

Wilshire



Wilshire Advisors

City of Grand Rapids Police & Fire Retirement System
Executive Summary of Investment Performance

As of December 31, 2022

Quarterly Market Review

Asset Class Performance

Asset Class Returns - Best to Worst

2017	2018	2019	2020	2021	2022 YTD	Annualized 5-Year as of 12/22
Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	REITs 46.2%	Commodities 16.1%	U.S. Equity 9.0%
Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	Commodities 27.1%	T-Bills 1.3%	Commodities 6.4%
U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	U.S. Equity 26.7%	High Yield -11.2%	REITs 3.4%
High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	Developed 11.8%	U.S. TIPS -11.8%	High Yield 2.3%
REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	U.S. TIPS 6.0%	Core Bond -13.0%	U.S. TIPS 2.1%
Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	High Yield 5.3%	Developed -14.0%	Developed 2.0%
U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%	U.S. Equity -19.0%	T-Bills 1.2%
Commodities 1.7%	Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Core Bond -1.5%	Emrg Mrkts -19.7%	Core Bond 0.0%
T-Bills 0.8%	Emrg Mrkts -14.2%	T-Bills 2.3%	REITs -7.9%	Emrg Mrkts -2.2%	REITs -26.8%	Emrg Mrkts -1.0%

Data Sources: Bloomberg

Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

Market Commentary

U.S. Equity

The U.S. stock market was up 7.1% for the fourth quarter but was down -19.0% for all of 2022. A majority of sectors were up for the quarter. The best performing were Energy (+19.9%), Industrials (+16.6%) and Materials (+14.6%). Consumer Discretionary was down -8.0%. From a size perspective, small-cap outperformed large-cap by 86 basis points. Growth stocks underperformed value for the quarter and also trailed meaningfully for the year.

The Federal Reserve's aggressive action to combat unacceptably high inflation is the story of 2022 with uncertainty around Fed policy poised to drive market volatility in 2023. The FOMC raised rates 4.25%, with increases becoming more dramatic in May. This marks the largest 12-month increase since 1981 (also a period of inflation near or above double-digits). Unsurprisingly, fixed income suffered but so did equities as investors repriced off a higher risk-free rate. The Fed is currently forecasting a rate 0.75% higher by the end of 2023. The open market does not agree – or perhaps doubts their credibility to continue tightening, with a modest change forecasted for the next year. How this disagreement plays out is likely to be a primary market driver this year.

Non-U.S. Equity

Europe faced similar headwinds as the United States in 2022 – surging inflation and aggressive central bank tightening – but also had to more directly contend with the ongoing war in Ukraine. The labor market remains tight in the eurozone and many businesses report that a labor shortage is limiting production. Despite China's zero-COVID policies, including lockdowns, infections continued to surge intermittently. Tension among the country's citizens continued to rise and led to protests not seen in decades. In early December, the central government took definitive steps to ease restrictions.

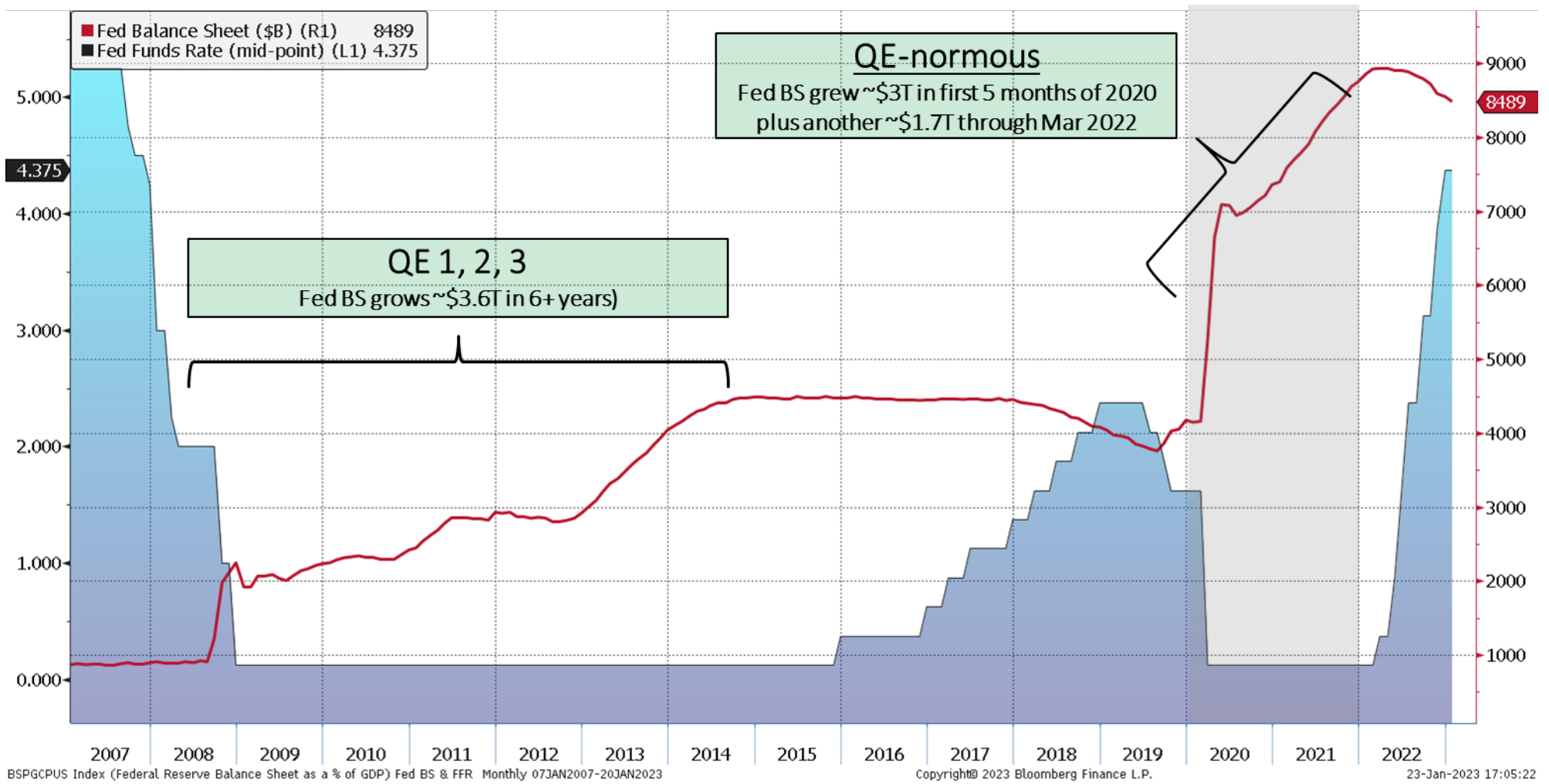
Fixed Income

The U.S. Treasury yield curve was up in the short-end (below 3-years) by 50-135 basis points but largely unchanged across the remainder of the curve. The 10-year Treasury yield ended the quarter at 3.88%, up just 5 basis points from September. The Fed increased the overnight rate by 0.75% in November and 0.50% in December, targeting a range of 4.25% to 4.50%. The Fed's "dot plot" is messaging that the current intent is for another 75 basis points in increases before the end of 2023.

December 2022 Asset Class Assumptions

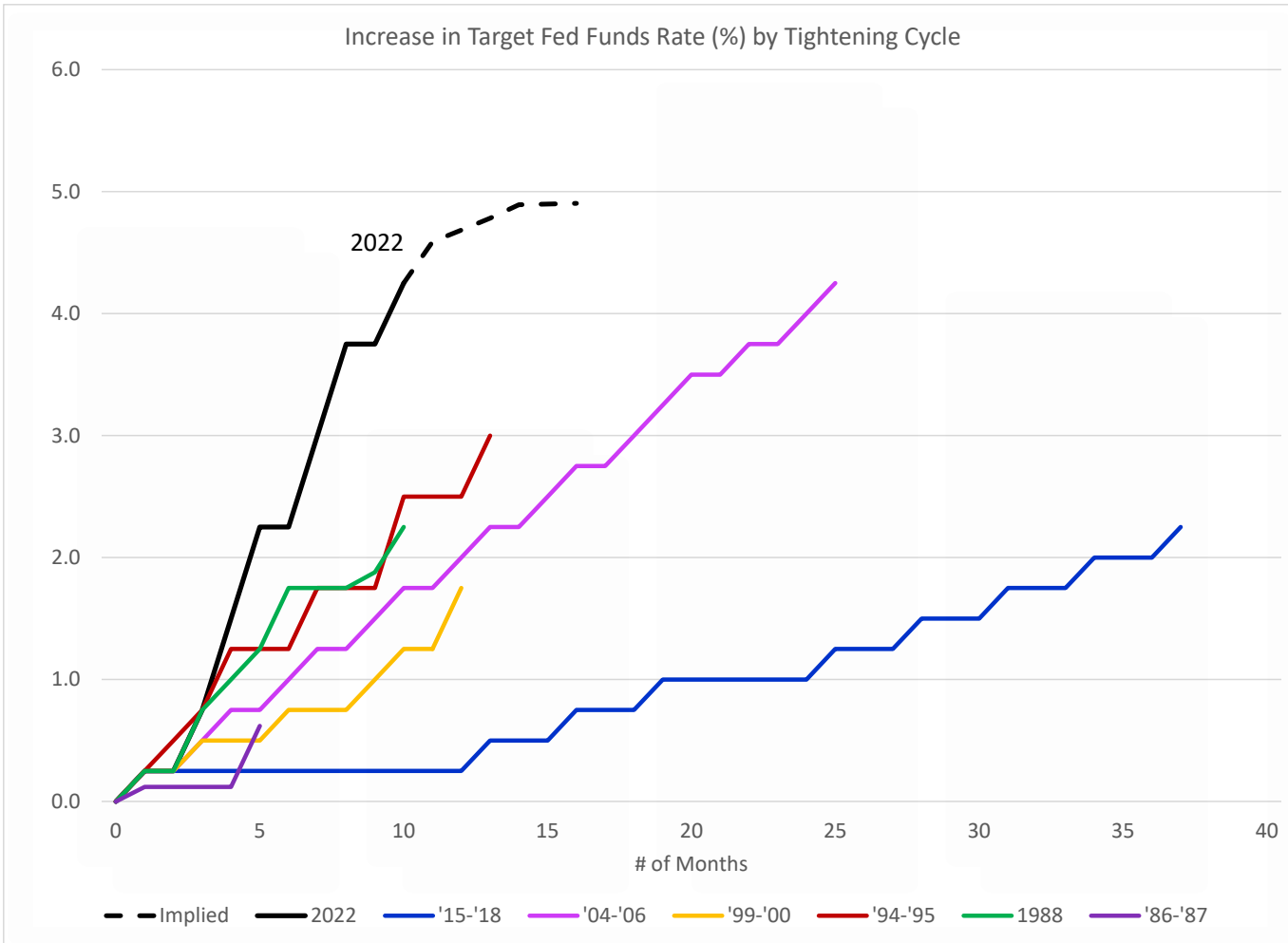
	Equity						Fixed Income						Real Assets						
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	TIPS	High Yield	Private Credit	Dev ex-US Bond (Hdg)	US RES	Global RES	Private RE	Cmdty	Real Assets	US CPI
Compound Return (%)	6.50	7.25	7.50	7.60	7.05	9.90	4.00	4.90	4.90	3.95	6.55	8.85	3.05	5.65	5.80	6.20	6.25	6.65	2.25
Expected Risk (%)	17.00	18.00	26.00	19.10	17.10	29.00	0.75	4.70	9.80	6.00	10.00	12.75	4.00	17.50	16.45	14.00	16.00	12.35	1.75
Cash Yield (%)	1.75	3.25	2.80	3.10	2.25	0.00	4.00	5.10	5.25	4.40	9.65	5.10	3.75	3.95	3.95	2.25	4.00	3.15	0.00
Growth Exposure	8.00	8.00	8.00	8.00	8.00	14.00	0.00	-0.95	-2.40	-3.00	4.00	5.10	-1.00	6.00	6.00	3.50	0.00	2.70	0.00
Inflation Exposure	-3.00	0.00	5.00	1.45	-1.30	-3.75	0.00	-2.50	-6.80	2.50	-1.00	-1.50	-3.00	1.00	1.80	1.00	12.00	5.25	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	0.84	0.95	0.89	1.00															
Global Stock	0.95	0.91	0.84	0.94	1.00														
Private Equity	0.72	0.63	0.61	0.67	0.73	1.00													
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.06	0.00	1.00												
Core Bond	0.28	0.13	0.00	0.08	0.20	0.30	0.18	1.00											
LT Core Bond	0.31	0.15	0.01	0.11	0.24	0.31	0.11	0.94	1.00										
TIPS	-0.05	0.00	0.15	0.06	-0.01	-0.03	0.20	0.60	0.48	1.00									
High Yield Bond	0.54	0.39	0.49	0.46	0.53	0.31	-0.10	0.24	0.32	0.05	1.00								
Private Credit	0.68	0.55	0.58	0.60	0.68	0.44	0.00	0.24	0.30	0.00	0.76	1.00							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.16	0.17	0.26	0.10	0.68	0.66	0.39	0.26	0.22	1.00						
US RE Securities	0.58	0.47	0.44	0.49	0.57	0.49	-0.05	0.17	0.22	0.10	0.56	0.62	0.05	1.00					
Global RE Securities	0.64	0.57	0.54	0.60	0.65	0.55	-0.05	0.17	0.21	0.11	0.61	0.68	0.04	0.96	1.00				
Private Real Estate	0.55	0.45	0.45	0.49	0.54	0.50	-0.05	0.19	0.25	0.09	0.58	0.63	0.05	0.79	0.78	1.00			
Commodities	0.25	0.34	0.39	0.38	0.32	0.28	0.00	-0.03	-0.03	0.25	0.29	0.29	-0.10	0.25	0.28	0.25	1.00		
Real Assets	0.62	0.63	0.65	0.69	0.67	0.57	-0.03	0.22	0.24	0.30	0.64	0.69	0.04	0.78	0.84	0.76	0.64	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	0.00	-0.08	0.05	0.04	0.05	0.44	0.22	1.00

The Fed: Zero Rates & QE to \$8T and Beyond...

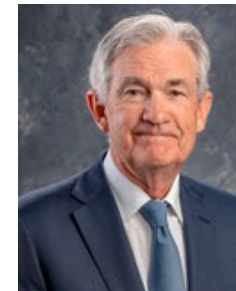


Data Source: Bloomberg

The Shift to Tightening: Most Aggressive in Modern Era: Will “Bring Some Pain”



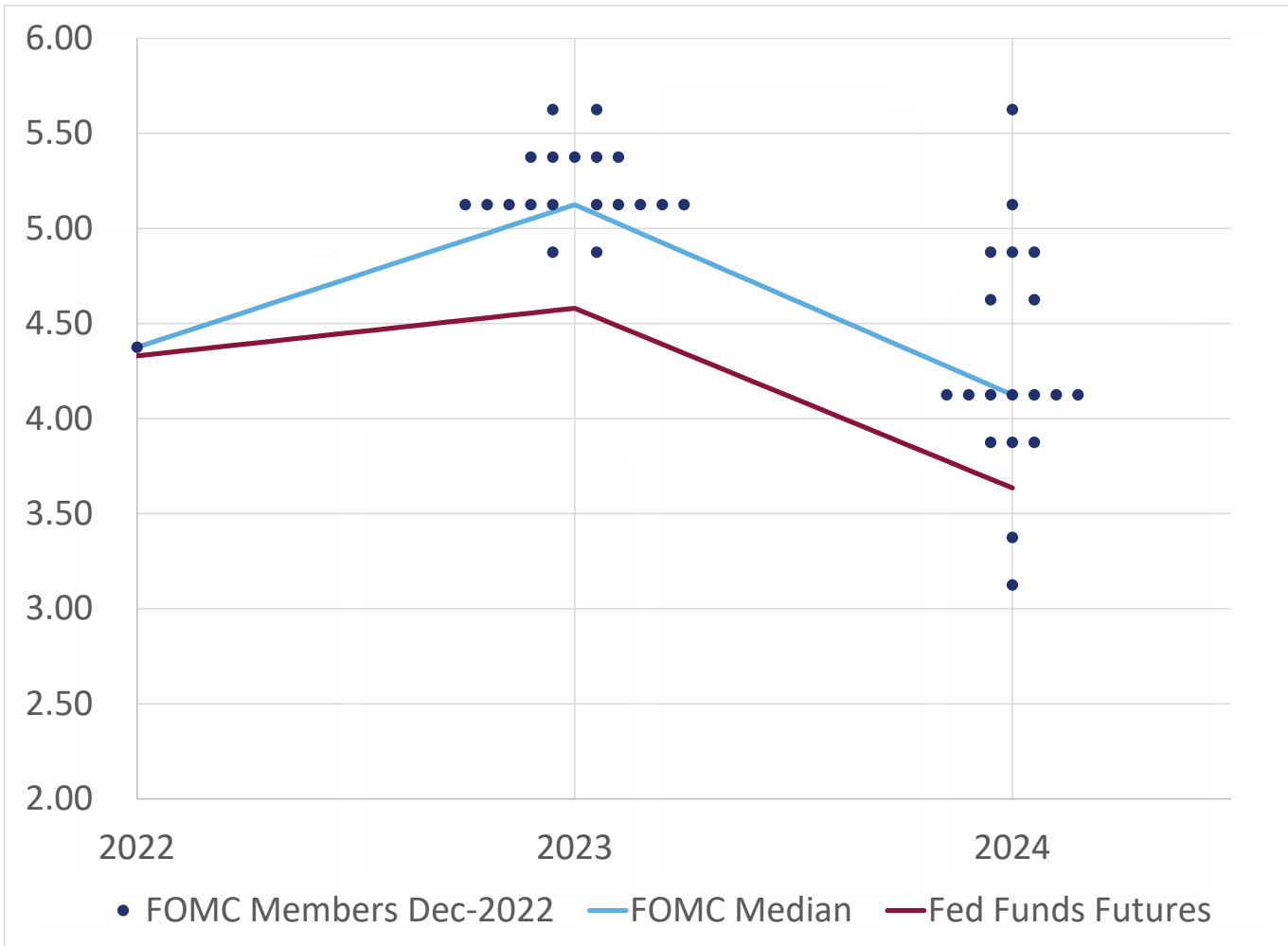
“While higher interest rates, slower growth, and softer labor market conditions will bring down inflation, they will also bring some pain to households and businesses. These are the unfortunate costs of reducing inflation. But a failure to restore price stability would mean far greater pain.”



Jerome Powell
August 2022, Jackson Hole

Data Source: Bloomberg

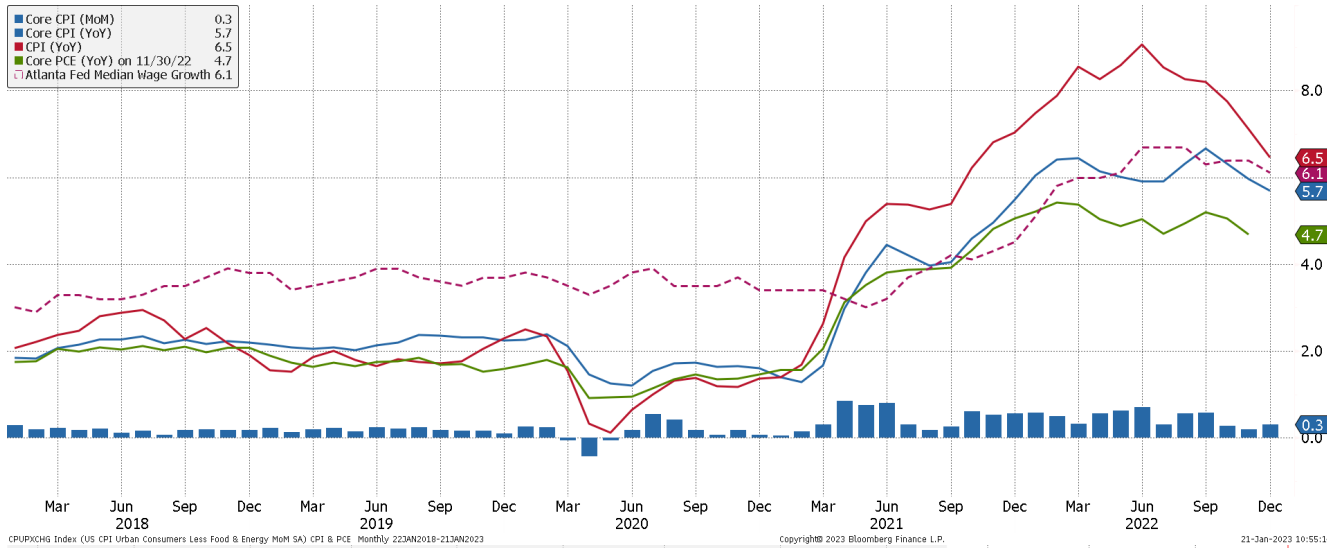
The Fed Outlook vs. Market Consensus



- The market's Dec 2023 implied Fed Funds Rate is below every FOMC member's forecast
- Why the divergence: A Fed credibility issue or just a difference in view?
- How might this play out?
 - What if the Fed's wrong?
 - What if the market is wrong?

Data Source: Bloomberg

The Fed's Dashboard: Realized & Expected Inflation



Data Source: Bloomberg

- Realized inflation has begun to ease off extreme levels
 - CPI 6.5% v. 9.1% in June 2022
 - Core CPI stabilizing ~5%
 - Wage inflation remains elevated (~6%)
- Inflation expectations remain well-anchored
 - Expectational anchoring at higher levels would make the Fed's job even more challenging
 - These expectations are likely at the heart of the divergence between market and Fed outlooks (i.e., the Fed would likely pause now if they believed these expectations would be realized)

The Fed's Dashboard: Economic Growth & Labor Market



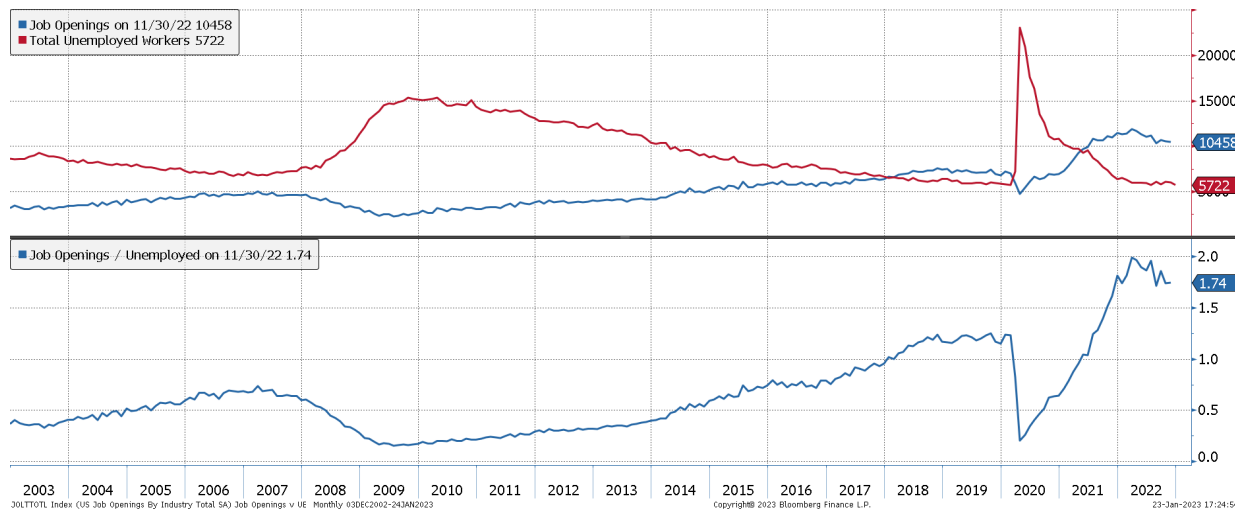
The market seems a bit more confident in the prospects of a “soft landing” as inflation has subsided in recent months

- However, lots more liquidity to be drained
- Powell’s “Sully” Sullenberger moment...



“We’re going to be in the Hudson”

Chesley Burnett "Sully" Sullenberger III
Pilot of US Airways 1549, January 15, 2009

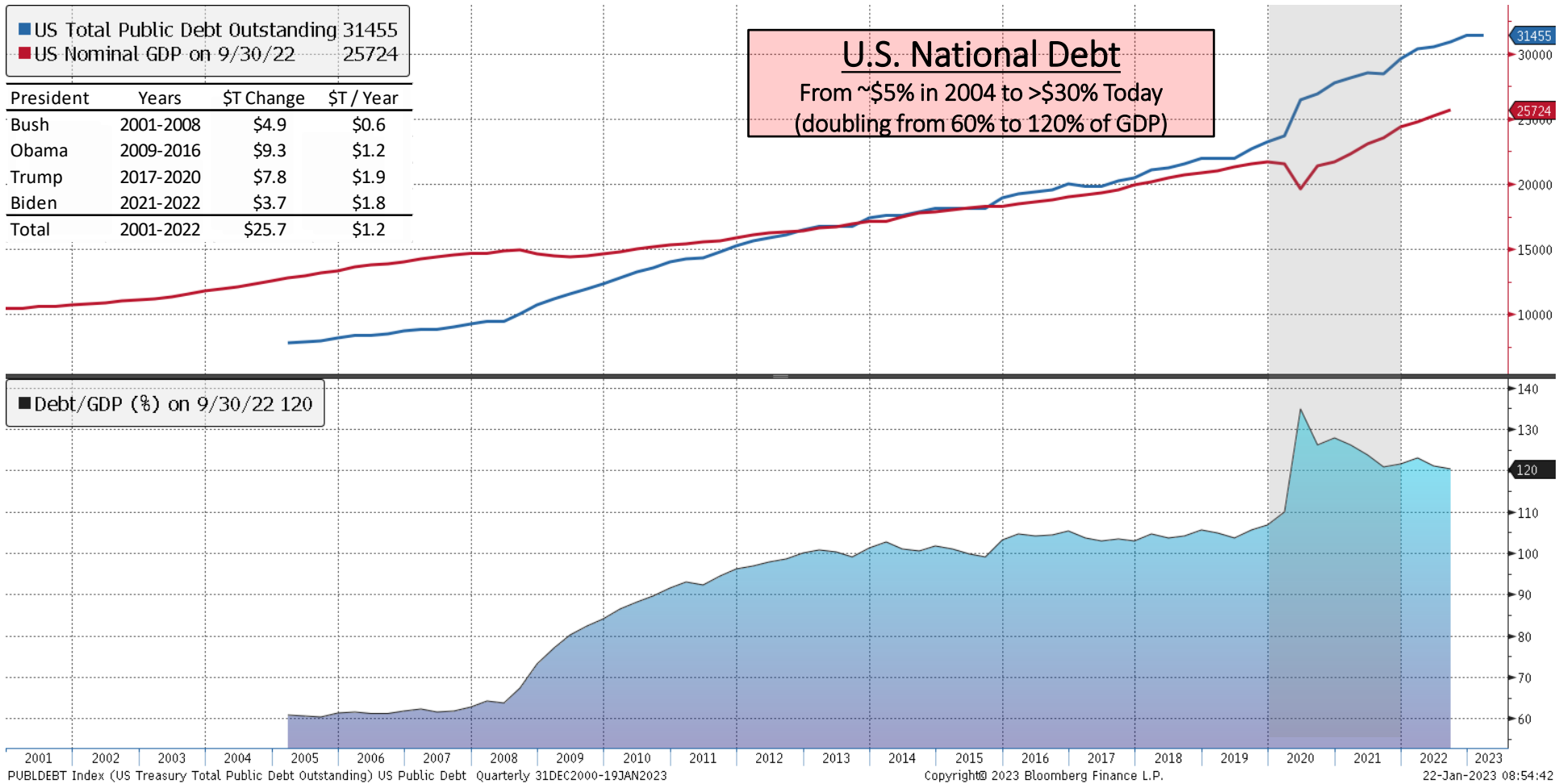


Labor markets remain tight

- Difficult to see inflation pressures return to Fed target without these tensions reversing
- Recent jobs reports remain strong (good news for economic resilience but challenges the market’s benign inflation expectations)

Data Source: Bloomberg

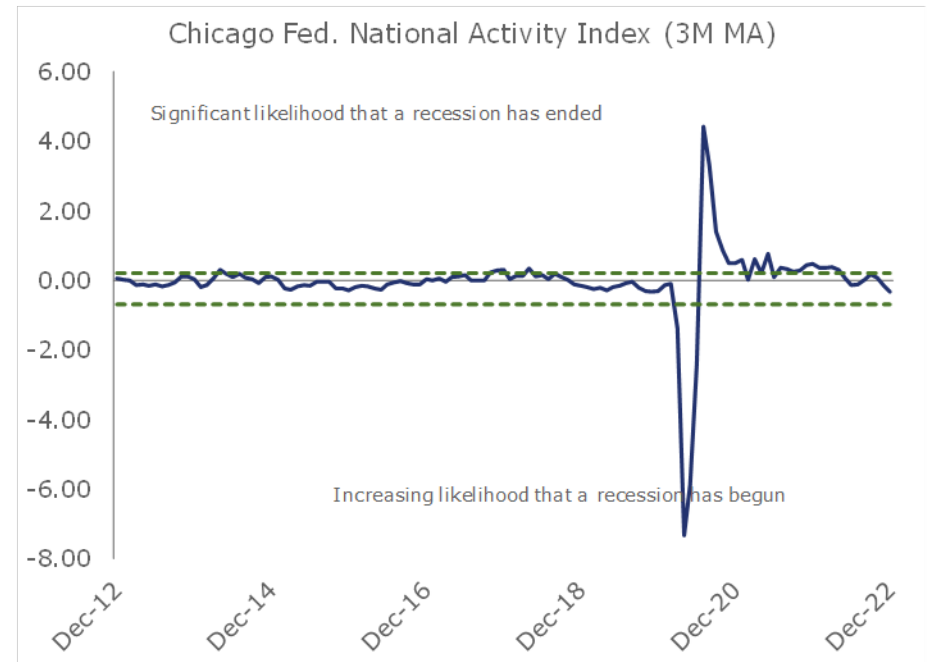
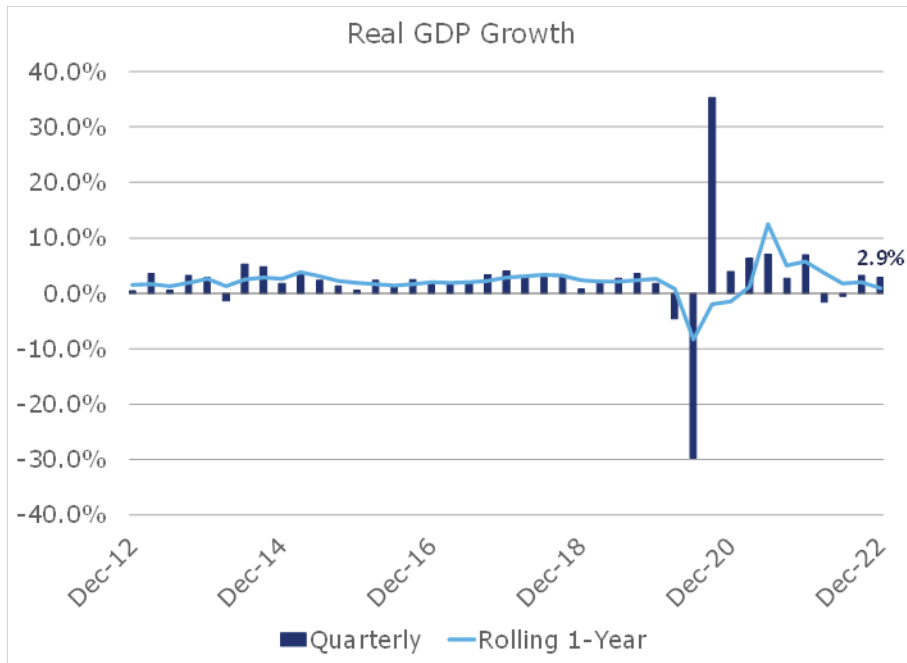
A Secular Explosion in National Debt: “We’re Not in Kansas Anymore”



Data Source: Bloomberg

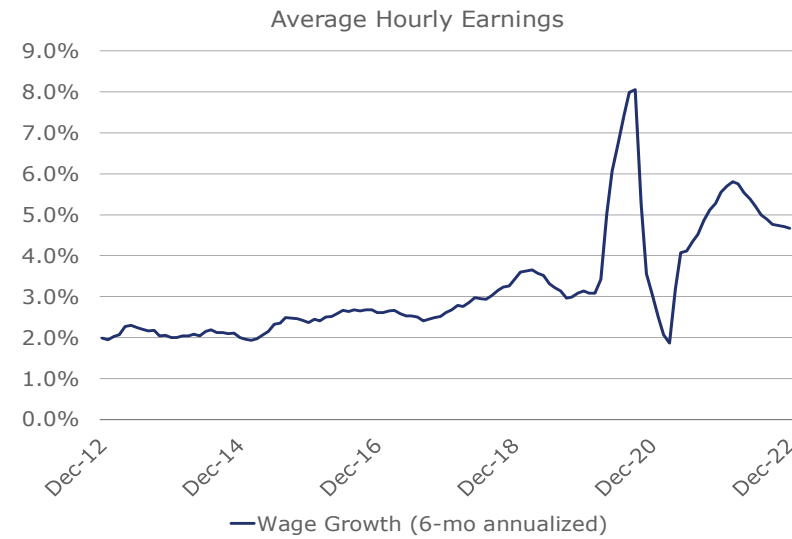
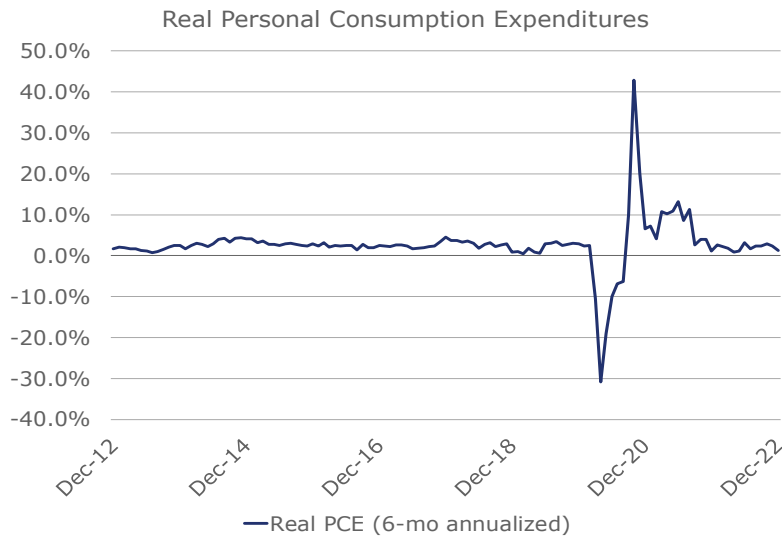
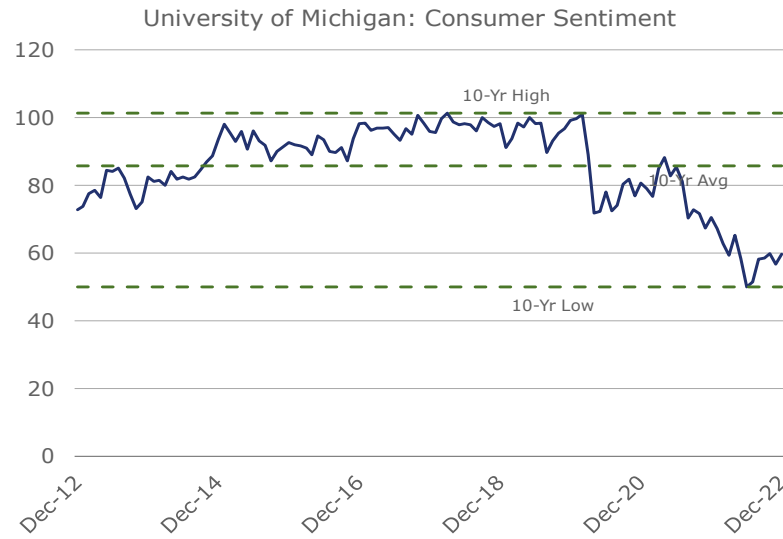
Economic/Market Activity

Economic Growth



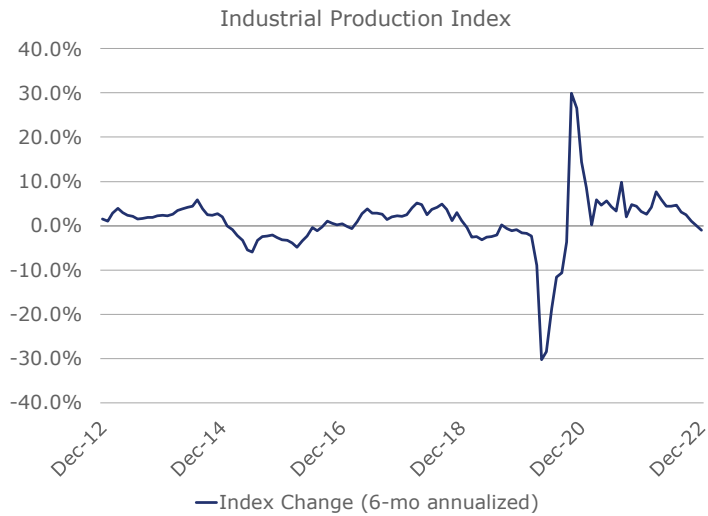
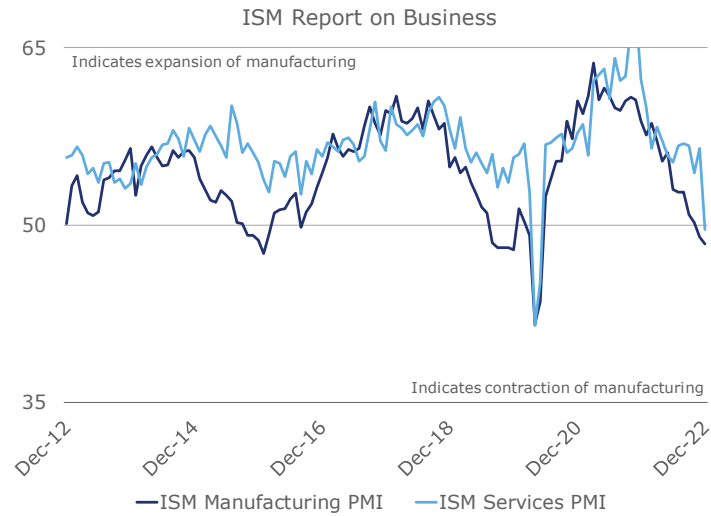
Data Source: Bloomberg

Consumer Activity



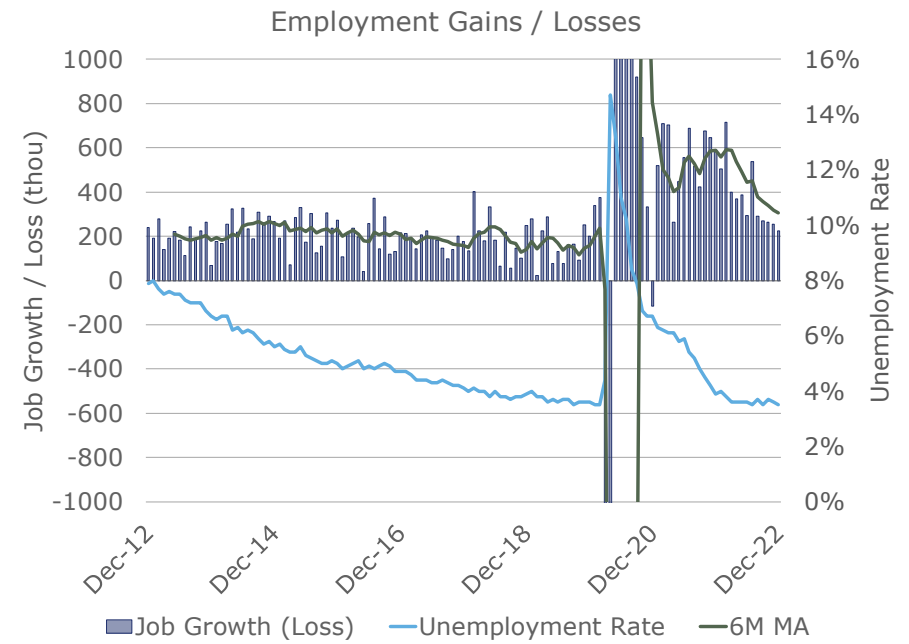
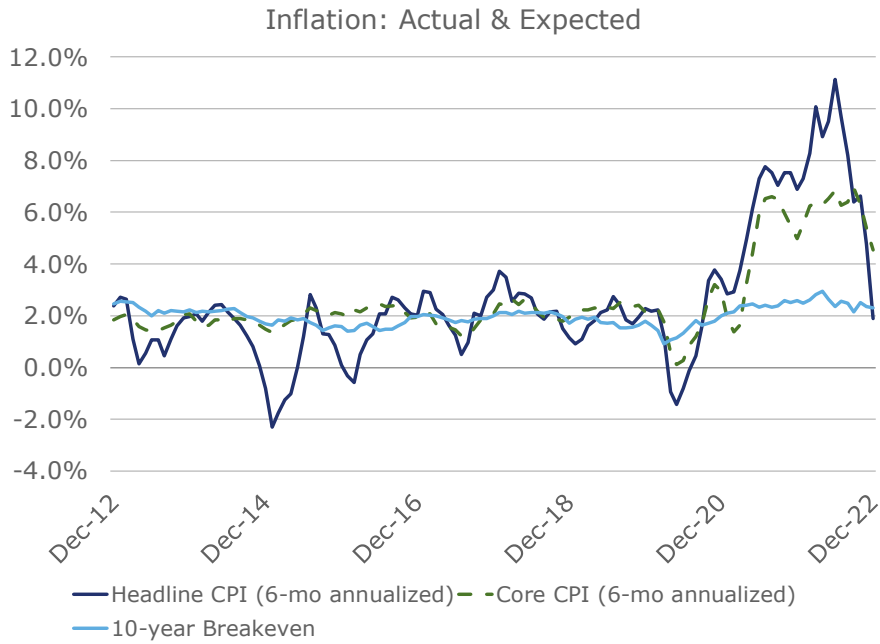
Data Source: Bloomberg

Business Activity



Data Source: Bloomberg

Inflation and Employment

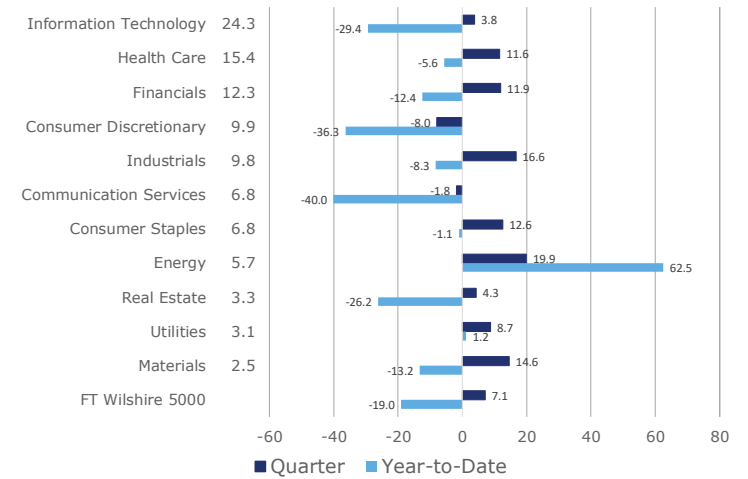


Data Source: Bloomberg

U.S. Equity Market

As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	7.1	-19.0	-19.0	7.4	9.0	12.3
Wilshire U.S. Large Cap	7.1	-19.0	-19.0	7.7	9.4	12.6
Wilshire U.S. Small Cap	7.9	-18.7	-18.7	4.4	5.1	9.7
Wilshire U.S. Large Growth	0.8	-29.5	-29.5	7.1	10.0	13.6
Wilshire U.S. Large Value	13.8	-5.5	-5.5	8.1	8.7	11.5
Wilshire U.S. Small Growth	7.1	-23.1	-23.1	3.2	5.1	9.9
Wilshire U.S. Small Value	8.7	-14.2	-14.2	5.6	5.0	9.3
Wilshire REIT Index	4.0	-26.8	-26.8	-0.5	3.4	6.3
MSCI USA Min. Vol. Index	9.8	-9.2	-9.2	5.1	8.6	11.9
FTSE RAFI U.S. 1000 Index	12.5	-7.4	-7.4	9.6	9.1	12.2

U.S. Sector Weight and Return (%)



Large Cap vs Small Cap



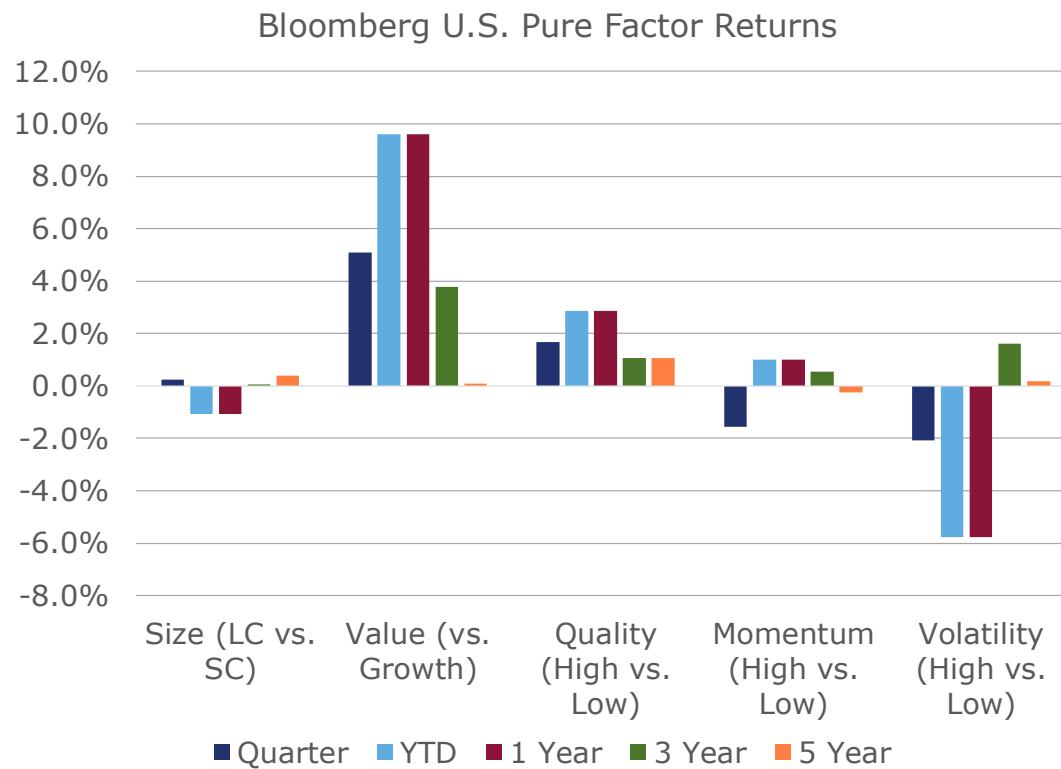
Large Growth vs Large Value



Data Sources: Bloomberg, Wilshire Atlas

U.S. Factor Returns

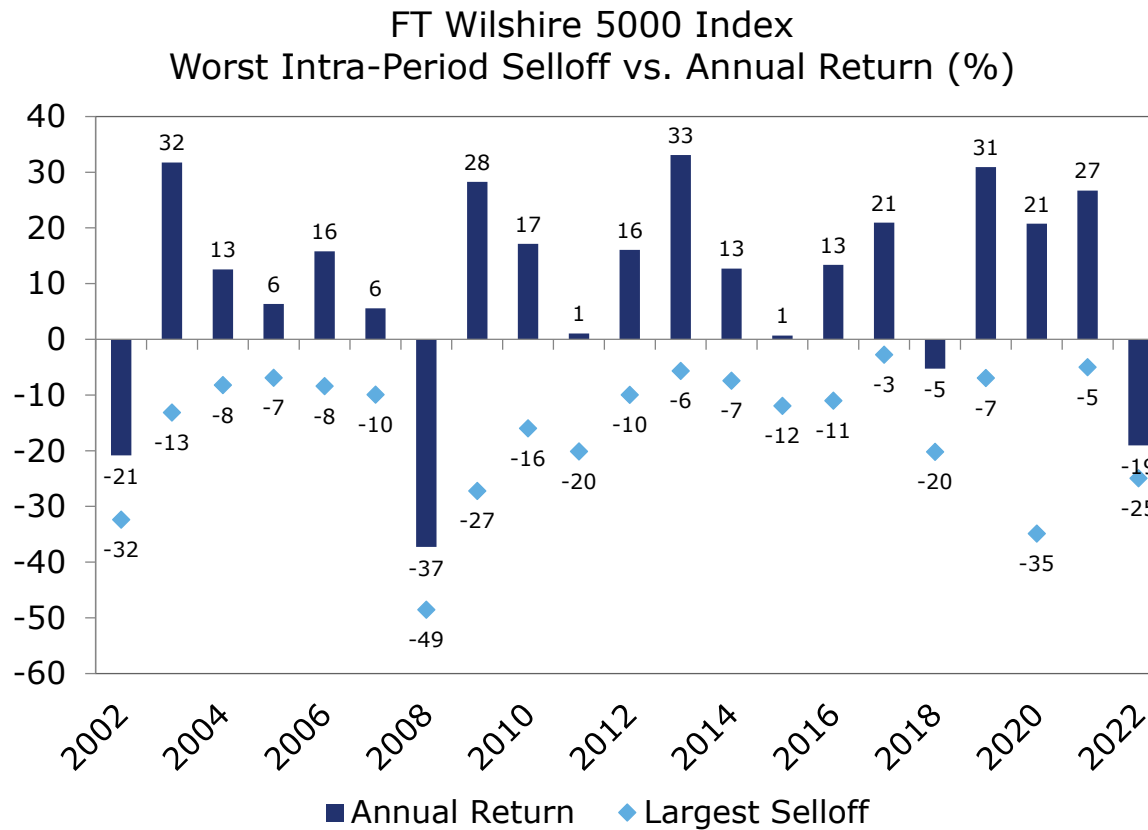
- Factor returns represent the contribution from large cap, value, etc. stocks within Bloomberg’s Portfolio & Risk Analytics module
- Value and low volatility have mostly outperformed this year



Data Sources: Bloomberg

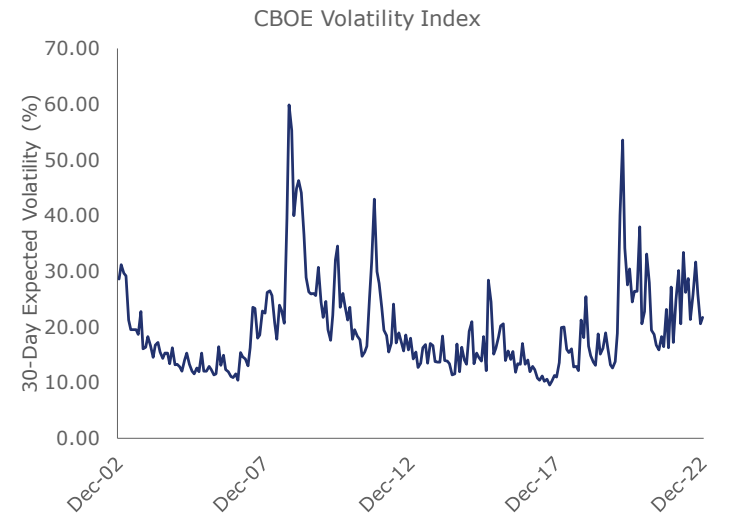
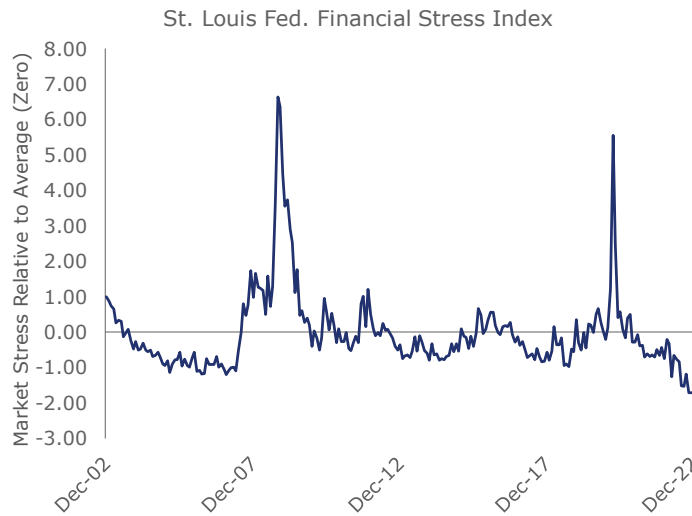
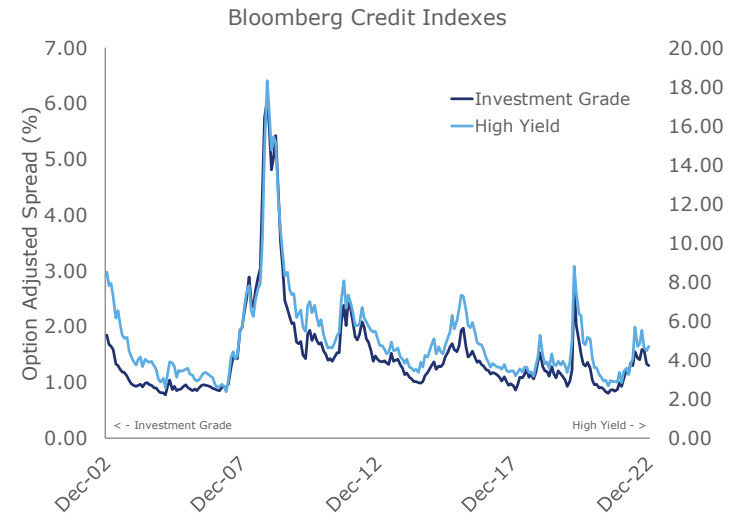
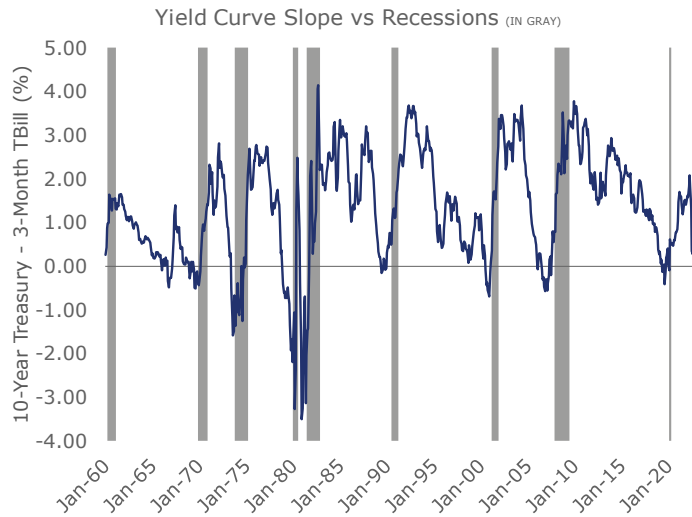
Annual Equity Market Selloffs

- U.S. equity suffered its worse year since the 2008 global financial crisis



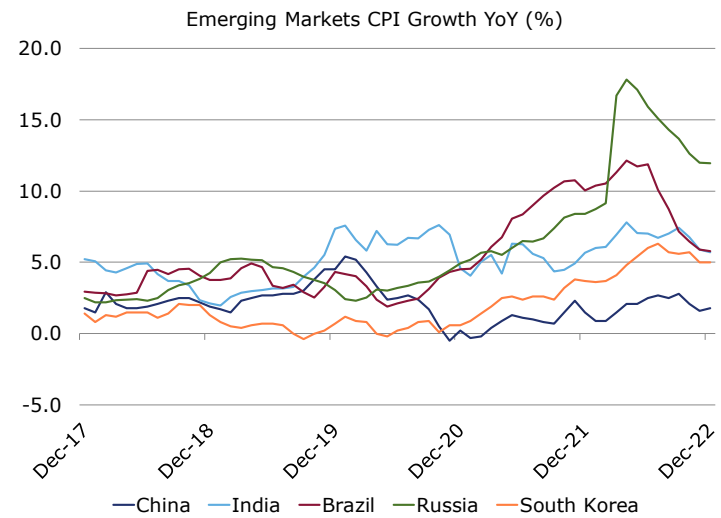
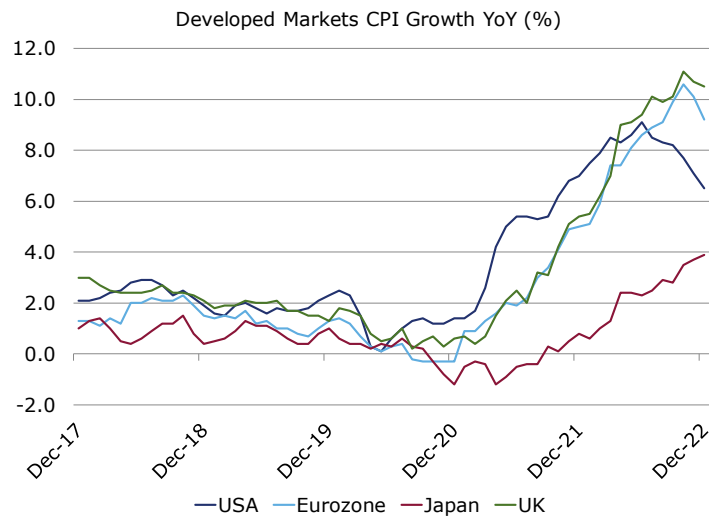
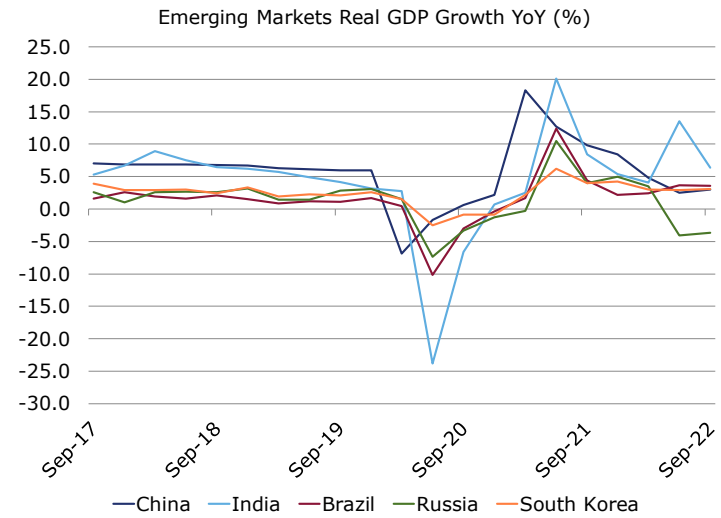
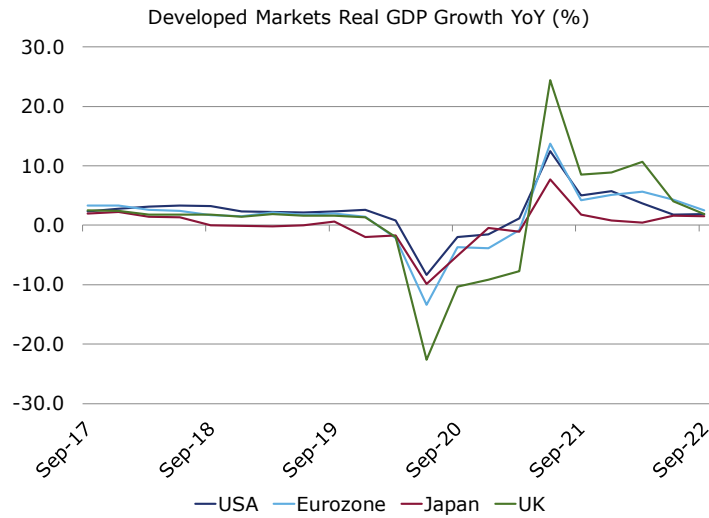
Data Sources: Wilshire Web, Bloomberg

Risk Monitor



Data Sources: Bloomberg

Non-U.S. Growth and Inflation

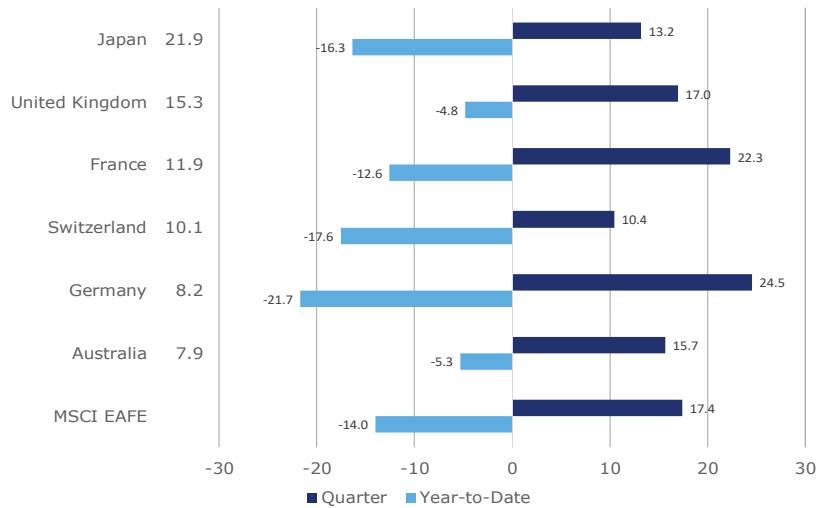


Data Sources: Bloomberg

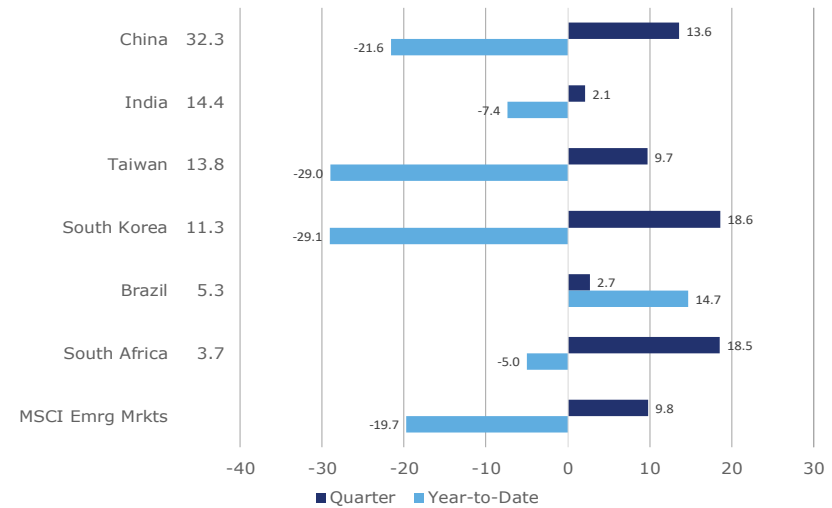
Non-U.S. Equity Market

As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US (\$G)	14.4	-15.6	-15.6	0.5	1.4	4.3
MSCI EAFE (\$G)	17.4	-14.0	-14.0	1.3	2.0	5.2
MSCI Emerging Markets (\$G)	9.8	-19.7	-19.7	-2.3	-1.0	1.8
MSCI Frontier Markets (\$G)	9.2	-17.8	-17.8	-5.7	-3.8	0.2
MSCI ACWI ex-US Growth (\$G)	12.9	-22.8	-22.8	-0.1	1.8	5.0
MSCI ACWI ex-US Value (\$G)	15.7	-8.7	-8.7	0.8	0.6	3.6
MSCI ACWI ex-US Small (\$G)	13.4	-19.6	-19.6	1.5	1.1	5.6
MSCI ACWI Minimum Volatility	8.6	-9.8	-9.8	2.2	5.2	8.4
MSCI EAFE Minimum Volatility	12.5	-14.6	-14.6	-2.6	0.6	5.1
FTSE RAFI Developed ex-US	18.3	-9.0	-9.0	2.7	1.7	4.9
MSCI EAFE LC (G)	8.8	-6.5	-6.5	4.1	4.3	8.1
MSCI Emerging Markets LC (G)	6.7	-15.2	-15.2	0.5	1.7	5.0

Developed Markets Weight and Return (%)



Emerging Markets Weight and Return (%)

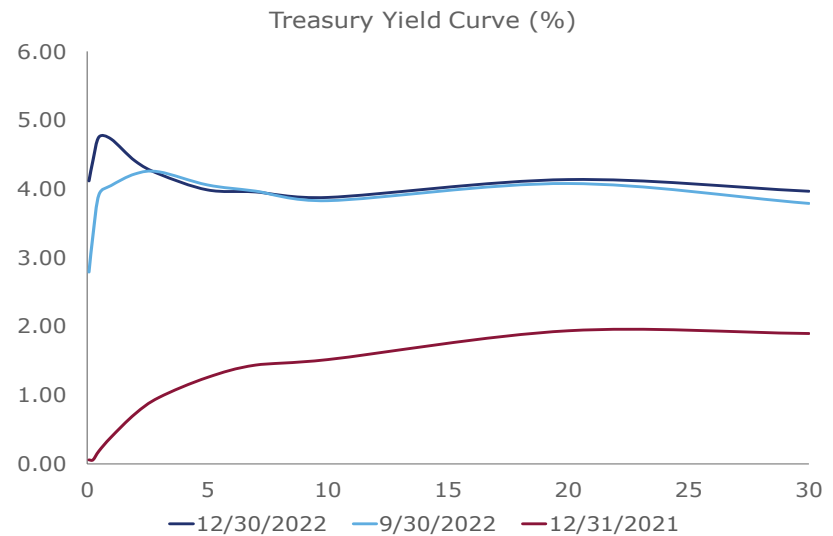
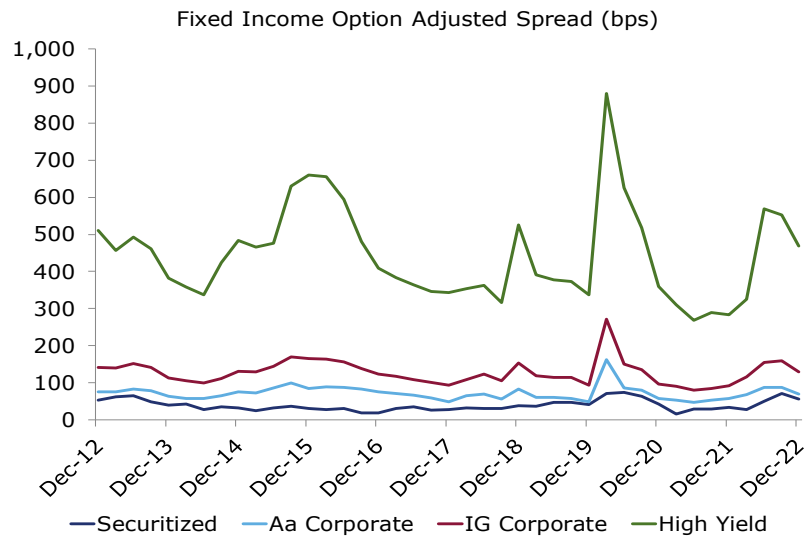


Data Sources: Bloomberg

U.S. Fixed Income

As of 12/30/2022	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	4.7	6.2	1.9	-13.0	-13.0	-2.7	0.0	1.1
Bloomberg Treasury	4.2	6.1	0.7	-12.5	-12.5	-2.6	-0.1	0.6
Bloomberg Gov't-Rel.	4.8	5.2	1.9	-11.1	-11.1	-2.4	0.3	1.1
Bloomberg Securitized	4.8	5.7	2.0	-11.7	-11.7	-3.1	-0.4	0.8
Bloomberg Corporate	5.4	7.1	3.6	-15.8	-15.8	-2.9	0.5	2.0
Bloomberg LT Gov't/Credit	4.9	14.3	2.6	-27.1	-27.1	-6.2	-1.2	1.6
Bloomberg LT Treasury	4.1	16.2	-0.6	-29.3	-29.3	-7.4	-2.2	0.6
Bloomberg LT Gov't-Rel.	5.5	11.6	4.2	-22.7	-22.7	-5.9	-0.8	1.6
Bloomberg LT Corporate	5.6	13.0	5.4	-25.6	-25.6	-5.7	-0.8	2.2
Bloomberg U.S. TIPS *	3.8	7.6	2.0	-11.8	-11.8	1.2	2.1	1.1
Bloomberg High Yield	9.0	3.9	4.2	-11.2	-11.2	0.0	2.3	4.0
S&P/LSTA Leveraged Loan	9.1	0.3	2.7	-0.6	-0.6	2.5	3.3	3.7
Treasury Bills	4.4	0.3	0.9	1.3	1.3	0.7	1.2	0.8

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

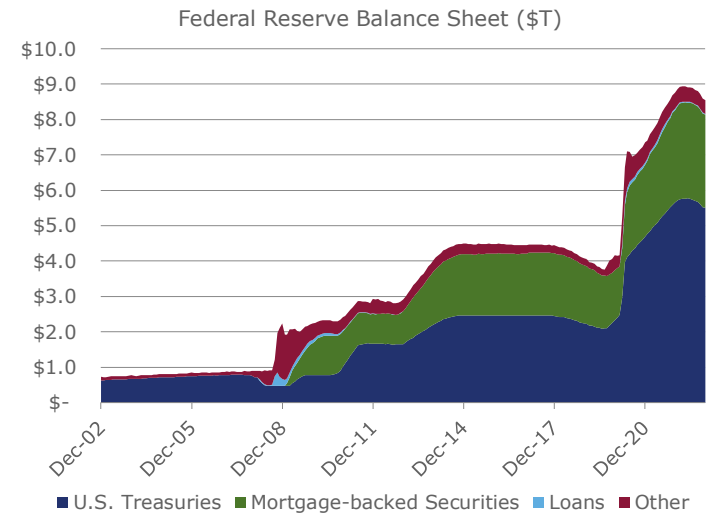
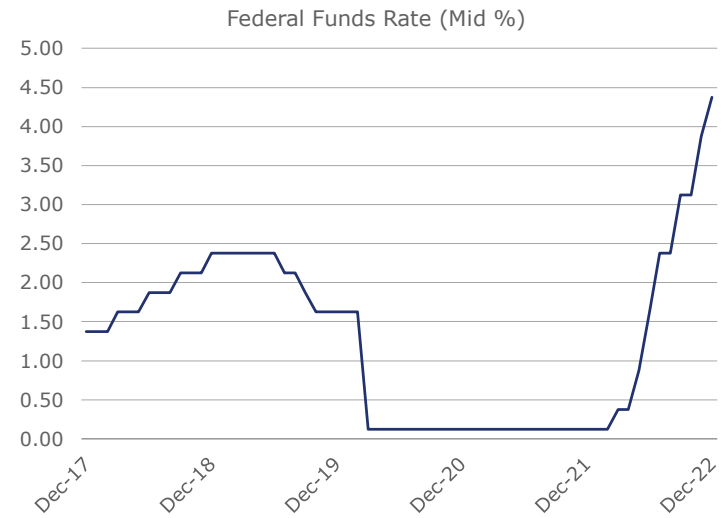


Data Sources: Bloomberg

Federal Reserve

- After 300 basis point increase in the Fed-funds rate through September, the FOMC increased the rate an additional 125 basis points during Q4
- Federal Reserve has added more than \$4.5 trillion in assets to their balance sheet during the past two years
- QE4 was 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	\$4,779

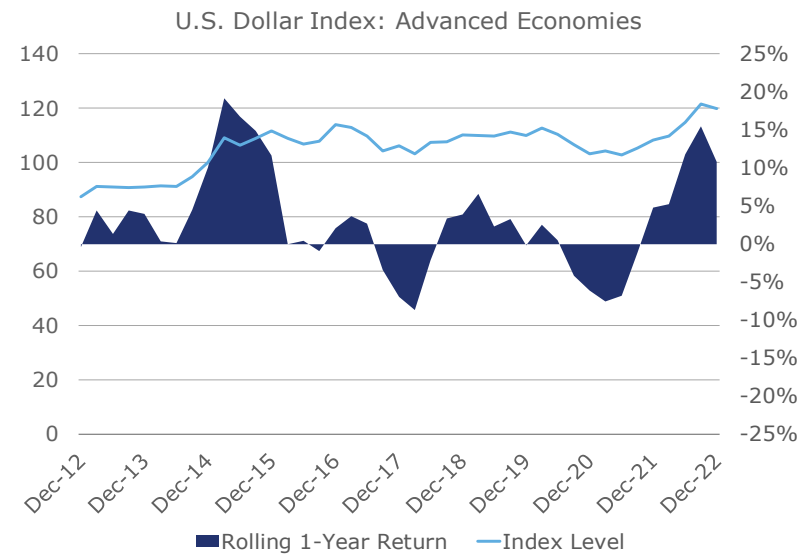
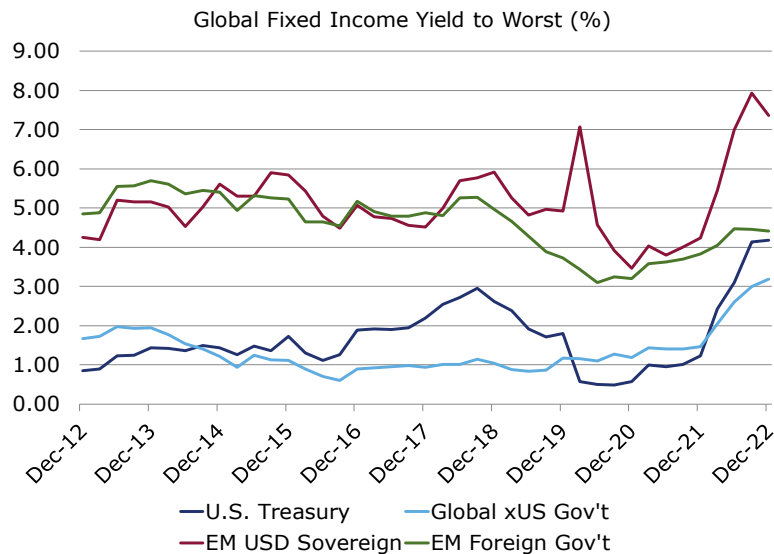


Data Sources: Bloomberg

Non-U.S. Fixed Income

As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Developed Markets						
Bloomberg Global Aggregate xUS	6.8	-18.7	-18.7	-5.9	-3.1	-1.6
Bloomberg Global Aggregate xUS *	0.2	-9.8	-9.8	-2.6	0.5	2.1
Bloomberg Global Inflation Linked xUS	5.8	-29.6	-29.6	-7.0	-4.0	-0.9
Bloomberg Global Inflation Linked xUS *	-1.7	-21.1	-21.1	-3.5	-0.4	2.7
Emerging Markets (Hard Currency)						
Bloomberg EM USD Aggregate	6.6	-15.3	-15.3	-3.9	-0.4	1.7
Emerging Markets (Foreign Currency)						
Bloomberg EM Local Currency Gov't	5.9	-8.4	-8.4	-1.7	0.1	0.2
Bloomberg EM Local Currency Gov't *	1.9	-2.7	-2.7	-0.3	2.0	1.9
Euro vs. Dollar	9.2	-5.8	-5.8	-1.5	-2.3	-2.1
Yen vs. Dollar	10.4	-12.2	-12.2	-6.1	-3.0	-4.0
Pound vs. Dollar	8.2	-10.7	-10.7	-3.0	-2.2	-2.9

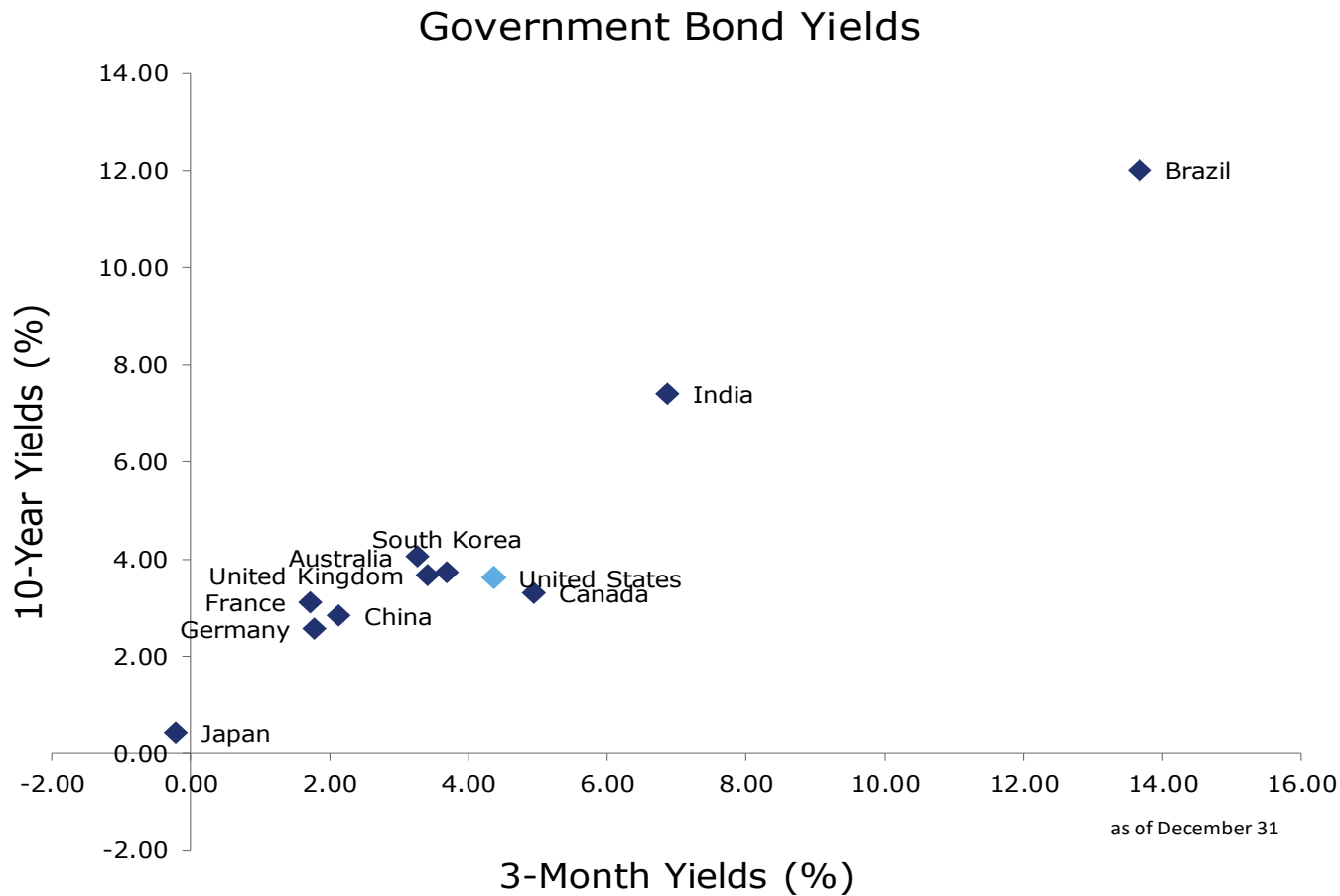
* Returns are reported in terms of local market investors, which removes currency effects.



Data Sources: Bloomberg

Global Interest Rates

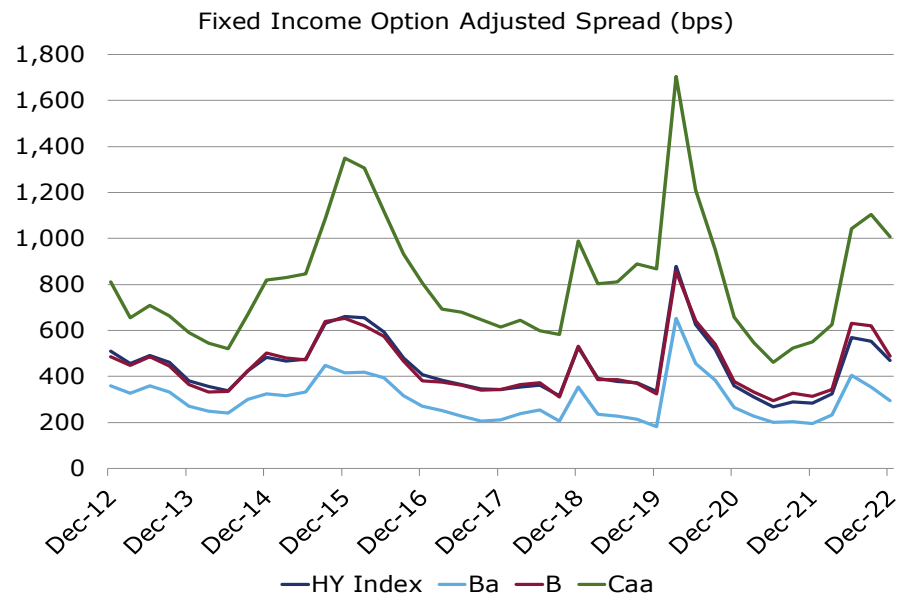
Short-term rates have turned positive in most larger countries; longer-term rates around 4% in the U.K., Australia, South Korea and the U.S.



Data Sources: Bloomberg

High Yield Bond Market

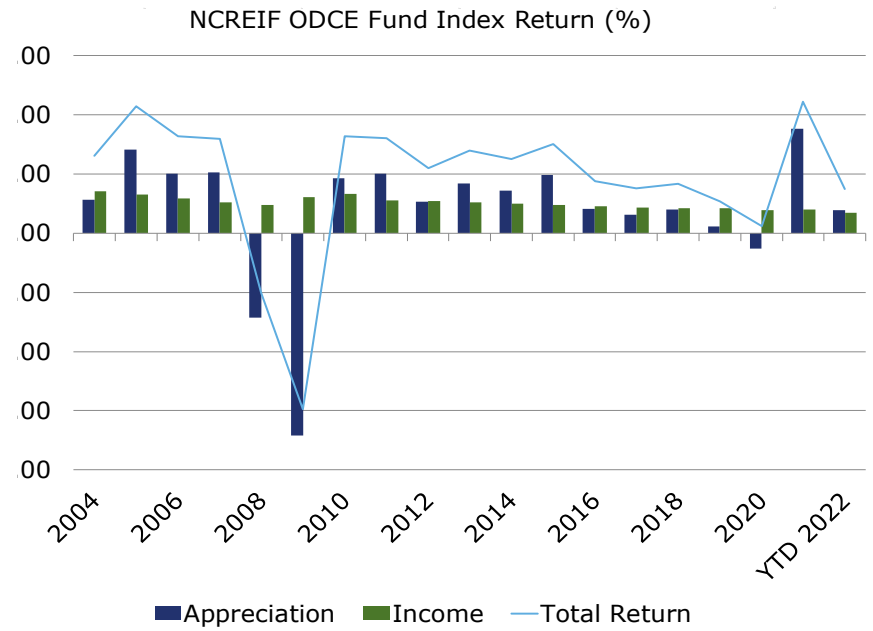
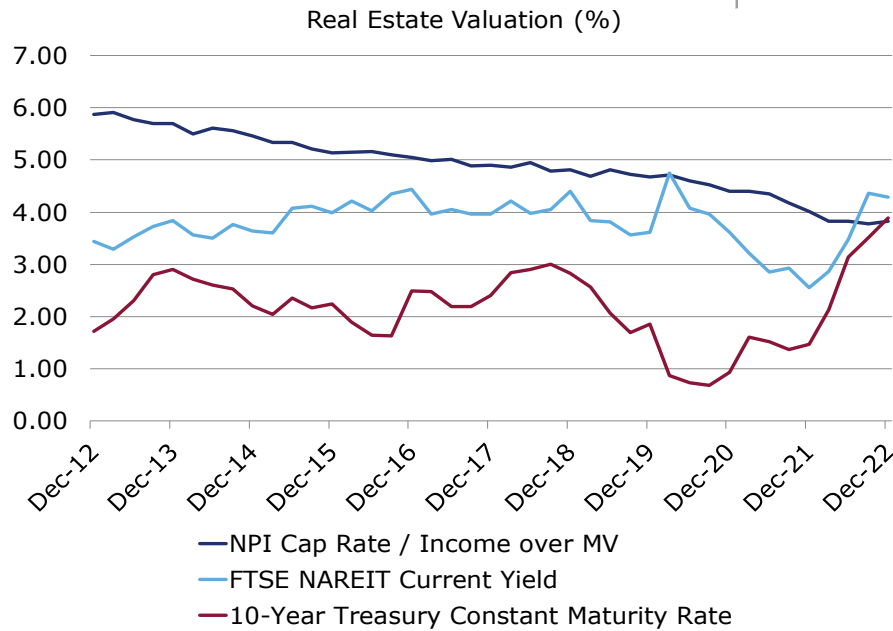
As of 12/31/2022		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		9.0	4.2	-11.2	-11.2	0.0	2.3	4.0
S&P LSTA Leveraged Loan		9.1	3.8	-0.6	-0.6	1.9	3.1	3.2
High Yield Quality Distribution	Weight							
Ba U.S. High Yield	49.9%	7.2	4.3	-10.8	-10.8	0.9	3.0	4.4
B U.S. High Yield	38.6%	9.2	4.9	-10.3	-10.3	-0.5	2.2	3.6
Caa U.S. High Yield	10.7%	14.3	0.5	-16.3	-16.3	-2.4	-0.4	3.5
Ca to D U.S. High Yield	0.7%	36.3	13.8	-10.4	-10.4	1.1	0.4	-5.0



Data Sources: Bloomberg

Real Assets

As of 12/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg U.S. TIPS	2.0	-11.8	-11.8	1.2	2.1	1.1
Bloomberg Commodity Index	2.2	16.1	16.1	12.7	6.4	-1.3
Bloomberg Gold Index	9.5	-0.7	-0.7	4.7	5.7	0.0
Wilshire Global RESI Index	6.4	-24.9	-24.9	-2.7	1.6	4.8
NCREIF ODCE Fund Index	-5.0	7.5	7.5	9.9	8.7	10.1
NCREIF Timberland Index	4.9	12.9	12.9	7.5	5.4	5.8
FTSE Global Core Infrastructure 50/50	9.2	-4.1	-4.1	2.3	5.5	7.9
Alerian Midstream Energy	8.4	21.5	21.5	8.8	6.8	n.a.
Bitcoin	-14.9	-64.3	-64.3	32.2	3.3	103.6



Data Sources: Bloomberg

Total Fund

Asset Allocation Compliance

Total Fund

Periods Ended As of December 31, 2022

Executive Summary

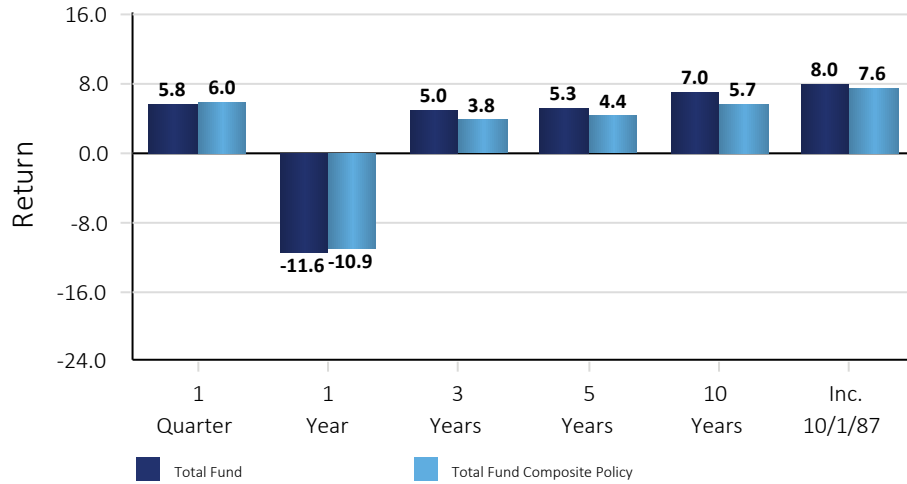
Asset Class	Current Allocation		Policy (%)	Difference to Target	
	(\$000)	(%)		(\$000)	(%)
Domestic Equity	77,904	17.0	17.8	(3,514)	(0.8)
International Equity	74,121	16.2	17.8	(7,297)	(1.6)
Private Equity	36,272	7.9	5.0	13,337	2.9
Total Growth Assets	188,298	41.1	40.5	2,526	0.6
Global Low Volatility Equity	45,860	10.0	10.0	(9)	(0.0)
Private Credit	21,123	4.6	5.0	(1,812)	(0.4)
Total Defensive Growth Assets	66,983	14.6	15.0	(1,821)	(0.4)
Core Fixed Income	108,991	23.8	24.5	(3,389)	(0.7)
Cash & Equivalents	2,732	0.6	0.0	2,732	0.6
Total Defensive Assets	111,723	24.4	24.5	(657)	(0.1)
U.S. TIPS	21,118	4.6	5.0	(1,817)	(0.4)
U.S. REITs	21,548	4.7	5.0	(1,387)	(0.3)
Commodities	24,913	5.4	5.0	1,978	0.4
Midstream Energy Infrastructure	24,112	5.3	5.0	1,177	0.3
Total Inflation Oriented Assets	91,690	20.0	20.0	(48)	(0.0)
Total Fund Assets	458,695	100.0	100.0	-	0.0

Composite Performance Summary

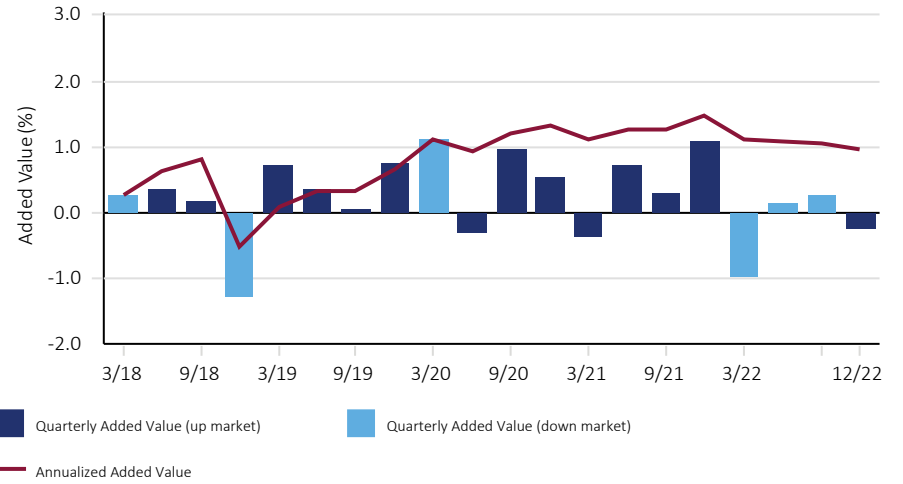
Total Fund

Periods Ended December 31, 2022

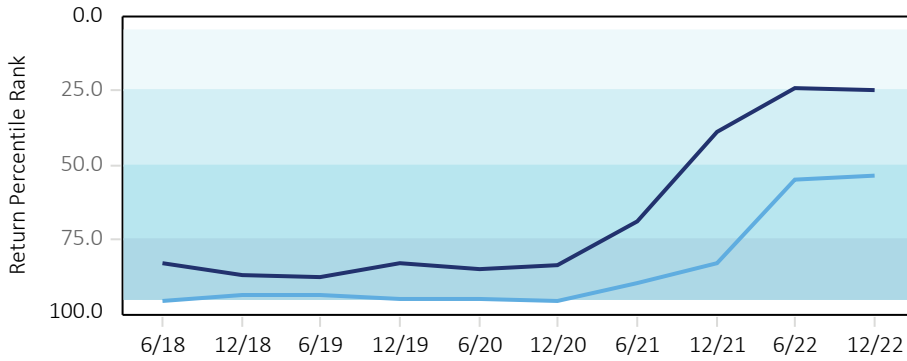
Comparative Performance



Added Value History

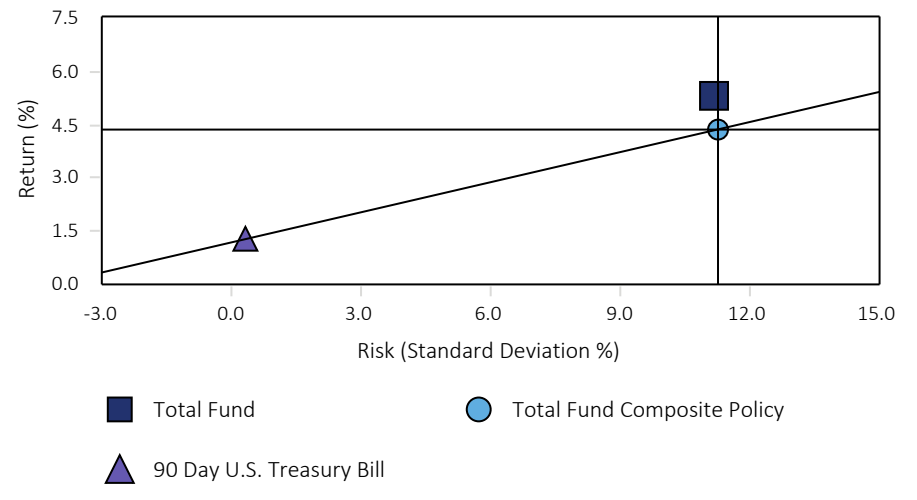


Rolling Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
— Total Fund	10	2 (20%)	1 (10%)	1 (10%)	6 (60%)
— Benchmark	10	0 (0%)	0 (0%)	2 (20%)	8 (80%)

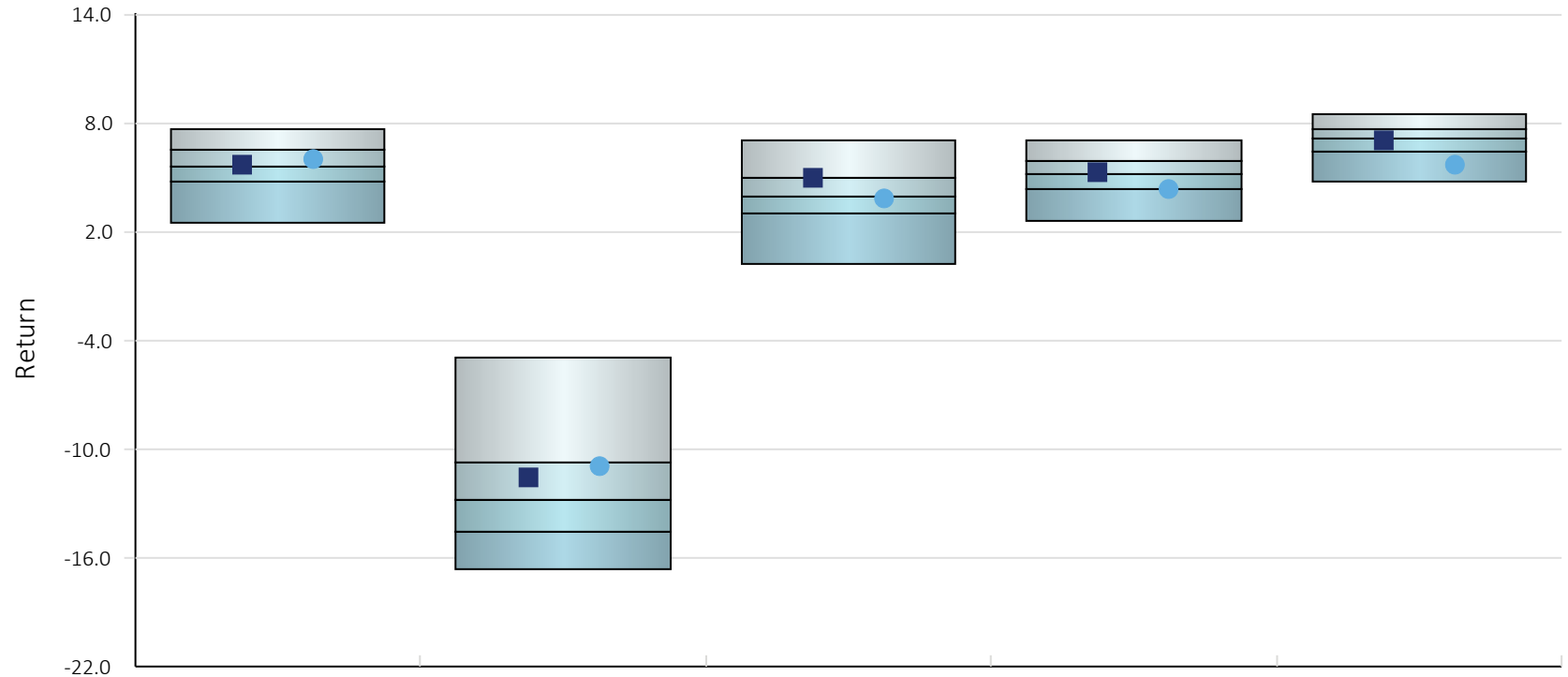
Risk and Return 01/1/18 - 12/31/22



Plan Sponsor Peer Group Analysis

Total Fund vs All Public Plans-Total Fund

Periods Ended December 31, 2022



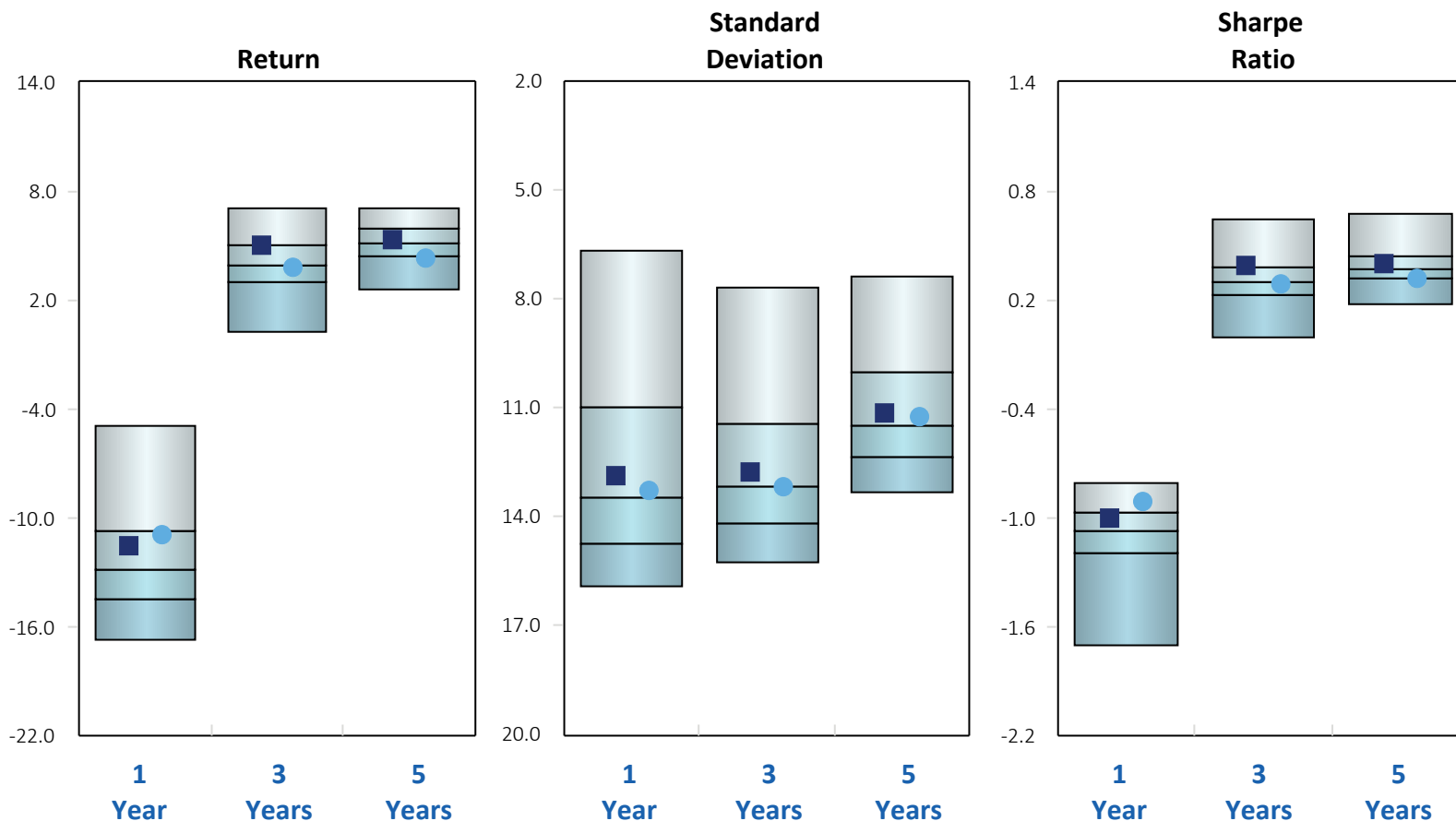
	QTD	1 Year	3 Years	5 Years	10 Years
■ Total Fund	5.76 (46)	-11.58 (35)	5.03 (25)	5.34 (42)	7.04 (55)
● Total Fund Composite Policy	6.00 (40)	-10.93 (27)	3.84 (54)	4.36 (78)	5.73 (90)
5th Percentile	7.73	-4.93	7.11	7.12	8.47
1st Quartile	6.52	-10.71	5.02	5.93	7.70
Median	5.65	-12.81	3.94	5.17	7.15
3rd Quartile	4.78	-14.51	3.00	4.43	6.44
95th Percentile	2.50	-16.67	0.29	2.59	4.75
Population	414	402	383	366	311

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

Total Fund vs All Public Plans-Total Fund

Periods Ended December 31, 2022



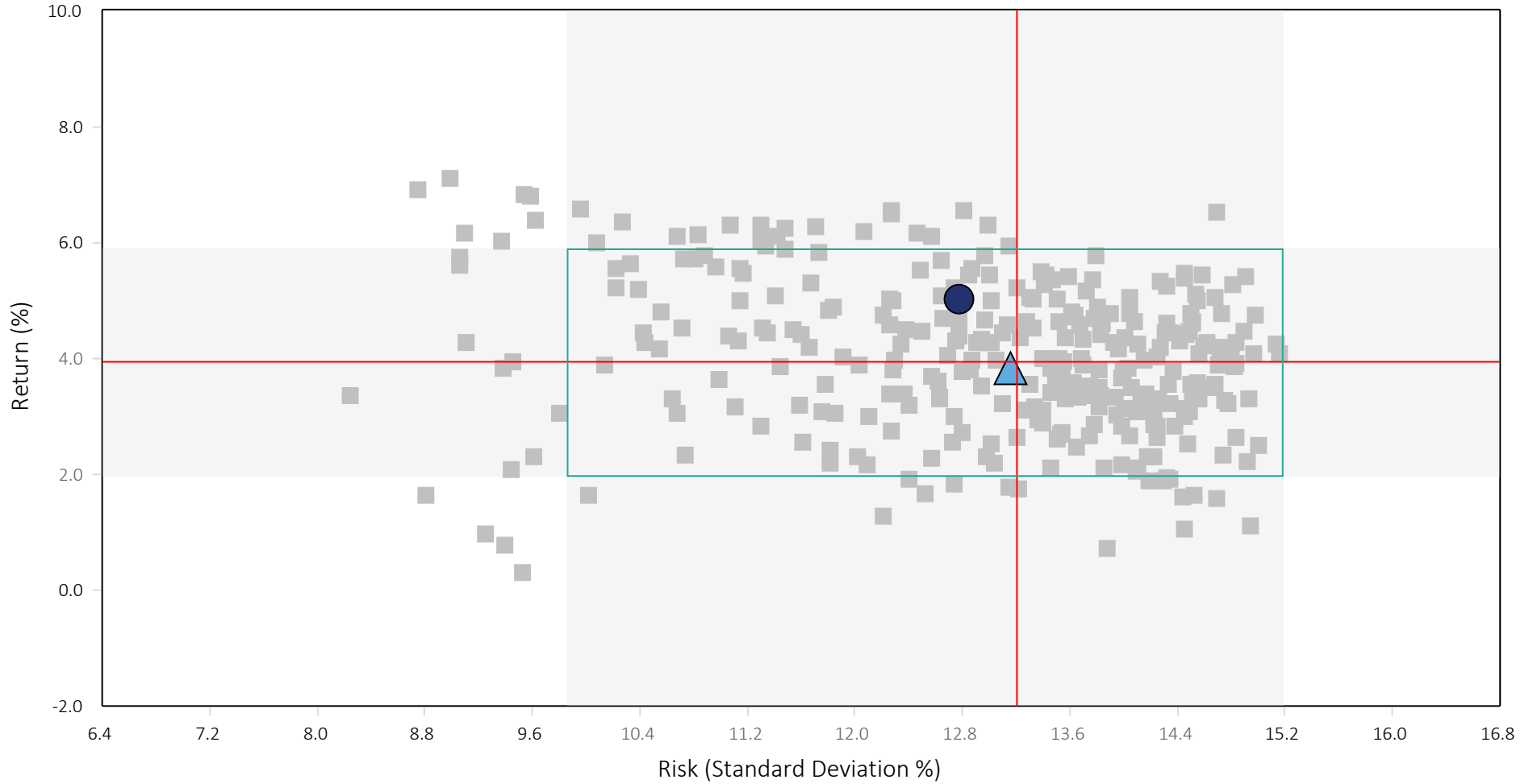
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ Total Fund	-11.58 (35)	5.03 (25)	5.34 (42)	12.86 (42)	12.77 (41)	11.16 (40)	-1.00 (34)	0.39 (24)	0.41 (40)
● Total Fund Composite Policy	-10.93 (27)	3.84 (54)	4.36 (78)	13.30 (48)	13.16 (49)	11.25 (42)	-0.91 (13)	0.30 (52)	0.32 (76)
5th Percentile	-4.93	7.11	7.12	6.67	7.70	7.39	-0.81	0.65	0.68
1st Quartile	-10.71	5.02	5.93	11.02	11.46	10.05	-0.97	0.38	0.45
Median	-12.81	3.94	5.17	13.49	13.20	11.52	-1.07	0.30	0.38
3rd Quartile	-14.51	3.00	4.43	14.78	14.21	12.37	-1.19	0.23	0.32
95th Percentile	-16.67	0.29	2.59	15.94	15.25	13.32	-1.70	0.00	0.18

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Scattergram

Total Fund vs All Public Plans-Total Fund

Periods Ended January 1, 2020 To December 31, 2022



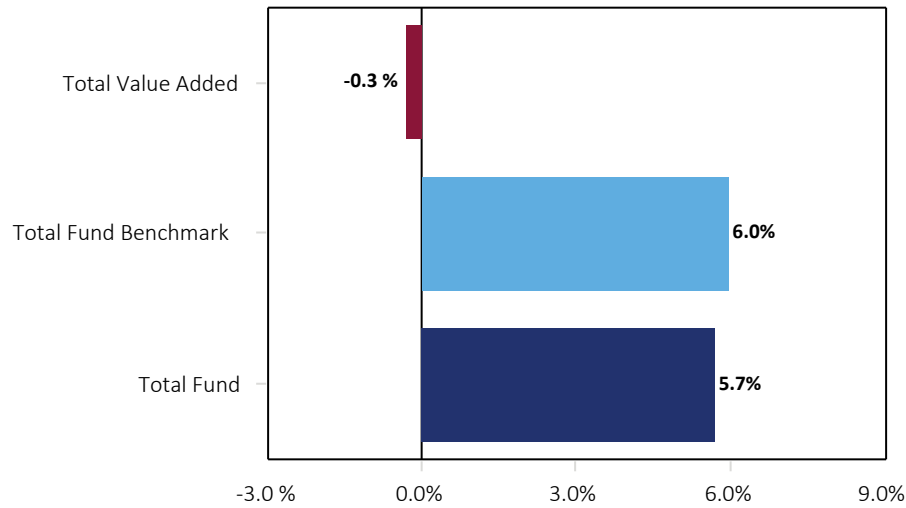
	Return	Standard Deviation
● Total Fund	5.03	12.77
▲ Total Fund Composite Policy	3.84	13.16
— Median	3.94	13.20

Total Fund Attribution

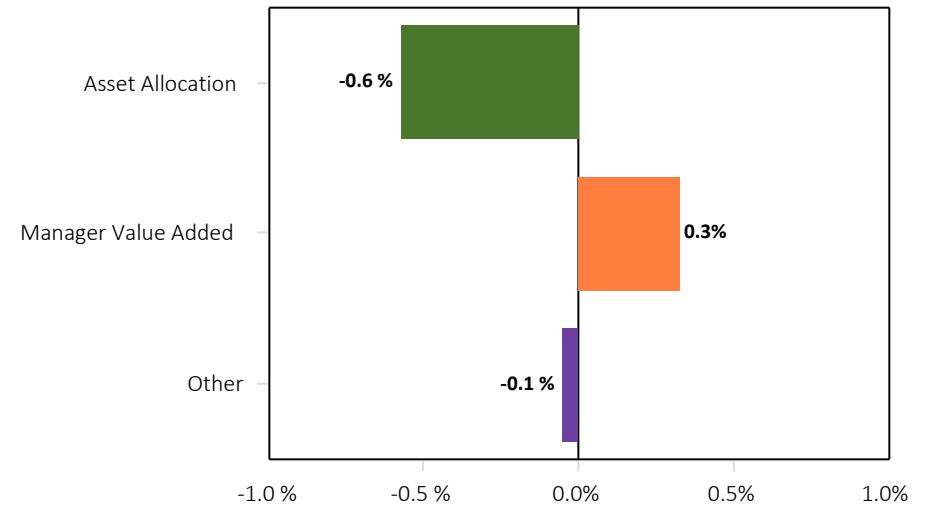
Total Fund

Periods Ended 1 Quarter Ending December 31, 2022

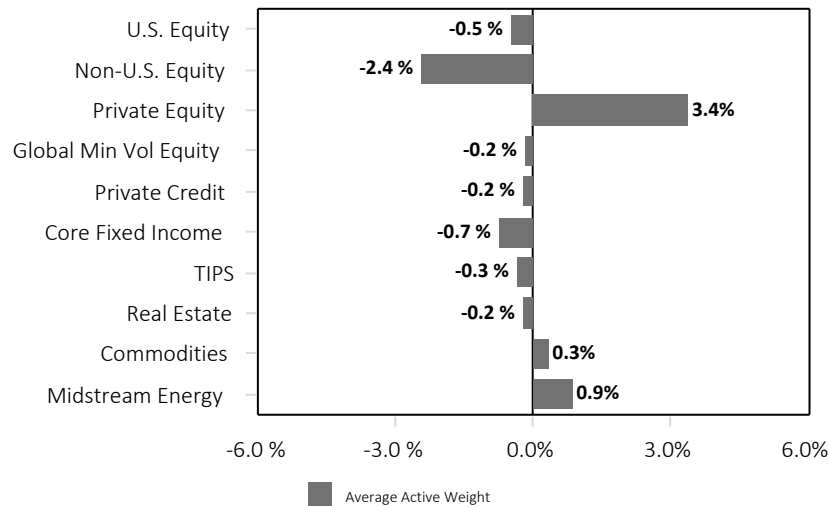
Total Fund Performance



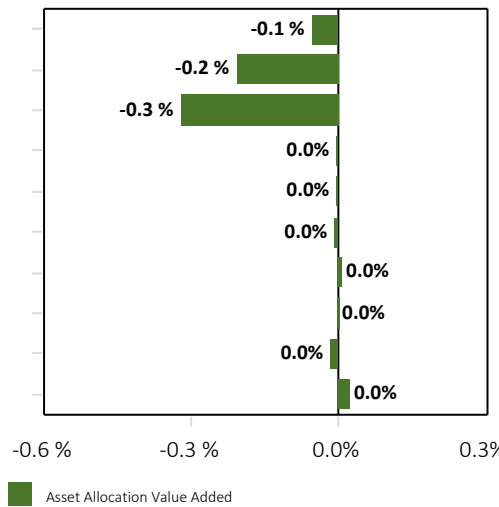
Total Value Added:-0.3 %



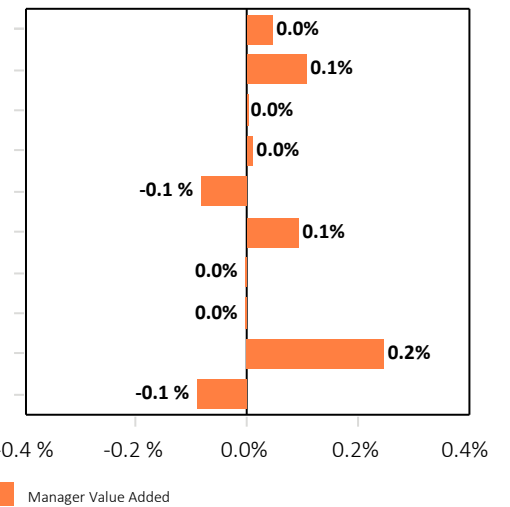
Total Asset Allocation:-0.6 %



Asset Allocation Value Added:-0.6 %



Total Manager Value Added:0.3%

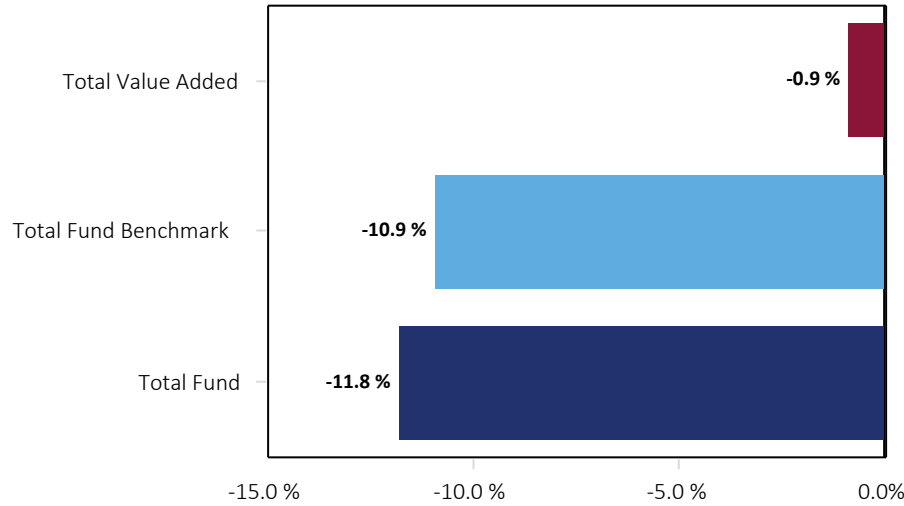


Total Fund Attribution

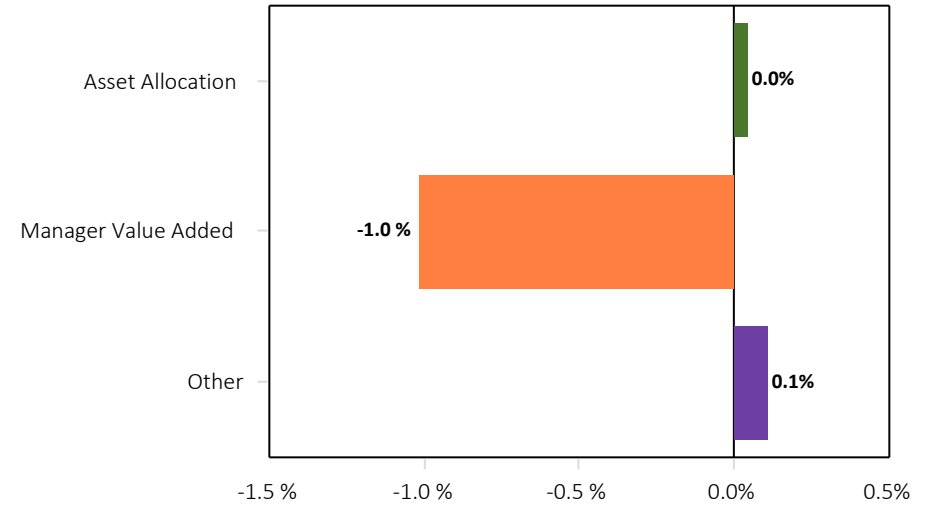
Total Fund

Periods Ended 1 Year Ending December 31, 2022

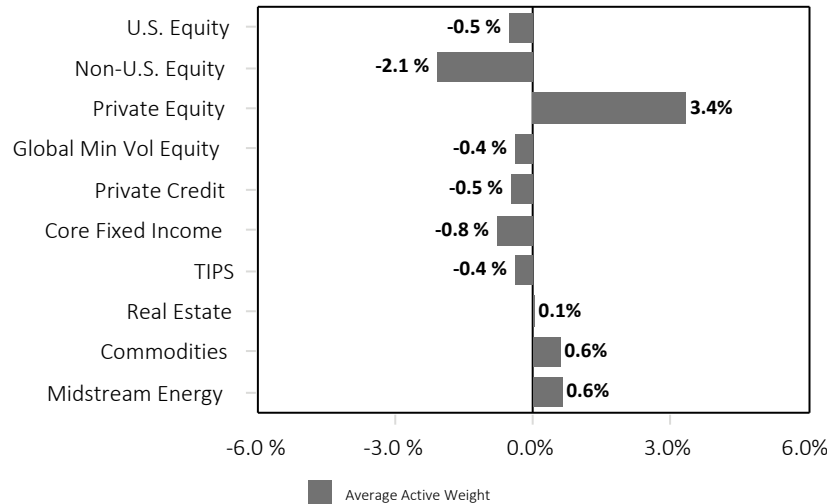
Total Fund Performance



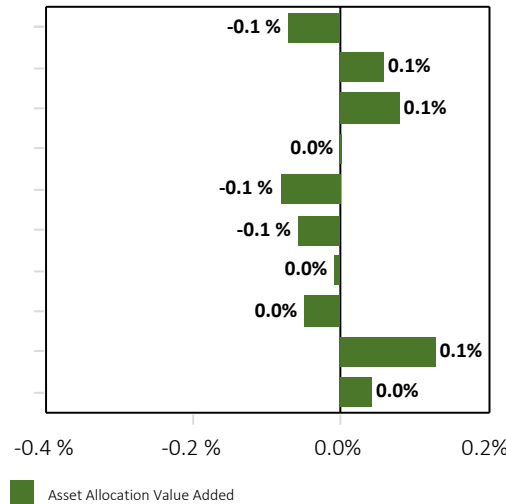
Total Value Added:-0.9 %



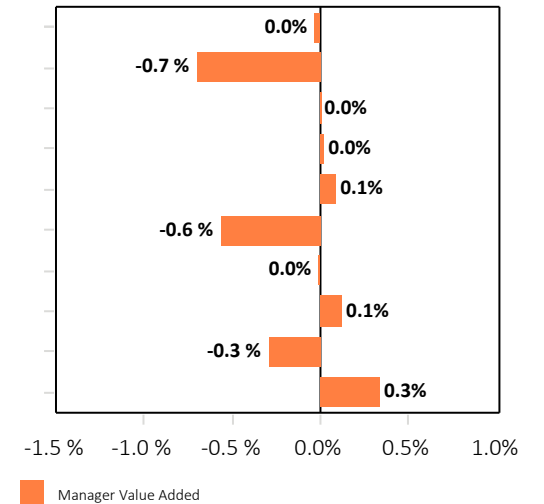
Total Asset Allocation:0.0%



Asset Allocation Value Added:0.0%



Total Manager Value Added:-1.0 %

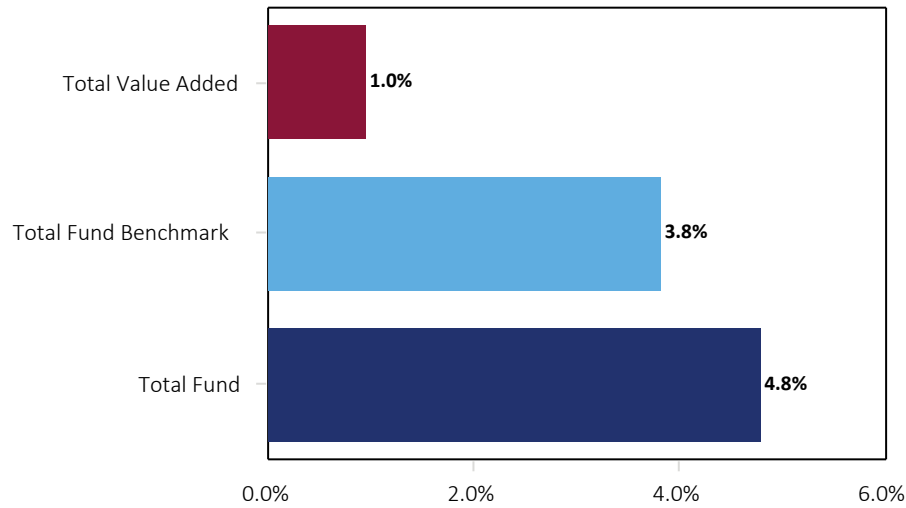


Total Fund Attribution

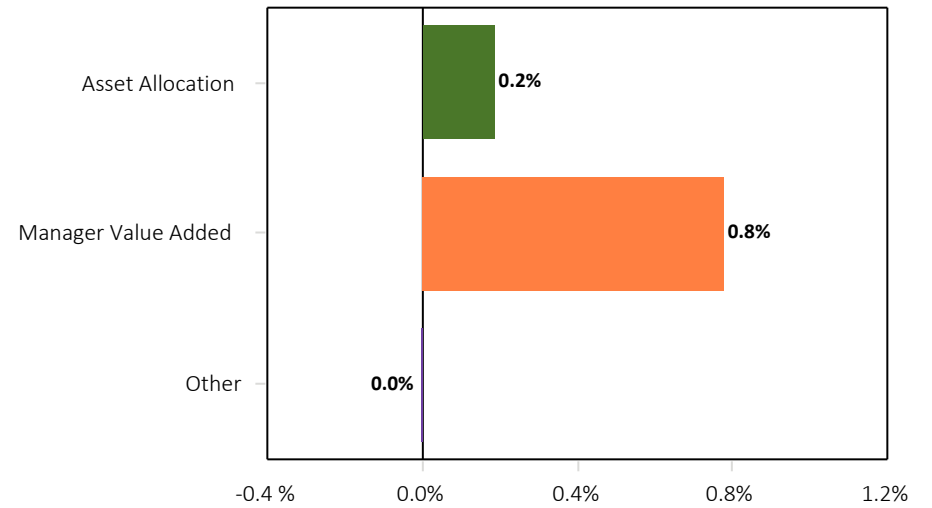
Total Fund

Periods Ended 3 Years Ending December 31, 2022

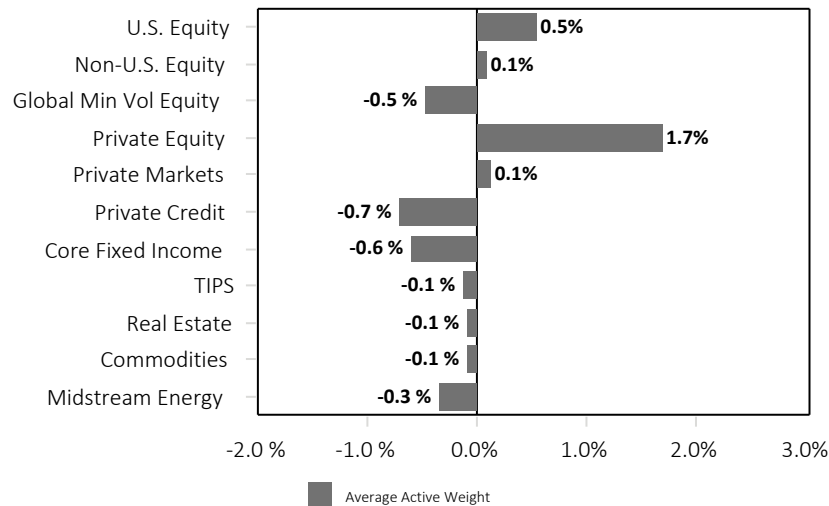
Total Fund Performance



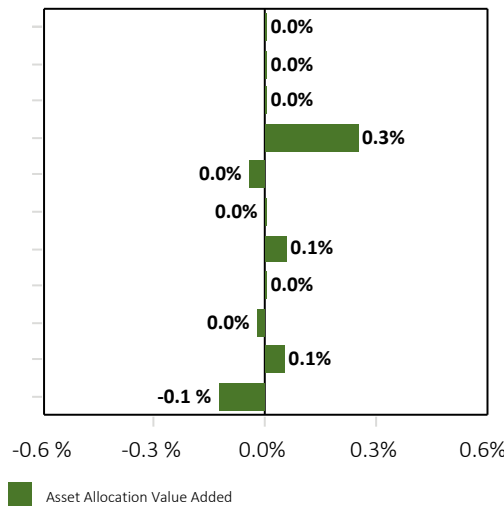
Total Value Added: 1.0%



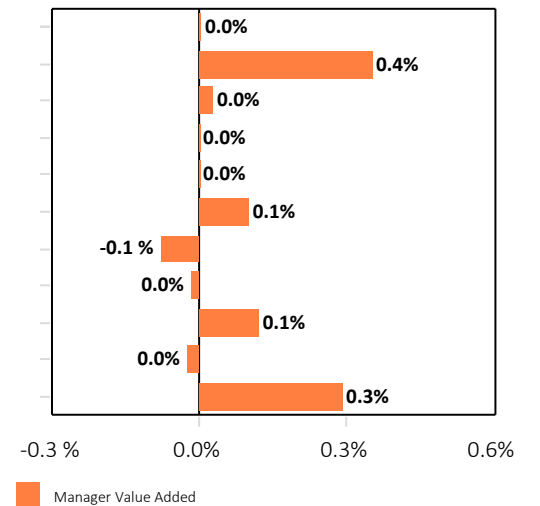
Total Asset Allocation: 0.2%



Asset Allocation Value Added: 0.2%



Total Manager Value Added: 0.8%



Asset Allocation & Performance

Total Fund

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Fund	458,694,664	100.00	5.70	-11.79	-11.79	4.79	5.09	6.64	6.78	7.83	10/1/1987
Total Fund Composite Policy			6.00	-10.93	-10.93	3.84	4.36	5.88	5.73	7.59	
Value Added			-0.30	-0.86	-0.86	0.95	0.73	0.76	1.05	0.24	
U.S. Equity	77,904,307	16.98	7.39	-19.18	-19.18	7.36	8.96	11.39	12.47	9.58	10/1/1987
FT Wilshire 5000 Index			7.10	-19.04	-19.04	7.41	8.99	11.26	12.28	9.58	
Value Added			0.29	-0.14	-0.14	-0.05	-0.03	0.13	0.19	0.00	
Non-U.S. Equity	74,121,460	16.16	15.13	-19.74	-19.74	1.85	2.50	5.47	5.40	7.51	1/1/1990
International Equity Composite Policy			14.28	-16.00	-16.00	0.07	0.88	4.80	3.80	4.23	
Value Added			0.85	-3.74	-3.74	1.78	1.62	0.67	1.60	3.28	
Private Equity	36,271,931	7.91	-3.01	-7.00	-7.00	26.47	22.13	19.06	16.34	13.26	5/1/2010
Private Equity Policy Index			-3.01	-7.00	-7.00	26.47	22.13	19.06	16.34	13.26	
Value Added			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Global Low Volatility Equity	45,860,403	10.00	8.57	-10.07	-10.07	1.91				4.50	6/1/2019
MSCI AC World Minimum Volatility Index (Net)			8.48	-10.31	-10.31	1.62				4.17	
Value Added			0.09	0.24	0.24	0.29				0.33	
Private Credit	21,122,825	4.60	1.06	1.67	1.67	4.91				4.50	10/1/2018
Morningstar LSTA US Leveraged Loan			2.74	-0.60	-0.60	2.55				2.94	
Value Added			-1.68	2.27	2.27	2.36				1.56	
Core Fixed Income	108,991,217	23.76	2.26	-15.27	-15.27	-2.94	0.14	1.50	1.68	5.95	10/1/1987
Blmbg. U.S. Aggregate Index			1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	5.56	
Value Added			0.39	-2.26	-2.26	-0.23	0.12	0.61	0.62	0.39	

Asset Allocation & Performance

Total Fund

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Real Assets Composite	91,690,487	19.99	5.27	0.11	0.11	7.53	5.16	5.44		3.11	4/1/2015
Real Assets Composite Policy			4.89	0.79	0.79	7.64	5.21	5.45		3.05	
Value Added			0.38	-0.68	-0.68	-0.11	-0.05	-0.01		0.06	
TIPS	21,117,909	4.60	1.95	-12.08	-12.08	0.87	1.83	2.40		1.74	5/1/2015
Blmbg. U.S. TIPS Index			2.04	-11.85	-11.85	1.21	2.11	2.60		1.89	
Value Added			-0.09	-0.23	-0.23	-0.34	-0.28	-0.20		-0.15	
Real Estate	21,547,709	4.70	4.69	-23.82	-23.82	1.21	2.71	3.52	4.02	7.46	6/1/2009
Real Estate Policy Index			4.76	-25.96	-25.96	-1.37	1.39	3.01	3.82	7.61	
Value Added			-0.07	2.14	2.14	2.58	1.32	0.51	0.20	-0.15	
Commodities	24,913,019	5.43	6.81	10.48	10.48	13.50	7.38	8.68		-0.44	2/1/2013
Bloomberg Commodity Index Total Return			2.22	16.09	16.09	12.65	6.44	6.49		-1.53	
Value Added			4.59	-5.61	-5.61	0.85	0.94	2.19		1.09	
S&P GSCI Equal Weight Index			6.94	11.94	11.94	12.06	7.34	8.22		-0.40	
Value Added			-0.13	-1.46	-1.46	1.44	0.04	0.46		-0.04	
Midstream Energy Composite	24,111,849	5.26	6.86	29.67	29.67	10.71	5.65	5.85		0.42	3/1/2015
Midstream Energy Policy Index			8.38	21.53	21.53	2.86	-0.13	-0.24		-6.25	
Value Added			-1.52	8.14	8.14	7.85	5.78	6.09		6.67	

Historical Hybrid Composition

Grand Rapids General Retirement System

Periods Ended December 31, 2022

Policy Index	Weight (%)
Jan-1976	
FT Wilshire 5000 Index	55.00
Blmbg. U.S. Aggregate Index	40.00
MSCI EAFE (Net)	5.00
Jul-1998	
FT Wilshire 5000 Index	50.00
Blmbg. U.S. Aggregate Index	40.00
MSCI EAFE (Net)	10.00
Oct-2002	
FT Wilshire 5000 Index	50.00
Blmbg. U.S. Aggregate Index	35.00
MSCI EAFE (Net)	15.00
Apr-2006	
FT Wilshire 5000 Index	55.00
Blmbg. U.S. Aggregate Index	30.00
MSCI EAFE (Net)	15.00
Jul-2006	
FT Wilshire 5000 Index	55.00
Blmbg. U.S. Aggregate Index	30.00
MSCI AC World ex USA (Net)	15.00
Jul-2009	
FT Wilshire 5000 Index	50.00
Blmbg. U.S. Aggregate Index	30.00
MSCI AC World ex USA (Net)	15.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00

Policy Index	Weight (%)
Apr-2010	
FT Wilshire 5000 Index	50.00
Blmbg. U.S. Aggregate Index	30.00
MSCI AC World ex USA (Net)	15.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00
May-2010	
FT Wilshire 5000 Index	45.00
Blmbg. U.S. Aggregate Index	30.00
MSCI AC World ex USA (Net)	15.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity	5.00
Jul-2010	
FT Wilshire 5000 Index	45.00
Blmbg. U.S. Aggregate Index	30.00
MSCI AC World ex USA (Net)	15.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity Policy Index	5.00
Jan-2013	
FT Wilshire 5000 Index	40.00
Blmbg. U.S. Aggregate Index	30.00
MSCI AC World ex USA (Net)	15.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity Policy Index	5.00
Bloomberg Commodity Index Total Return	5.00

Historical Hybrid Composition

Grand Rapids General Retirement System

Periods Ended December 31, 2022

Policy Index	Weight (%)
Apr-2015	
FT Wilshire 5000 Index	22.50
Blmbg. U.S. Aggregate Index	25.00
MSCI AC World ex USA (Net)	22.50
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity Policy Index	5.00
Bloomberg Commodity Index Total Return	5.00
S&P MLP Index	5.00
Blmbg. U.S. TIPS Index	10.00
Dec-2018	
FT Wilshire 5000 Index	22.50
Blmbg. U.S. Aggregate Index	25.00
MSCI AC World ex USA (Net)	22.50
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity Policy Index	5.00
Bloomberg Commodity Index Total Return	5.00
S&P MLP Index	5.00
Blmbg. U.S. TIPS Index	10.00

Policy Index	Weight (%)
Jul-2019	
FT Wilshire 5000 Index	17.75
Blmbg. U.S. Aggregate Index	24.50
MSCI AC World ex USA (Net)	17.75
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity Policy Index	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian MLP Index	5.00
Blmbg. U.S. TIPS Index	5.00
S&P LSTA Leverage Loan Index	5.00
MSCI AC World Minimum Volatility Index (Net)	10.00
Oct-2019	
FT Wilshire 5000 Index	17.75
MSCI AC World ex USA (Net)	17.75
MSCI AC World Minimum Volatility Index (Net)	10.00
Private Equity Policy Index	5.00
S&P LSTA Leverage Loan Index	5.00
Blmbg. U.S. Aggregate Index	24.50
Blmbg. U.S. TIPS Index	5.00
Dow Jones U.S. Select REIT Total Return Index	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian MLP Index	5.00

Historical Hybrid Composition

Grand Rapids General Retirement System

Periods Ended December 31, 2022

Policy Index	Weight (%)
Oct-2020	
FT Wilshire 5000 Index	17.75
MSCI AC World ex USA (Net)	17.75
Private Equity Policy Index	5.00
MSCI AC World Minimum Volatility Index (Net)	10.00
S&P LSTA Leverage Loan Index	5.00
Blmbg. U.S. Aggregate Index	24.50
Blmbg. U.S. TIPS Index	5.00
Dow Jones U.S. Select REIT Total Return Index	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian Midstream Energy Index	5.00

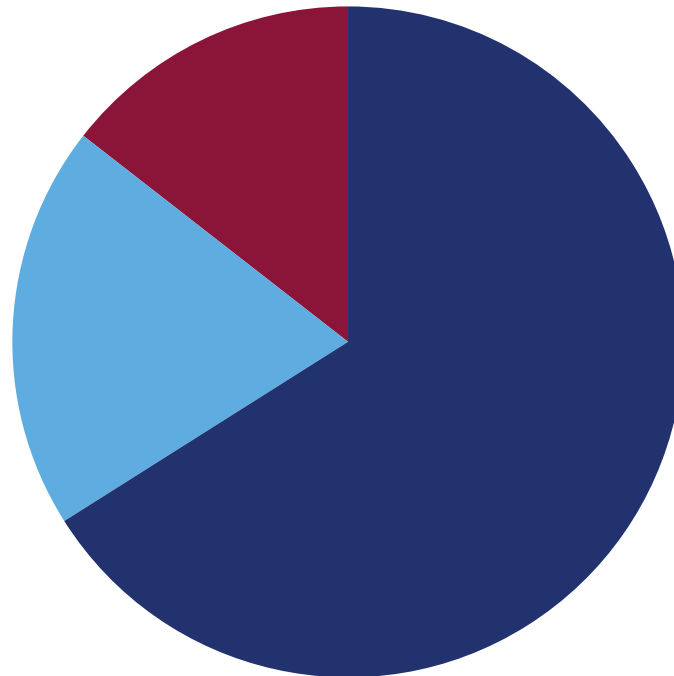
U.S. Equity

Asset Allocation By Manager

U.S. Equity

Periods Ended December 31, 2022

Dec-2022 : 77,904,307



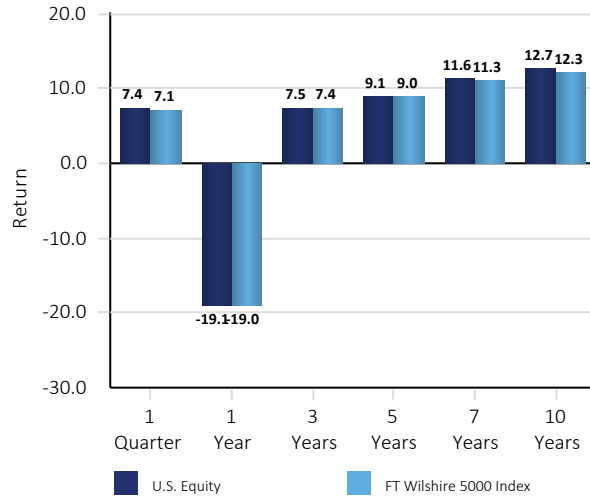
	Market Value \$	Allocation (%)
■ NTAM S&P 500	51,440,652	66.0
■ PIMCO Stock Plus	15,195,437	19.5
■ Wellington Small Cap	11,268,218	14.5

Performance Summary

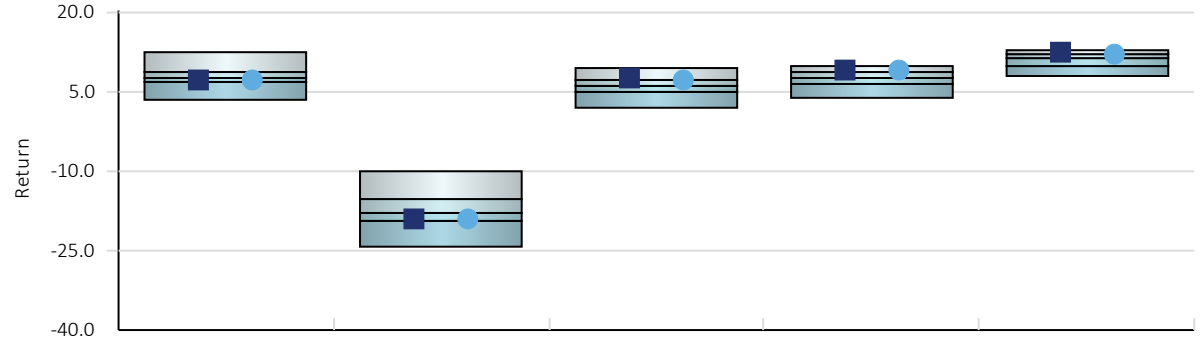
U.S. Equity

Periods Ended December 31, 2022

Comparative Performance

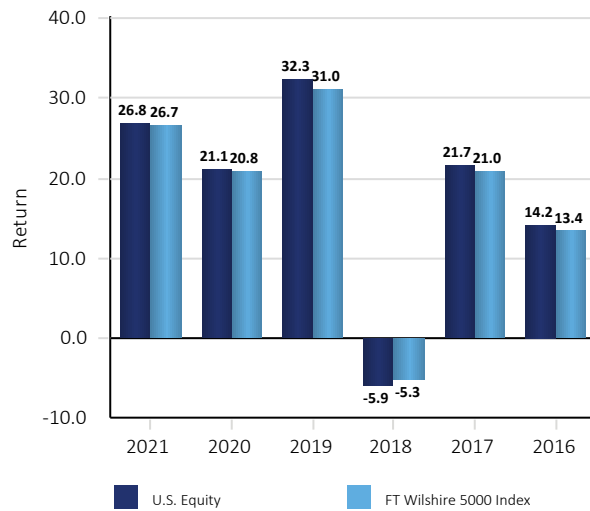


Peer Group Analysis: All Master Trust-US Equity Segment

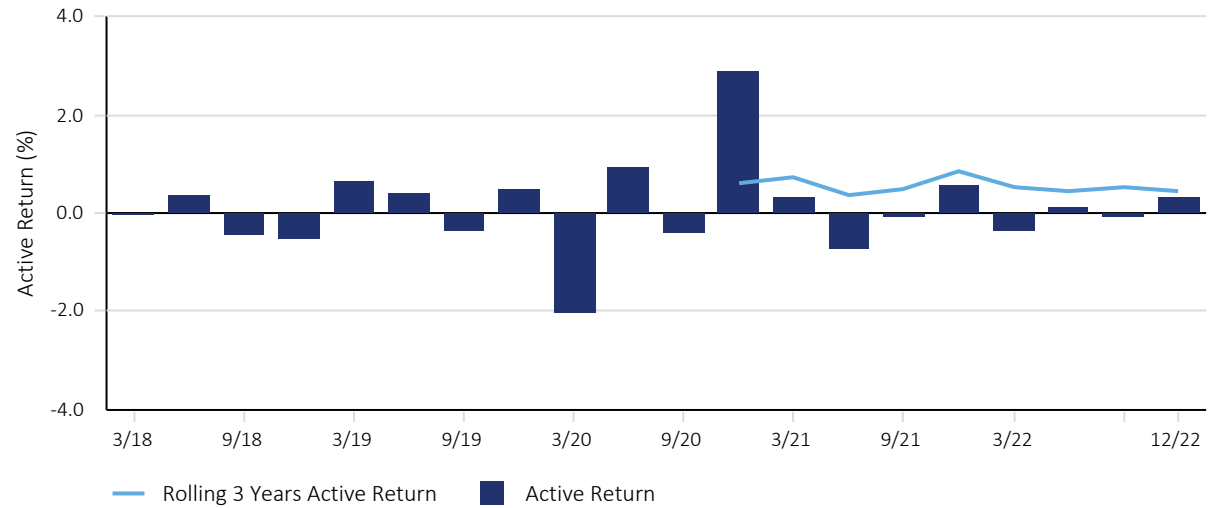


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	7.41 (60)	-19.10 (69)	7.51 (23)	9.12 (15)	12.68 (7)
Benchmark	7.10 (70)	-19.04 (68)	7.41 (25)	8.99 (18)	12.28 (16)
Median	7.70	-17.91	6.10	7.60	11.24

Comparative Performance



Rolling 3 Years Performance

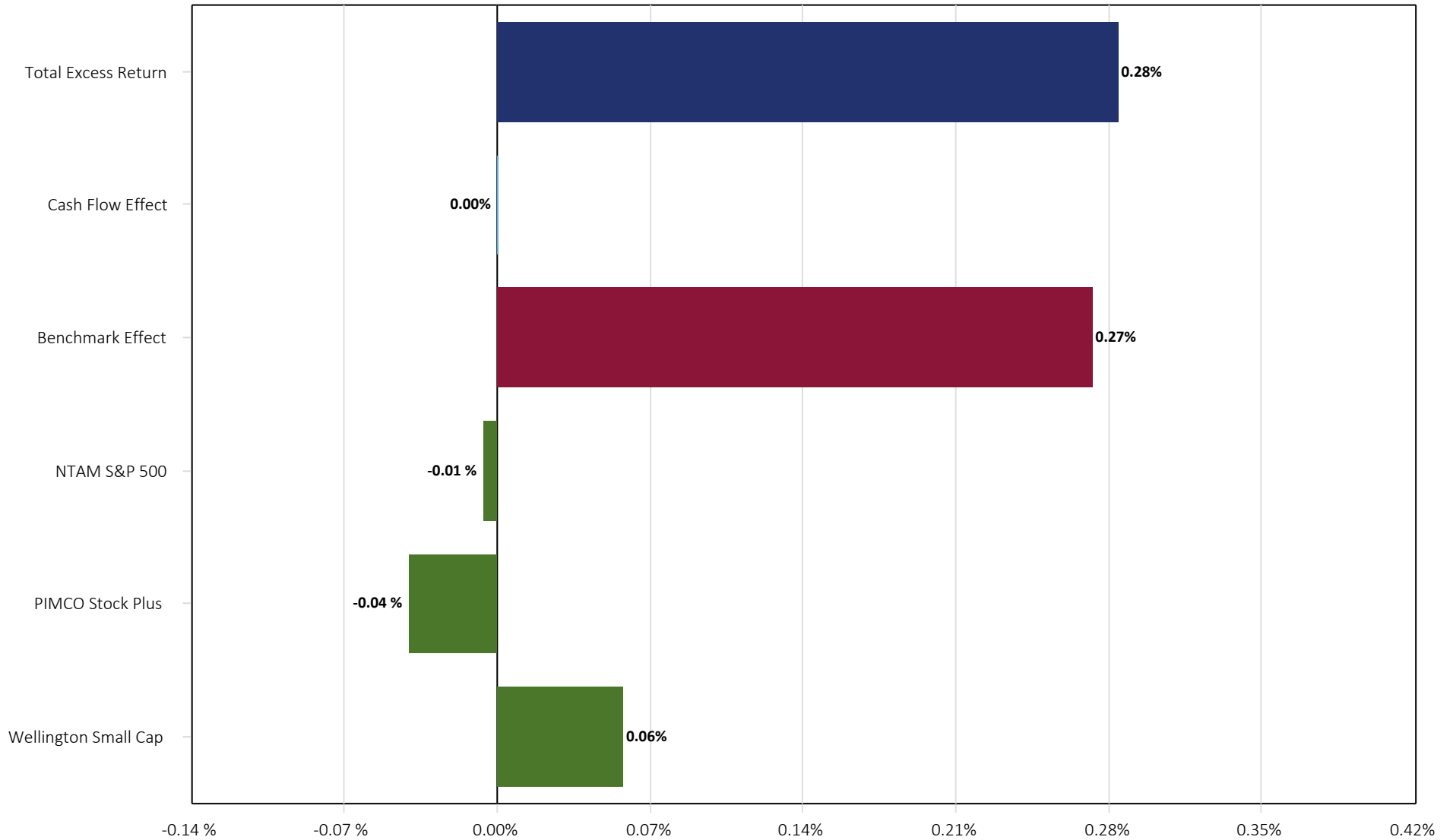


Asset Class Attribution

U.S. Equity

Periods Ended 1 Quarter Ending December 31, 2022

1 Quarter



Asset Allocation & Performance

U.S. Equity

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
U.S. Equity	77,904,307	100.00	7.39	-19.18	-19.18	7.36	8.96	11.39	12.47	9.58	10/1/1987
FT Wilshire 5000 Index			7.10	-19.04	-19.04	7.41	8.99	11.26	12.28	9.58	
Value Added			0.29	-0.14	-0.14	-0.05	-0.03	0.13	0.19	0.00	
NTAM S&P 500	51,440,652	66.03	7.55	-18.11	-18.11	7.66	9.43	11.48	12.57	8.24	4/1/1998
NTAM Policy			7.56	-18.11	-18.11	7.66	9.42	11.48	12.56	7.29	
Value Added			-0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.95	
PIMCO Stock Plus	15,195,437	19.51	7.35	-20.69	-20.69	6.72	8.84	11.28	12.36	6.53	6/1/2000
S&P 500 Index			7.56	-18.11	-18.11	7.66	9.42	11.48	12.56	6.52	
Value Added			-0.21	-2.58	-2.58	-0.94	-0.58	-0.20	-0.20	0.01	
Wellington Small Cap	11,268,218	14.46	6.68	-21.90	-21.90	5.20	6.82	10.47	11.91	10.64	9/1/1999
Russell 2000 Index			6.23	-20.44	-20.44	3.10	4.13	7.90	9.01	7.67	
Value Added			0.45	-1.46	-1.46	2.10	2.69	2.57	2.90	2.97	

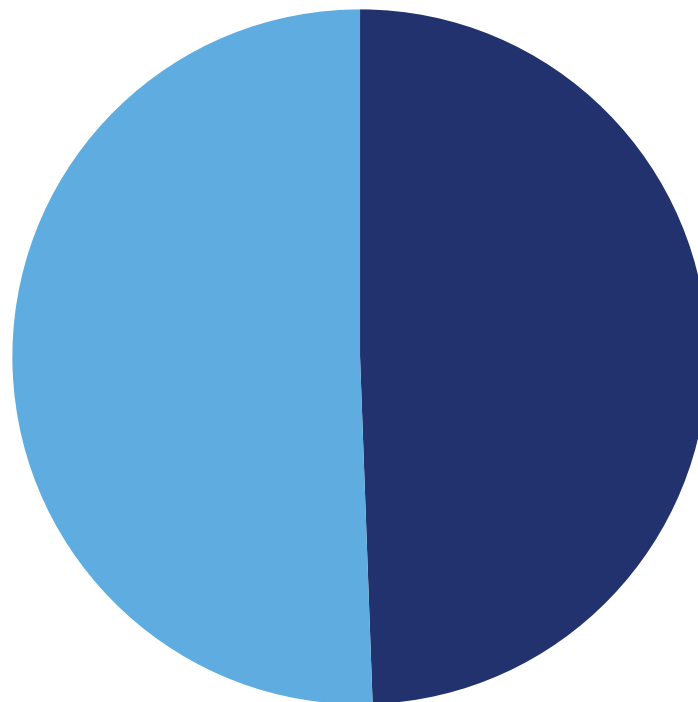
Non-U.S. Equity

Asset Allocation By Manager

Non-U.S. Equity

Periods Ended December 31, 2022

Dec-2022 : 74,121,460



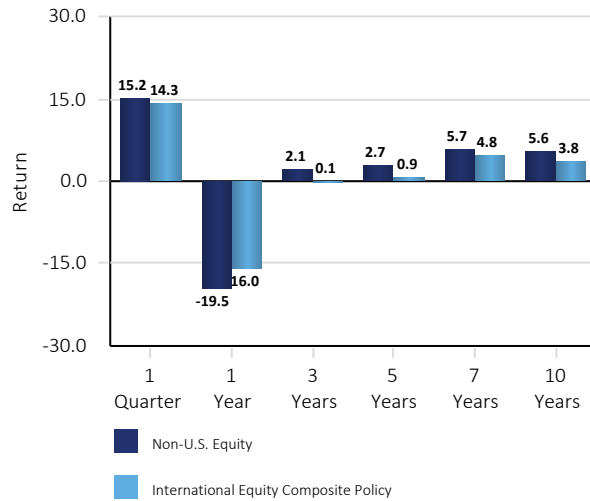
	Market Value \$	Allocation (%)
■ Harding Loevner	36,633,384	49.4
■ Neuberger Berman CIT	37,488,075	50.6

Performance Summary

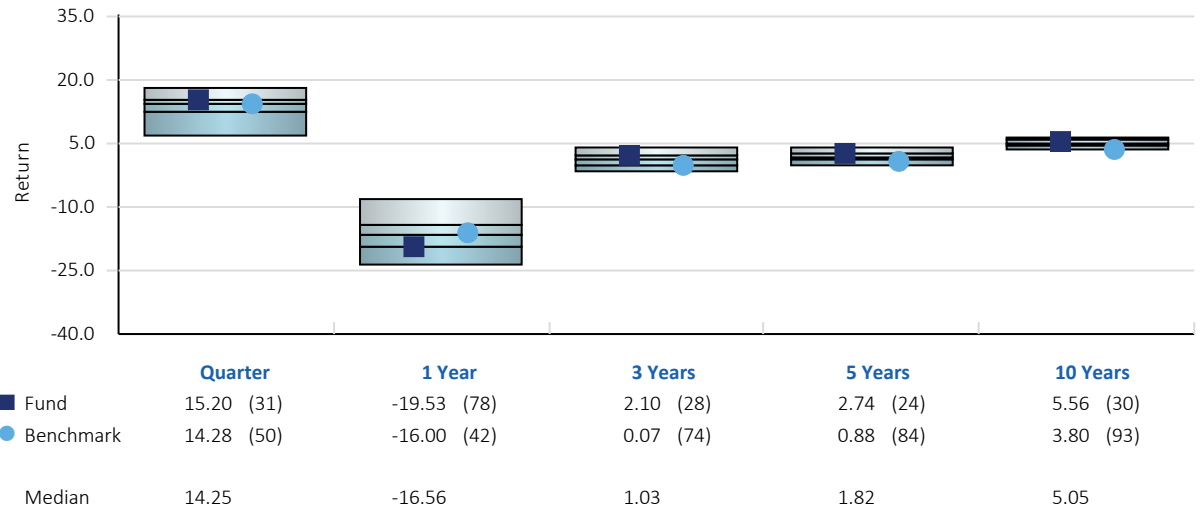
Non-U.S. Equity

Periods Ended December 31, 2022

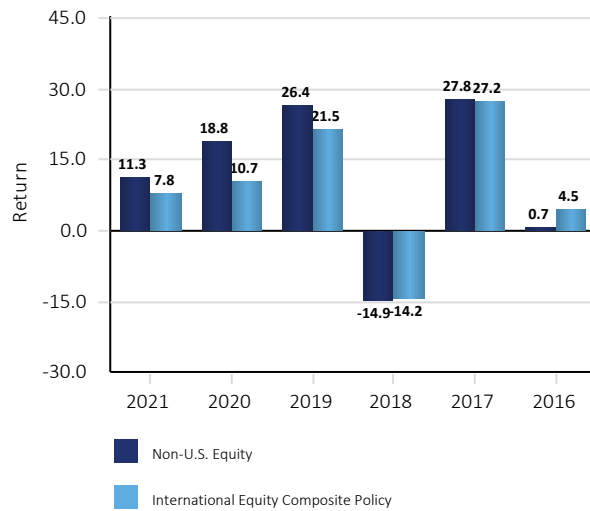
Comparative Performance



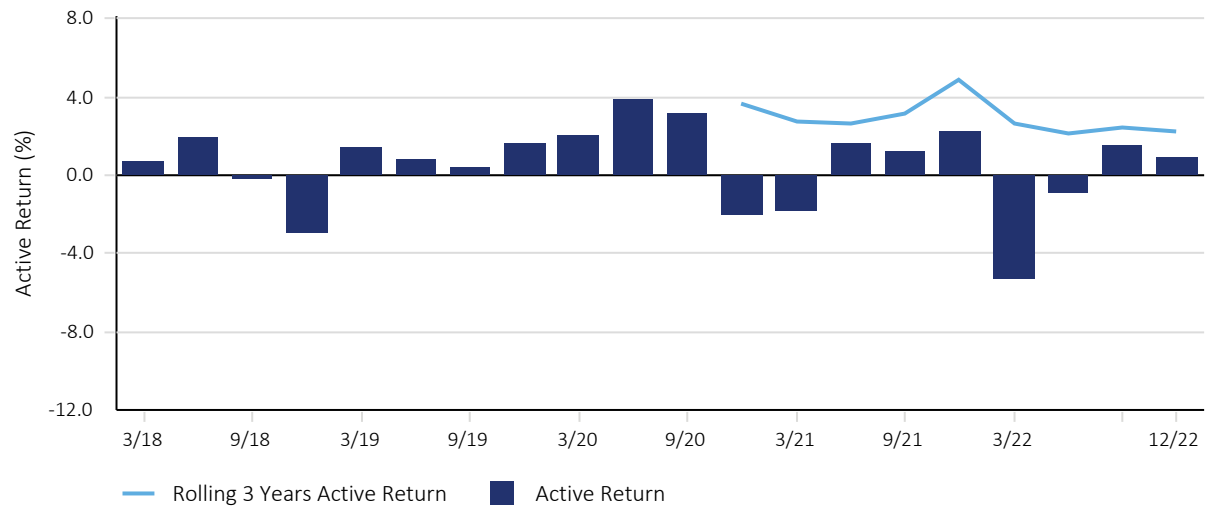
Peer Group Analysis: All Master Trust-Intl. Equity Segment



Comparative Performance



Rolling 3 Years Performance

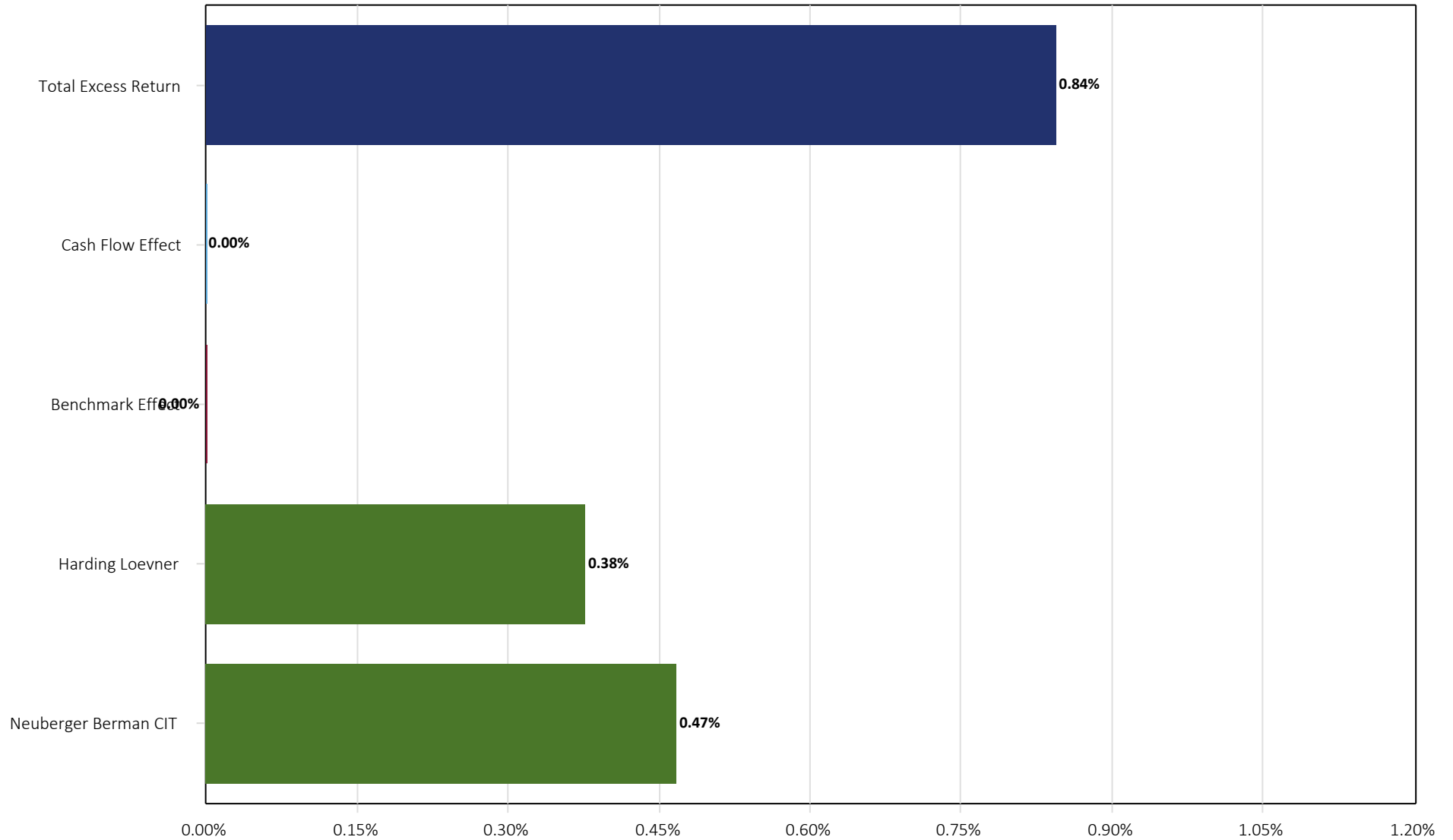


Asset Class Attribution

Non-U.S. Equity

Periods Ended 1 Quarter Ending December 31, 2022

1 Quarter



Asset Allocation & Performance

Non-U.S. Equity

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Non-U.S. Equity	74,121,460	100.00	15.13	-19.74	-19.74	1.85	2.50	5.47	5.40	7.51	1/1/1990
International Equity Composite Policy			14.28	-16.00	-16.00	0.07	0.88	4.80	3.80	4.23	
Value Added			0.85	-3.74	-3.74	1.78	1.62	0.67	1.60	3.28	
Harding Loevner	36,633,384	49.42	15.07	-19.49	-19.49	2.12	2.36	5.95		4.52	4/1/2015
MSCI AC World ex USA (Net)			14.28	-16.00	-16.00	0.07	0.88	4.80		3.09	
Value Added			0.79	-3.49	-3.49	2.05	1.48	1.15		1.43	
Neuberger Berman CIT	37,488,075	50.58	15.18	-19.99	-19.99	1.49				3.22	7/1/2018
MSCI AC World ex USA (Net)			14.28	-16.00	-16.00	0.07				1.85	
Value Added			0.90	-3.99	-3.99	1.42				1.37	

Private Equity

Private Equity Composite Overview

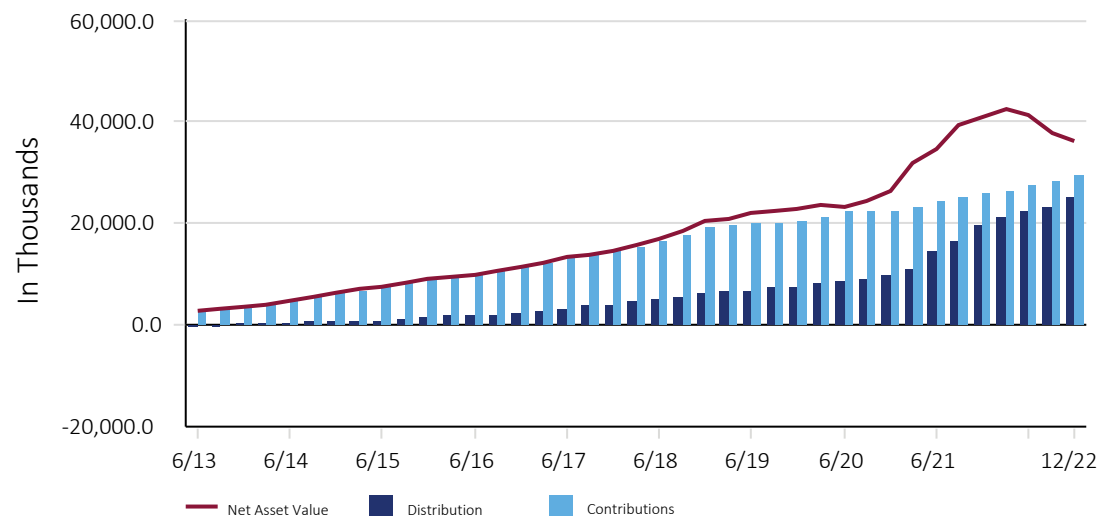
Private Equity

Periods Ended As of December 31, 2022

Cash Flow Summary

Capital Committed:	34,500,000
Capital Invested:	9,341,651
Total Contributions:	29,507,925
Remaining Capital Commitment:	5,360,830
Total Distributions:	25,106,835
Market Value:	36,271,931
Inception Date:	5/1/2010
Inception IRR:	17.6
TVPI:	2.1

Cash Flow Analysis



Private Equity Portfolio

Partnerships	Capital Committed \$	Total Contribution \$	Total Distribution \$	Market Value \$	IRR (%)	TVPI Multiple (%)
Adams Street 2010 Direct Fund	500,000	480,500	688,243	218,033	11.9	1.9
Adams Street 2010 EM Fund	500,000	449,000	443,865	470,900	10.8	2.0
Adams Street 2010 Non-US Fund	1,500,000	1,350,750	1,866,042	639,376	12.5	1.9
Adams Street 2010 US Fund	2,500,000	2,202,500	3,931,476	1,699,763	16.8	2.6
Adams Street 2013 Global Fund	5,000,000	4,621,316	4,189,470	5,660,942	14.8	2.1
Adams Street 2015 Global	6,500,000	5,689,817	3,954,415	8,741,301	24.0	2.2
Adams Street 2017 Global Fund	6,000,000	4,792,008	1,486,406	7,756,243	24.2	1.9
Aberdeen Global	5,000,000	4,950,000	7,744,137	4,919,165	16.6	2.6
Adams Street 2019 Global	7,000,000	4,972,034	802,781	6,166,208	38.4	1.4

Private Equity Composite Overview

Private Equity

Periods Ended As of December 31, 2022

Partnerships	Capital Committed \$	Total Contribution \$	Total Distribution \$	Market Value \$	IRR (%)	TVPI Multiple (%)
Private Equity	34,500,000	29,507,925	25,106,835	36,271,931	17.6	2.1

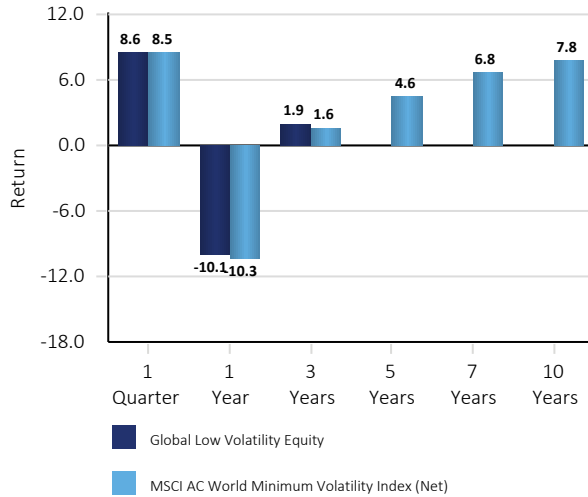
Global Low Volatility Equity

Performance Summary

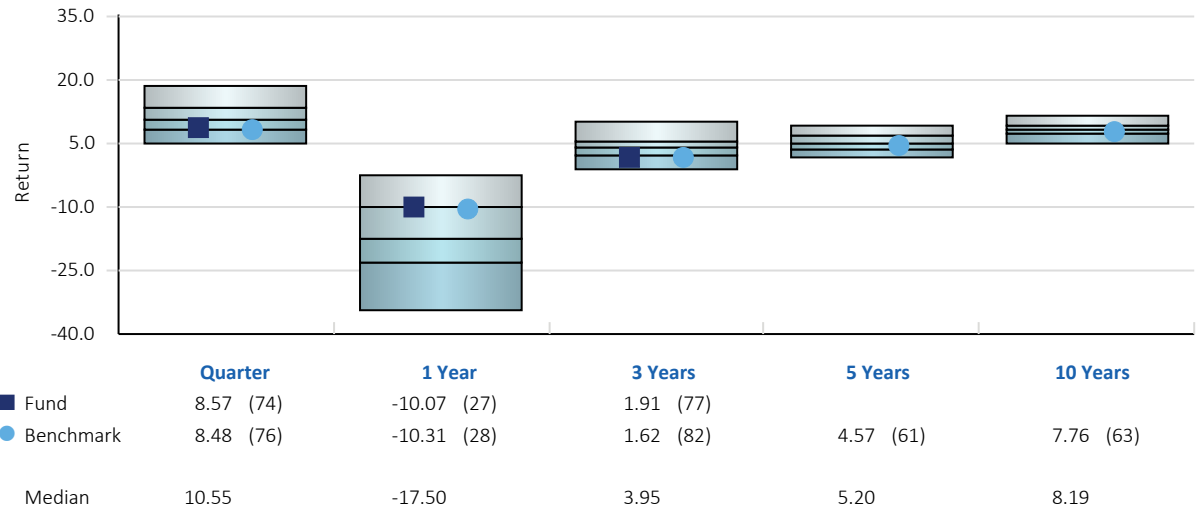
Global Low Volatility Equity

Periods Ended December 31, 2022

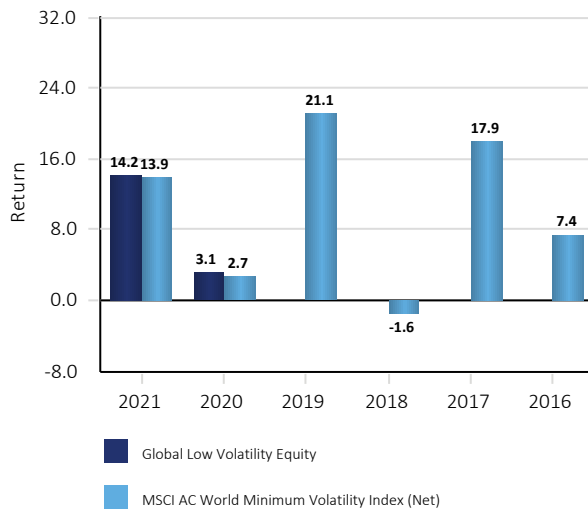
Comparative Performance



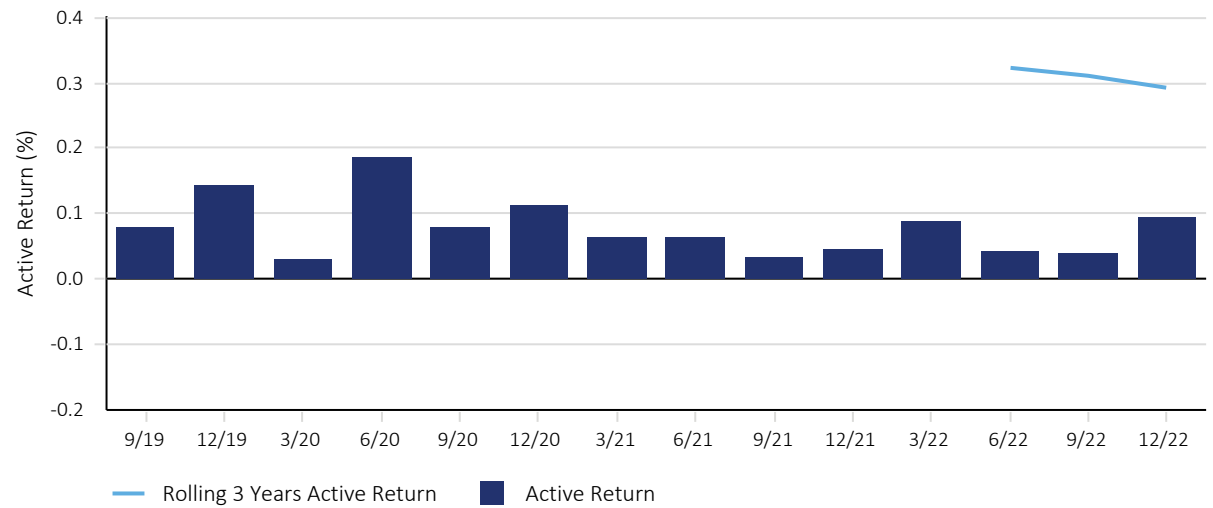
Peer Group Analysis: IM Global Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Asset Allocation & Performance

Global Low Volatility Equity

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Global Low Volatility Equity	45,860,403	100.00	8.57	-10.07	-10.07	1.91				4.50	6/1/2019
MSCI AC World Minimum Volatility Index (Net)			8.48	-10.31	-10.31	1.62				4.17	
Value Added			0.09	0.24	0.24	0.29				0.33	
BlackRock MSCI ACWI Min Vol	45,860,403	100.00	8.57	-10.07	-10.07	1.91				4.50	6/1/2019
MSCI AC World Minimum Volatility Index (Net)			8.48	-10.31	-10.31	1.62				4.17	
Value Added			0.09	0.24	0.24	0.29				0.33	

Private Credit

Private Credit Composite Overview

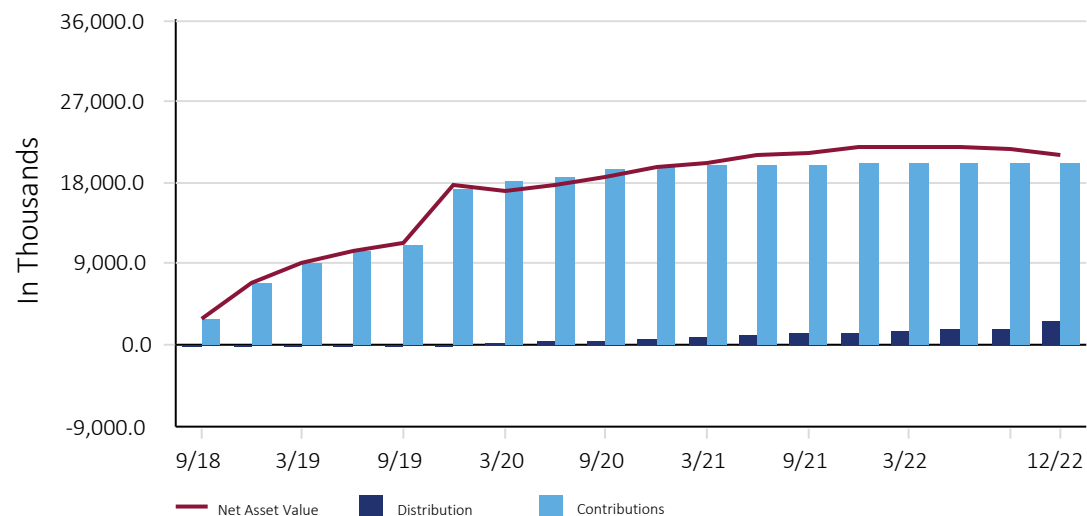
Private Credit

Periods Ended As of December 31, 2022

Cash Flow Summary

Capital Committed:	21,000,000
Capital Invested:	2,570,919
Total Contributions:	20,191,428
Remaining Capital Commitment:	808,572
Total Distributions:	2,650,917
Market Value:	21,122,825
Inception Date:	10/1/2018
Inception IRR:	5.0
TVPI:	1.2

Cash Flow Analysis



Private Equity Portfolio

Partnerships	Capital Committed \$	Total Contribution \$	Total Distribution \$	Market Value \$	IRR (%)	TVPI Multiple (%)
50 South Capital Private Credit	7,000,000	6,191,428	2,650,917	4,888,685	7.7	1.2
Grosvenor PC	14,000,000	14,000,000		16,234,140	4.2	1.2
Private Credit	21,000,000	20,191,428	2,650,917	21,122,825	5.0	1.2

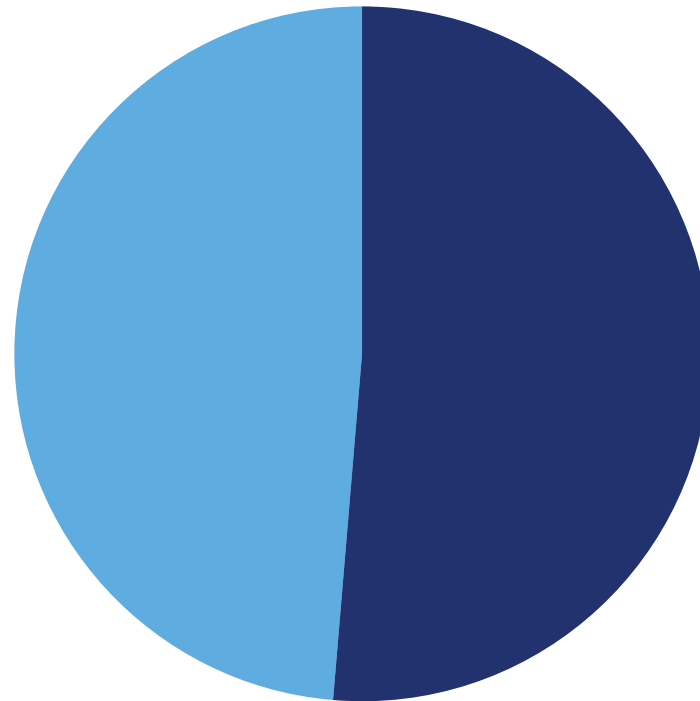
Core Fixed Income

Asset Allocation By Manager

Core Fixed Income

Periods Ended December 31, 2022

Dec-2022 : 108,991,217



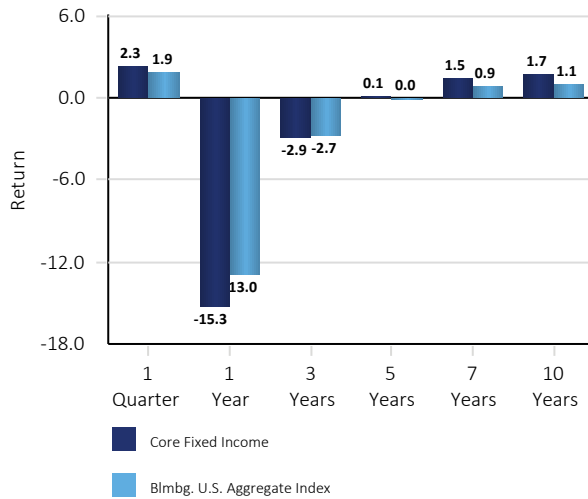
	Market Value \$	Allocation (%)
■ Baird Advisors	55,948,279	51.3
■ Western Asset Management	53,042,939	48.7

Performance Summary

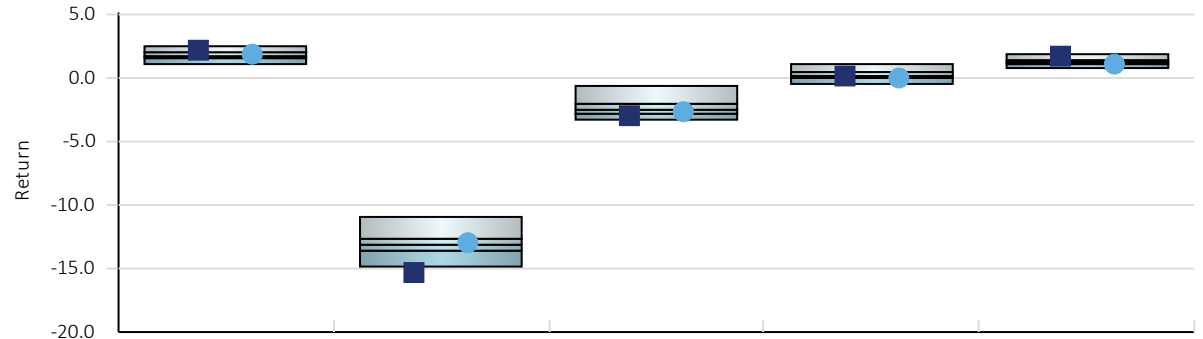
Core Fixed Income

Periods Ended December 31, 2022

Comparative Performance

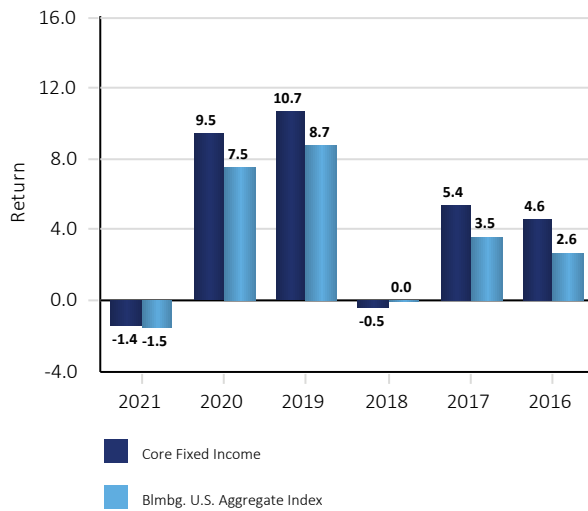


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

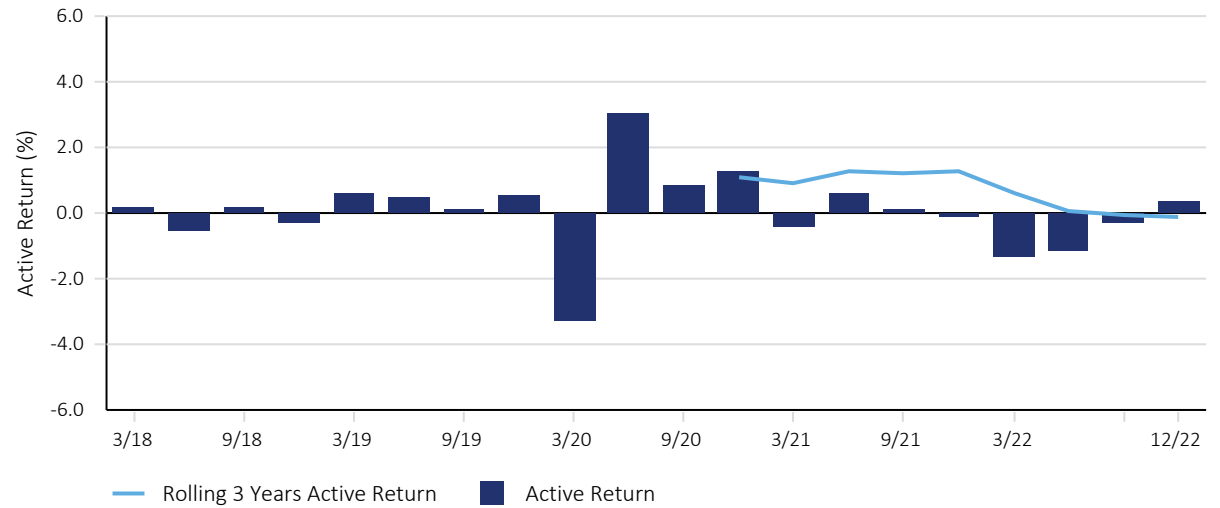


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	2.26 (8)	-15.27 (98)	-2.94 (86)	0.14 (57)	1.68 (12)
Benchmark	1.87 (36)	-13.01 (38)	-2.71 (72)	0.02 (70)	1.06 (71)
Median	1.77	-13.12	-2.47	0.18	1.22

Comparative Performance



Rolling 3 Years Performance

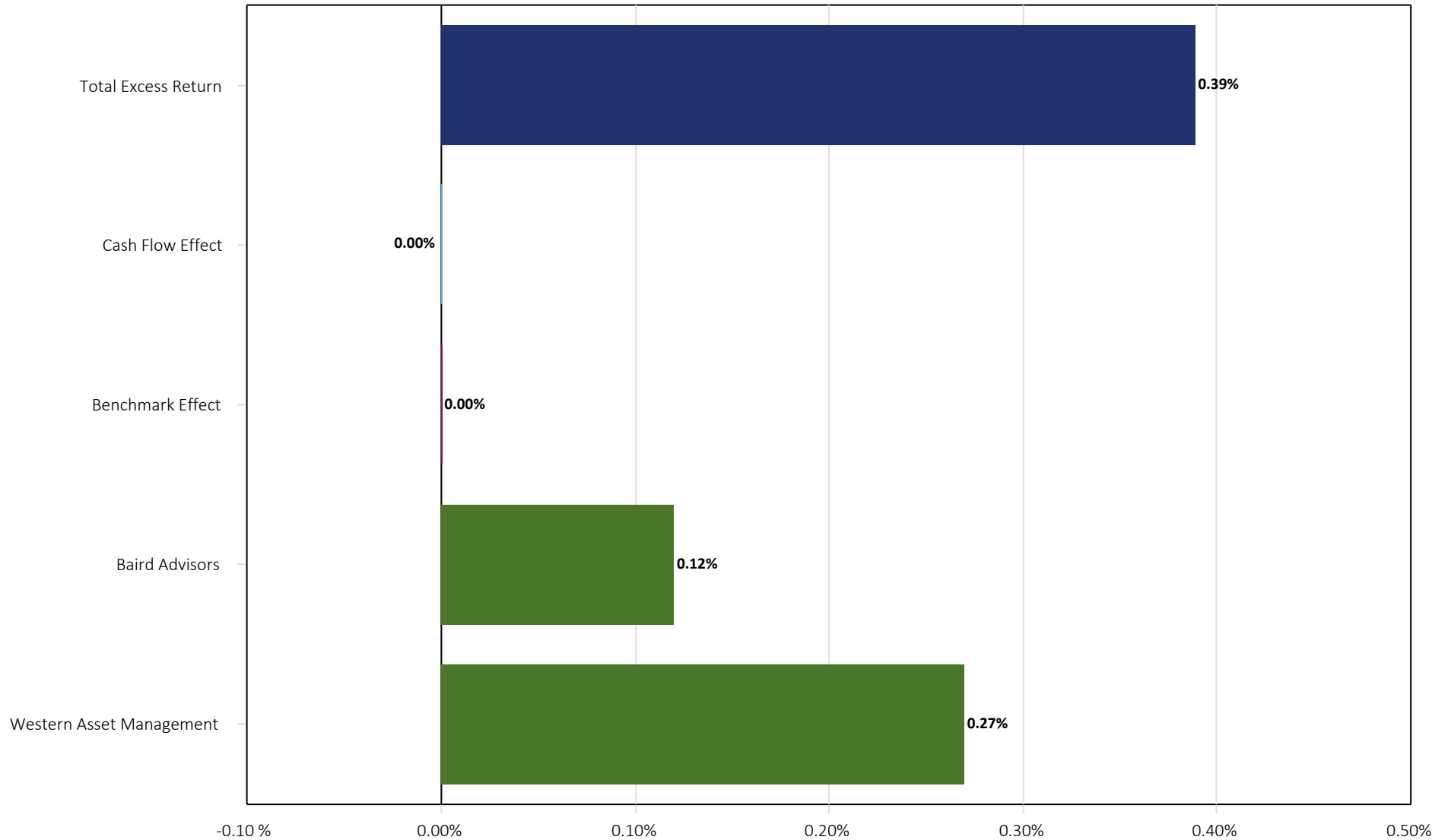


Asset Class Attribution

Core Fixed Income

Periods Ended 1 Quarter Ending December 31, 2022

1 Quarter



Asset Allocation & Performance

Core Fixed Income

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Core Fixed Income	108,991,217	100.00	2.26	-15.27	-15.27	-2.94	0.14	1.50	1.68	5.95	10/1/1987
Blmbg. U.S. Aggregate Index			1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	5.56	
Value Added			0.39	-2.26	-2.26	-0.23	0.12	0.61	0.62	0.39	
Baird Advisors	55,948,279	51.33	2.11	-12.97	-12.97	-2.36	0.36	1.37	1.53	3.42	12/1/2002
Blmbg. U.S. Aggregate Index			1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	3.19	
Value Added			0.24	0.04	0.04	0.35	0.34	0.48	0.47	0.23	
Western Asset Management	53,042,939	48.67	2.43	-17.58	-17.58	-3.55	-0.12	1.59	1.81	3.84	1/1/2004
Blmbg. U.S. Aggregate Index			1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	3.05	
Value Added			0.56	-4.57	-4.57	-0.84	-0.14	0.70	0.75	0.79	

TIPS

Asset Allocation & Performance

TIPS

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
TIPS	21,117,909	100.00	1.95	-12.08	-12.08	0.87	1.83	2.40		1.74	5/1/2015
Blmbg. U.S. TIPS Index			2.04	-11.85	-11.85	1.21	2.11	2.60		1.89	
Value Added			-0.09	-0.23	-0.23	-0.34	-0.28	-0.20		-0.15	
Brown Brothers Harriman	21,117,909	100.00	1.95	-12.08	-12.08	0.87	1.83	2.40		1.74	5/1/2015
Blmbg. U.S. TIPS Index			2.04	-11.85	-11.85	1.21	2.11	2.60		1.89	
Value Added			-0.09	-0.23	-0.23	-0.34	-0.28	-0.20		-0.15	

Real Estate

Asset Allocation & Performance

Real Estate

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Real Estate	21,547,709	100.00	4.69	-23.82	-23.82	1.21	2.71	3.52	4.02	7.46	6/1/2009
Real Estate Policy Index			4.76	-25.96	-25.96	-1.37	1.39	3.01	3.82	7.61	
Value Added			-0.07	2.14	2.14	2.58	1.32	0.51	0.20	-0.15	
Centersquare	21,547,709	100.00	4.69	-23.82	-23.82	1.21				1.11	10/1/2019
Dow Jones U.S. Select REIT Total Return Index			4.76	-25.96	-25.96	-1.37				-1.64	
Value Added			-0.07	2.14	2.14	2.58				2.75	

Commodities

Asset Allocation & Performance

Commodities

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Commodities	24,913,019	100.00	6.81	10.48	10.48	13.50	7.38	8.68		-0.44	2/1/2013
Bloomberg Commodity Index Total Return			2.22	16.09	16.09	12.65	6.44	6.49		-1.53	
Value Added			4.59	-5.61	-5.61	0.85	0.94	2.19		1.09	
S&P GSCI Equal Weight Index			6.94	11.94	11.94	12.06	7.34	8.22		-0.40	
Value Added			-0.13	-1.46	-1.46	1.44	0.04	0.46		-0.04	
Wellington Commodities	24,913,019	100.00	6.81	10.48	10.48	13.50	7.38	8.68		-0.44	2/1/2013
Bloomberg Commodity Index Total Return			2.22	16.09	16.09	12.65	6.44	6.49		-1.53	
Value Added			4.59	-5.61	-5.61	0.85	0.94	2.19		1.09	
S&P GSCI Equal Weight Index			6.94	11.94	11.94	12.06	7.34	8.22		-0.40	
Value Added			-0.13	-1.46	-1.46	1.44	0.04	0.46		-0.04	

Midstream Energy

Asset Allocation & Performance

Midstream Energy Composite

Periods Ended December 31, 2022

	Allocation		Performance (%) net of fees								
	Market Value \$	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Midstream Energy Composite	24,111,849	100.00	6.86	29.67	29.67	10.71	5.65	5.85		0.42	3/1/2015
Midstream Energy Policy Index			8.38	21.53	21.53	2.86	-0.13	-0.24		-6.25	
Value Added			-1.52	8.14	8.14	7.85	5.78	6.09		6.67	
Harvest MLP	24,111,849	100.00	6.86	29.67	29.67	10.71	5.65	5.85		0.42	3/1/2015
Midstream Energy Policy Index			8.38	21.53	21.53	2.86	-0.13	-0.24		-6.25	
Value Added			-1.52	8.14	8.14	7.85	5.78	6.09		6.67	

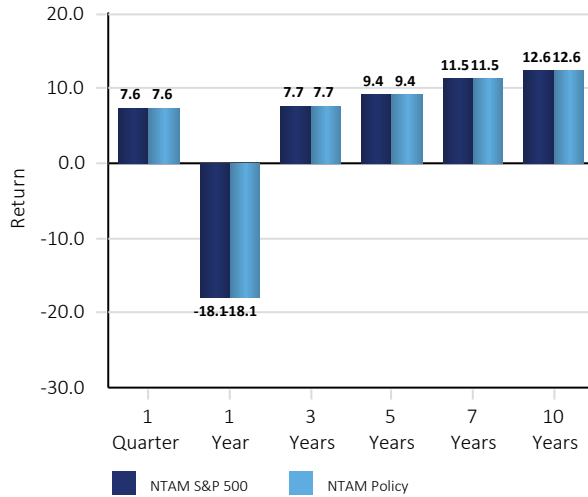
Appendix

Performance Summary

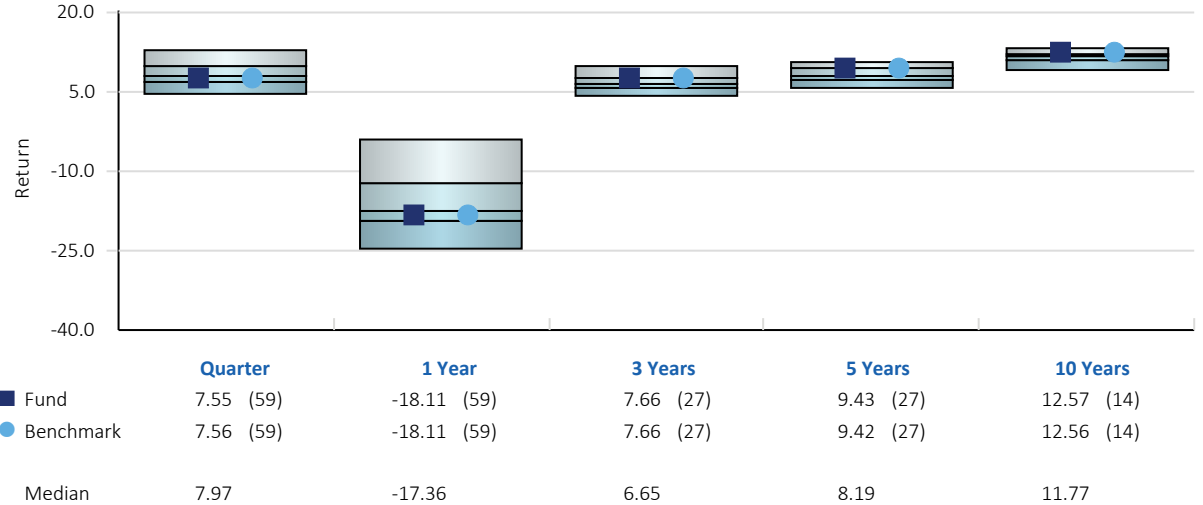
NTAM S&P 500

Periods Ended December 31, 2022

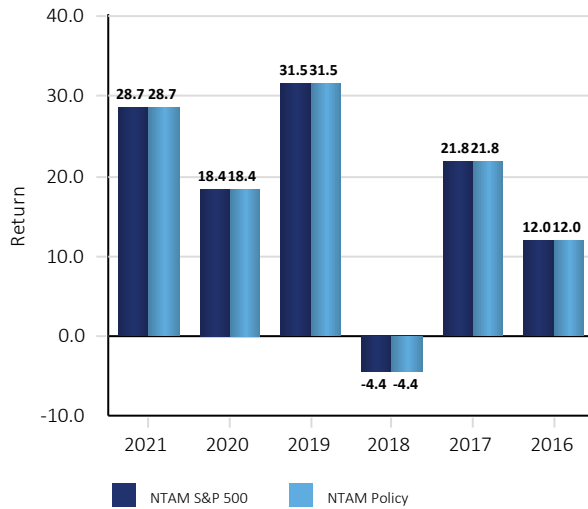
Comparative Performance



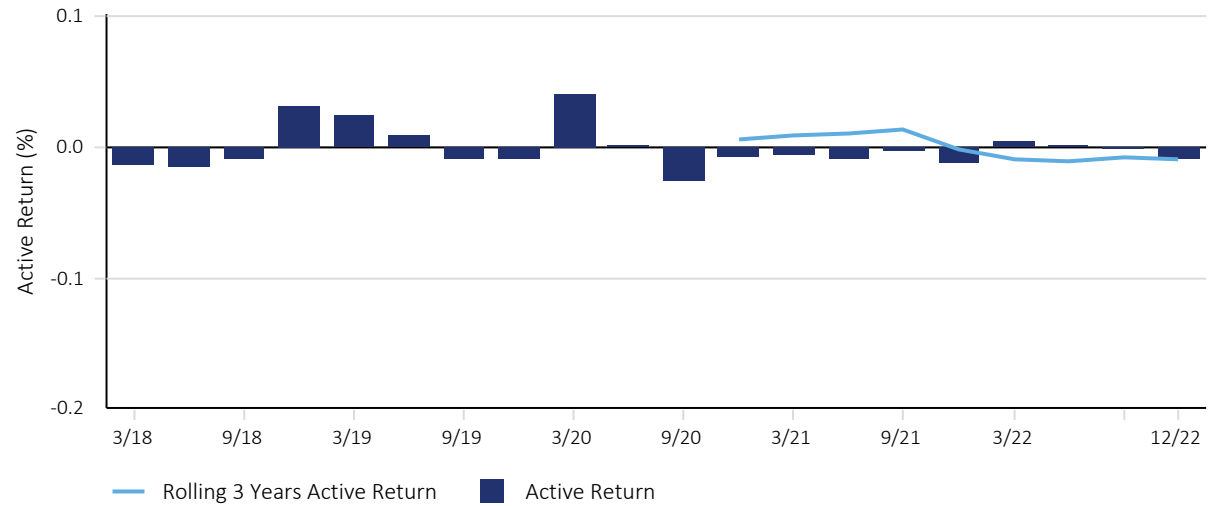
Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance

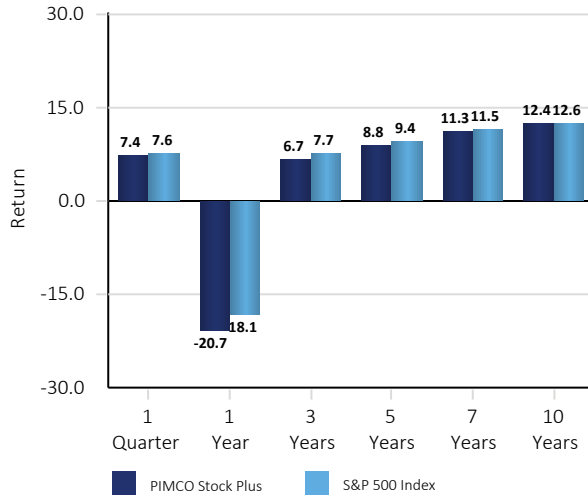


Performance Summary

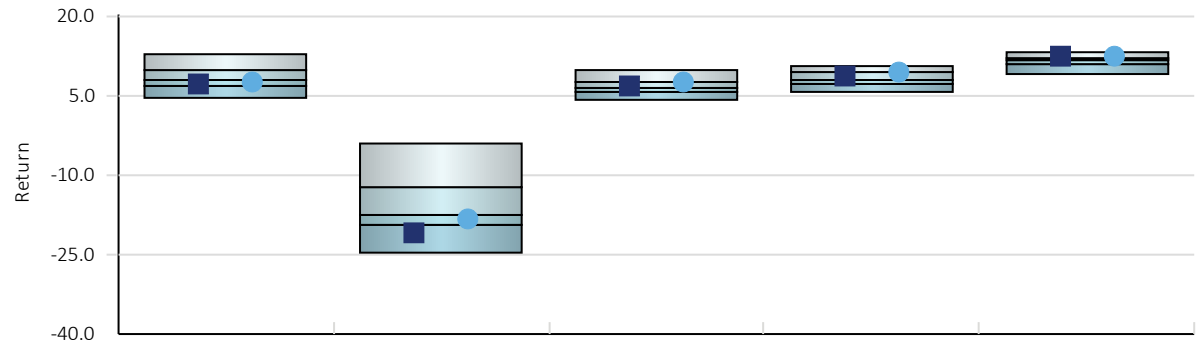
PIMCO Stock Plus

Periods Ended December 31, 2022

Comparative Performance

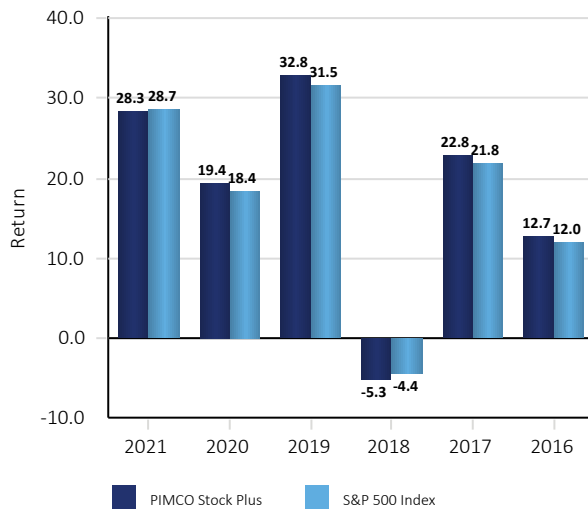


Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)

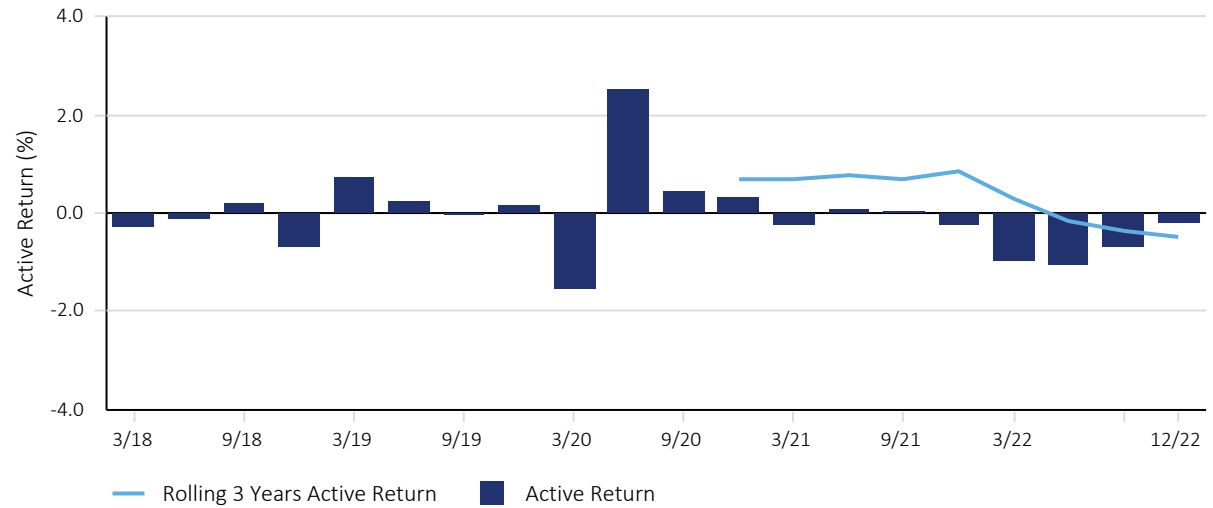


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	7.35 (70)	-20.69 (86)	6.72 (49)	8.84 (36)	12.36 (21)
Benchmark	7.56 (59)	-18.11 (59)	7.66 (27)	9.42 (27)	12.56 (14)
Median	7.97	-17.36	6.65	8.19	11.77

Comparative Performance



Rolling 3 Years Performance

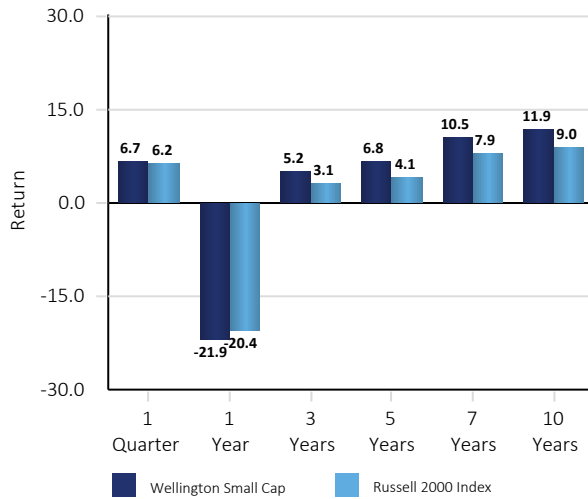


Performance Summary

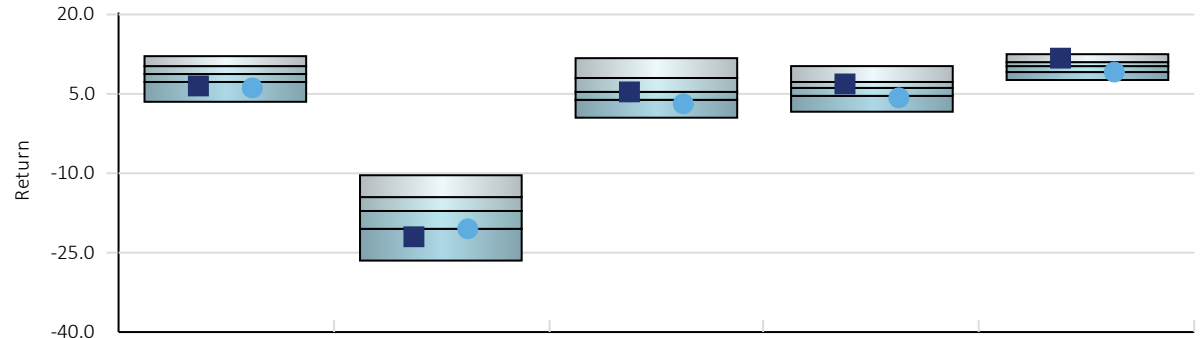
Wellington Small Cap

Periods Ended December 31, 2022

Comparative Performance

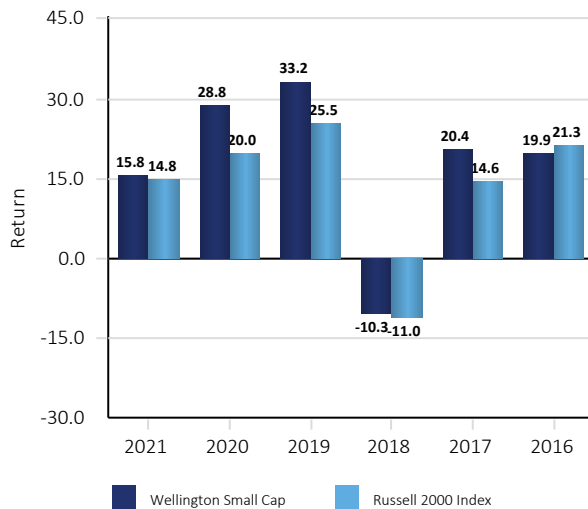


Peer Group Analysis: IM U.S. Small Cap Core Equity (SA+CF)

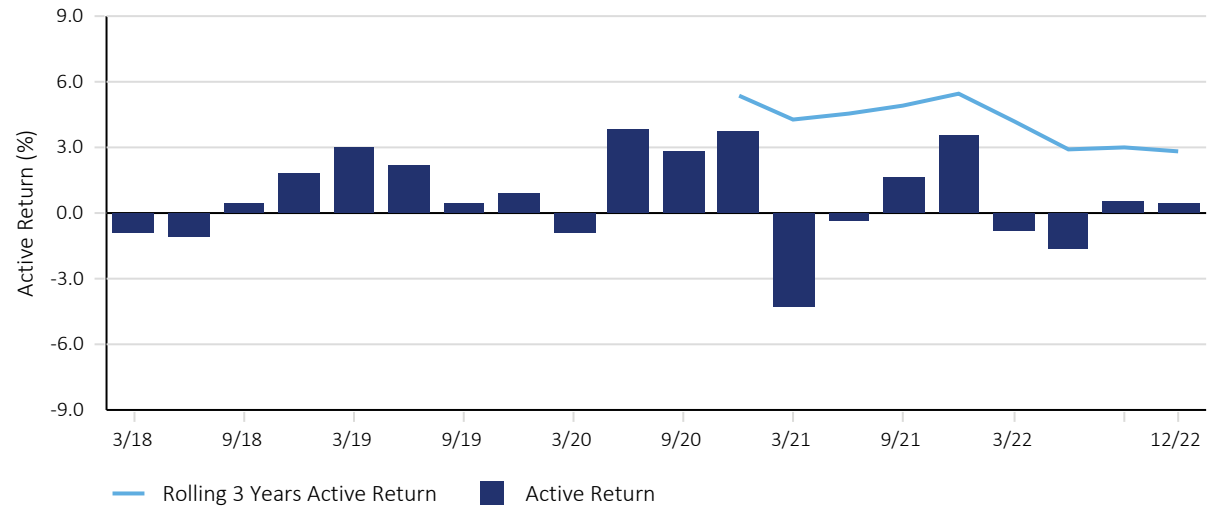


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	6.68 (82)	-21.90 (81)	5.20 (55)	6.82 (35)	11.91 (13)
Benchmark	6.23 (87)	-20.44 (75)	3.10 (80)	4.13 (81)	9.01 (72)
Median	8.77	-17.26	5.44	6.05	10.32

Comparative Performance



Rolling 3 Years Performance

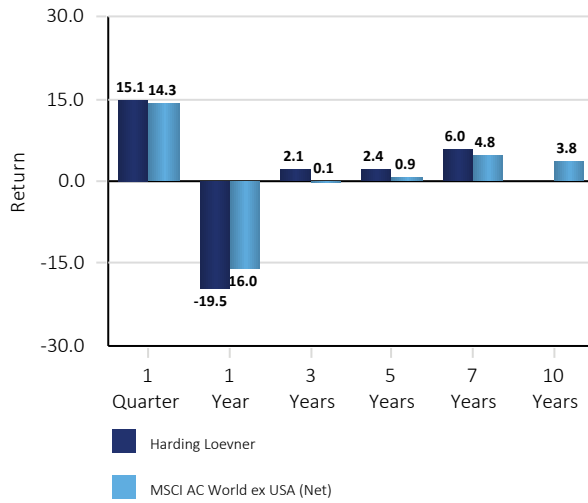


Performance Summary

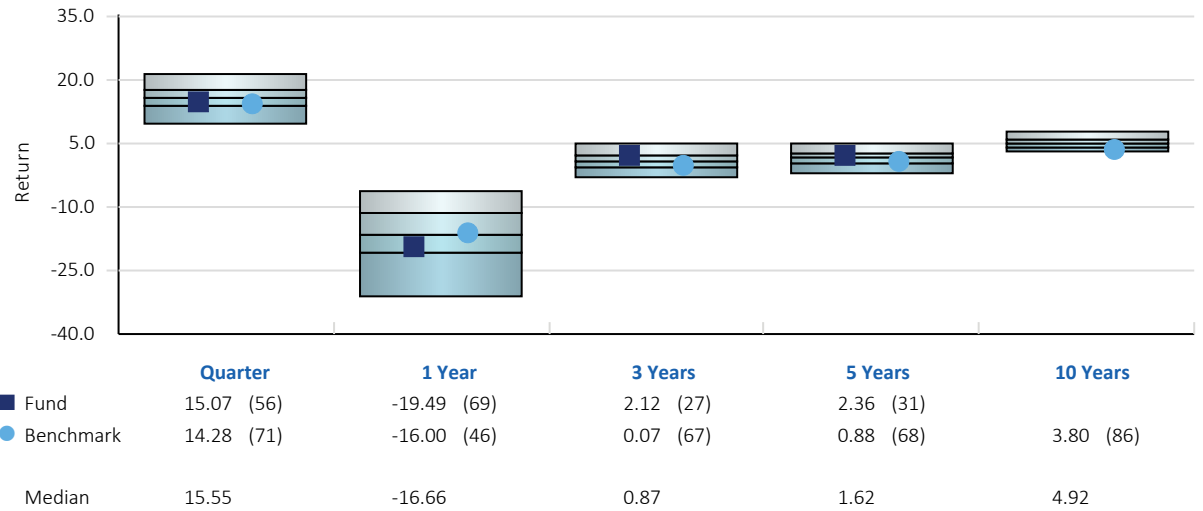
Harding Loevner

Periods Ended December 31, 2022

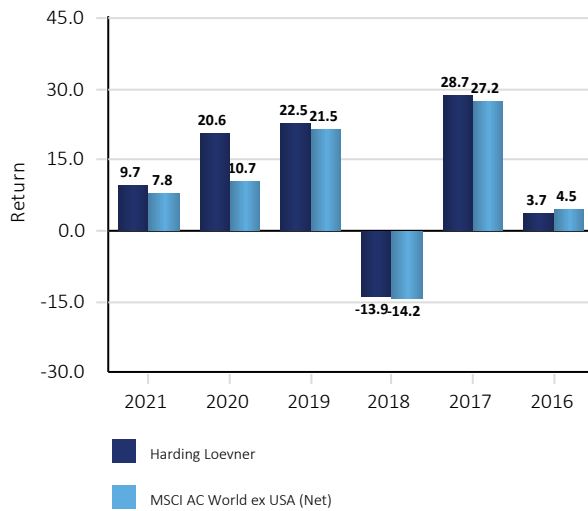
Comparative Performance



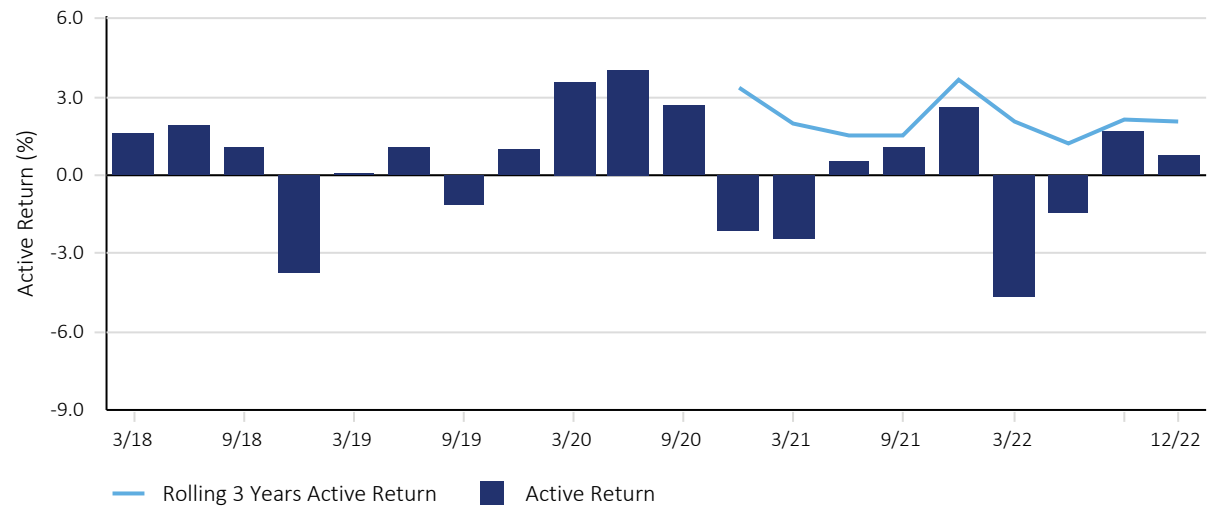
Peer Group Analysis: IM International Large Cap Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance

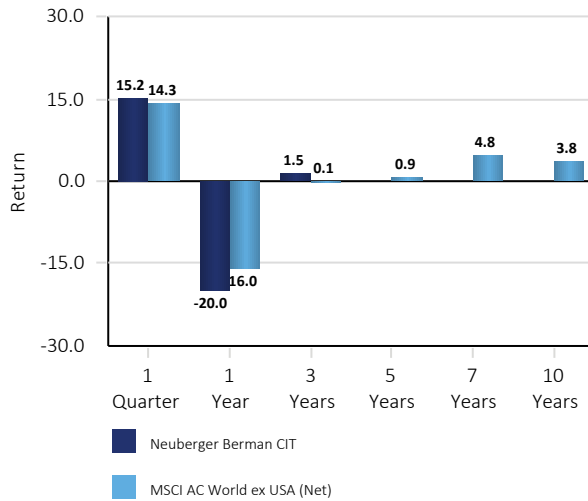


Performance Summary

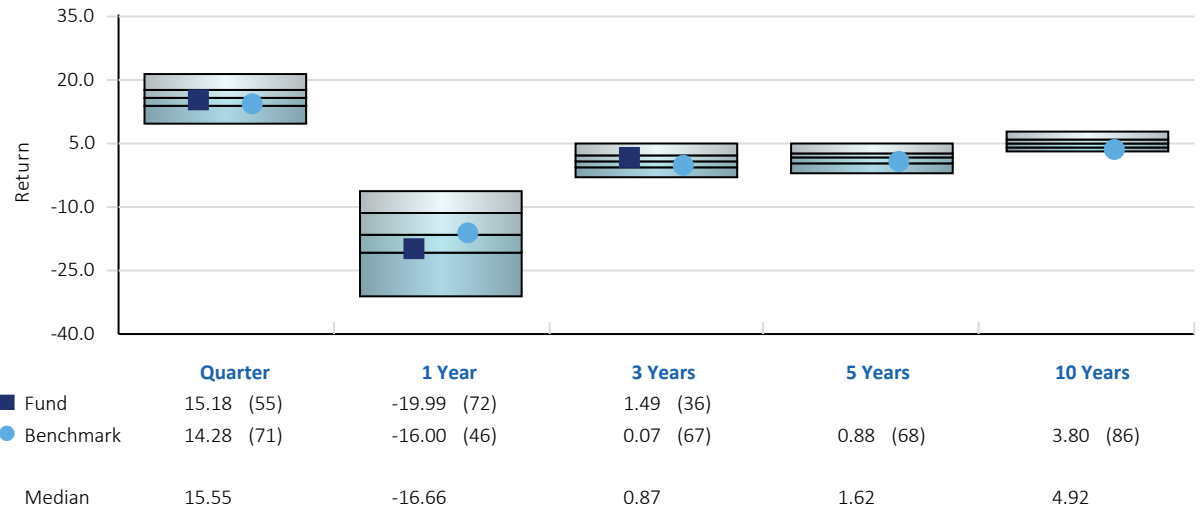
Neuberger Berman CIT

Periods Ended December 31, 2022

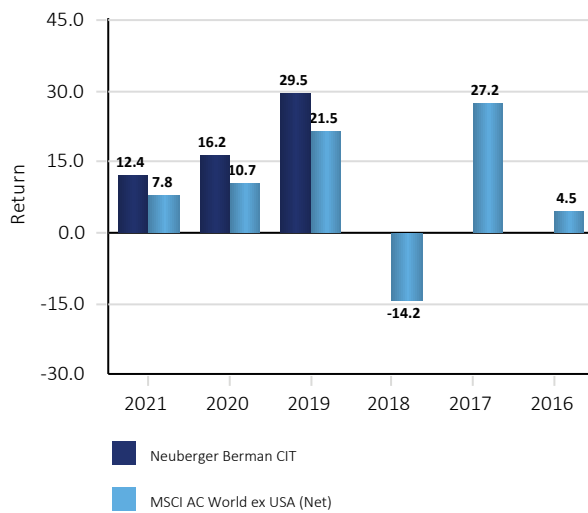
Comparative Performance



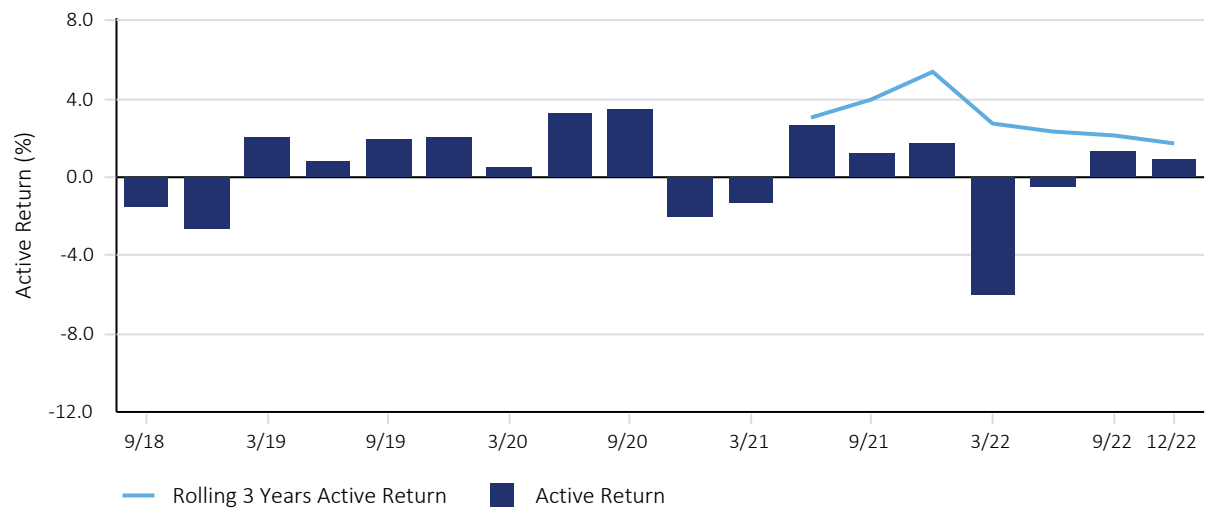
Peer Group Analysis: IM International Large Cap Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance

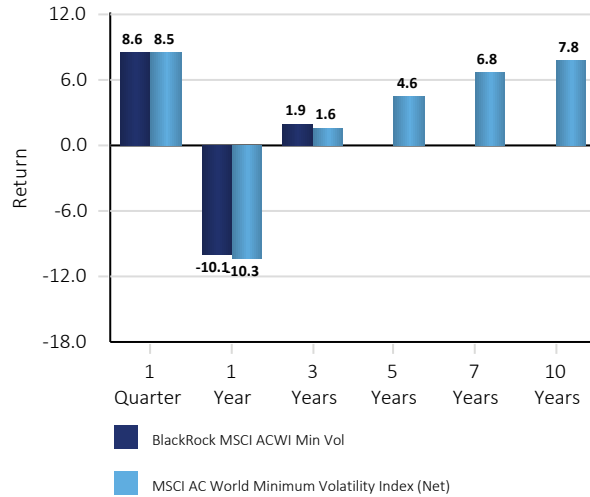


Performance Summary

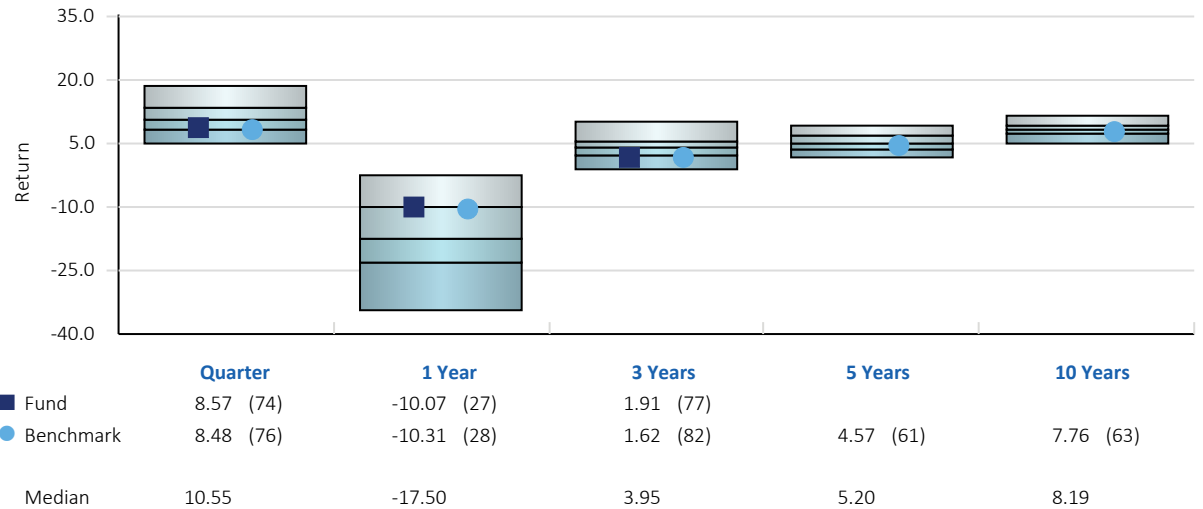
BlackRock MSCI ACWI Min Vol

Periods Ended December 31, 2022

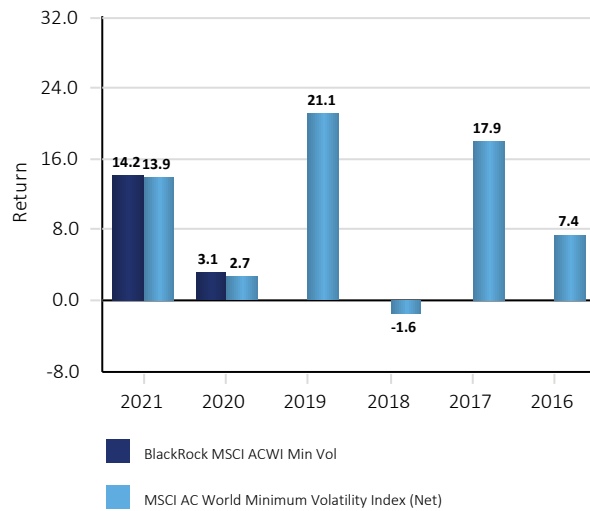
Comparative Performance



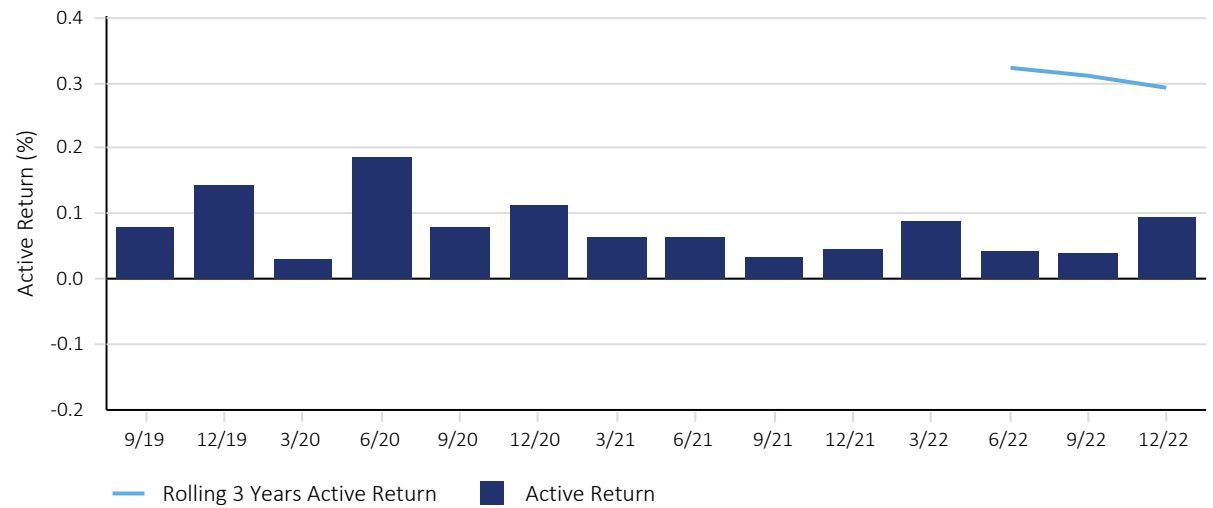
Peer Group Analysis: IM Global Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance

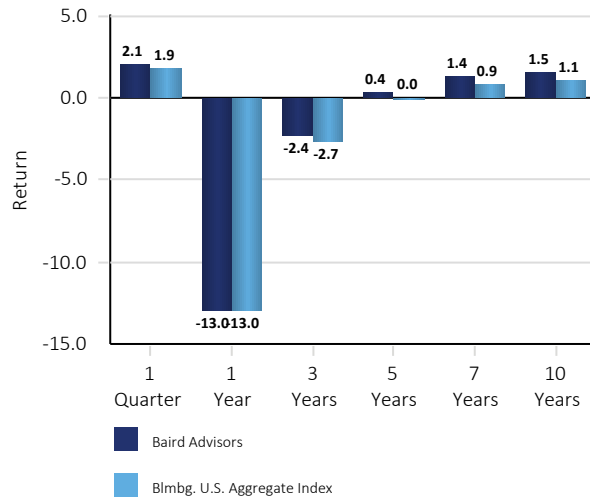


Performance Summary

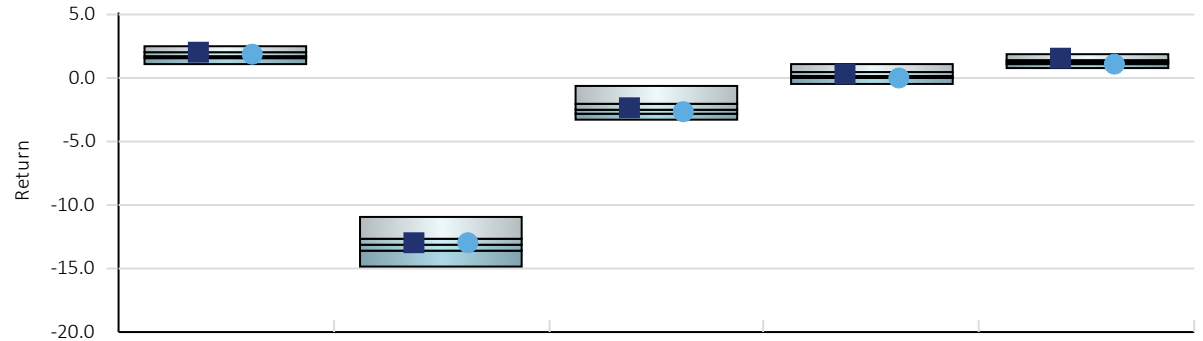
Baird Advisors

Periods Ended December 31, 2022

Comparative Performance

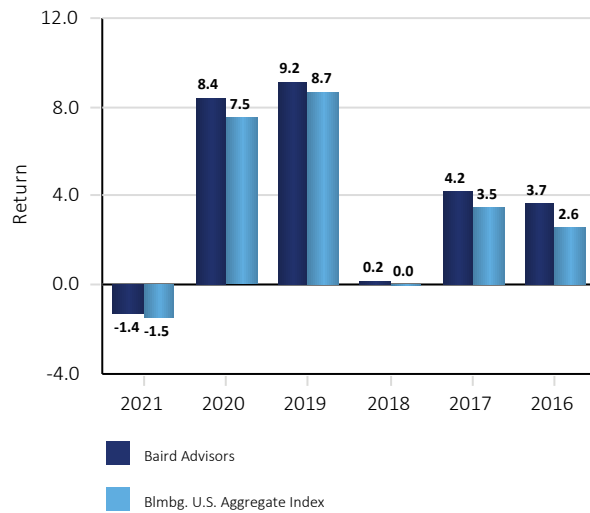


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

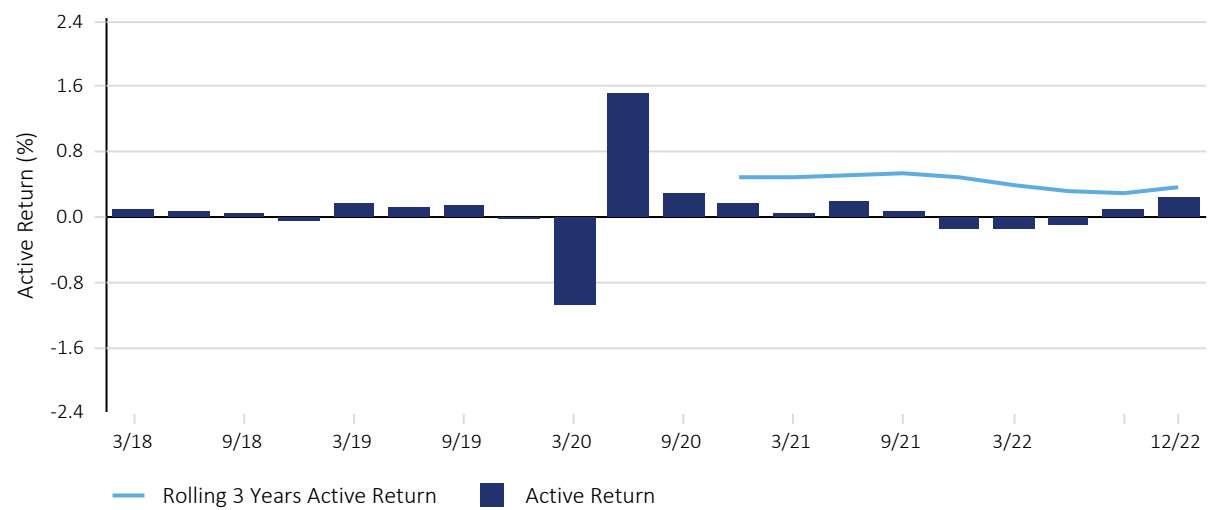


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	2.11 (19)	-12.97 (38)	-2.36 (41)	0.36 (29)	1.53 (21)
Benchmark	1.87 (36)	-13.01 (38)	-2.71 (72)	0.02 (70)	1.06 (71)
Median	1.77	-13.12	-2.47	0.18	1.22

Comparative Performance



Rolling 3 Years Performance

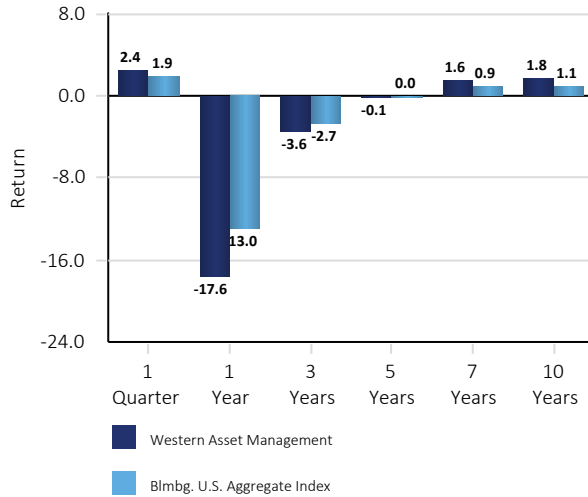


Performance Summary

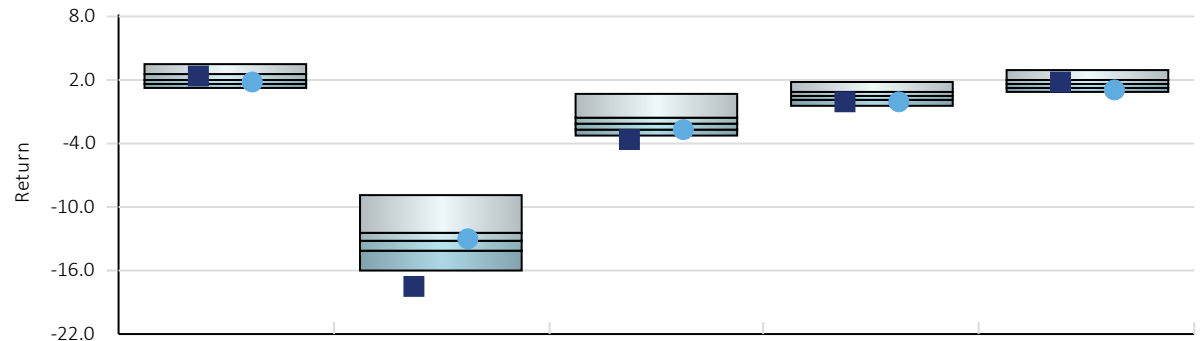
Western Asset Management

Periods Ended December 31, 2022

Comparative Performance

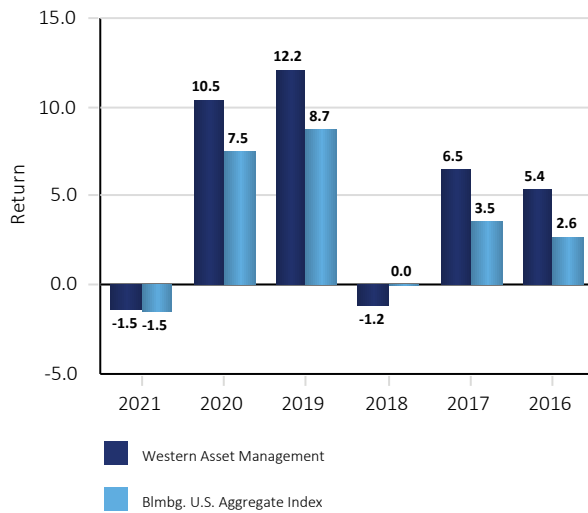


Peer Group Analysis: IM U.S. Broad Market Core+ Fixed Income (SA+CF)

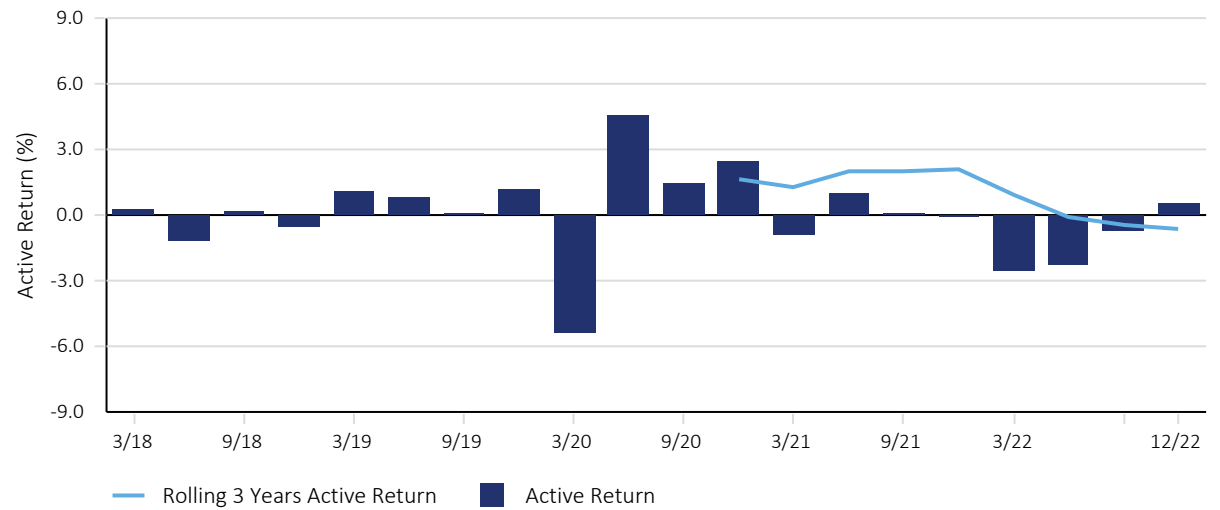


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	2.43 (27)	-17.58 (97)	-3.55 (97)	-0.12 (86)	1.81 (33)
Benchmark	1.87 (63)	-13.01 (42)	-2.71 (80)	0.02 (82)	1.06 (92)
Median	2.04	-13.28	-2.13	0.48	1.64

Comparative Performance



Rolling 3 Years Performance

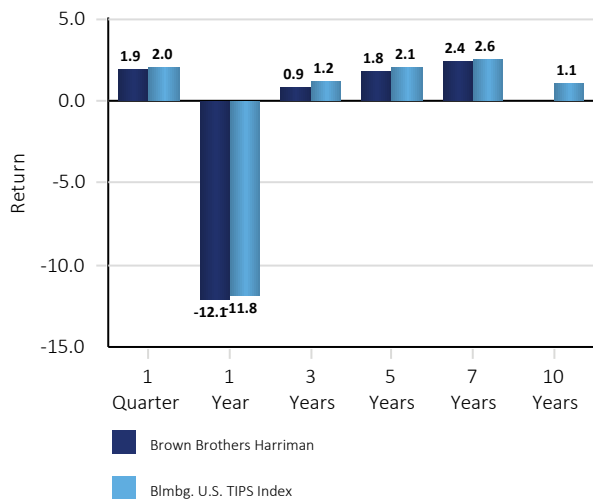


Performance Summary

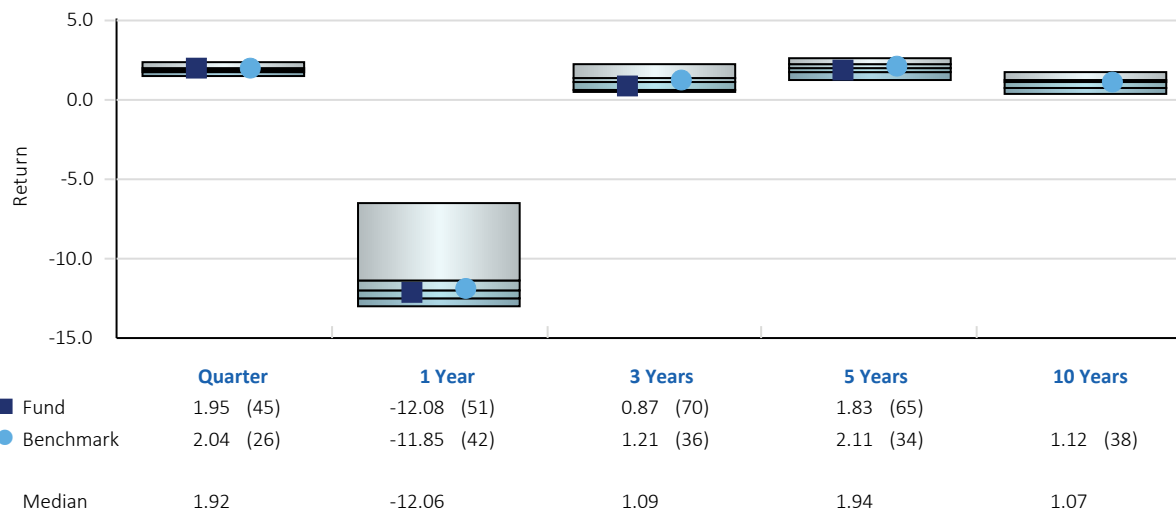
Brown Brothers Harriman

Periods Ended December 31, 2022

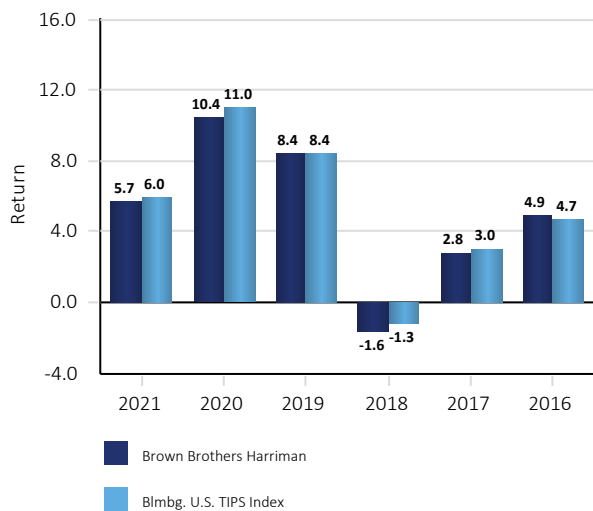
Comparative Performance



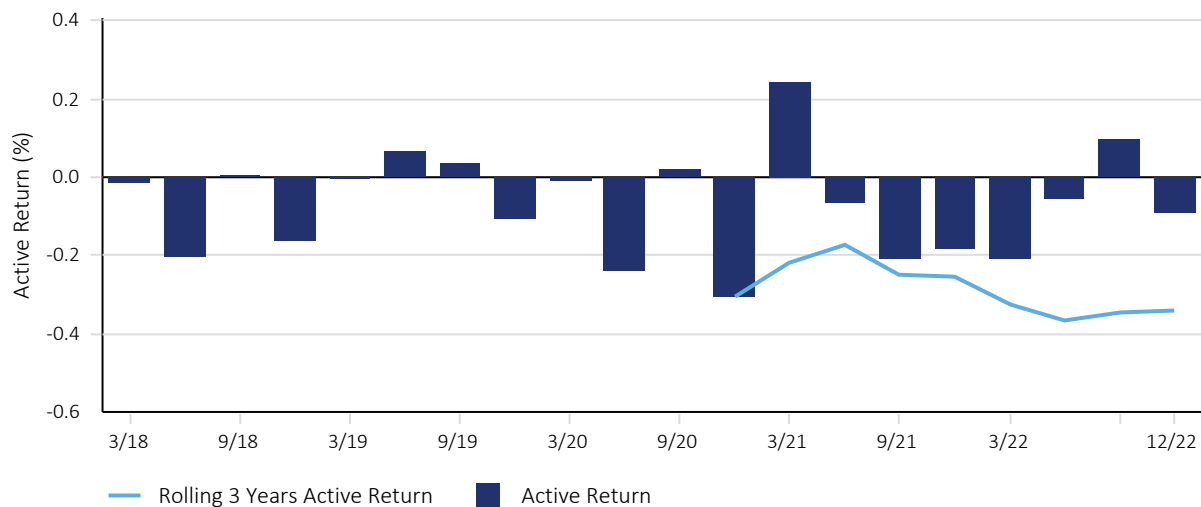
Peer Group Analysis: IM U.S. TIPS (SA+CF)



Comparative Performance



Rolling 3 Years Performance

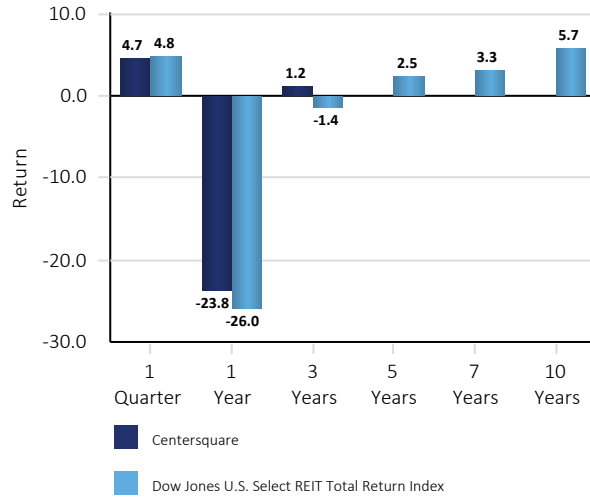


Performance Summary

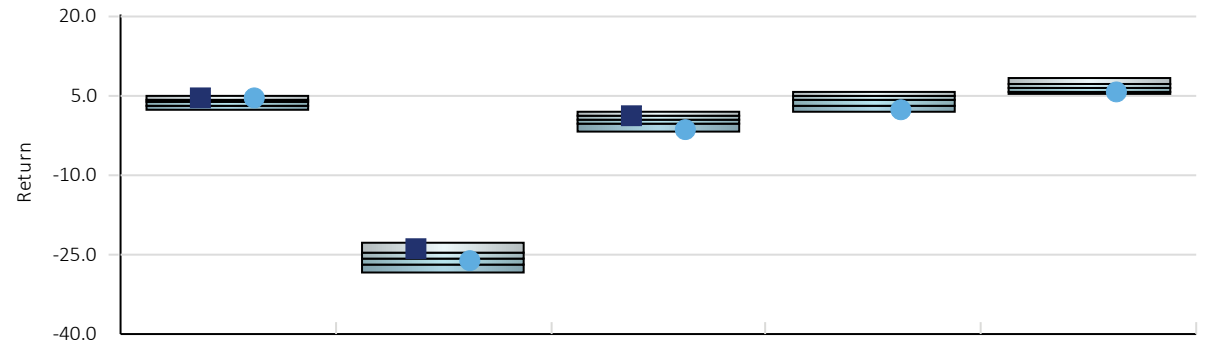
Centersquare

Periods Ended December 31, 2022

Comparative Performance

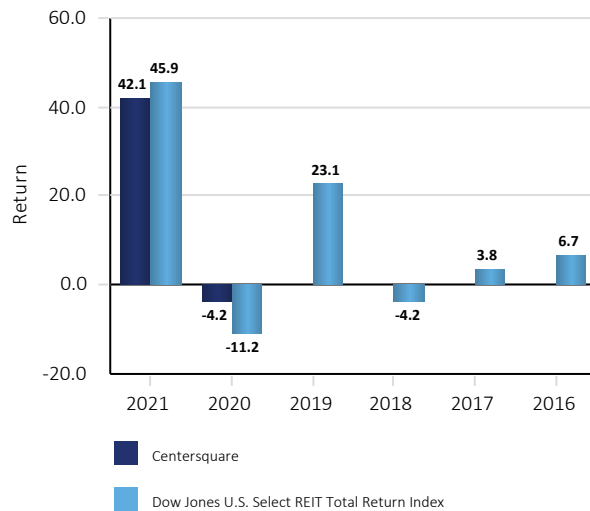


Peer Group Analysis: IM U.S. REIT (SA+CF)

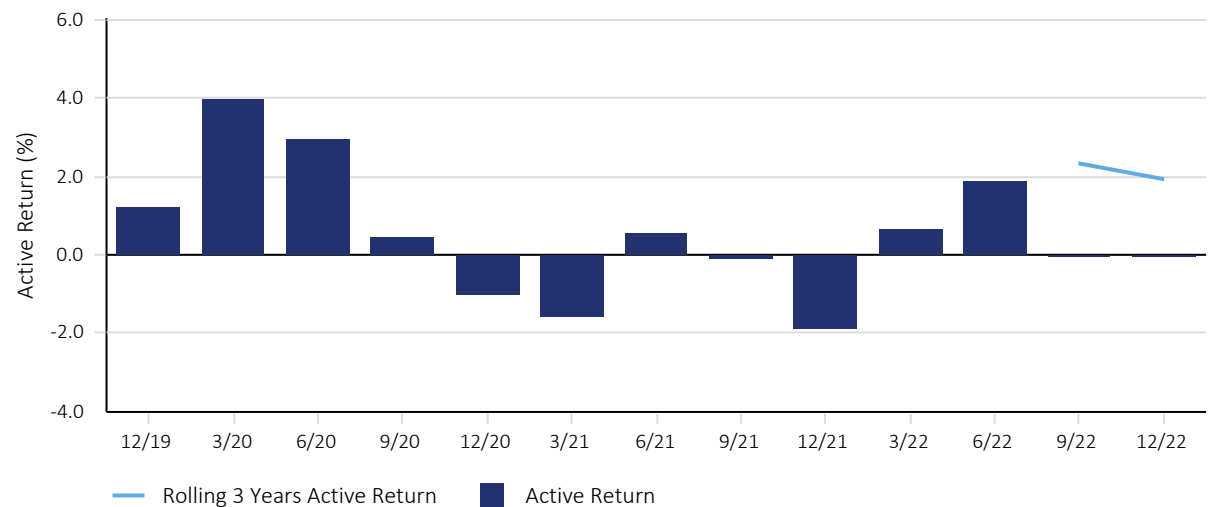


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	4.69 (13)	-23.82 (17)	1.21 (30)	2.50 (89)	5.74 (88)
Benchmark	4.76 (8)	-25.96 (58)	-1.37 (89)	2.50 (89)	5.74 (88)
Median	3.92	-25.60	0.36	4.33	6.47

Comparative Performance



Rolling 3 Years Performance

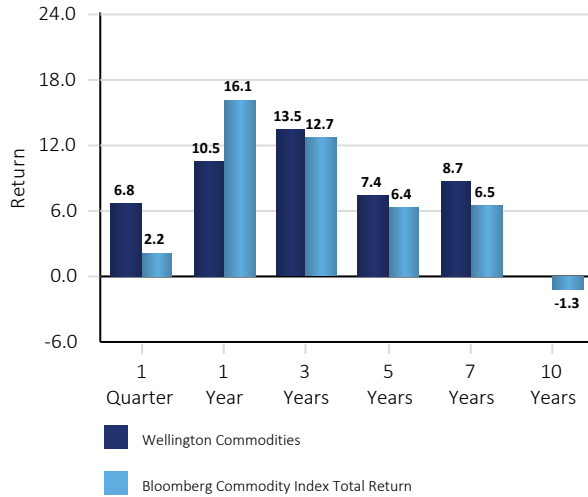


Performance Summary

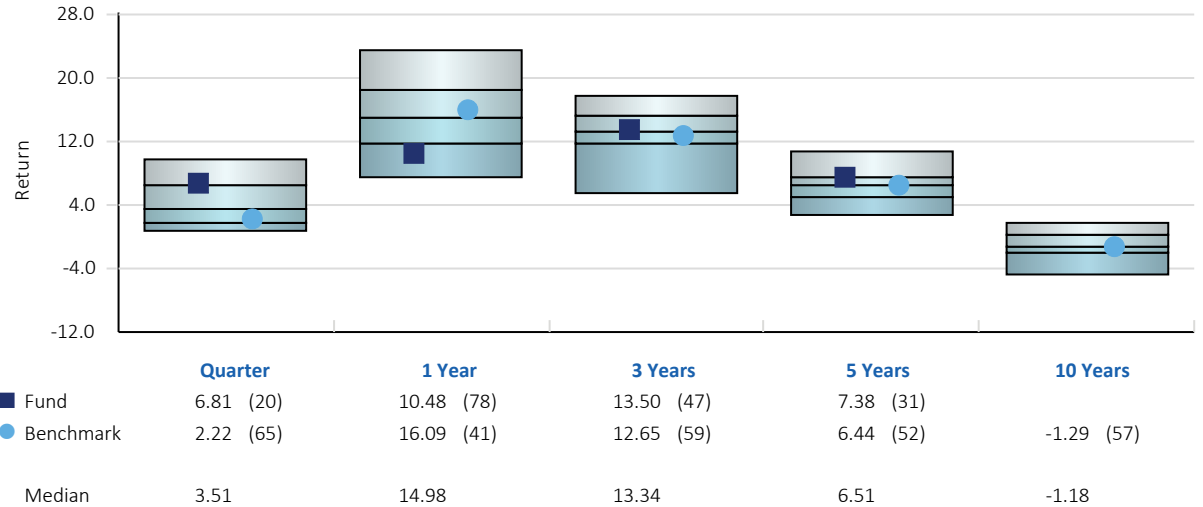
Wellington Commodities

Periods Ended December 31, 2022

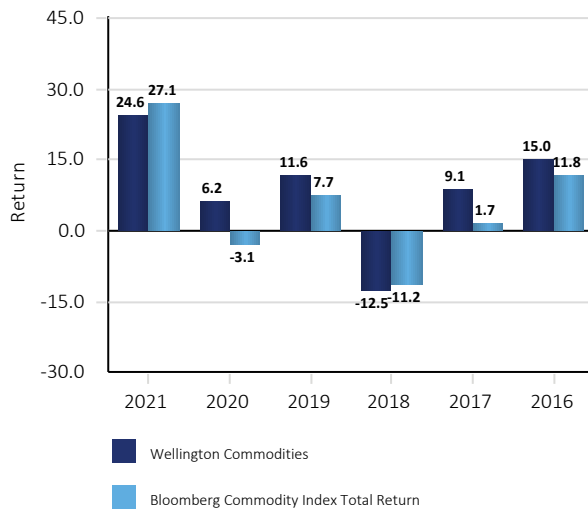
Comparative Performance



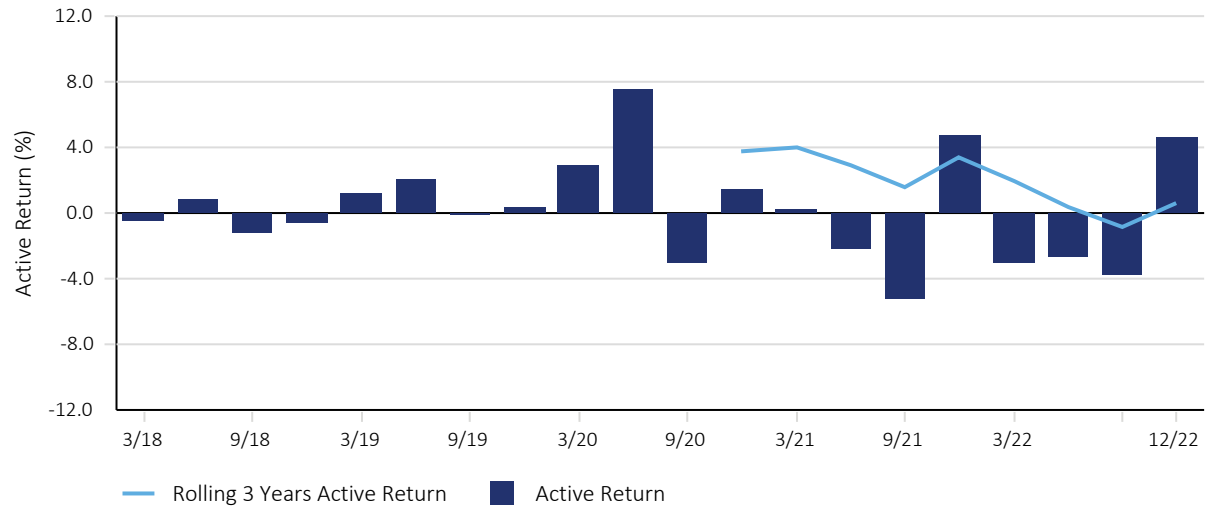
Peer Group Analysis: Commodities Broad Basket



Comparative Performance



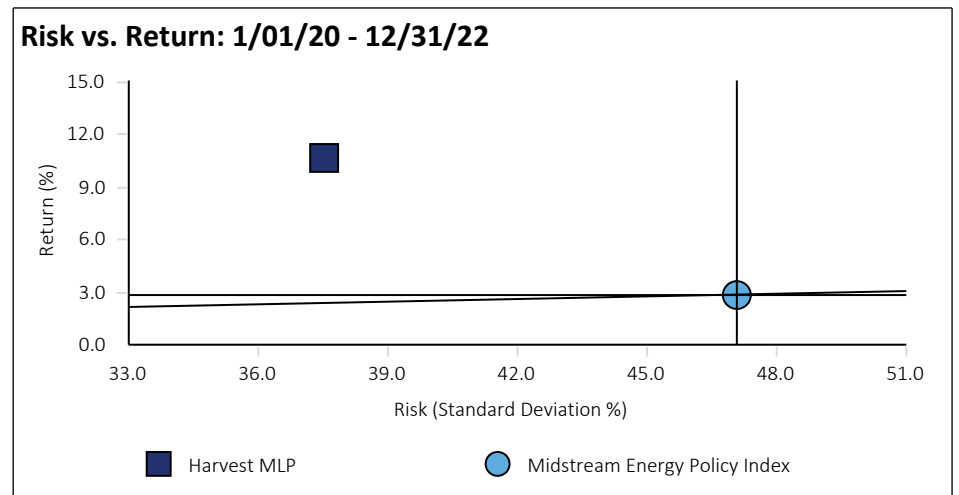
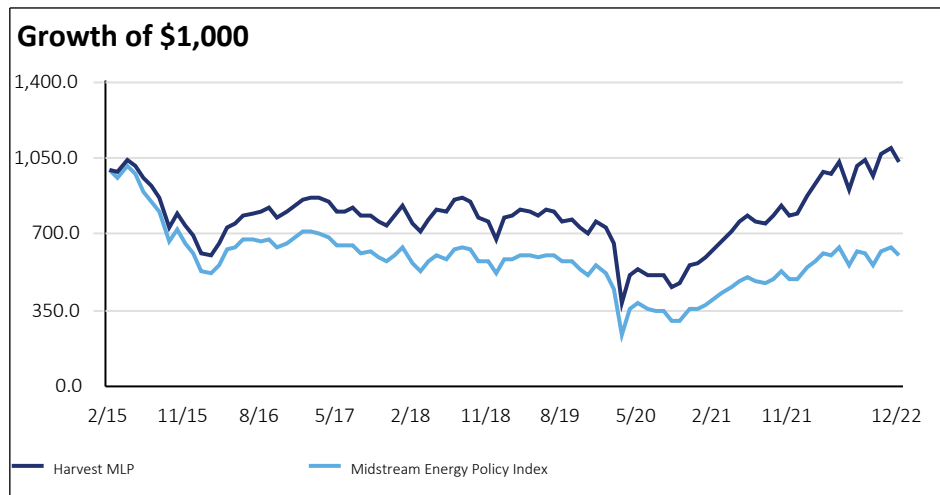
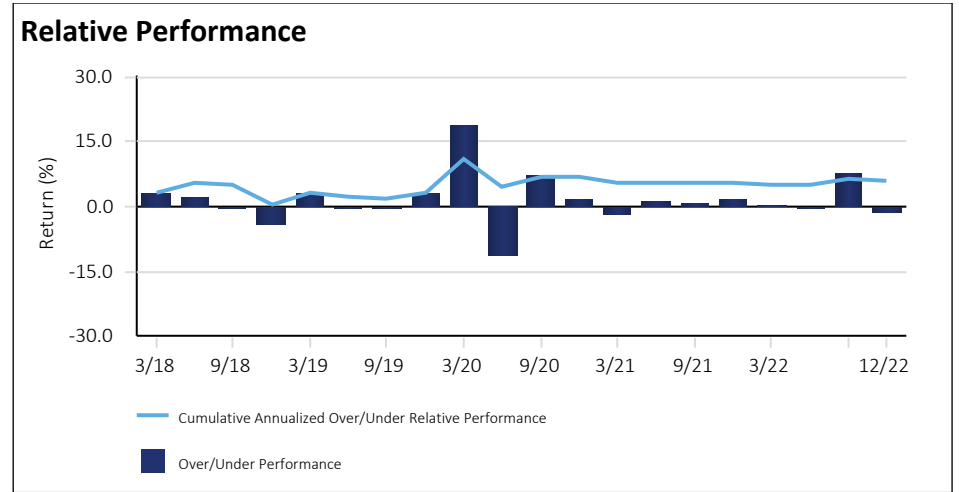
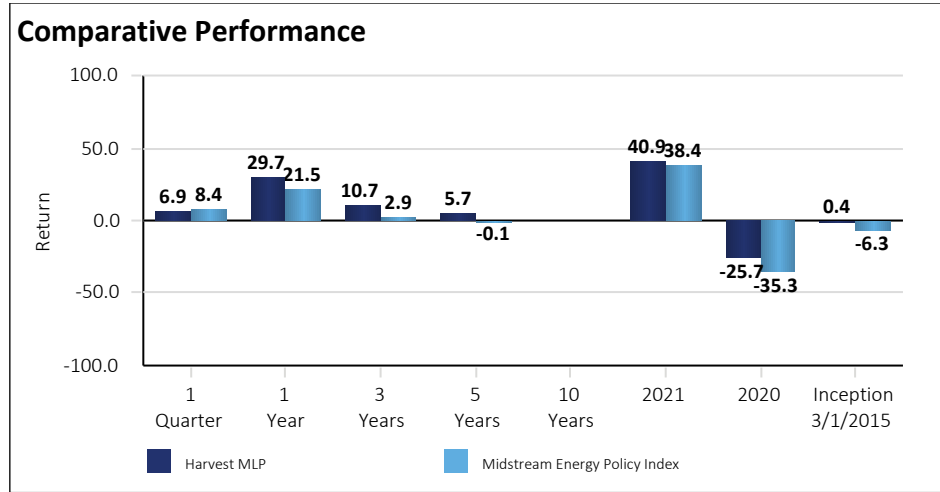
Rolling 3 Years Performance



Manager Summary

Harvest MLP

Periods Ended December 31, 2022



Historical Statistics: 1/01/20 - 12/31/22

	Alpha	Tracking Error	Information Ratio	Beta	Standard Deviation	Sharpe Ratio	Maximum Drawdown	Up Capture	Down Capture
Fund	6.07	12.78	0.18	0.81	41.48	0.48	-49.04	87.49	70.96
Benchmark	0.00	0.00		1.00	50.43	0.35	-57.19	100.00	100.00