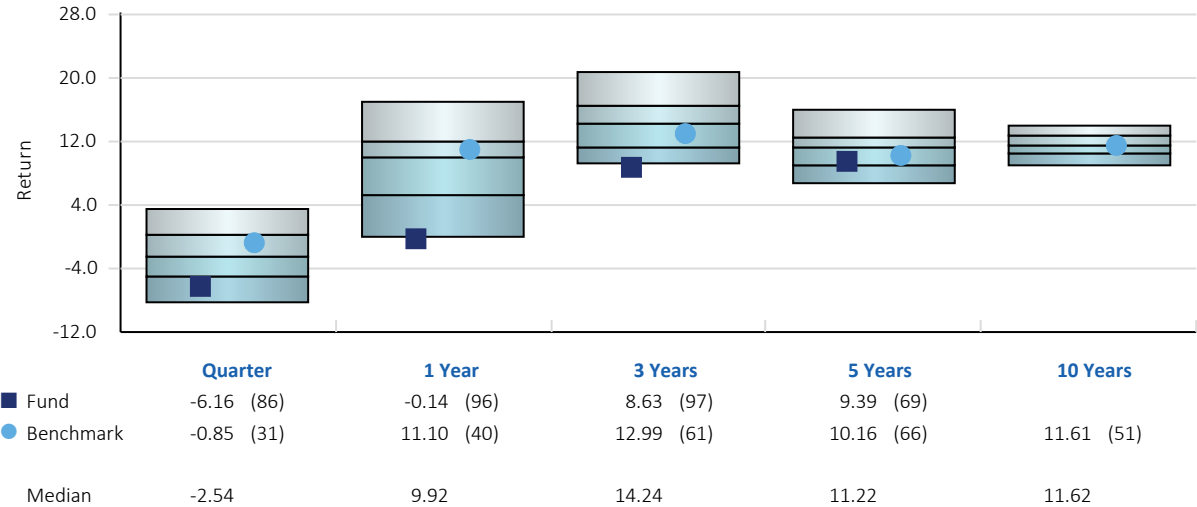
River Road FAV

Periods Ended March 31, 2022

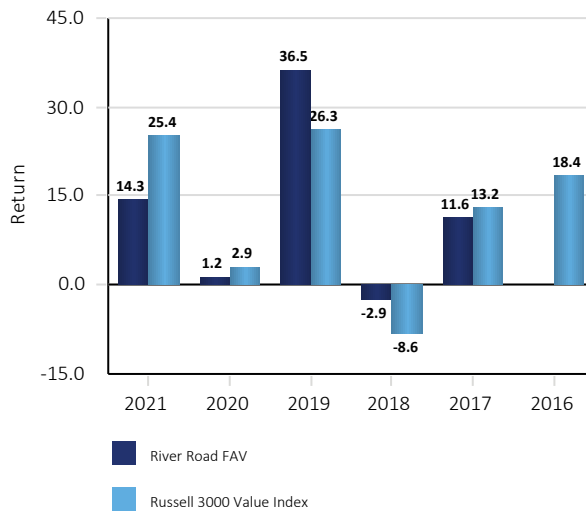
Comparative Performance



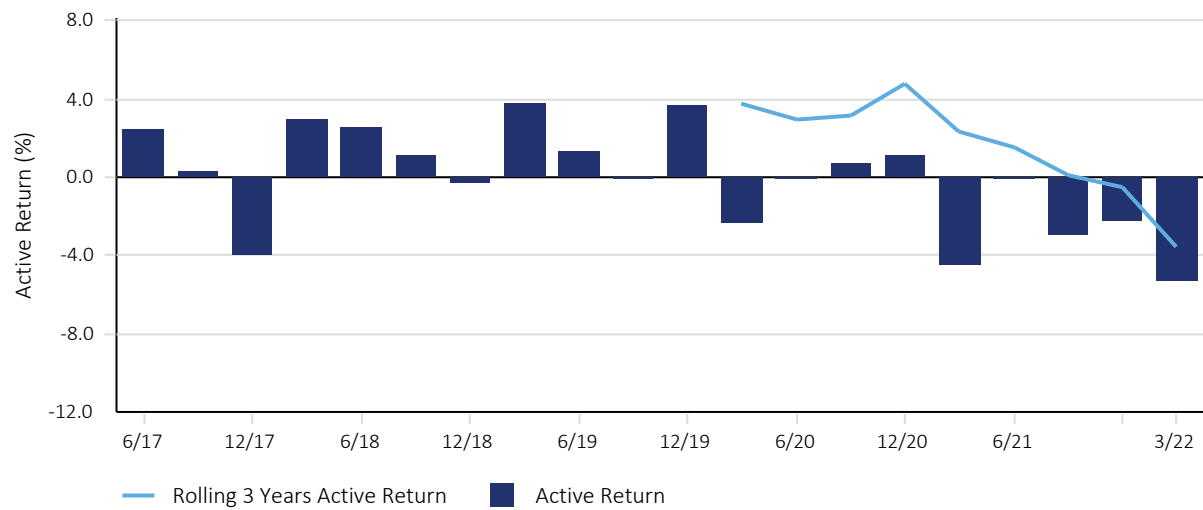
Peer Group Analysis: IM U.S. All Cap Value Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

River Road FAV

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
Maximum Return	7.22	6.16
Minimum Return	-5.54	-3.52
Return	-0.14	11.10
Cumulative Return	-0.14	11.10
Active Return	-10.64	0.00
Excess Return	0.45	11.09

Risk Summary Statistics

	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
Upside Risk	2.50	2.82
Downside Risk	7.66	5.70
Beta	0.93	1.00

Risk/Return Summary Statistics

	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
Standard Deviation	11.55	10.85
Alpha	-9.43	0.00
Active Return/Risk	-0.92	0.00
Tracking Error	5.66	0.00
Information Ratio	-1.88	
Sharpe Ratio	0.04	1.02

Correlation Statistics

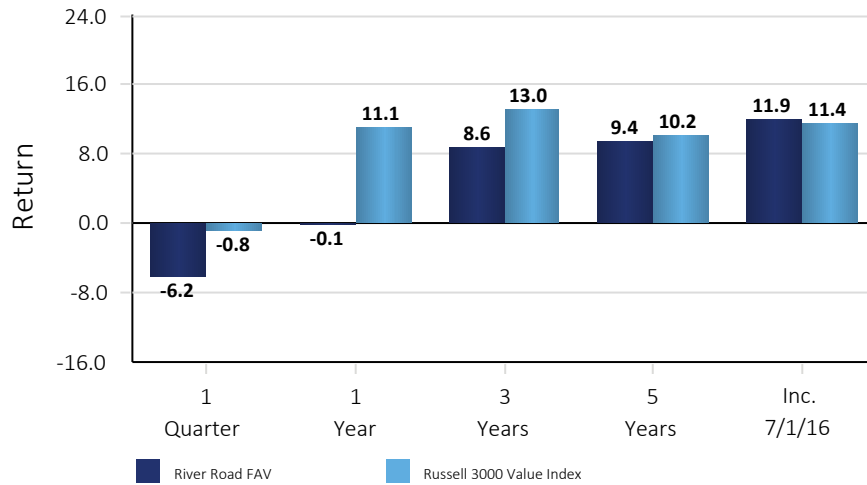
	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
R-Squared	0.76	1.00
Actual Correlation	0.87	1.00

Manager Summary

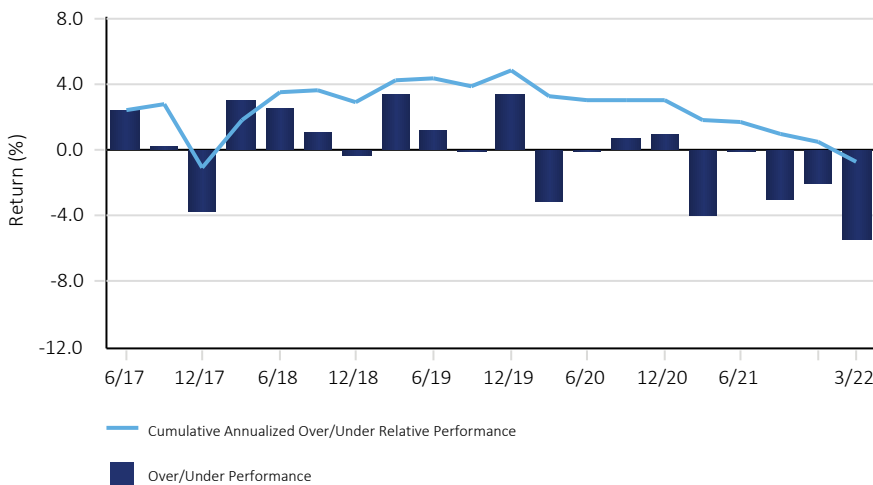
River Road FAV vs IM U.S. All Cap Value Equity (SA+CF)

Periods Ended March 31, 2022

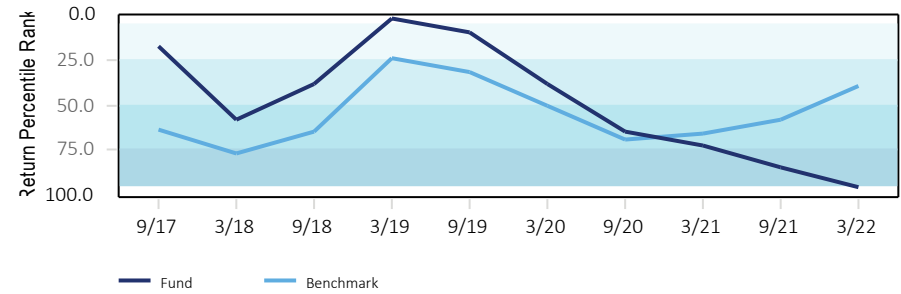
Comparative Performance



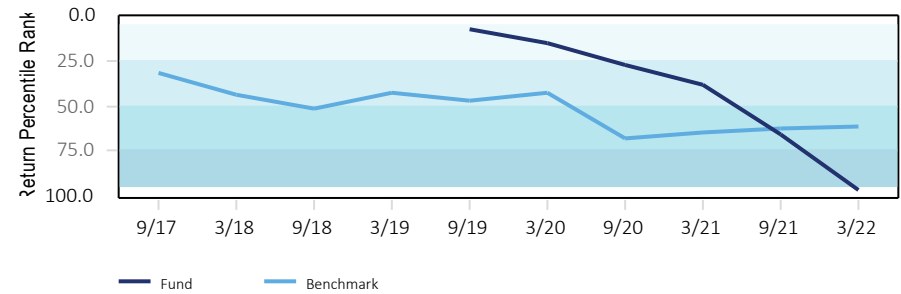
Relative Performance



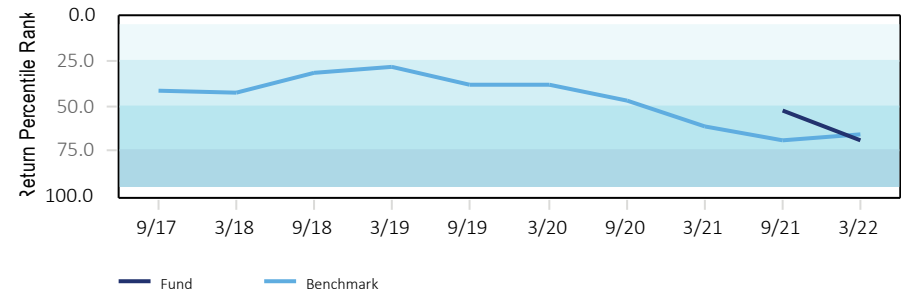
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



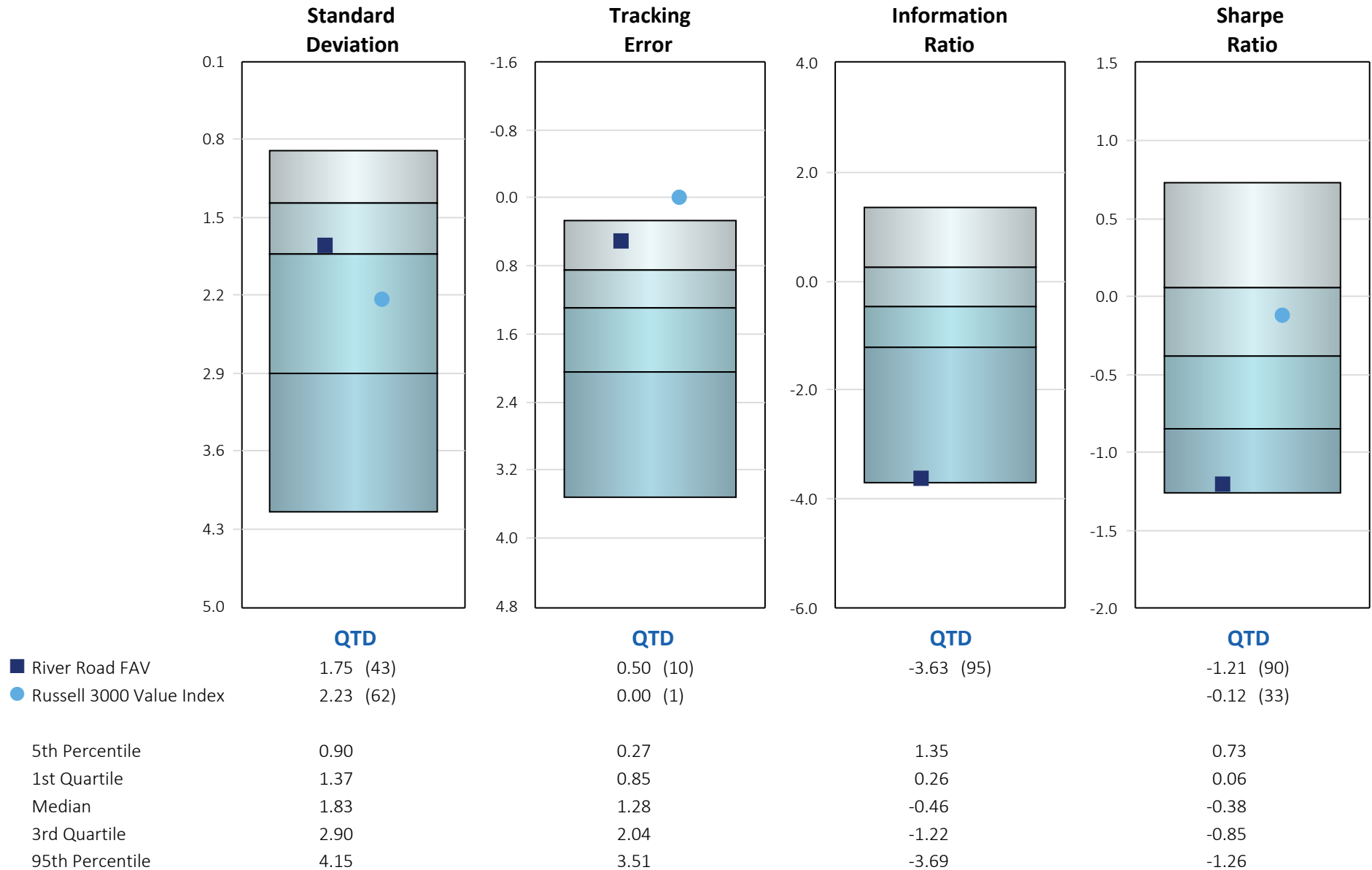
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

River Road FAV

Periods Ended March 31, 2022



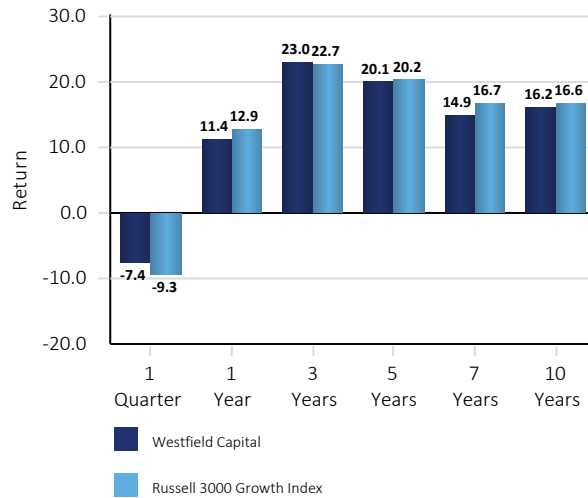
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

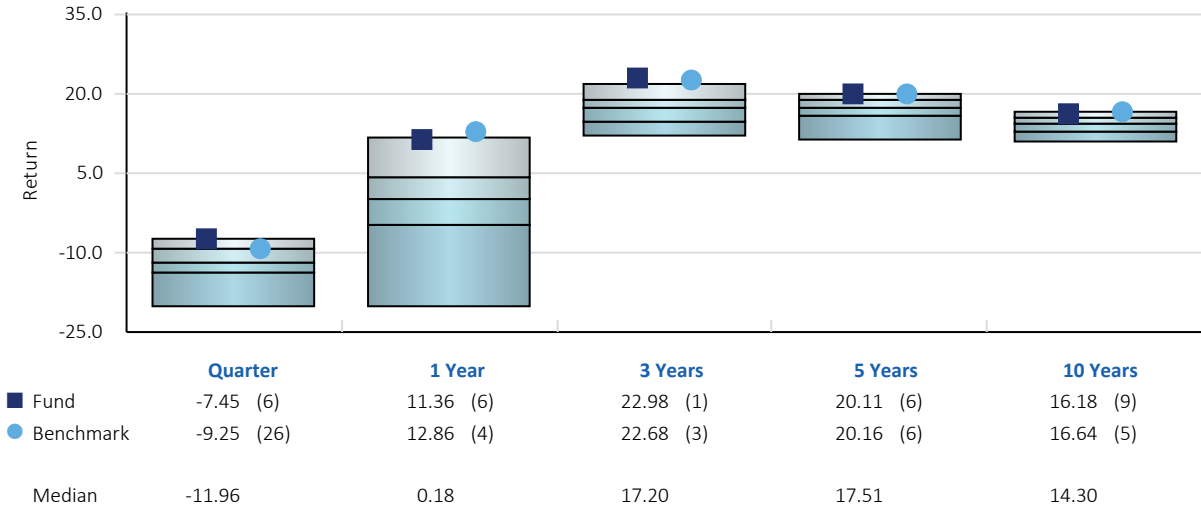
Westfield Capital

Periods Ended March 31, 2022

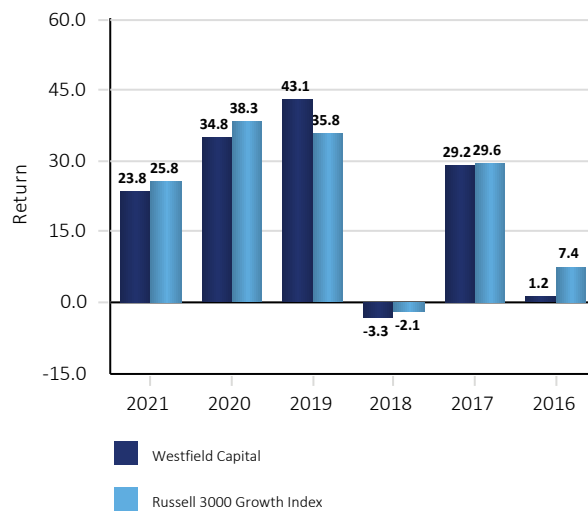
Comparative Performance



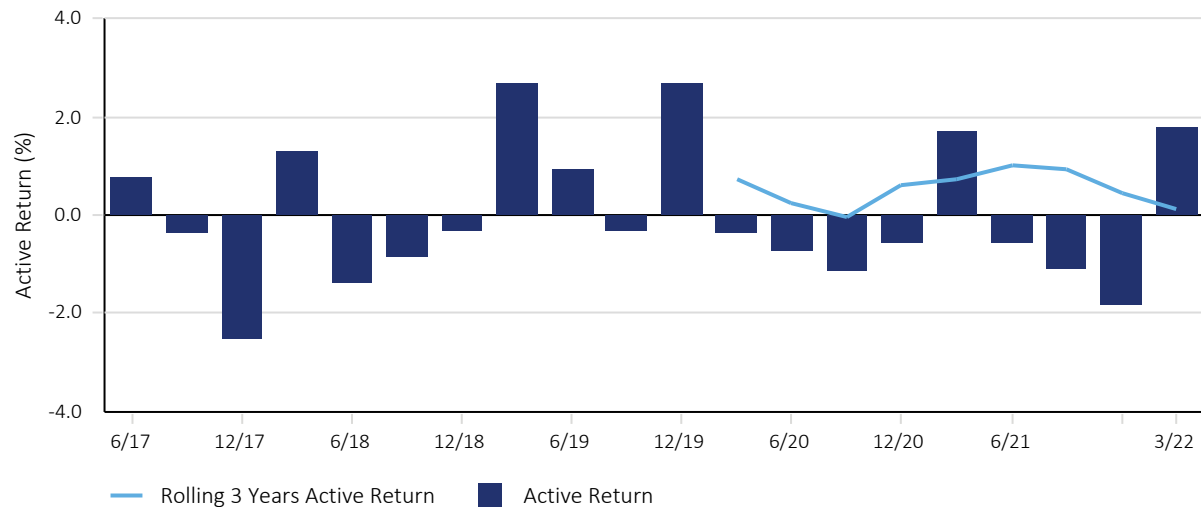
Peer Group Analysis: IM U.S. All Cap Growth Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Westfield Capital

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
Maximum Return	6.95	8.41
Minimum Return	-6.71	-8.86
Return	11.36	12.86
Cumulative Return	11.36	12.86
Active Return	-1.82	0.00
Excess Return	11.78	13.61

Risk Summary Statistics

	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
Upside Risk	3.36	3.98
Downside Risk	9.18	11.26
Beta	0.80	1.00

Risk/Return Summary Statistics

	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
Standard Deviation	14.41	17.35
Alpha	0.90	0.00
Active Return/Risk	-0.13	0.00
Tracking Error	5.16	0.00
Information Ratio	-0.35	
Sharpe Ratio	0.82	0.78

Correlation Statistics

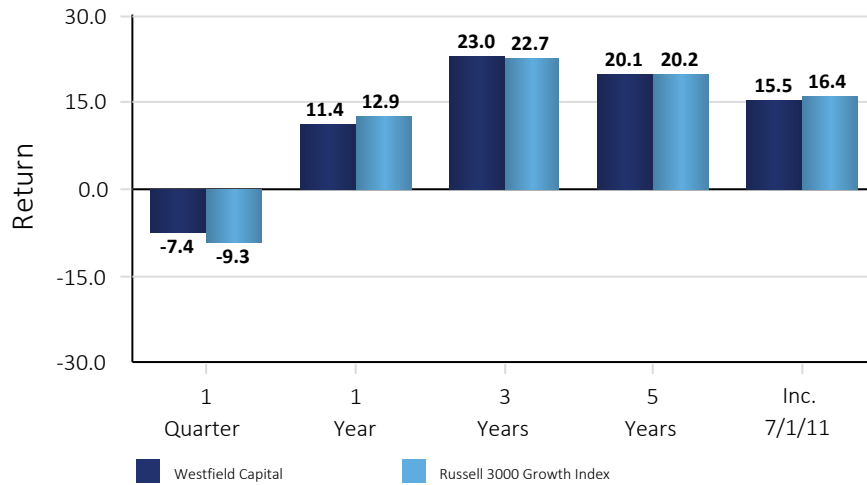
	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
R-Squared	0.93	1.00
Actual Correlation	0.96	1.00

Manager Summary

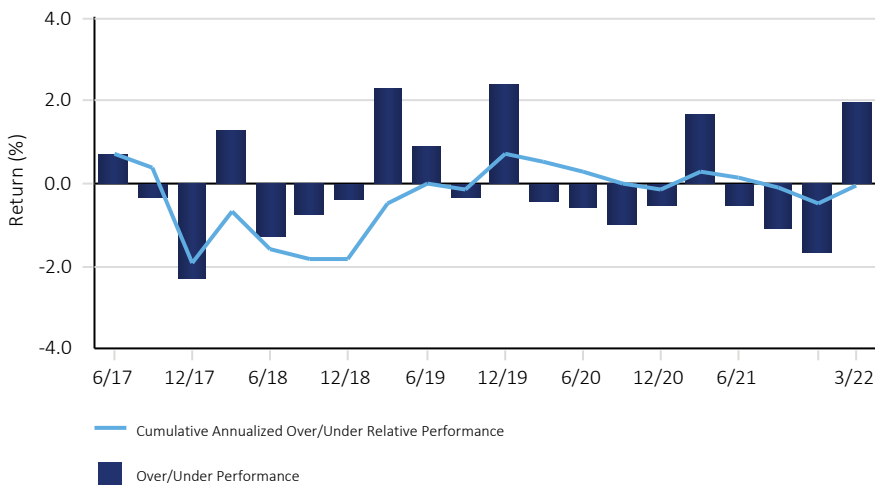
Westfield Capital vs IM U.S. All Cap Growth Equity (SA+CF)

Periods Ended March 31, 2022

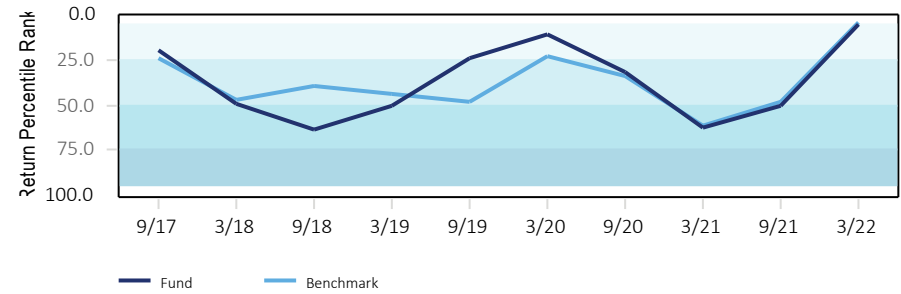
Comparative Performance



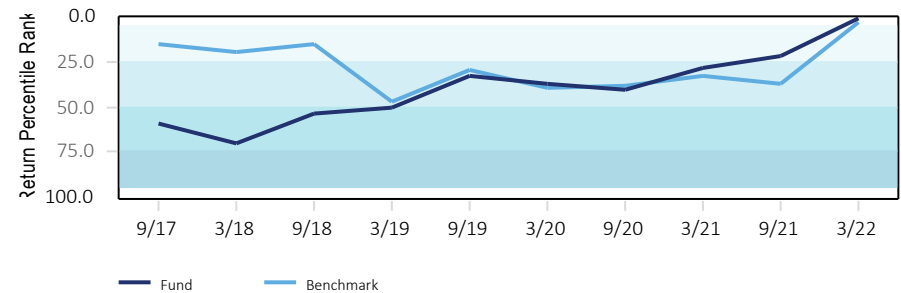
Relative Performance



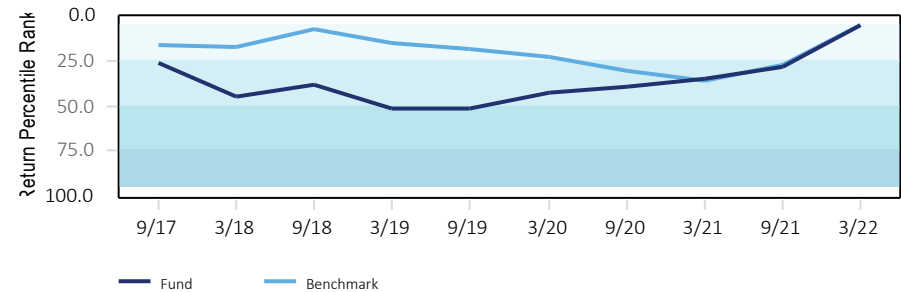
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



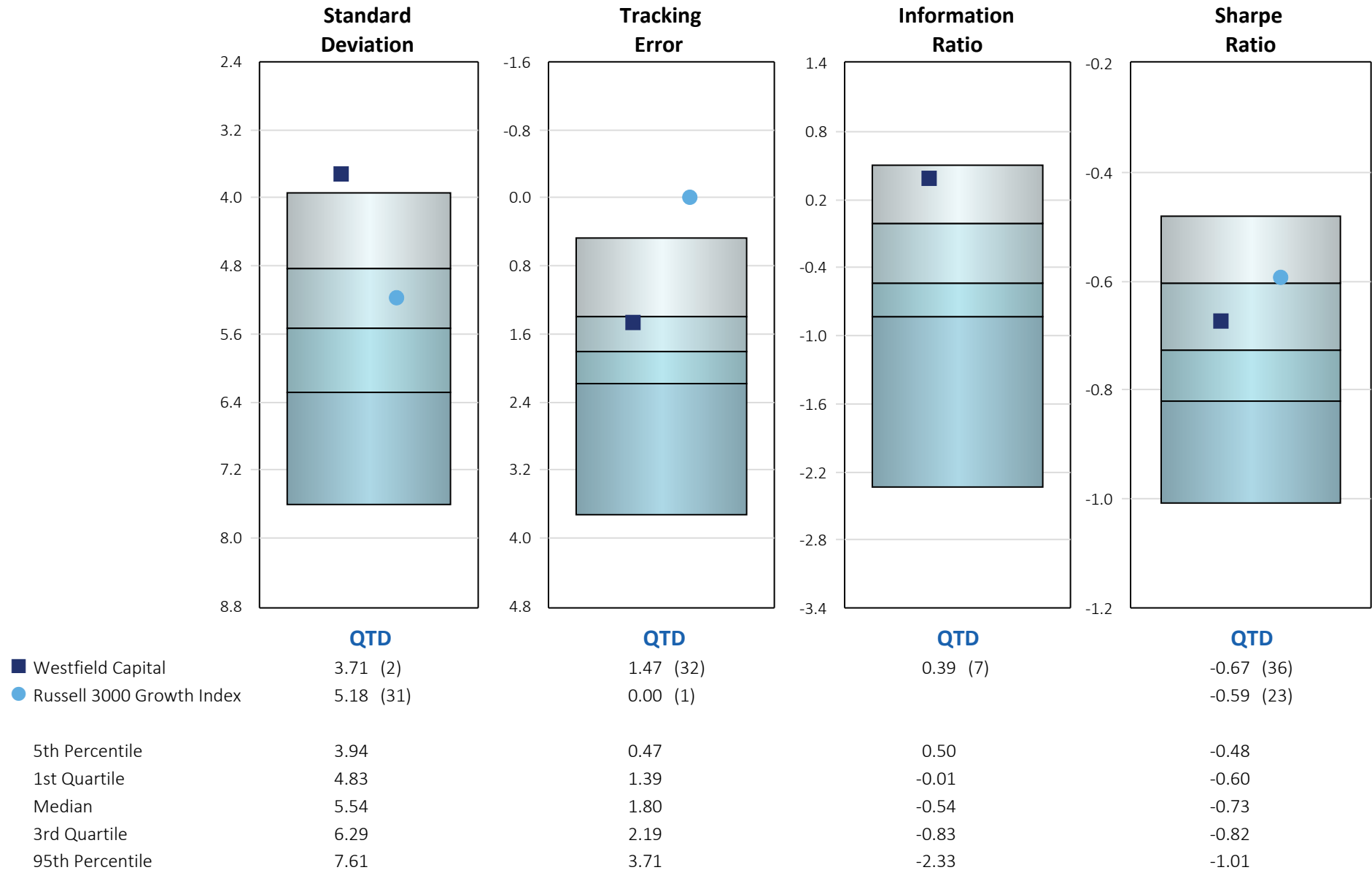
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Westfield Capital

Periods Ended March 31, 2022



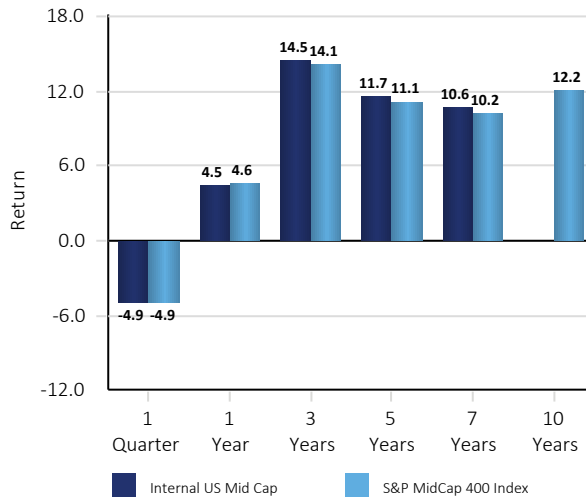
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

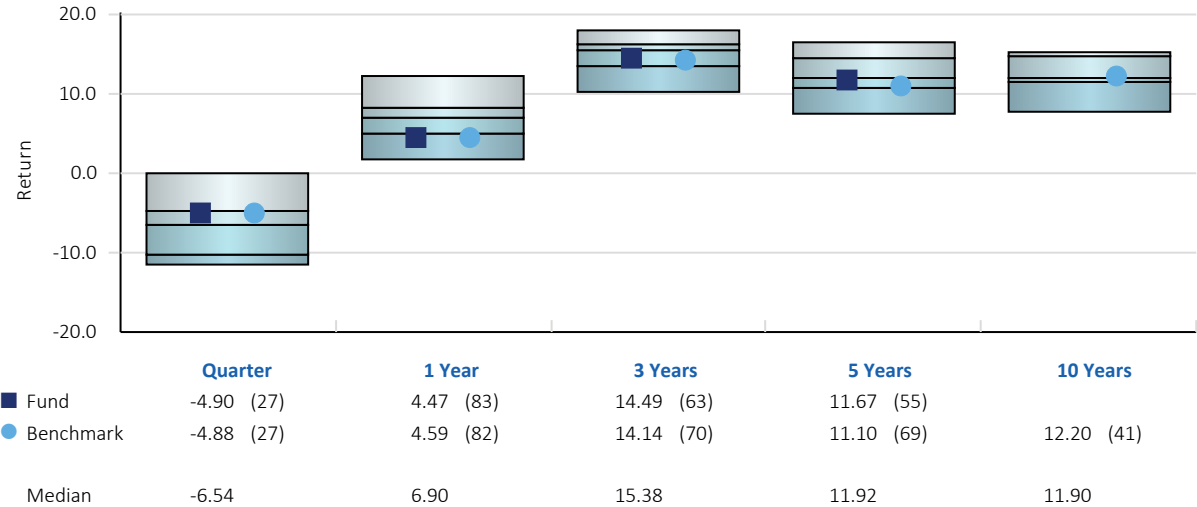
Internal US Mid Cap

Periods Ended March 31, 2022

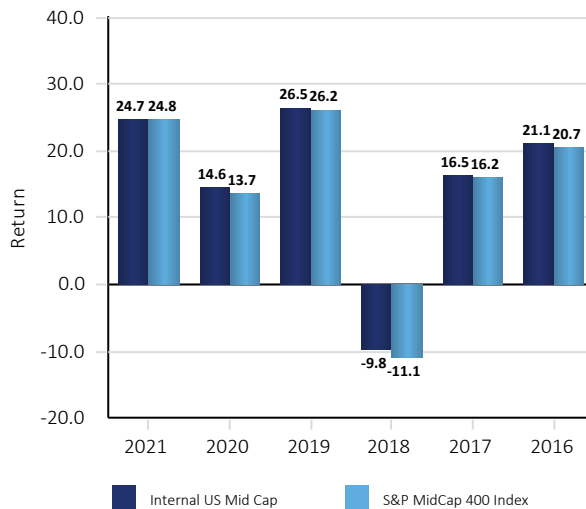
Comparative Performance



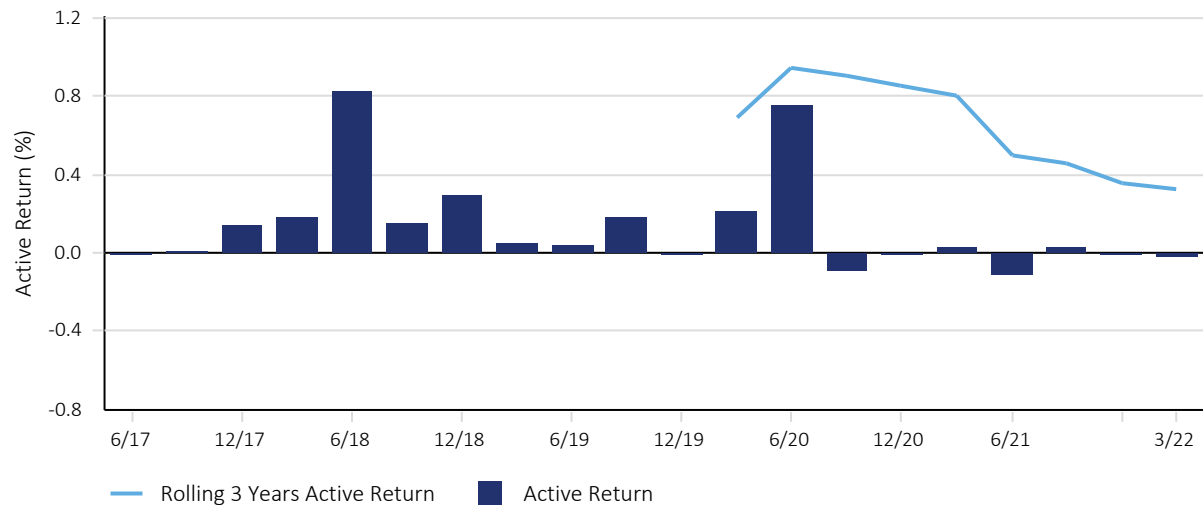
Peer Group Analysis: IM U.S. Mid Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Internal US Mid Cap

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
Maximum Return	5.92	5.89
Minimum Return	-7.25	-7.21
Return	4.47	4.59
Cumulative Return	4.47	4.59
Active Return	-0.10	0.00
Excess Return	5.15	5.25

Risk Summary Statistics

	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
Upside Risk	2.71	2.71
Downside Risk	8.88	8.80
Beta	1.00	1.00

Risk/Return Summary Statistics

	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
Standard Deviation	12.82	12.76
Alpha	-0.13	0.00
Active Return/Risk	-0.01	0.00
Tracking Error	0.23	0.00
Information Ratio	-0.44	
Sharpe Ratio	0.40	0.41

Correlation Statistics

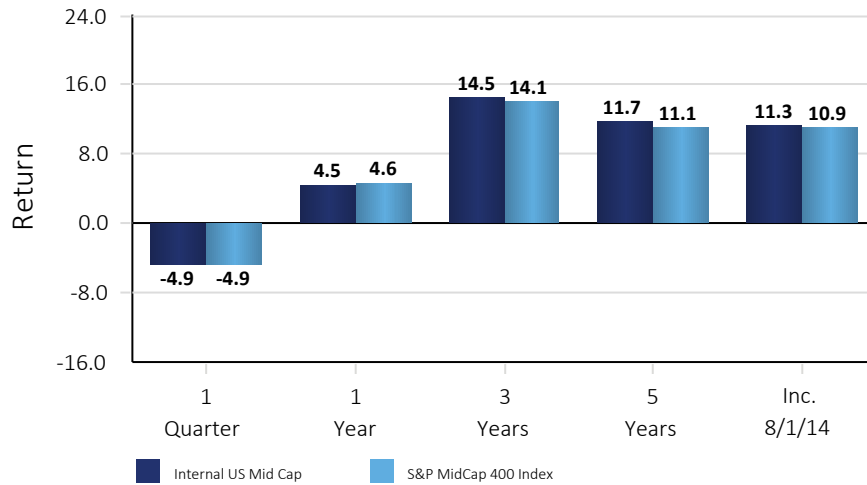
	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

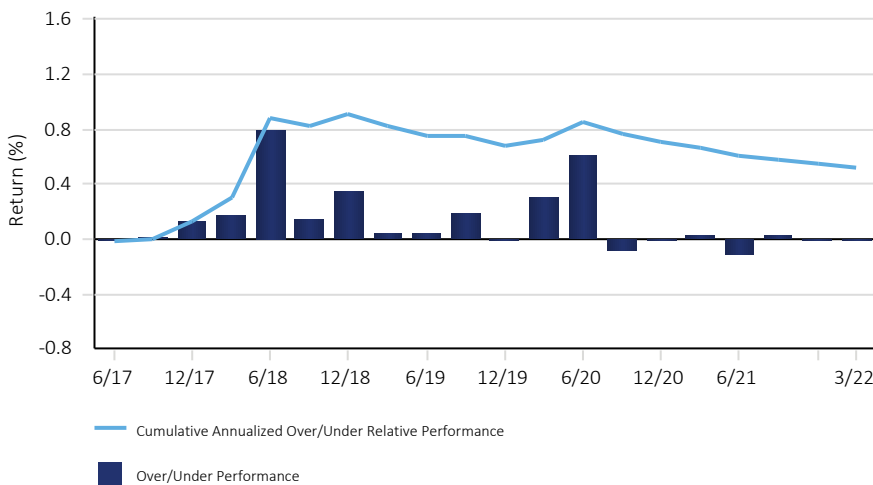
Internal US Mid Cap vs IM U.S. Mid Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

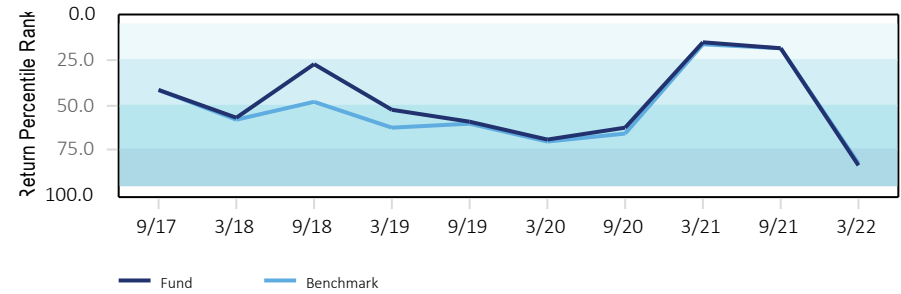
Comparative Performance



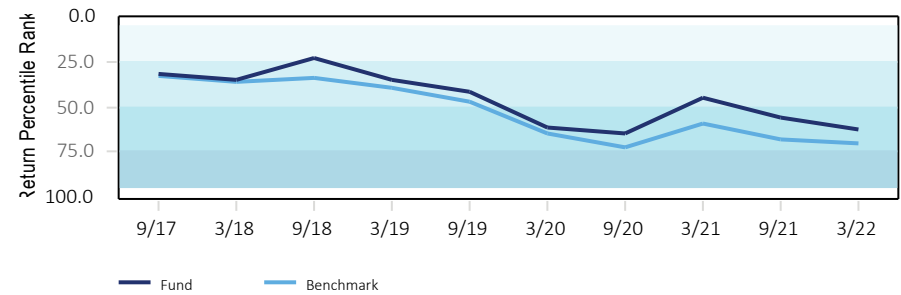
Relative Performance



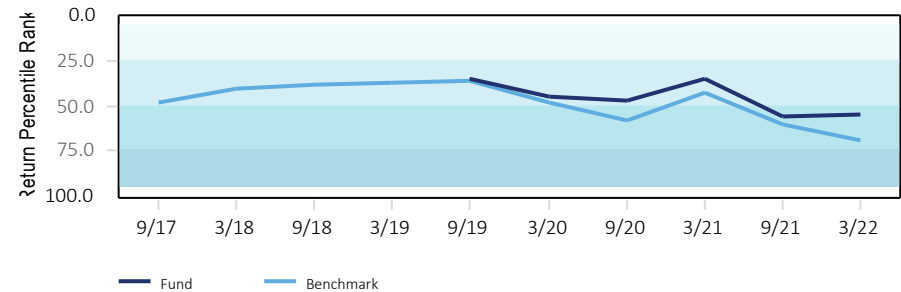
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



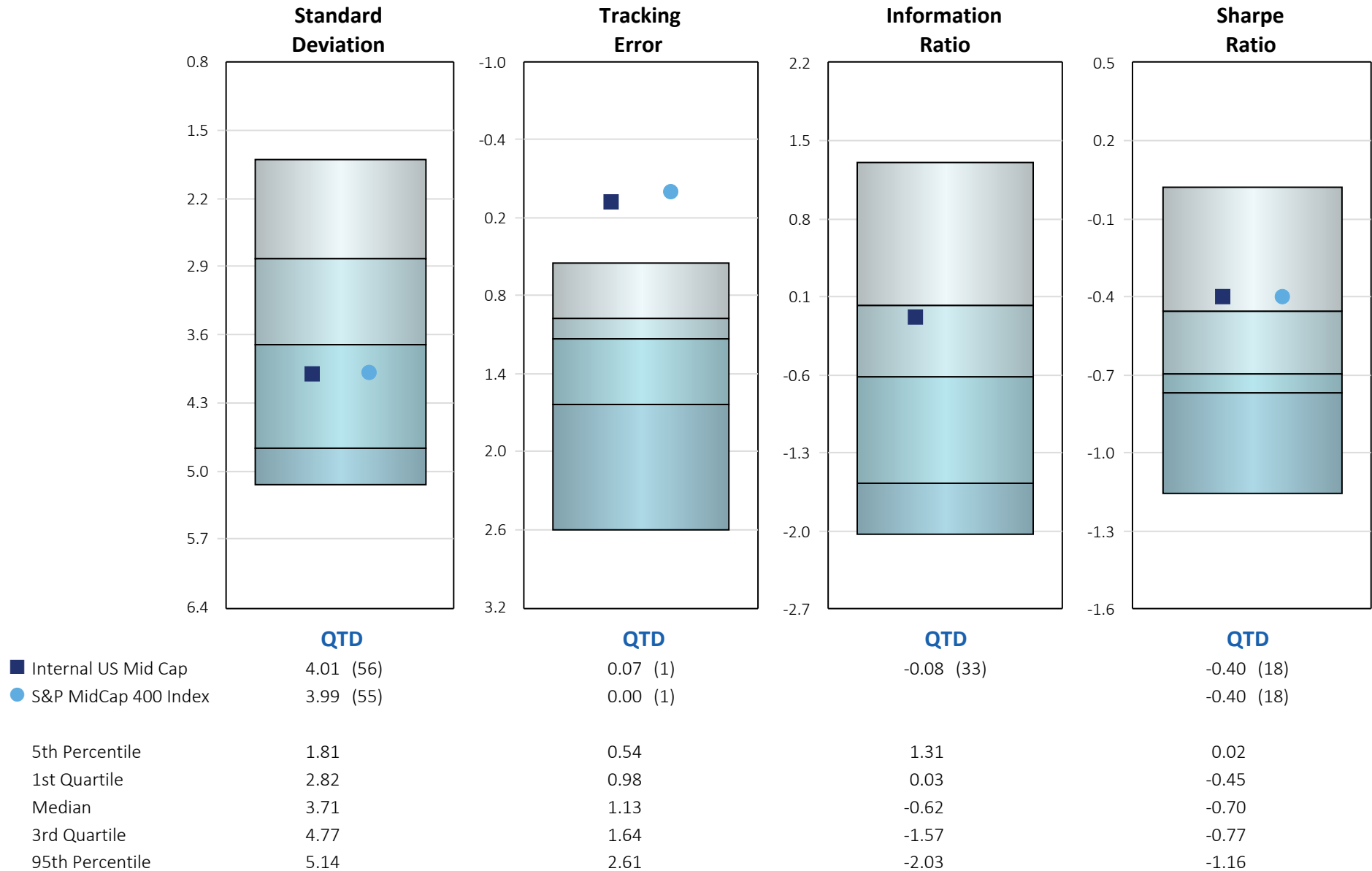
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Internal US Mid Cap

Periods Ended March 31, 2022



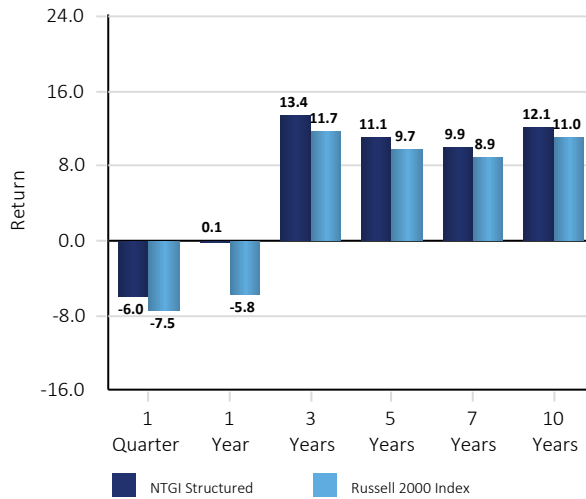
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

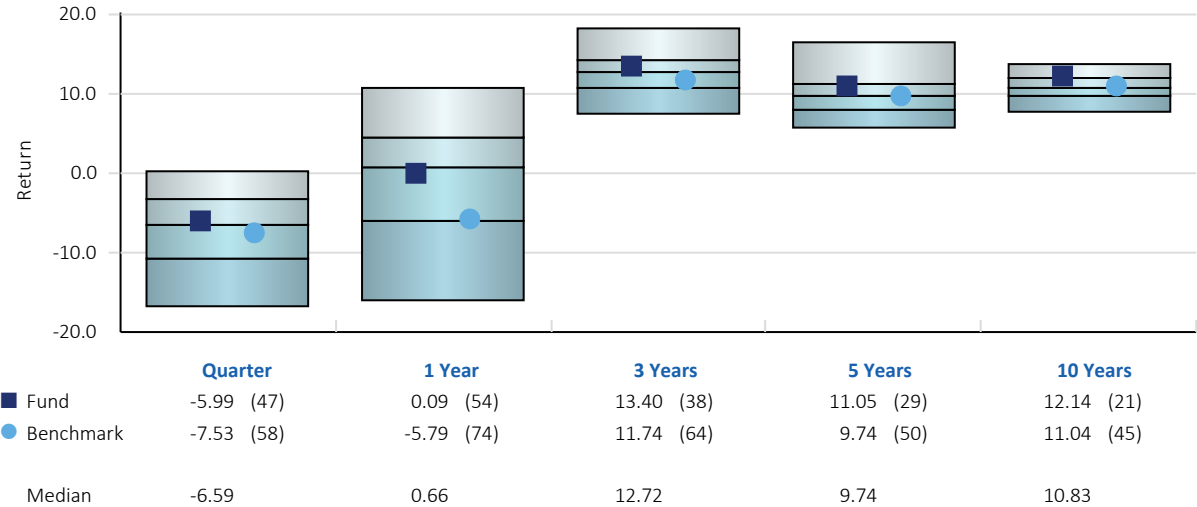
NTGI Structured

Periods Ended March 31, 2022

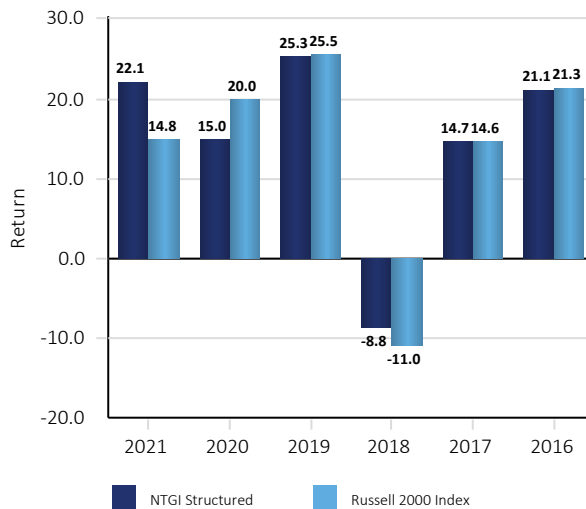
Comparative Performance



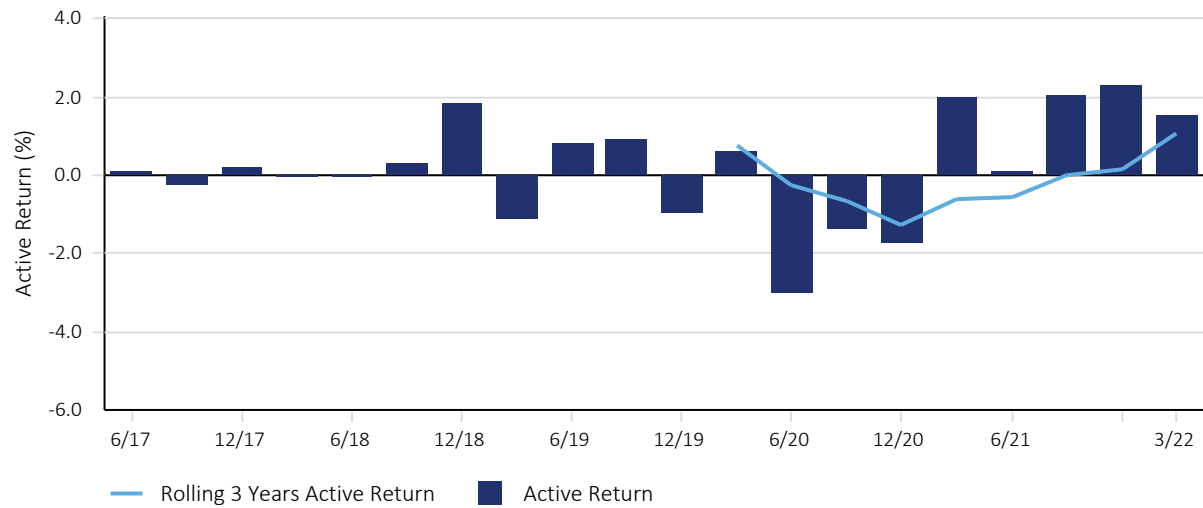
Peer Group Analysis: IM U.S. Small Cap Equity (MF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

NTGI Structured

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
Maximum Return	3.95	4.25
Minimum Return	-8.21	-9.63
Return	0.09	-5.79
Cumulative Return	0.09	-5.79
Active Return	5.85	0.00
Excess Return	0.71	-5.14

Risk Summary Statistics

	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
Upside Risk	1.97	1.80
Downside Risk	9.38	11.48
Beta	0.88	1.00

Risk/Return Summary Statistics

	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
Standard Deviation	11.59	12.99
Alpha	5.37	0.00
Active Return/Risk	0.50	0.00
Tracking Error	2.54	0.00
Information Ratio	2.31	
Sharpe Ratio	0.06	-0.40

Correlation Statistics

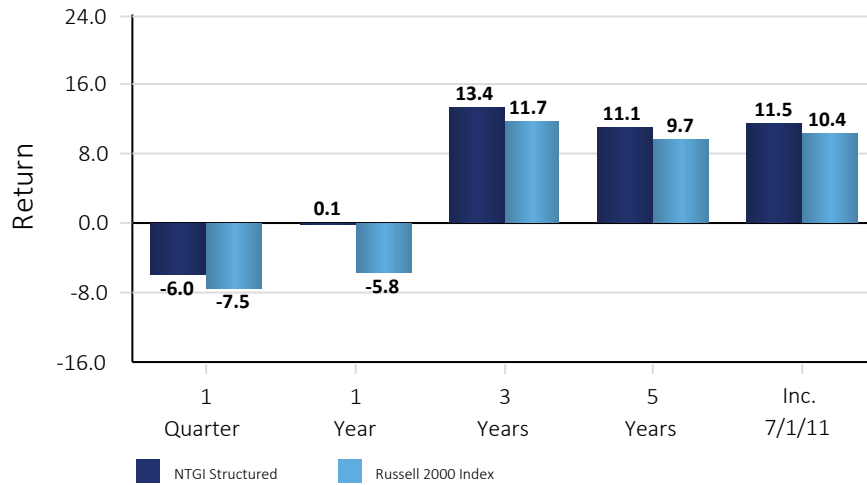
	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
R-Squared	0.97	1.00
Actual Correlation	0.99	1.00

Manager Summary

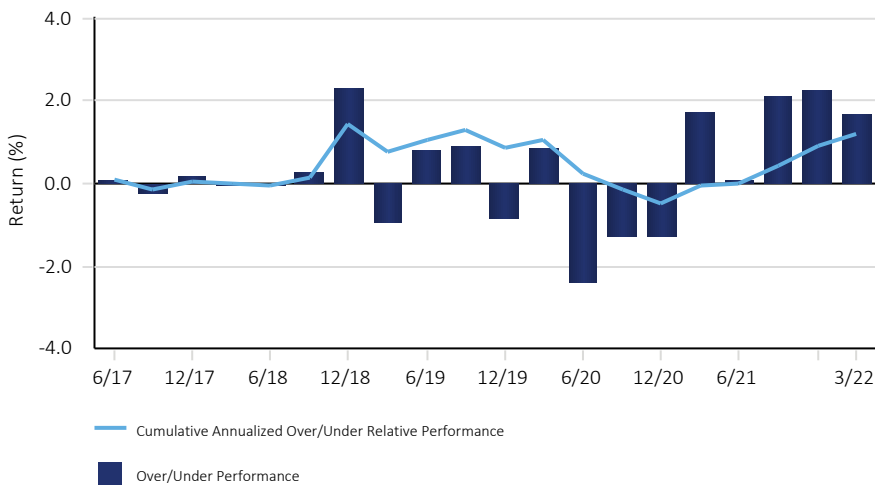
NTGI Structured vs IM U.S. Small Cap Equity (MF)

Periods Ended March 31, 2022

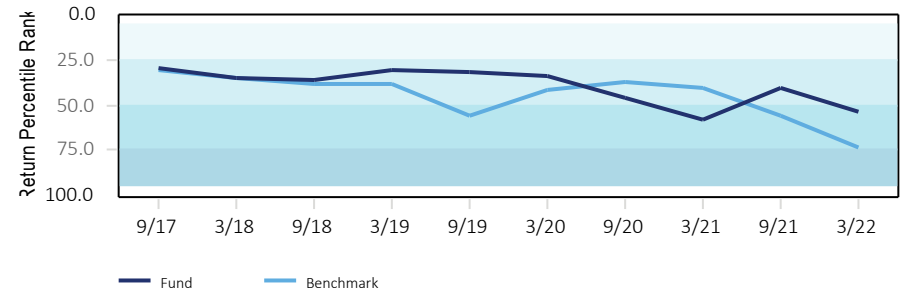
Comparative Performance



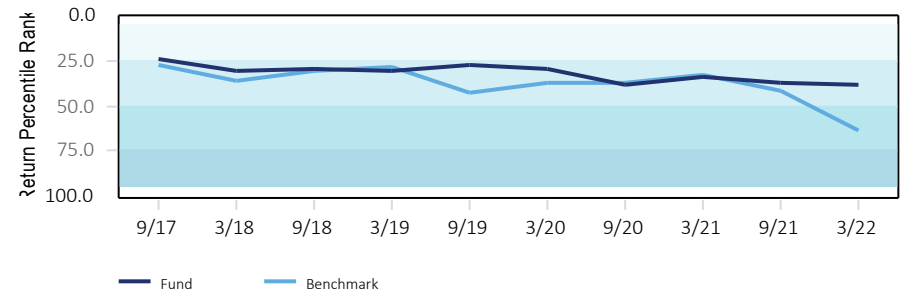
Relative Performance



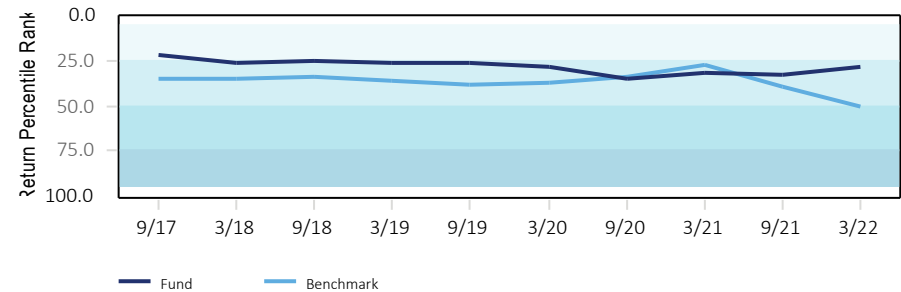
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



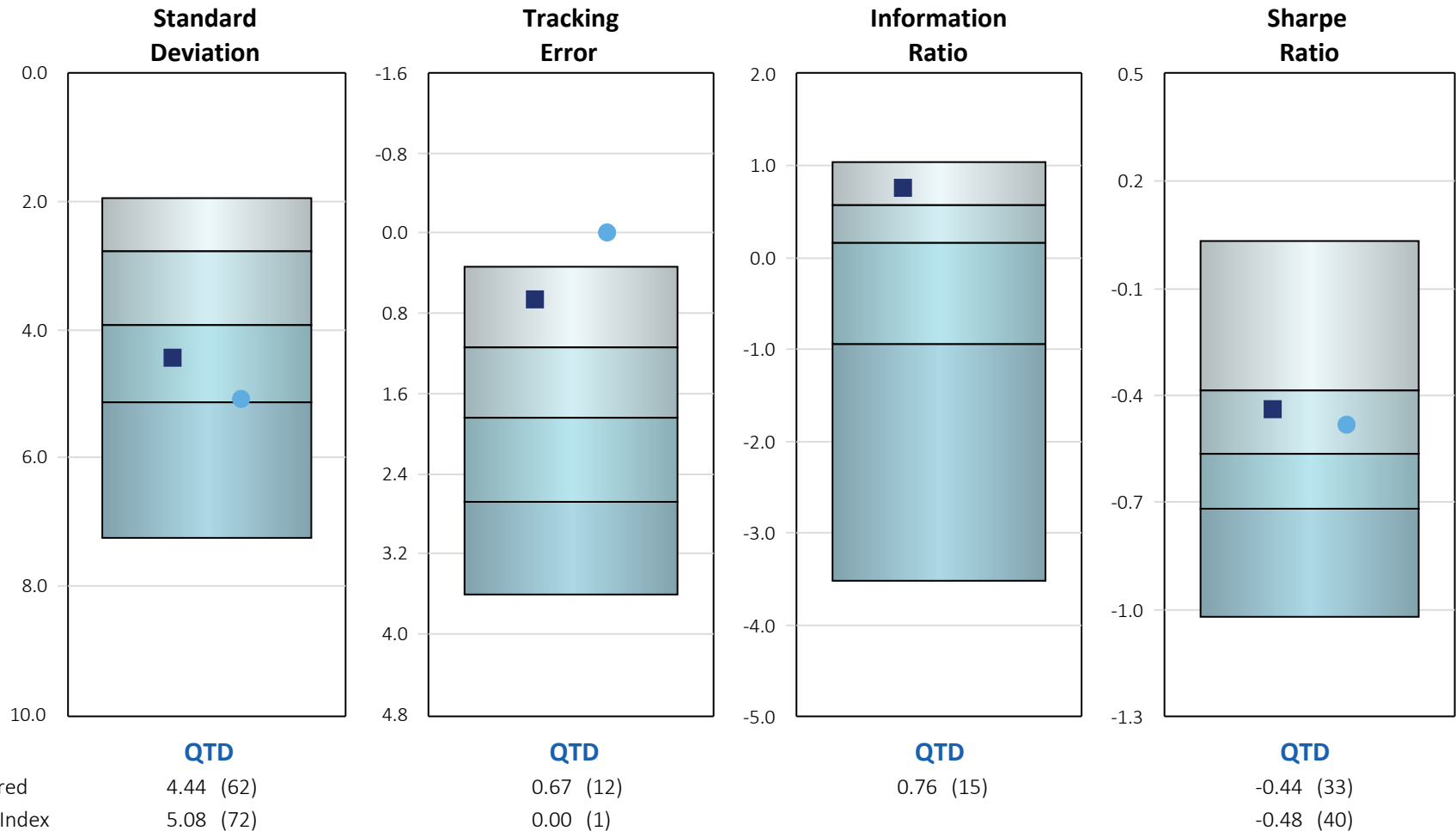
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

NTGI Structured

Periods Ended March 31, 2022



5th Percentile	1.94	0.33	1.05	0.03
1st Quartile	2.78	1.13	0.58	-0.38
Median	3.92	1.84	0.16	-0.56
3rd Quartile	5.13	2.67	-0.94	-0.72
95th Percentile	7.25	3.60	-3.52	-1.02

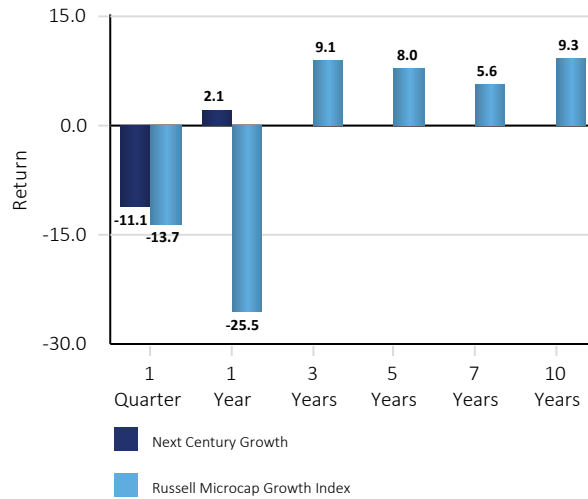
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

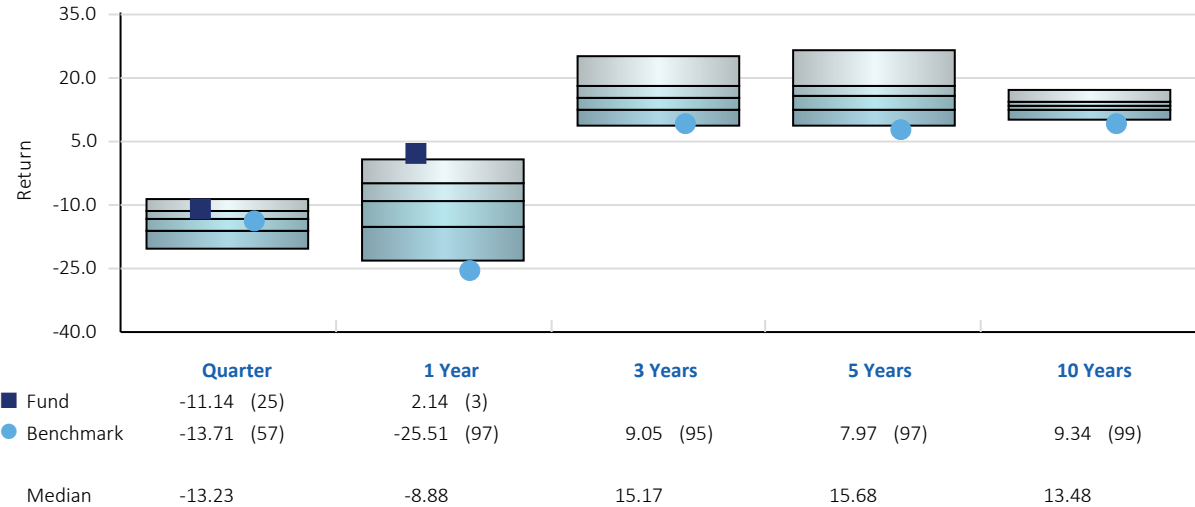
Next Century Growth

Periods Ended March 31, 2022

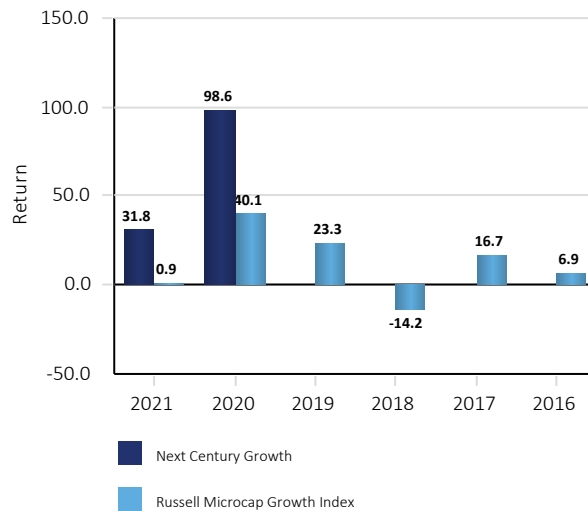
Comparative Performance



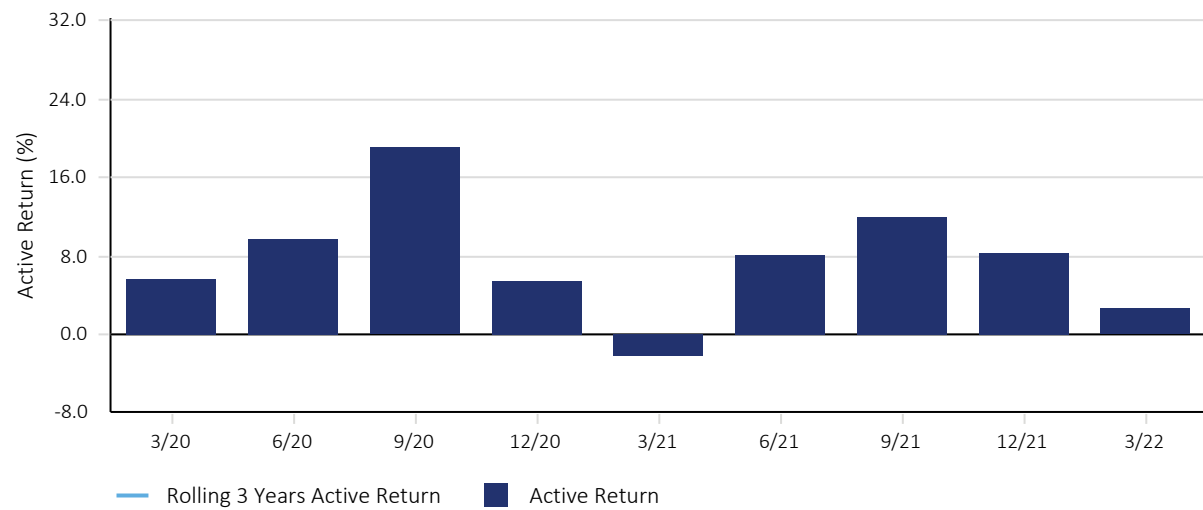
Peer Group Analysis: IM U.S. Small Cap Growth Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Next Century Growth

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
Maximum Return	8.22	6.36
Minimum Return	-12.37	-14.51
Return	2.14	-25.51
Cumulative Return	2.14	-25.51
Active Return	31.45	0.00
Excess Return	4.00	-27.45

Risk Summary Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
Upside Risk	3.96	2.03
Downside Risk	13.94	18.33
Beta	0.99	1.00

Risk/Return Summary Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
Standard Deviation	19.53	17.97
Alpha	35.99	0.00
Active Return/Risk	1.61	0.00
Tracking Error	8.10	0.00
Information Ratio	3.88	
Sharpe Ratio	0.20	-1.53

Correlation Statistics

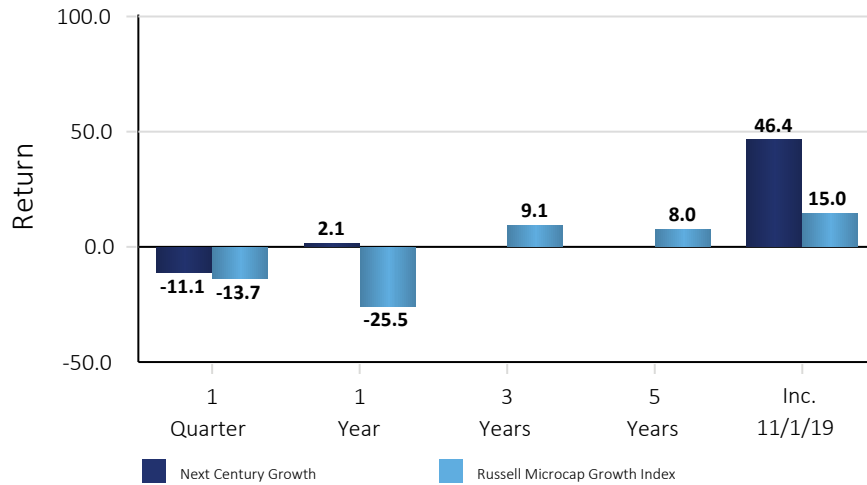
	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
R-Squared	0.83	1.00
Actual Correlation	0.91	1.00

Manager Summary

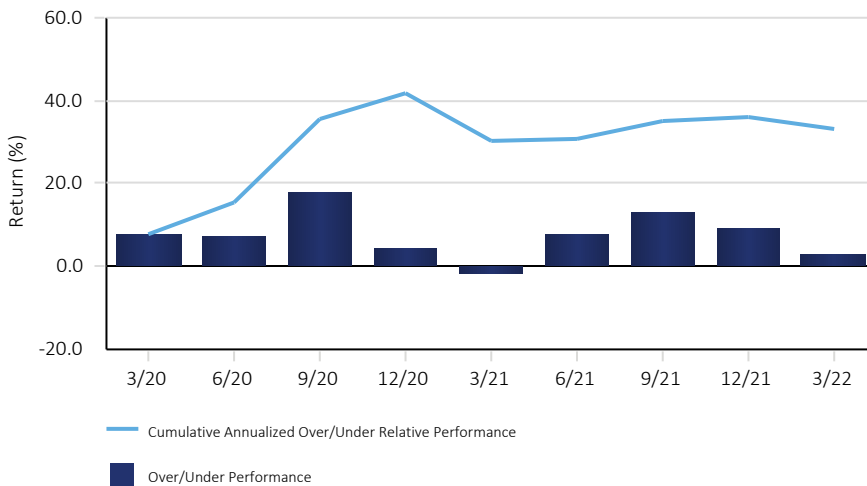
Next Century Growth vs IM U.S. Small Cap Growth Equity (SA+CF)

Periods Ended March 31, 2022

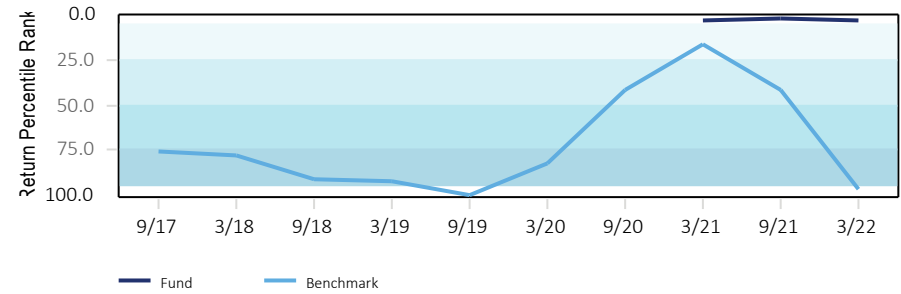
Comparative Performance



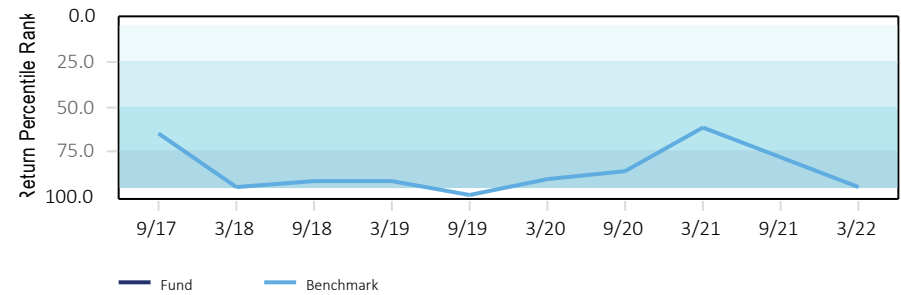
Relative Performance



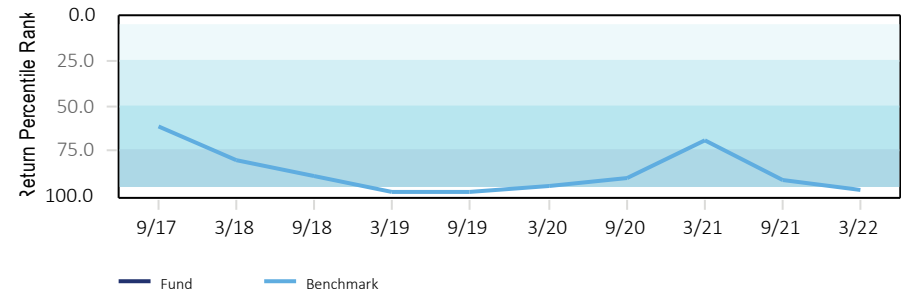
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



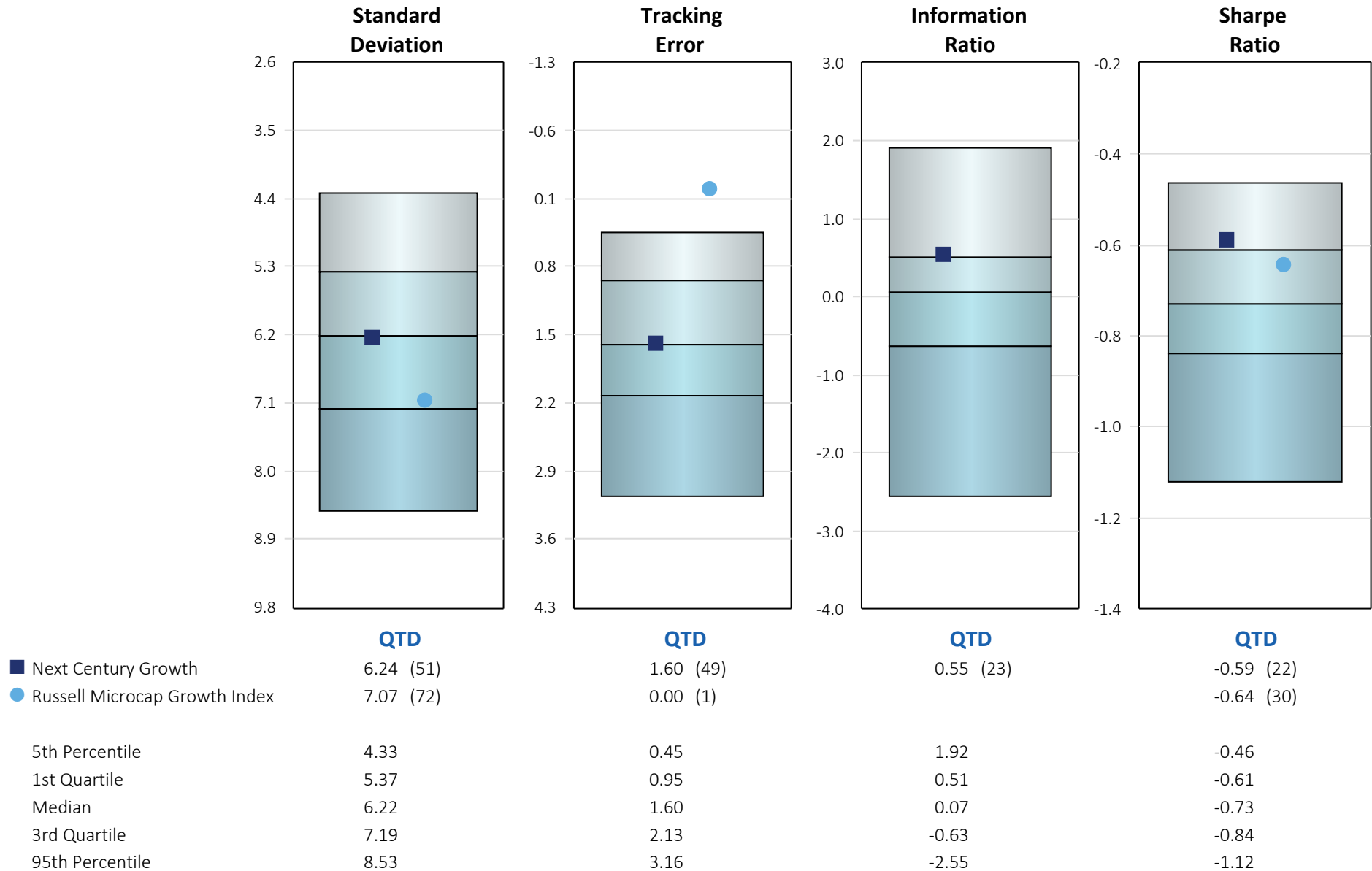
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Next Century Growth

Periods Ended March 31, 2022



Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

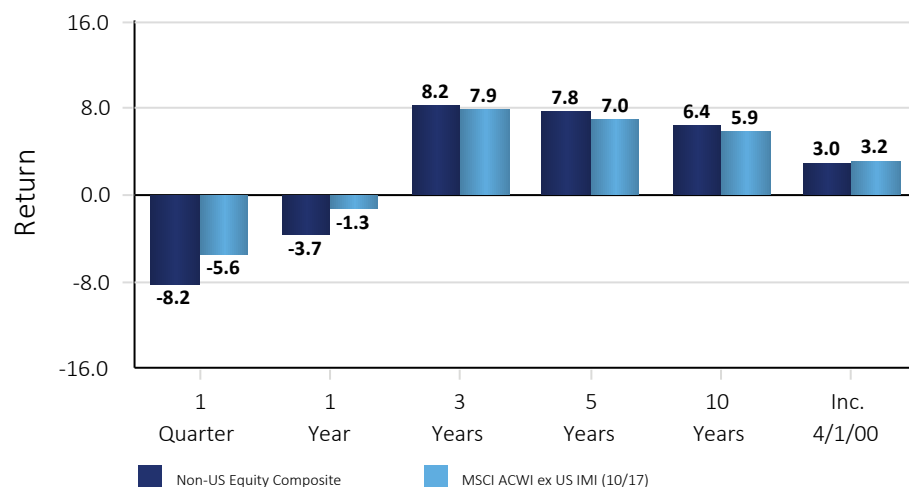
Non-US Equity Composite

Composite Performance Summary

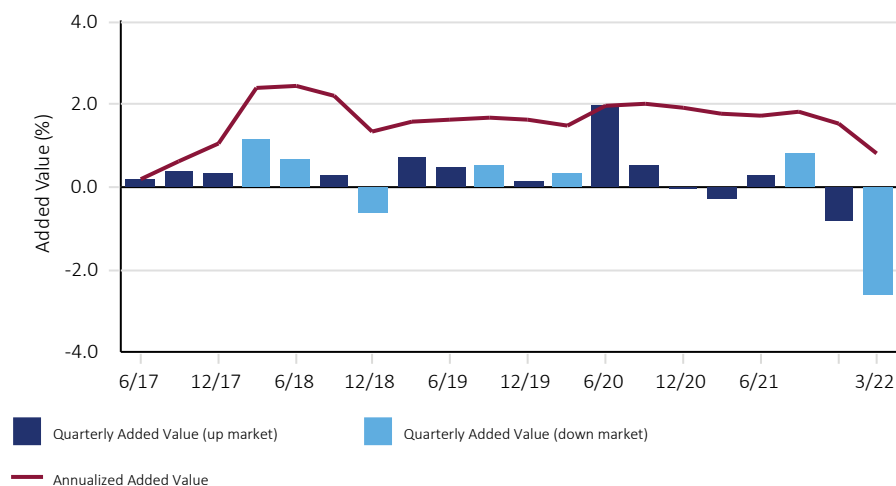
Non-US Equity Composite

Periods Ended March 31, 2022

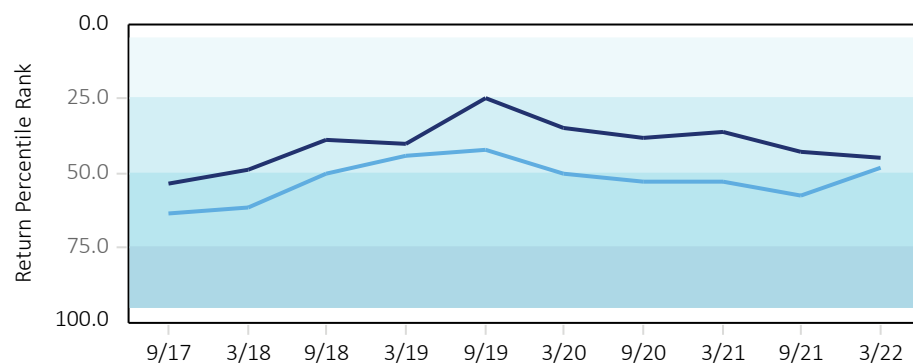
Comparative Performance



Added Value History

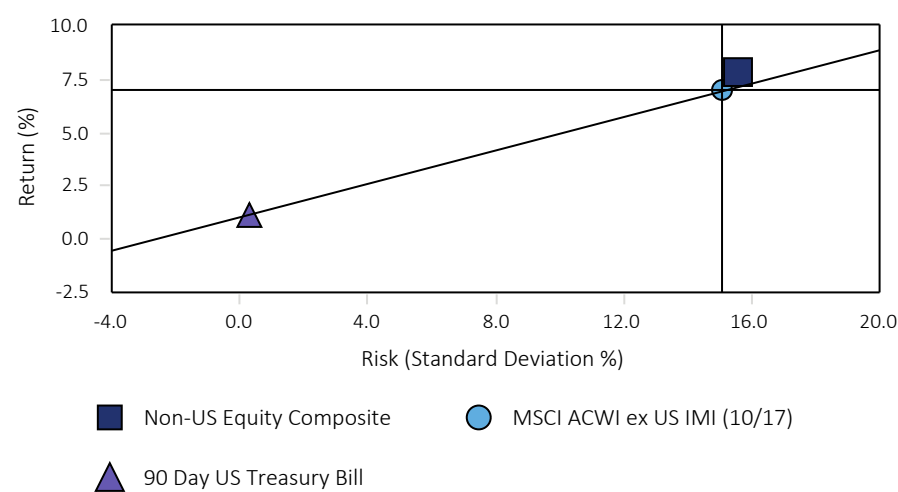


Rolling Percentile Rank: IM International Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Non-US Equity Composite	10	1 (10%)	8 (80%)	1 (10%)	0 (0%)
Benchmark	10	0 (0%)	5 (50%)	5 (50%)	0 (0%)

Risk and Return 04/1/17 - 03/31/22

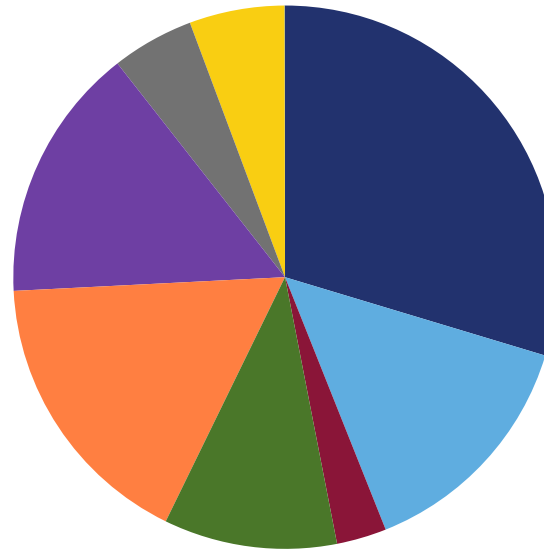


Asset Allocation By Manager

Non-US Equity Composite

Periods Ended March 31, 2022

Mar-2022 : 1,387,932,248

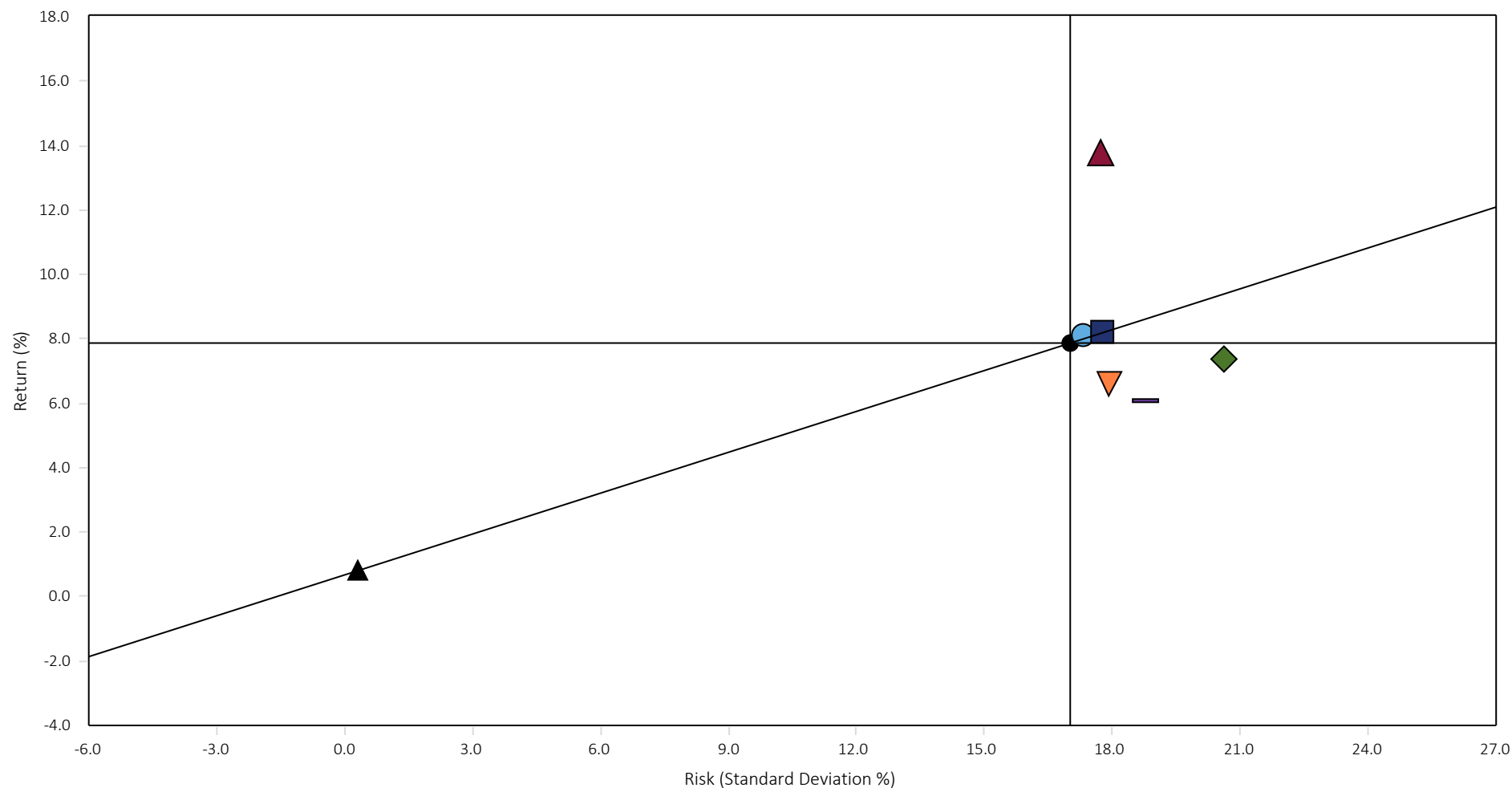


	Market Value \$	Allocation (%)
BlackRock World Ex US	411,565,074	29.7
American Century	198,652,055	14.3
Axiom	41,180,340	3.0
Franklin Templeton	142,969,530	10.3
Lazard Asset Mgmt	235,468,571	17.0
LSV Asset Mgmt	211,231,793	15.2
JP Morgan Emerging Markets	67,783,326	4.9
Pzena Emerging Markets	78,618,405	5.7
Non-US Equity Transition	463,154	0.0

Risk vs. Return

Non-US Equity Composite

Periods Ended 3 Years Ending March 31, 2022



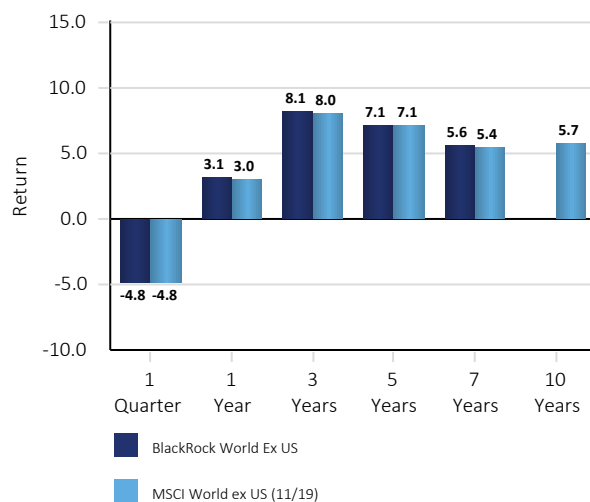
- Non-US Equity Composite
- Blackrock ACWI Ex-US Small Cap
- BlackRock World Ex US
- American Century
- Franklin Templeton
- JP Morgan Emerging Markets
- Lazard Asset Mgmt
- LSV Asset Mgmt
- Pzena Emerging Markets
- MSCI ACWI ex US IMI (10/17)
- 90 Day US Treasury Bill

Performance Summary

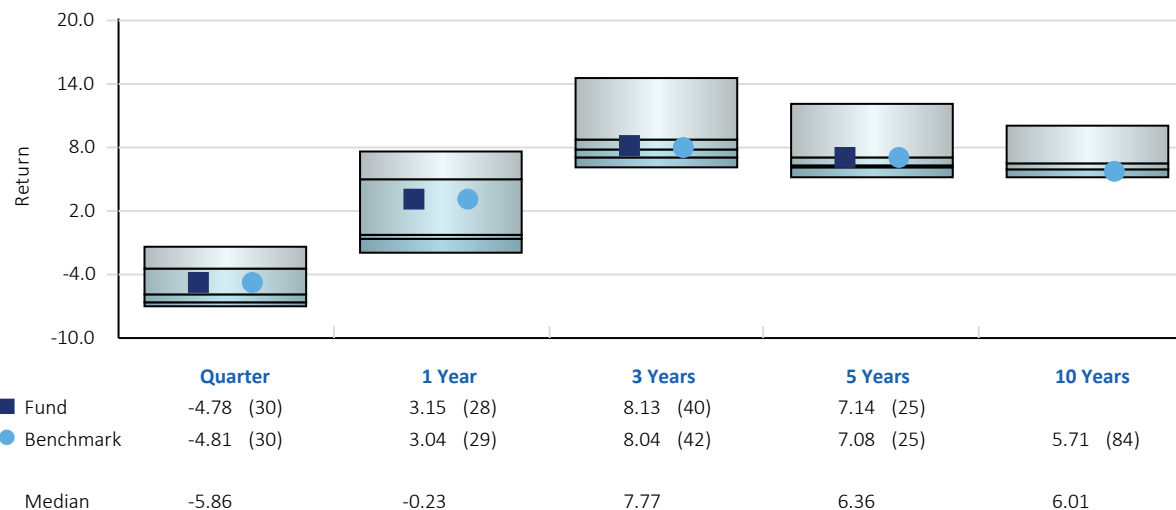
BlackRock World Ex US

Periods Ended March 31, 2022

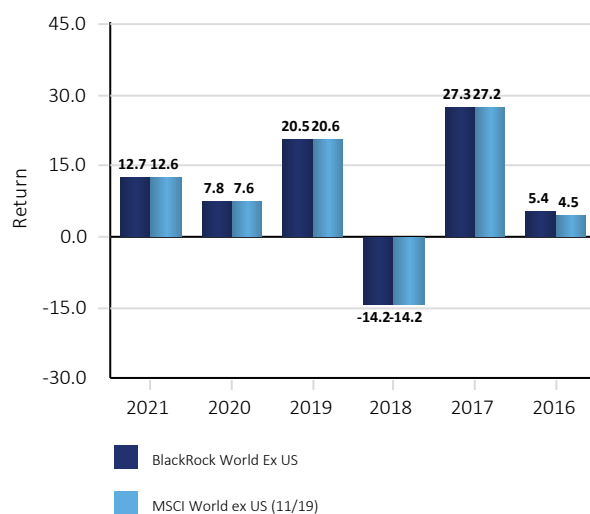
Comparative Performance



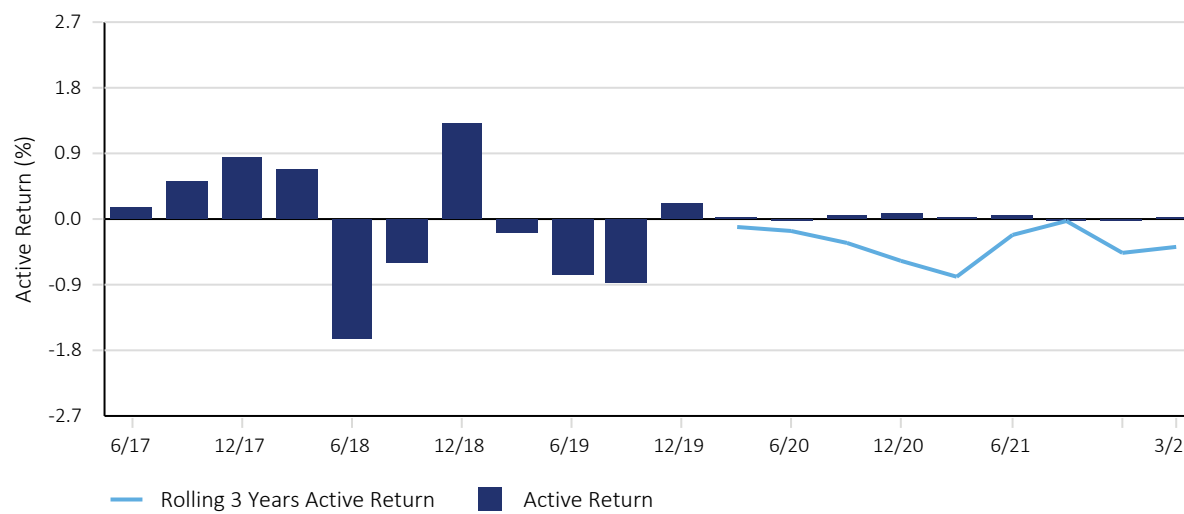
Peer Group Analysis: IM Enhanced and Indexed International Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

BlackRock World Ex US

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

BlackRock World Ex US

Maximum Return	5.08
Minimum Return	-4.68
Return	3.15
Cumulative Return	3.15
Active Return	0.12
Excess Return	3.62

MSCI World ex US (11/19)

5.08
-4.68
3.04
3.04
0.00
3.50

Risk Summary Statistics

BlackRock World Ex US

Upside Risk	2.31
Downside Risk	7.32
Beta	1.01

MSCI World ex US (11/19)

2.25
7.29
1.00

Risk/Return Summary Statistics

BlackRock World Ex US

Standard Deviation	10.79
Alpha	0.07
Active Return/Risk	0.01
Tracking Error	0.55
Information Ratio	0.21
Sharpe Ratio	0.34

MSCI World ex US (11/19)

10.63
0.00
0.00
0.00
0.00
0.33

Correlation Statistics

BlackRock World Ex US

R-Squared	1.00
Actual Correlation	1.00

MSCI World ex US (11/19)

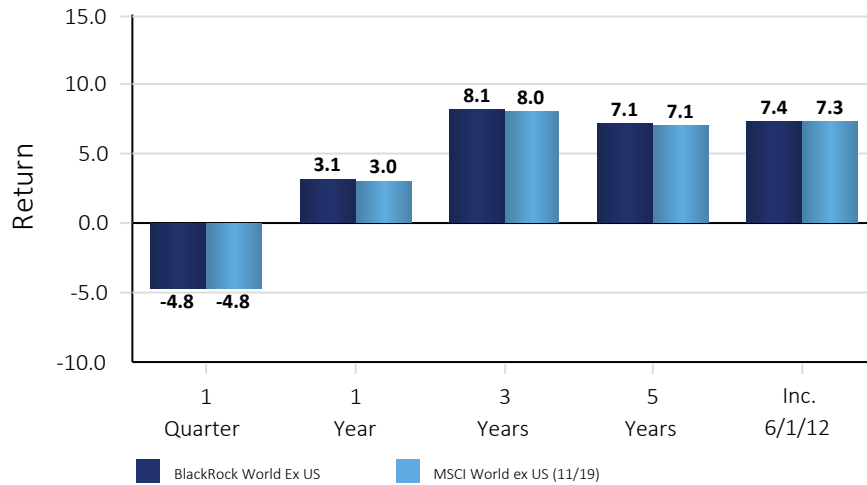
1.00
1.00

Manager Summary

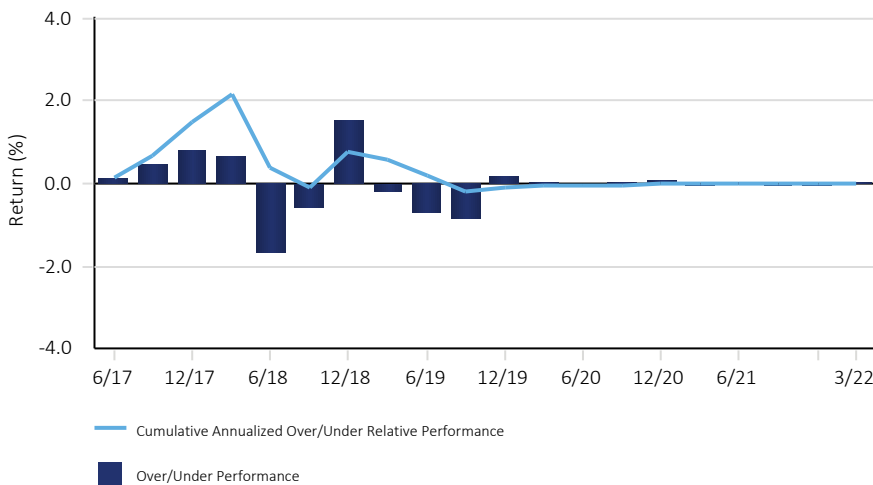
BlackRock World Ex US vs IM Enhanced and Indexed International Equity (SA+CF)

Periods Ended March 31, 2022

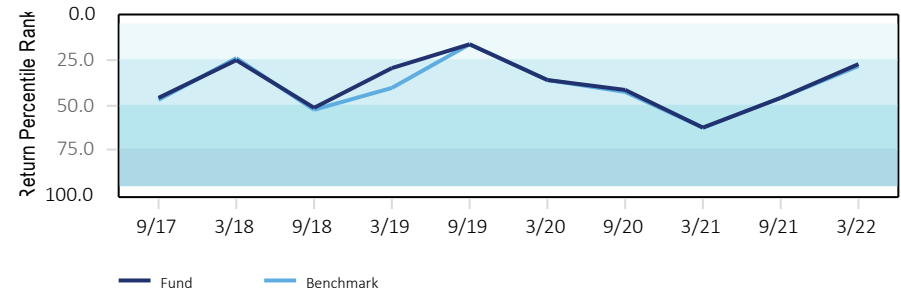
Comparative Performance



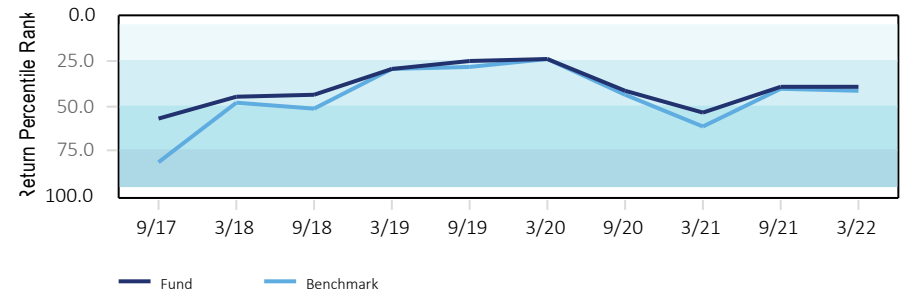
Relative Performance



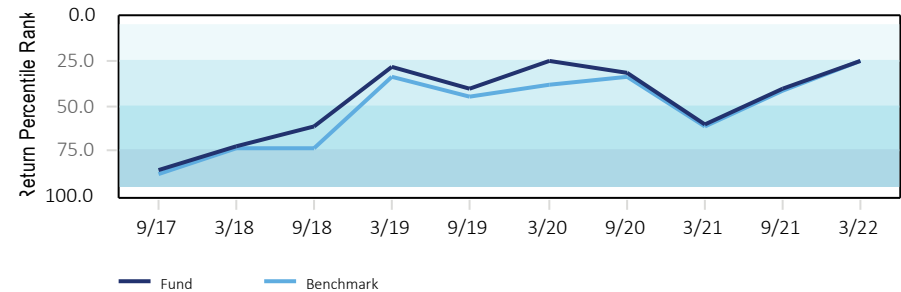
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

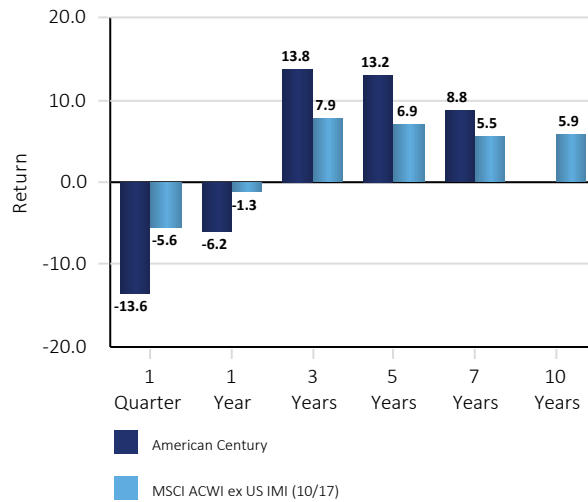


Performance Summary

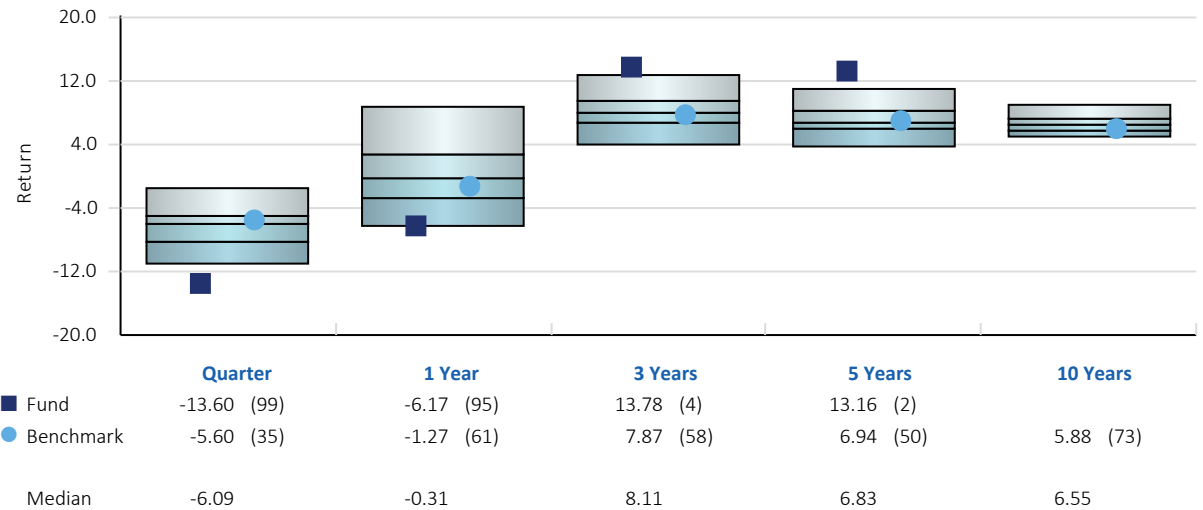
American Century

Periods Ended March 31, 2022

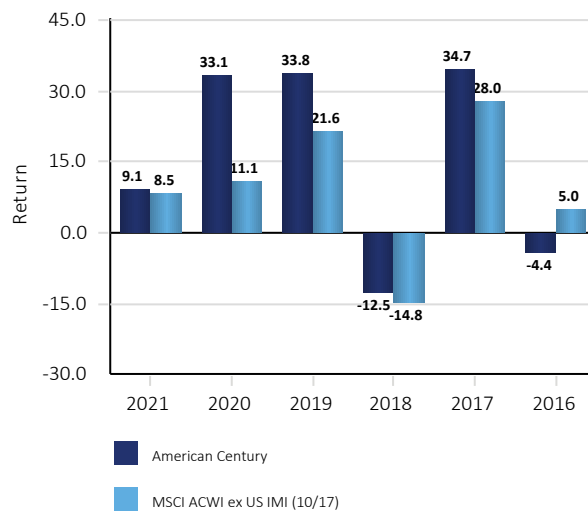
Comparative Performance



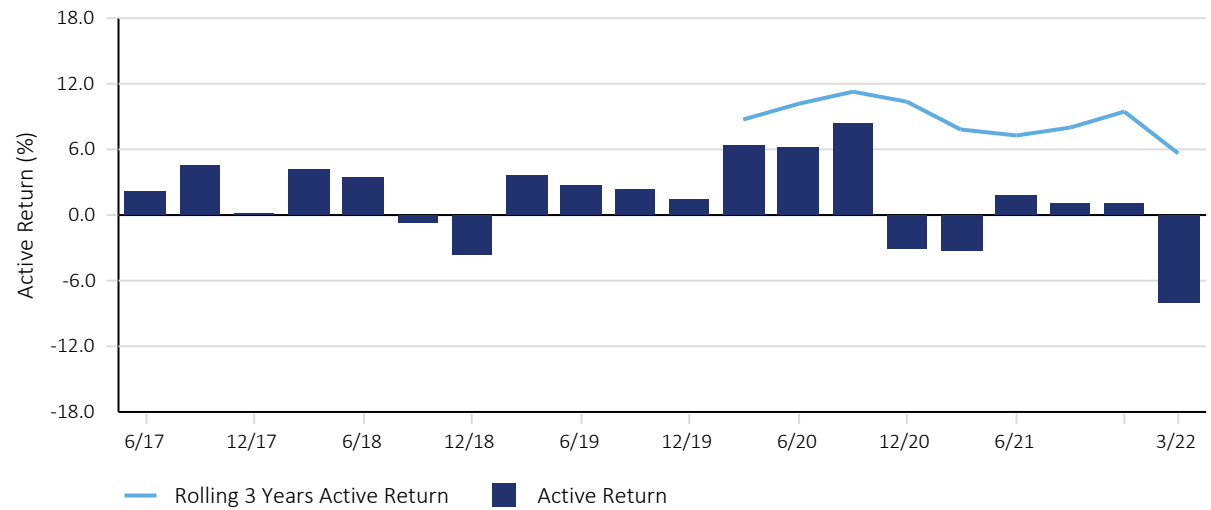
Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

American Century

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>American Century</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Maximum Return	4.52	4.15
Minimum Return	-10.72	-4.57
Return	-6.17	-1.27
Cumulative Return	-6.17	-1.27
Active Return	-4.20	0.00
Excess Return	-5.05	-0.85

Risk Summary Statistics

	<u>American Century</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Upside Risk	2.54	1.94
Downside Risk	13.80	7.28
Beta	1.47	1.00

Risk/Return Summary Statistics

	<u>American Century</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Standard Deviation	16.30	9.92
Alpha	-3.77	0.00
Active Return/Risk	-0.26	0.00
Tracking Error	8.70	0.00
Information Ratio	-0.48	
Sharpe Ratio	-0.31	-0.09

Correlation Statistics

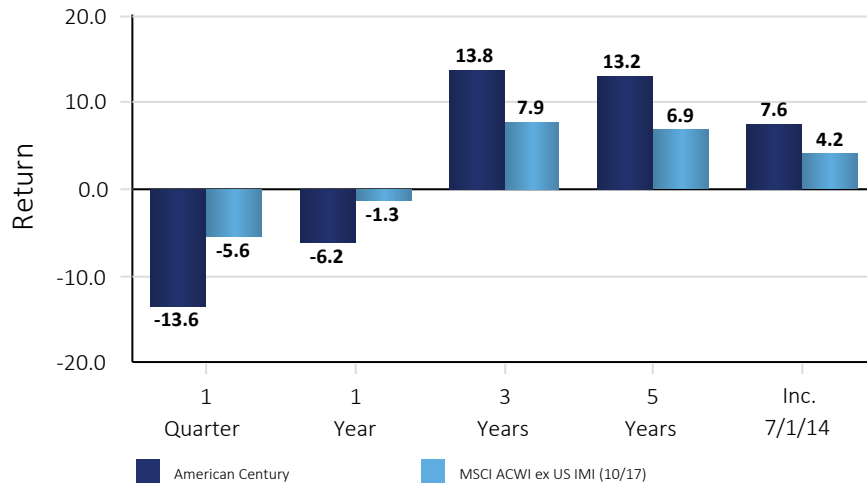
	<u>American Century</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
R-Squared	0.80	1.00
Actual Correlation	0.89	1.00

Manager Summary

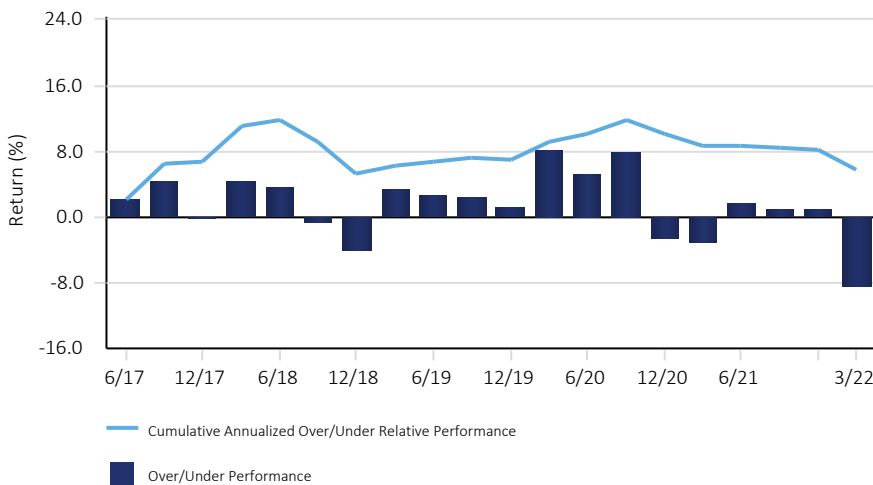
American Century vs IM International Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

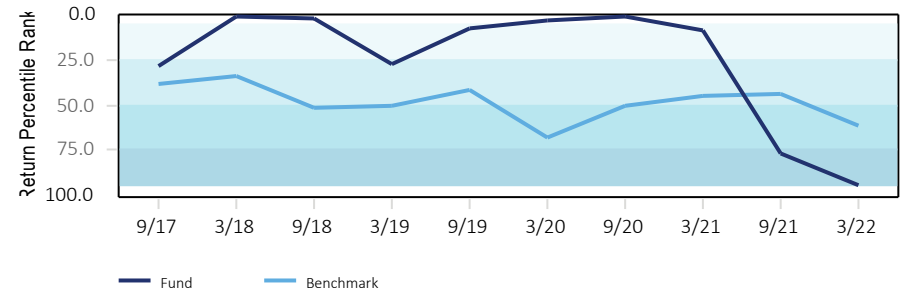
Comparative Performance



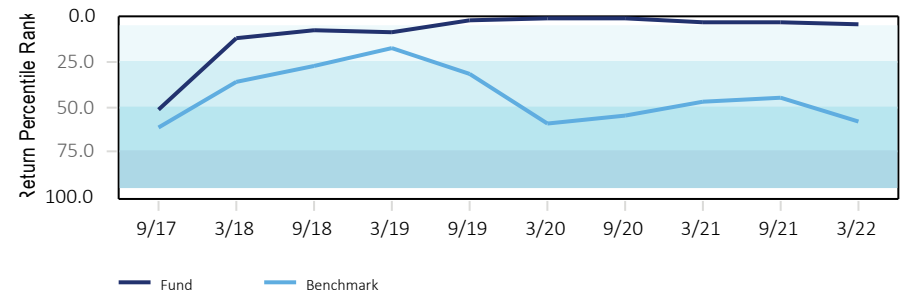
Relative Performance



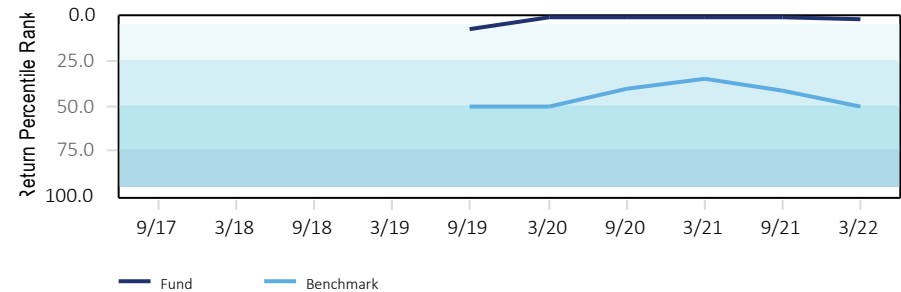
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

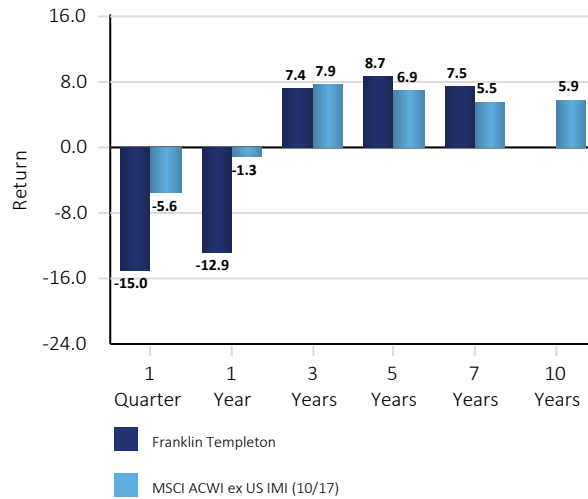


Performance Summary

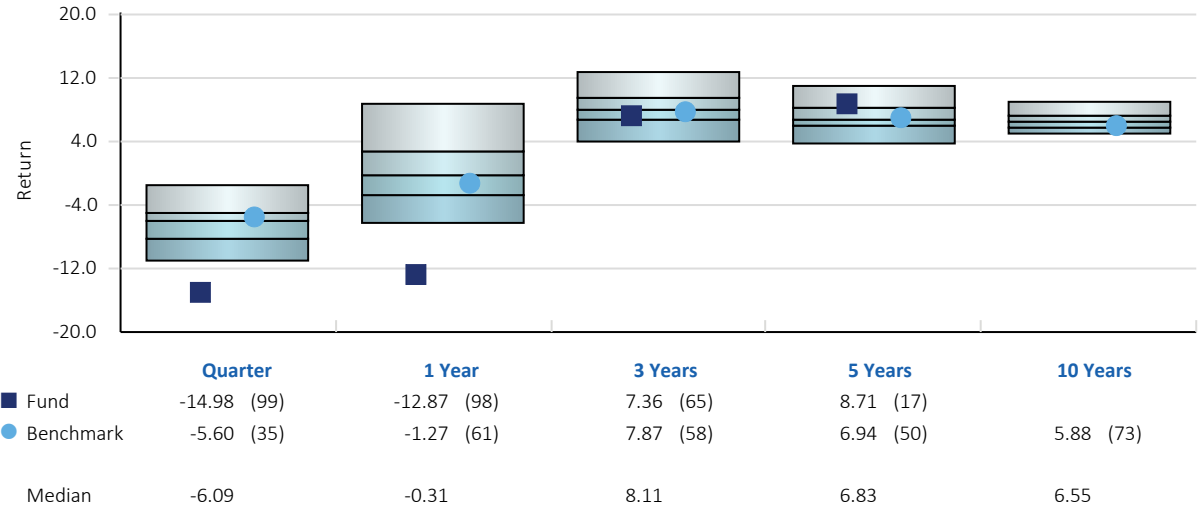
Franklin Templeton

Periods Ended March 31, 2022

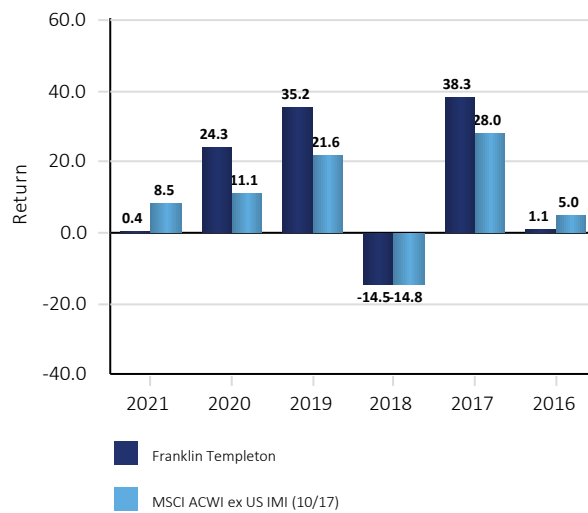
Comparative Performance



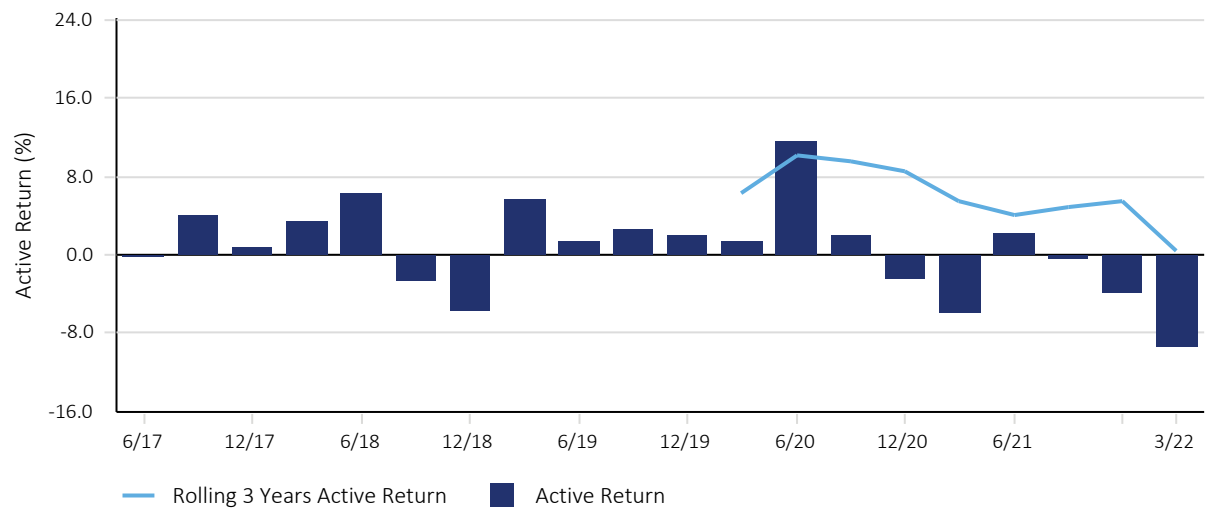
Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Franklin Templeton

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Franklin Templeton</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Maximum Return	5.87	4.15
Minimum Return	-13.62	-4.57
Return	-12.87	-1.27
Cumulative Return	-12.87	-1.27
Active Return	-11.34	0.00
Excess Return	-12.19	-0.85

Risk Summary Statistics

	<u>Franklin Templeton</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Upside Risk	2.15	1.94
Downside Risk	15.96	7.28
Beta	1.45	1.00

Risk/Return Summary Statistics

	<u>Franklin Templeton</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Standard Deviation	17.25	9.92
Alpha	-10.45	0.00
Active Return/Risk	-0.66	0.00
Tracking Error	10.48	0.00
Information Ratio	-1.08	
Sharpe Ratio	-0.71	-0.09

Correlation Statistics

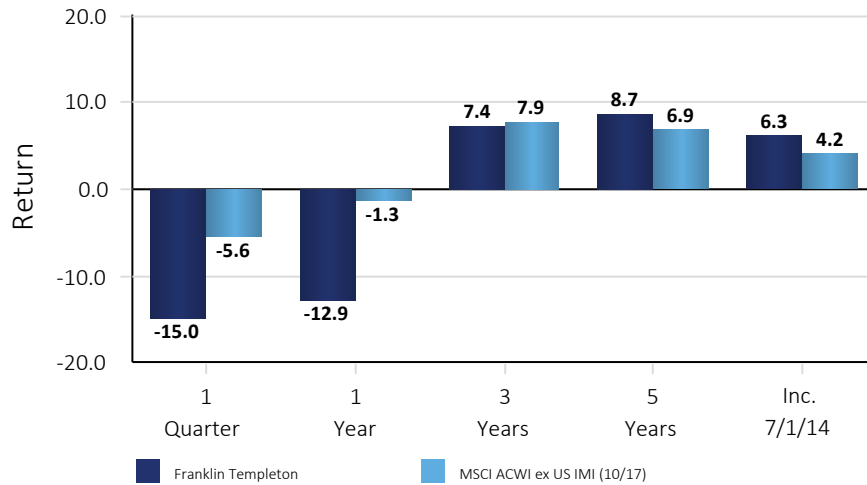
	<u>Franklin Templeton</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
R-Squared	0.70	1.00
Actual Correlation	0.84	1.00

Manager Summary

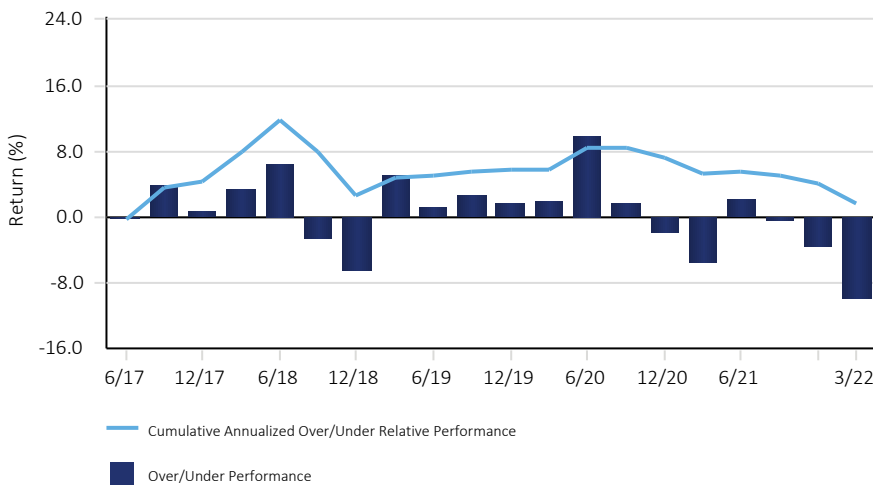
Franklin Templeton vs IM International Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

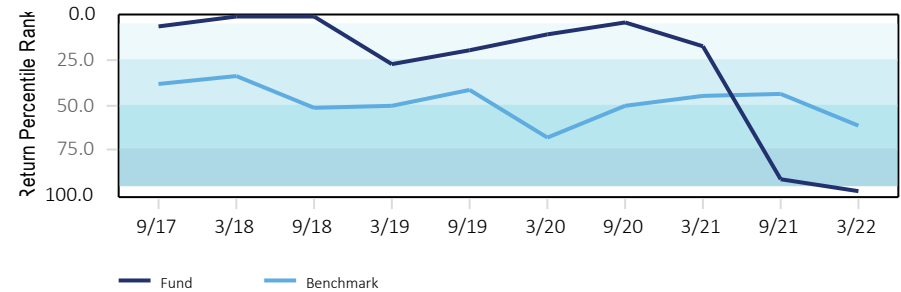
Comparative Performance



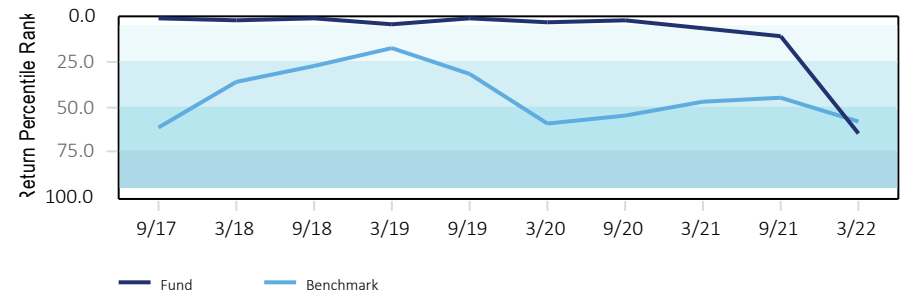
Relative Performance



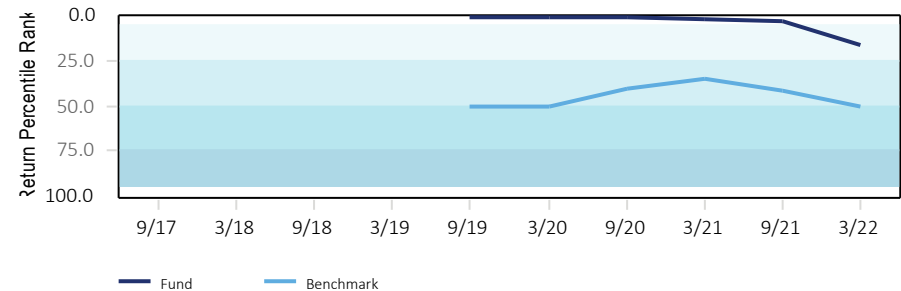
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

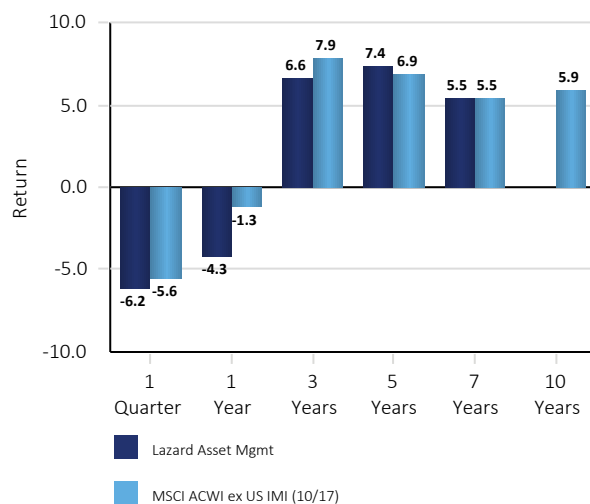


Performance Summary

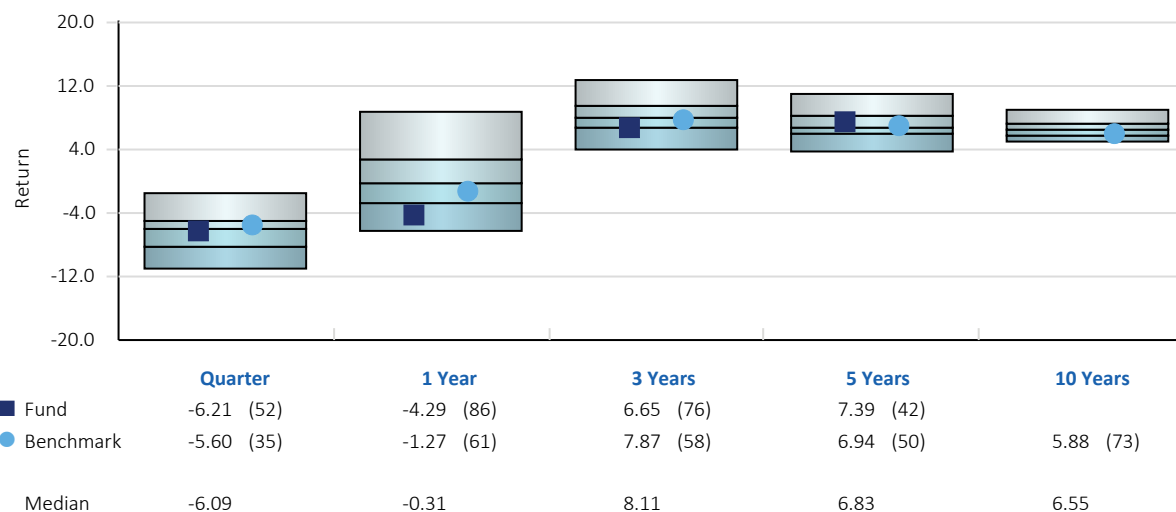
Lazard Asset Mgmt

Periods Ended March 31, 2022

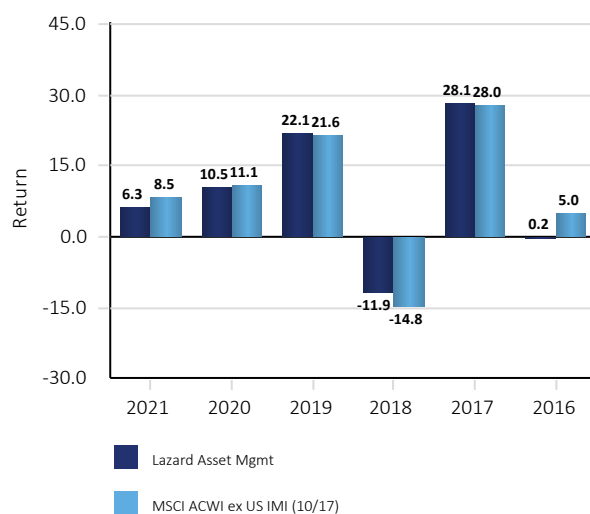
Comparative Performance



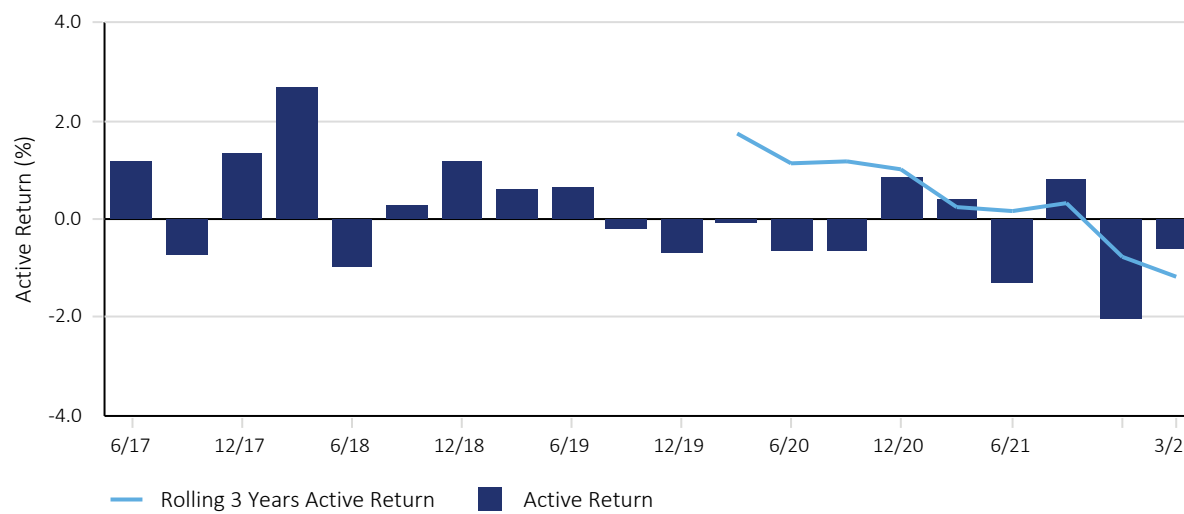
Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Lazard Asset Mgmt

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Lazard Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Maximum Return	3.89	4.15
Minimum Return	-6.01	-4.57
Return	-4.29	-1.27
Cumulative Return	-4.29	-1.27
Active Return	-2.98	0.00
Excess Return	-3.83	-0.85

Risk Summary Statistics

	<u>Lazard Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Upside Risk	2.03	1.94
Downside Risk	8.50	7.28
Beta	1.04	1.00

Risk/Return Summary Statistics

	<u>Lazard Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Standard Deviation	10.97	9.92
Alpha	-2.91	0.00
Active Return/Risk	-0.27	0.00
Tracking Error	3.63	0.00
Information Ratio	-0.82	
Sharpe Ratio	-0.35	-0.09

Correlation Statistics

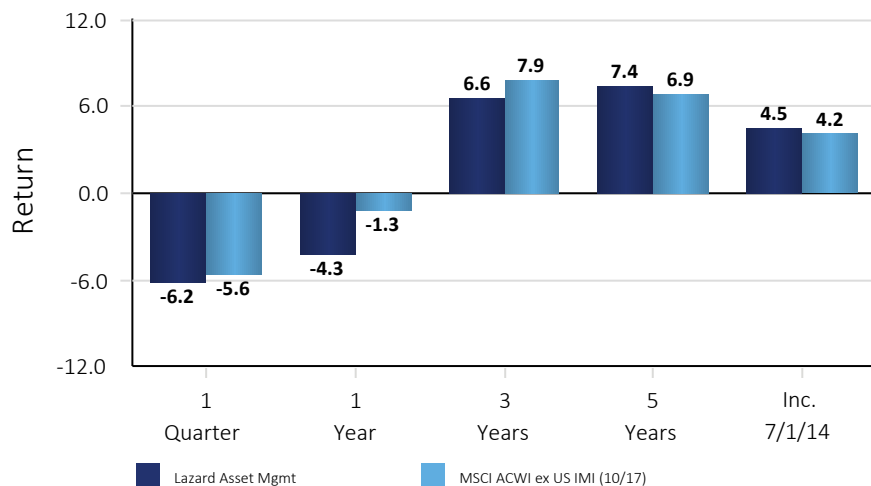
	<u>Lazard Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
R-Squared	0.89	1.00
Actual Correlation	0.94	1.00

Manager Summary

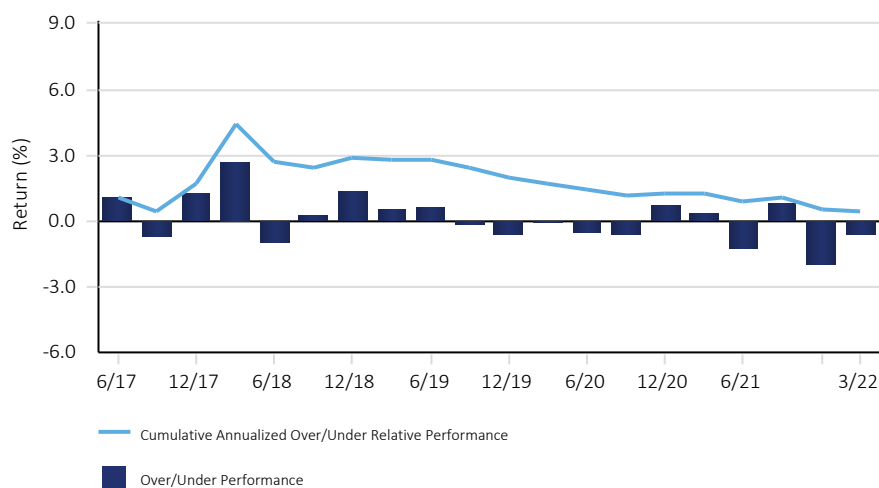
Lazard Asset Mgmt vs IM International Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

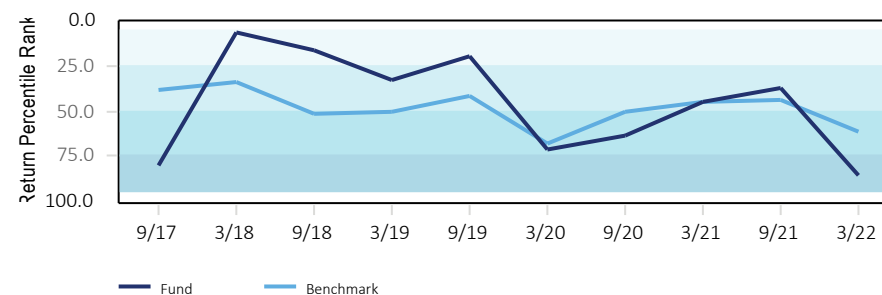
Comparative Performance



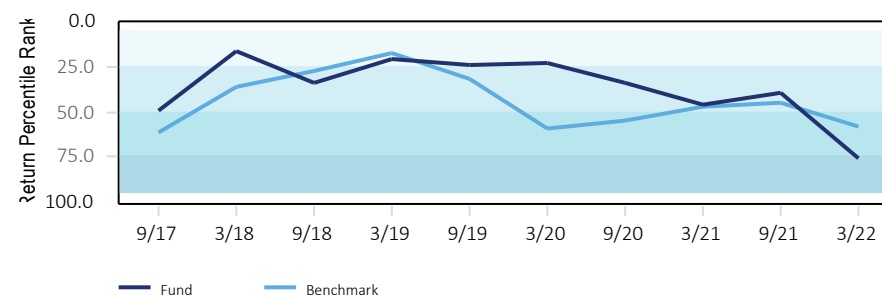
Relative Performance



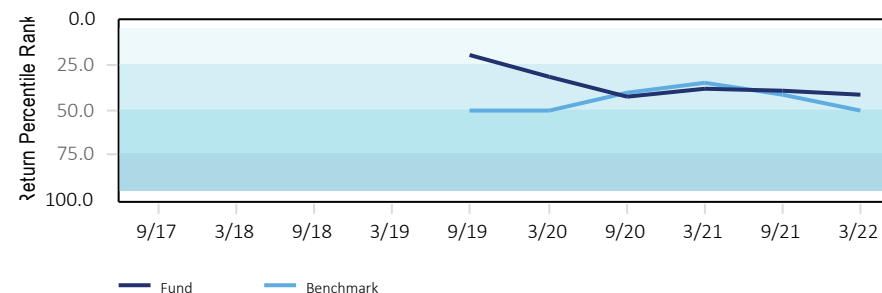
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

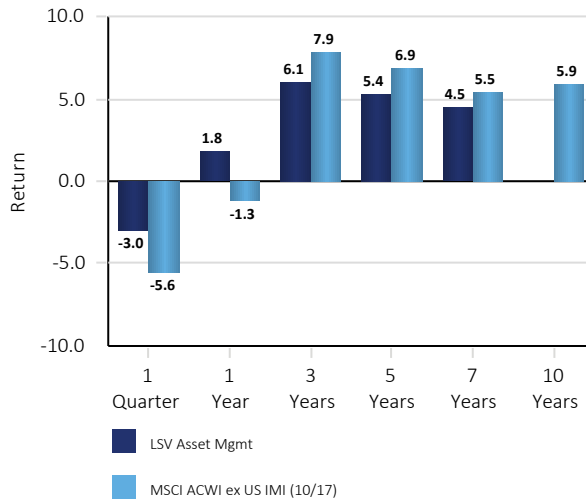


Performance Summary

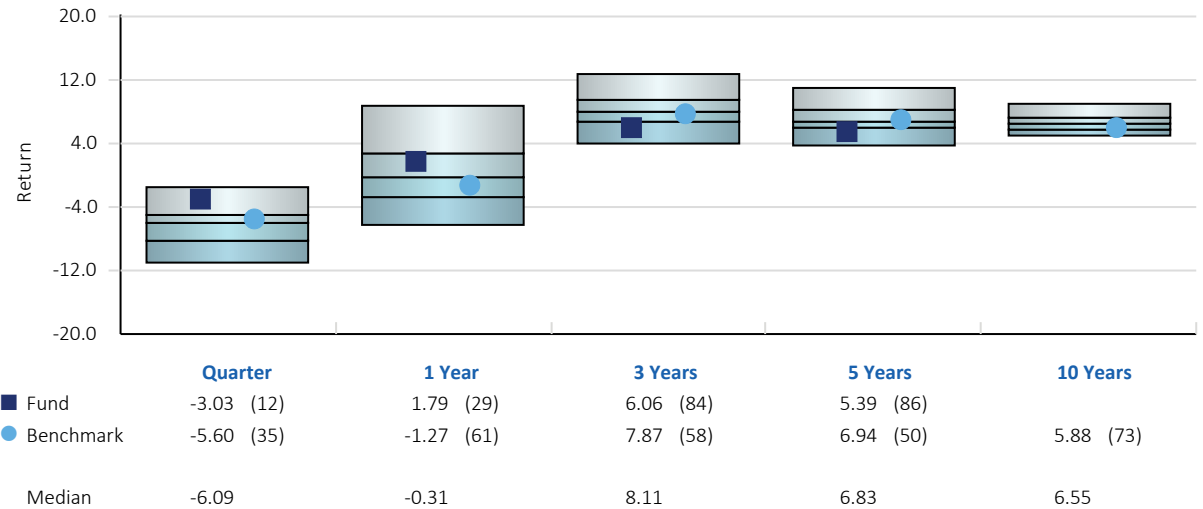
LSV Asset Mgmt

Periods Ended March 31, 2022

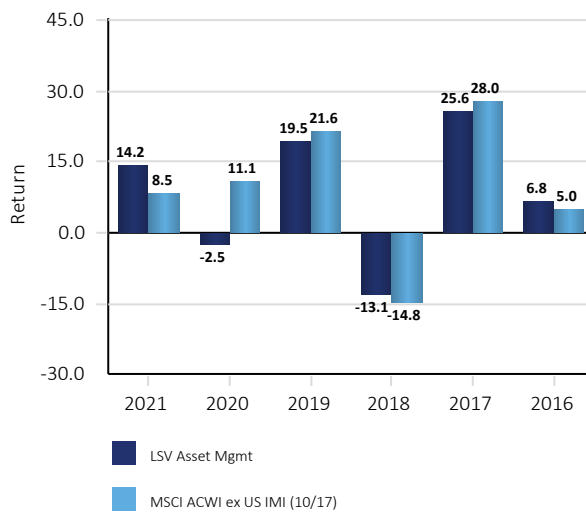
Comparative Performance



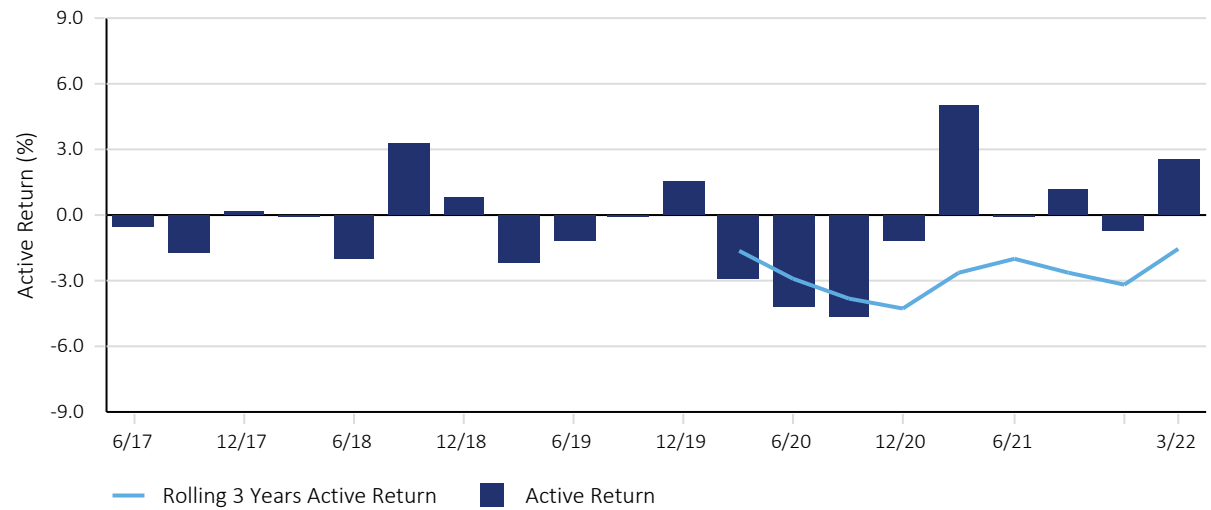
Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

LSV Asset Mgmt

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>LSV Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Maximum Return	6.06	4.15
Minimum Return	-5.67	-4.57
Return	1.79	-1.27
Cumulative Return	1.79	-1.27
Active Return	3.20	0.00
Excess Return	2.35	-0.85

Risk Summary Statistics

	<u>LSV Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Upside Risk	2.48	1.94
Downside Risk	7.41	7.28
Beta	0.97	1.00

Risk/Return Summary Statistics

	<u>LSV Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
Standard Deviation	11.34	9.92
Alpha	3.22	0.00
Active Return/Risk	0.28	0.00
Tracking Error	6.04	0.00
Information Ratio	0.53	
Sharpe Ratio	0.21	-0.09

Correlation Statistics

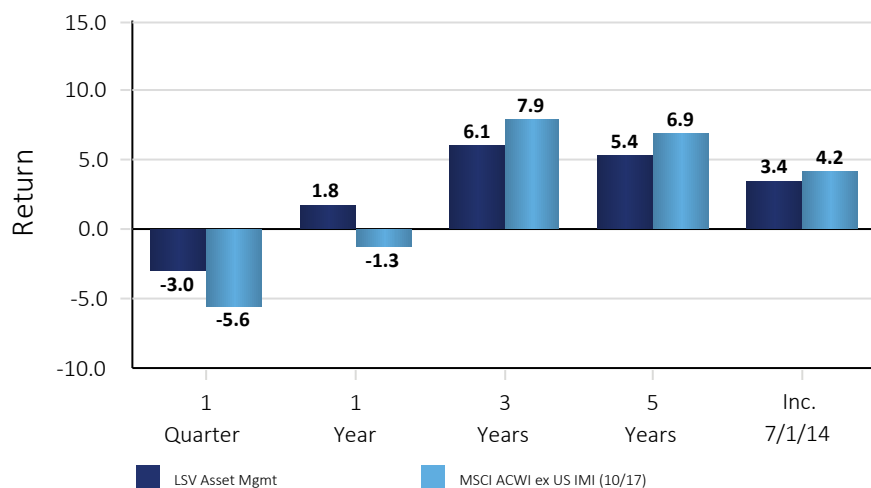
	<u>LSV Asset Mgmt</u>	<u>MSCI ACWI ex US IMI (10/17)</u>
R-Squared	0.72	1.00
Actual Correlation	0.85	1.00

Manager Summary

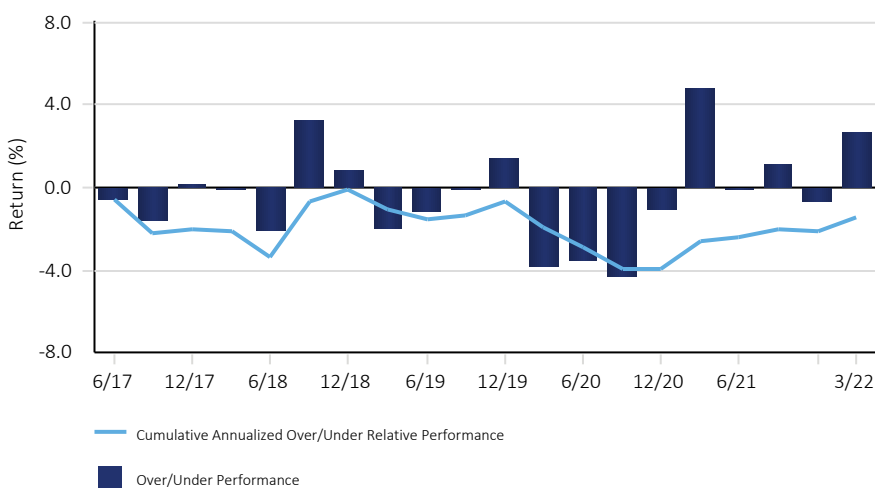
LSV Asset Mgmt vs IM International Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2022

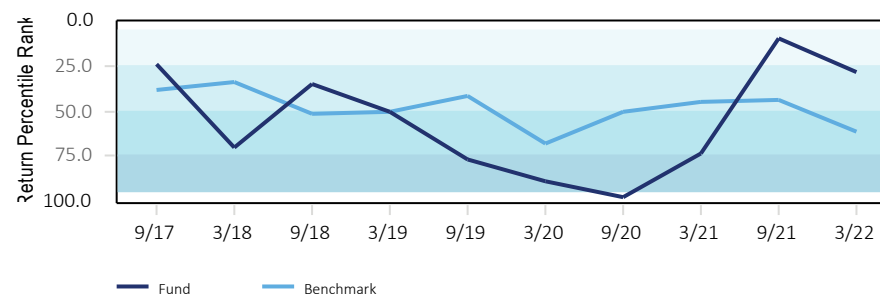
Comparative Performance



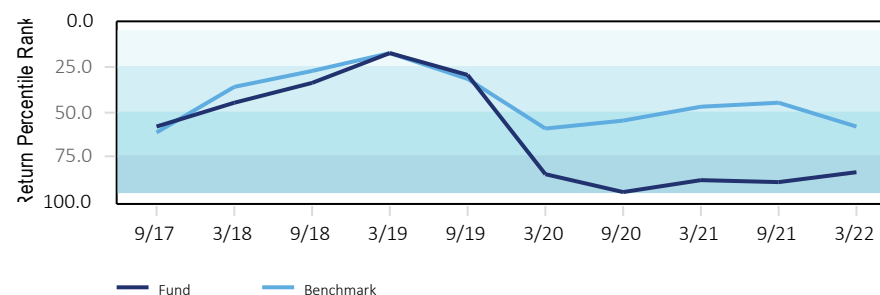
Relative Performance



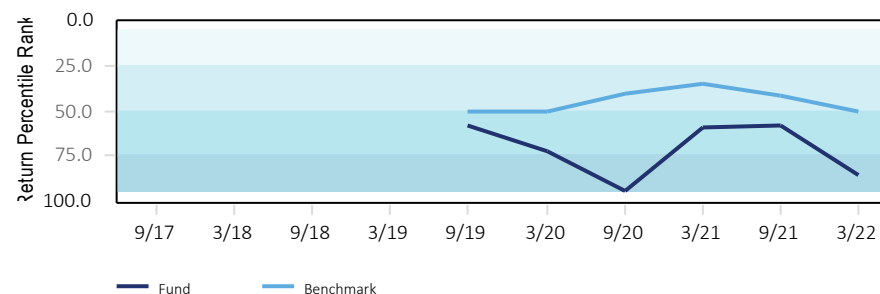
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

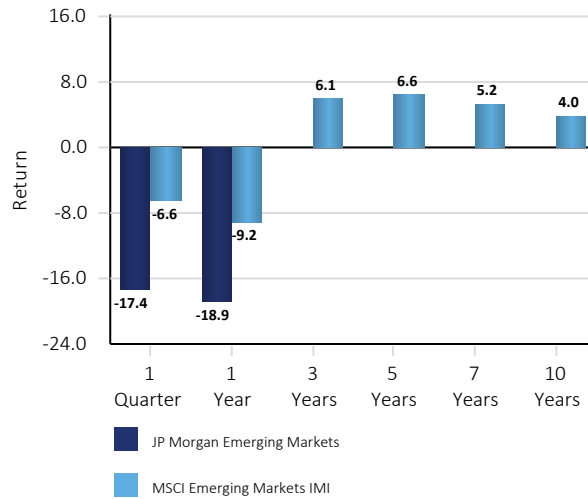


Performance Summary

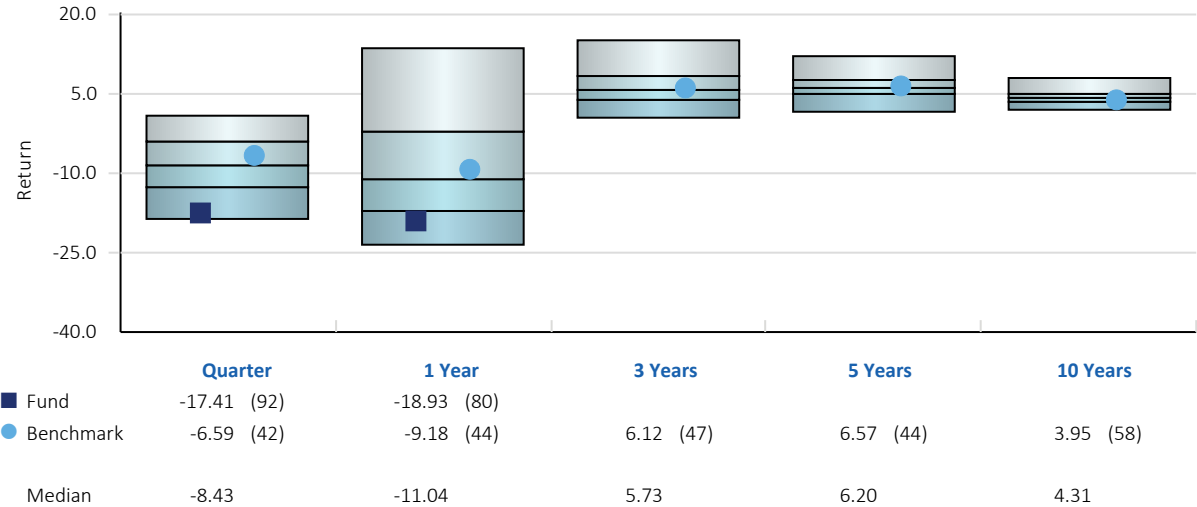
JP Morgan Emerging Markets

Periods Ended March 31, 2022

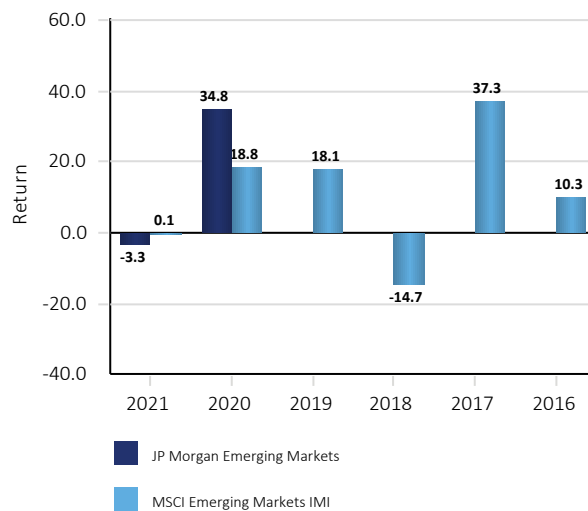
Comparative Performance



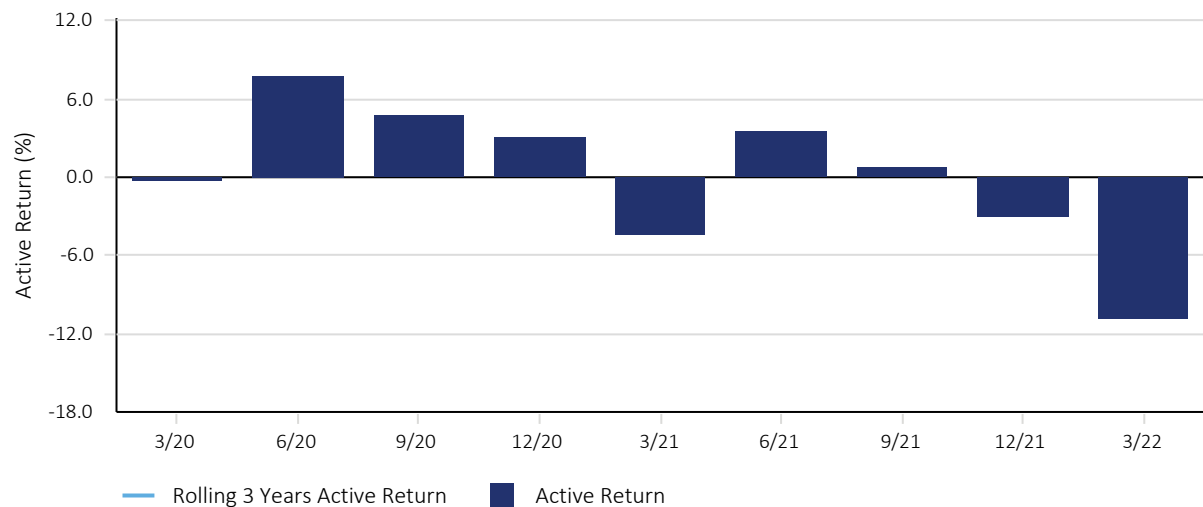
Peer Group Analysis: IM Emerging Markets Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

JP Morgan Emerging Markets

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
Maximum Return	5.45	2.89
Minimum Return	-8.48	-6.03
Return	-18.93	-9.18
Cumulative Return	-18.93	-9.18
Active Return	-10.46	0.00
Excess Return	-19.61	-9.14

Risk Summary Statistics

	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
Upside Risk	2.31	1.47
Downside Risk	14.68	9.02
Beta	1.37	1.00

Risk/Return Summary Statistics

	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
Standard Deviation	15.75	10.03
Alpha	-6.86	0.00
Active Return/Risk	-0.66	0.00
Tracking Error	8.53	0.00
Information Ratio	-1.23	
Sharpe Ratio	-1.24	-0.91

Correlation Statistics

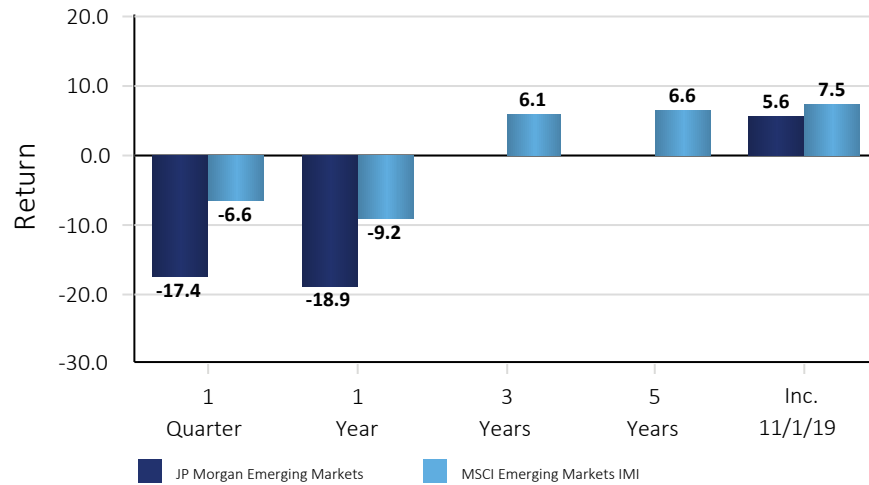
	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
R-Squared	0.76	1.00
Actual Correlation	0.87	1.00

Manager Summary

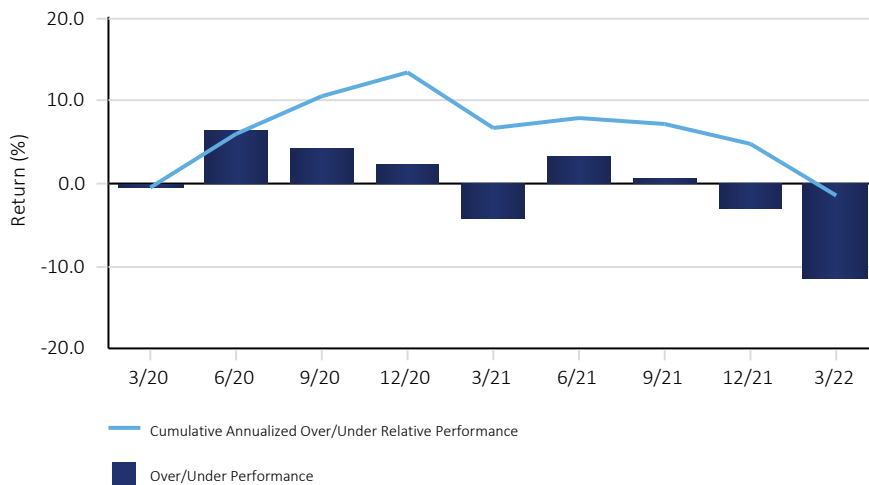
JP Morgan Emerging Markets vs IM Emerging Markets Equity (SA+CF)

Periods Ended March 31, 2022

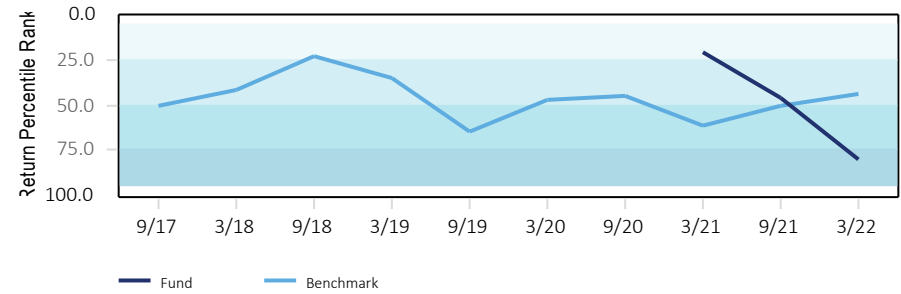
Comparative Performance



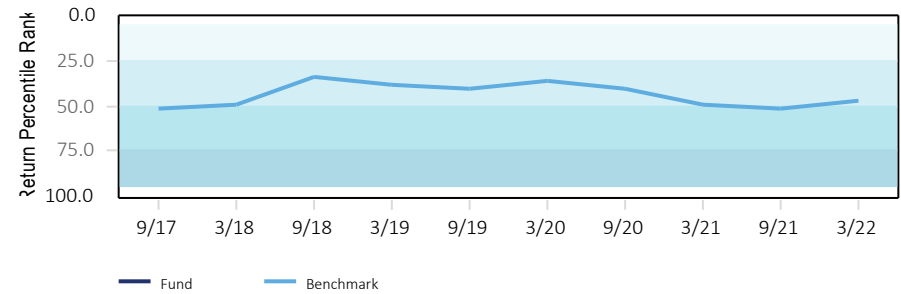
Relative Performance



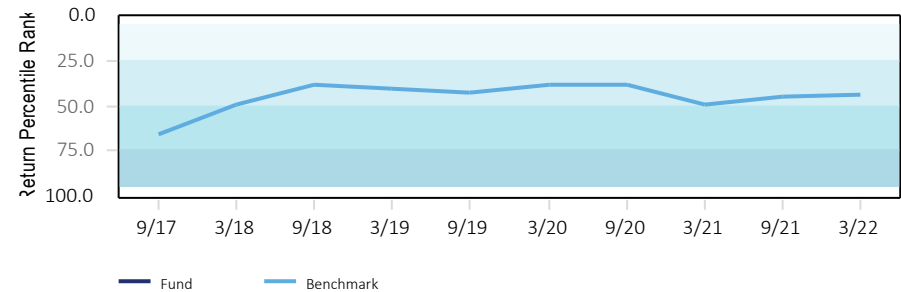
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

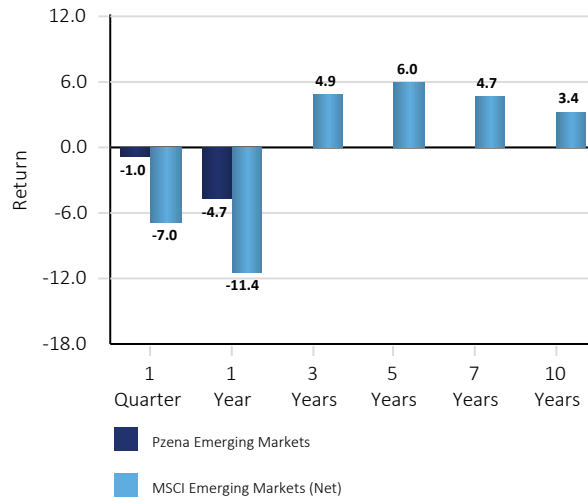


Performance Summary

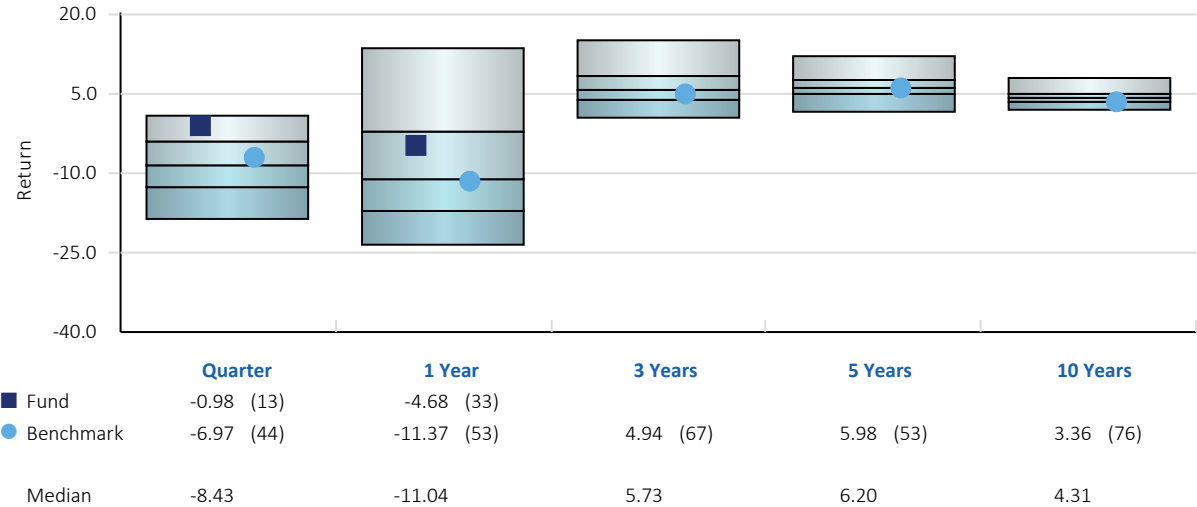
Pzena Emerging Markets

Periods Ended March 31, 2022

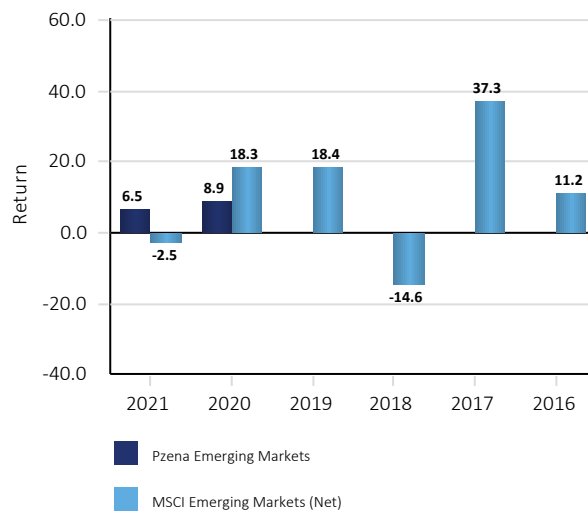
Comparative Performance



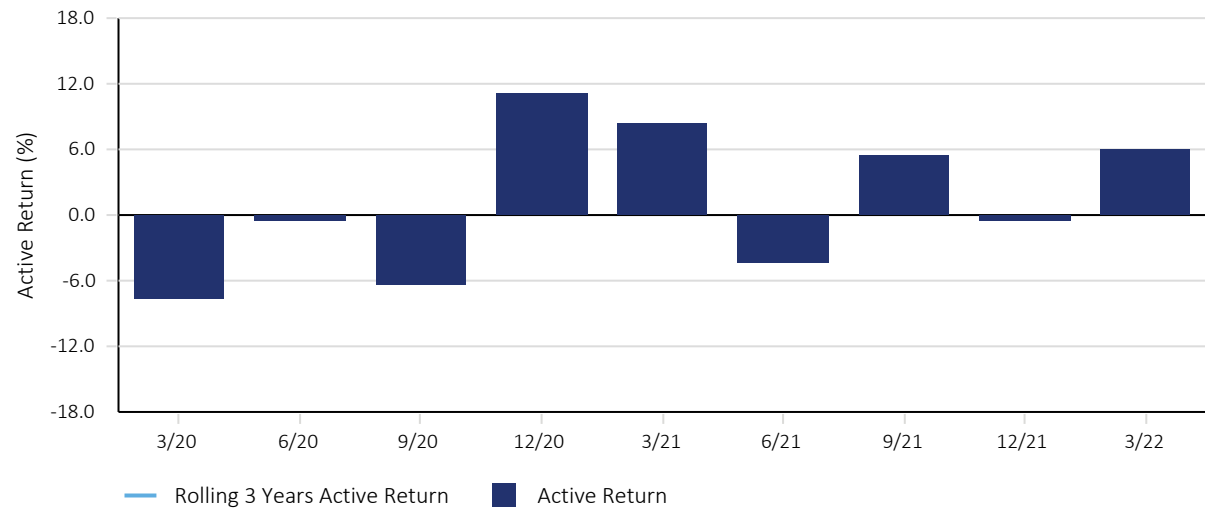
Peer Group Analysis: IM Emerging Markets Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Pzena Emerging Markets

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
Maximum Return	2.86	2.62
Minimum Return	-5.54	-6.73
Return	-4.68	-11.37
Cumulative Return	-4.68	-11.37
Active Return	7.18	0.00
Excess Return	-4.34	-11.52

Risk Summary Statistics

	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
Upside Risk	1.54	1.38
Downside Risk	8.45	9.76
Beta	0.70	1.00

Risk/Return Summary Statistics

	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
Standard Deviation	9.92	10.36
Alpha	3.79	0.00
Active Return/Risk	0.72	0.00
Tracking Error	7.47	0.00
Information Ratio	0.96	
Sharpe Ratio	-0.44	-1.11

Correlation Statistics

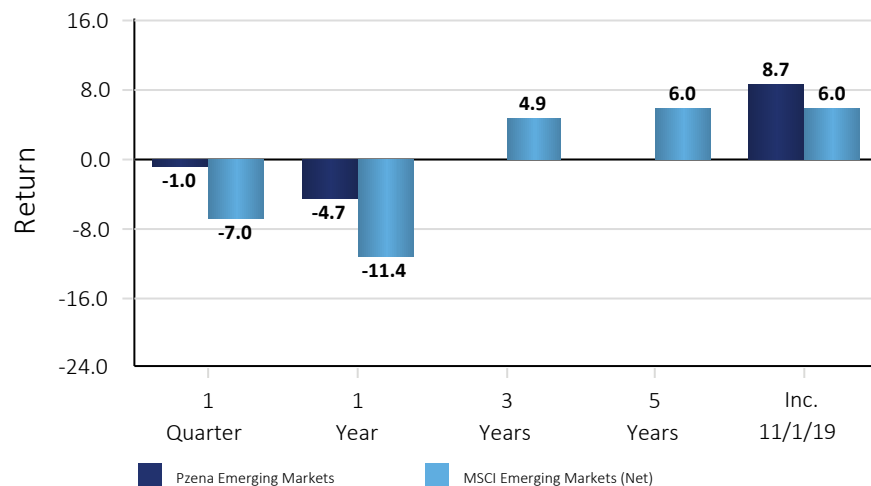
	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
R-Squared	0.53	1.00
Actual Correlation	0.73	1.00

Manager Summary

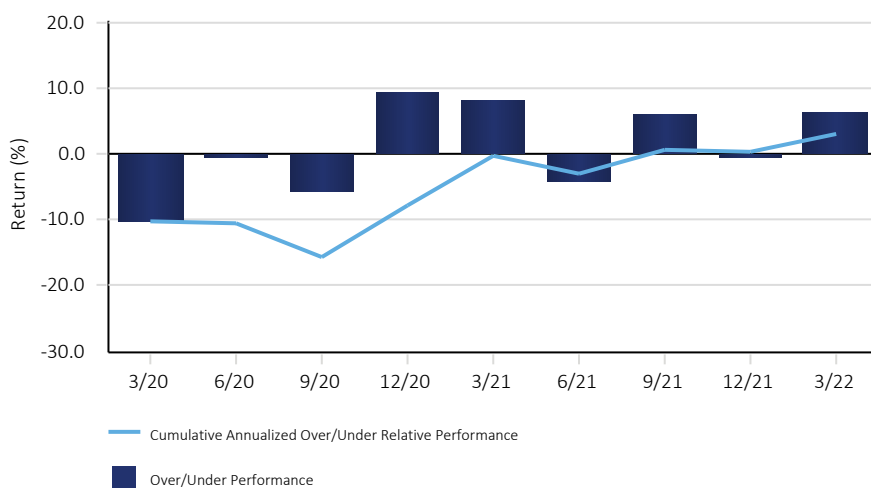
Pzena Emerging Markets vs IM Emerging Markets Equity (SA+CF)

Periods Ended March 31, 2022

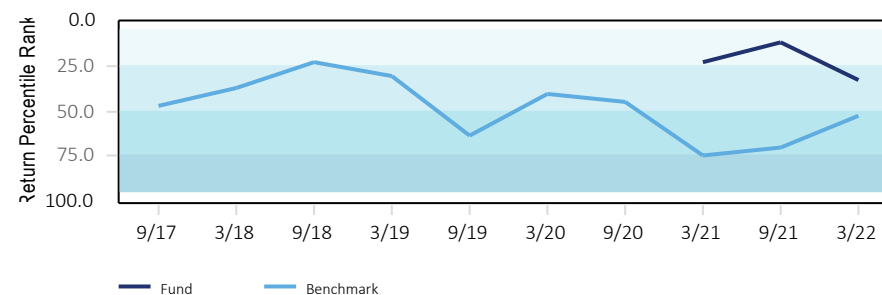
Comparative Performance



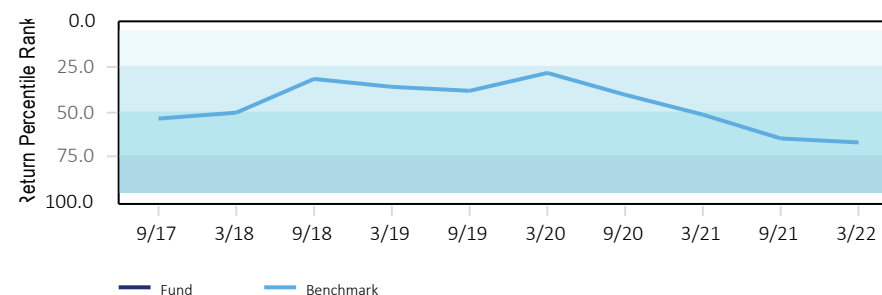
Relative Performance



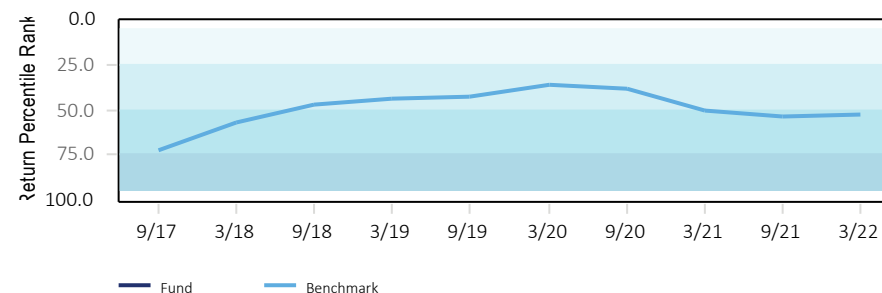
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



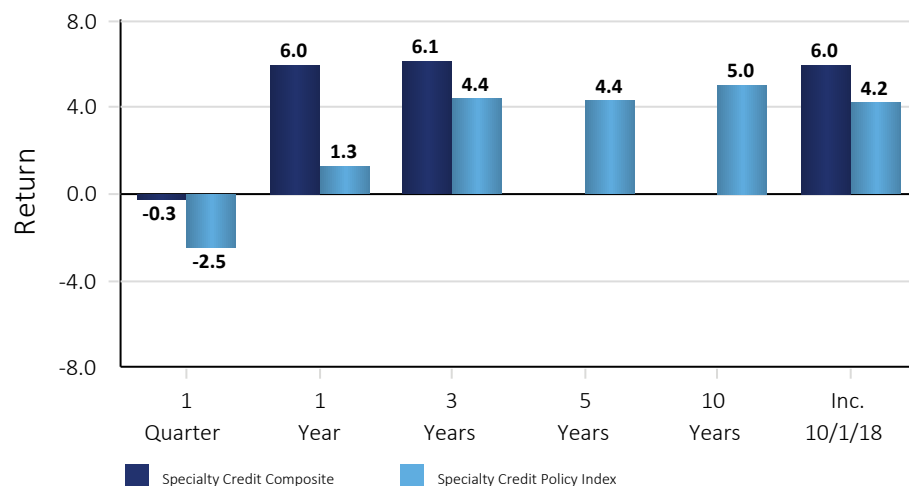
Specialty Credit Composite

Composite Performance Summary

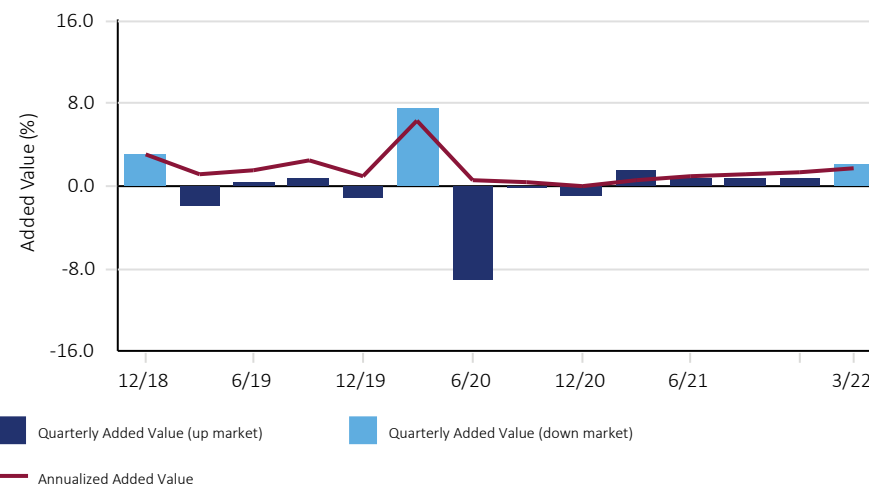
Specialty Credit Composite

Periods Ended March 31, 2022

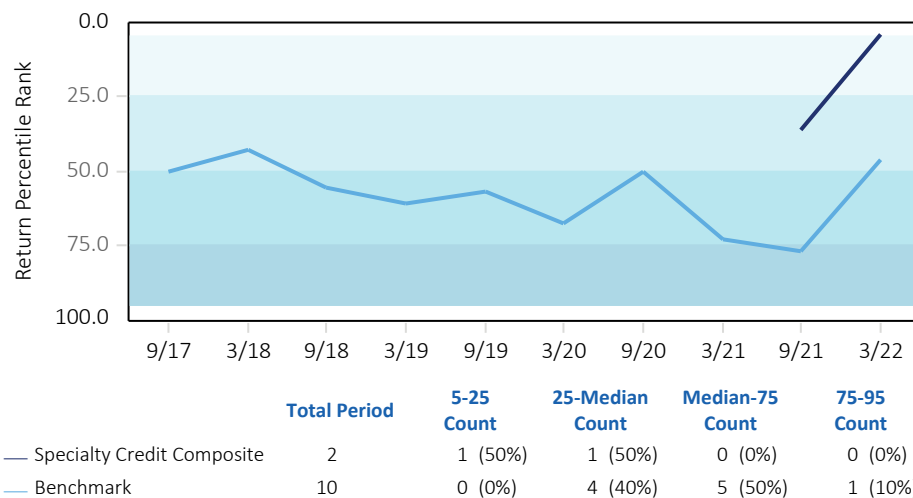
Comparative Performance



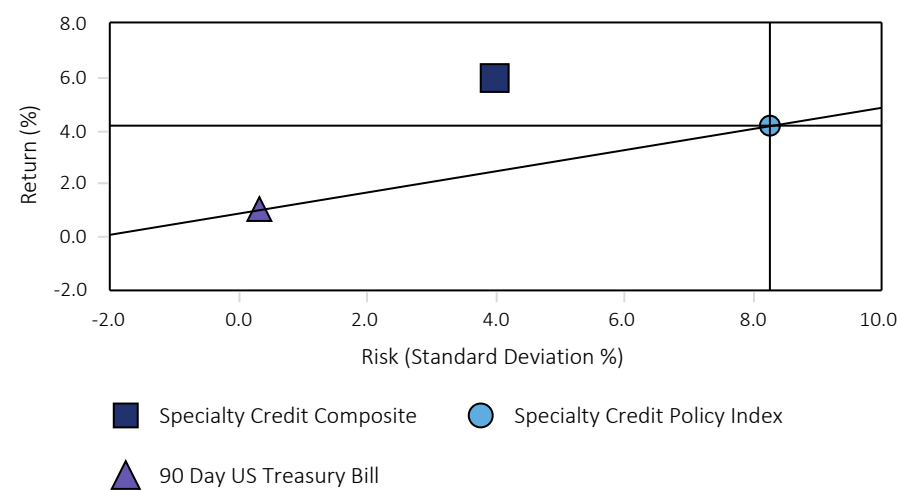
Added Value History



Rolling Percentile Rank: IM U.S. High Yield Bonds (SA+CF)



Risk and Return 10/1/18 - 03/31/22

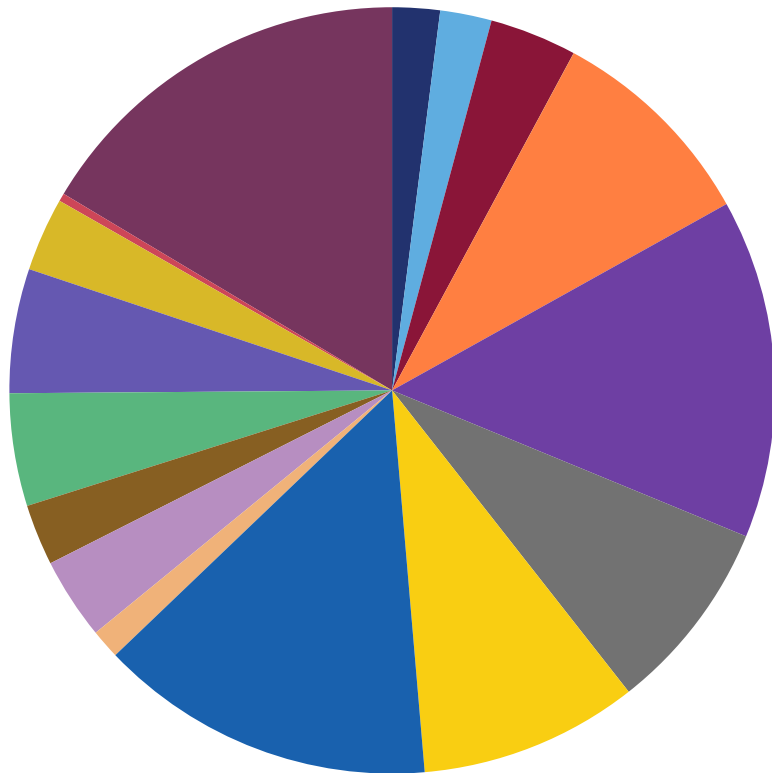


Asset Allocation By Manager

Specialty Credit Composite

Periods Ended March 31, 2022

Mar-2022 : 1,409,325,113

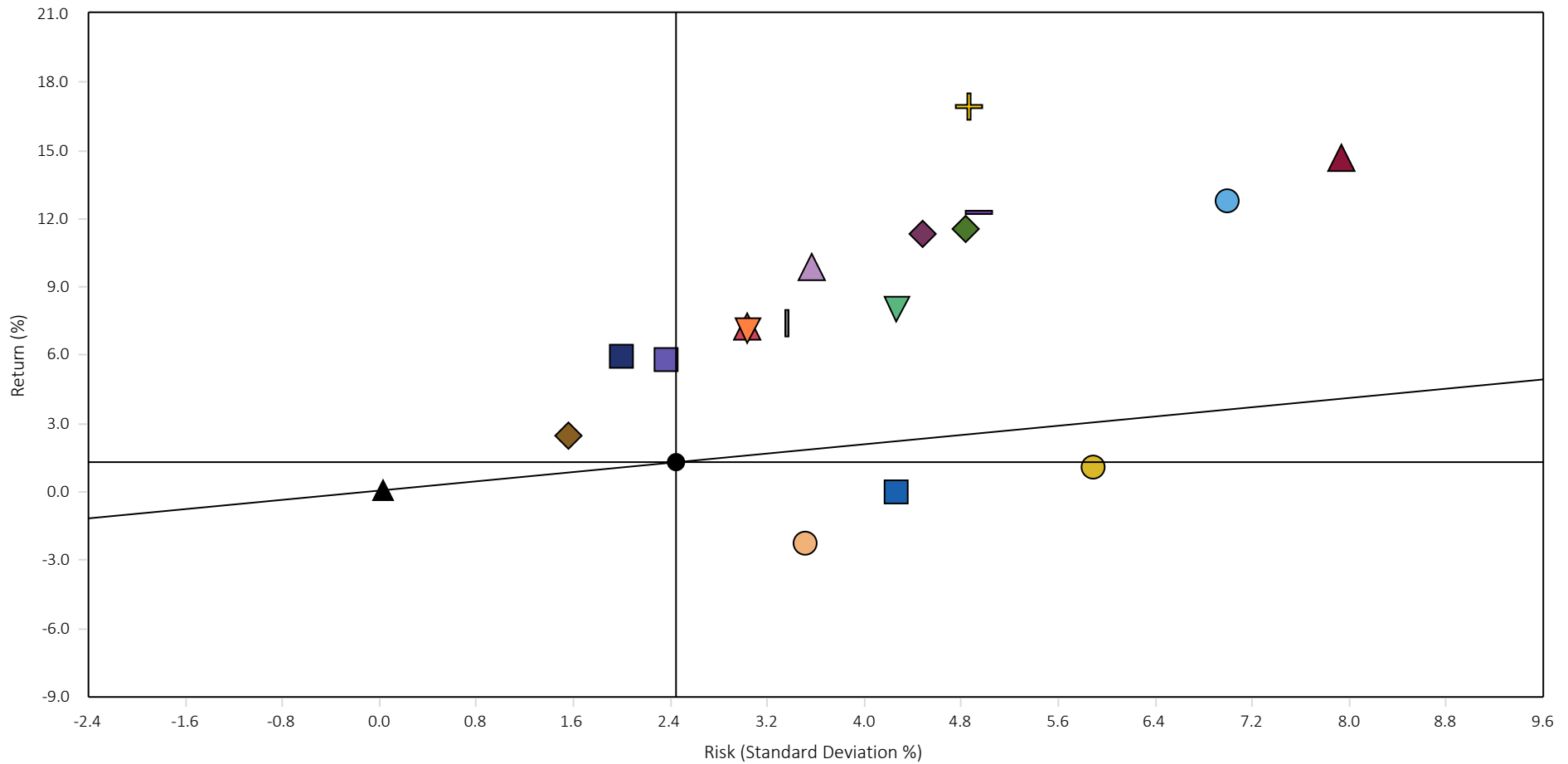


	Market Value \$	Allocation (%)
Adams St SPC II A	28,274,657	2.0
Adams St SPC II B	30,720,996	2.2
Blue Torch	51,823,843	3.7
Loomis	37,760	0.0
Manulife Asset Mgmt	127,478,230	9.0
Marathon Bluegrass	201,592,623	14.3
Shenkman Capital	115,326,684	8.2
Waterfall	130,266,750	9.2
Columbia	200,408,973	14.2
BSP Coinvestment	17,503,832	1.2
BSP Private Credit	48,647,332	3.5
CapitalSpring	36,294,867	2.6
Cerberus Capital Mgmt	66,992,239	4.8
White Oak Yield Spectrum	73,889,487	5.2
Mesa West Core Lend	43,896,905	3.1
Mesa West IV	4,680,633	0.3
Arrowmark	231,489,303	16.4

Risk vs. Return

Specialty Credit Composite

Periods Ended 1 Year Ending March 31, 2022



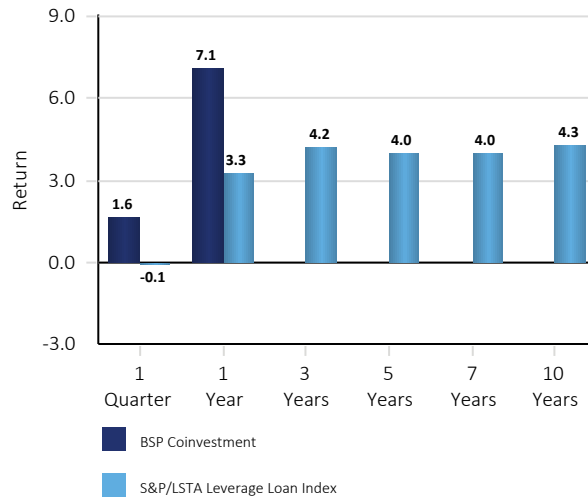
- | | | | | |
|------------------------------|---------------------|---------------------------------|----------------------------|-----------------------|
| ■ Specialty Credit Composite | ● Adams St SPC II A | ▲ Adams St SPC II B | ◆ Blue Torch | ▼ BSP Coinvestment |
| — BSP Private Credit | CapitalSpring | + Cerberus Capital Mgmt | ■ Columbia | ○ Manulife Asset Mgmt |
| ▲ Marathon Bluegrass | ◆ Shenkman Capital | ▼ Waterfall | ■ White Oak Yield Spectrum | ● H/2 Credit Partner |
| ▲ Mesa West Core Lend | ◆ Mesa West IV | ● Specialty Credit Policy Index | ▲ 90 Day US Treasury Bill | |

Performance Summary

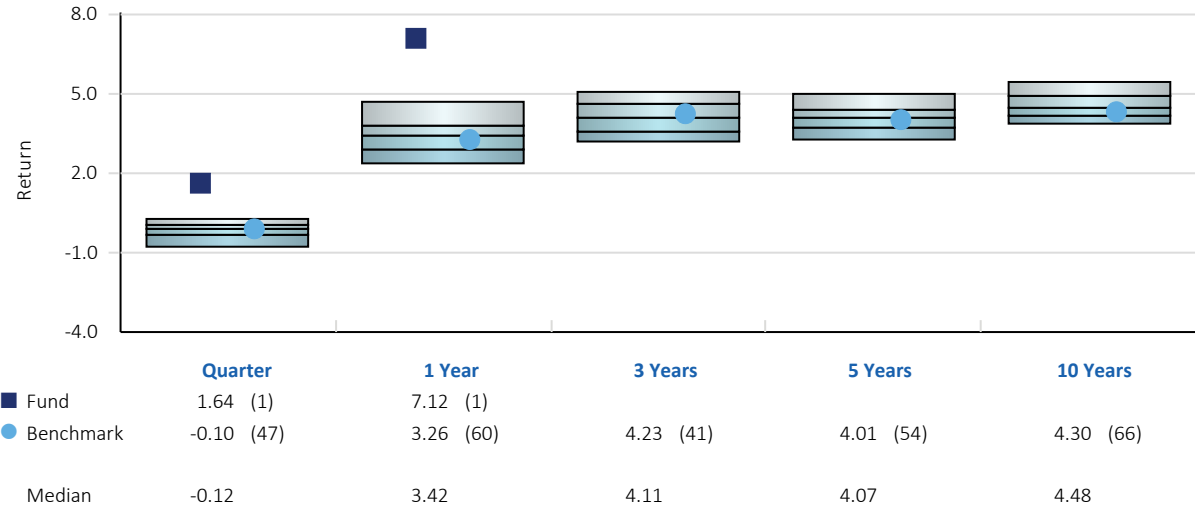
BSP Coinvestment

Periods Ended March 31, 2022

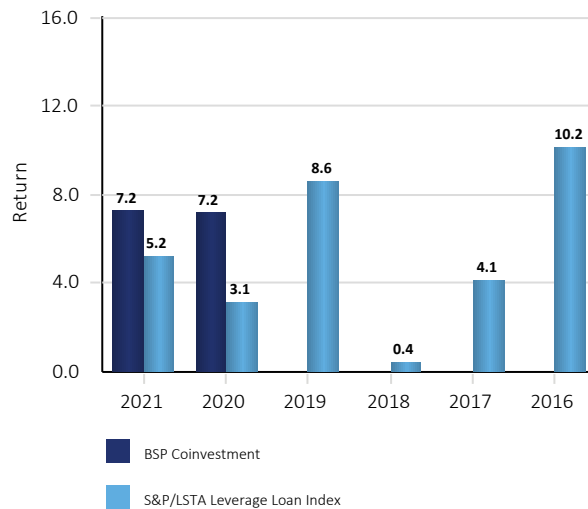
Comparative Performance



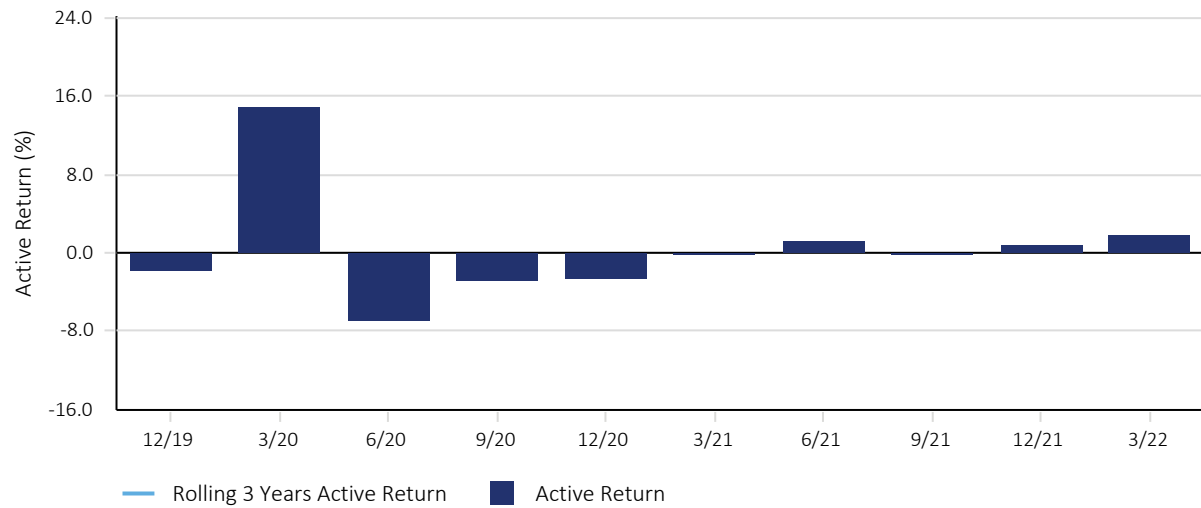
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

BSP Coinvestment

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	2.60	0.64
Minimum Return	0.00	-0.51
Return	7.12	3.26
Cumulative Return	7.12	3.26
Active Return	3.73	0.00
Excess Return	6.88	3.15

Risk Summary Statistics

	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	3.64	0.41
Downside Risk	0.00	0.54
Beta	0.64	1.00

Risk/Return Summary Statistics

	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	3.03	1.19
Alpha	4.99	0.00
Active Return/Risk	1.23	0.00
Tracking Error	2.97	0.00
Information Ratio	1.26	
Sharpe Ratio	2.27	2.62

Correlation Statistics

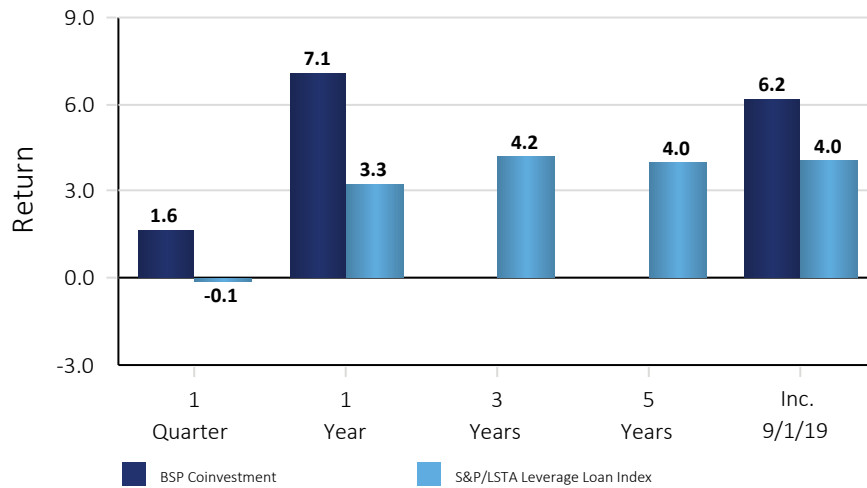
	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.06	1.00
Actual Correlation	0.25	1.00

Manager Summary

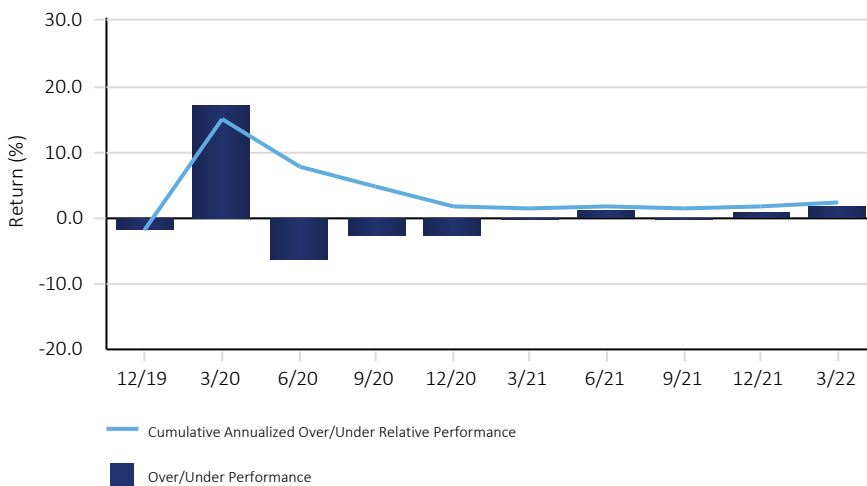
BSP Coinvestment vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

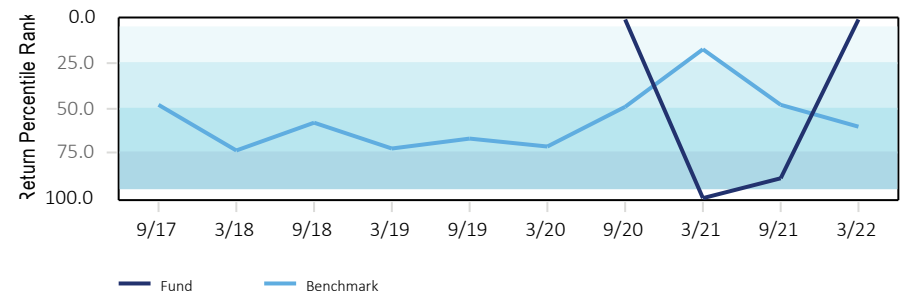
Comparative Performance



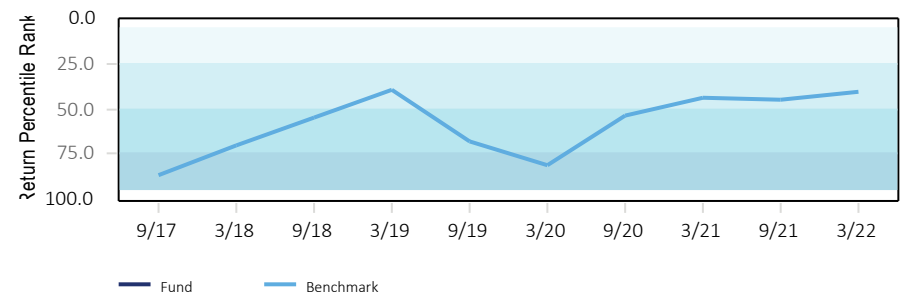
Relative Performance



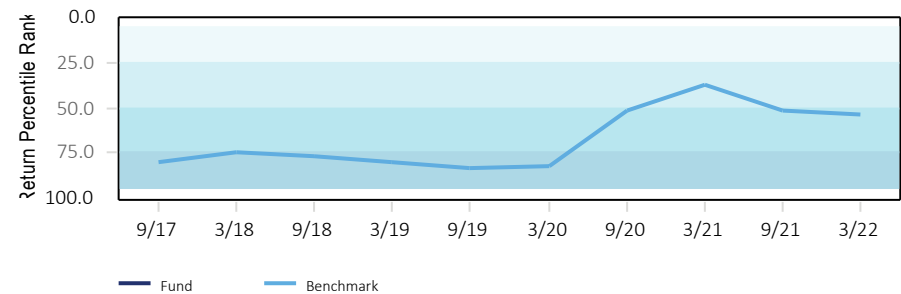
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

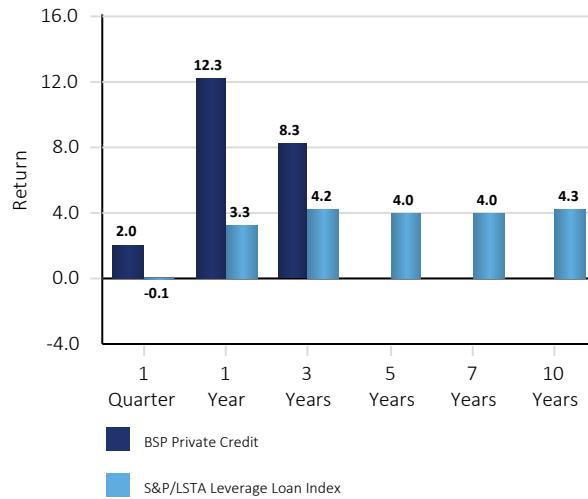


Performance Summary

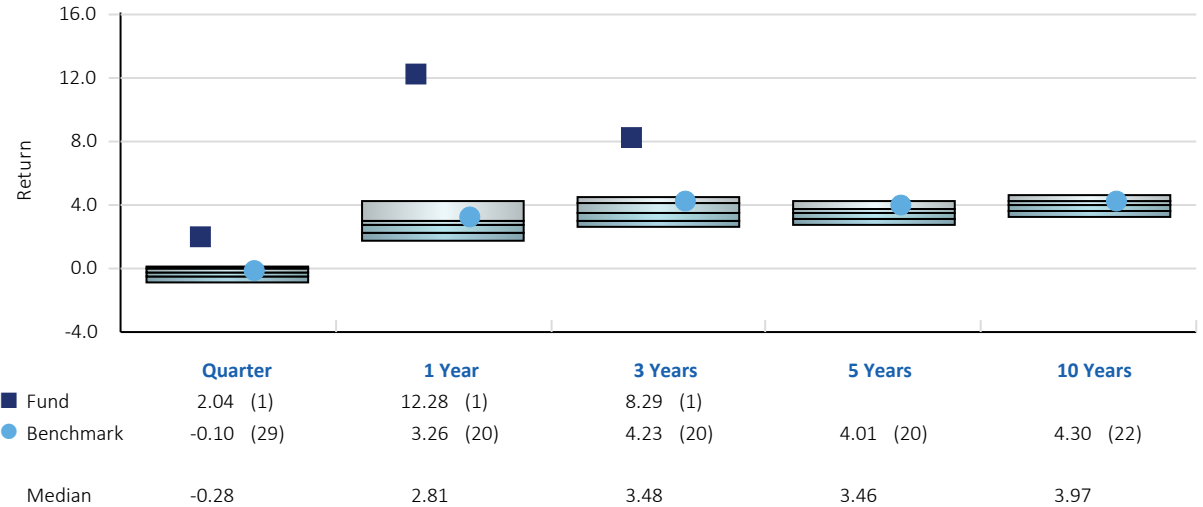
BSP Private Credit

Periods Ended March 31, 2022

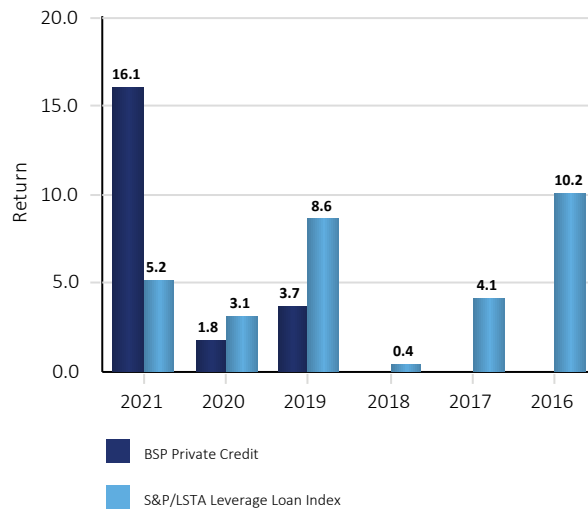
Comparative Performance



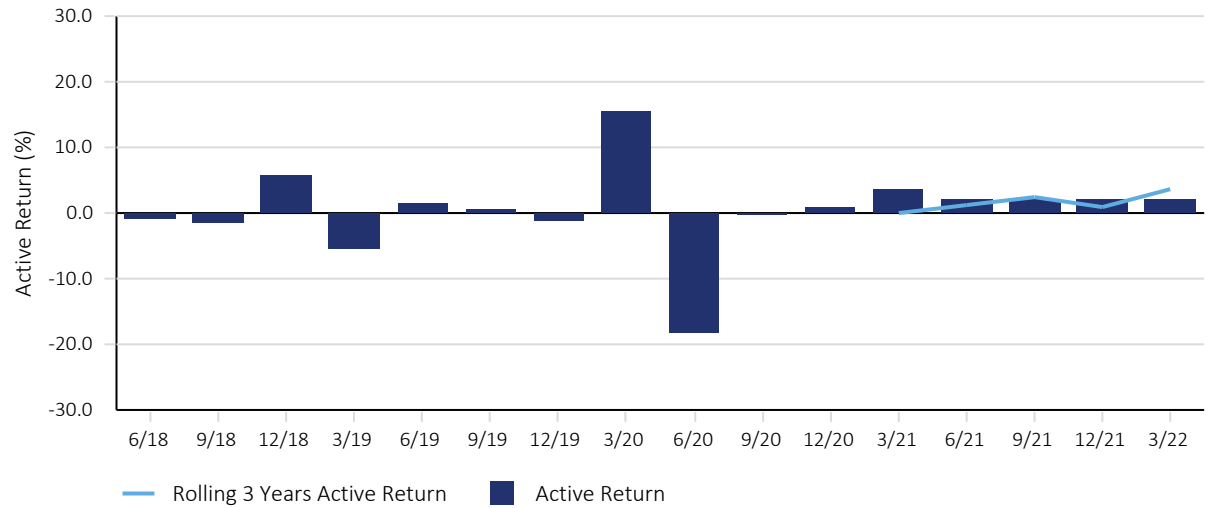
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

BSP Private Credit

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	3.56	0.64
Minimum Return	0.00	-0.51
Return	12.28	3.26
Cumulative Return	12.28	3.26
Active Return	8.54	0.00
Excess Return	11.70	3.15

Risk Summary Statistics

	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	5.99	0.41
Downside Risk	0.00	0.54
Beta	1.56	1.00

Risk/Return Summary Statistics

	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	4.94	1.19
Alpha	6.95	0.00
Active Return/Risk	1.73	0.00
Tracking Error	4.63	0.00
Information Ratio	1.85	
Sharpe Ratio	2.37	2.62

Correlation Statistics

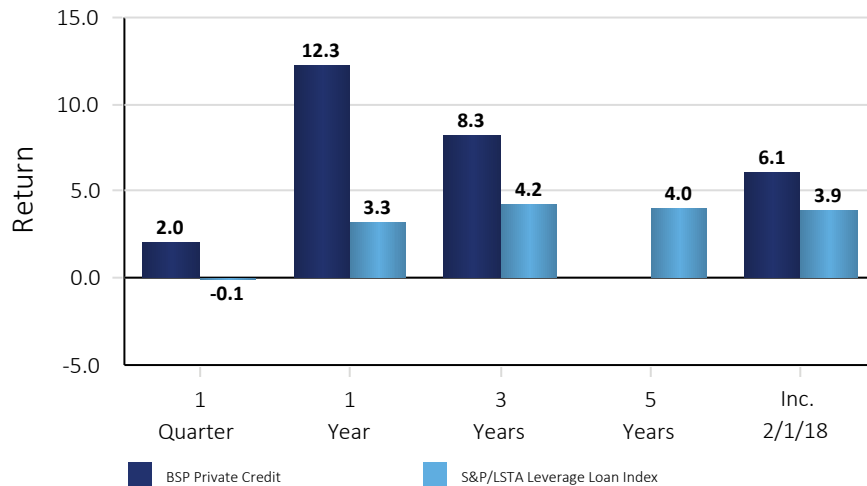
	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.14	1.00
Actual Correlation	0.38	1.00

Manager Summary

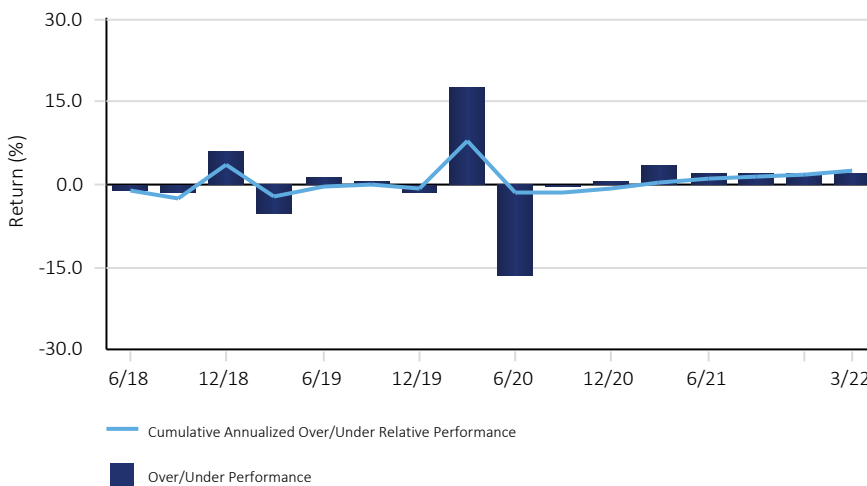
BSP Private Credit vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

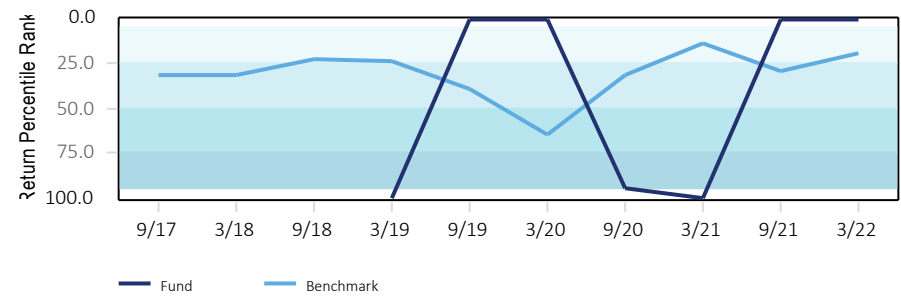
Comparative Performance



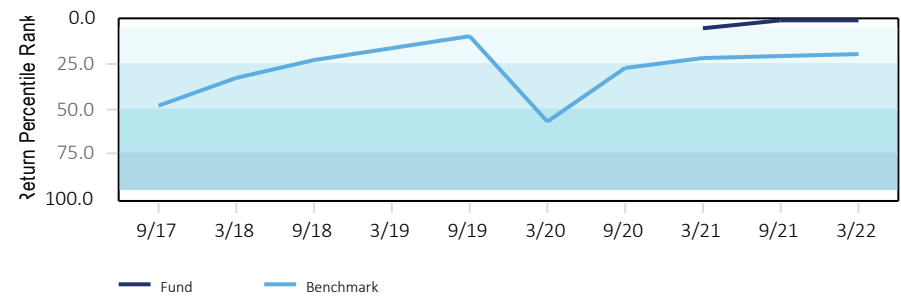
Relative Performance



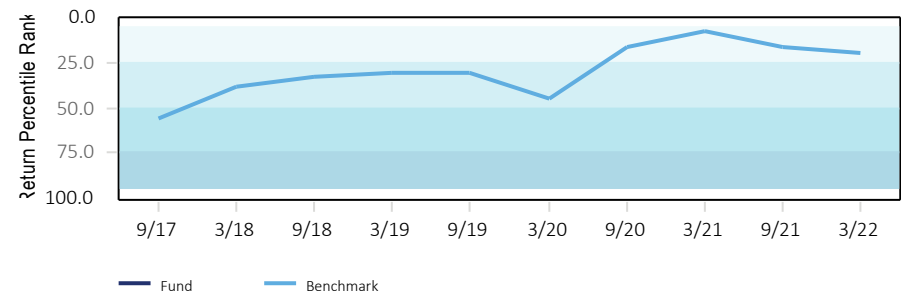
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

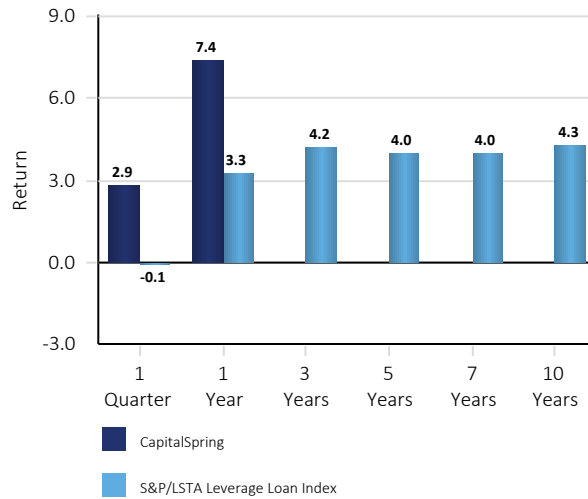


Performance Summary

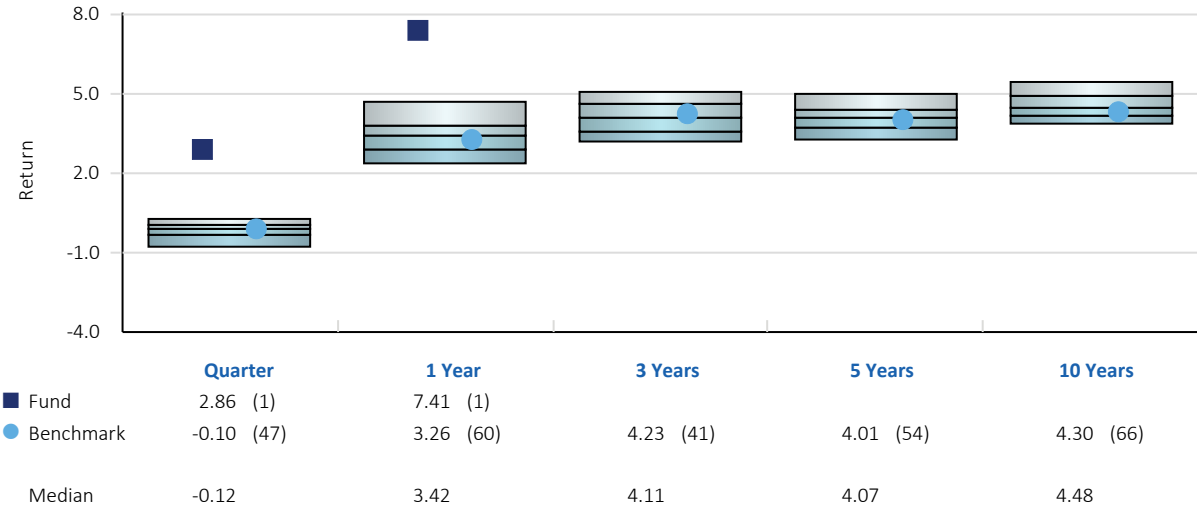
CapitalSpring

Periods Ended March 31, 2022

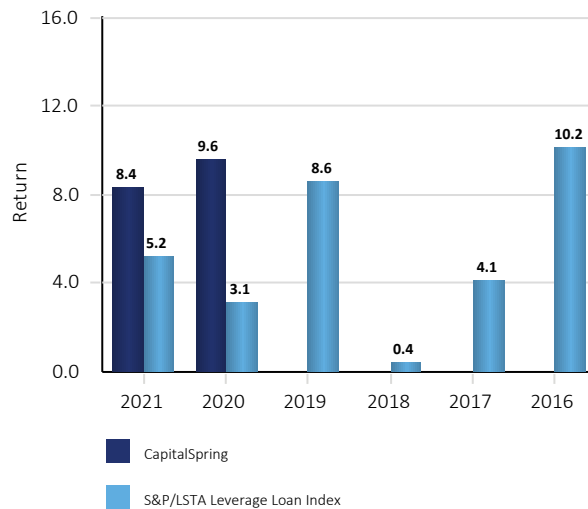
Comparative Performance



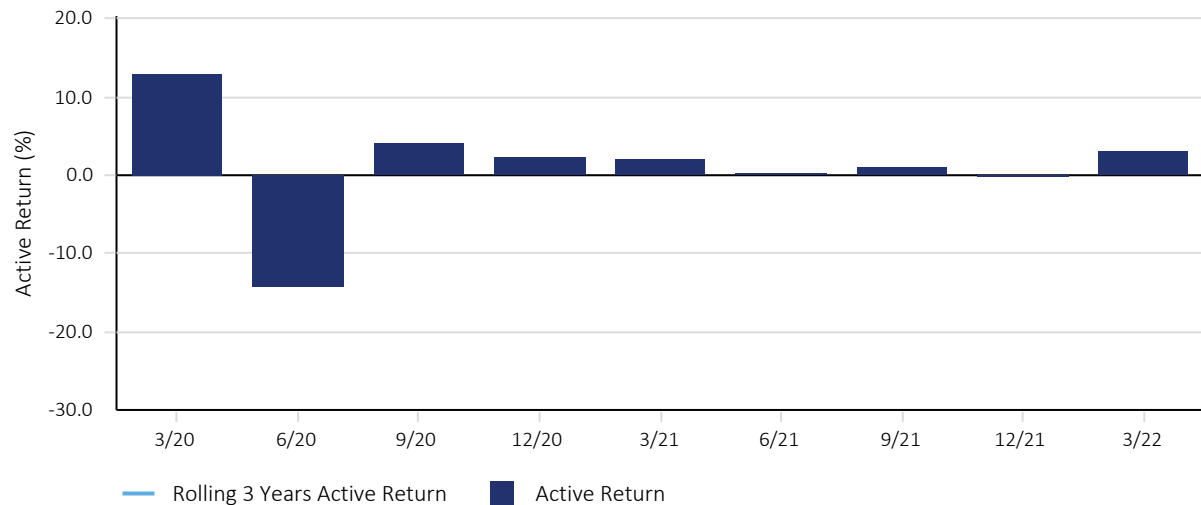
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

CapitalSpring

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>CapitalSpring</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	2.86	0.64
Minimum Return	0.00	-0.51
Return	7.41	3.26
Cumulative Return	7.41	3.26
Active Return	4.01	0.00
Excess Return	7.16	3.15

Risk Summary Statistics

	<u>CapitalSpring</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	3.96	0.41
Downside Risk	0.00	0.54
Beta	0.37	1.00

Risk/Return Summary Statistics

	<u>CapitalSpring</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	3.36	1.19
Alpha	6.22	0.00
Active Return/Risk	1.19	0.00
Tracking Error	3.42	0.00
Information Ratio	1.17	
Sharpe Ratio	2.14	2.62

Correlation Statistics

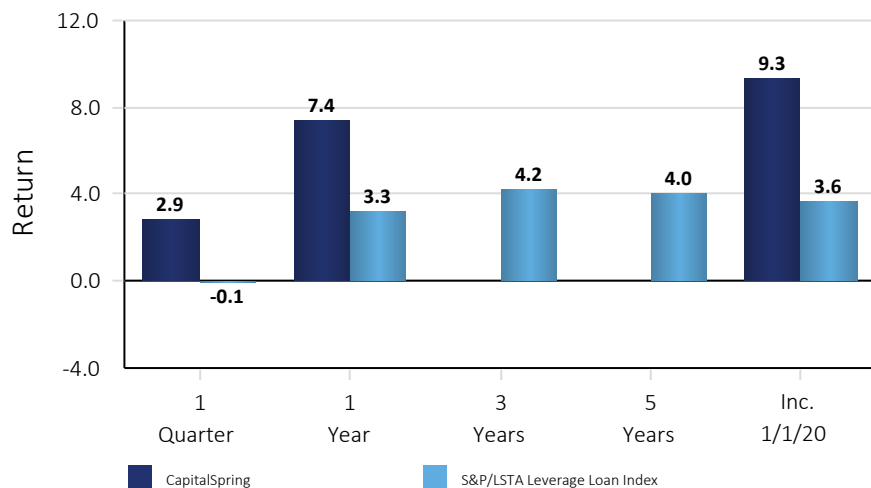
	<u>CapitalSpring</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.02	1.00
Actual Correlation	0.13	1.00

Manager Summary

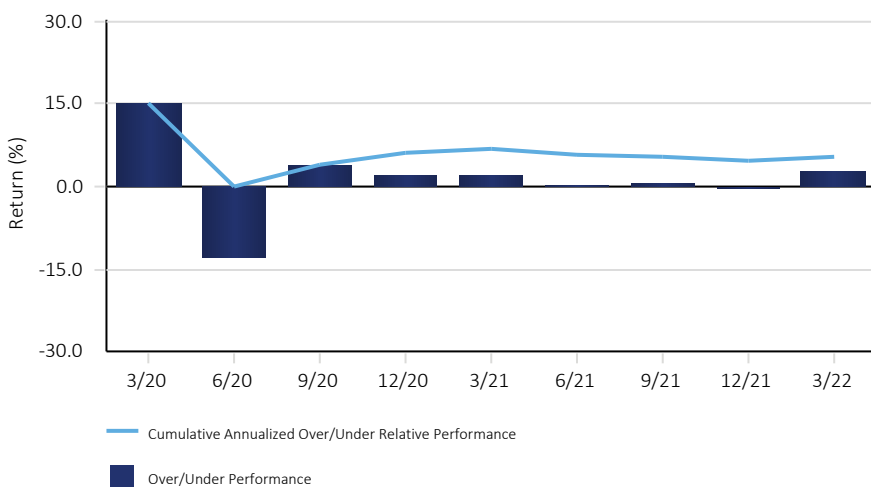
CapitalSpring vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

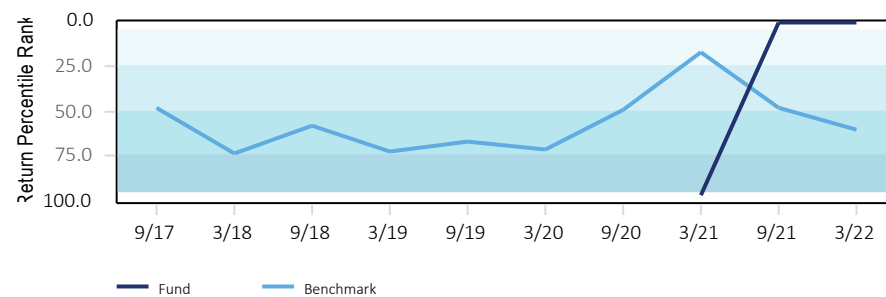
Comparative Performance



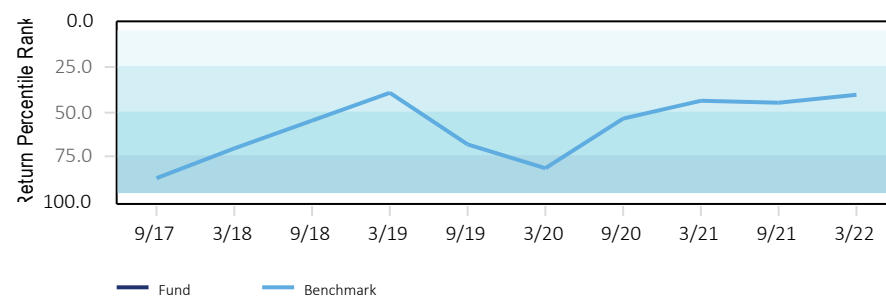
Relative Performance



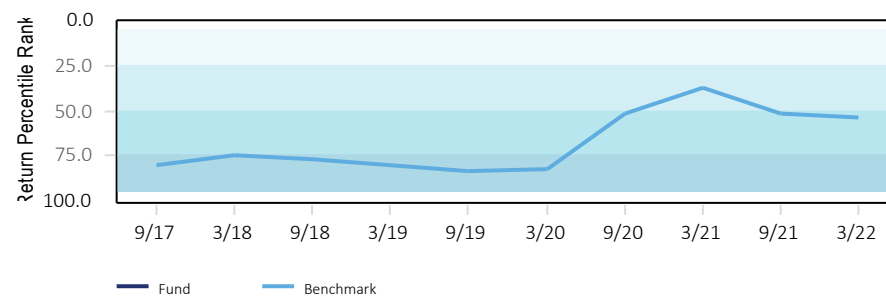
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

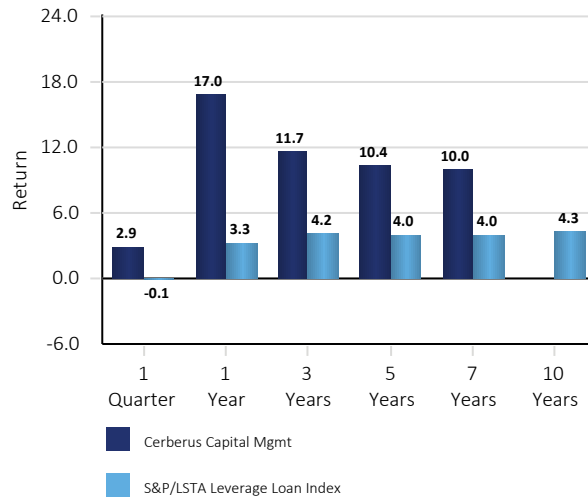


Performance Summary

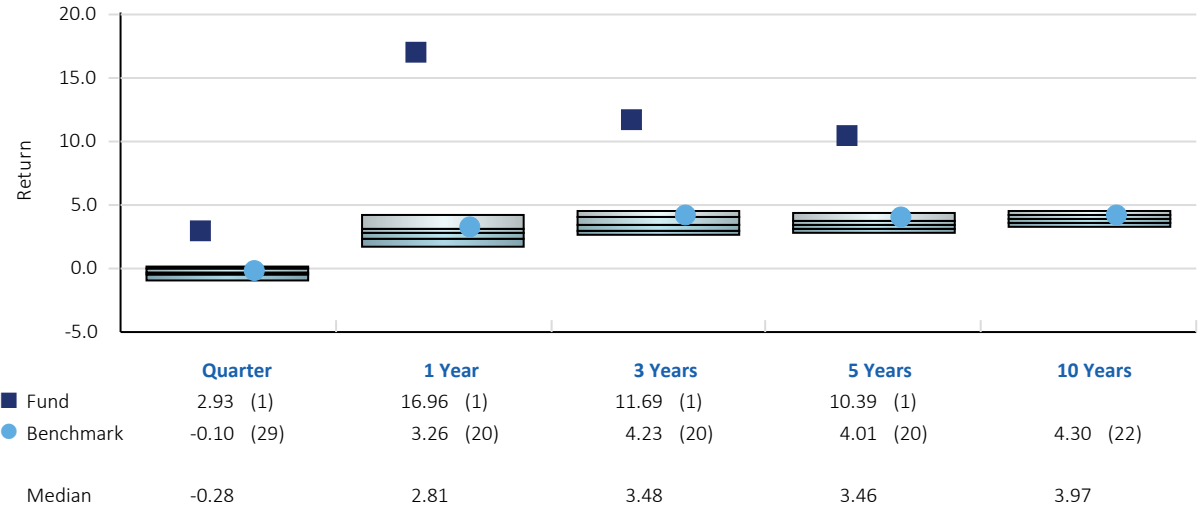
Cerberus Capital Mgmt

Periods Ended March 31, 2022

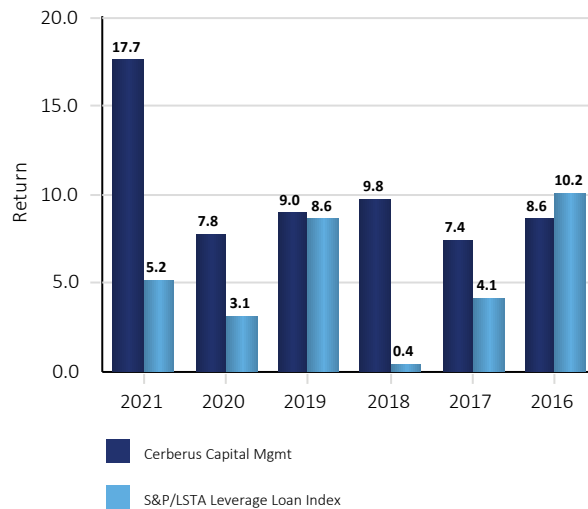
Comparative Performance



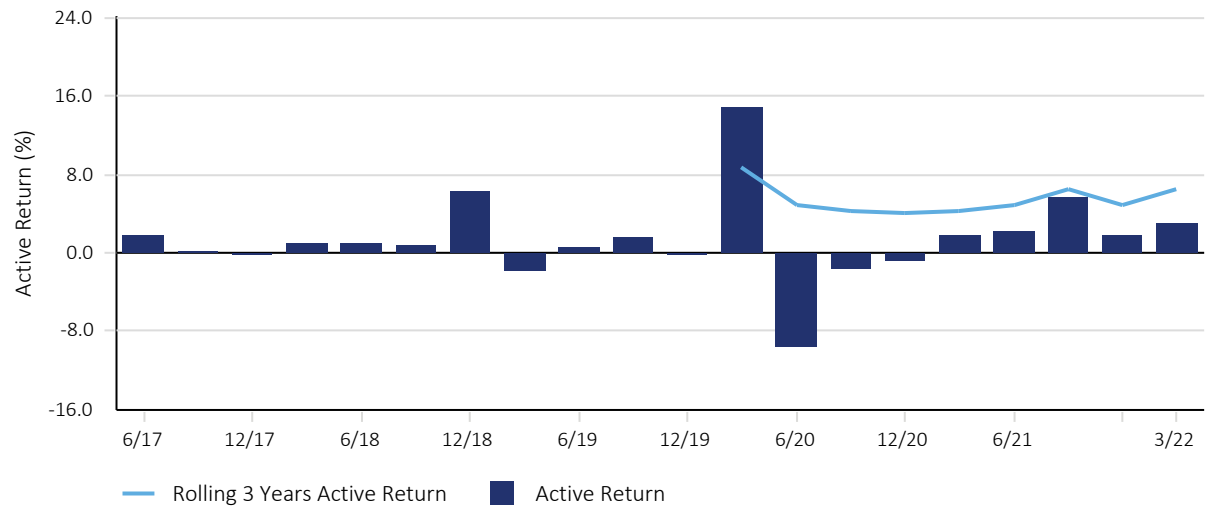
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Cerberus Capital Mgmt

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	5.68	0.64
Minimum Return	0.00	-0.51
Return	16.96	3.26
Cumulative Return	16.96	3.26
Active Return	12.67	0.00
Excess Return	15.82	3.15

Risk Summary Statistics

	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	6.68	0.41
Downside Risk	0.00	0.54
Beta	1.23	1.00

Risk/Return Summary Statistics

	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	4.86	1.19
Alpha	12.62	0.00
Active Return/Risk	2.61	0.00
Tracking Error	4.64	0.00
Information Ratio	2.73	
Sharpe Ratio	3.25	2.62

Correlation Statistics

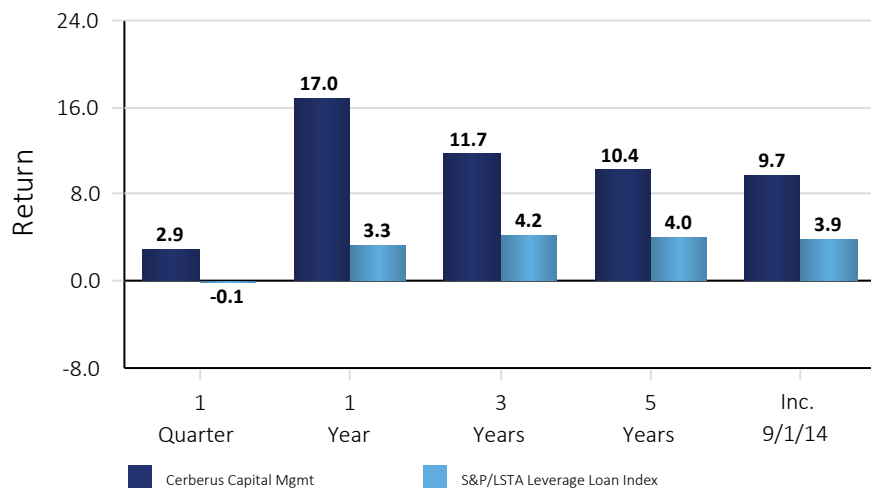
	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.09	1.00
Actual Correlation	0.30	1.00

Manager Summary

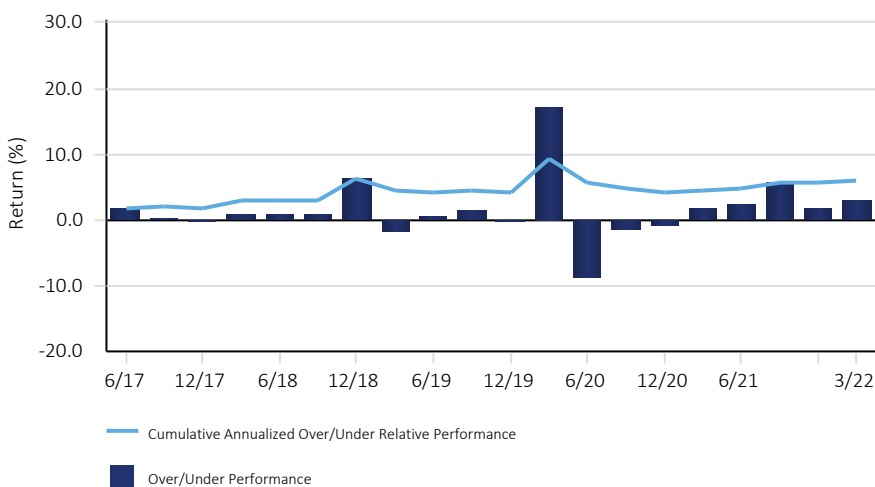
Cerberus Capital Mgmt vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

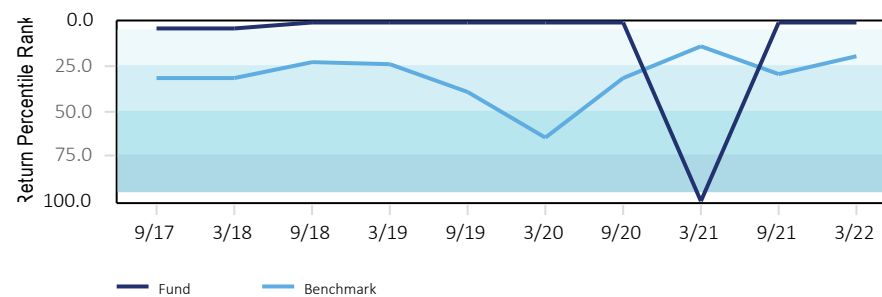
Comparative Performance



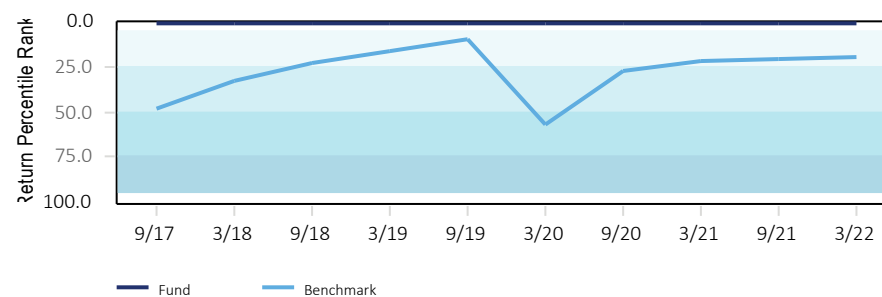
Relative Performance



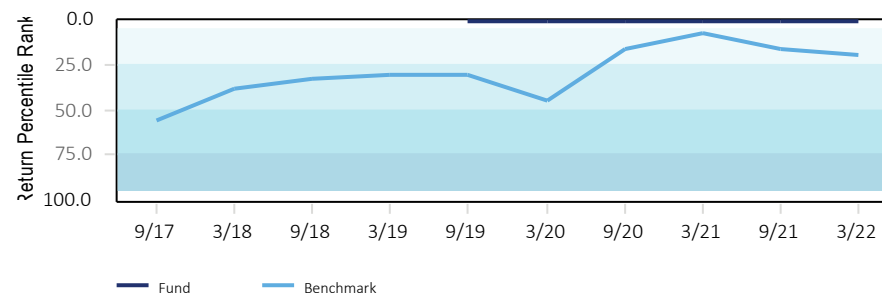
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

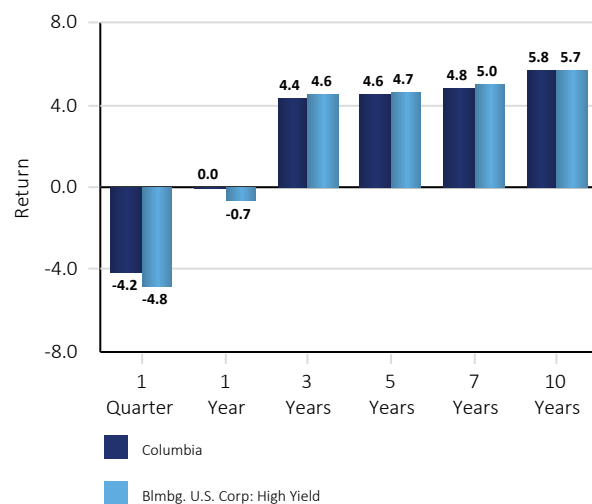


Performance Summary

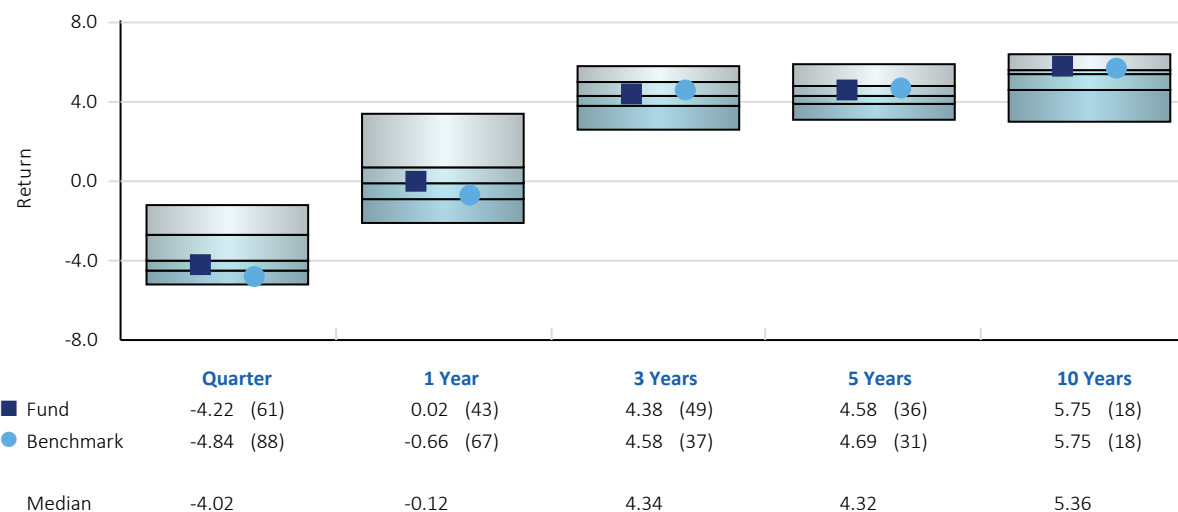
Columbia

Periods Ended March 31, 2022

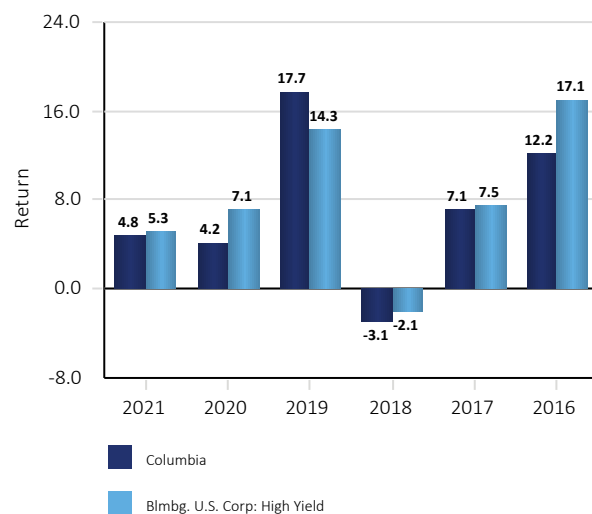
Comparative Performance



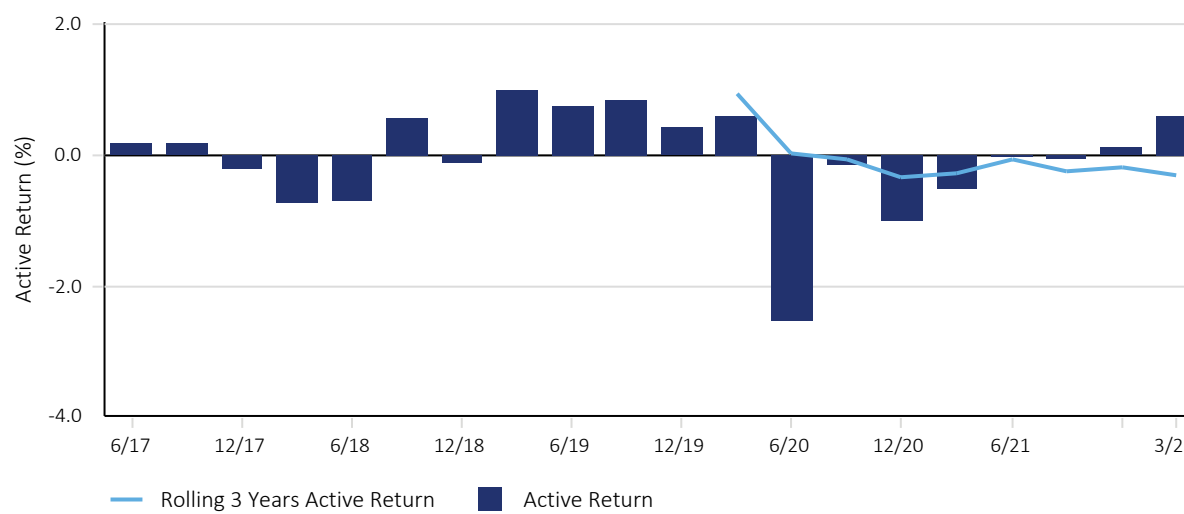
Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Columbia

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Columbia</u>
Maximum Return	2.05
Minimum Return	-2.86
Return	0.02
Cumulative Return	0.02
Active Return	0.68
Excess Return	0.05

Blmbg. U.S. Corp: High Yield

1.87
-2.73
-0.66
-0.66
0.00
-0.64

Risk Summary Statistics

	<u>Columbia</u>
Upside Risk	0.82
Downside Risk	3.18
Beta	1.00

Blmbg. U.S. Corp: High Yield

0.76
3.29
1.00

Risk/Return Summary Statistics

	<u>Columbia</u>
Standard Deviation	4.26
Alpha	0.68
Active Return/Risk	0.16
Tracking Error	0.63
Information Ratio	1.08
Sharpe Ratio	0.01

Blmbg. U.S. Corp: High Yield

4.22
0.00
0.00
0.00
-0.15

Correlation Statistics

	<u>Columbia</u>
R-Squared	0.98
Actual Correlation	0.99

Blmbg. U.S. Corp: High Yield

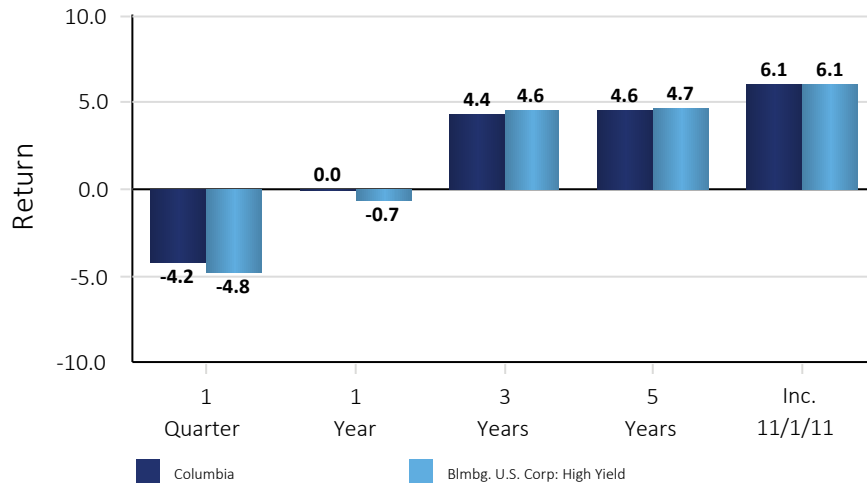
1.00
1.00

Manager Summary

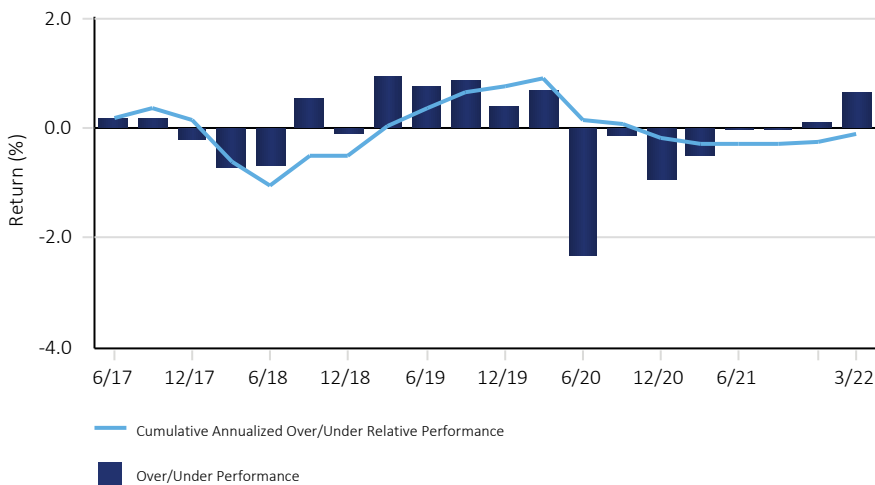
Columbia vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended March 31, 2022

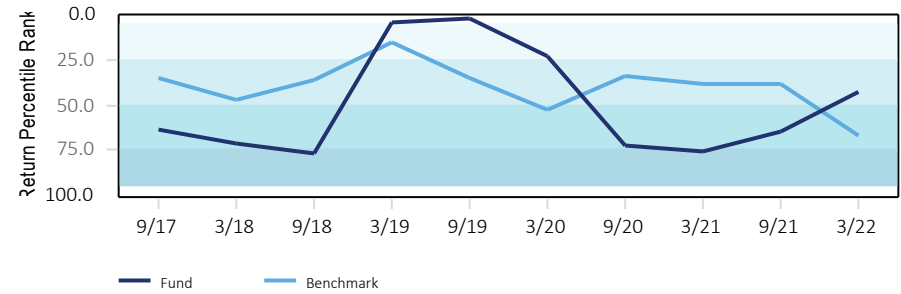
Comparative Performance



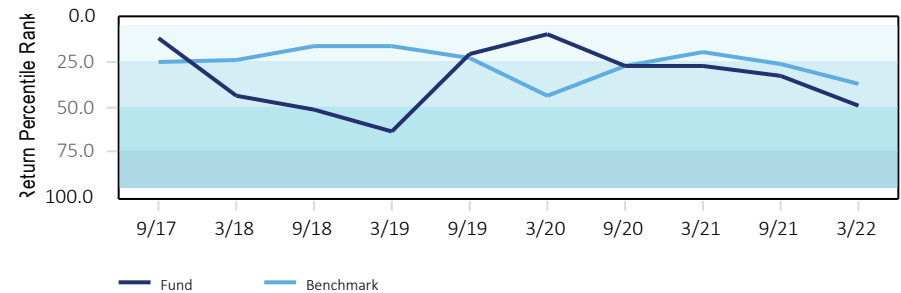
Relative Performance



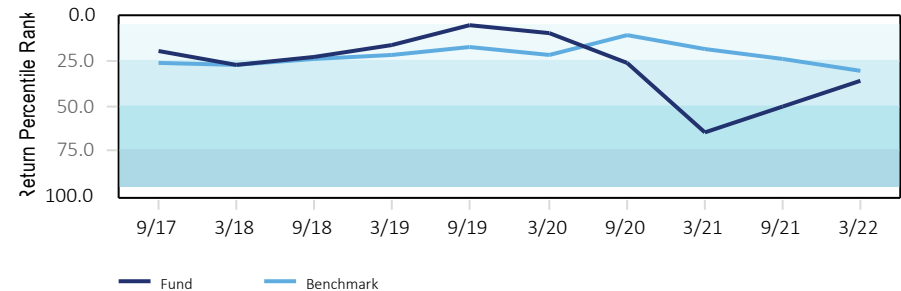
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

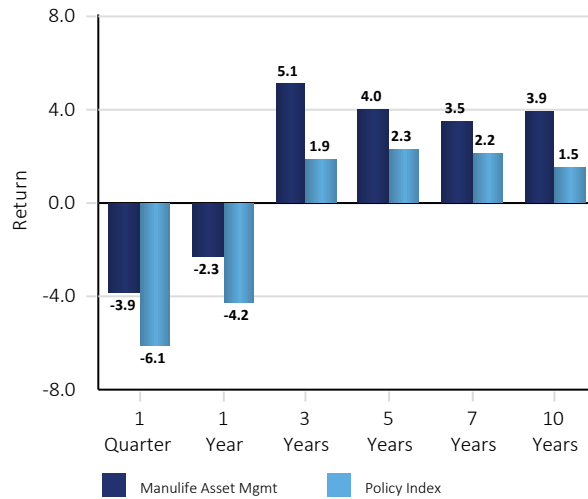


Performance Summary

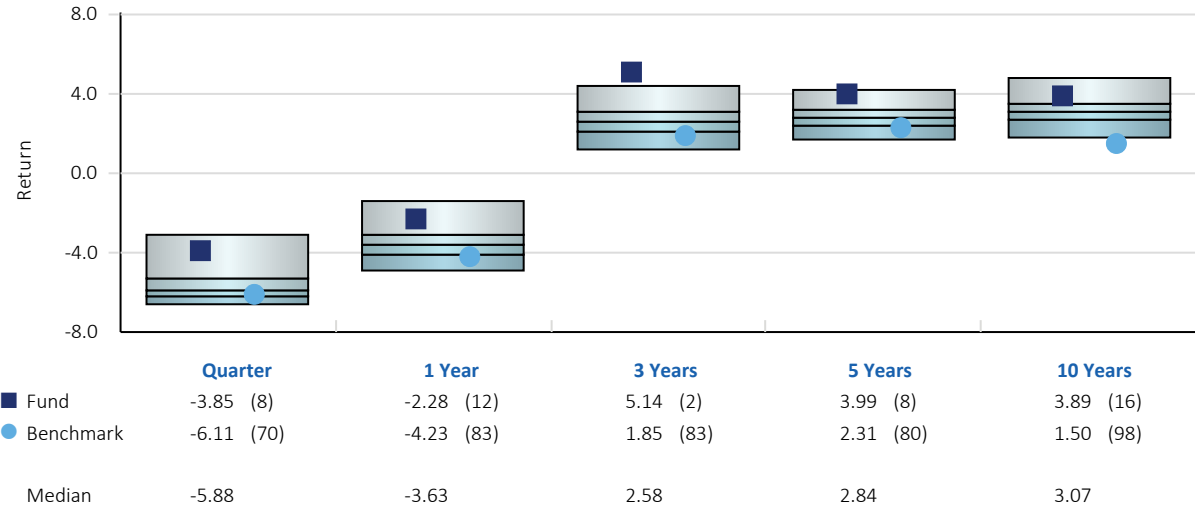
Manulife Asset Mgmt

Periods Ended March 31, 2022

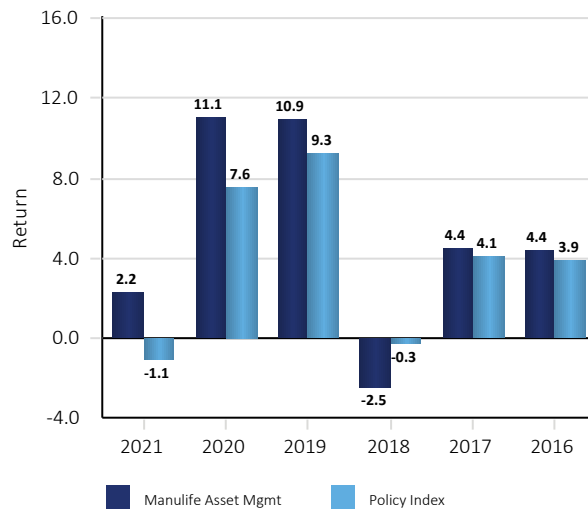
Comparative Performance



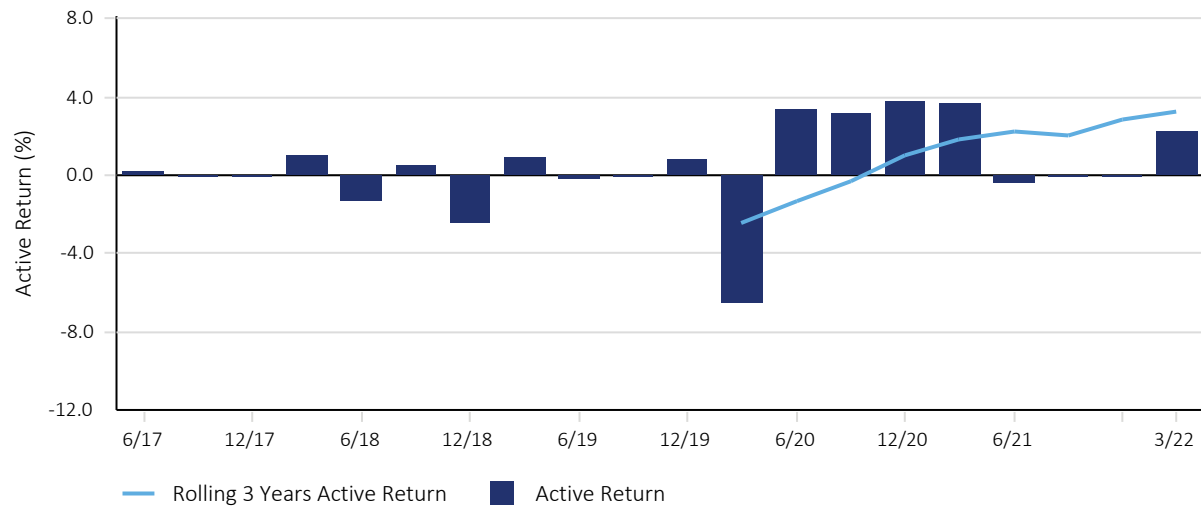
Peer Group Analysis: IM U.S. Broad Market Core+ Fixed Income (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Manulife Asset Mgmt

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
Maximum Return	1.68	1.00
Minimum Return	-2.13	-2.68
Return	-2.28	-4.23
Cumulative Return	-2.28	-4.23
Active Return	1.99	0.00
Excess Return	-2.30	-4.30

Risk Summary Statistics

	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
Upside Risk	0.62	0.45
Downside Risk	2.86	3.82
Beta	0.54	1.00

Risk/Return Summary Statistics

	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
Standard Deviation	3.52	3.94
Alpha	0.03	0.00
Active Return/Risk	0.57	0.00
Tracking Error	3.35	0.00
Information Ratio	0.59	
Sharpe Ratio	-0.66	-1.09

Correlation Statistics

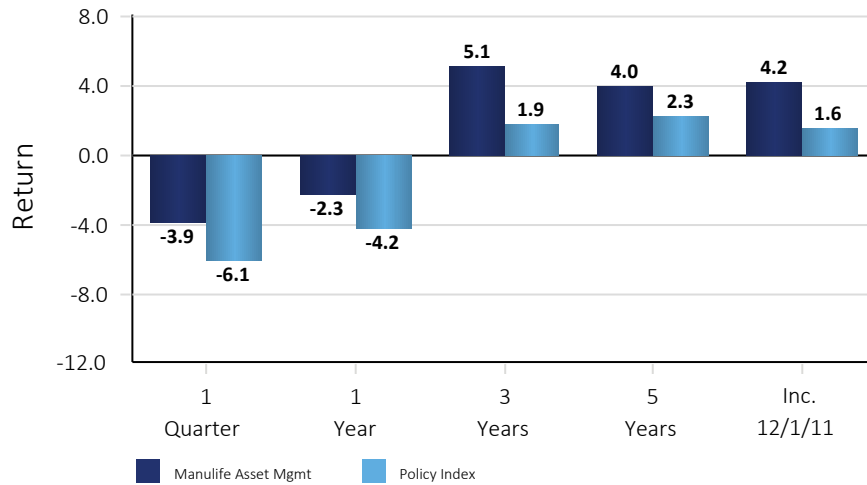
	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
R-Squared	0.36	1.00
Actual Correlation	0.60	1.00

Manager Summary

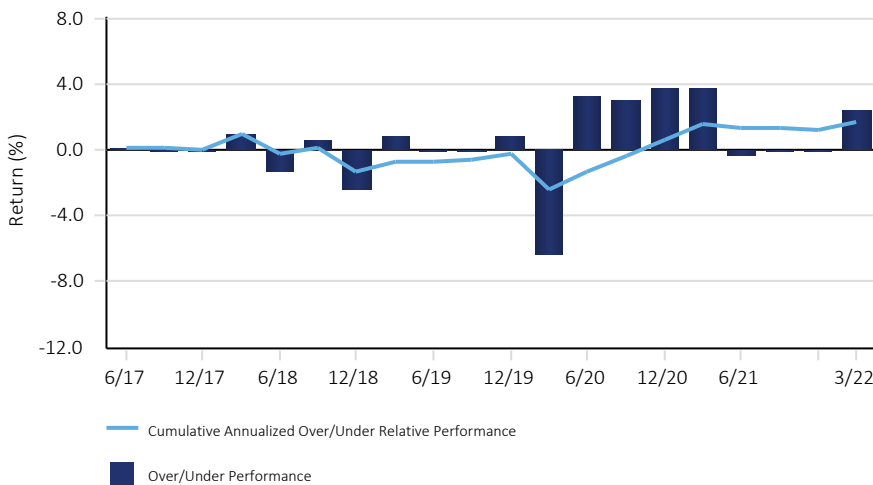
Manulife Asset Mgmt vs IM U.S. Broad Market Core+ Fixed Income (SA+CF)

Periods Ended March 31, 2022

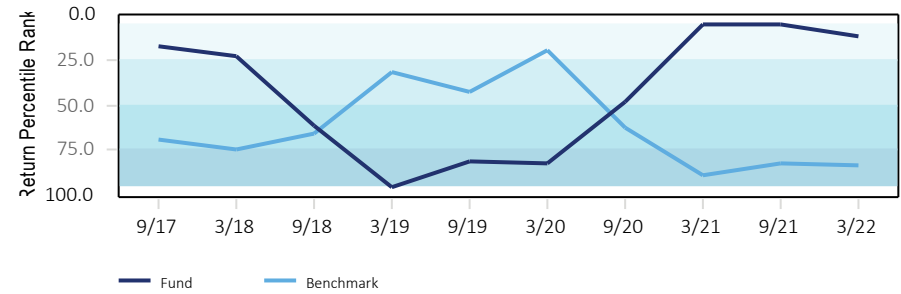
Comparative Performance



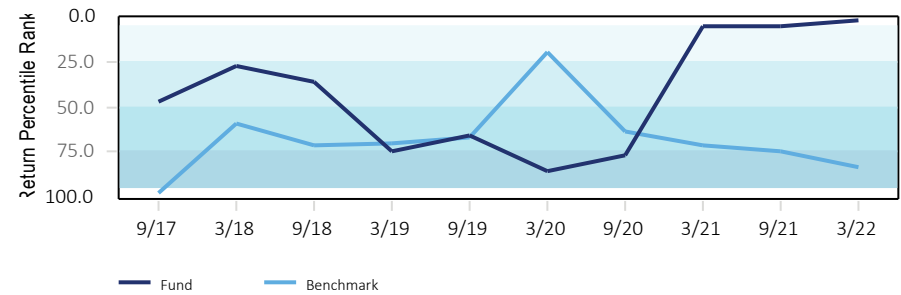
Relative Performance



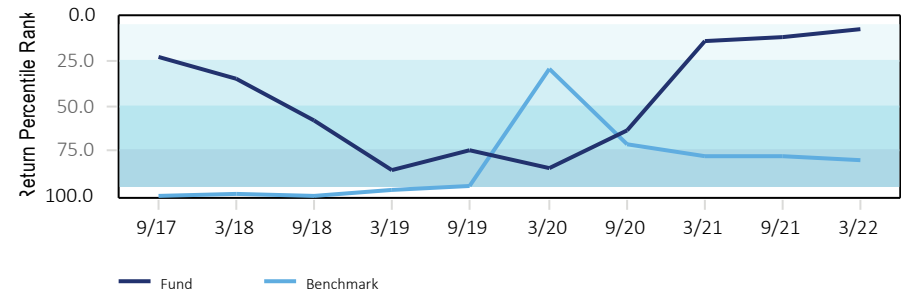
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

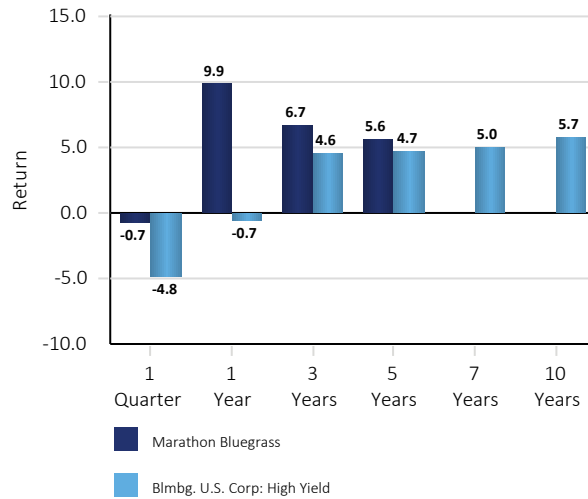


Performance Summary

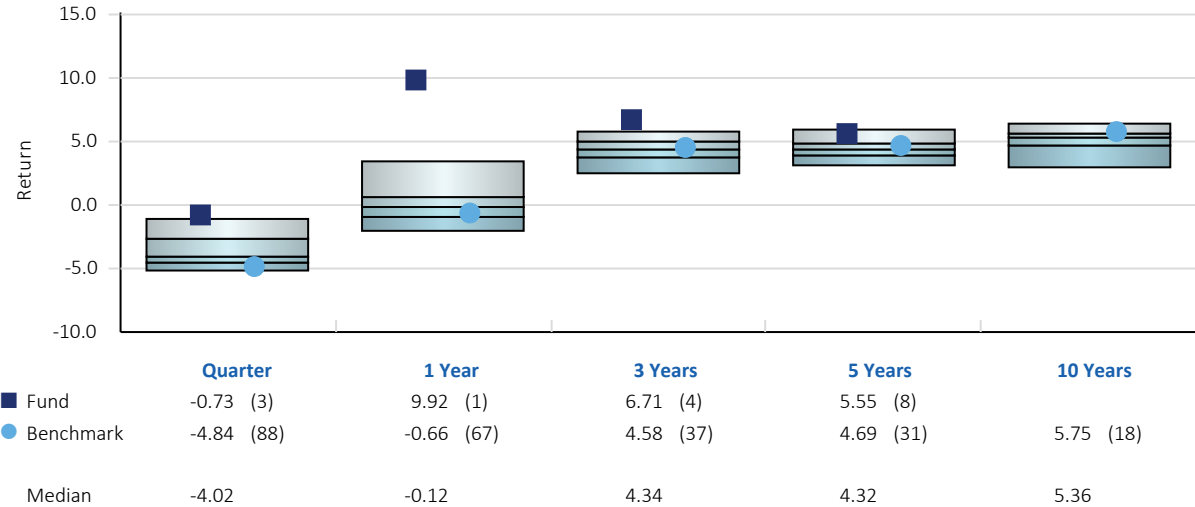
Marathon Bluegrass

Periods Ended March 31, 2022

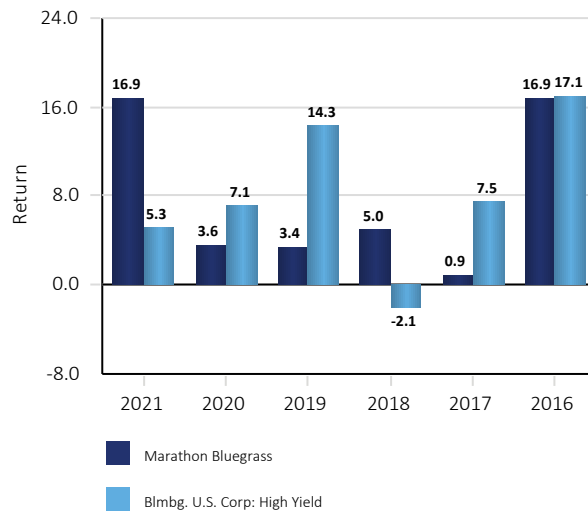
Comparative Performance



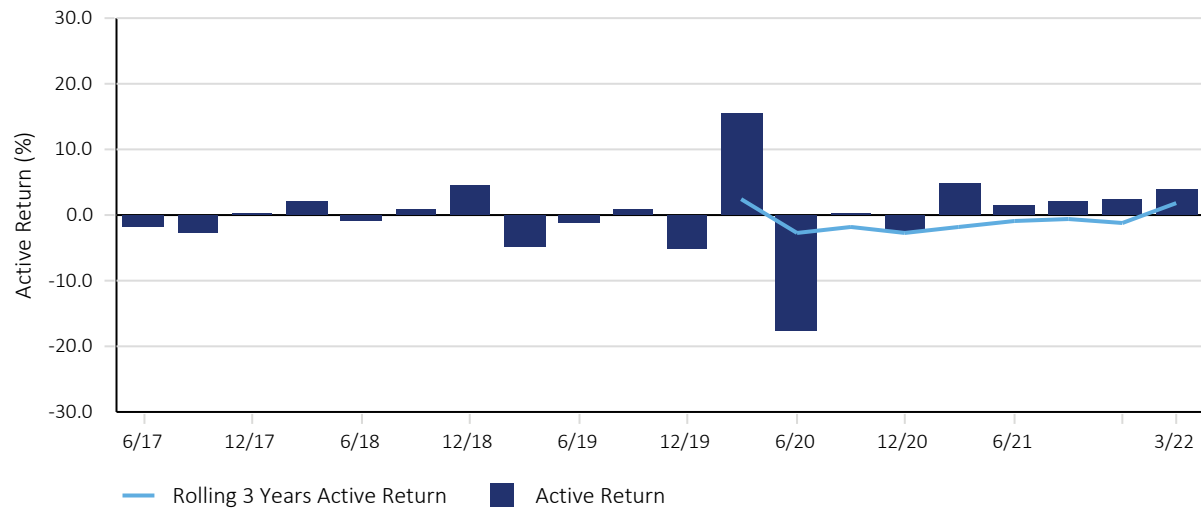
Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Marathon Bluegrass

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Marathon Bluegrass</u>	<u>Blmbg. U.S. Corp: High Yield</u>
Maximum Return	2.77	1.87
Minimum Return	-1.01	-2.73
Return	9.92	-0.66
Cumulative Return	9.92	-0.66
Active Return	10.13	0.00
Excess Return	9.50	-0.64

Risk Summary Statistics

	<u>Marathon Bluegrass</u>	<u>Blmbg. U.S. Corp: High Yield</u>
Upside Risk	1.26	0.76
Downside Risk	1.06	3.29
Beta	0.66	1.00

Risk/Return Summary Statistics

	<u>Marathon Bluegrass</u>	<u>Blmbg. U.S. Corp: High Yield</u>
Standard Deviation	3.56	4.22
Alpha	10.40	0.00
Active Return/Risk	2.84	0.00
Tracking Error	2.64	0.00
Information Ratio	3.84	
Sharpe Ratio	2.65	-0.15

Correlation Statistics

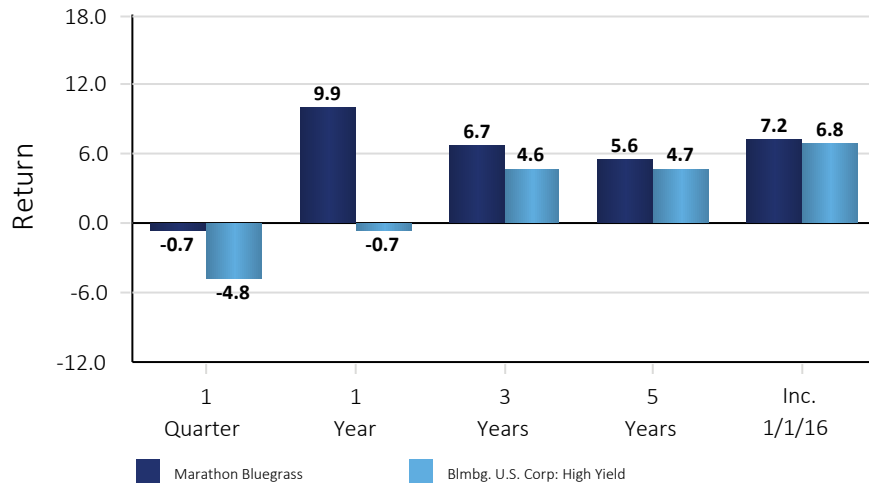
	<u>Marathon Bluegrass</u>	<u>Blmbg. U.S. Corp: High Yield</u>
R-Squared	0.61	1.00
Actual Correlation	0.78	1.00

Manager Summary

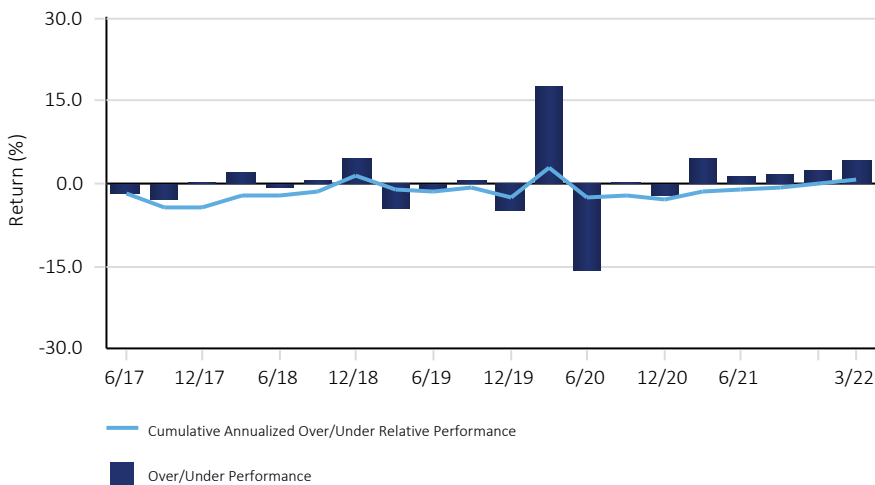
Marathon Bluegrass vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended March 31, 2022

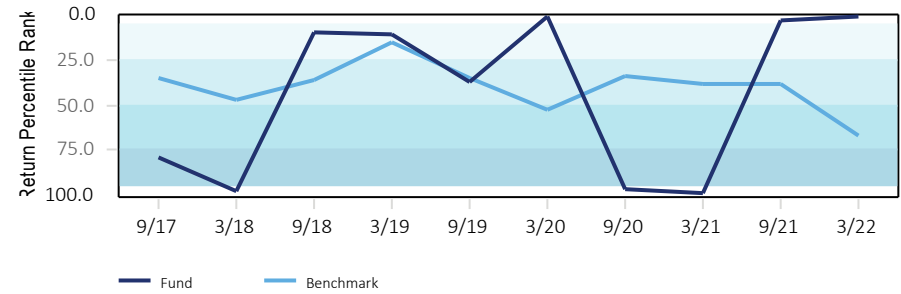
Comparative Performance



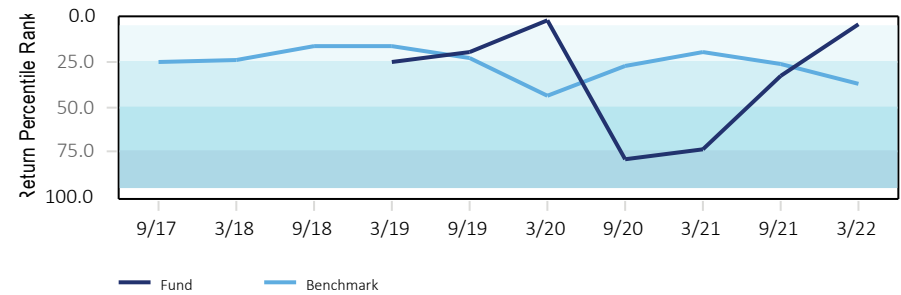
Relative Performance



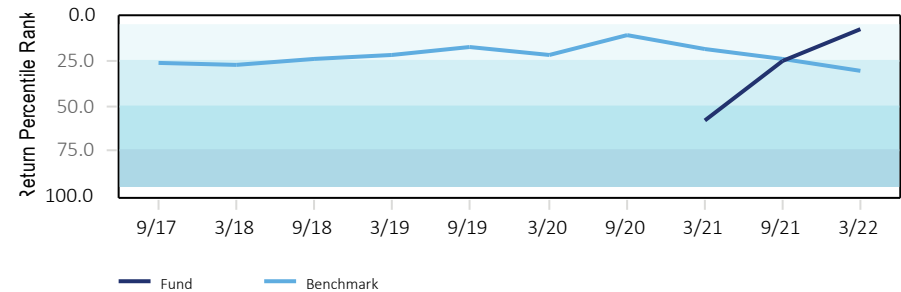
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

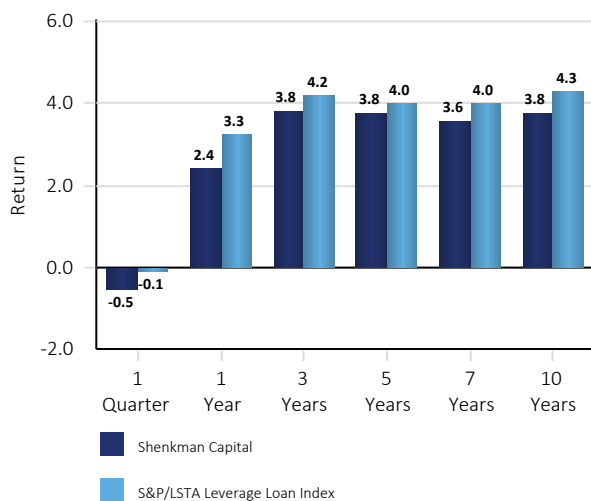


Performance Summary

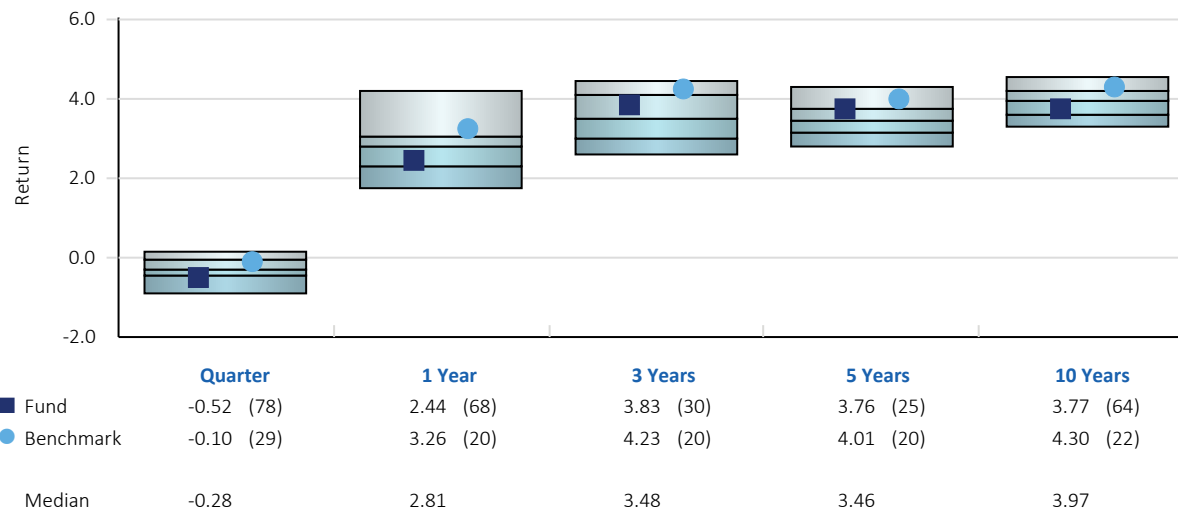
Shenkman Capital

Periods Ended March 31, 2022

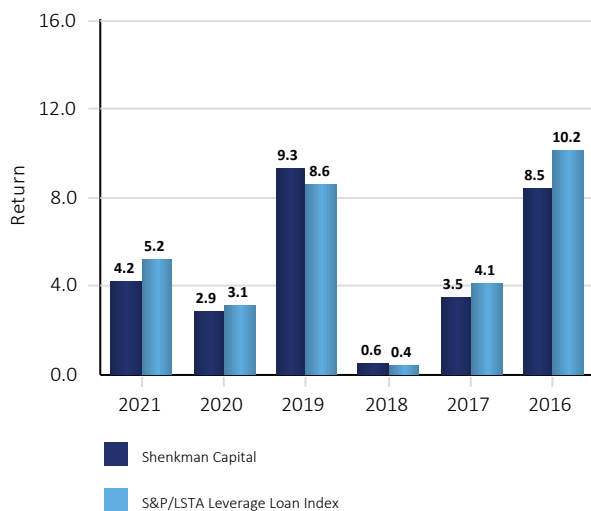
Comparative Performance



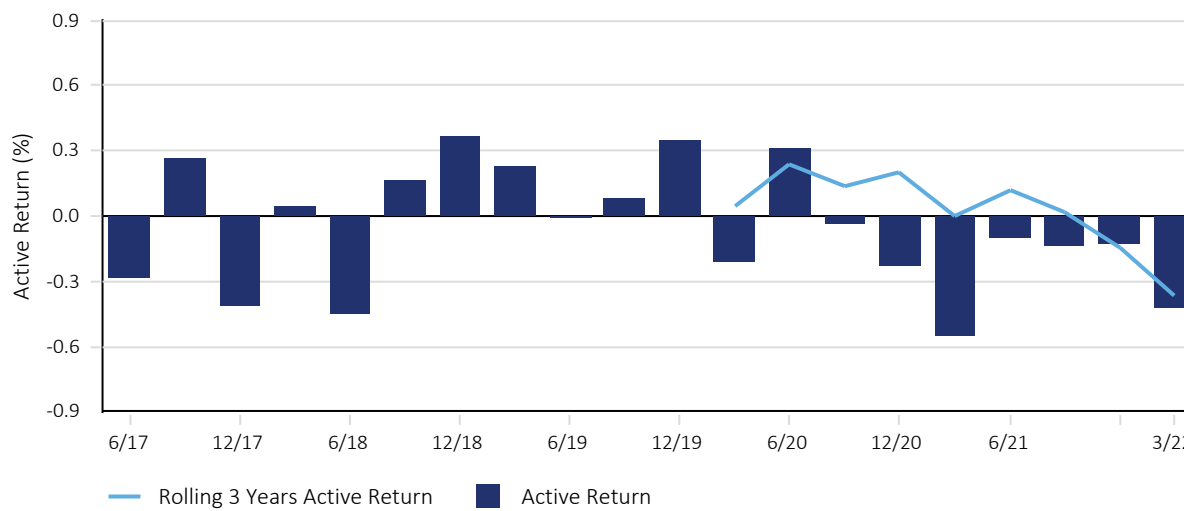
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Shenkman Capital

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	0.95	0.64
Minimum Return	-0.62	-0.51
Return	2.44	3.26
Cumulative Return	2.44	3.26
Active Return	-0.79	0.00
Excess Return	2.36	3.15

Risk Summary Statistics

	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	0.44	0.41
Downside Risk	0.81	0.54
Beta	1.24	1.00

Risk/Return Summary Statistics

	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	1.56	1.19
Alpha	-1.54	0.00
Active Return/Risk	-0.51	0.00
Tracking Error	0.59	0.00
Information Ratio	-1.34	
Sharpe Ratio	1.51	2.62

Correlation Statistics

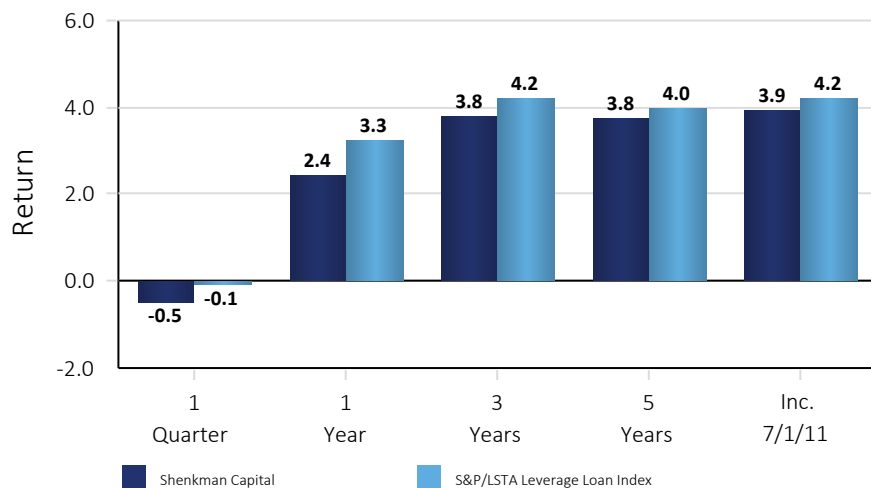
	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.89	1.00
Actual Correlation	0.94	1.00

Manager Summary

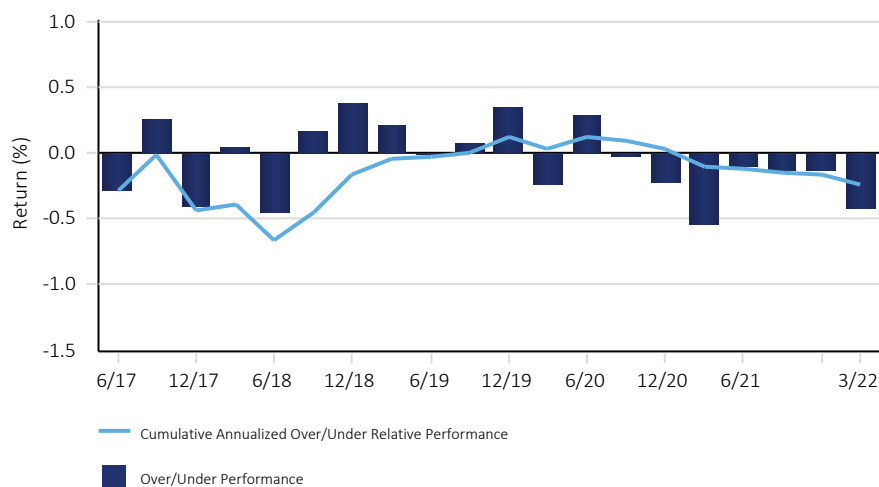
Shenkman Capital vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

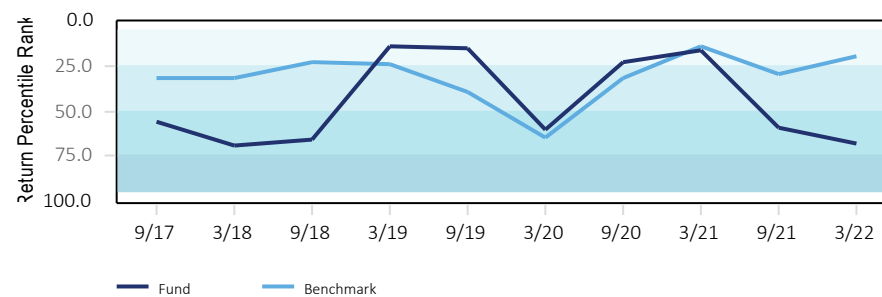
Comparative Performance



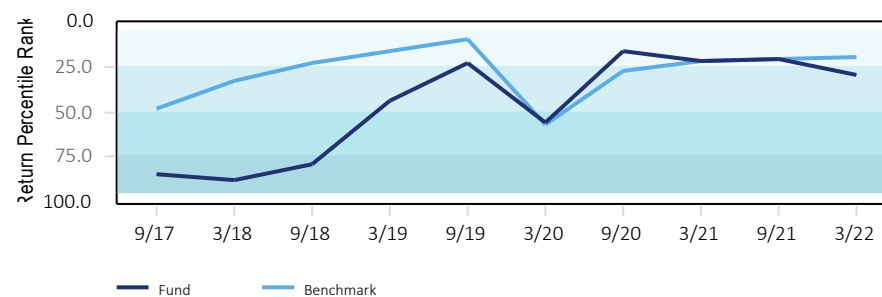
Relative Performance



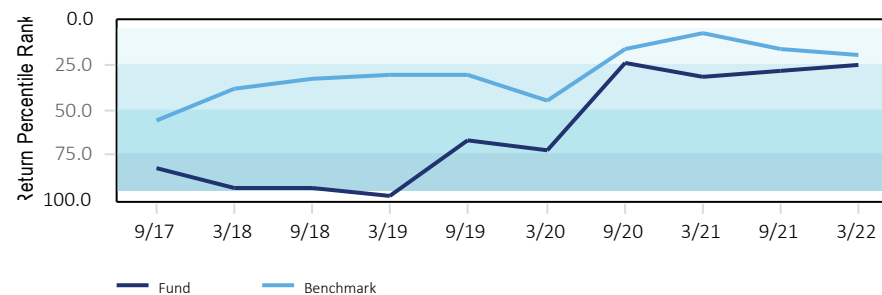
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

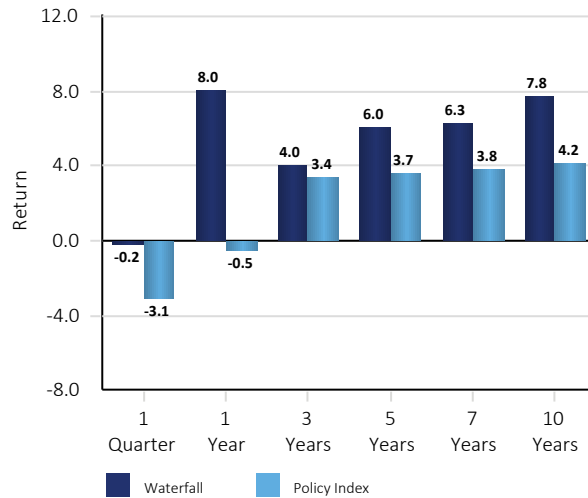


Performance Summary

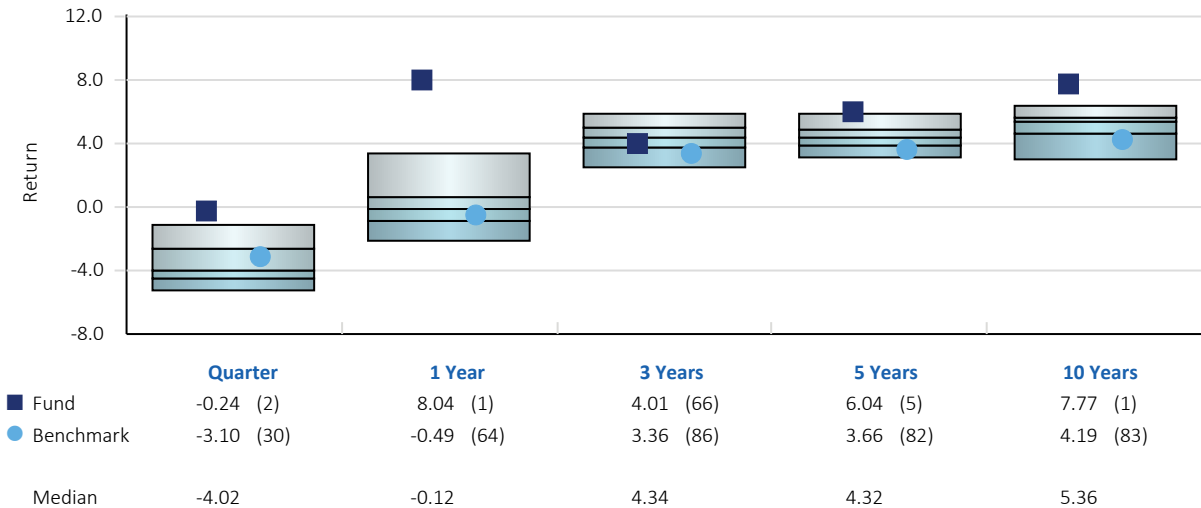
Waterfall

Periods Ended March 31, 2022

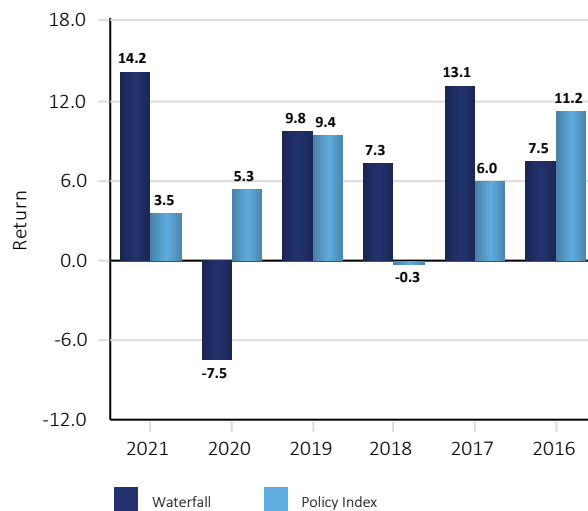
Comparative Performance



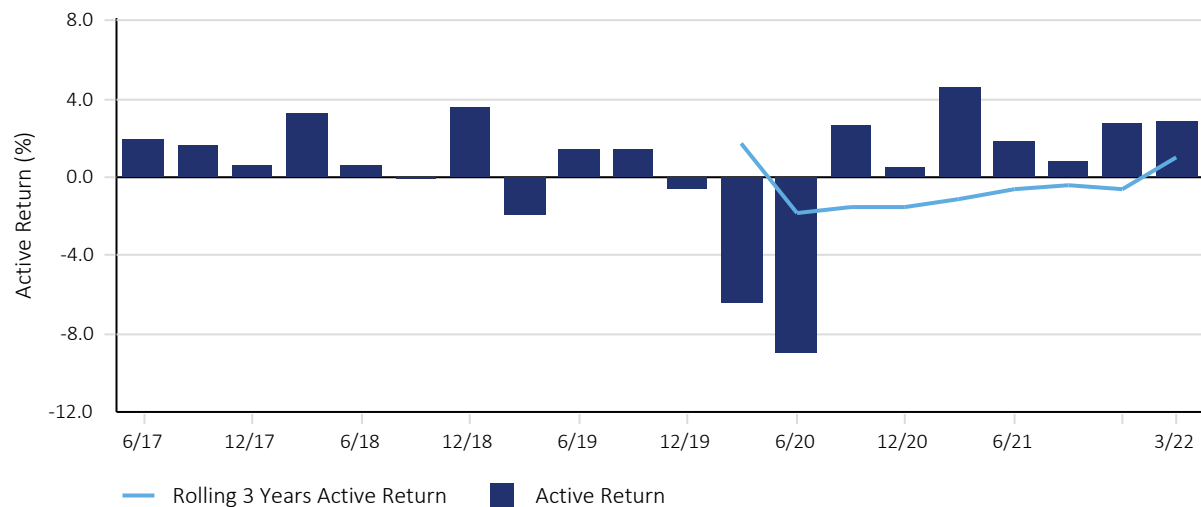
Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Waterfall

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Waterfall</u>	<u>Policy Index</u>
Maximum Return	2.14	0.96
Minimum Return	-2.66	-1.52
Return	8.04	-0.49
Cumulative Return	8.04	-0.49
Active Return	8.31	0.00
Excess Return	7.79	-0.53

Risk Summary Statistics

	<u>Waterfall</u>	<u>Policy Index</u>
Upside Risk	1.15	0.45
Downside Risk	2.70	2.00
Beta	0.35	1.00

Risk/Return Summary Statistics

	<u>Waterfall</u>	<u>Policy Index</u>
Standard Deviation	4.26	2.53
Alpha	8.31	0.00
Active Return/Risk	1.95	0.00
Tracking Error	4.49	0.00
Information Ratio	1.85	
Sharpe Ratio	1.82	-0.21

Correlation Statistics

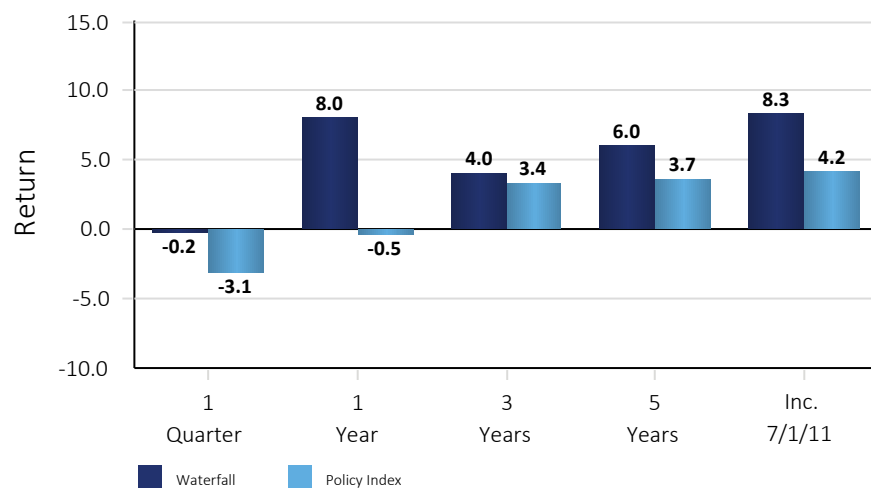
	<u>Waterfall</u>	<u>Policy Index</u>
R-Squared	0.04	1.00
Actual Correlation	0.21	1.00

Manager Summary

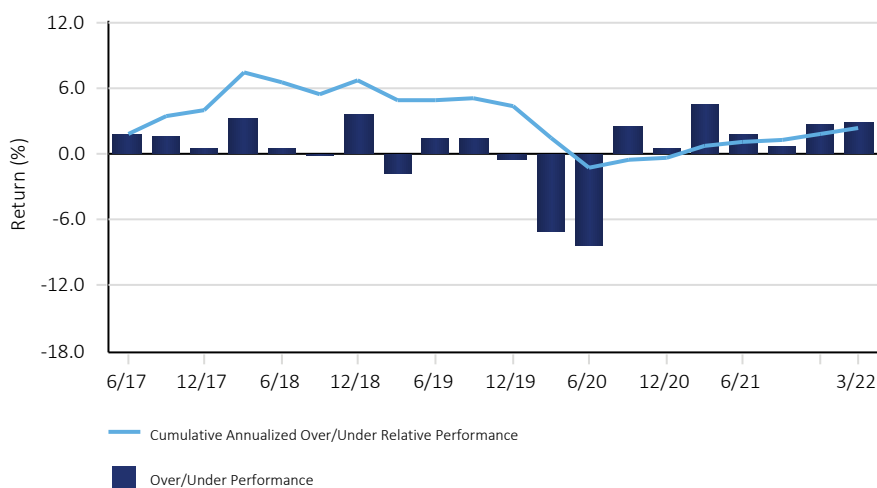
Waterfall vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended March 31, 2022

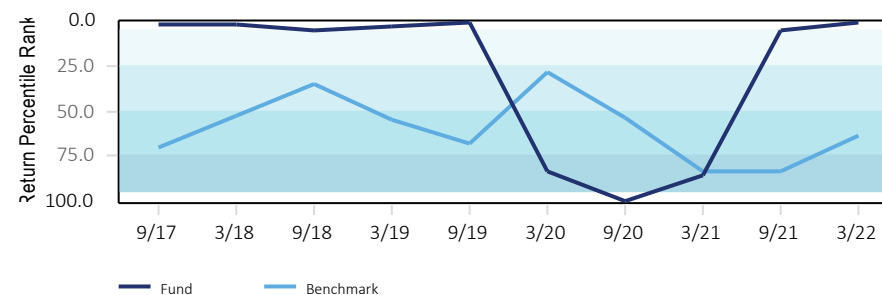
Comparative Performance



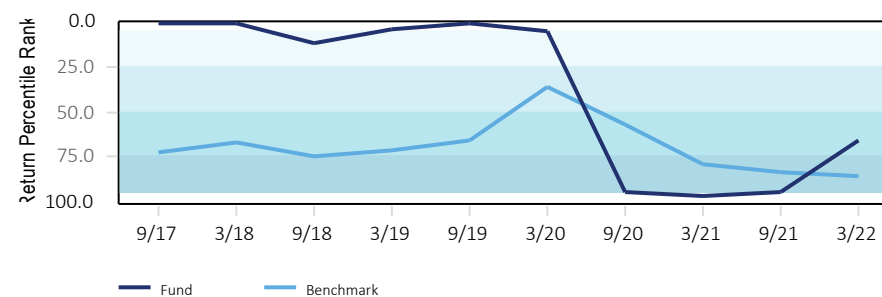
Relative Performance



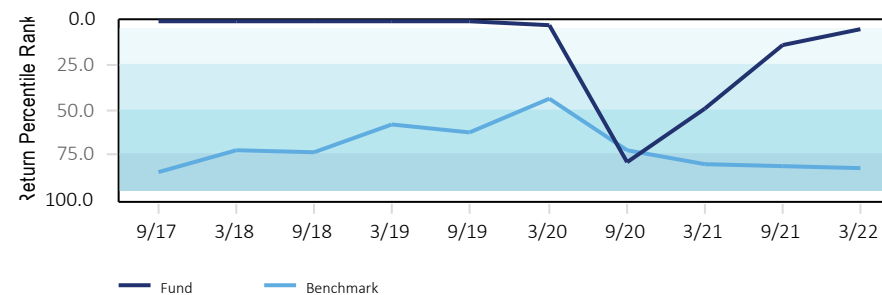
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

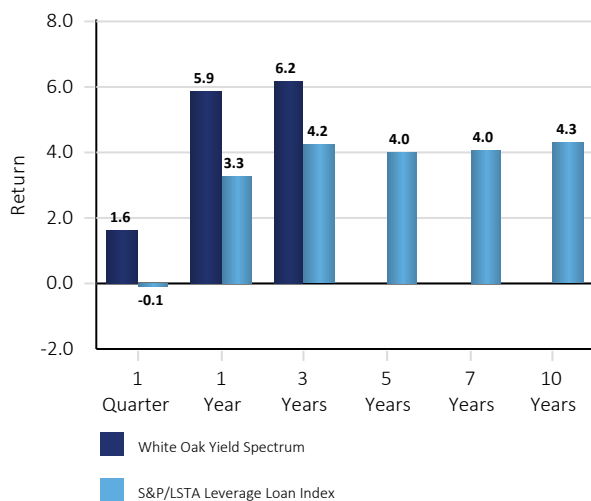


Performance Summary

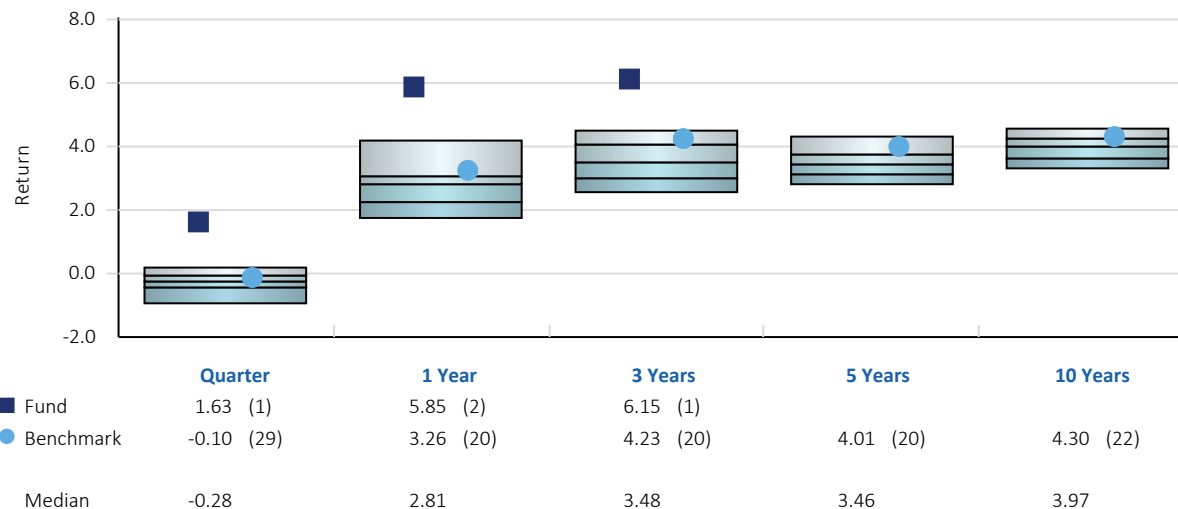
White Oak Yield Spectrum

Periods Ended March 31, 2022

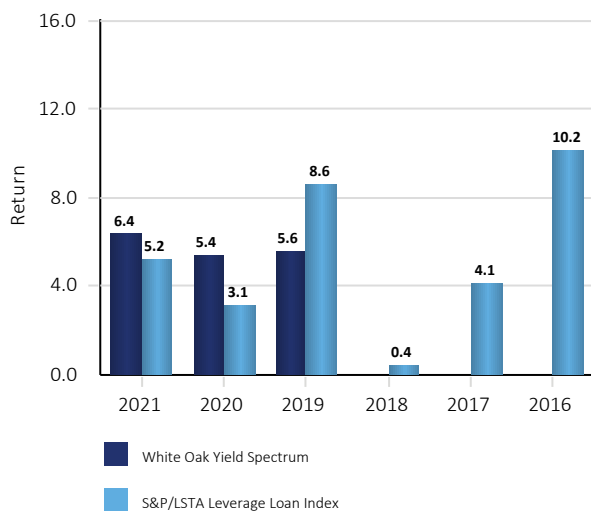
Comparative Performance



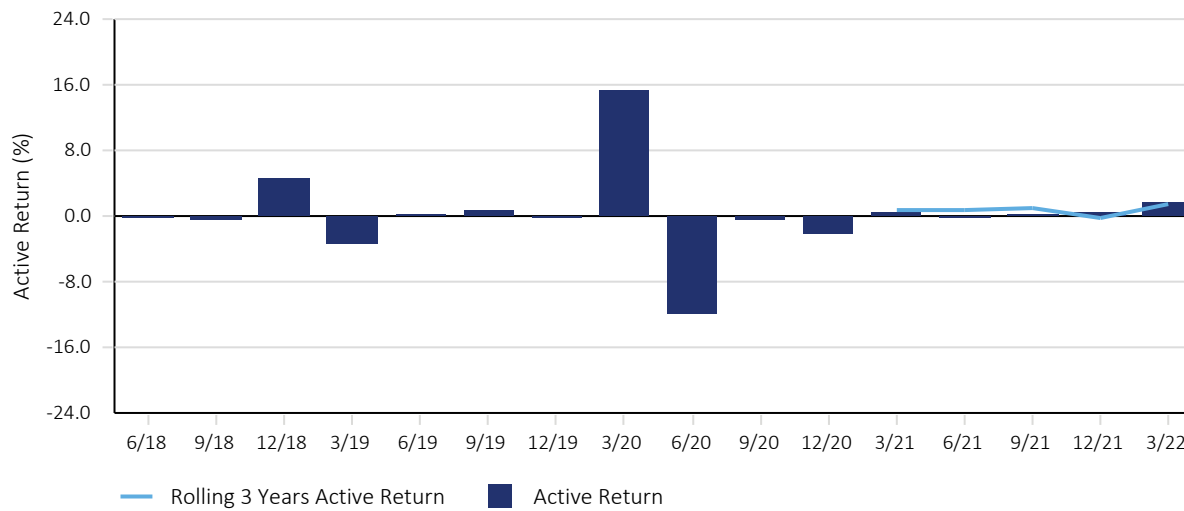
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

White Oak Yield Spectrum

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	1.63	0.64
Minimum Return	0.00	-0.51
Return	5.85	3.26
Cumulative Return	5.85	3.26
Active Return	2.51	0.00
Excess Return	5.66	3.15

Risk Summary Statistics

	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	2.89	0.41
Downside Risk	0.00	0.54
Beta	0.53	1.00

Risk/Return Summary Statistics

	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	2.36	1.19
Alpha	4.11	0.00
Active Return/Risk	1.06	0.00
Tracking Error	2.35	0.00
Information Ratio	1.07	
Sharpe Ratio	2.41	2.62

Correlation Statistics

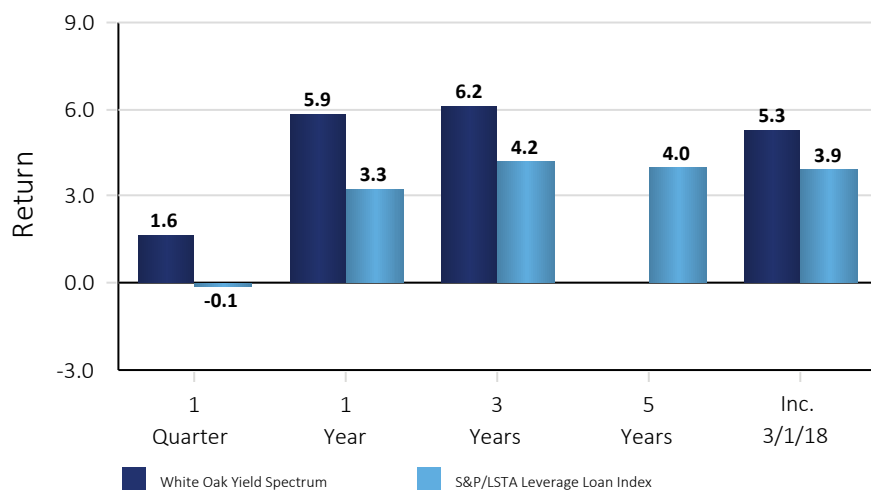
	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.07	1.00
Actual Correlation	0.27	1.00

Manager Summary

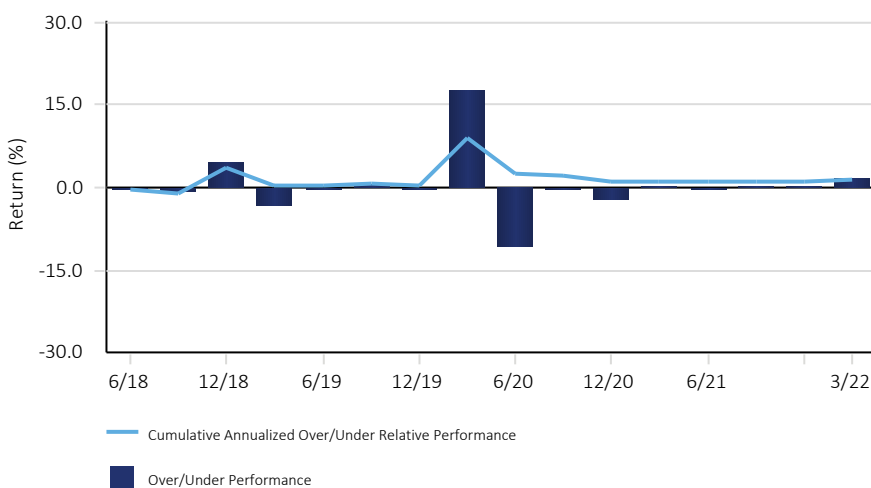
White Oak Yield Spectrum vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

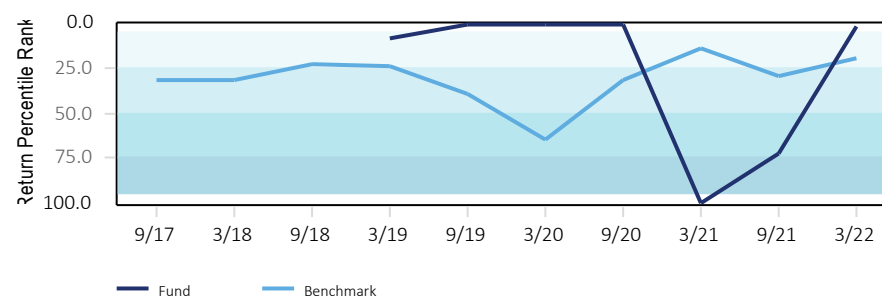
Comparative Performance



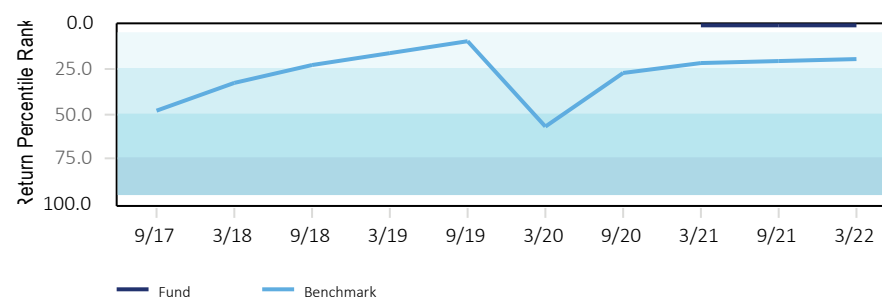
Relative Performance



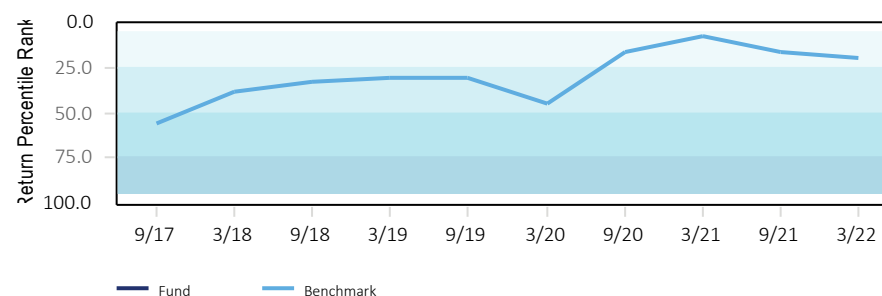
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

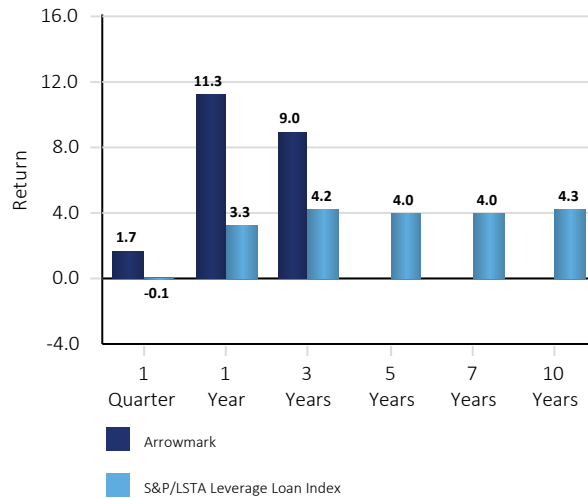


Performance Summary

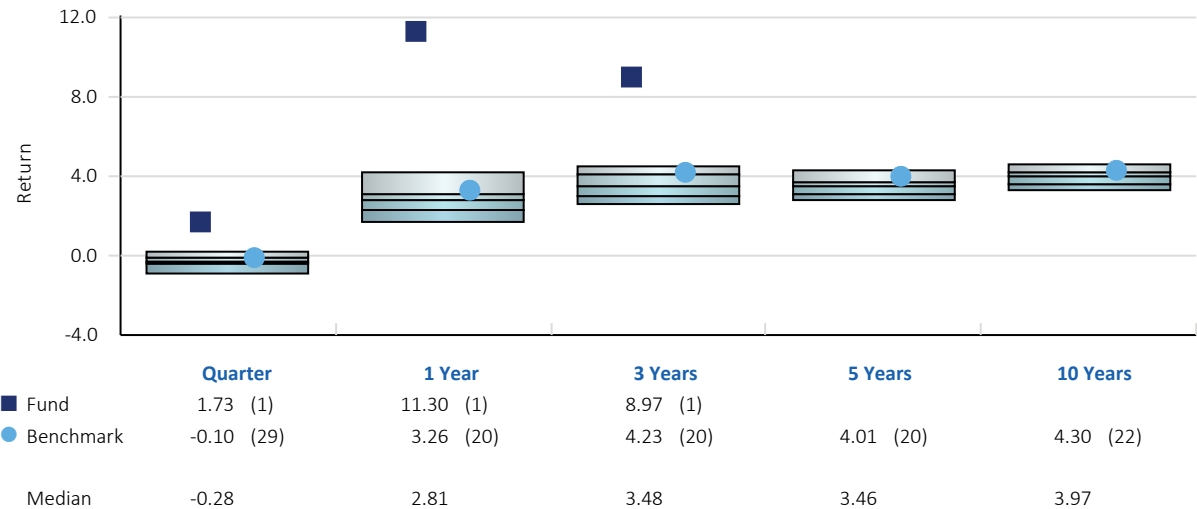
Arrowmark

Periods Ended March 31, 2022

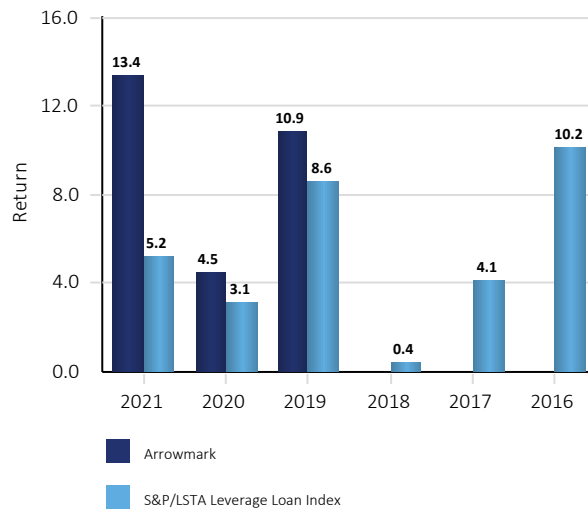
Comparative Performance



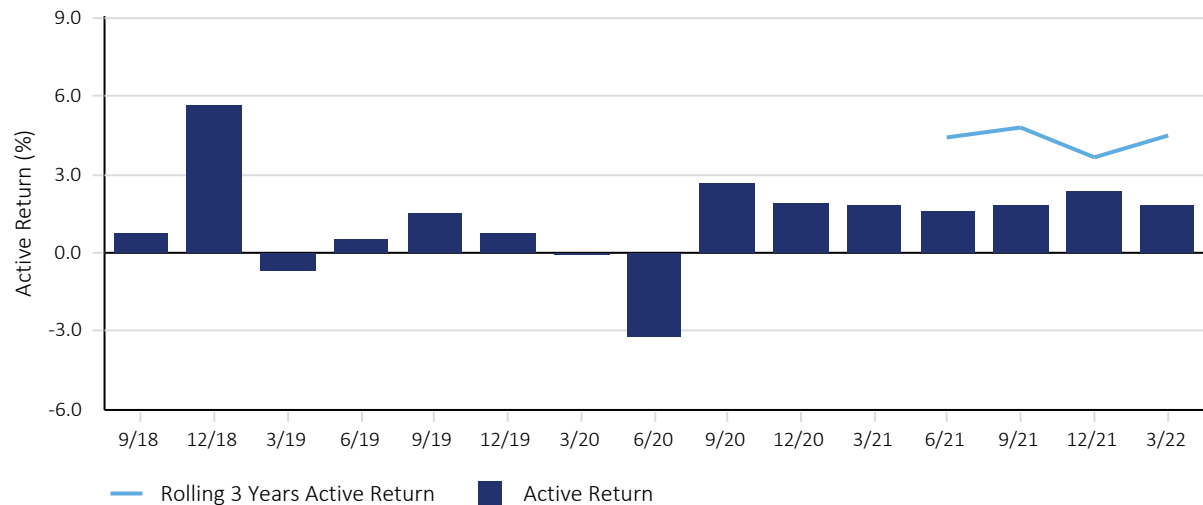
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Arrowmark

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Arrowmark</u>
Maximum Return	1.22
Minimum Return	-0.03
Return	11.30
Cumulative Return	11.30
Active Return	7.54
Excess Return	10.70

Risk Summary Statistics

	<u>Arrowmark</u>
Upside Risk	0.96
Downside Risk	0.03
Beta	0.71

S&P/LSTA Leverage Loan Index

0.64
-0.51
3.26
3.26
0.00
3.15

Risk/Return Summary Statistics

	<u>Arrowmark</u>
Standard Deviation	1.22
Alpha	8.83
Active Return/Risk	6.19
Tracking Error	0.95
Information Ratio	7.96
Sharpe Ratio	8.73

S&P/LSTA Leverage Loan Index

1.19
0.00
0.00
0.00
2.62

Correlation Statistics

	<u>Arrowmark</u>
R-Squared	0.48
Actual Correlation	0.69

S&P/LSTA Leverage Loan Index

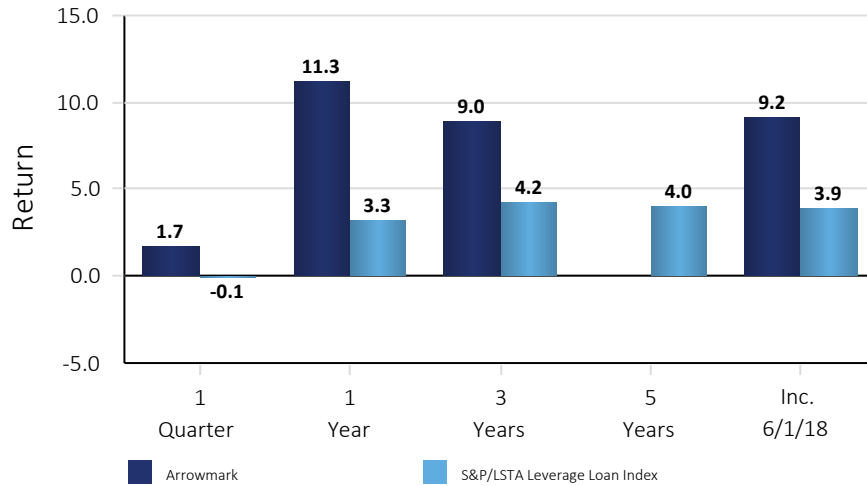
1.00
1.00

Manager Summary

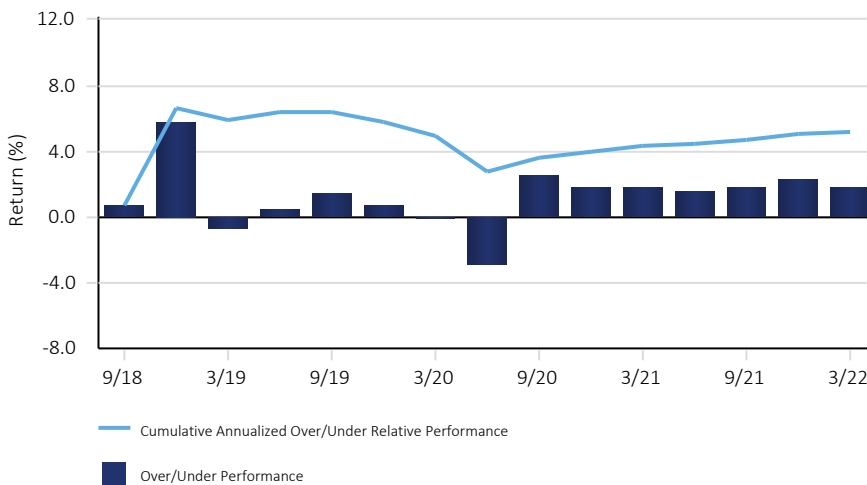
Arrowmark vs IM U.S. Bank Loans (SA+CF)

Periods Ended March 31, 2022

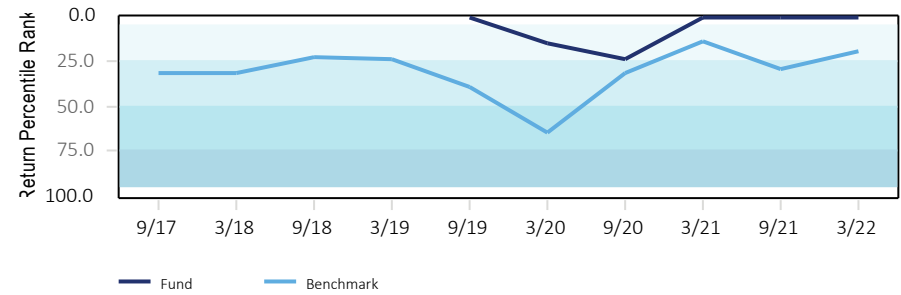
Comparative Performance



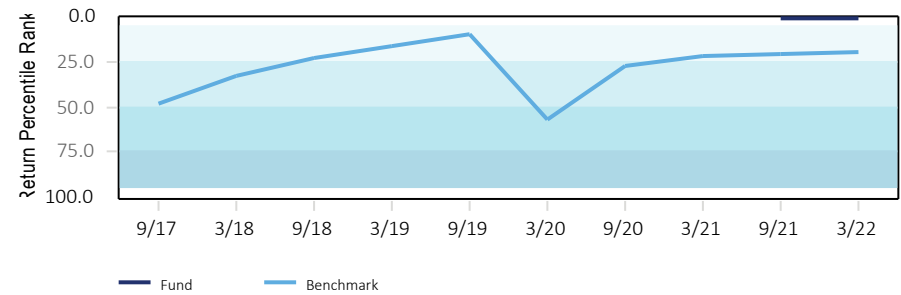
Relative Performance



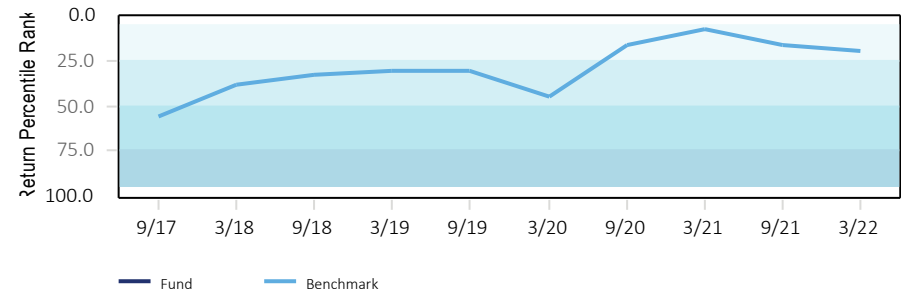
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



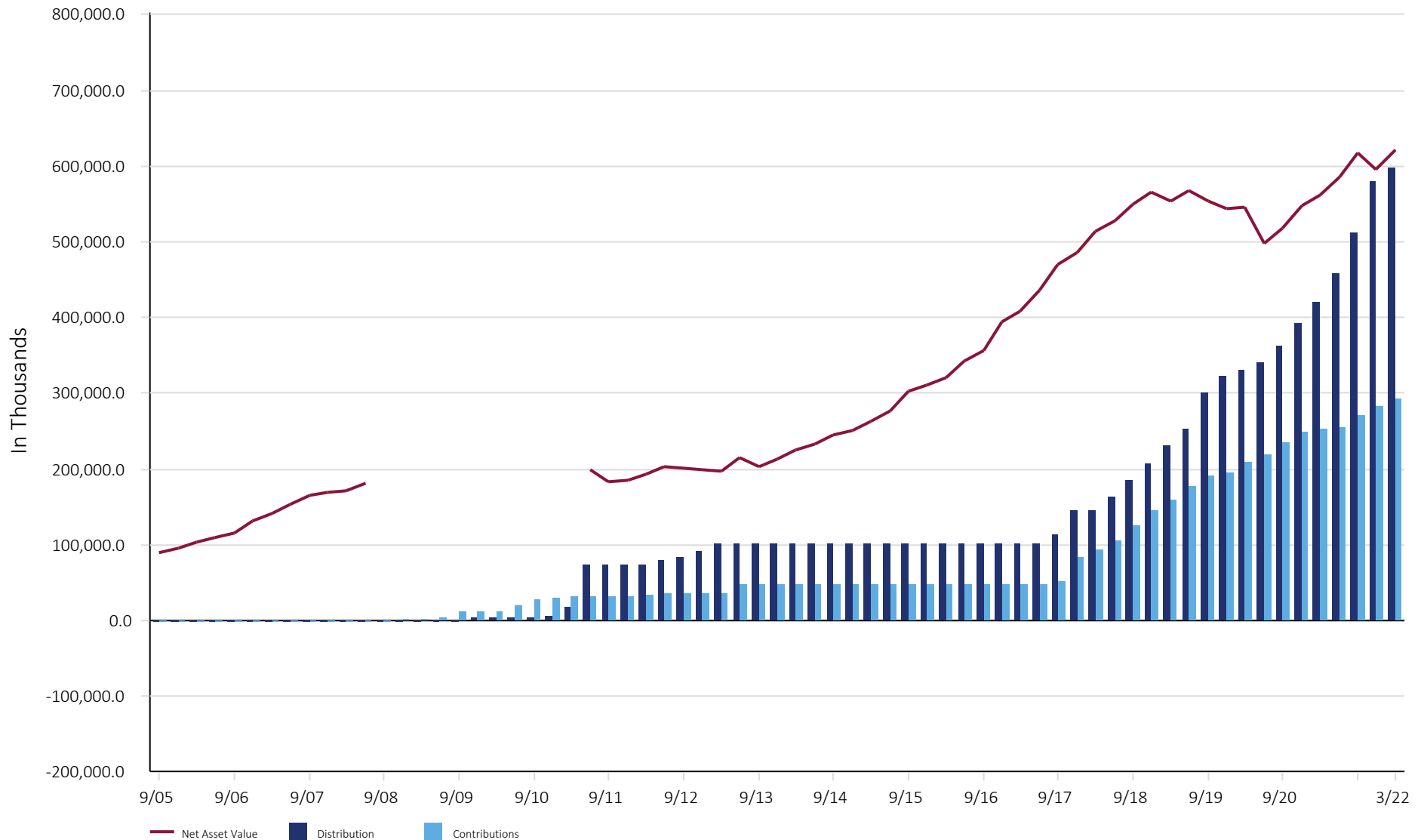
Private Equity Composite

Private Equity Composite Overview

Private Equity Composite

Periods Ended As of March 31, 2022

Cash Flow Analysis



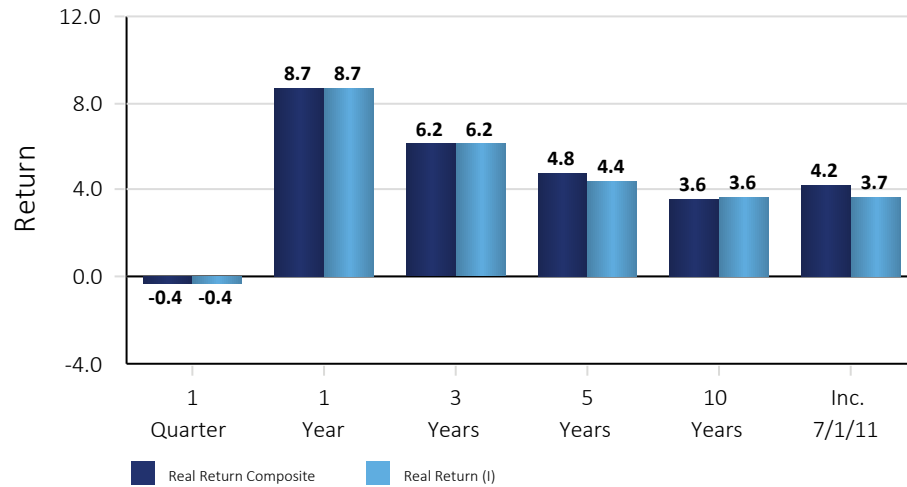
Real Return Composite

Composite Performance Summary

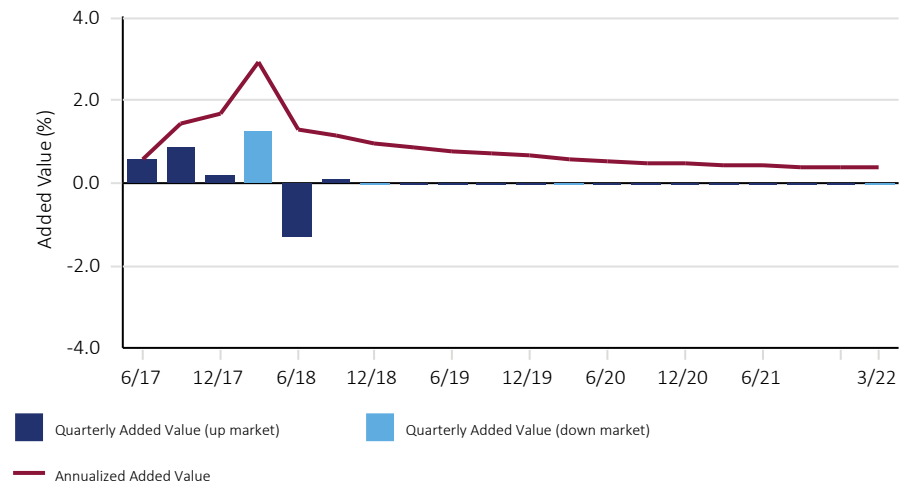
Real Return Composite

Periods Ended March 31, 2022

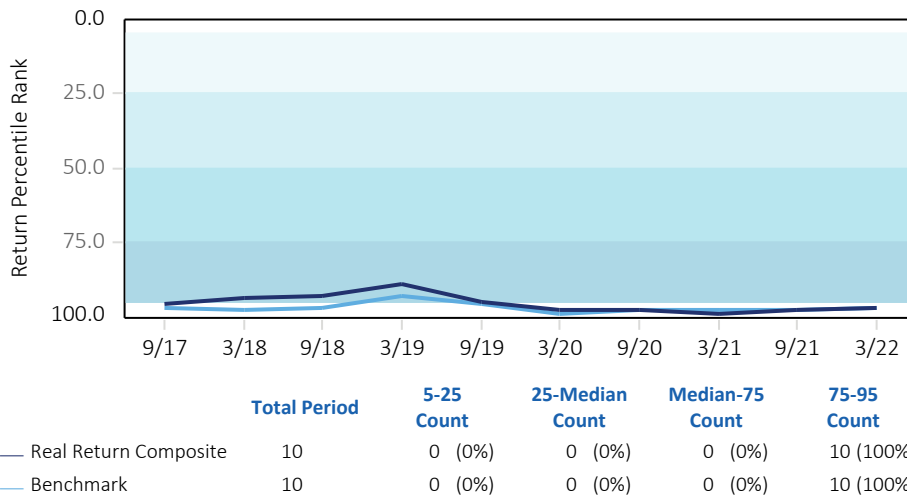
Comparative Performance



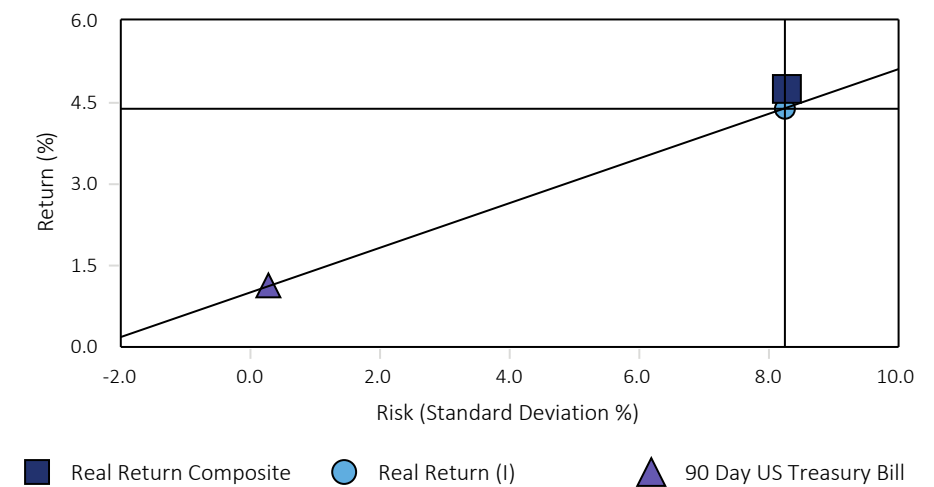
Added Value History



Rolling Percentile Rank: IM U.S. Tactical Asset Allocation (TAA) (SA+CF)



Risk and Return 04/1/17 - 03/31/22

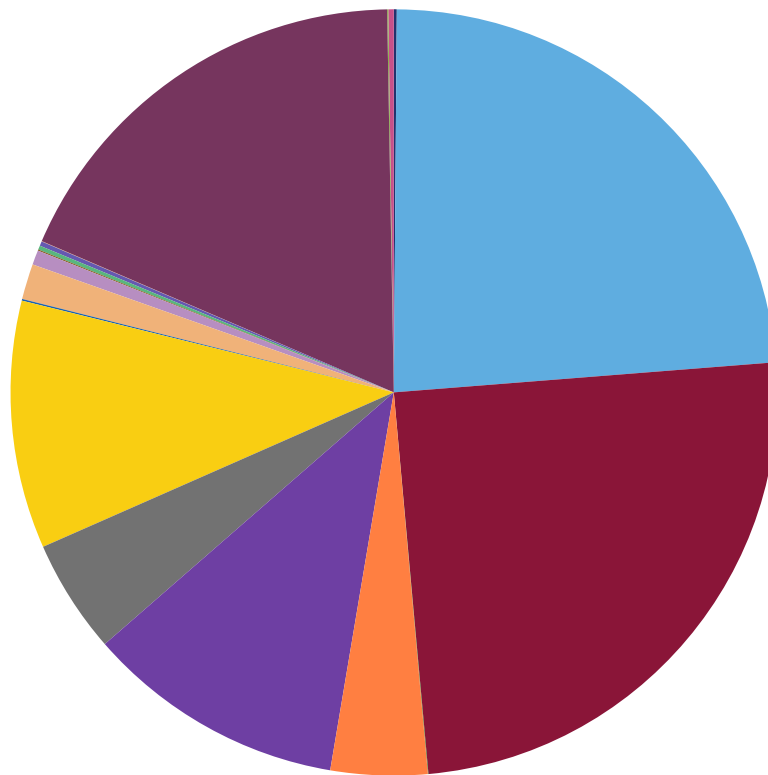


Asset Allocation By Manager

Real Return Composite

Periods Ended March 31, 2022

Mar-2022 : 219,995,987

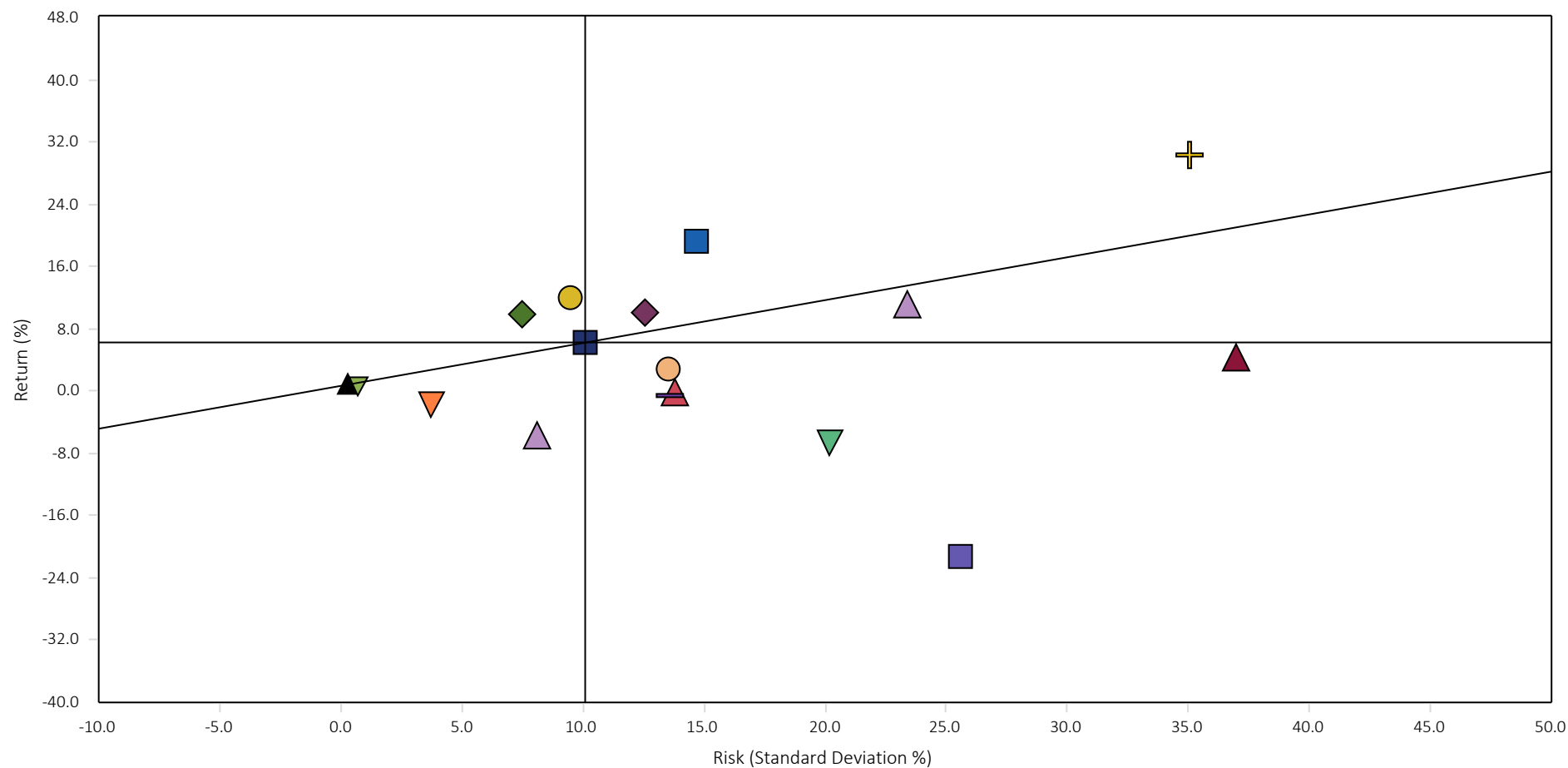


	Market Value \$	Allocation (%)
Internal TIPS	271,631	0.1
Putnam	51,963,119	23.6
Tortoise Capital	54,599,907	24.8
Nuveen Real Asset	57,092	0.0
Amerra AGRI Fund II	8,950,265	4.1
Amerra AGRI Holdings	24,063,877	10.9
BTG Pactual	10,578,505	4.8
IFM Infrastructure	22,993,712	10.5
Magnetar MTP EOF II	151,997	0.1
Oberland Capital	3,295,397	1.5
Taurus Mine Finance	1,356,477	0.6
TPF II	103,857	0.0
Blackstone Strat Opp	372,405	0.2
Luxor Capital	415,303	0.2
Myriad Opportunities	21,895	0.0
Pine River	25,305	0.0
PRISMA Capital	40,153,852	18.3
SRS Partners US	110,913	0.1
Tricadia Select	510,479	0.2

Risk vs. Return

Real Return Composite

Periods Ended 3 Years Ending March 31, 2022

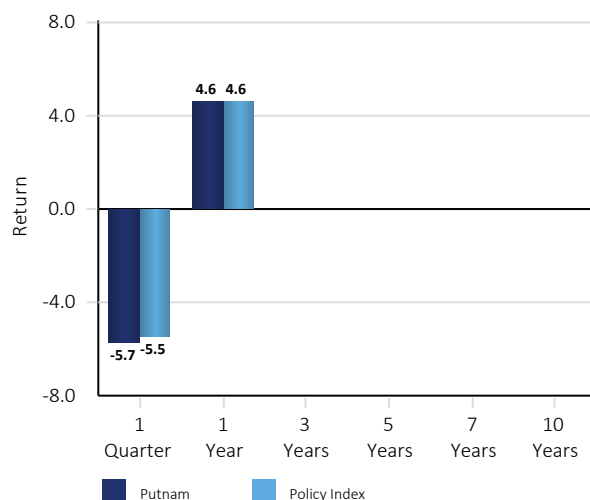


Performance Summary

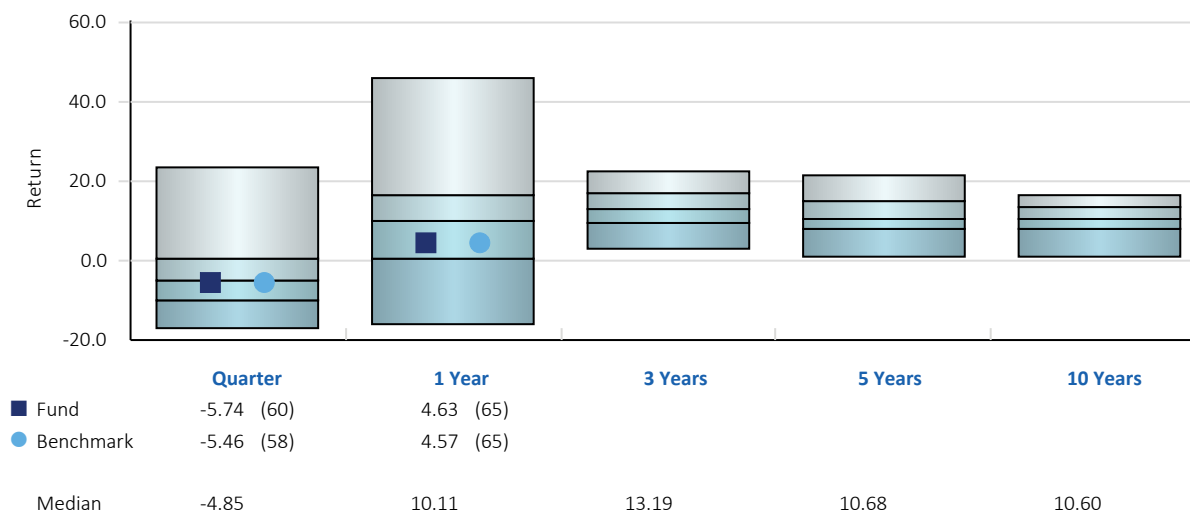
Putnam

Periods Ended March 31, 2022

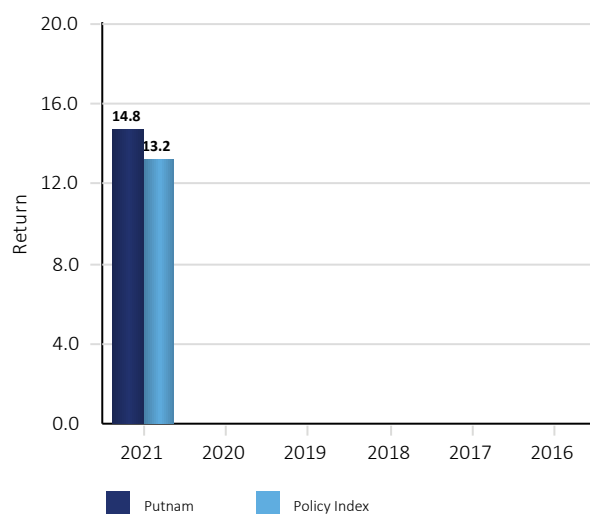
Comparative Performance



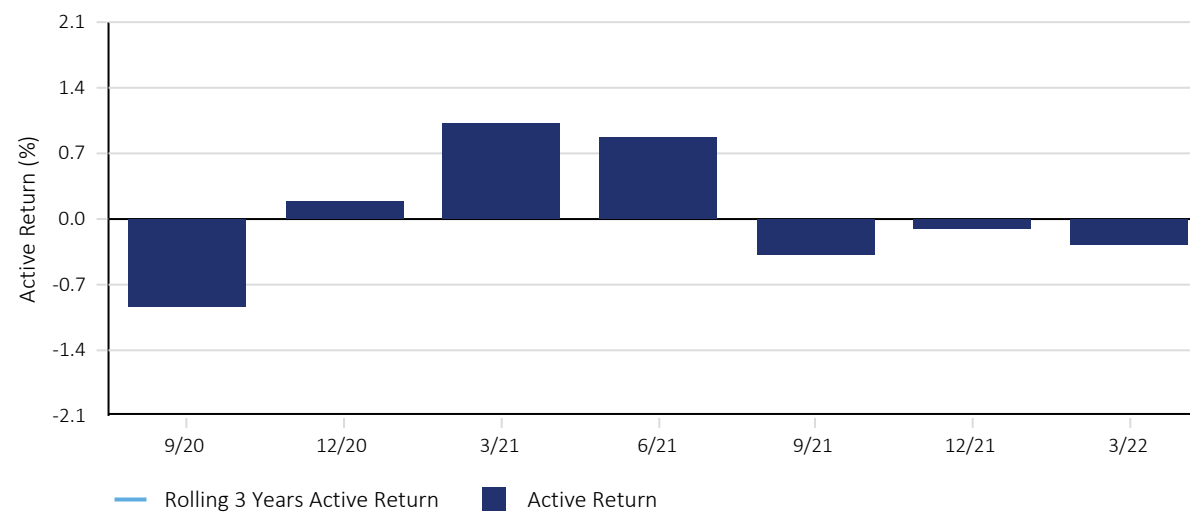
Peer Group Analysis: IM U.S. Other Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Putnam

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Putnam</u>	<u>Policy Index</u>
Maximum Return	3.31	3.60
Minimum Return	-3.60	-4.31
Return	4.63	4.57
Cumulative Return	4.63	4.57
Active Return	0.01	0.00
Excess Return	4.75	4.74

Risk Summary Statistics

	<u>Putnam</u>	<u>Policy Index</u>
Upside Risk	1.67	1.75
Downside Risk	5.05	5.61
Beta	0.65	1.00

Risk/Return Summary Statistics

	<u>Putnam</u>	<u>Policy Index</u>
Standard Deviation	7.54	8.13
Alpha	1.71	0.00
Active Return/Risk	0.00	0.00
Tracking Error	6.08	0.00
Information Ratio	0.00	
Sharpe Ratio	0.63	0.58

Correlation Statistics

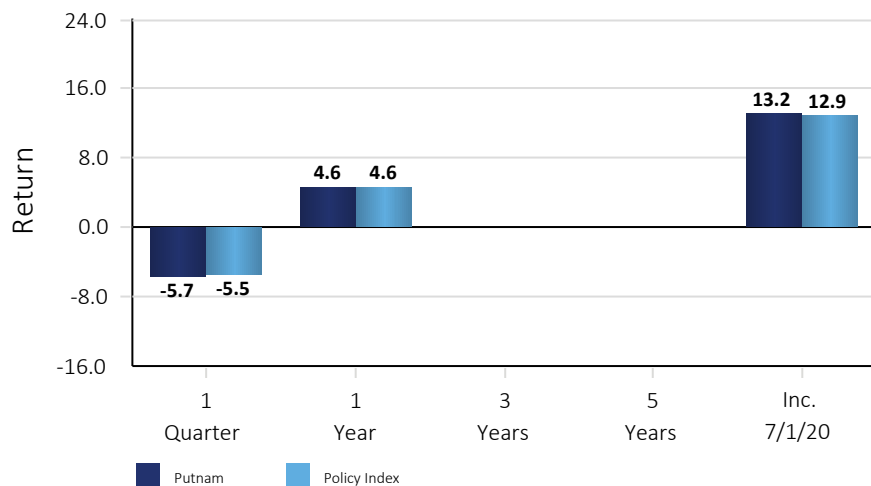
	<u>Putnam</u>	<u>Policy Index</u>
R-Squared	0.49	1.00
Actual Correlation	0.70	1.00

Manager Summary

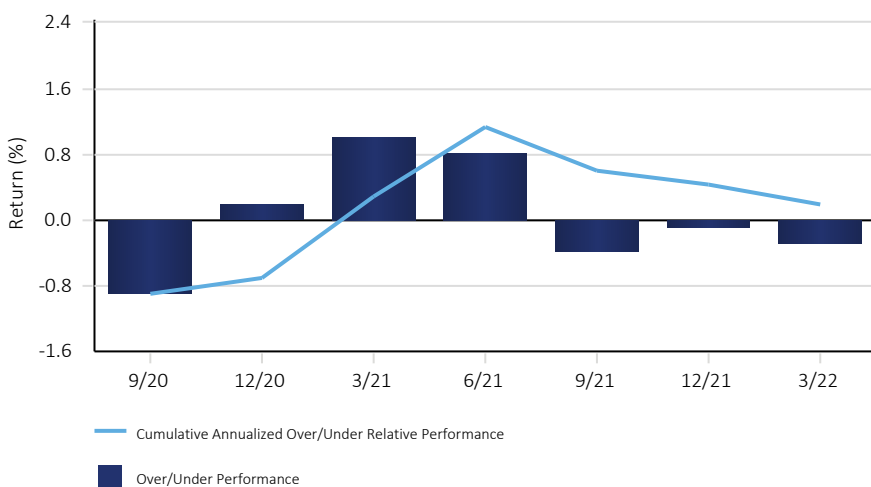
Putnam vs IM U.S. Other Equity (SA+CF)

Periods Ended March 31, 2022

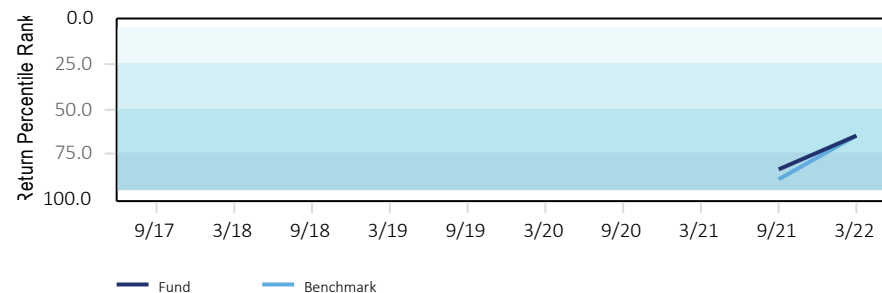
Comparative Performance



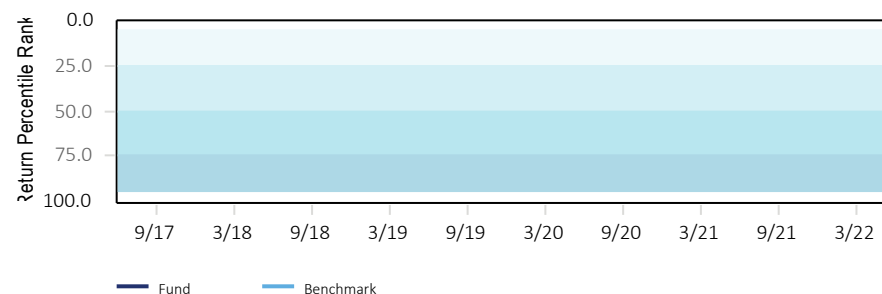
Relative Performance



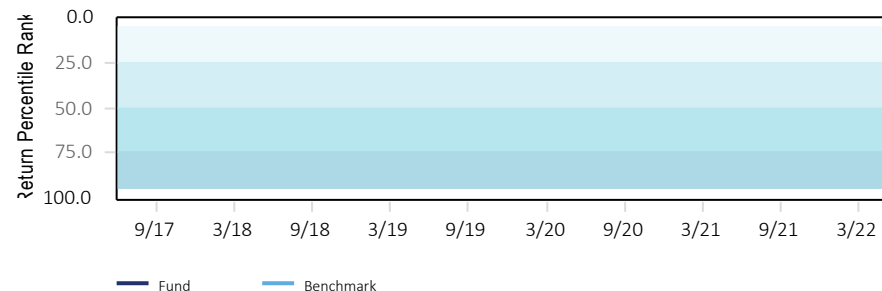
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

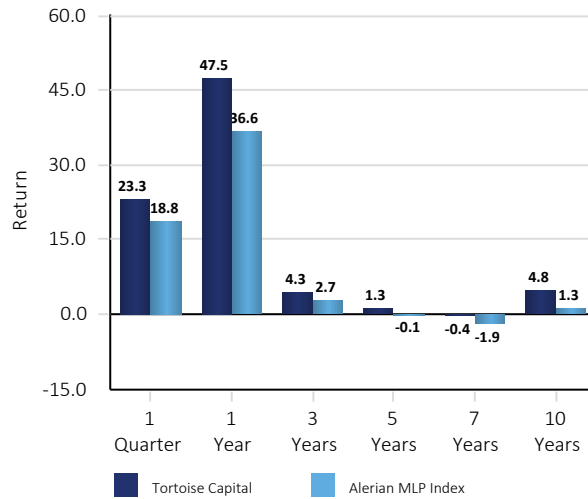


Performance Summary

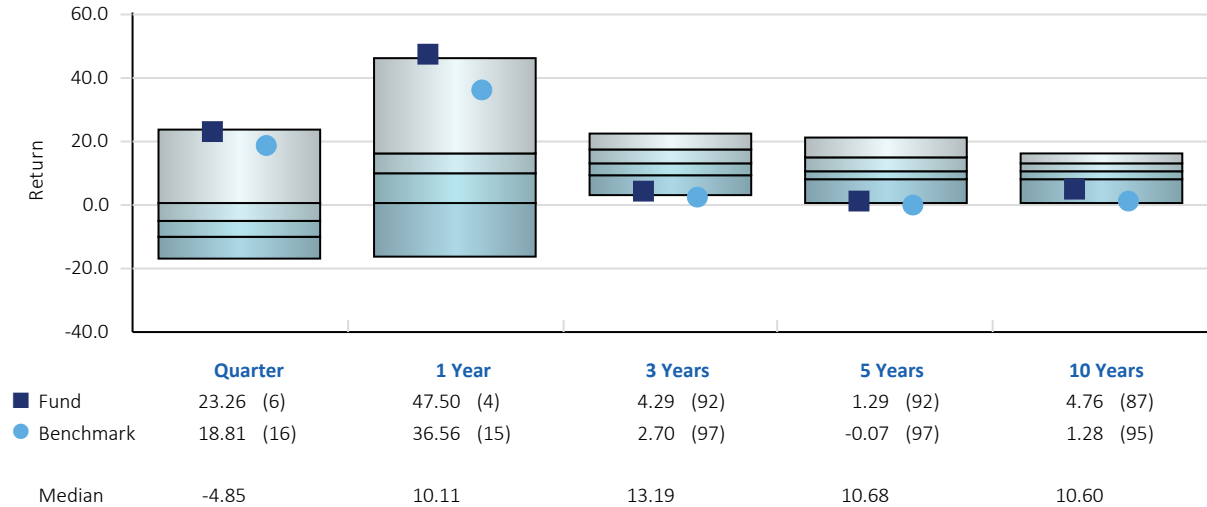
Tortoise Capital

Periods Ended March 31, 2022

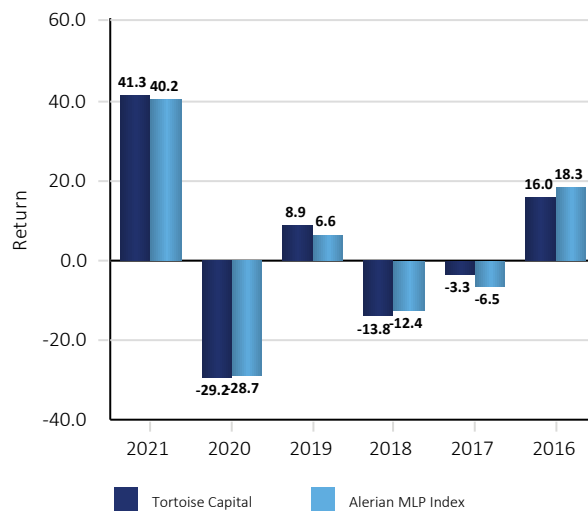
Comparative Performance



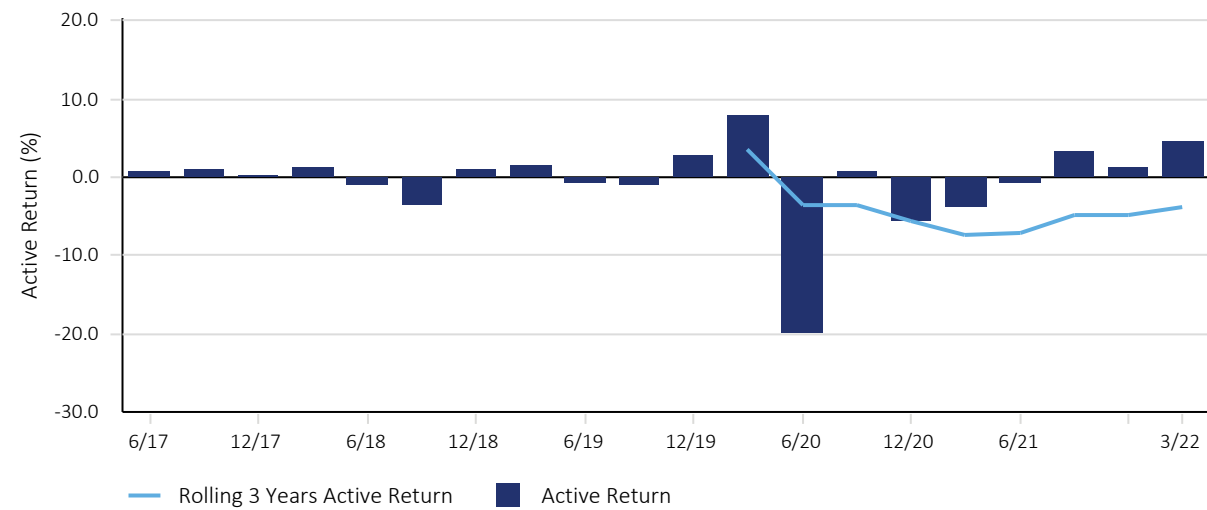
Peer Group Analysis: IM U.S. Other Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Tortoise Capital

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
Maximum Return	9.89	11.07
Minimum Return	-6.59	-7.51
Return	47.50	36.56
Cumulative Return	47.50	36.56
Active Return	7.71	0.00
Excess Return	40.91	33.20

Risk Summary Statistics

	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
Upside Risk	5.46	5.26
Downside Risk	8.78	10.08
Beta	0.90	1.00

Risk/Return Summary Statistics

	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
Standard Deviation	17.19	18.47
Alpha	11.58	0.00
Active Return/Risk	0.45	0.00
Tracking Error	4.70	0.00
Information Ratio	1.64	
Sharpe Ratio	2.38	1.80

Correlation Statistics

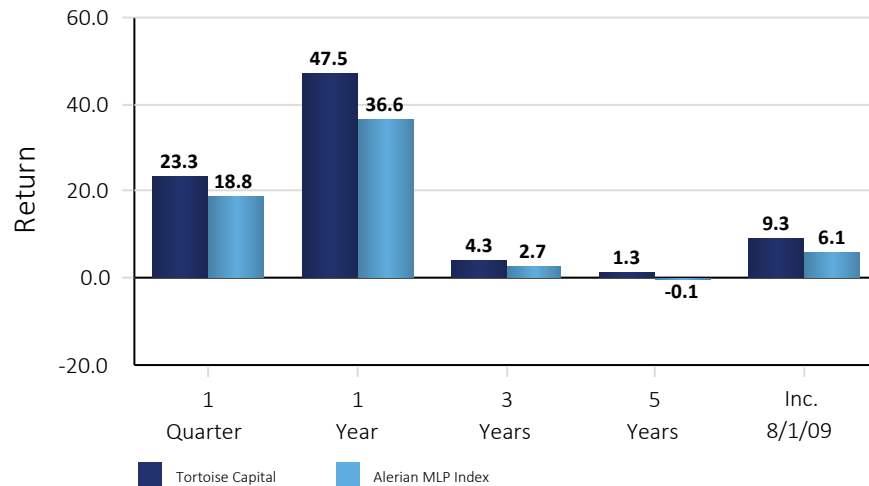
	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
R-Squared	0.94	1.00
Actual Correlation	0.97	1.00

Manager Summary

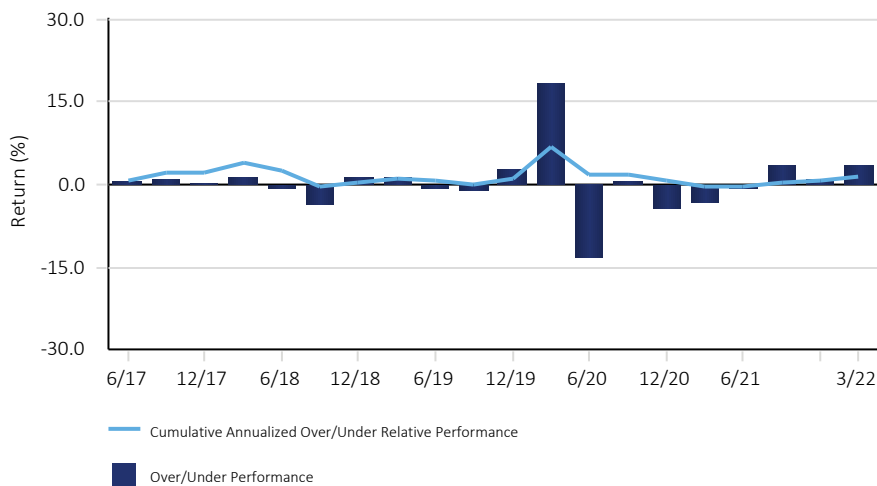
Tortoise Capital vs IM U.S. Other Equity (SA+CF)

Periods Ended March 31, 2022

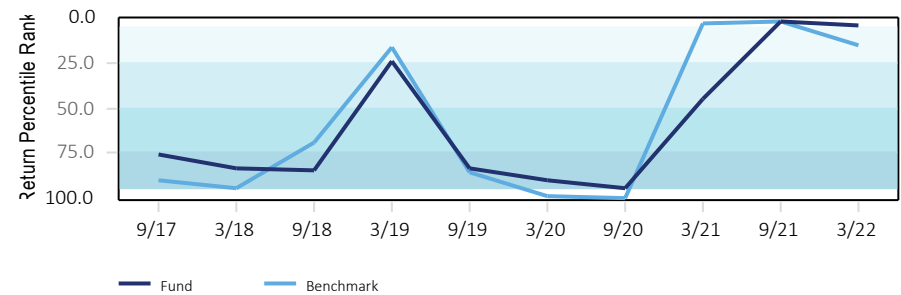
Comparative Performance



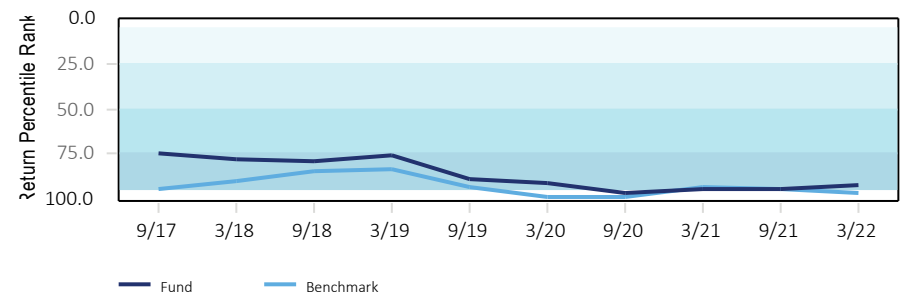
Relative Performance



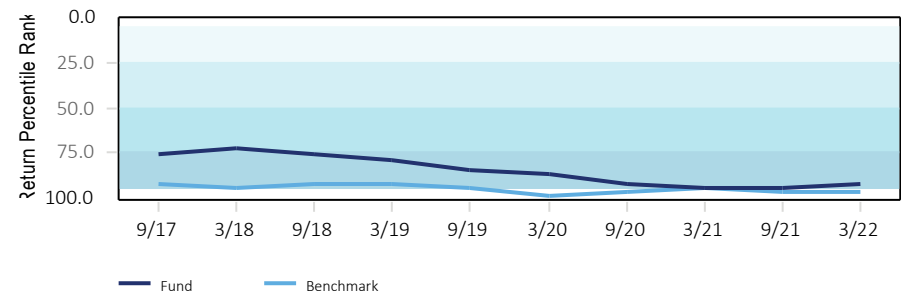
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



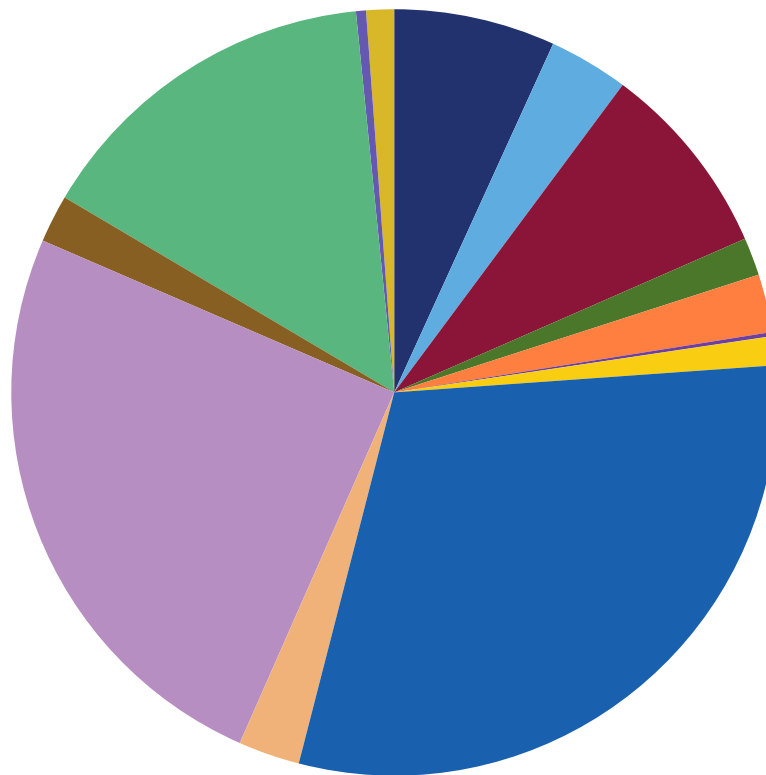
Real Estate Composite

Asset Allocation By Manager

Real Estate Composite

Periods Ended March 31, 2022

Mar-2022 : 356,747,650

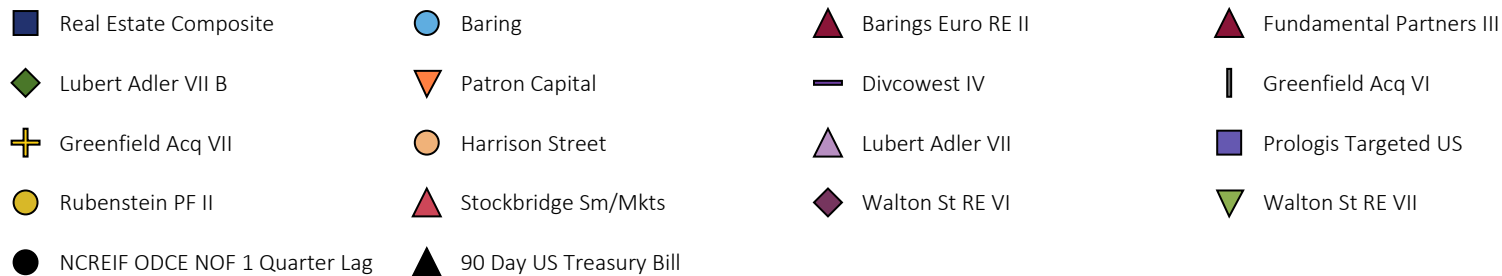
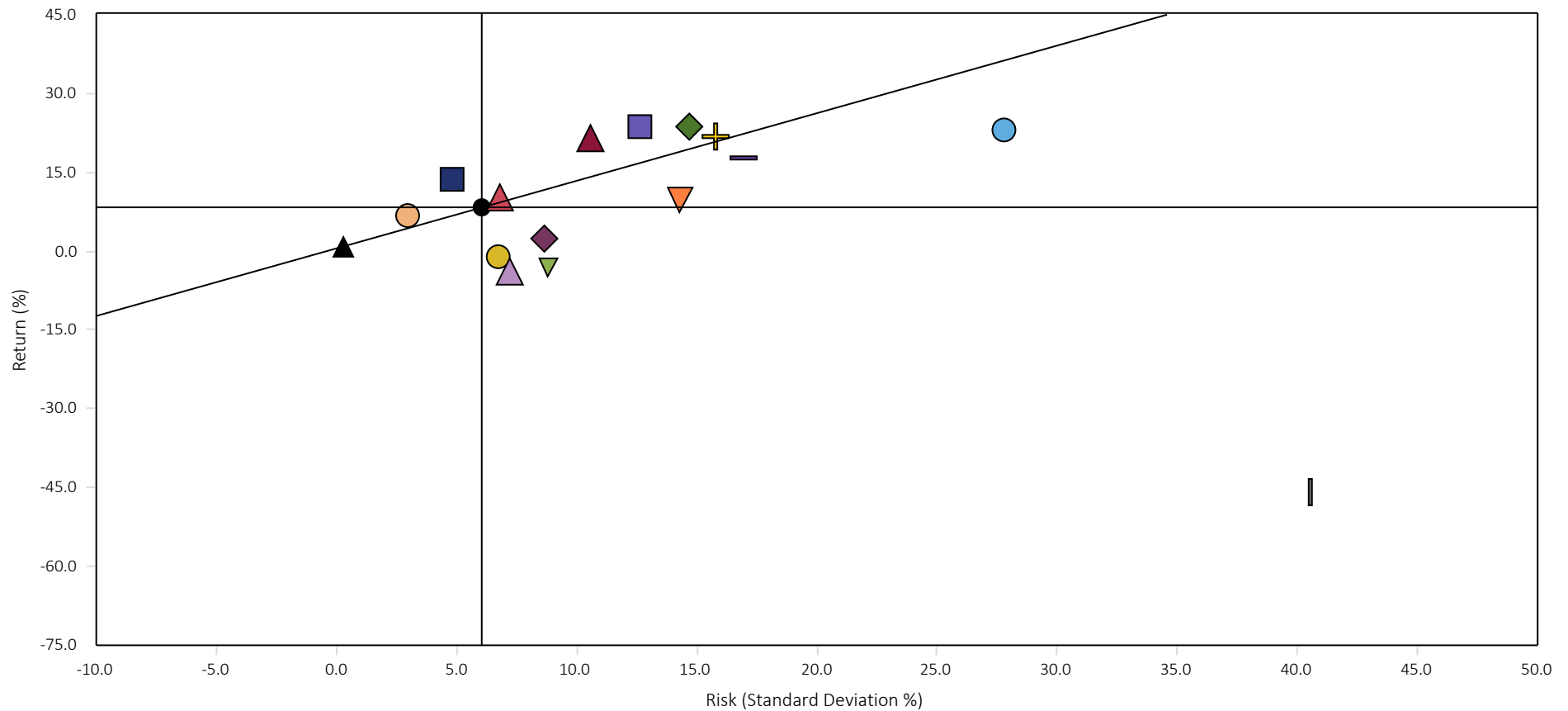


	Market Value \$	Allocation (%)
Baring	24,296,426	6.8
Barings Euro RE II	11,999,649	3.4
Fundamental Partners III	29,446,348	8.3
Lubert Adler VII B	5,702,651	1.6
Patron Capital	8,728,365	2.4
Divcowest IV	607,965	0.2
Greenfield Acq VI	29,592	0.0
Greenfield Acq VII	4,343,234	1.2
Harrison Street	107,532,080	30.1
Lubert Adler VII	9,276,470	2.6
Prologis Targeted US	88,732,264	24.9
Rubenstein PF II	7,176,944	2.0
Stockbridge Sm/Mkts	53,172,023	14.9
Walton St RE VI	1,492,572	0.4
Walton St RE VII	4,211,066	1.2

Risk vs. Return

Real Estate Composite

Periods Ended 3 Years Ending March 31, 2022



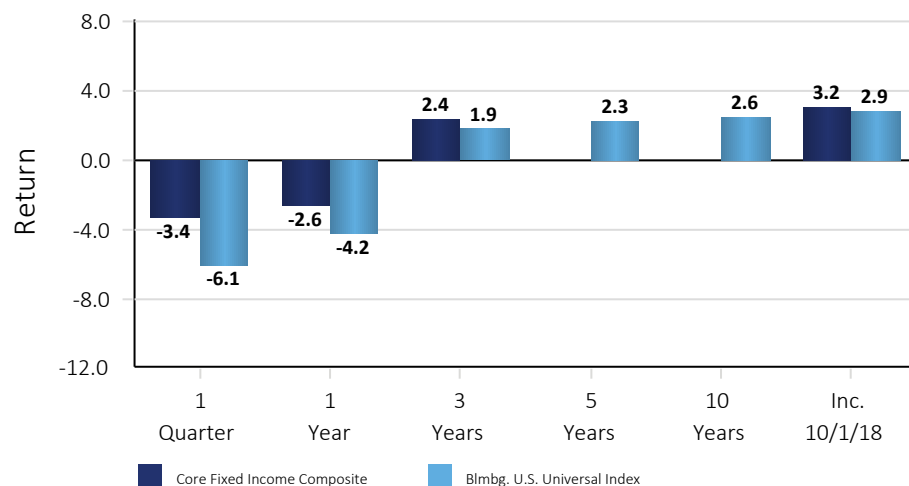
Core Fixed Composite

Composite Performance Summary

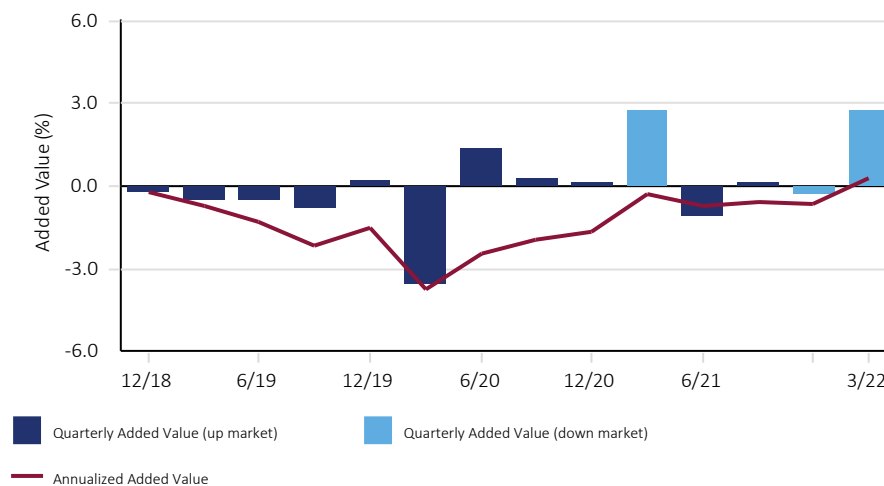
Core Fixed Income Composite

Periods Ended March 31, 2022

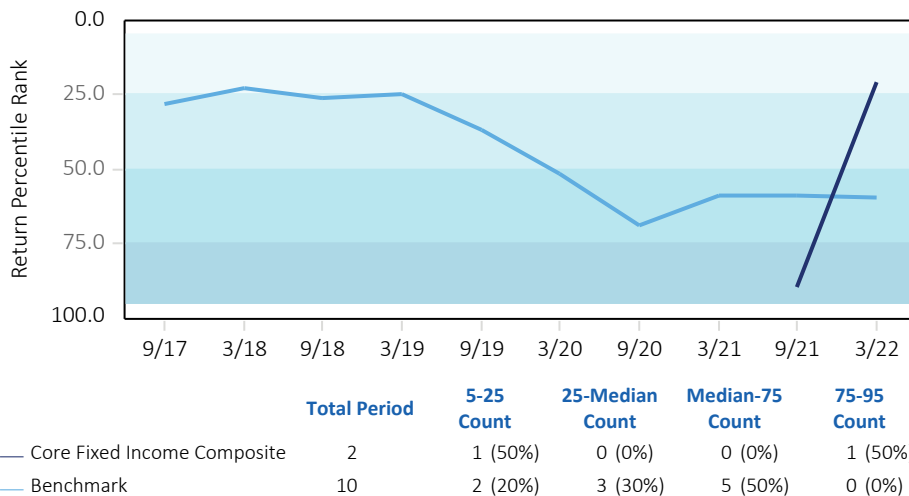
Comparative Performance



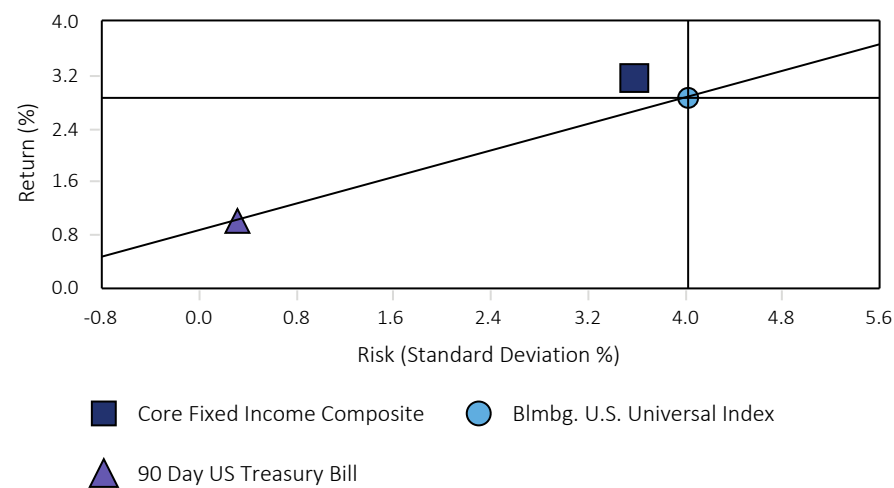
Added Value History



Rolling Percentile Rank: 101 U.S. Broad Market Core Fixed Income (S&P 500)



Risk and Return 10/1/18 - 03/31/22

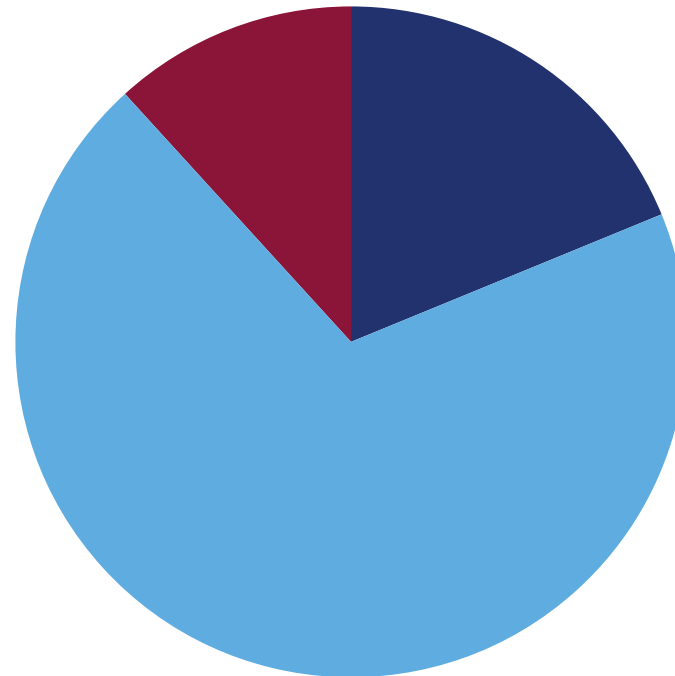


Asset Allocation By Manager

Core Fixed Income Composite

Periods Ended March 31, 2022

Mar-2022 : 802,476,512

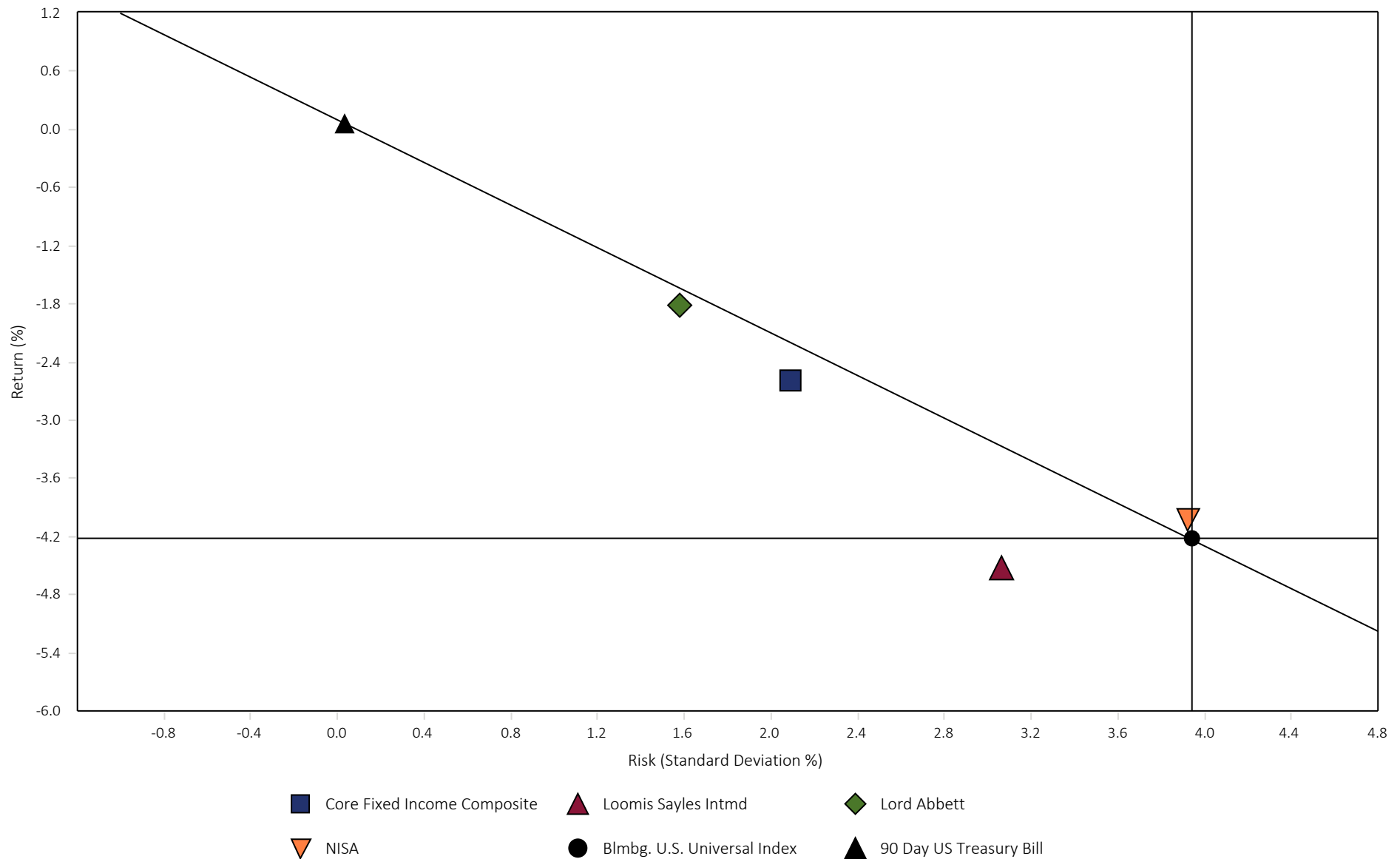


	Market Value \$	Allocation (%)
■ Loomis Sayles Intmd	150,802,336	18.8
■ Lord Abbett	557,303,508	69.4
■ NISA	94,370,668	11.8

Risk vs. Return

Core Fixed Income Composite

Periods Ended 1 Year Ending March 31, 2022

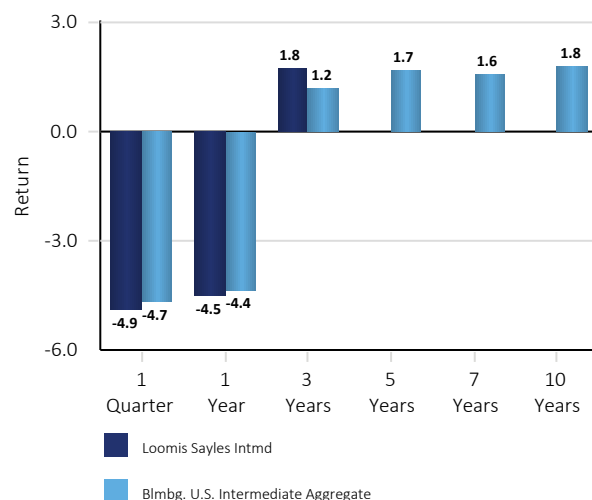


Performance Summary

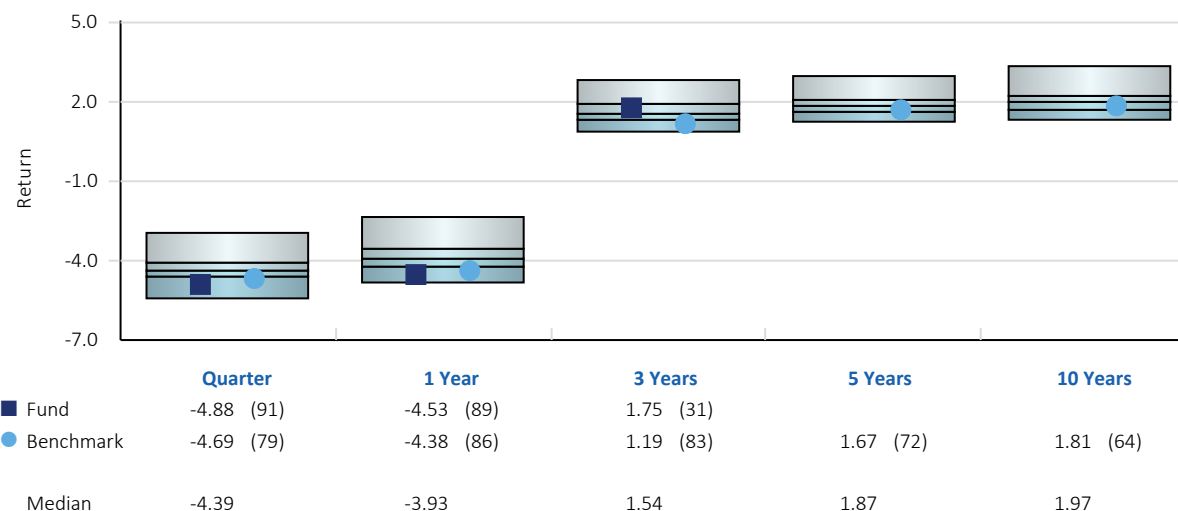
Loomis Sayles Intmd

Periods Ended March 31, 2022

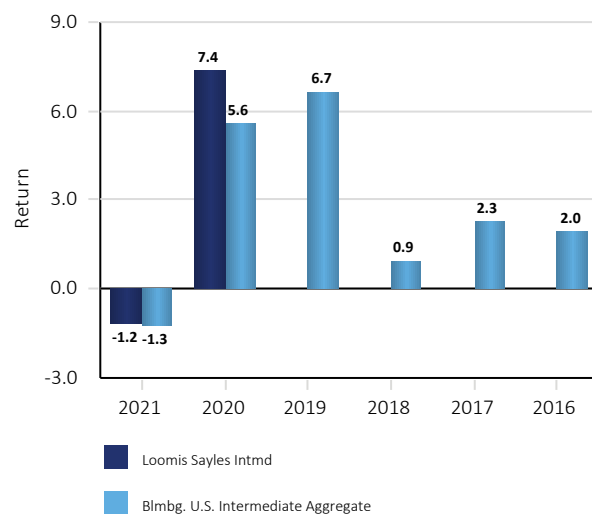
Comparative Performance



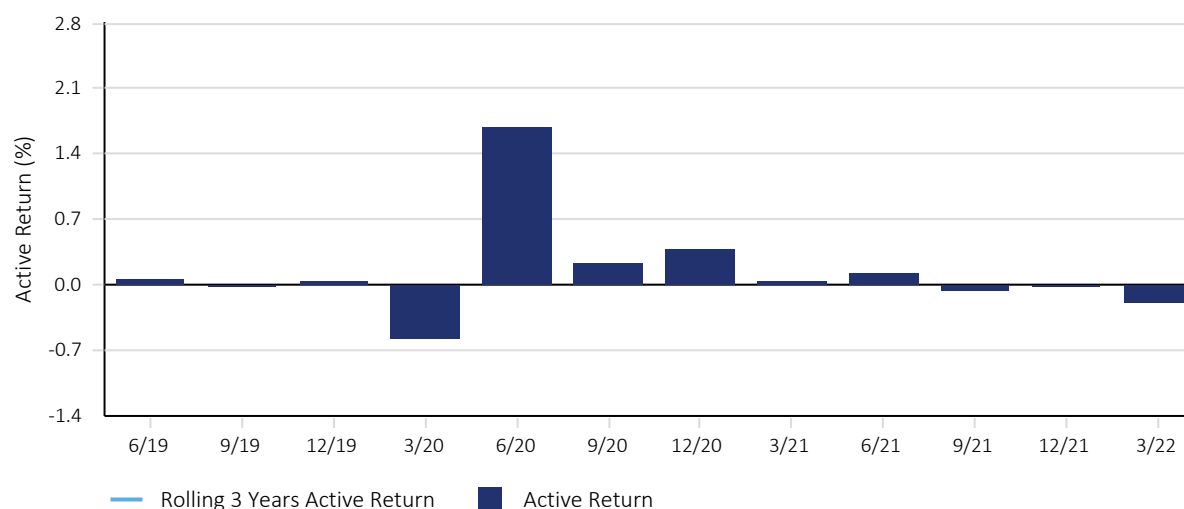
Peer Group Analysis: IM U.S. Intermediate Duration (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Loomis Sayles Intmd

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Loomis Sayles Intmd</u>	<u>Blmbg. U.S. Intermediate Aggregate</u>
Maximum Return	0.69	0.72
Minimum Return	-2.58	-2.51
Return	-4.53	-4.38
Cumulative Return	-4.53	-4.38
Active Return	-0.15	0.00
Excess Return	-4.64	-4.49

Risk Summary Statistics

	<u>Loomis Sayles Intmd</u>	<u>Blmbg. U.S. Intermediate Aggregate</u>
Upside Risk	0.27	0.27
Downside Risk	3.20	3.09
Beta	1.03	1.00

Risk/Return Summary Statistics

	<u>Loomis Sayles Intmd</u>	<u>Blmbg. U.S. Intermediate Aggregate</u>
Standard Deviation	3.06	2.96
Alpha	-0.01	0.00
Active Return/Risk	-0.05	0.00
Tracking Error	0.20	0.00
Information Ratio	-0.75	
Sharpe Ratio	-1.51	-1.51

Correlation Statistics

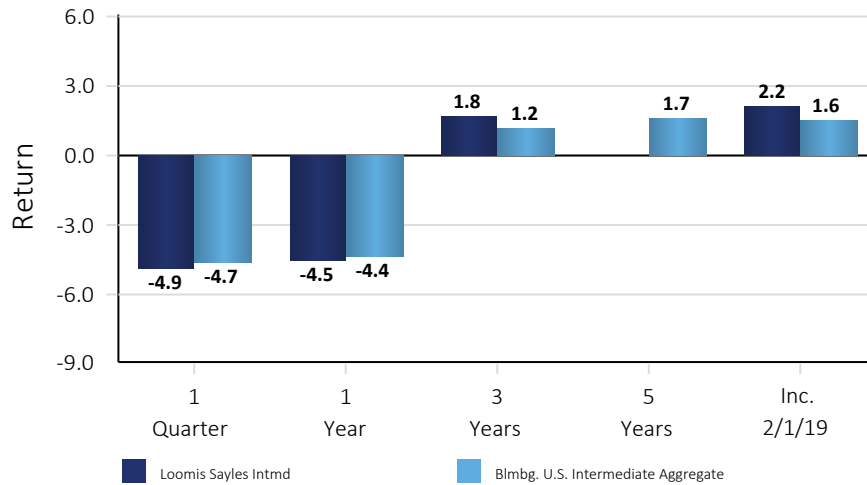
	<u>Loomis Sayles Intmd</u>	<u>Blmbg. U.S. Intermediate Aggregate</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

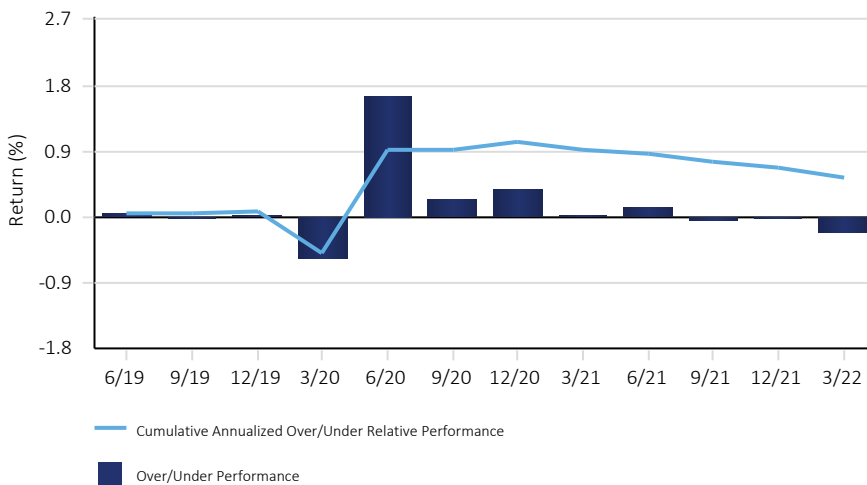
Loomis Sayles Intmd vs IM U.S. Intermediate Duration (SA+CF)

Periods Ended March 31, 2022

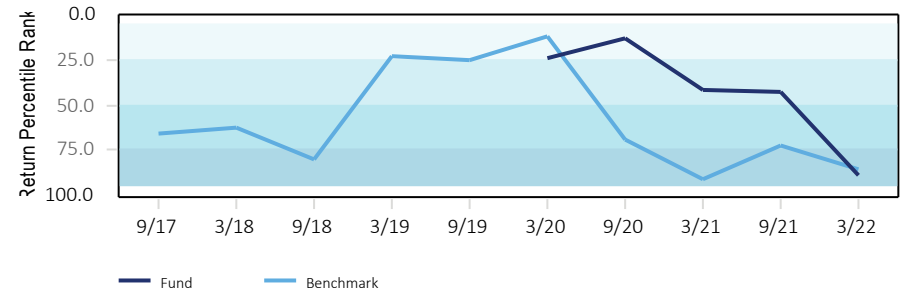
Comparative Performance



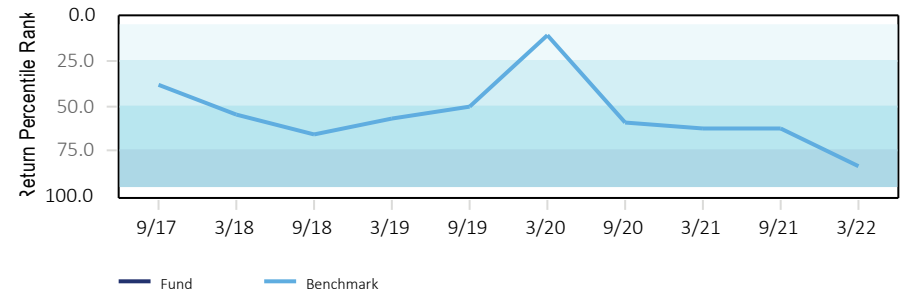
Relative Performance



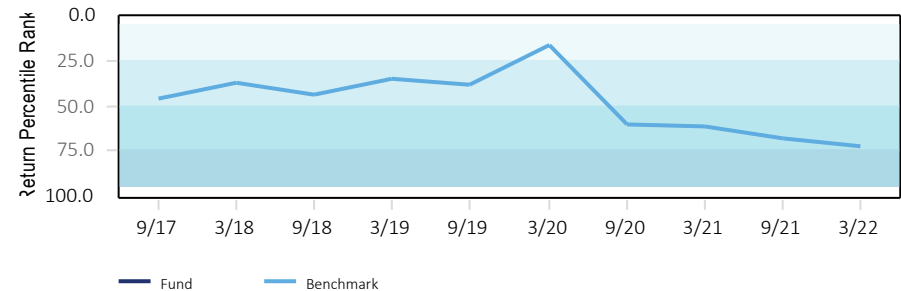
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

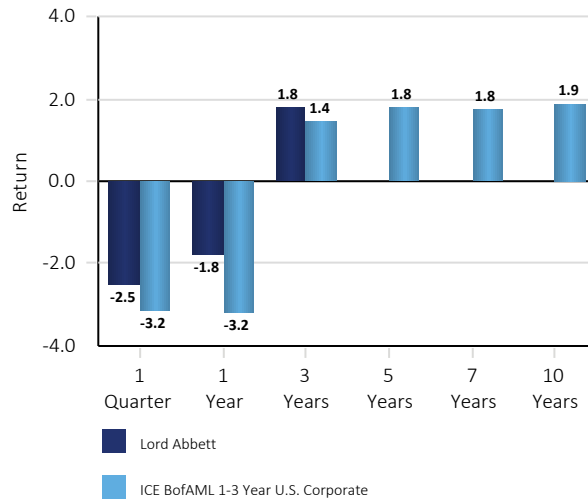


Performance Summary

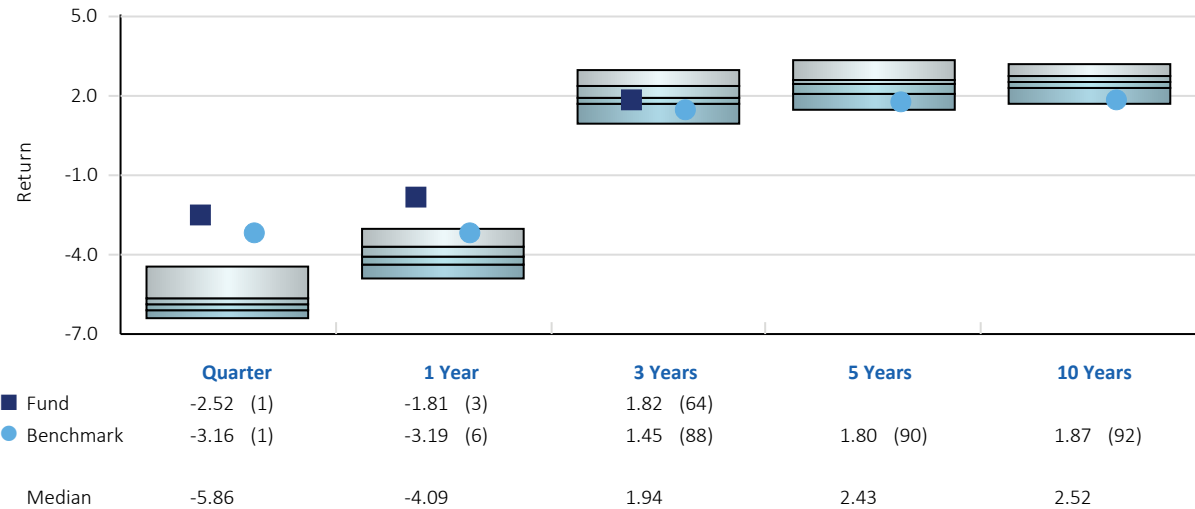
Lord Abbett

Periods Ended March 31, 2022

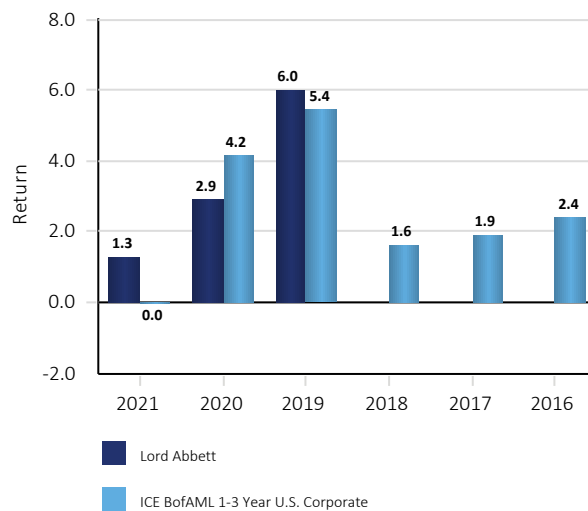
Comparative Performance



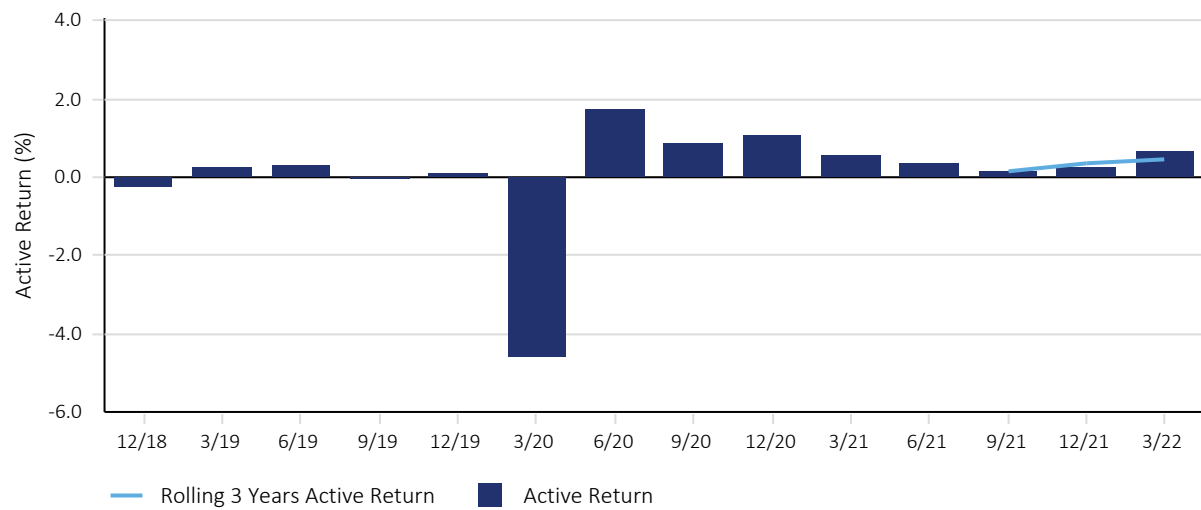
Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Lord Abbett

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
Maximum Return	0.30	0.21
Minimum Return	-1.30	-1.67
Return	-1.81	-3.19
Cumulative Return	-1.81	-3.19
Active Return	1.41	0.00
Excess Return	-1.88	-3.28

Risk Summary Statistics

	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
Upside Risk	0.13	0.10
Downside Risk	1.60	2.02
Beta	0.85	1.00

Risk/Return Summary Statistics

	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
Standard Deviation	1.58	1.83
Alpha	0.94	0.00
Active Return/Risk	0.89	0.00
Tracking Error	0.36	0.00
Information Ratio	3.87	
Sharpe Ratio	-1.17	-1.78

Correlation Statistics

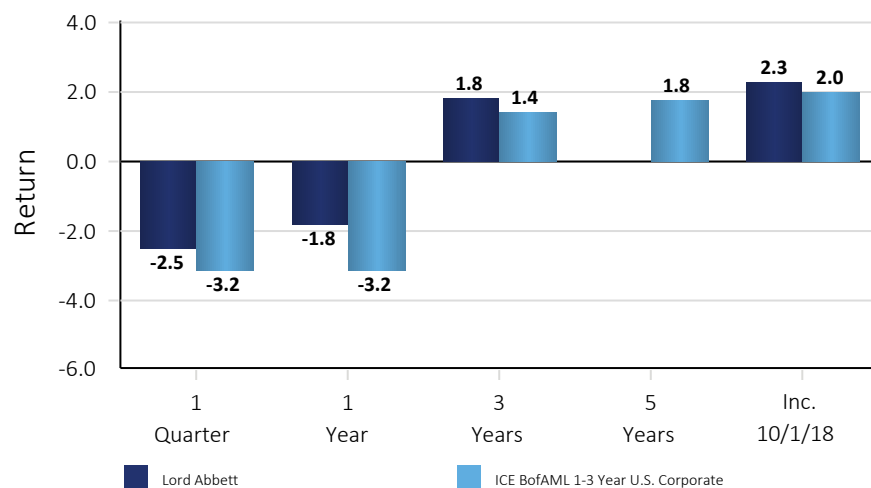
	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

Manager Summary

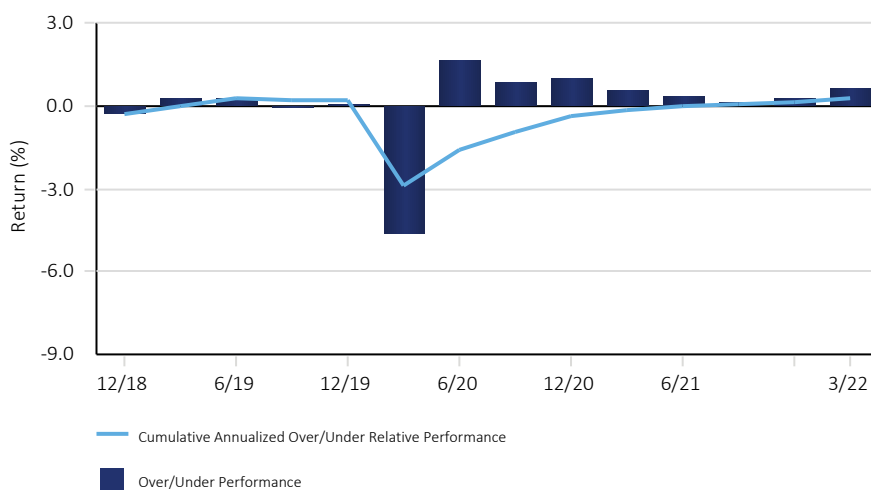
Lord Abbett vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended March 31, 2022

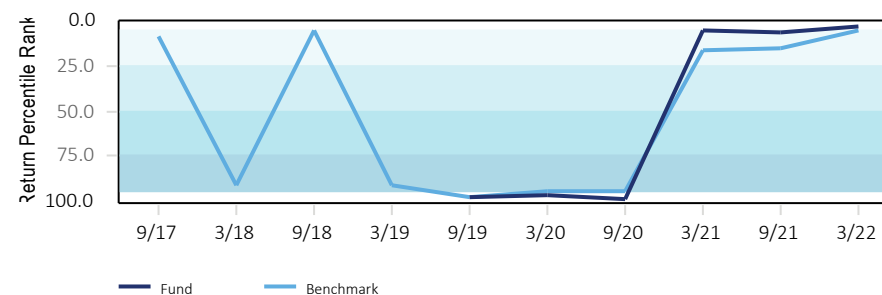
Comparative Performance



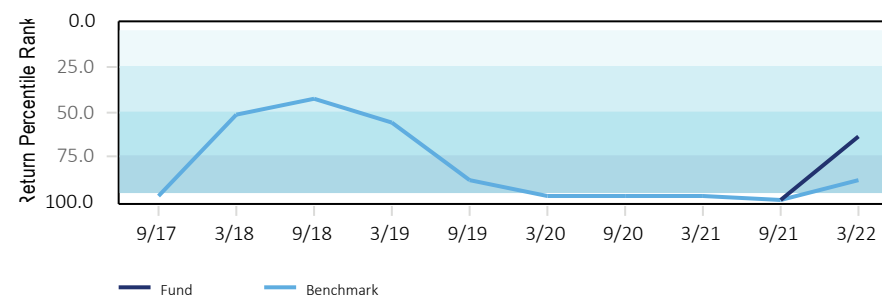
Relative Performance



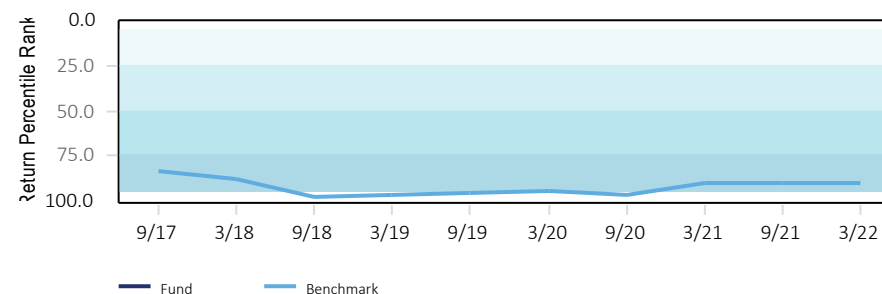
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

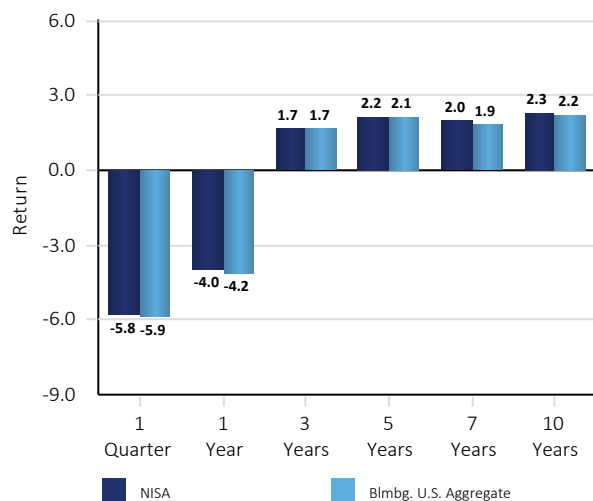


Performance Summary

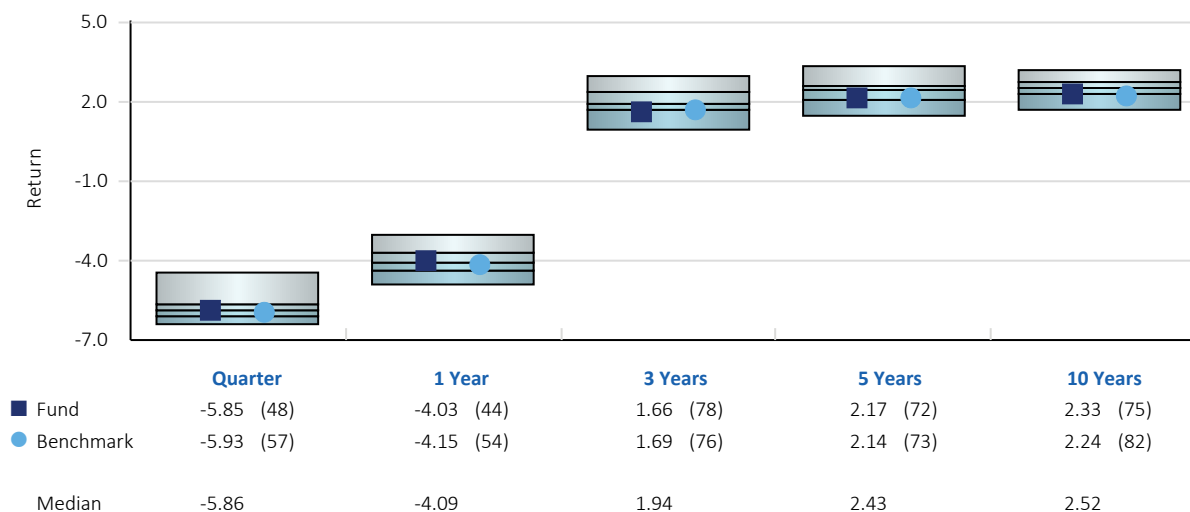
NISA

Periods Ended March 31, 2022

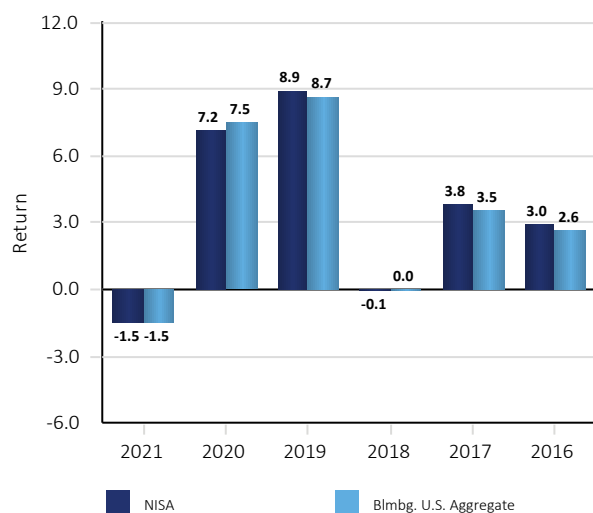
Comparative Performance



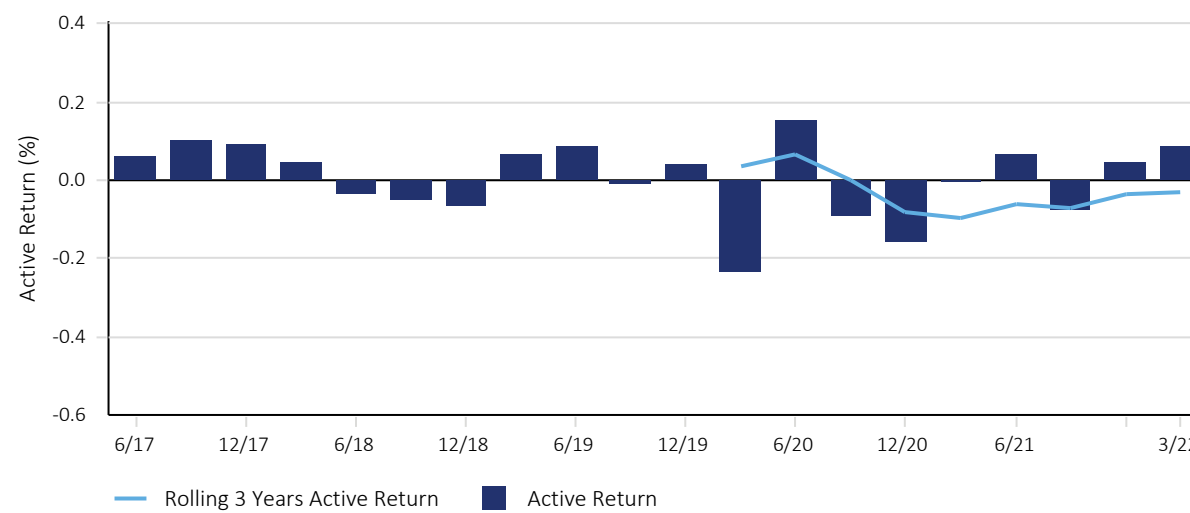
Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

NISA

Periods Ended 1 Year Ending March 31, 2022

Return Summary Statistics

	<u>NISA</u>	<u>Blmbg. U.S. Aggregate</u>
Maximum Return	1.10	1.12
Minimum Return	-2.75	-2.78
Return	-4.03	-4.15
Cumulative Return	-4.03	-4.15
Active Return	0.13	0.00
Excess Return	-4.09	-4.22

Risk Summary Statistics

	<u>NISA</u>	<u>Blmbg. U.S. Aggregate</u>
Upside Risk	0.47	0.46
Downside Risk	3.75	3.80
Beta	0.99	1.00

Risk/Return Summary Statistics

	<u>NISA</u>	<u>Blmbg. U.S. Aggregate</u>
Standard Deviation	3.92	3.95
Alpha	0.09	0.00
Active Return/Risk	0.03	0.00
Tracking Error	0.20	0.00
Information Ratio	0.63	
Sharpe Ratio	-1.04	-1.06

Correlation Statistics

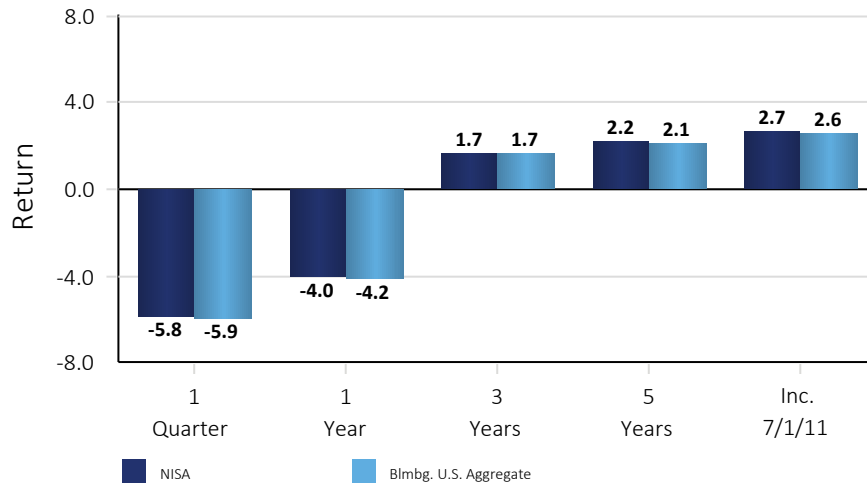
	<u>NISA</u>	<u>Blmbg. U.S. Aggregate</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

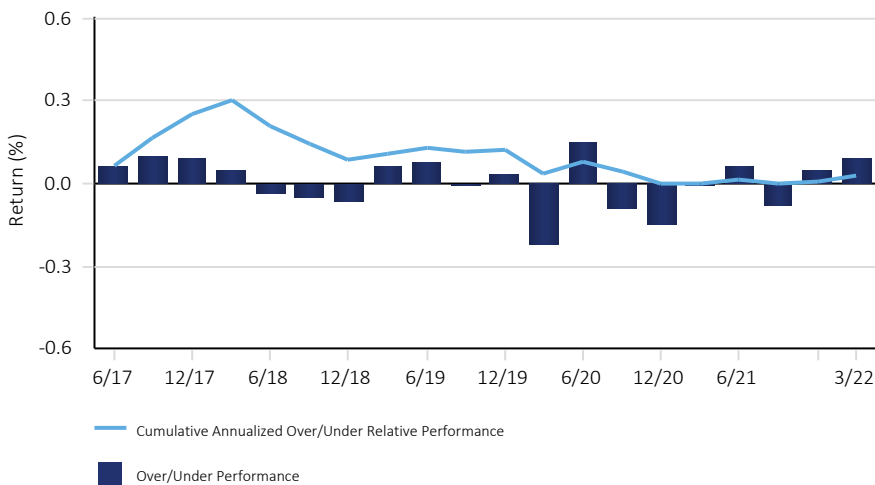
NISA vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended March 31, 2022

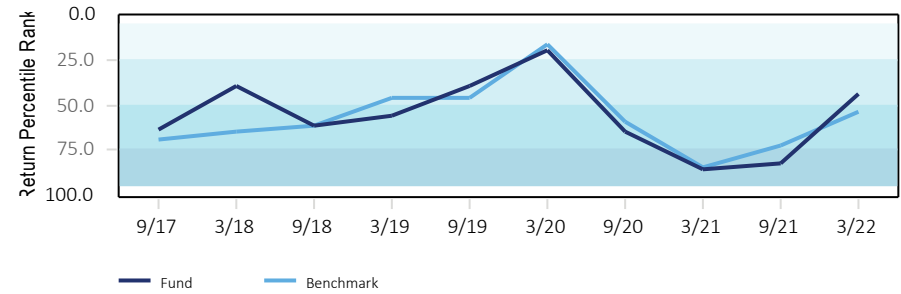
Comparative Performance



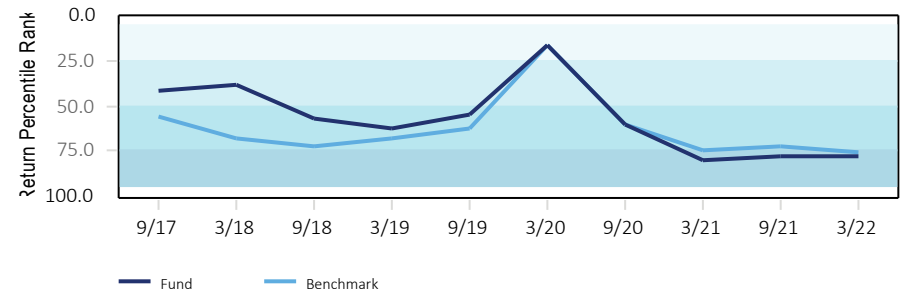
Relative Performance



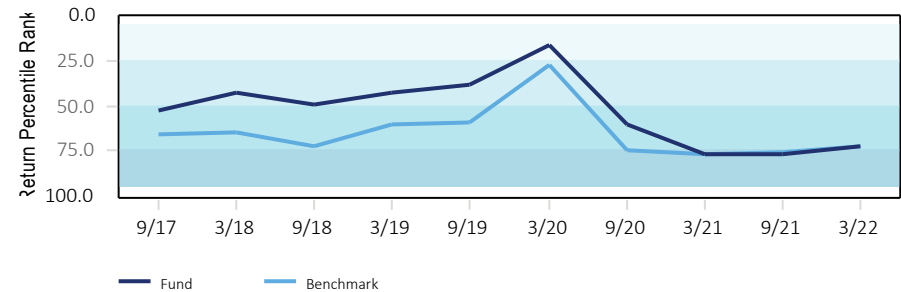
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Appendix

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
KRS Pension Plan	16,440,016,139	1,563,163,443	-1,557,094,307	-16,686,334	-17,474,697	-418,283,721	15,993,640,524
EQUITY							
US Equity Composite	3,991,627,900	171,709,009	-15,340,808	-879,197	-3,428	-206,381,027	3,940,732,449
S&P 500 Index	2,465,662,113	102,209,009	-12,551,644		-4,143	-109,622,639	2,445,692,696
Scientific Beta	253,896,145	43,500,000	-1,630,462		-34,272	-10,087,712	285,643,698
River Road FAV	307,966,479	16,000,000	-378,388	-207,768	-2,513	-19,040,669	304,337,141
Westfield Capital	304,803,363	10,000,000	-224,168	-275,302	-1,388	-21,629,036	292,673,468
Internal US Mid Cap	215,211,817		-98,332		-1,262	-10,538,166	204,574,058
NTGI Structured	284,731,801		-423,838	-89,584	32,725	-18,047,826	266,203,278
Next Century Growth	159,222,016		-33,975	-306,543	7,425	-17,418,510	141,470,412
Abel Noser Transition	42,383						42,383
Invesco	49,660					5	49,665
Transition Account	42,123					3,527	45,650
Non-US Equity Composite	3,266,651,154	5,000,000	-4,460,162	-2,574,583	-8,006	-265,792,420	2,998,815,982
BlackRock World Ex US	888,452,621			-53,214		-41,601,646	846,797,761
American Century	514,627,467		-75,718	-446,581	-1,107	-69,504,564	444,599,497
Franklin Templeton	389,162,450		-5,103	-321,462	-1,770	-58,046,094	330,788,021
Lazard Asset Mgmt	532,289,788		-3,501,031	-311,023	-2,792	-32,756,804	495,718,137
LSV Asset Mgmt	470,046,092	5,000,000	-411,841	-712,768	-3,686	-12,584,205	461,333,593
NTGI Int'l Small Cap							
Axiom	109,763,374			-191,935	-166	-18,460,471	91,110,803
JP Morgan Emerging Markets	183,960,974		-95,931	-282,049	2,022	-31,857,498	151,727,518
Pzena Emerging Markets	176,939,468		-370,538	-255,552	66	-672,178	175,641,265
Pyramis Intl	4,037					47	4,084
Non-US Equity Transition	1,404,884				-572	-309,007	1,095,305

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Private Equity Composite	1,262,539,645	14,640,556	-28,278,567	-1,446,196	-11,235,982	67,541,942	1,303,761,398
FIXED INCOME							
High Yield / Specialty Credit Composite	3,159,992,822	17,412,935	-45,777,659	-8,522,113	-3,194,168	-2,574,785	3,117,337,032
Adams St SPC II A	71,891,189		-5,916,989				65,974,200
Adams St SPC II B	73,333,779		-1,651,460				71,682,319
Blue Torch	100,208,711	17,412,935		-337,825	-1,466,603	5,105,080	120,922,298
BSP Coinvestment	37,995,157		-421,194			619,789	38,193,752
BSP Private Credit	97,718,158		-2,364,162	-275,407	-342,471	2,558,548	97,294,666
Capital Springs	91,104,402		-8,773,915	-211,570	-471,494	3,040,598	84,688,021
Cerberus Capital Mgmt	151,858,433			-985,190	-786,492	6,228,472	156,315,223
Columbia	510,702,768		-2,478,303	-431,161	-953	-20,963,312	486,829,039
Manulife Asset Mgmt	350,776,619		-1,166,756	-203,284	1,473	-13,120,068	336,287,985
Marathon Bluegrass	507,650,103			-438,177		-2,851,106	504,360,821
Shenkman Capital	205,634,831		-238,344	-212,954	789	-775,321	204,409,001
Waterfall	267,844,401		-290	-2,770,634	4,850	2,379,912	267,458,241
White Oak Yield Spectrum	157,835,458		-3,365,185	-375,685	-103,935	3,012,090	157,002,743
H/2 Credit Partner	17,605,967		-18,497,777			891,810	
Mesa West Core Lend	58,992,459		-705,542	-120,784		1,064,139	59,230,272
Mesa West IV	11,924,503		-197,742	-41,070	-29,332	386,941	12,043,300
Loomis	37,062					-126	36,935
Arrowmark	446,878,822			-2,118,373		9,847,768	454,608,217
Core Fixed Composite	2,344,396,960		-138,400,506	-542,363	-890	-73,566,638	2,131,886,564
NISA	164,296,064		-220,160	-58,964	-185	-9,628,771	154,387,985
Loomis Sayles Intmd	459,406,206		-14,014,699	-64,875	1,917	-21,892,901	423,435,648
Lord Abbett	1,720,694,690		-124,165,647	-418,524	-2,622	-42,044,966	1,554,062,930

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Cash Composite	612,903,688	1,322,442,977	-846,098,271		-1,208,247	221,696	1,088,261,843
INFLATION PROTECTED							
Real Return Composite	1,021,821,360	9,002,572	-463,901,254	-736,833	-471,942	2,889,698	568,603,601
Putnam	623,320,672		-452,835,454	-183,432	-1,849	-30,993,648	139,306,289
Tortoise Capital	140,047,351		-15,436	-84,666	6,196	32,677,272	172,630,717
Amerra AGRI Fund II	21,584,491		-838,971	-41,186	-361,351	1,849,515	22,192,498
Amerra AGRI Holdings	42,083,877	3,880,597	-514,063	-234,479	-66,001	-459,874	44,690,057
BTG Pactual	24,414,025			-102,593	111,160	-876,888	23,545,704
IFM Infrastructure	48,517,734	5,121,975	-607,092	-42,803	-84,405	746,585	53,651,994
Magnetar MTP EOF II	5,471,578		-5,110,619		-23,759	118,794	455,994
Oberland Capital	8,370,207		-1,191,539	-30,246	-46,596	233,089	7,334,915
Taurus Mine Finance	4,138,464		-1,373,816	-17,317	-5,337	332,237	3,074,231
TPF II	683,367					251,316	934,683
Blackstone Strat Opp	1,430,218		-496,647			11,339	944,910
Governors Lane Onshore							
Luxor Capital	1,249,526					-3,617	1,245,908
Myriad Opportunities	1,692,087		-917,616	-16		-719,706	54,750
Pine River	75,904			-95		107	75,916
PRISMA Capital	96,880,294					-275,067	96,605,227
SRS Partners US	281,422						281,422
Tricadia Select	1,295,248						1,295,248
PAAMCO							
Internal TIPS	127,934		-1			13	127,945
Nuveen Real Asset	156,961					-1,769	155,193
Real Estate Composite	780,082,609	22,955,394	-14,837,080	-1,985,049	-1,352,033	59,377,815	844,241,655
Baring	54,122,758	4,970,737	-2,901,786		-63	500,017	56,691,662

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Barings Euro RE II	10,567,660	15,308,580		-27,238	-1,266,732	3,416,910	27,999,180
Divcowest IV	3,201,061		-2,045,690	-3,190	-140,058	362,397	1,374,520
Fundamental Partners III	63,788,654		-1,409,869	-237,625	-1,750,000	8,316,977	68,708,137
Greenfield Acq VI	75,486				2,039	-10,198	67,327
Greenfield Acq VII	12,167,494		-3,649,031	-95,495	-341,240	1,815,146	9,896,874
Harrison Street	231,302,604			-441,840		6,622,636	237,483,400
Lubert Adler VII	20,171,546			-62,018	-20,108	1,048,769	21,138,190
Lubert Adler VII B	17,142,313		-4,814,229	-51,907	-262,255	1,292,263	13,306,186
Patron Capital	18,047,276			4,221,266	2,429,854	-4,930,408	22,444,064
Prologis Targeted US	201,757,726		-16,403	-4,954,330	-3,543	32,451,010	229,234,461
Rubenstein PF II	15,658,386			-45,884		613,632	16,226,134
Stockbridge Sm/Mkts	102,997,593			-227,383		6,587,387	109,357,597
Walton St RE VI	12,396,703			-10,474		1,046,921	13,433,150
Walton St RE VII	9,385,349		-72	-48,932	72	244,356	9,580,773
Perimeter Park	7,300,001						7,300,001

Cash Flow Summary

KRS Insurance Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
KRS Insurance Plan	7,310,676,308	645,154,388	-635,098,052	-7,736,604	-11,623,825	-169,836,943	7,131,535,272
EQUITY							
US Equity Composite	1,757,987,025	165,441,593	-6,867,891	-409,360	-3,444	-88,242,899	1,827,905,025
S&P 500 Index	1,079,728,517	104,841,593	-5,598,748		-1,964	-46,466,491	1,132,502,906
Scientific Beta	113,858,657	25,600,000	-752,011		-15,382	-4,333,178	134,358,086
River Road FAV	136,627,774	20,000,000	-167,875	-100,827	-881	-8,286,242	148,071,948
Westfield Capital	135,566,479	15,000,000	-101,291	-133,516	-493	-9,222,679	141,108,500
Internal US Mid Cap	95,330,008		-46,272		-1,740	-4,665,318	90,616,678
NTGI Structured	125,702,633		-186,911	-39,197	13,938	-7,479,177	118,011,287
Next Century Growth	71,154,044		-14,783	-135,820	3,079	-7,789,814	63,216,707
Abel Noser Transition	18,012						18,012
Transition Account	902						902
Non-US Equity Composite	1,488,457,036	24,000,000	-2,011,088	-1,173,034	-3,898	-121,336,769	1,387,932,248
BlackRock World Ex US	432,205,193			-41,445		-20,598,674	411,565,074
American Century	229,968,754		-33,639	-198,614	-354	-31,084,092	198,652,055
Franklin Templeton	168,162,374		-4,370	-139,489	-821	-25,048,164	142,969,530
Lazard Asset Mgmt	238,215,532	14,000,000	-1,577,654	-142,203	-1,162	-15,025,942	235,468,571
LSV Asset Mgmt	208,032,527	10,000,000	-180,356	-327,625	-1,207	-6,291,547	211,231,793
Blackrock ACWI Ex-US Small Cap							
Axiom	49,618,856			-90,187	-65	-8,348,265	41,180,340
JP Morgan Emerging Markets	82,119,781		-43,327	-119,001	783	-14,174,911	67,783,326
Pzena Emerging Markets	79,566,416		-171,742	-114,471	-1,072	-660,726	78,618,405
Boston Company							
Pyramis Intl							
Non-US Equity Transition	567,604		-1			-104,449	463,154

Cash Flow Summary

KRS Insurance Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Private Equity Composite	595,876,977	9,032,455	-18,985,996	-967,004	-8,736,330	45,446,841	621,666,942
FIXED INCOME							
Specialty Credit Composite	1,449,432,096	7,462,687	-43,343,066	-3,789,843	-1,398,779	962,019	1,409,325,113
Adams St SPC II A	30,810,509		-2,535,852				28,274,657
Adams St SPC II B	31,428,764		-707,768				30,720,996
Blue Torch	42,946,591	7,462,687		-144,782	-628,544	2,187,891	51,823,843
BSP Coinvestment	17,418,968		-197,859			282,723	17,503,832
BSP Private Credit	48,859,078		-1,182,081	-137,703	-171,235	1,279,273	48,647,332
CapitalSpring	39,044,744		-3,760,249	-90,673	-202,069	1,303,114	36,294,867
Cerberus Capital Mgmt	65,082,185			-422,224	-337,068	2,669,346	66,992,239
Columbia	210,273,172		-1,036,113	-177,330	-601	-8,650,155	200,408,973
Manulife Asset Mgmt	146,877,364		-14,003,436	-76,477	669	-5,319,889	127,478,230
Marathon Bluegrass	203,069,168			-147,586		-1,328,959	201,592,623
Shenkman Capital	116,053,009		-119,290	-120,485	370	-486,920	115,326,684
Waterfall	130,574,927		-152	-1,113,983	16	805,941	130,266,750
White Oak Yield Spectrum	74,281,353		-1,583,617	-176,793	-48,910	1,417,454	73,889,487
H/2 Credit Partner	17,265,200		-18,139,749			874,549	
Mesa West Core Lend	43,221,382			-87,146		762,669	43,896,905
Mesa West IV	4,634,435		-76,900	-15,972	-11,407	150,477	4,680,633
Loomis	37,800					-40	37,760
Arrowmark	227,553,448			-1,078,689		5,014,544	231,489,303
Core Fixed Income Composite	855,261,645		-24,603,599	-215,739	505	-27,966,301	802,476,512
NISA	100,371,264		-139,378	-36,121	-146	-5,824,950	94,370,668
Loomis Sayles Intmd	161,086,938		-2,506,551	-23,104	452	-7,755,398	150,802,336
Lord Abbett	593,803,444		-21,957,670	-156,514	200	-14,385,953	557,303,508

Cash Flow Summary

KRS Insurance Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Cash Composite	401,003,570	425,185,327	-320,204,128		-601,270	102,297	505,485,795
INFLATION PROTECTED							
Real Return Composite	432,244,515	4,284,685	-212,642,801	-332,068	-199,271	-3,359,073	219,995,987
Putnam	274,436,369		-208,358,986	-76,712	-739	-14,036,813	51,963,119
Tortoise Capital	44,296,419		-2,611	-26,783	182	10,332,701	54,599,907
Amerra AGRI Fund II	8,705,054		-338,358	-16,610	-145,733	745,912	8,950,265
Amerra AGRI Holdings	22,660,549	2,089,552	-276,803	-126,258	-35,539	-247,624	24,063,877
BTG Pactual	10,968,620			-46,092	49,941	-393,964	10,578,505
IFM Infrastructure	20,793,315	2,195,132	-260,182	-18,344	-36,174	319,965	22,993,712
Magnetar MTP EOF II	1,823,859		-1,703,540		-7,920	39,598	151,997
Oberland Capital	3,760,529		-535,330	-13,589	-20,934	104,721	3,295,397
Taurus Mine Finance	1,826,061		-606,185	-7,641	-2,355	146,597	1,356,477
TPF II	75,934					27,923	103,857
Blackstone Strat Opp	563,670		-195,734			4,469	372,405
Governors Lane Onshore							
Luxor Capital	416,509					-1,206	415,303
Myriad Opportunities	673,302		-365,069	-7		-286,331	21,895
Pine River	25,302			-32		36	25,305
PRISMA Capital	40,268,183					-114,331	40,153,852
SRS Partners US	110,913						110,913
Tricadia Select	510,479						510,479
PAAMCO							
Internal TIPS	271,606		-2			26	271,631
Nuveen Real Asset	57,842					-750	57,092
Real Estate Composite	330,413,444	9,747,641	-6,439,483	-849,557	-681,339	24,556,944	356,747,650
Baring	23,195,467	2,130,316	-1,243,623		-27	214,293	24,296,426

Cash Flow Summary

KRS Insurance Plan

1 Quarter Ending March 31, 2022

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Barings Euro RE II	4,528,997	6,560,820		-11,673	-542,884	1,464,390	11,999,649
Divcowest IV	1,415,858		-904,824	-1,411	-61,949	160,291	607,965
Fundamental Partners III	27,337,998		-604,229	-101,839	-750,000	3,564,418	29,446,348
Greenfield Acq VI	33,178				896	-4,482	29,592
Greenfield Acq VII	5,339,692		-1,601,373	-41,908	-149,753	796,576	4,343,234
Harrison Street	104,733,427			-200,065		2,998,718	107,532,080
Lubert Adler VII	8,852,259			-27,217	-8,824	460,251	9,276,470
Lubert Adler VII B	7,346,706		-2,063,241	-22,246	-112,395	553,827	5,702,651
Patron Capital	7,018,586	1,040,697		1,641,604	944,968	-1,917,489	8,728,365
Prologis Targeted US	78,103,217		-6,353	-1,931,278	-1,402	12,568,080	88,732,264
Rubenstein PF II	6,925,825			-20,295		271,414	7,176,944
Stockbridge Sm/Mkts	50,079,652			-110,558		3,202,930	53,172,023
Walton St RE VI	1,377,411	15,809	-15,809	-1,164		116,325	1,492,572
Walton St RE VII	4,125,171		-31	-21,507	31	107,402	4,211,066

Historical Hybrid Composition

CERS Pension

Periods Ended March 31, 2022

Policy Index Weight (%)

Jul-2017

Russell 3000 Index	17.50
MSCI AC World ex USA IMI	17.50
CERS Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00

Oct-2017

Russell 3000 Index	17.50
MSCI AC World ex USA IMI (Net)	17.50
CERS Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00

Policy Index Weight (%)

Jul-2018

Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS Real Return Index	15.00
Blmbg. U.S. Corp: High Yield	15.00
Blmbg. U.S. Universal Index	13.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00

Oct-2018

Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS Real Return Index	15.00
Blmbg. U.S. Aggregate	13.50
Blmbg. U.S. Corp: High Yield	7.50
S&P/LSTA Leverage Loan Index	7.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00

Historical Hybrid Composition

CERS Pension

Periods Ended March 31, 2022

Policy Index	Weight (%)
Jan-2021	
Russell 3000 Index	21.75
MSCI AC World ex USA IMI (Net)	21.75
CERS Short-Term PE Index	10.00
Policy Index	15.00
Blmbg. U.S. Aggregate	10.00
FTSE 3 Month T-Bill	1.50
NCREIF ODCE NOF 1 Quarter Lag	10.00
CERS Real Return Index	10.00
Dec-2021	
MSCI AC World Index	50.00
CERS Short-Term PE Index	10.00
Policy Index	10.00
Blmbg. U.S. Aggregate	10.00
NCREIF ODCE NOF 1 Quarter Lag	7.00
CERS Real Return Index	13.00

Historical Hybrid Composition

CERS Insurance

Periods Ended March 31, 2022

Policy Index	Weight (%)
Jul-2017	
Russell 3000 Index	17.50
MSCI AC World ex USA IMI	17.50
CERS Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00
Oct-2017	
Russell 3000 Index	17.50
MSCI AC World ex USA IMI (Net)	17.50
CERS Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00

Policy Index	Weight (%)
Jul-2018	
Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS Real Return Index	15.00
Blmbg. U.S. Corp: High Yield	15.00
Blmbg. U.S. Universal Index	13.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00
Oct-2018	
Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS Real Return Index	15.00
Blmbg. U.S. Aggregate	13.50
Blmbg. U.S. Corp: High Yield	7.50
S&P/LSTA Leverage Loan Index	7.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00

Historical Hybrid Composition

CERS Insurance

Periods Ended March 31, 2022

Policy Index	Weight (%)
Jan-2021	
Russell 3000 Index	21.75
MSCI AC World ex USA IMI (Net)	21.75
CERS Short-Term PE Index	10.00
Specialty Credit Policy Index	15.00
Blmbg. U.S. Aggregate	10.00
FTSE 3 Month T-Bill	1.50
NCREIF ODCE NOF 1 Quarter Lag	10.00
CERS Real Return Index	10.00
Dec-2021	
MSCI AC World Index	50.00
CERS Short-Term PE Index	10.00
Specialty Credit Policy Index	10.00
Blmbg. U.S. Aggregate	10.00
NCREIF ODCE NOF 1 Quarter Lag	7.00
CERS Real Return Index	13.00

Historical Hybrid Composition

CERS (H) Pension

Periods Ended March 31, 2022

Policy Index	Weight (%)
Jul-2017	
Russell 3000 Index	17.50
MSCI AC World ex USA IMI	17.50
CERS (H) Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS (H) Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00
Oct-2017	
Russell 3000 Index	17.50
MSCI AC World ex USA IMI (Net)	17.50
CERS (H) Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS (H) Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00

Policy Index	Weight (%)
Jul-2018	
Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS (H) Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS (H) Real Return Index	15.00
Blmbg. U.S. Corp: High Yield	15.00
Blmbg. U.S. Universal Index	13.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00
Oct-2018	
Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS (H) Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS (H) Real Return Index	15.00
Blmbg. U.S. Aggregate	13.50
Blmbg. U.S. Corp: High Yield	7.50
S&P/LSTA Leverage Loan Index	7.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00

Historical Hybrid Composition

CERS (H) Pension

Periods Ended March 31, 2022

Policy Index	Weight (%)
Jan-2021	
Russell 3000 Index	21.75
MSCI AC World ex USA IMI (Net)	21.75
CERS (H) Short-Term PE Index	10.00
Policy Index	15.00
Blmbg. U.S. Aggregate	10.00
FTSE 3 Month T-Bill	1.50
NCREIF ODCE NOF 1 Quarter Lag	10.00
CERS (H) Real Return Index	10.00
Dec-2021	
MSCI AC World Index	50.00
CERS (H) Short-Term PE Index	10.00
Policy Index	10.00
Blmbg. U.S. Aggregate	10.00
NCREIF ODCE NOF 1 Quarter Lag	7.00
CERS (H) Real Return Index	13.00

Historical Hybrid Composition

CERS (H) Insurance

Periods Ended March 31, 2022

Policy Index	Weight (%)
Jul-2017	
Russell 3000 Index	17.50
MSCI AC World ex USA IMI	17.50
CERS (H) Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS (H) Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00
Oct-2017	
Russell 3000 Index	17.50
MSCI AC World ex USA IMI (Net)	17.50
CERS (H) Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
CERS (H) Real Return Index	10.00
Blmbg. U.S. Corp: High Yield	24.00
Blmbg. U.S. Universal Index	4.00
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.00

Policy Index	Weight (%)
Jul-2018	
Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS (H) Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS (H) Real Return Index	15.00
Blmbg. U.S. Corp: High Yield	15.00
Blmbg. U.S. Universal Index	13.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00
Oct-2018	
Russell 3000 Index	18.75
MSCI AC World ex USA IMI (Net)	18.75
CERS (H) Short-Term PE Index	10.00
HFRI FOF: Diversified Index	3.00
CERS (H) Real Return Index	15.00
Blmbg. U.S. Aggregate	13.50
Blmbg. U.S. Corp: High Yield	7.50
S&P/LSTA Leverage Loan Index	7.50
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.00

Historical Hybrid Composition

CERS (H) Insurance

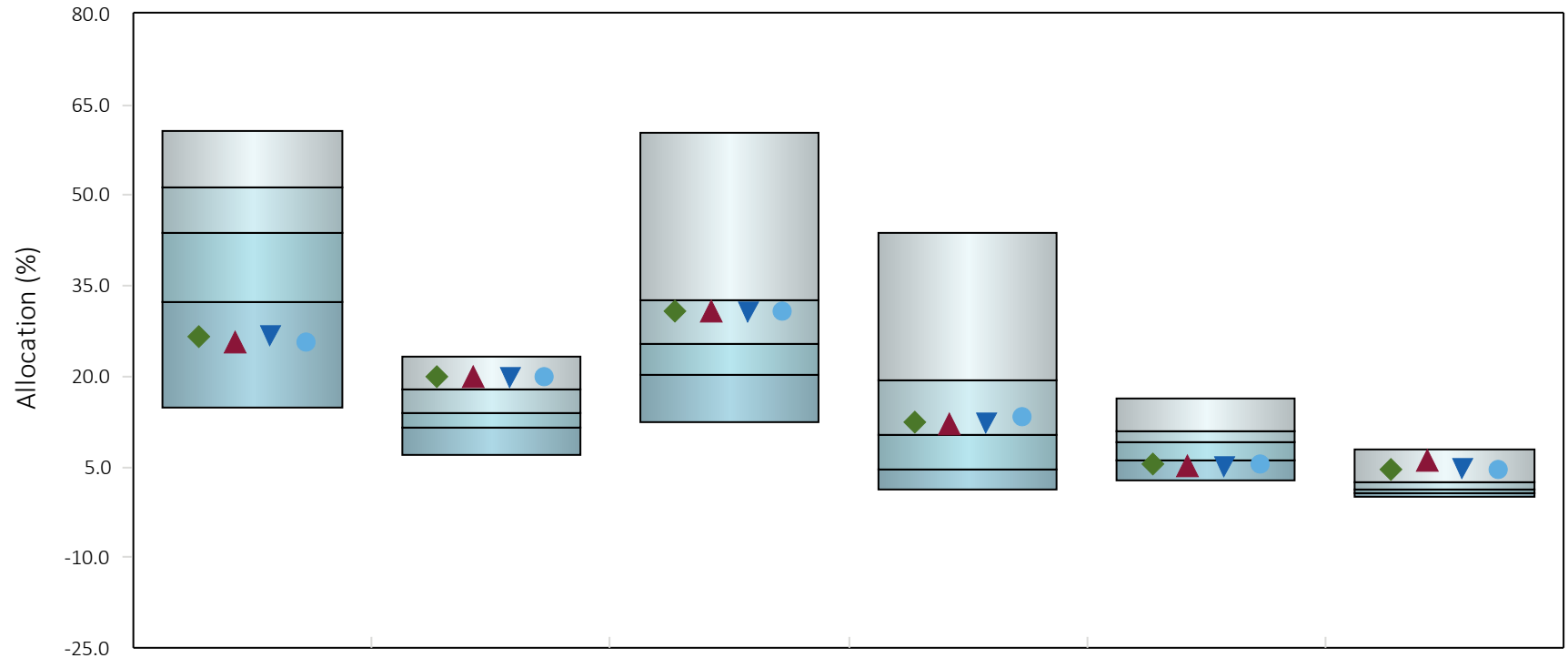
Periods Ended March 31, 2022

Policy Index	Weight (%)
Jan-2021	
Russell 3000 Index	21.75
MSCI AC World ex USA IMI (Net)	21.75
CERS (H) Short-Term PE Index	10.00
Specialty Credit Policy Index	15.00
Blmbg. U.S. Aggregate	10.00
FTSE 3 Month T-Bill	1.50
NCREIF ODCE NOF 1 Quarter Lag	10.00
CERS (H) Real Return Index	10.00
Dec-2021	
MSCI AC World Index	50.00
CERS (H) Short-Term PE Index	10.00
Specialty Credit Policy Index	10.00
Blmbg. U.S. Aggregate	10.00
NCREIF ODCE NOF 1 Quarter Lag	7.00
CERS (H) Real Return Index	13.00

Plan Sponsor TF Asset Allocation

CERS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2022



	US Equity	Global ex-US Equity	Total Fixed Income	Alternatives	Total Real Estate	Cash & Equivalents
◆ CERS Pension Plan	26.72	19.96	30.87	12.51	5.48	4.46
▲ CERS Insurance Plan	25.71	20.00	30.95	12.11	5.06	6.17
▼ CERS (H) Pension Plan	26.86	19.97	30.84	12.30	5.13	4.90
● CERS (H) Insurance Plan	25.58	19.97	30.94	13.32	5.49	4.70
5th Percentile	60.84	23.18	60.30	43.70	16.26	7.88
1st Quartile	51.30	17.90	32.53	19.48	11.00	2.57
Median	43.86	14.00	25.46	10.42	9.17	1.21
3rd Quartile	32.47	11.38	20.28	4.46	6.10	0.55
95th Percentile	14.72	7.06	12.43	1.37	2.64	0.08