

Wilshire Advisors

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

As of September 30, 2022

Quarterly Market Review

September 30, 2022

Asset Class Performance

Asset Class Returns - Best to Worst

Annualized 5-Year as of 9/22

2017	2018	2019	2020	2021	2022 YTD	
Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	REITs 46.2%	Commodities 13.6%	U.S. Equity 8.8%
Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	Commodities 27.1%	T-Bills 0.4%	Commodities 7.0%
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 -13.6%	REITs 2.9%
High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	Developed 11.8%	Core Bond -14.6%	U.S. TIPS 2.0%
REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	U.S. TIPS 6.0%	High Yield -14.7%	High Yield 1.6%
Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	High Yield 5.3%	U.S. Equity -24.4%	T-Bills 1.1%
U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%	Developed -26.8%	Core Bond -0.3%
Commodities 1.7%	Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Core Bond -1.5%	Emrg Mrkts -26.9%	Developed -0.4%
T-Bills 0.8%	Emrg Mrkts -14.2%	T-Bills 2.3%	REITs -7.9%	Emrg Mrkts -2.2%	REITs -29.7%	Emrg Mrkts -1.4%

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 down -4.4% for the third quarter and is now down -24.4% for all of 2022. Most sectors were down for the quarter. The worst performing were Communication Services (-12.5%), Real Estate (-10.9%) and Materials (-6.7%). From a size perspective, small-cap outperformed large by 100 basis points. Growth stocks outperformed value for the quarter but trail meaningfully for the year-to-date.

The U.S. equity market is in the midst of one of the worst sell-offs in the past 20 years, ahead of only the global financial crisis and COVID shutdown. Stock indexes produced gains during the first half of the quarter on strong earnings reports, particularly in technology and energy. While earnings have been falling short of expectations this year, they continue to trend higher versus 2021. The rally collapsed, however, after Federal Reserve Chair Jerome Powell stated in August that the Fed would continue to combat inflation in a way that could cause “some pain” for the U.S. economy. Rising rates have been the story of 2022 as investors are now able to capture a positive real return from bonds, which has allowed them to redirect dollars away from riskier assets.

Non-U.S. Equity

In Europe, monetary policy tightening and an energy crisis due, in part, to restricted Russian gas supplies weighed on stocks. In late September, the Bank of England found it necessary to intervene in the bond market after a massive sell-off of UK government bonds, announcing a temporary purchase program of long-dated bonds. China is currently struggling on several fronts – slowing growth, record high youth unemployment and a collapsing housing market. Its zero-COVID policy is arguably making matters worse, as full or partial lockdowns announced in late September will affect approximately 125 million people.

Fixed Income

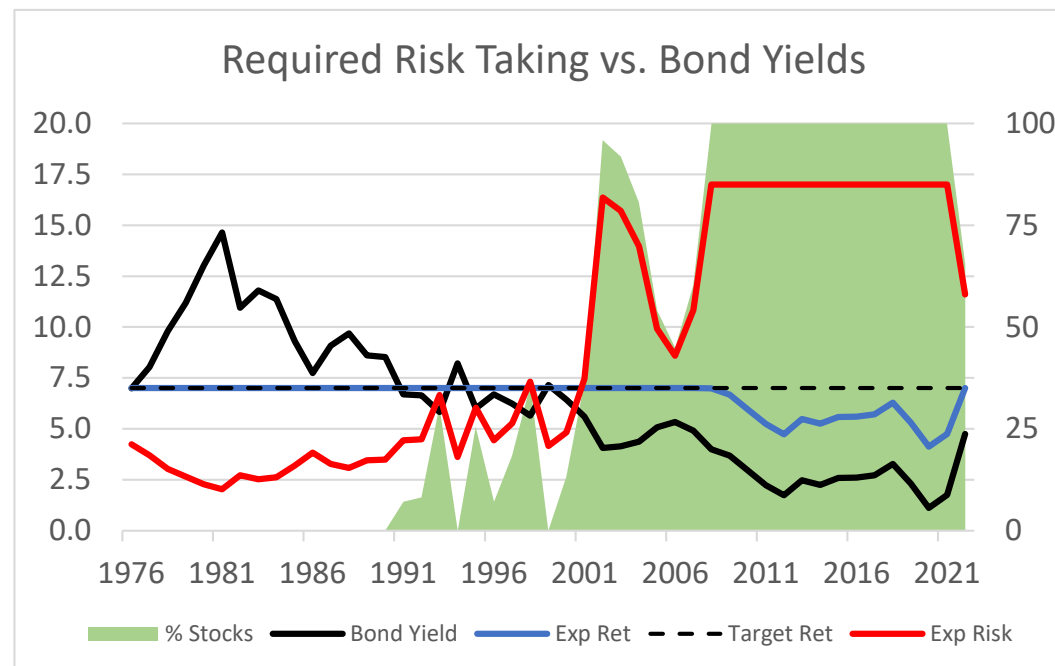
The U.S. Treasury yield curve was up meaningfully across all maturities during the quarter. The 10-year Treasury yield ended the quarter at 3.83%, up 81 basis points from June. The FOMC increased their overnight rate by 0.75% in both July and September, targeting a range of 3.00% to 3.25%. Equity markets reacted negatively to Fed Chair Jerome Powell’s “pain” speech in August where he clearly stressed the committee’s current goal of taming inflation.

September 2022 Asset Class Assumptions

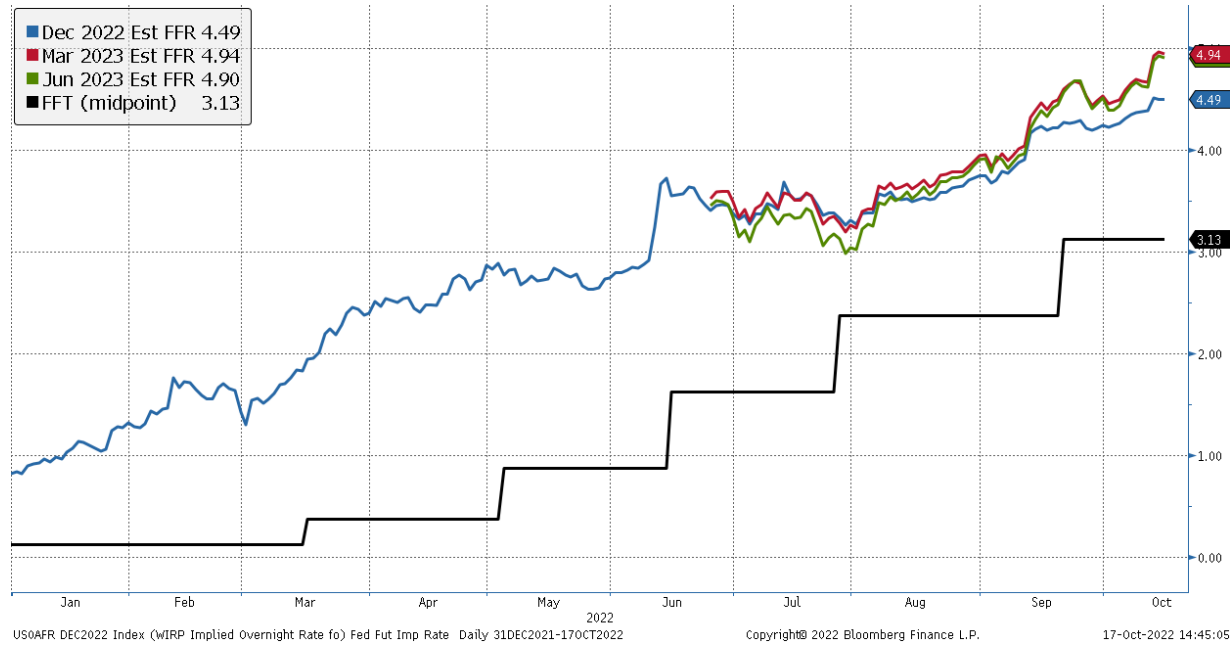
	Equity						Fixed Income					Real Assets						
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	TIPS	High Yield	Dev ex-US Bond (Hdg)	US RES	Global RES	Private RE	Cmdty	Real Assets	US CPI
Compound Return (%)	6.75	7.50	7.75	7.85	7.30	10.25	3.65	4.90	5.10	4.05	6.85	2.85	5.65	5.80	6.35	5.90	7.05	2.25
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 (%)	1.80	3.45	2.95	3.30	2.40	0.00	3.65	5.10	5.20	4.30	9.65	3.50	3.95	3.95	2.30	3.65	2.75	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

Improved Investment Outlook

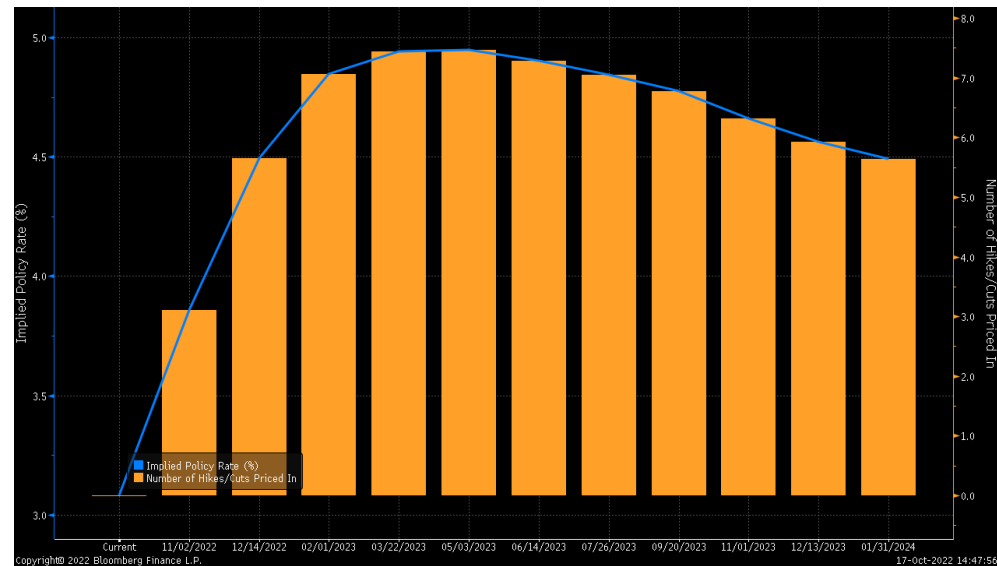
- Significant increase in bond yields has pushed return forecasts higher
- Exhibit below demonstrates how much risk taking is required within a stock/bond portfolio to meet a 7% return target – assuming the current bond yield of 4.75% and a 3% equity risk premium
- Under the September 2022 assumption suite, the necessary equity allocation is approximately 65% and the expected portfolio risk is 11.60%



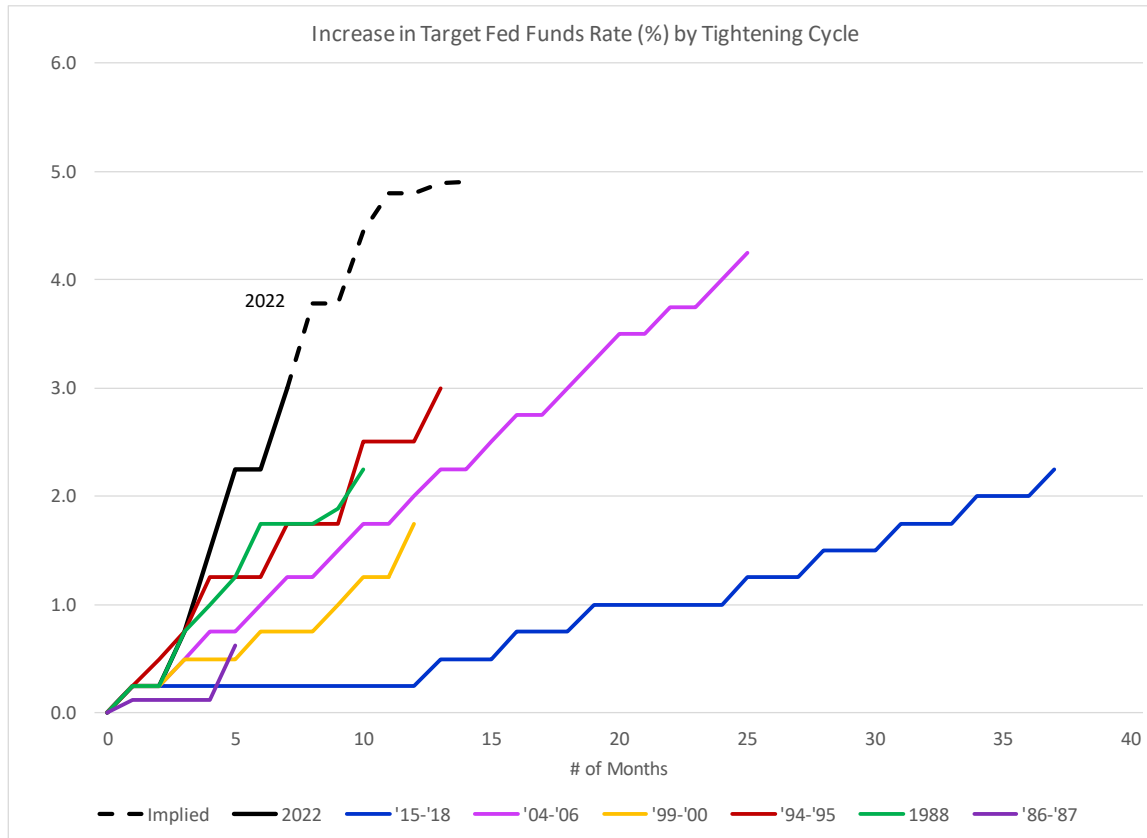
Center Stage: Fed Actions & Expectations



Data Source: Bloomberg



Most Aggressive Tightening in Modern Era... When/If it Bites, It Might Hurt



“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.”

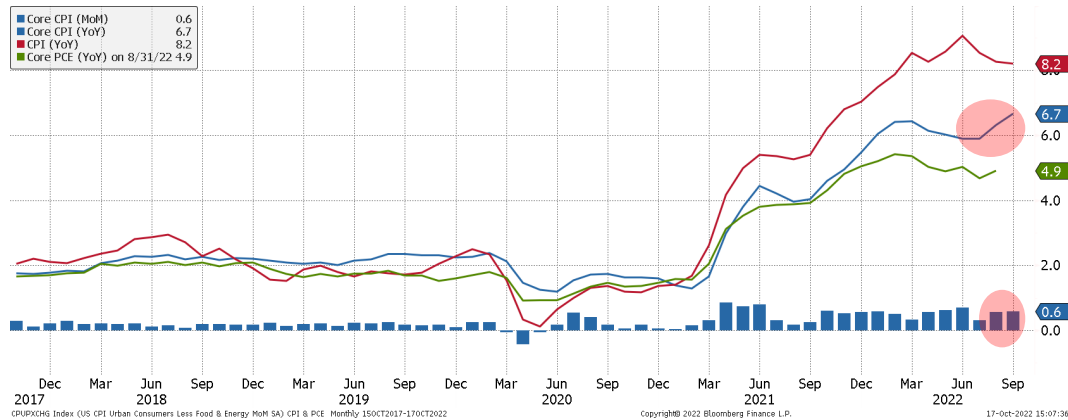


Jerome Powell

August 2022, Jackson Hole

Data Source: Bloomberg

The Fed's Dashboard: Realized & Expected Inflation

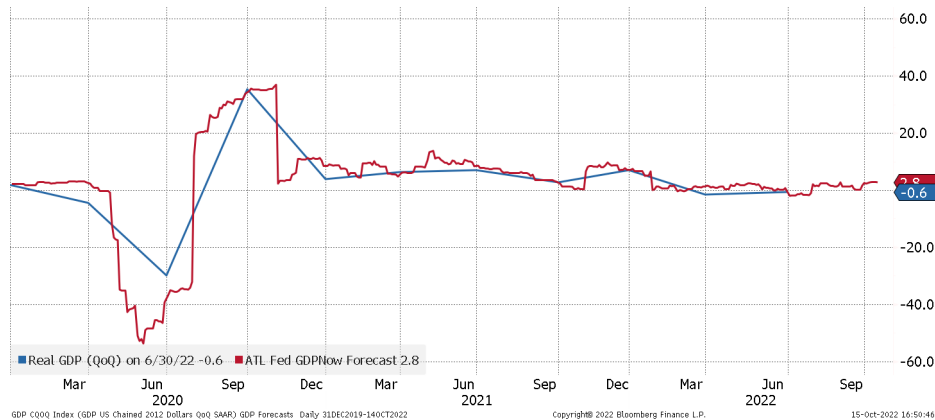


- Realized inflation remains stubbornly high
 - Sept & Oct Core CPI exceeded expectations
 - Core CPI (YoY) has ticked higher in recent months (as we anticipated last quarter)
 - Wage inflation & labor market imbalances add to inflation persistency/stickiness

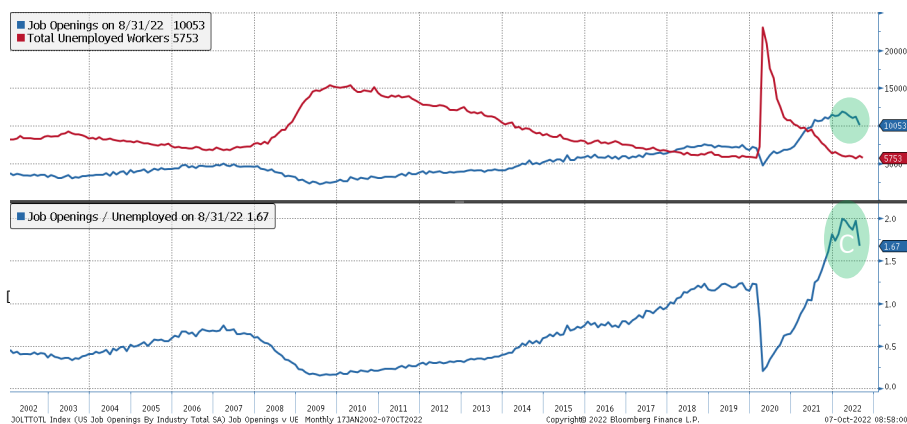
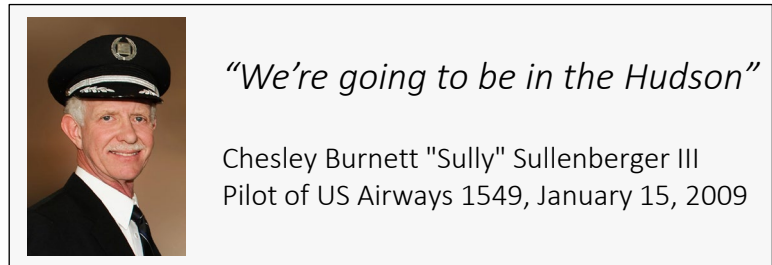


- Inflation expectations have come down
 - Suggests that inflation anchoring at high levels may not yet be fully entrenched in consumer/business sentiment
 - Expectational anchoring at higher-levels would make the Fed's job even more challenging

The Fed's Dashboard: Economic Growth & Labor Market

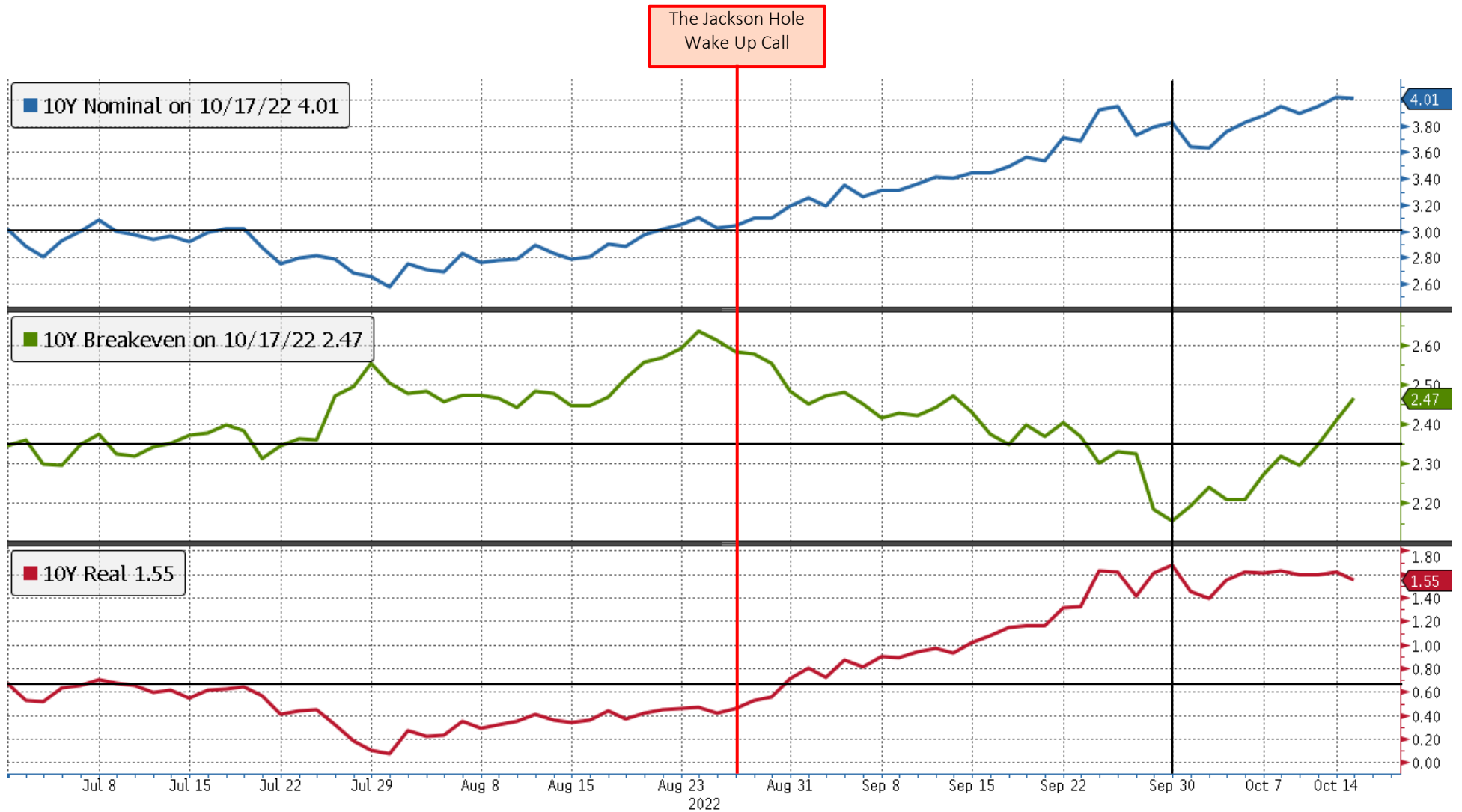


- The odds of a “soft landing” diminish as inflation persists (as the Fed is pressured to tighten aggressively)
 - Potential outcome may be somewhere between a hard and soft landing
 - Powell’s “Sully” Sullenberger moment...



- Labor markets remain historically tight
 - Difficult to see inflation pressures easing to acceptable levels without these tensions reversing
 - Recent jobs reports remain strong (good news is bad news as it relates to the Fed’s current objectives)

Rate Moves (10Y Nominal, Real & BEI)



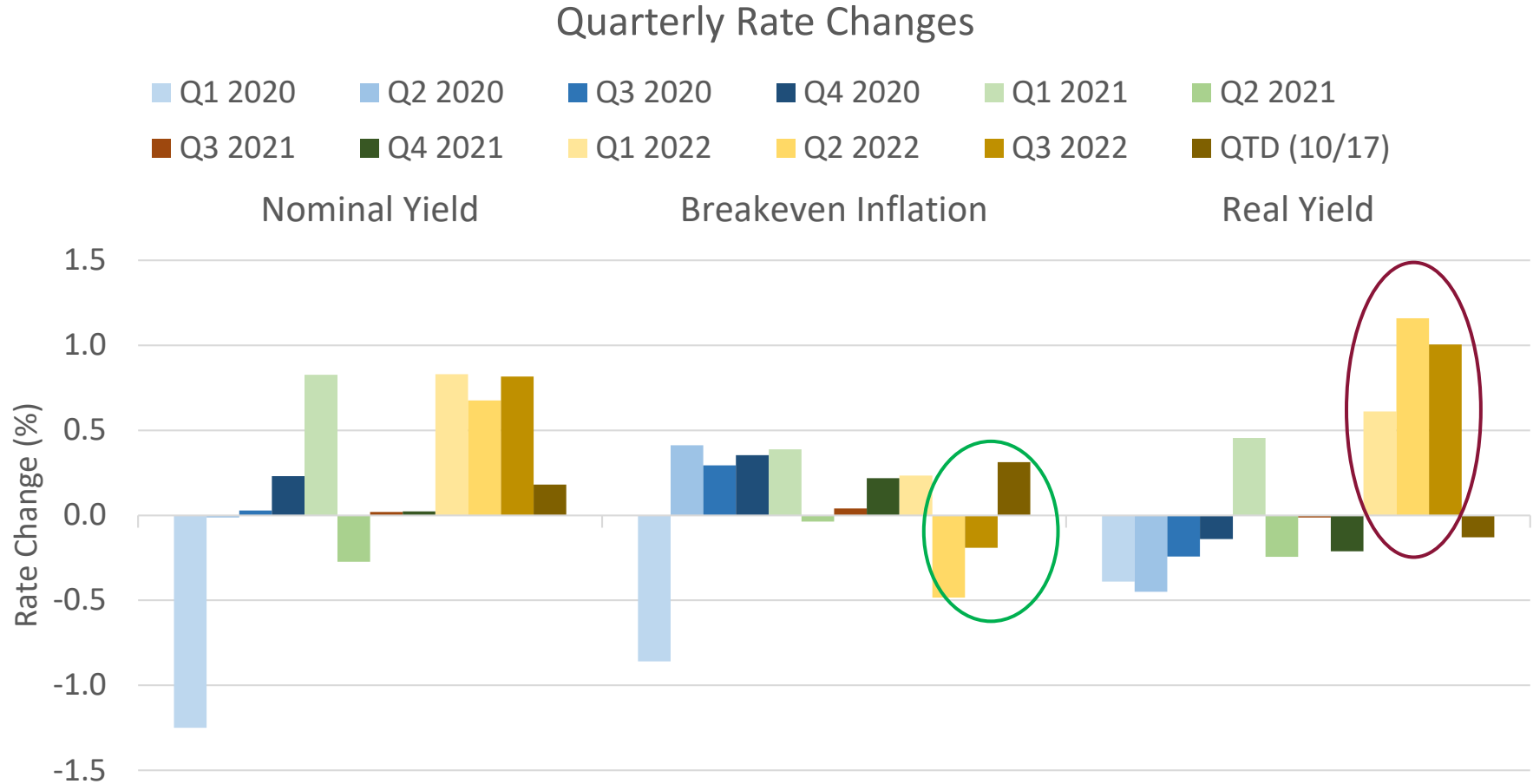
USGG10YR Index (US Generic Govt 10 Yr) 10yr Splits Daily 30JUN2022-17OCT2022

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Data Source: Bloomberg

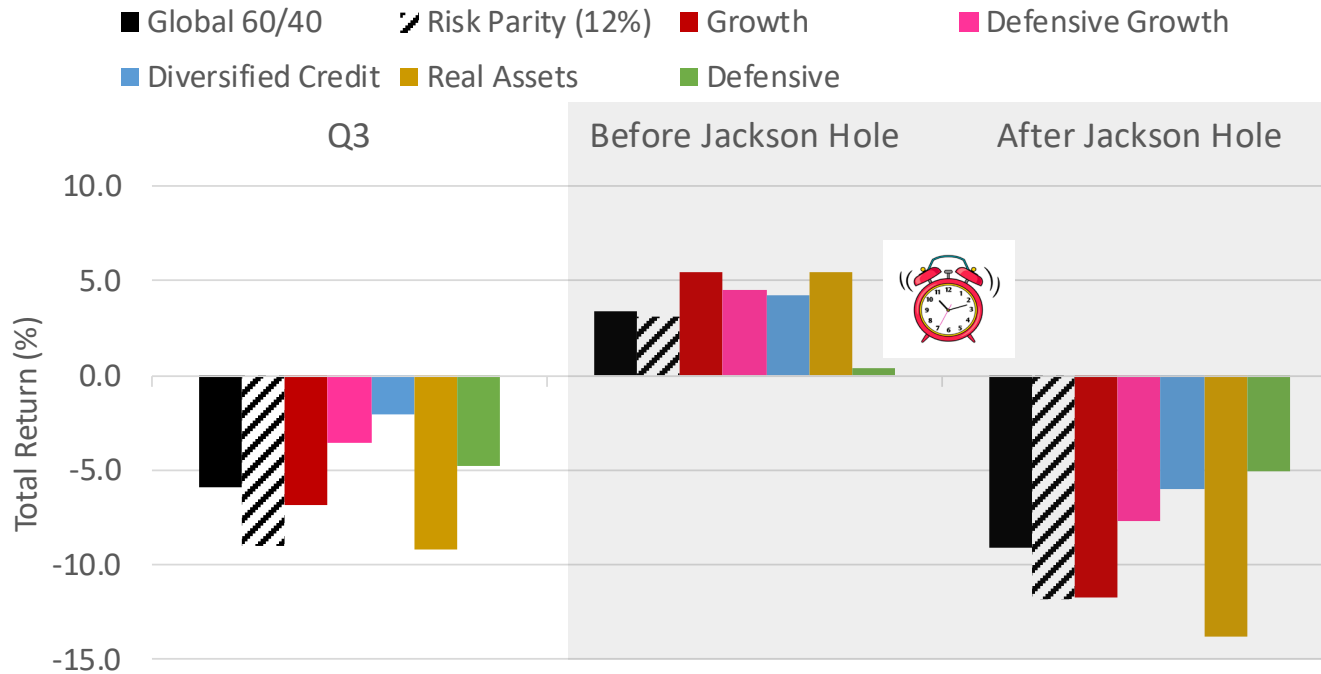
Rate Changes (2020 – YTD 2022) – Tightening the screws..



Data Source: Bloomberg

Q3 Market Returns: Before & After Jackson Hole

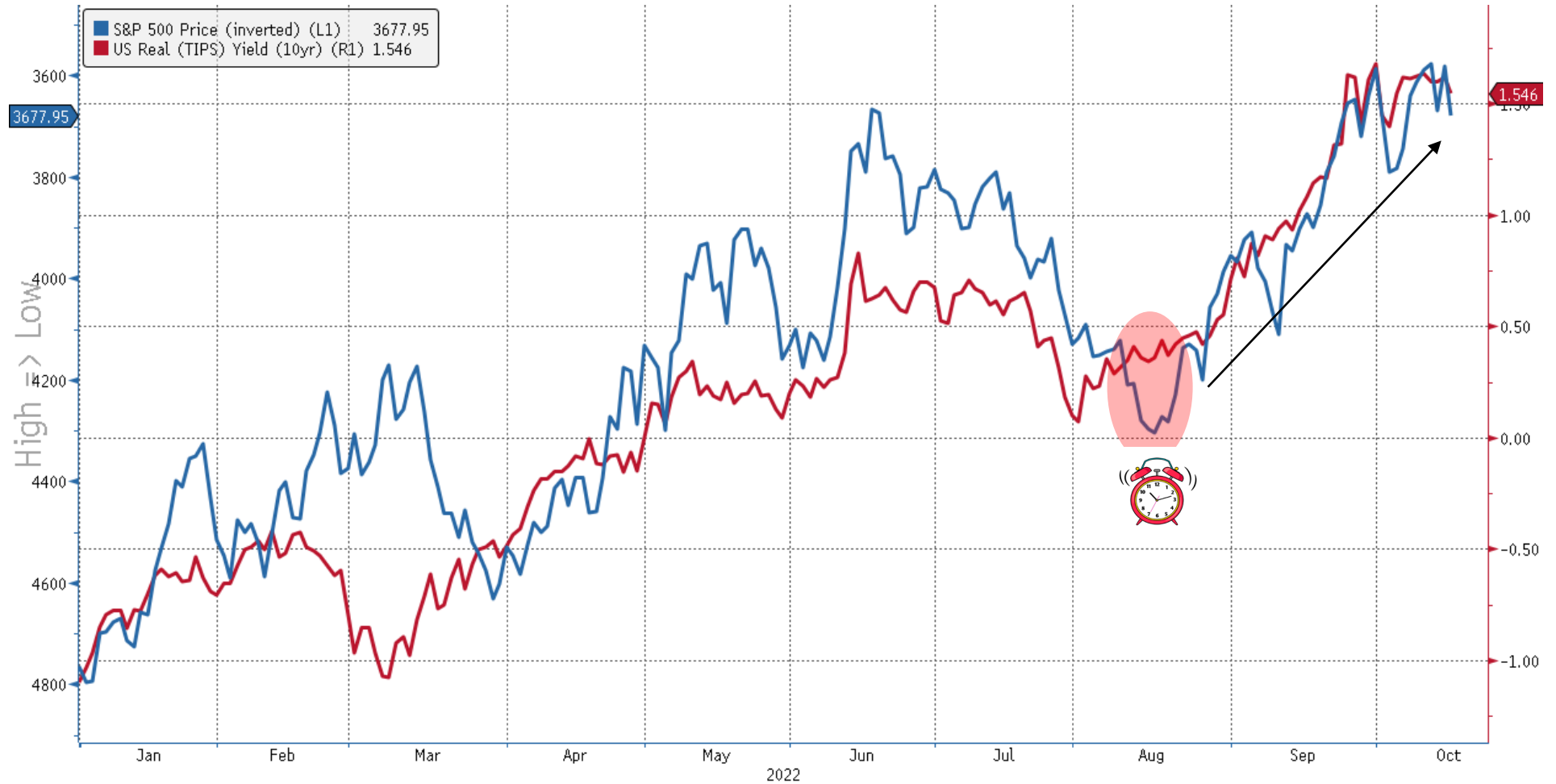
Asset Allocation & Thematic Returns



	Q3	Before Jackson Hole	After Jackson Hole
Global 60/40	(5.94)	3.44	(9.07)
Risk Parity (12%)	(9.03)	3.14	(11.80)
Growth	(6.82)	5.51	(11.68)
Defensive Growth	(3.54)	4.54	(7.73)
Diversified Credit	(2.03)	4.23	(6.01)
Real Assets	(9.14)	5.42	(13.81)
Defensive	(4.75)	0.36	(5.10)

Data Source: Bloomberg, Wilshire

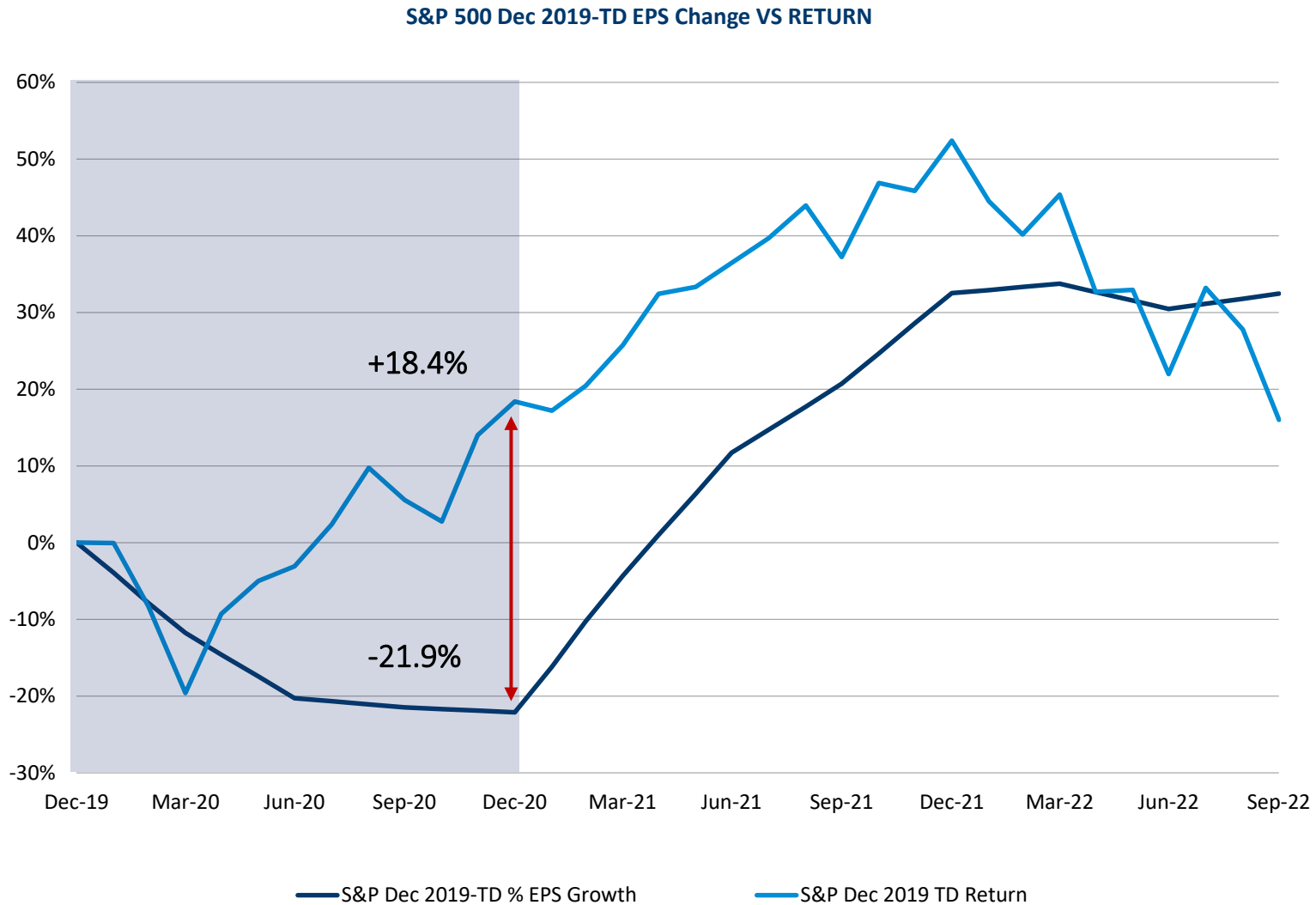
Liquidity/Rates-driven Market: Plenty of downside left if fundamentals deteriorate



SPX Index (S&P 500 INDEX) Stocks v Real. Daily 31DEC2021-17OCT2022 Copyright© 2022 Bloomberg Finance L.P. 17-Oct-2022 15:35:07

Data Source: Bloomberg

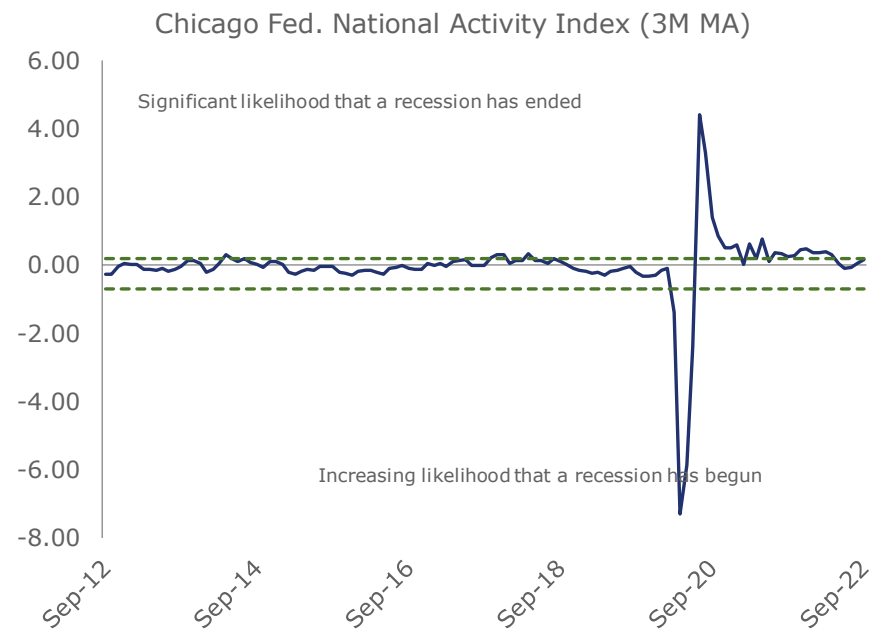
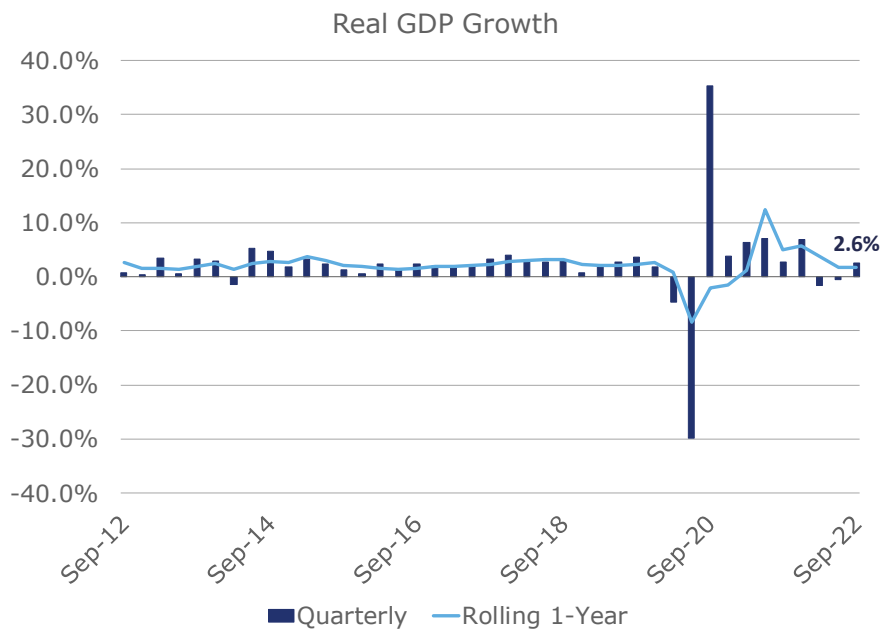
EPS Growth since Dec 2020 (prices down as growth stalls)



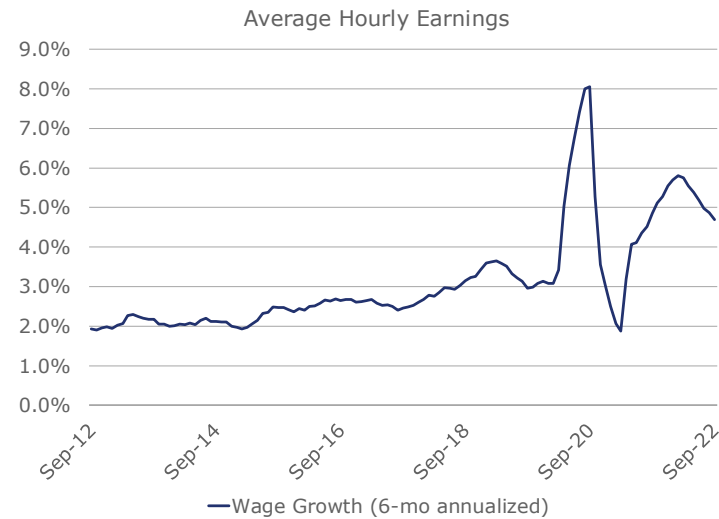
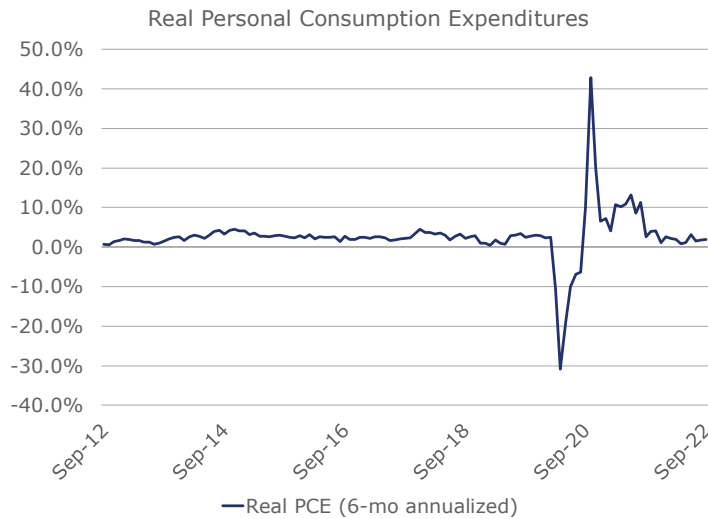
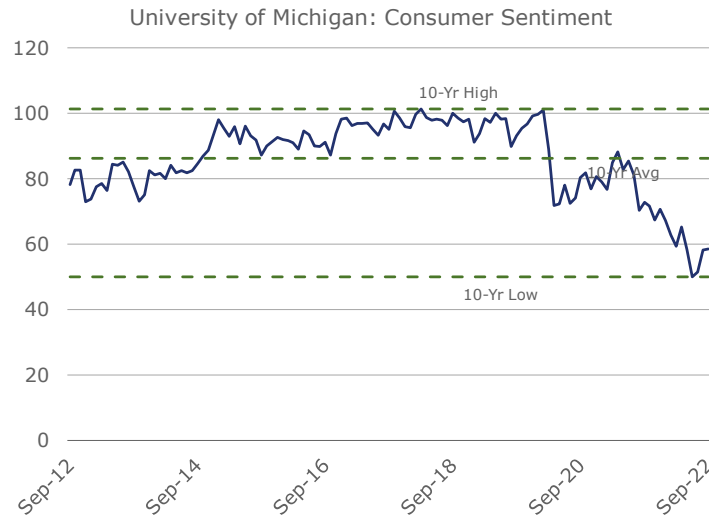
Data Source: Bloomberg

Economic/Market Activity

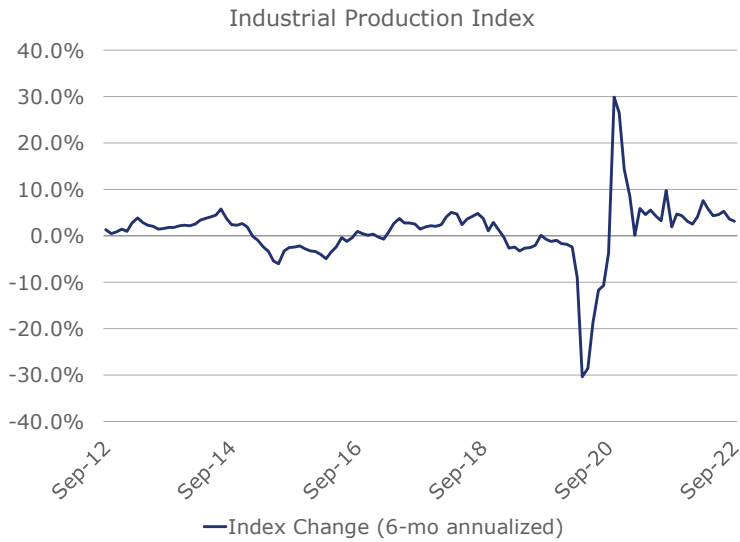
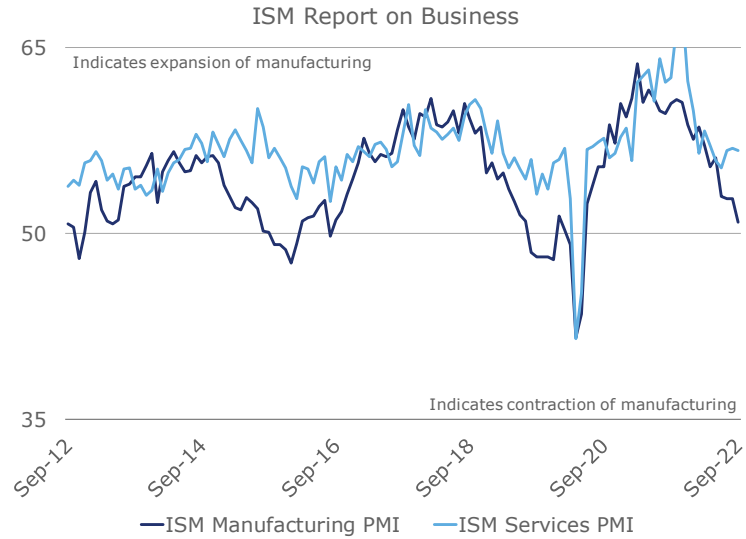
Economic Growth



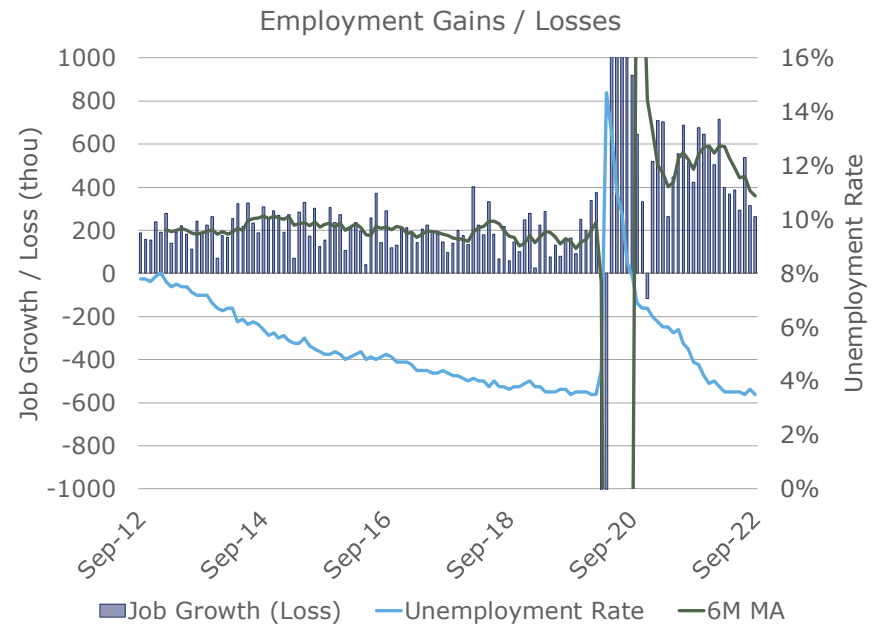
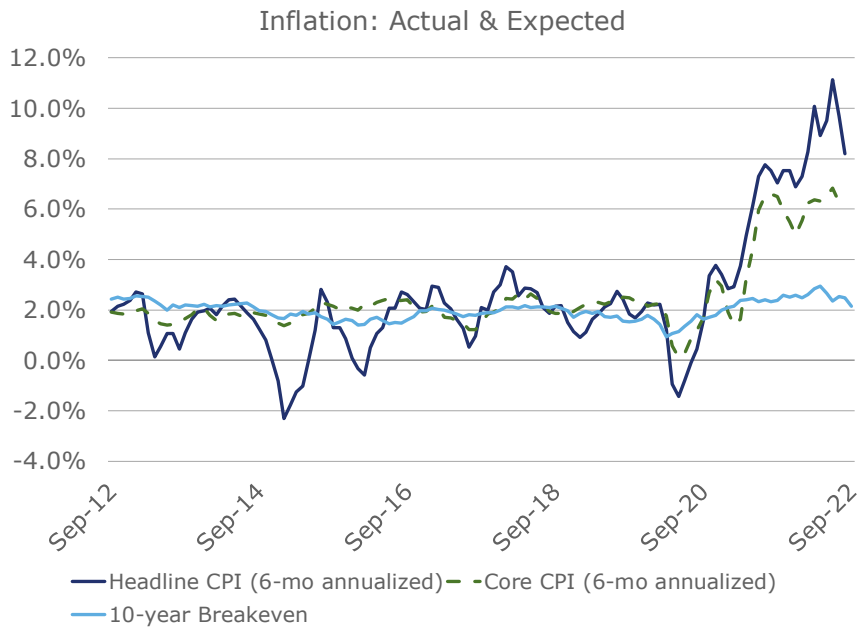
Consumer Activity



Business Activity



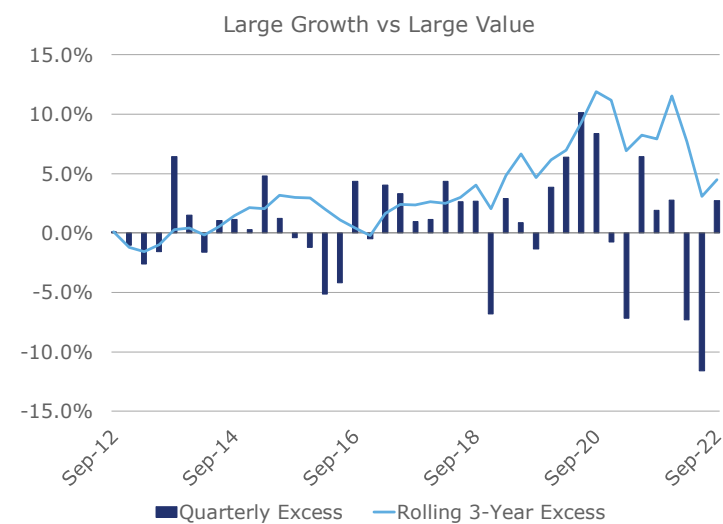
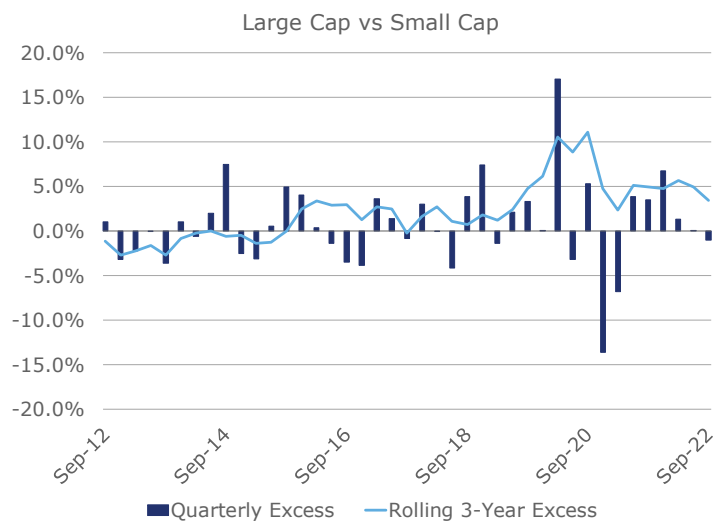
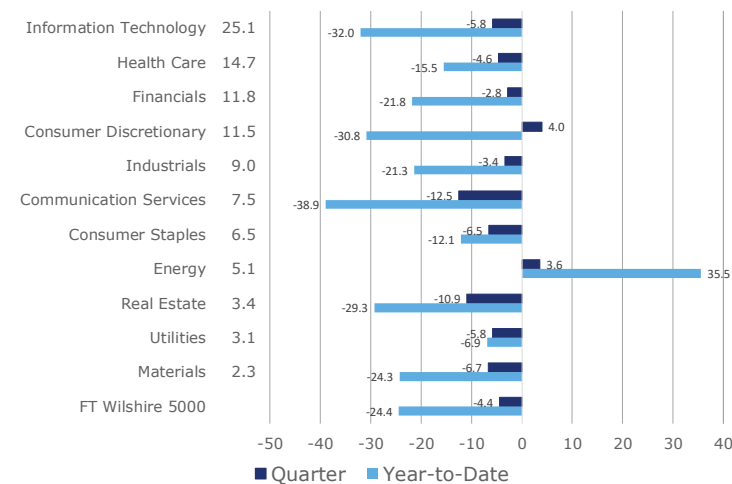
Inflation and Employment



U.S. Equity Market

As of 9/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	-4.4	-24.4	-17.2	8.1	8.8	11.5
Wilshire U.S. Large Cap	-4.5	-24.4	-16.6	8.4	9.3	11.8
Wilshire U.S. Small Cap	-3.5	-24.6	-22.1	4.8	4.2	9.2
Wilshire U.S. Large Growth	-3.3	-30.1	-22.0	10.7	11.4	13.4
Wilshire U.S. Large Value	-5.8	-16.9	-9.8	6.0	7.2	10.1
Wilshire U.S. Small Growth	-2.0	-28.2	-26.9	4.1	4.5	9.3
Wilshire U.S. Small Value	-4.9	-21.1	-17.3	5.4	3.8	8.9
Wilshire REIT Index	-10.2	-29.7	-17.6	-2.2	2.9	6.1
MSCI USA Min. Vol. Index	-5.4	-17.3	-8.7	2.9	7.7	10.7
FTSE RAFI U.S. 1000 Index	-5.7	-17.7	-10.3	8.2	7.9	11.1

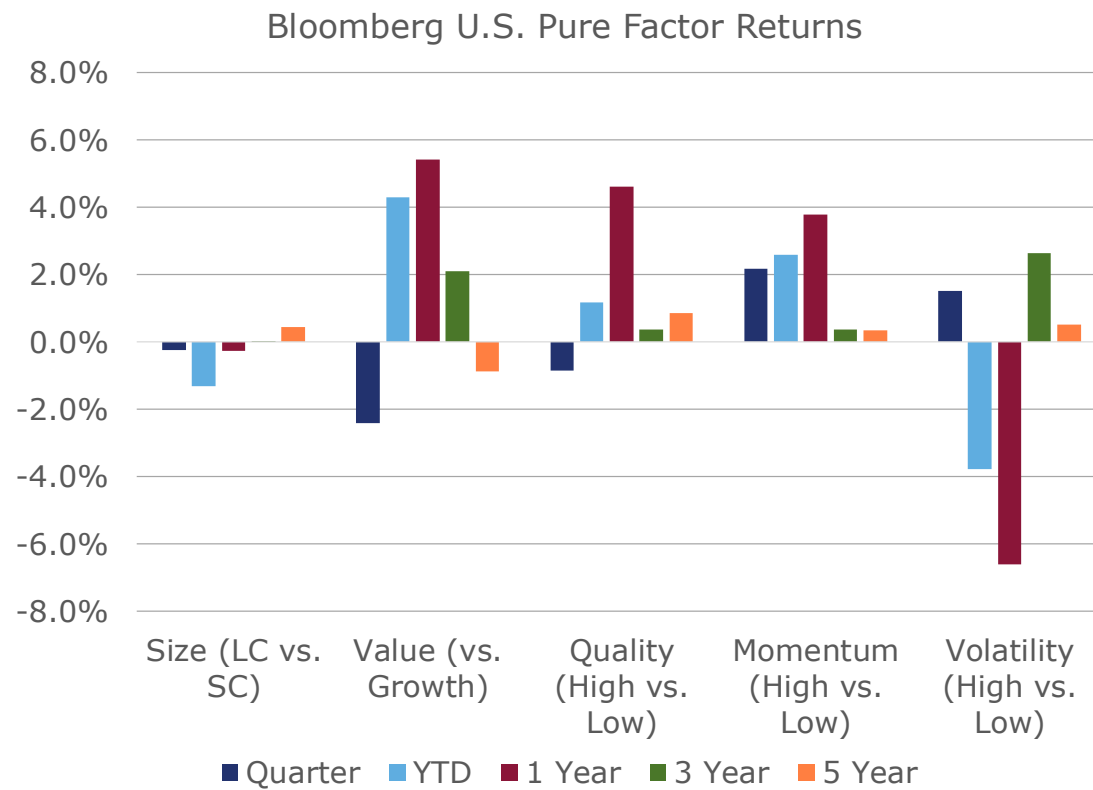
U.S. Sector Weight and Return (%)



Data Sources: Bloomberg, Wilshire Atlas

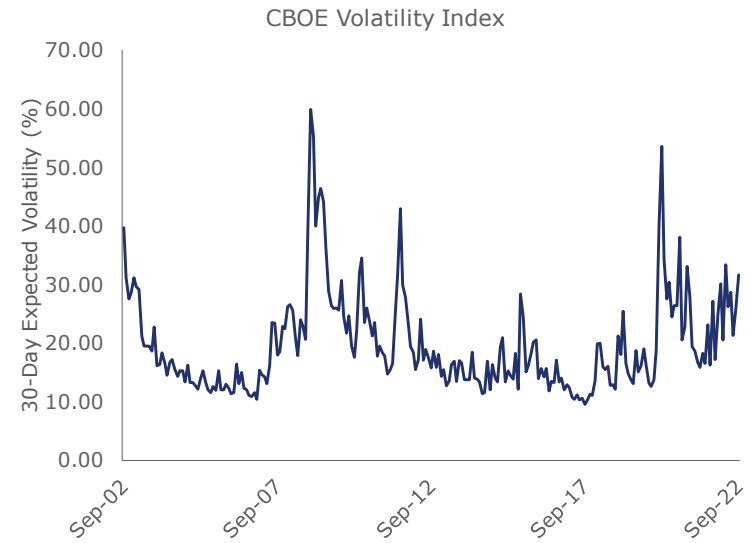
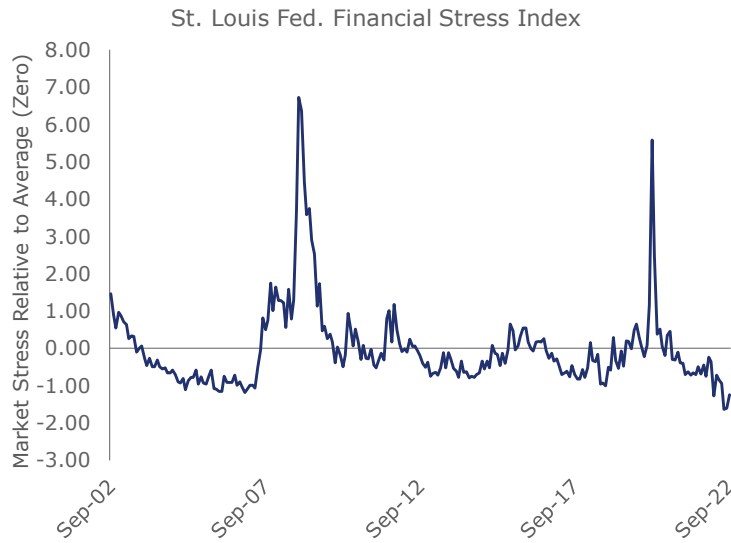
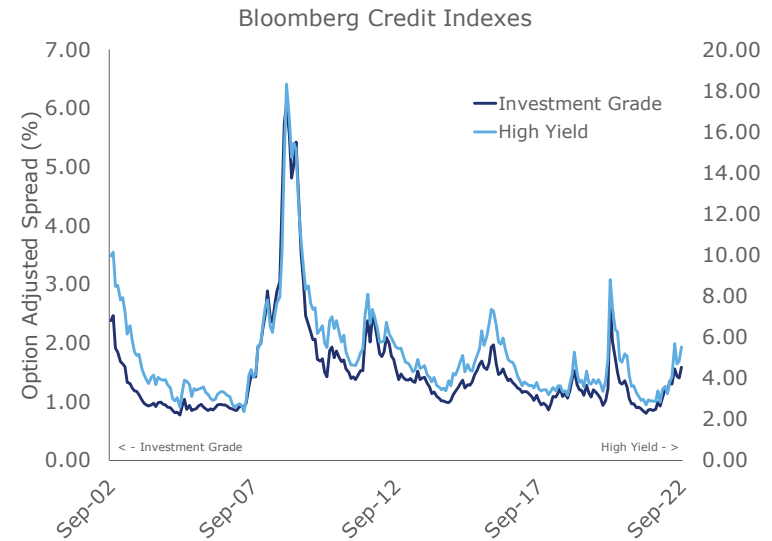
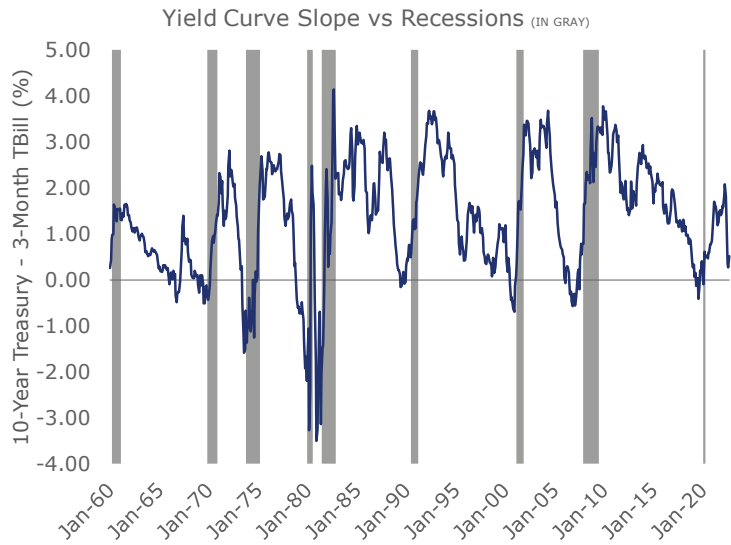
U.S. Factor Returns

- Factor returns represent the contribution from large cap, value, etc. stocks within Bloomberg's Portfolio & Risk Analytics module
- Low volatility has mostly outperformed this year, except during Q3



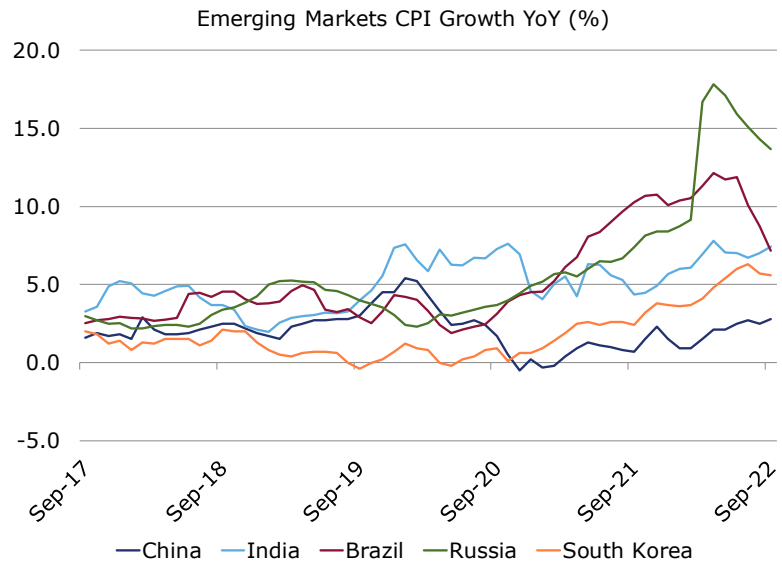
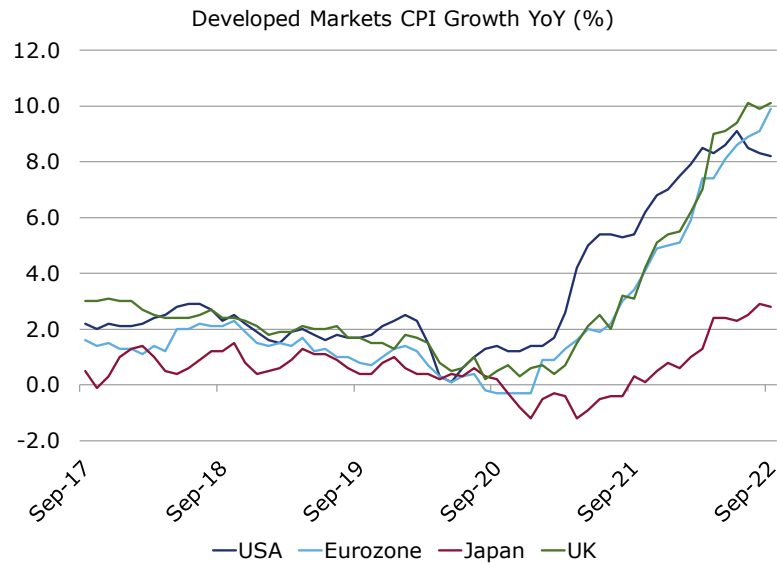
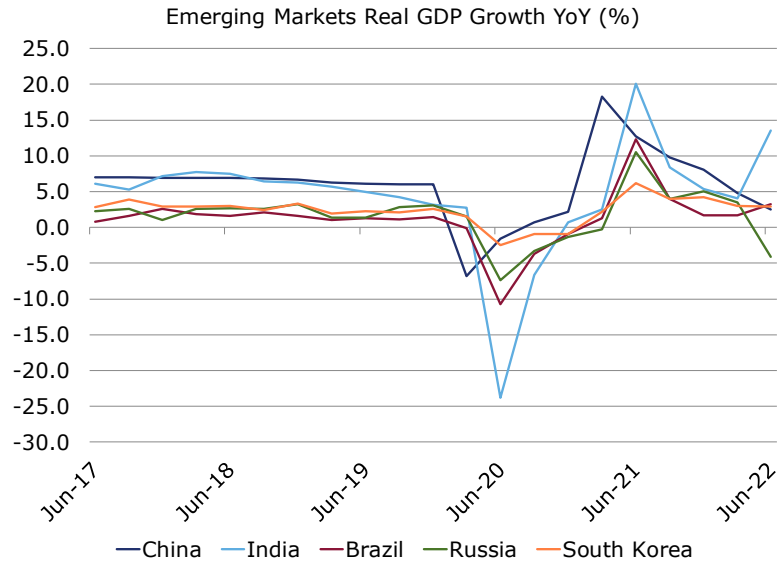
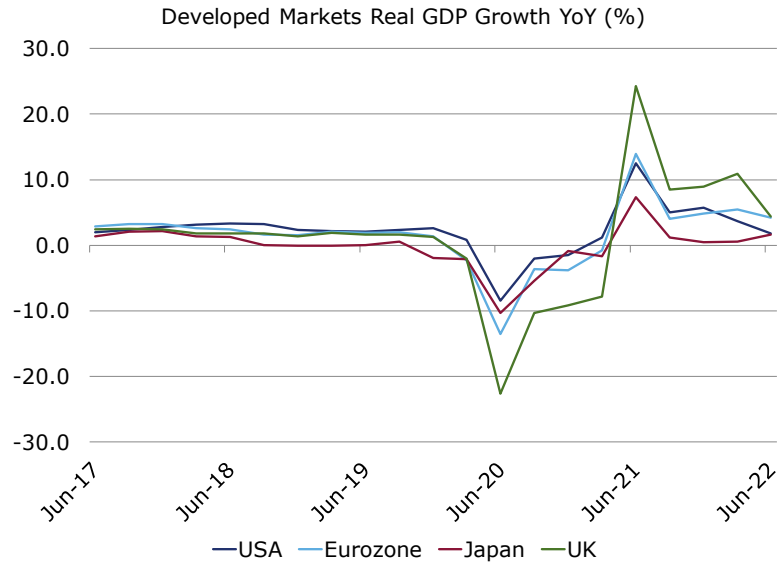
Data Sources: Bloomberg

Risk Monitor



Data Sources: Bloomberg

Non-U.S. Growth and Inflation

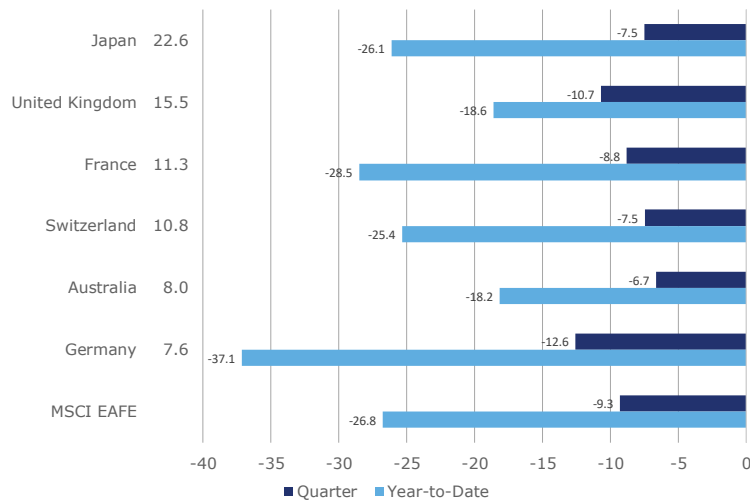


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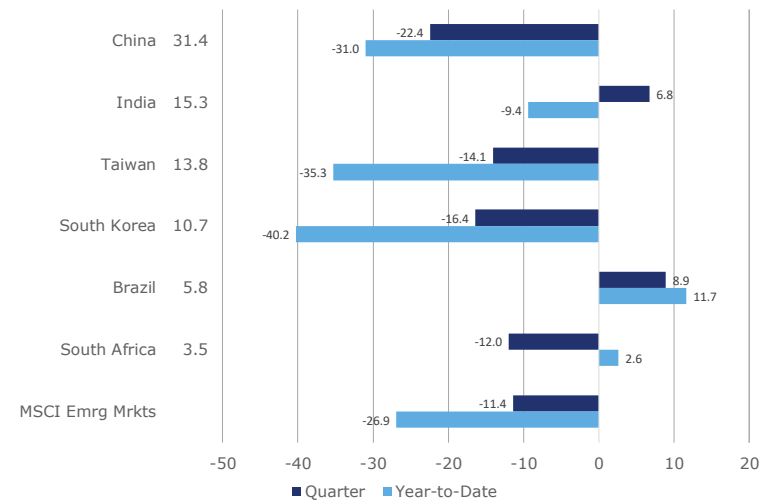
Non-U.S. Equity Market

As of 9/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US (\$G)	-9.8	-26.2	-24.8	-1.1	-0.3	3.5
MSCI EAFE (\$G)	-9.3	-26.8	-24.7	-1.4	-0.4	4.2
MSCI Emerging Markets (\$G)	-11.4	-26.9	-27.8	-1.7	-1.4	1.4
MSCI Frontier Markets (\$G)	-8.6	-24.8	-23.3	-6.4	-4.6	-0.1
MSCI ACWI ex-US Growth (\$G)	-9.3	-31.6	-30.0	-1.1	0.5	4.3
MSCI ACWI ex-US Value (\$G)	-10.1	-21.1	-20.1	-1.3	-1.4	2.8
MSCI ACWI ex-US Small (\$G)	-8.2	-29.1	-28.6	0.8	-0.2	4.8
MSCI ACWI Minimum Volatility	-5.9	-16.9	-11.6	0.4	4.5	7.4
MSCI EAFE Minimum Volatility	-9.3	-24.1	-22.2	-5.0	-1.1	3.9
FTSE RAFI Developed ex-US	-10.1	-23.1	-21.1	-0.4	-0.8	3.9
MSCI EAFE LC (G)	-3.5	-14.1	-10.7	3.0	3.3	7.9
MSCI Emerging Markets LC (G)	-8.0	-20.5	-21.1	1.4	1.5	4.8

Developed Markets Weight and Return (%)



Emerging Markets Weight and Return (%)

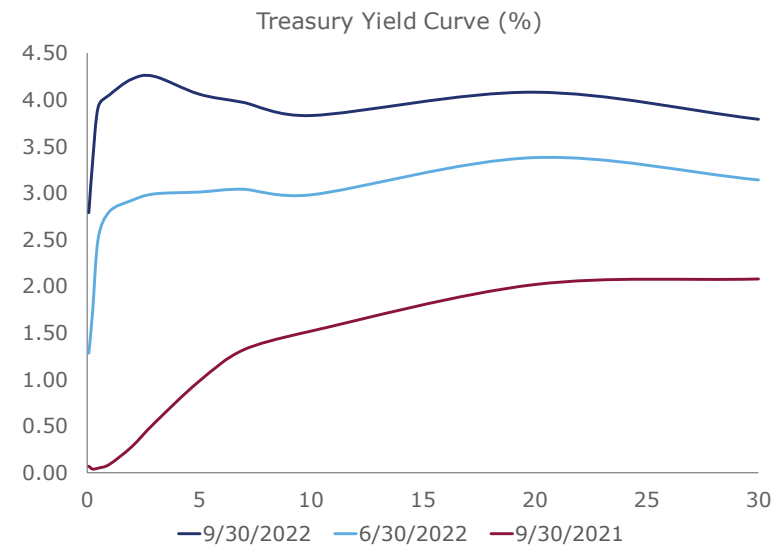
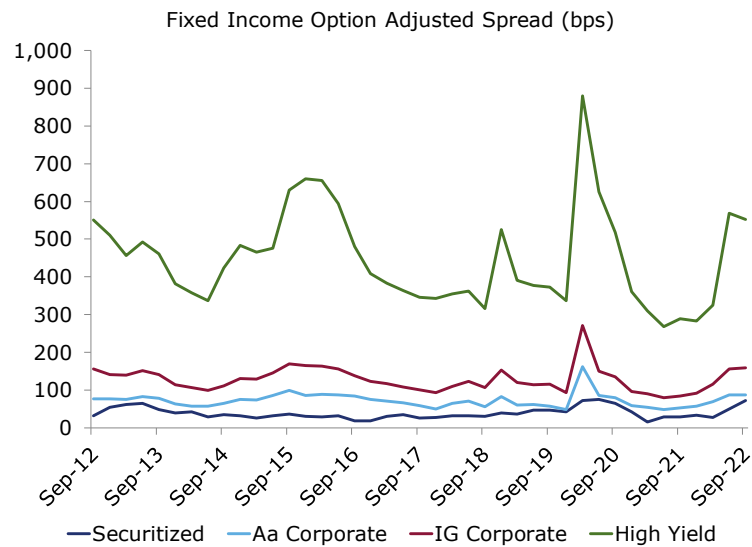


Data Sources: Bloomberg

U.S. Fixed Income

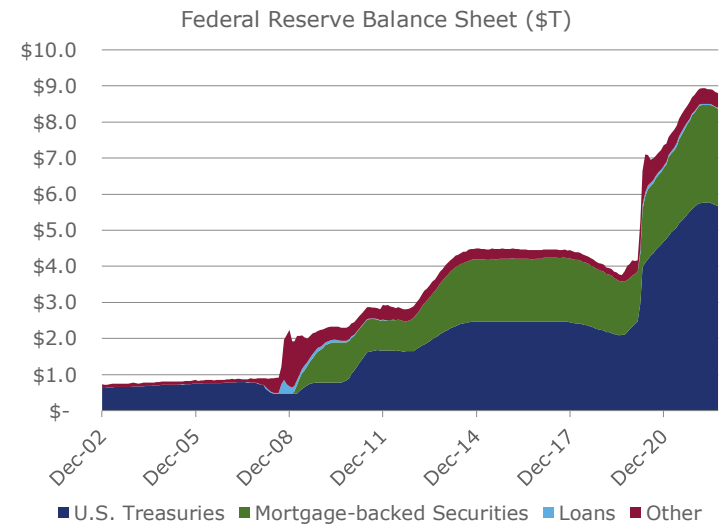
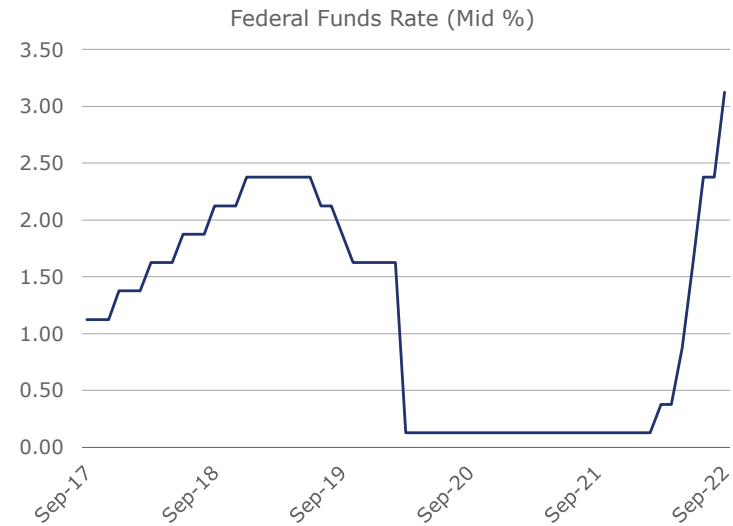
As of 9/30/2022	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	4.8	6.2	-4.8	-14.6	-14.6	-3.3	-0.3	0.9
Bloomberg Treasury	4.1	6.1	-4.3	-13.1	-12.9	-3.1	-0.2	0.5
Bloomberg Gov't-Rel.	4.7	5.1	-3.9	-12.7	-12.7	-2.9	0.0	1.0
Bloomberg Securitized	4.9	5.8	-5.2	-13.4	-13.8	-3.5	-0.8	0.6
Bloomberg Corporate	5.7	7.1	-5.1	-18.7	-18.5	-3.7	0.0	1.7
Bloomberg LT Gov't/Credit	5.0	14.3	-9.0	-28.9	-27.4	-7.3	-1.2	1.4
Bloomberg LT Treasury	4.0	16.3	-9.6	-28.8	-26.6	-8.5	-1.6	0.6
Bloomberg LT Gov't-Rel.	5.7	11.6	-7.9	-25.8	-24.4	-7.2	-1.3	1.4
Bloomberg LT Corporate	5.9	12.8	-8.7	-29.4	-28.4	-7.0	-1.1	1.8
Bloomberg U.S. TIPS *	3.8	7.8	-5.1	-13.6	-11.6	0.8	2.0	1.0
Bloomberg High Yield	9.7	4.1	-0.6	-14.7	-14.1	-0.5	1.6	3.9
S&P/LSTA Leveraged Loan	8.0	0.3	1.4	-3.3	-2.5	2.2	3.0	3.5
Treasury Bills	3.2	0.3	0.4	0.4	0.4	0.6	1.1	0.7

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



Federal Reserve

- After 150 basis point increase in the Fed-funds rate through June, the FOMC increased the rate an additional 150 basis points during Q3
- Federal Reserve has added more than \$4.5 trillion in assets to their balance sheet during the past two years
- QE4 is now larger than the 3 phases of quantitative easing – combined – following the global financial crisis

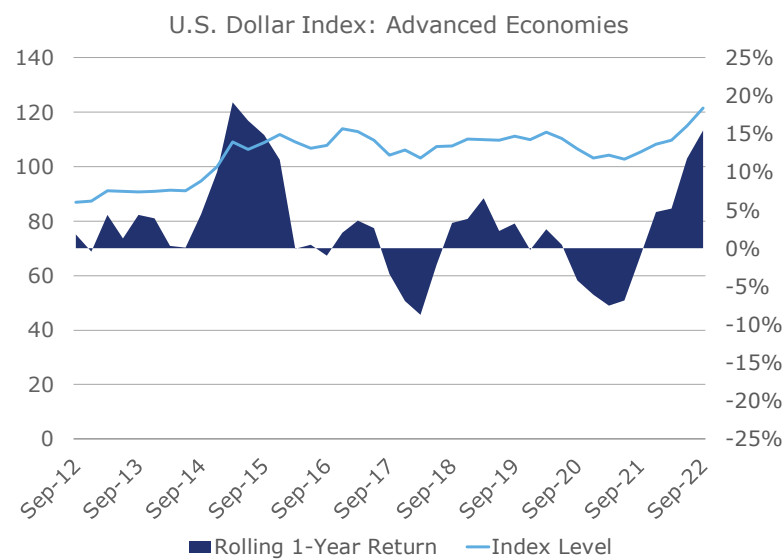
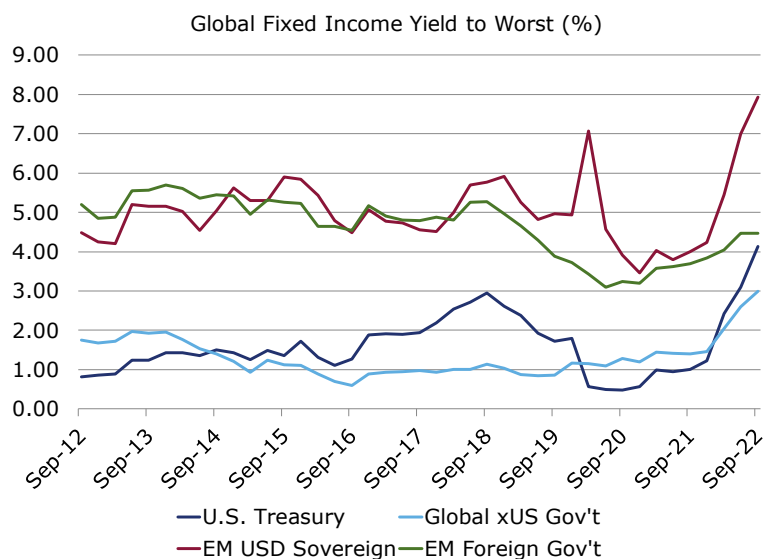


	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	\$1,403
QE2	11/3/2010	6/29/2012	\$568
QE3	9/13/2012	10/29/2014	\$1,674
QE4	3/23/2020	3/15/2022	\$4,779

Non-U.S. Fixed Income

As of 9/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Developed Markets						
Bloomberg Global Aggregate xUS	-8.8	-23.9	-24.8	-7.8	-4.0	-2.4
Bloomberg Global Aggregate xUS *	-2.2	-9.9	-9.9	-3.0	0.7	2.2
Bloomberg Global Inflation Linked xUS	-13.4	-33.5	-31.5	-8.9	-4.3	-1.0
Bloomberg Global Inflation Linked xUS *	-5.9	-19.7	-16.9	-4.7	0.6	3.2
Emerging Markets (Hard Currency)						
Bloomberg EM USD Aggregate	-4.1	-20.5	-20.9	-5.3	-1.6	1.4
Emerging Markets (Foreign Currency)						
Bloomberg EM Local Currency Gov't	-5.0	-13.5	-13.2	-2.3	-0.6	0.0
Bloomberg EM Local Currency Gov't *	0.6	-4.5	-4.9	-0.8	1.6	1.9
Euro vs. Dollar	-6.5	-13.8	-15.4	-3.5	-3.7	-2.7
Yen vs. Dollar	-6.2	-20.5	-23.1	-9.3	-4.9	-6.0
Pound vs. Dollar	-8.3	-17.5	-17.1	-3.1	-3.6	-3.6

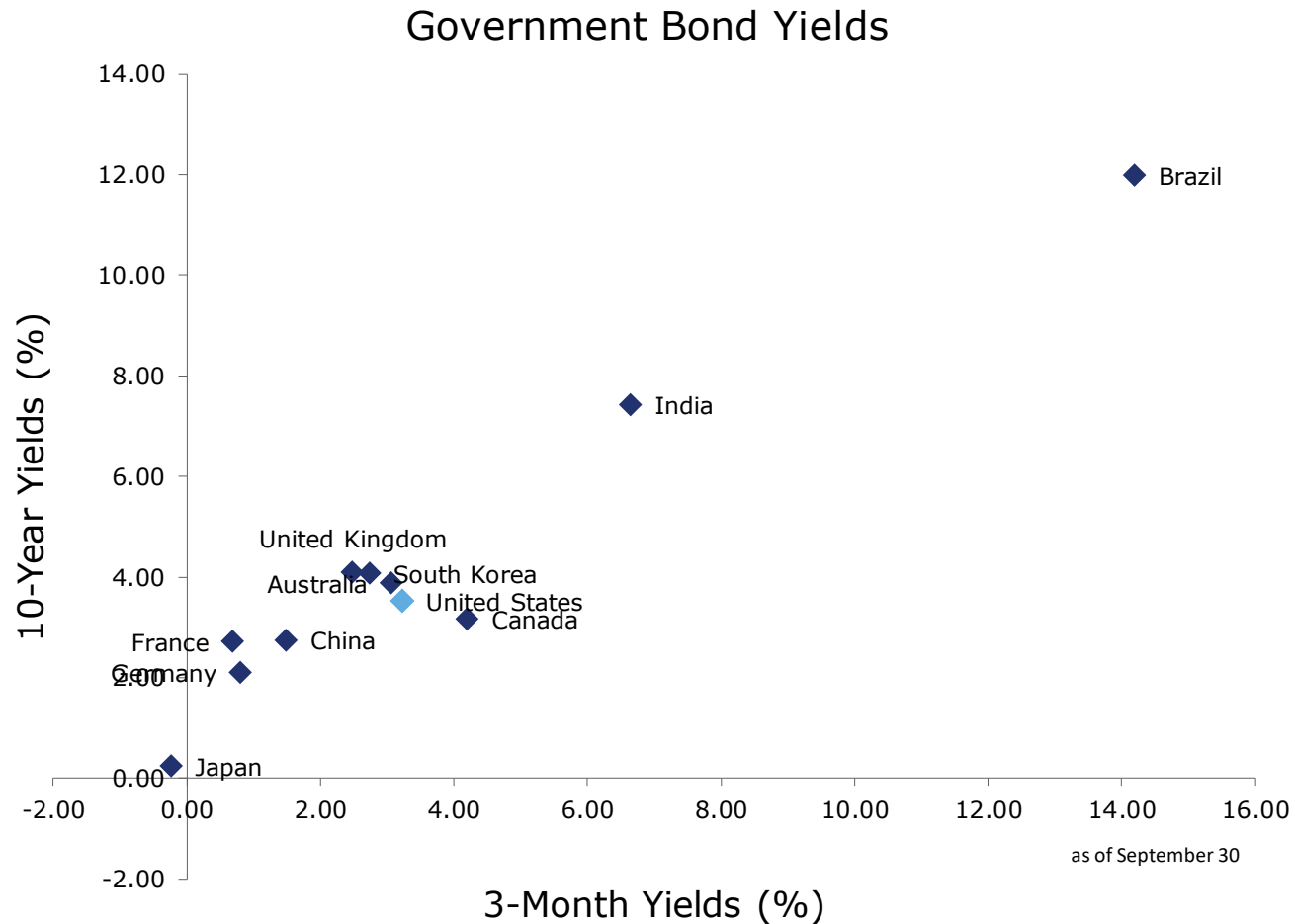
* Returns are reported in terms of local market investors, which removes currency effects.



Data Sources: Bloomberg

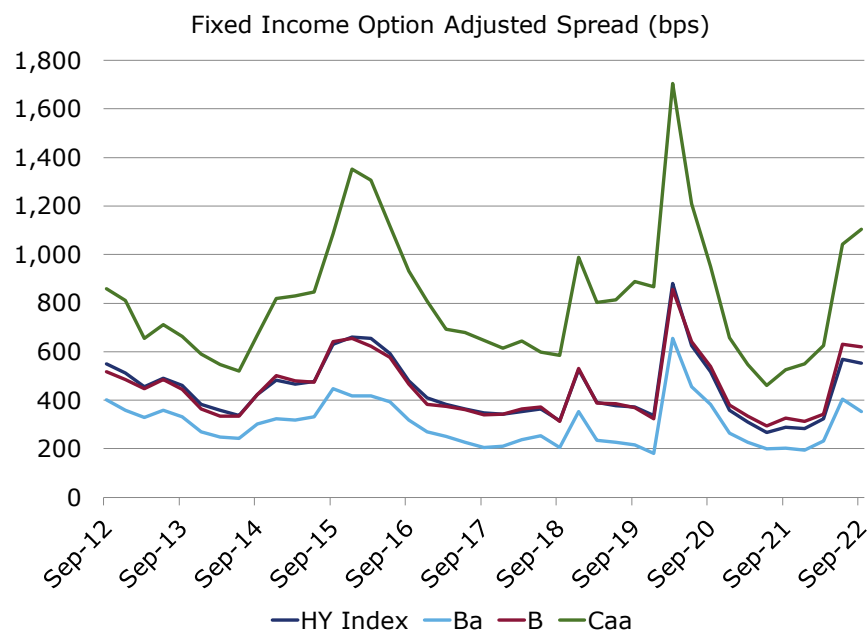
Global Interest Rates

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.



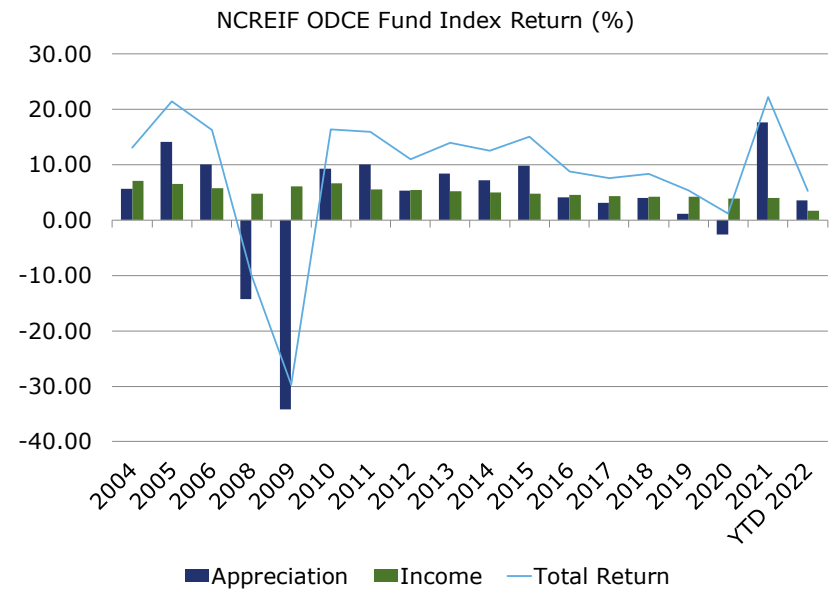
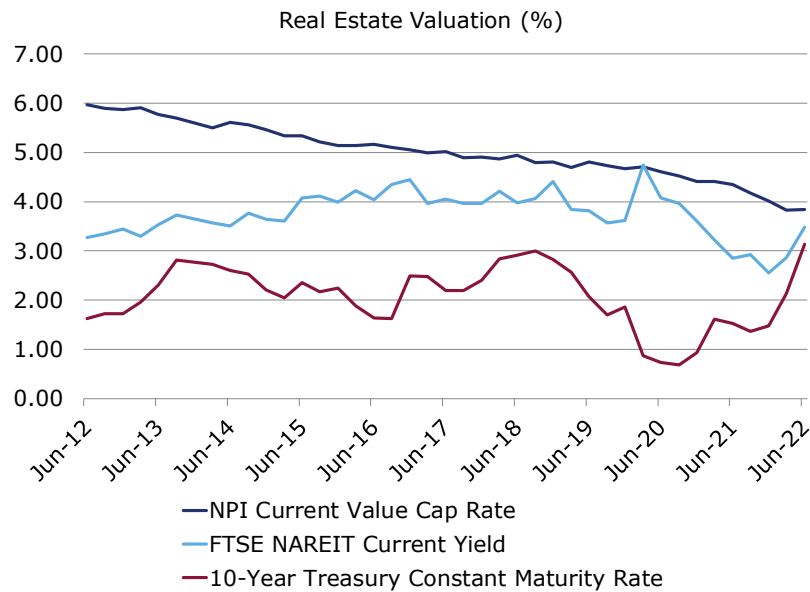
High Yield Bond Market

As of 9/30/2022		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		9.7	-0.6	-14.7	-14.1	-0.5	1.6	3.9
S&P LSTA Leveraged Loan		8.0	1.3	-4.3	-3.9	1.4	2.5	3.0
High Yield Quality Distribution	Weight							
Ba U.S. High Yield	51.6%	7.8	-0.7	-14.5	-13.8	0.3	2.2	4.2
B U.S. High Yield	36.7%	10.2	-0.7	-14.5	-13.8	-1.3	1.3	3.5
Caa U.S. High Yield	10.9%	15.2	-0.4	-16.7	-16.3	-1.4	-0.3	3.7
Ca to D U.S. High Yield	0.7%	34.0	-3.0	-21.3	-31.5	-5.6	-2.0	-5.6



Real Assets

As of 9/30/2022	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg U.S. TIPS	-5.1	-13.6	-11.6	0.8	2.0	1.0
Bloomberg Commodity Index	-4.1	13.6	11.8	13.5	7.0	-2.1
Bloomberg Gold Index	-7.9	-9.3	-5.7	2.8	4.2	-1.5
Wilshire Global RESI Index	-11.2	-29.4	-20.1	-4.3	1.0	4.6
NCREIF ODCE Fund Index	0.5	13.1	22.1	12.4	10.2	10.9
NCREIF Timberland Index	2.4	7.6	12.5	5.8	4.7	5.9
FTSE Global Core Infrastructure 50/50	-8.9	-12.3	-5.5	0.6	4.1	7.3
Alerian Midstream Energy	-1.0	12.1	11.7	6.7	5.0	n.a.
Bitcoin	3.7	-58.1	-55.3	33.1	36.0	108.7



Data Sources: Bloomberg, National Council of Real Estate Investment Fiduciaries

Total Fund

Asset Allocation Compliance

Total Fund

Periods Ended As of September 30, 2022

Executive Summary

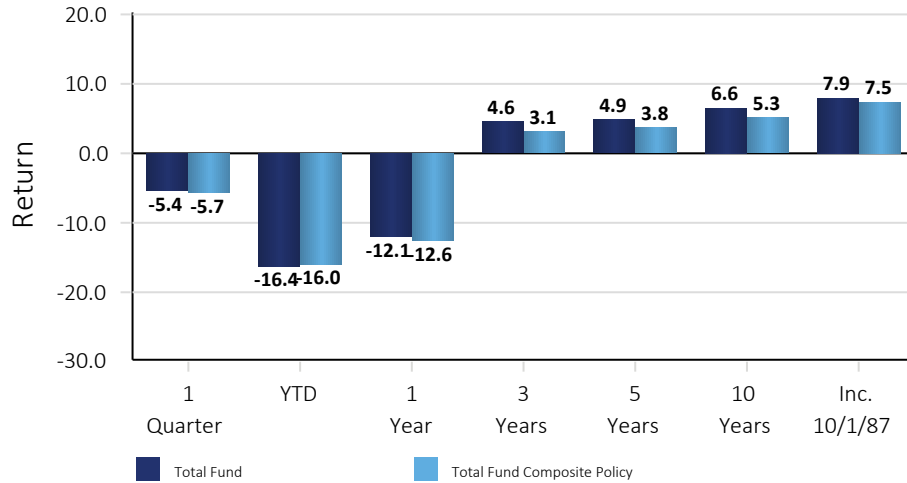
Asset Class	Current Allocation		Policy (%)	Difference to Target	
	(\$000)	(%)		(\$000)	(%)
Domestic Equity	72,529	16.6	17.8	(5,192)	(1.2)
International Equity	64,344	14.7	17.8	(13,376)	(3.1)
Private Equity	37,980	8.7	5.0	16,087	3.7
Total Growth Assets	174,853	39.9	40.5	(2,481)	(0.6)
Global Low Volatility Equity	42,234	9.6	10.0	(1,552)	(0.4)
Private Credit	21,805	5.0	5.0	(88)	(0.0)
Total Defensive Growth Assets	64,039	14.6	15.0	(1,640)	(0.4)
Core Fixed Income	106,513	24.3	24.5	(763)	(0.2)
Cash & Equivalents	2,447	0.6	0.0	2,447	0.6
Total Defensive Assets	108,960	24.9	24.5	1,684	0.4
U.S. TIPS	20,714	4.7	5.0	(1,179)	(0.3)
U.S. REITs	20,556	4.7	5.0	(1,337)	(0.3)
Commodities	23,287	5.3	5.0	1,394	0.3
Midstream Energy Infrastructure	25,451	5.8	5.0	3,558	0.8
Total Inflation Oriented Assets	90,009	20.6	20.0	2,437	0.6
Total Fund Assets	437,861	100.0	100.0	-	0.0

Composite Performance Summary

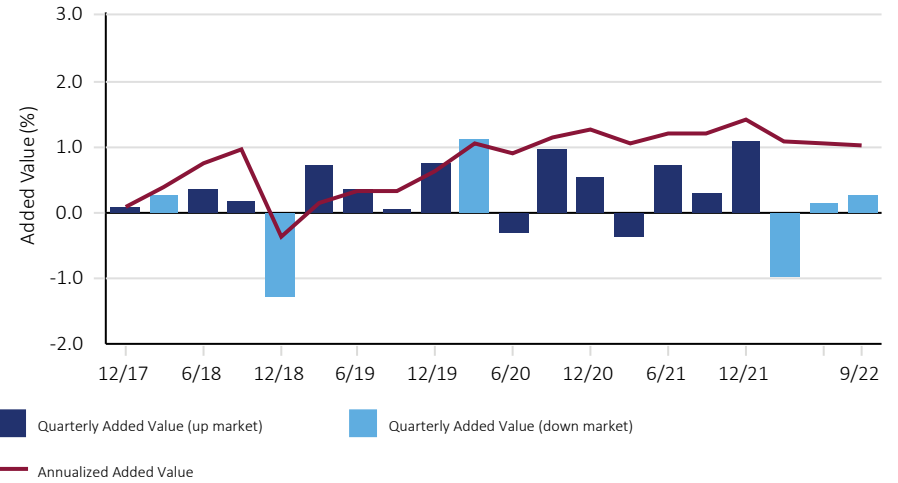
Total Fund

Periods Ended September 30, 2022

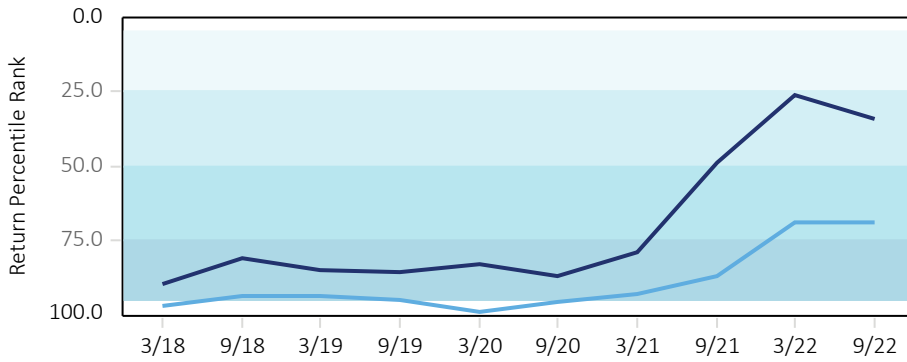
Comparative Performance



Added Value History

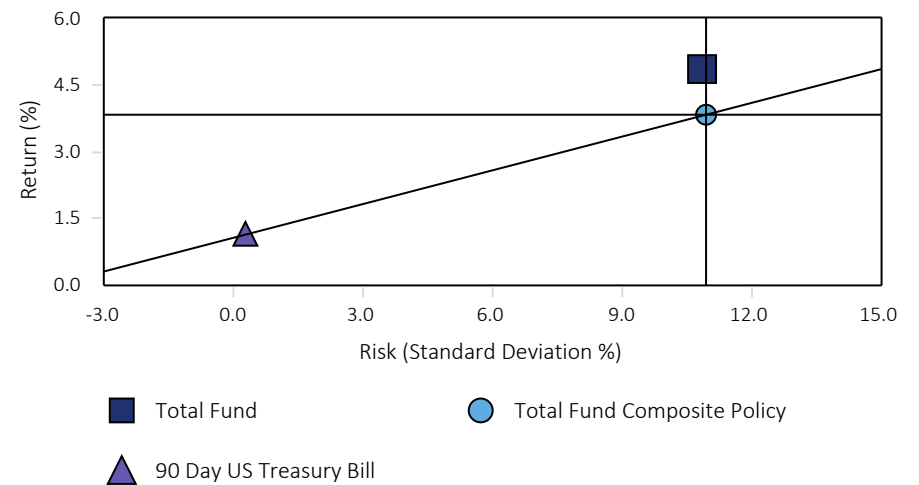


Rolling Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
— Total Fund	10	0 (0%)	3 (30%)	0 (0%)	7 (70%)
— Benchmark	10	0 (0%)	0 (0%)	2 (20%)	8 (80%)

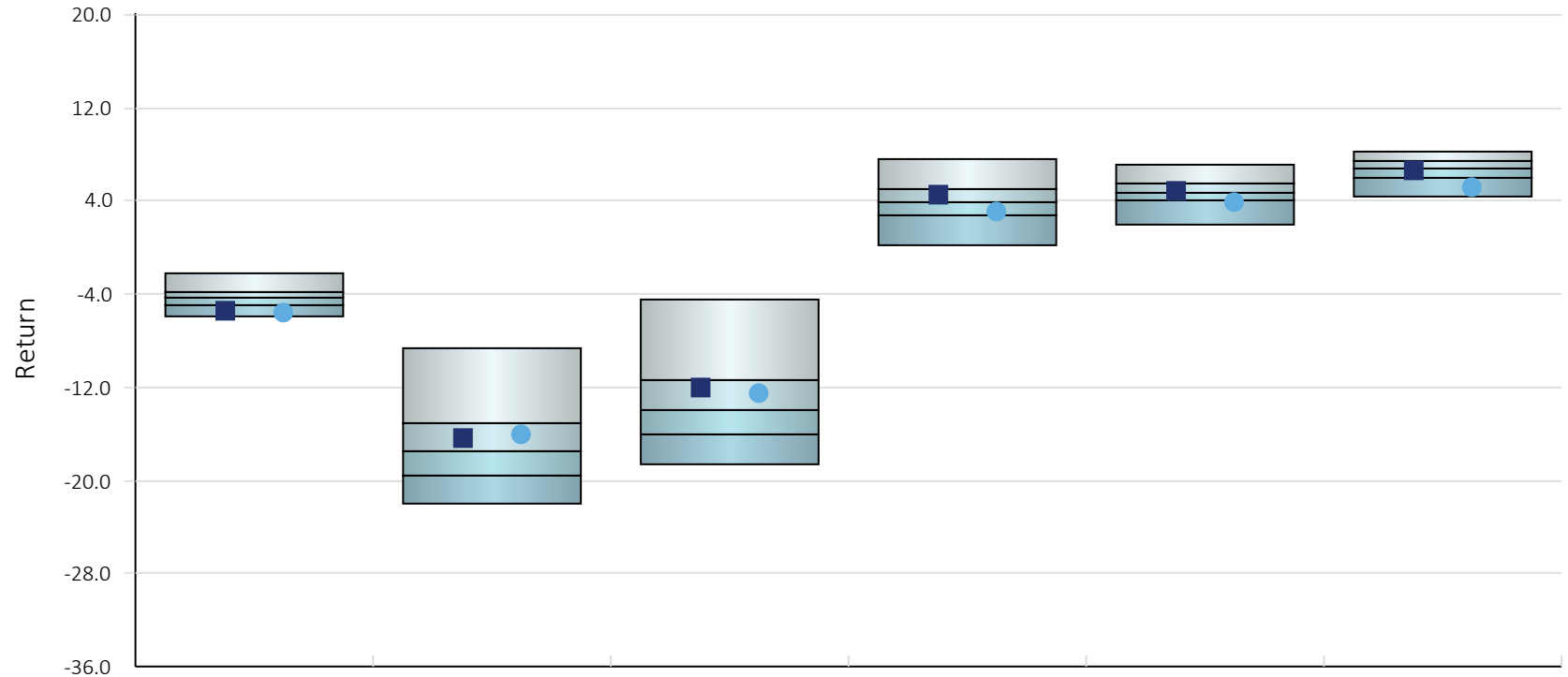
Risk and Return 10/1/17 - 09/30/22



Plan Sponsor Peer Group Analysis

Total Fund vs All Public Plans-Total Fund

Periods Ended September 30, 2022



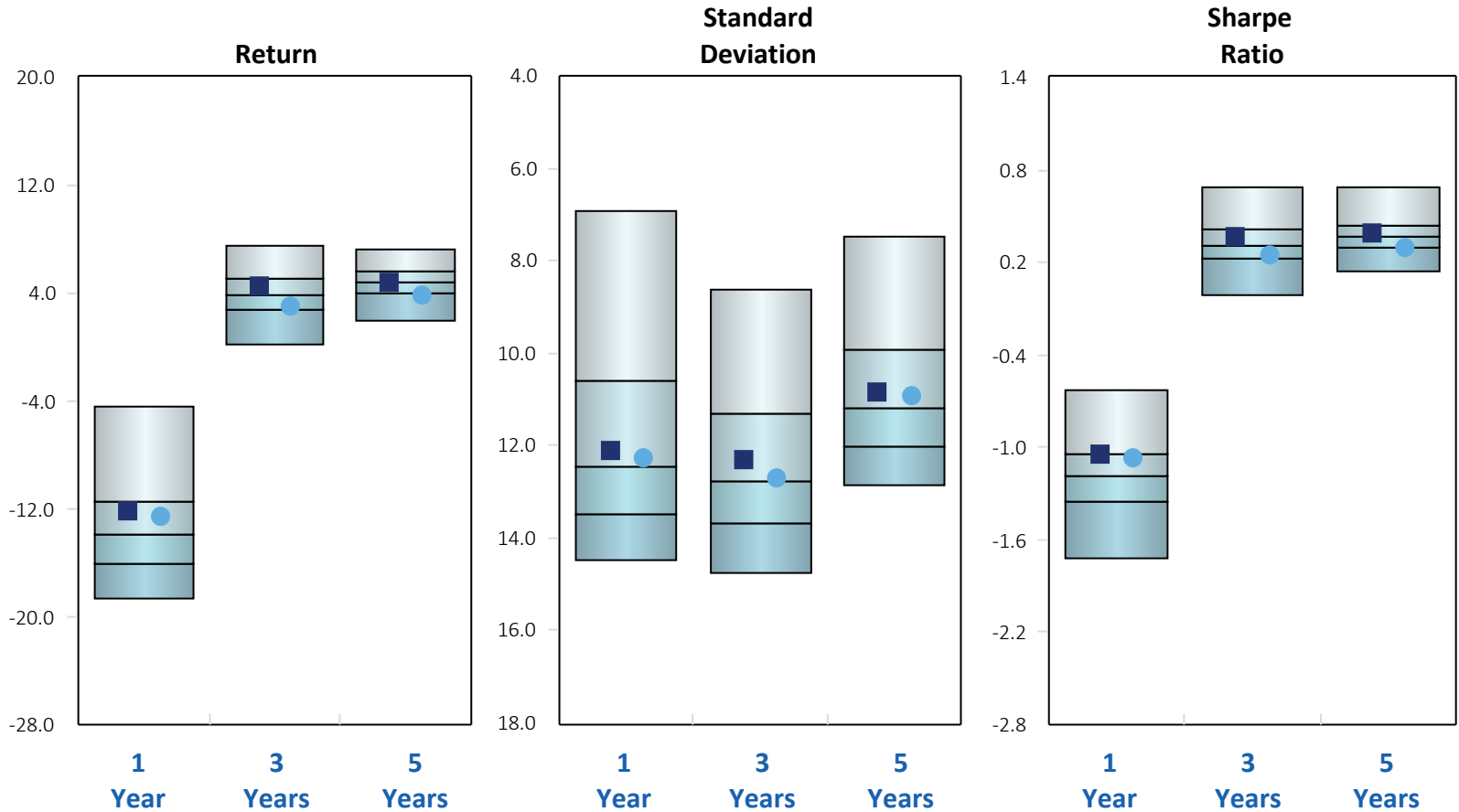
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ Total Fund	-5.38 (84)	-16.39 (35)	-12.10 (33)	4.57 (34)	4.87 (46)	6.57 (59)
● Total Fund Composite Policy	-5.67 (90)	-15.98 (31)	-12.57 (37)	3.07 (69)	3.83 (78)	5.25 (90)
5th Percentile	-2.14	-8.67	-4.43	7.53	7.19	8.23
1st Quartile	-3.76	-15.13	-11.42	5.05	5.58	7.38
Median	-4.37	-17.49	-13.95	3.85	4.76	6.79
3rd Quartile	-5.01	-19.64	-16.10	2.79	3.99	6.01
95th Percentile	-5.92	-21.98	-18.66	0.19	2.03	4.36
Population	412	401	397	384	370	321

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 September 30, 2022



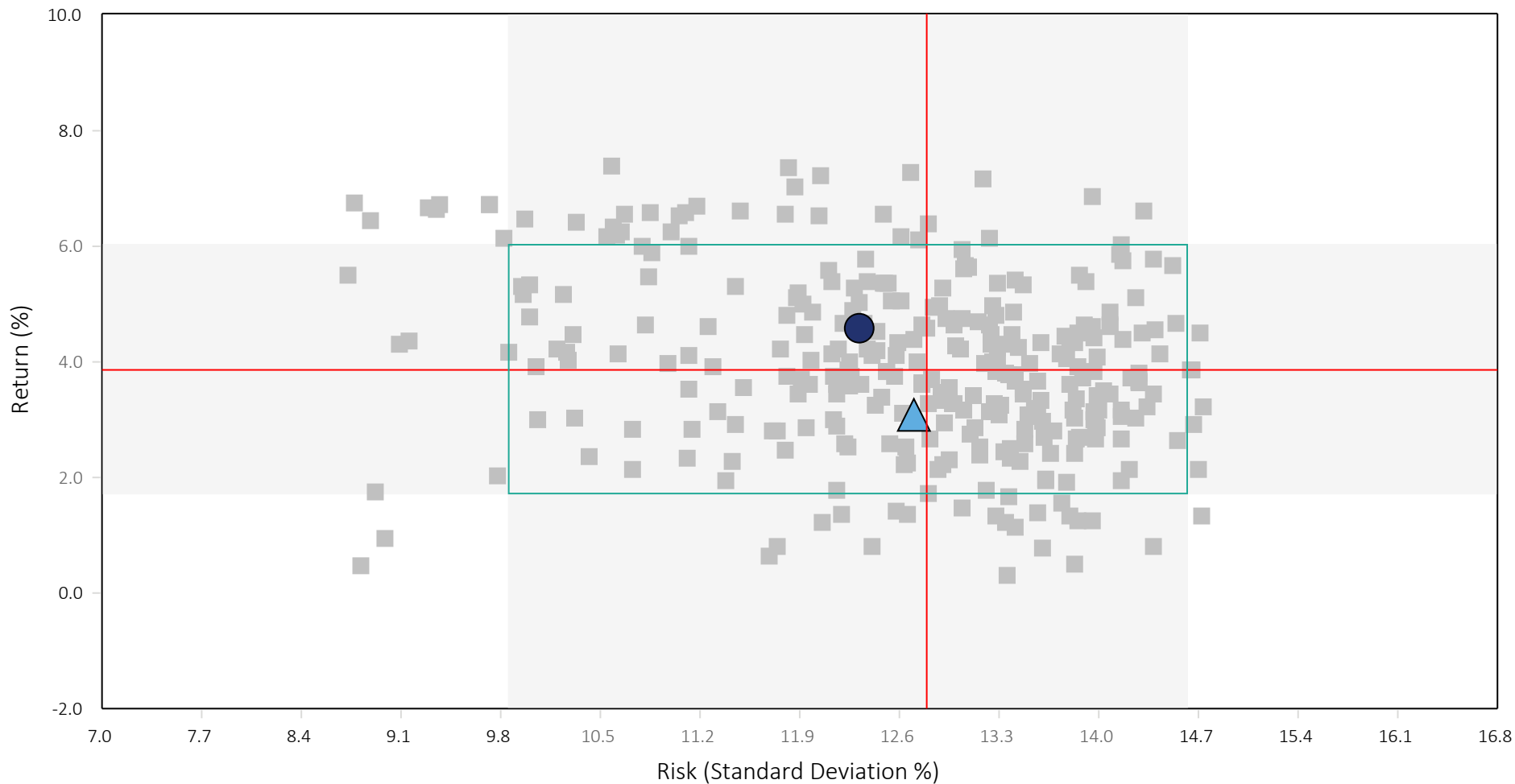
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ Total Fund	-12.10 (33)	4.57 (34)	4.87 (46)	12.10 (44)	12.32 (39)	10.83 (38)	-1.04 (25)	0.37 (32)	0.39 (43)
● Total Fund Composite Policy	-12.57 (37)	3.07 (69)	3.83 (78)	12.28 (47)	12.71 (48)	10.92 (42)	-1.06 (30)	0.25 (67)	0.29 (78)
5th Percentile	-4.43	7.53	7.19	6.91	8.62	7.48	-0.63	0.69	0.69
1st Quartile	-11.42	5.05	5.58	10.60	11.32	9.93	-1.04	0.41	0.44
Median	-13.95	3.85	4.76	12.45	12.80	11.18	-1.19	0.31	0.36
3rd Quartile	-16.10	2.79	3.99	13.49	13.70	12.01	-1.35	0.23	0.30
95th Percentile	-18.66	0.19	2.03	14.46	14.75	12.86	-1.72	-0.01	0.14

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Scattergram

Total Fund vs All Public Plans-Total Fund

Periods Ended October 1, 2019 To September 30, 2022



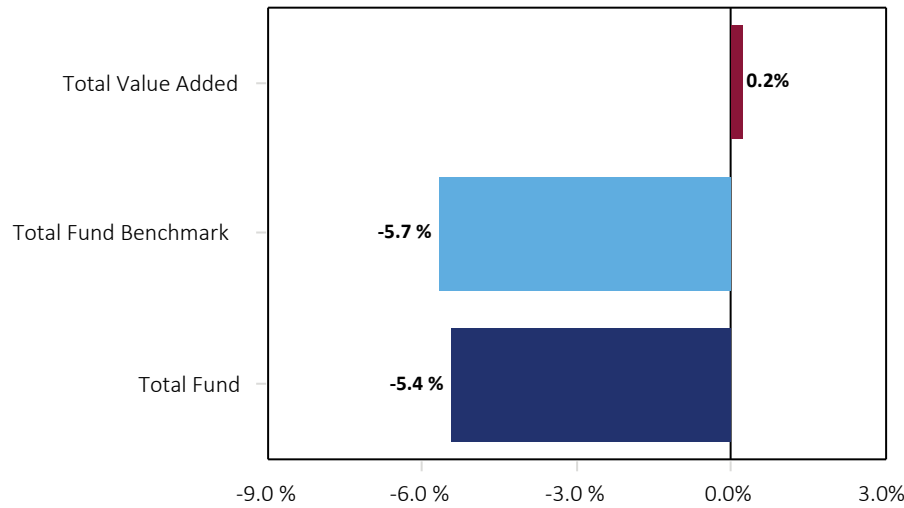
	Return	Standard Deviation
● Total Fund	4.57	12.32
▲ Total Fund Composite Policy	3.07	12.71
— Median	3.85	12.80

Total Fund Attribution

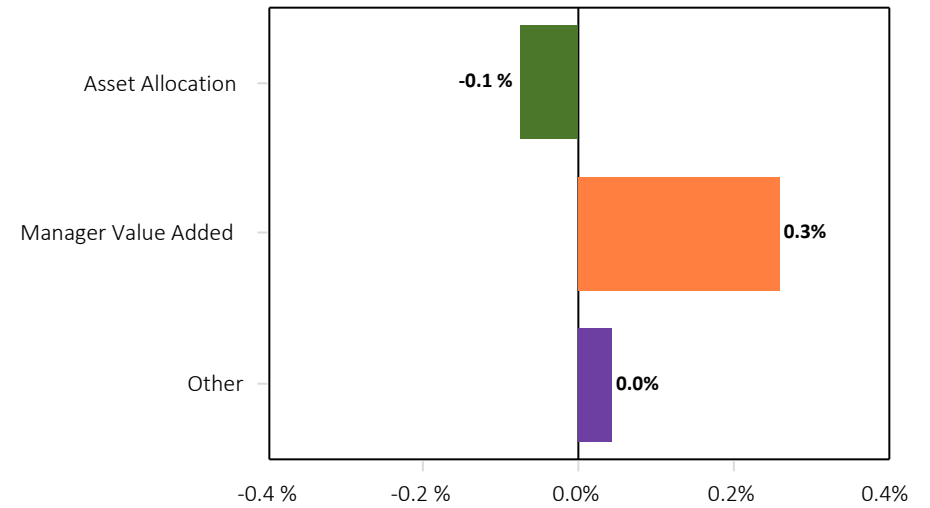
Total Fund

Periods Ended 1 Quarter Ending September 30, 2022

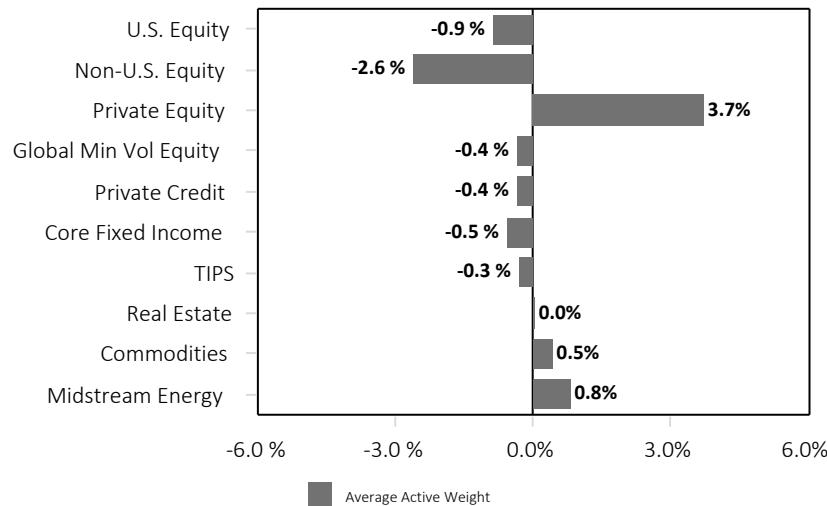
Total Fund Performance



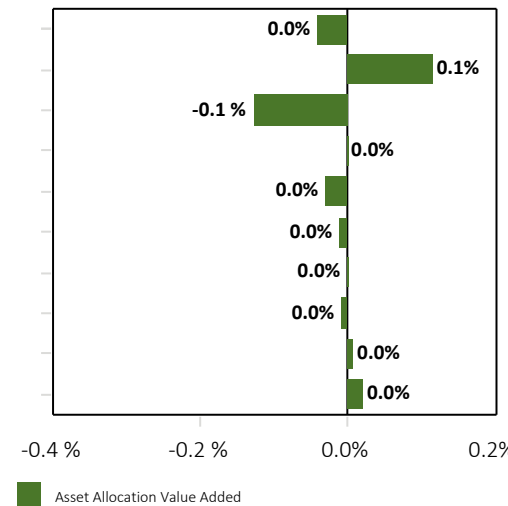
Total Value Added: 0.2%



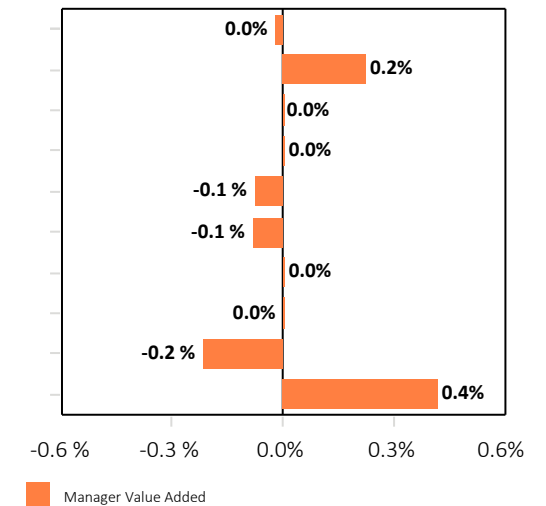
Total Asset Allocation: -0.1%



Asset Allocation Value Added: -0.1%



Total Manager Value Added: 0.3%

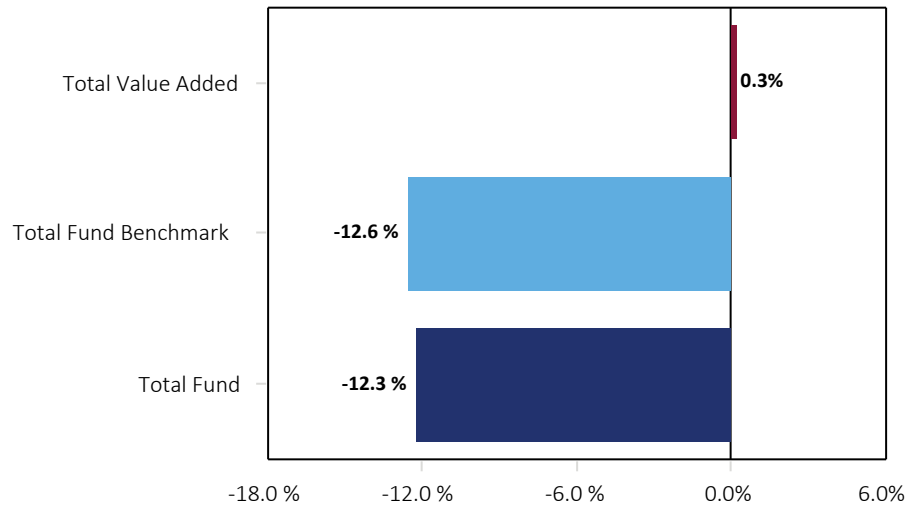


Total Fund Attribution

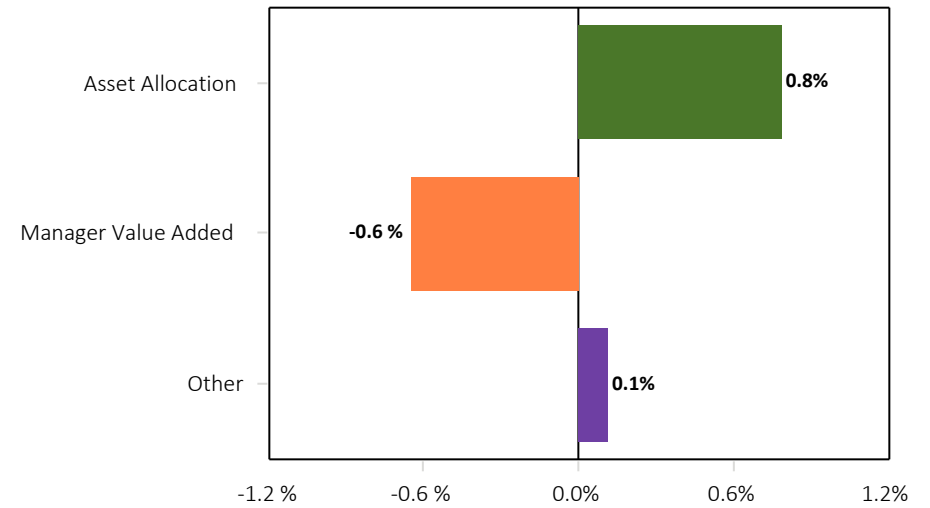
Total Fund

Periods Ended 1 Year Ending September 30, 2022

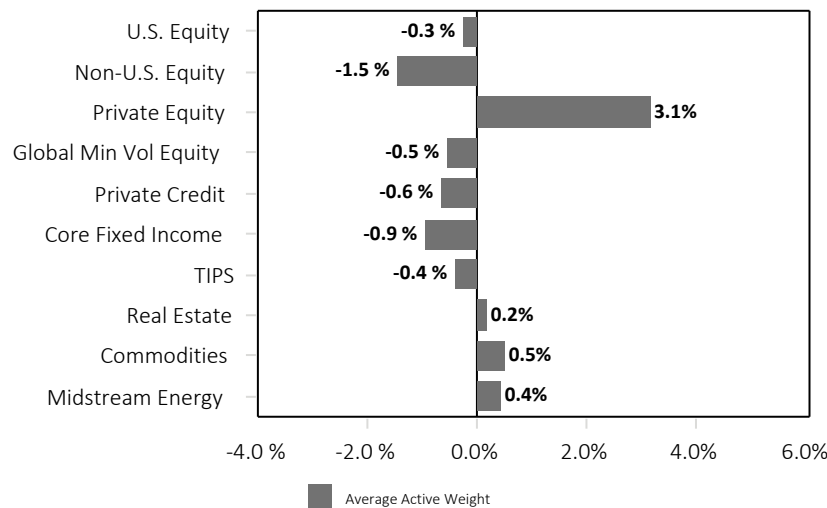
Total Fund Performance



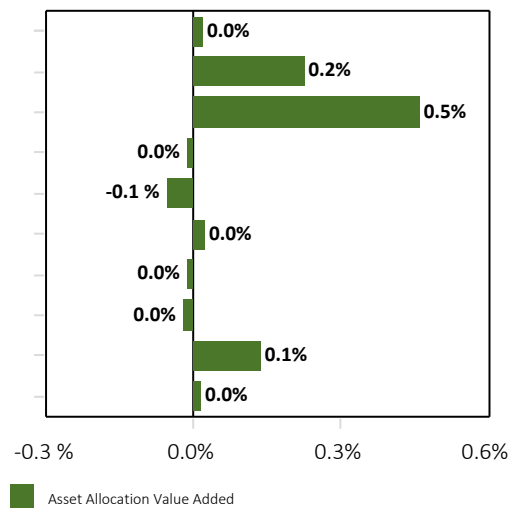
Total Value Added:0.3%



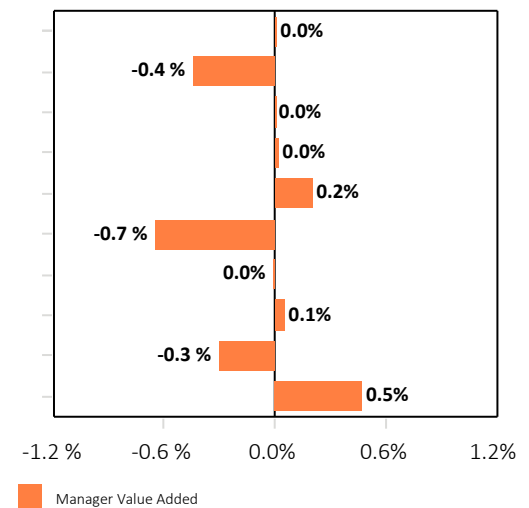
Total Asset Allocation:0.8%



Asset Allocation Value Added:0.8%



Total Manager Value Added:-0.6%

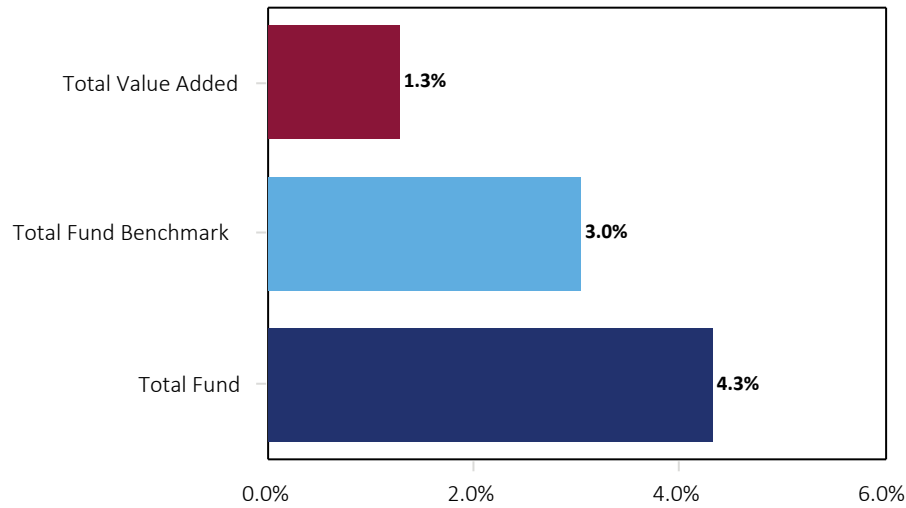


Total Fund Attribution

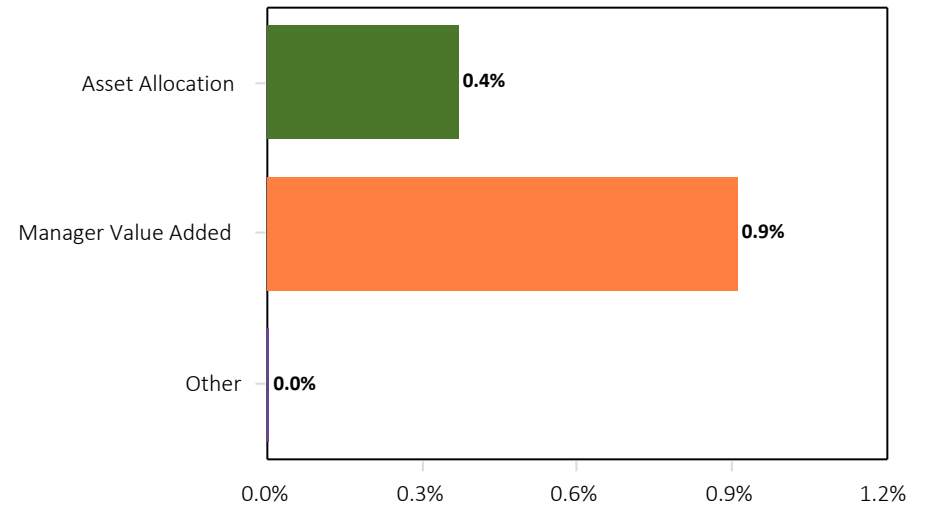
Total Fund

Periods Ended 3 Years Ending September 30, 2022

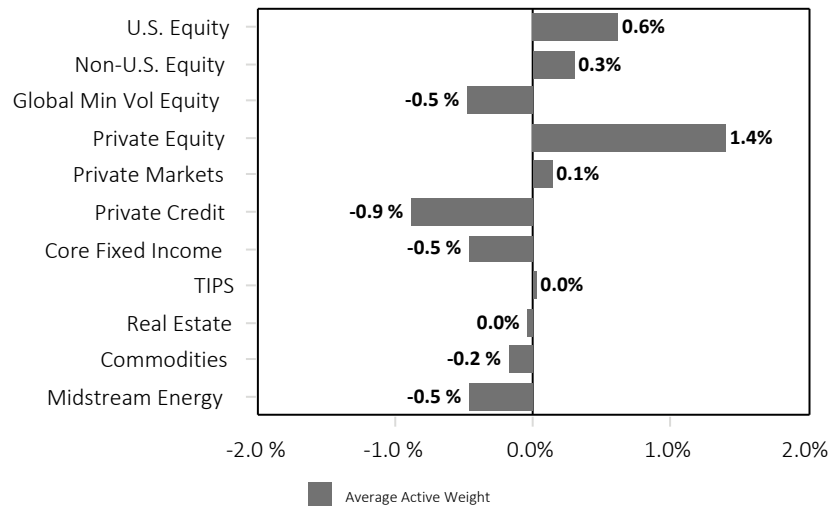
Total Fund Performance



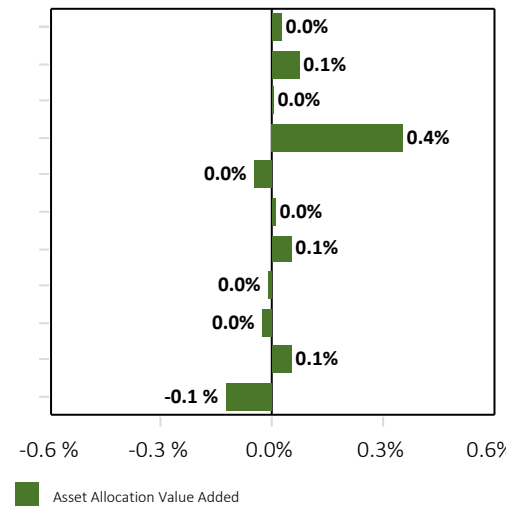
Total Value Added: 1.3%



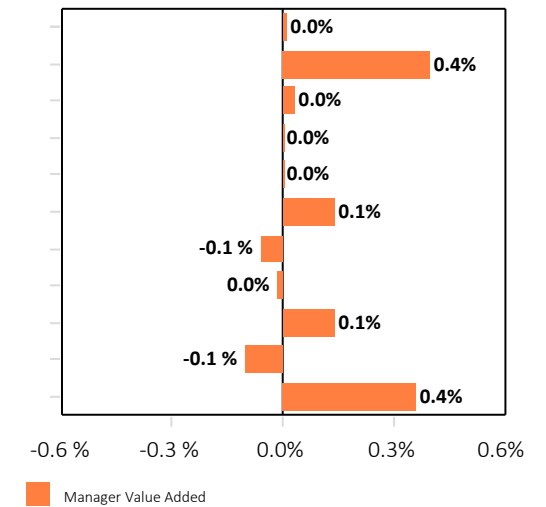
Total Asset Allocation: 0.4%



Asset Allocation Value Added: 0.4%



Total Manager Value Added: 0.9%



Asset Allocation & Performance

Total Fund

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Fund	437,861,030	100.00	-5.44	-16.54	-16.54	-12.30	4.34	4.63	6.15	6.31	7.71	10/1/1987
Total Fund Composite Policy			-5.67	-15.98	-15.98	-12.57	3.07	3.83	5.21	5.25	7.46	
Value Added			0.23	-0.56	-0.56	0.27	1.27	0.80	0.94	1.06	0.25	
U.S. Equity	72,528,558	16.56	-4.57	-24.74	-24.74	-17.11	8.07	8.66	11.25	11.67	9.43	10/1/1987
FT Wilshire 5000 Total Market TR Index			-4.45	-24.41	-24.41	-17.17	8.07	8.85	11.15	11.53	9.44	
Value Added			-0.12	-0.33	-0.33	0.06	0.00	-0.19	0.10	0.14	-0.01	
Non-U.S. Equity	64,344,400	14.70	-8.42	-30.29	-30.29	-27.50	0.46	0.38	4.19	4.36	7.11	1/1/1990
International Equity Composite Policy			-9.91	-26.50	-26.50	-25.17	-1.52	-0.81	3.29	3.01	3.84	
Value Added			1.49	-3.79	-3.79	-2.33	1.98	1.19	0.90	1.35	3.27	
Private Equity	37,980,029	8.67	-8.74	-4.12	-4.12	5.18	27.95	24.07	20.22	16.90	13.83	5/1/2010
Private Equity Policy Index			-8.74	-4.12	-4.12	5.18	27.95	24.07	20.22	16.90	13.83	
Value Added			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Global Low Volatility Equity	42,233,983	9.65	-6.00	-17.17	-17.17	-11.93	0.17				2.29	6/1/2019
MSCI ACWI Minimum Volatility Index (Net)			-6.03	-17.32	-17.32	-12.12	-0.13				1.97	
Value Added			0.03	0.15	0.15	0.19	0.30				0.32	
Private Credit	21,805,467	4.98	-0.53	0.60	0.60	2.65	5.64				4.52	10/1/2018
Morningstar LSTA US Leveraged Loan			1.37	-3.25	-3.25	-2.53	2.21				2.43	
Value Added			-1.90	3.85	3.85	5.18	3.43				2.09	
Core Fixed Income	106,513,033	24.33	-5.07	-17.15	-17.15	-17.25	-3.42	-0.17	1.12	1.55	5.92	10/1/1987
Blmbg. U.S. Aggregate			-4.75	-14.61	-14.61	-14.60	-3.26	-0.27	0.54	0.89	5.55	
Value Added			-0.32	-2.54	-2.54	-2.65	-0.16	0.10	0.58	0.66	0.37	

Asset Allocation & Performance

Total Fund

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Real Assets Composite	90,008,976	20.56	-4.11	-4.90	-4.90	0.45	6.04	4.65	4.32		2.51	4/1/2015
Real Assets Composite Policy			-2.98	-3.91	-3.91	0.47	5.97	4.65	4.30		2.50	
Value Added			-1.13	-0.99	-0.99	-0.02	0.07	0.00	0.02		0.01	
TIPS	20,714,481	4.73	-5.05	-13.76	-13.76	-11.88	0.45	1.70	2.04		1.53	5/1/2015
Blmbg. U.S. TIPS			-5.14	-13.61	-13.61	-11.57	0.79	1.95	2.21		1.68	
Value Added			0.09	-0.15	-0.15	-0.31	-0.34	-0.25	-0.17		-0.15	
Real Estate	20,556,301	4.69	-10.41	-27.23	-27.23	-16.05	-0.39	2.78	3.41	4.15	7.24	6/1/2009
Real Estate Policy Index			-10.37	-29.32	-29.32	-17.15	-3.29	1.16	2.93	3.91	7.38	
Value Added			-0.04	2.09	2.09	1.10	2.90	1.62	0.48	0.24	-0.14	
Commodities	23,287,099	5.32	-7.89	3.44	3.44	6.70	12.78	7.52	5.74		-1.12	2/1/2013
Bloomberg Commodity Index Total Return			-4.11	13.57	13.57	11.80	13.45	6.96	4.49		-1.79	
Value Added			-3.78	-10.13	-10.13	-5.10	-0.67	0.56	1.25		0.67	
Midstream Energy Composite	25,451,095	5.81	6.68	21.34	21.34	23.00	7.87	4.16	4.08		-0.44	3/1/2015
Midstream Energy Policy Index			-0.98	12.13	12.13	11.73	-1.24	-2.16	-2.62		-7.44	
Value Added			7.66	9.21	9.21	11.27	9.11	6.32	6.70		7.00	

Historical Hybrid Composition

Grand Rapids General Retirement System

Periods Ended September 30, 2022

Policy Index	Weight (%)
Jan-1976	
FT Wilshire 5000 Total Market TR Index	55.00
Blmbg. U.S. Aggregate	40.00
MSCI EAFE Index (Net)	5.00
Jul-1998	
FT Wilshire 5000 Total Market TR Index	50.00
Blmbg. U.S. Aggregate	40.00
MSCI EAFE Index (Net)	10.00
Oct-2002	
FT Wilshire 5000 Total Market TR Index	50.00
Blmbg. U.S. Aggregate	35.00
MSCI EAFE Index (Net)	15.00
Apr-2006	
FT Wilshire 5000 Total Market TR Index	55.00
Blmbg. U.S. Aggregate	30.00
MSCI EAFE Index (Net)	15.00
Jul-2006	
FT Wilshire 5000 Total Market TR Index	55.00
Blmbg. U.S. Aggregate	30.00
MSCI AC World ex USA (Net)	15.00
Jul-2009	
FT Wilshire 5000 Total Market TR Index	50.00
Blmbg. U.S. Aggregate	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 Total Market TR Index	50.00
Blmbg. U.S. Aggregate	30.00
MSCI AC World ex USA (Net)	15.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00
May-2010	
FT Wilshire 5000 Total Market TR Index	45.00
Blmbg. U.S. Aggregate	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 Total Market TR Index	45.00
Blmbg. U.S. Aggregate	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 Total Market TR Index	40.00
Blmbg. U.S. Aggregate	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 September 30, 2022

Policy Index	Weight (%)
Apr-2015	
FT Wilshire 5000 Total Market TR Index	22.50
Blmbg. U.S. Aggregate	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	10.00
Dec-2018	
FT Wilshire 5000 Total Market TR Index	22.50
Blmbg. U.S. Aggregate	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	10.00

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

Historical Hybrid Composition

Grand Rapids General Retirement System

Periods Ended September 30, 2022

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

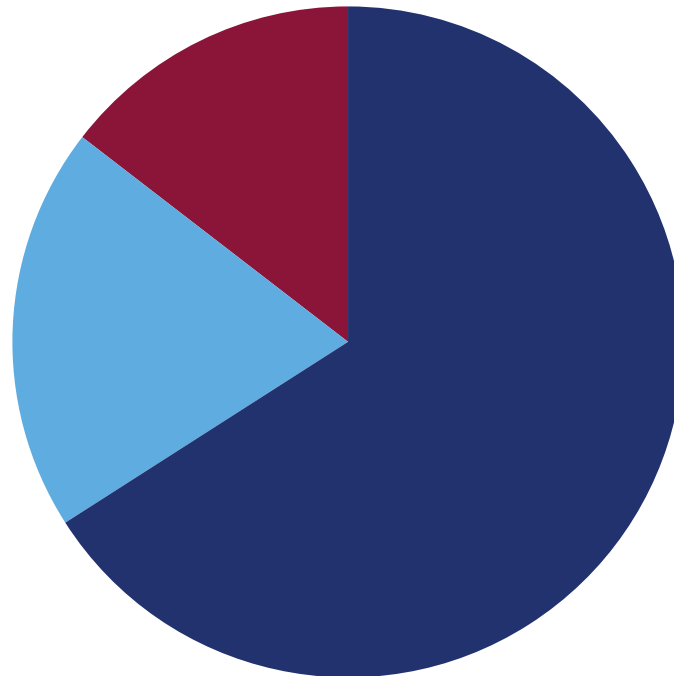
U.S. Equity

Asset Allocation By Manager

U.S. Equity

Periods Ended September 30, 2022

Sep-2022 : 72,528,558



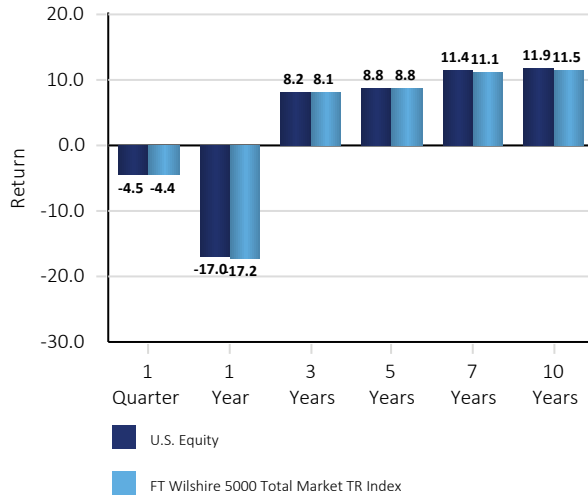
	Market Value \$	Allocation (%)
■ NTAM S&P 500	47,826,584	65.9
■ PIMCO Stock Plus	14,154,642	19.5
■ Wellington Small Cap	10,547,332	14.5

Performance Summary

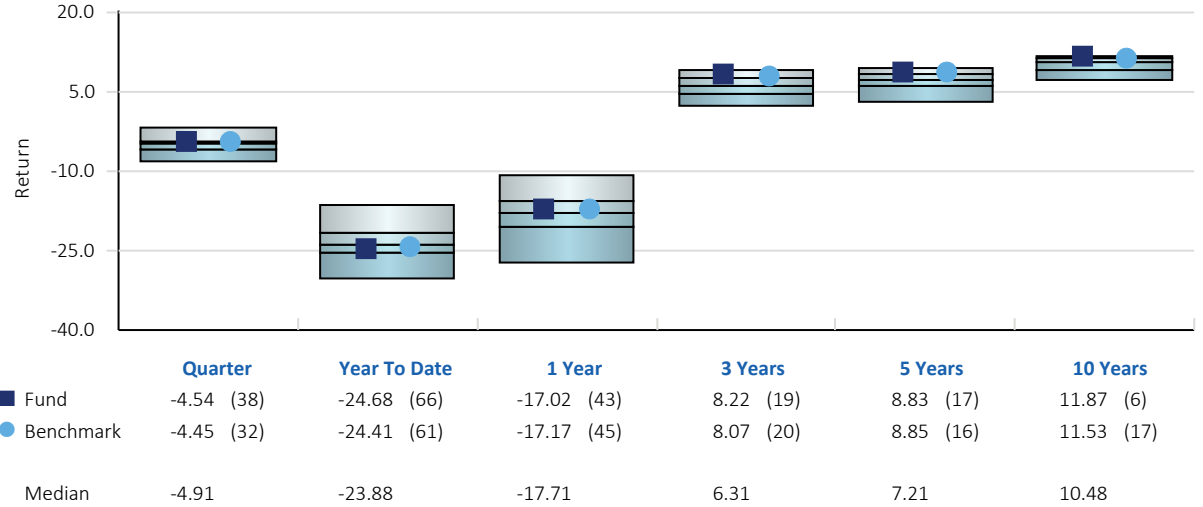
U.S. Equity

Periods Ended September 30, 2022

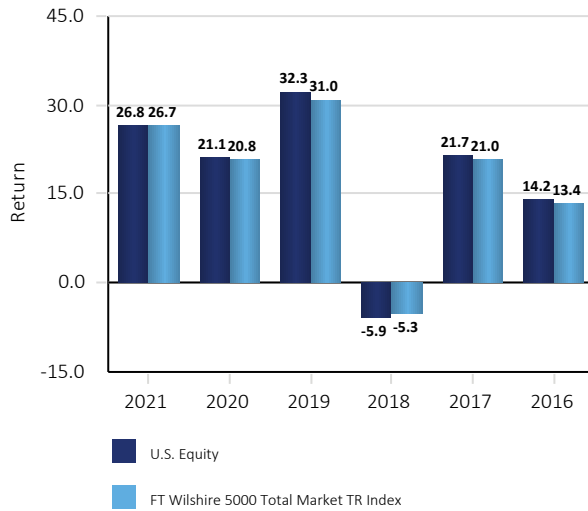
Comparative Performance



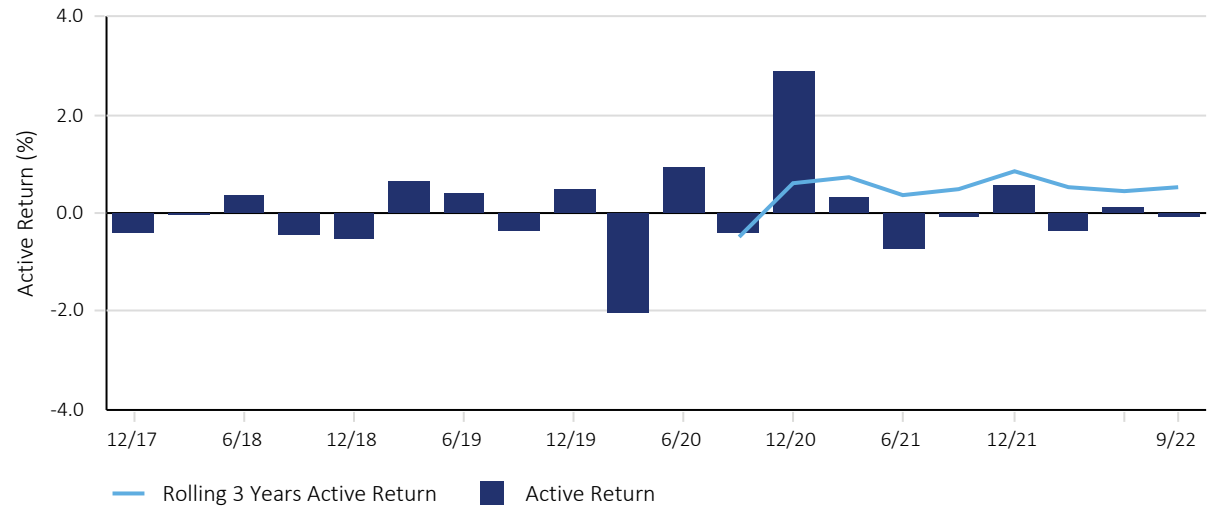
Peer Group Analysis: All Master Trust-US Equity Segment



Comparative Performance



Rolling 3 Years Performance

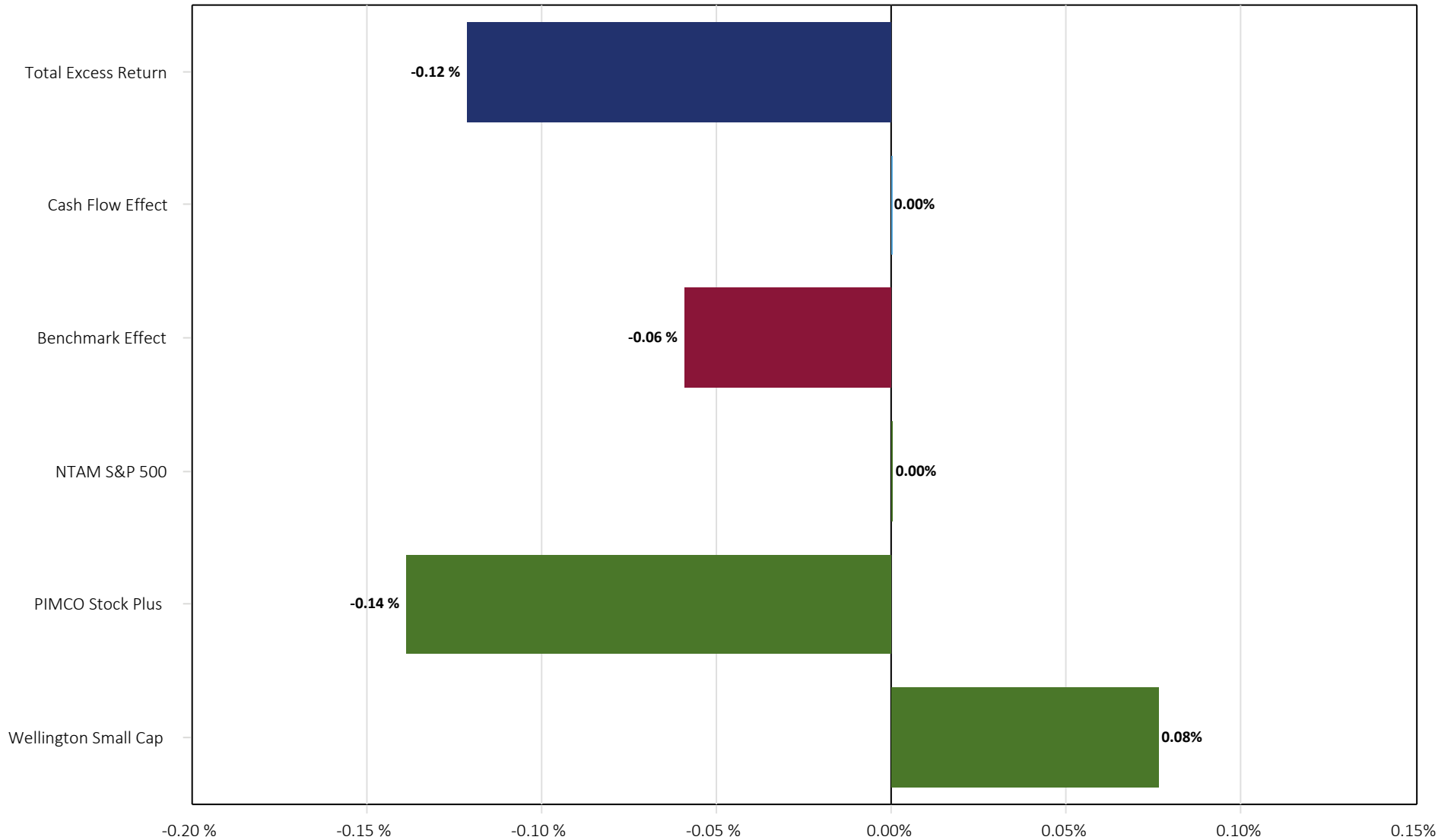


Asset Class Attribution

U.S. Equity

Periods Ended 1 Quarter Ending September 30, 2022

1 Quarter



Asset Allocation & Performance

U.S. Equity

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
U.S. Equity	72,528,558	100.00	-4.57	-24.74	-24.74	-17.11	8.07	8.66	11.25	11.67	9.43	10/1/1987
FT Wilshire 5000 Total Market TR Index			-4.45	-24.41	-24.41	-17.17	8.07	8.85	11.15	11.53	9.44	
Value Added			-0.12	-0.33	-0.33	0.06	0.00	-0.19	0.10	0.14	-0.01	
NTAM S&P 500	47,826,584	65.94	-4.88	-23.86	-23.86	-15.48	8.16	9.24	11.40	11.72	8.01	4/1/1998
NTAM Policy			-4.88	-23.87	-23.87	-15.47	8.16	9.24	11.40	11.70	7.05	
Value Added			0.00	0.01	0.01	-0.01	0.00	0.00	0.00	0.02	0.96	
PIMCO Stock Plus	14,154,642	19.52	-5.59	-26.12	-26.12	-18.15	7.34	8.74	11.23	11.55	6.26	6/1/2000
S&P 500			-4.88	-23.87	-23.87	-15.47	8.16	9.24	11.40	11.70	6.25	
Value Added			-0.71	-2.25	-2.25	-2.68	-0.82	-0.50	-0.17	-0.15	0.01	
Wellington Small Cap	10,547,332	14.54	-1.66	-26.79	-26.79	-22.64	6.56	6.25	10.14	11.29	10.45	9/1/1999
Russell 2000 Index			-2.19	-25.10	-25.10	-23.50	4.29	3.55	7.51	8.55	7.47	
Value Added			0.53	-1.69	-1.69	0.86	2.27	2.70	2.63	2.74	2.98	

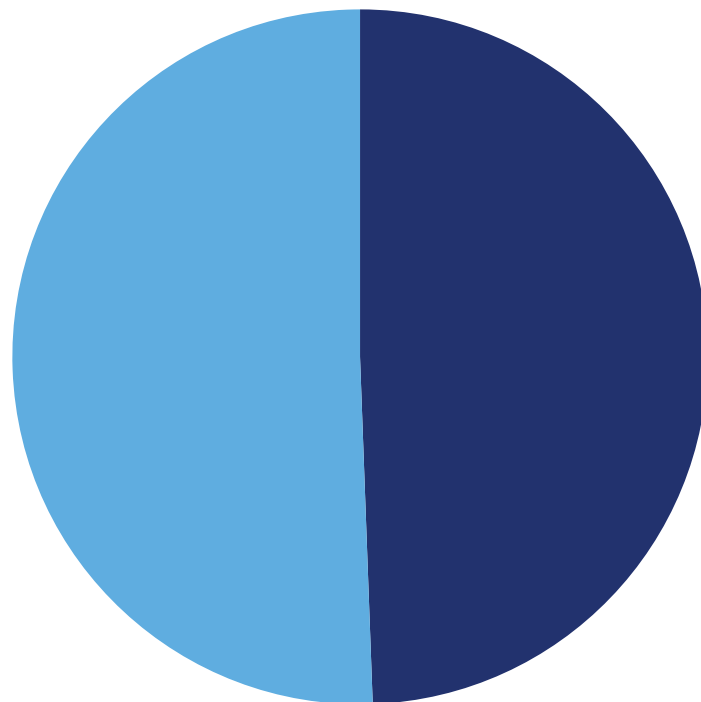
Non-U.S. Equity

Asset Allocation By Manager

Non-U.S. Equity

Periods Ended September 30, 2022

Sep-2022 : 64,344,400



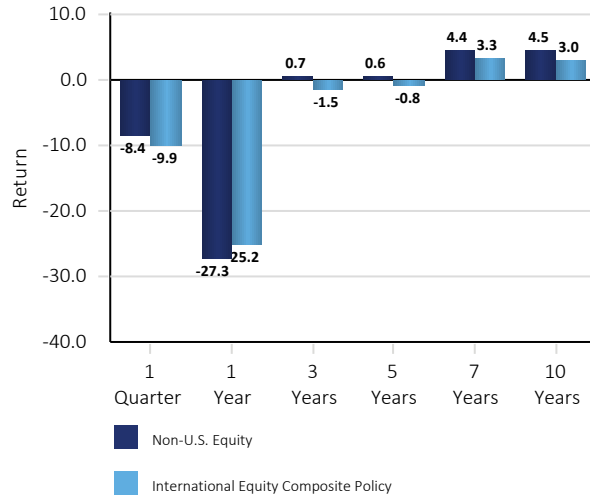
	Market Value \$	Allocation (%)
■ Harding Loevner	31,798,378	49.4
■ Neuberger Berman CIT	32,546,022	50.6

Performance Summary

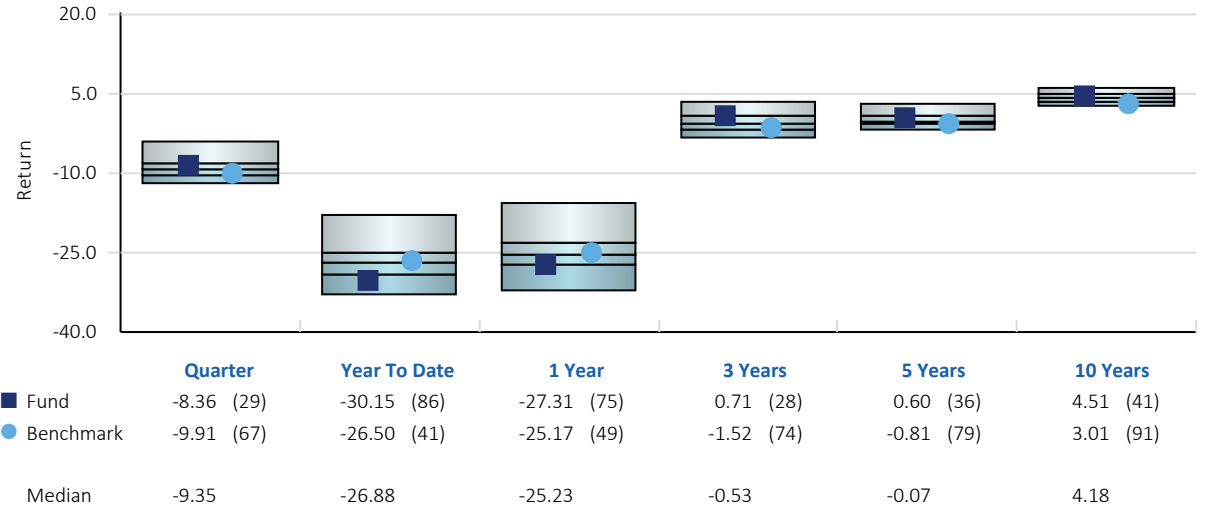
Non-U.S. Equity

Periods Ended September 30, 2022

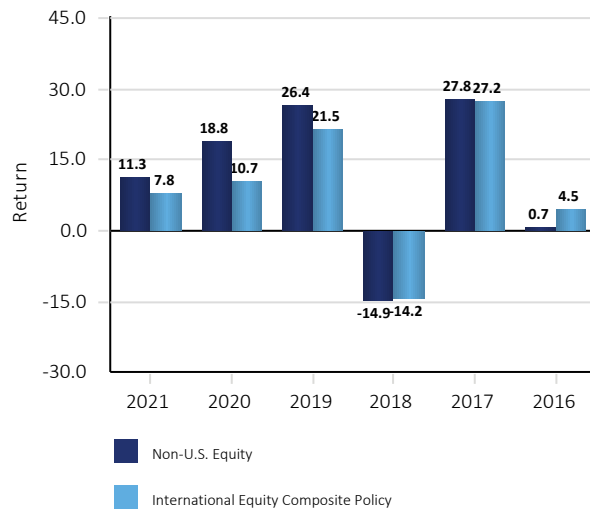
Comparative Performance



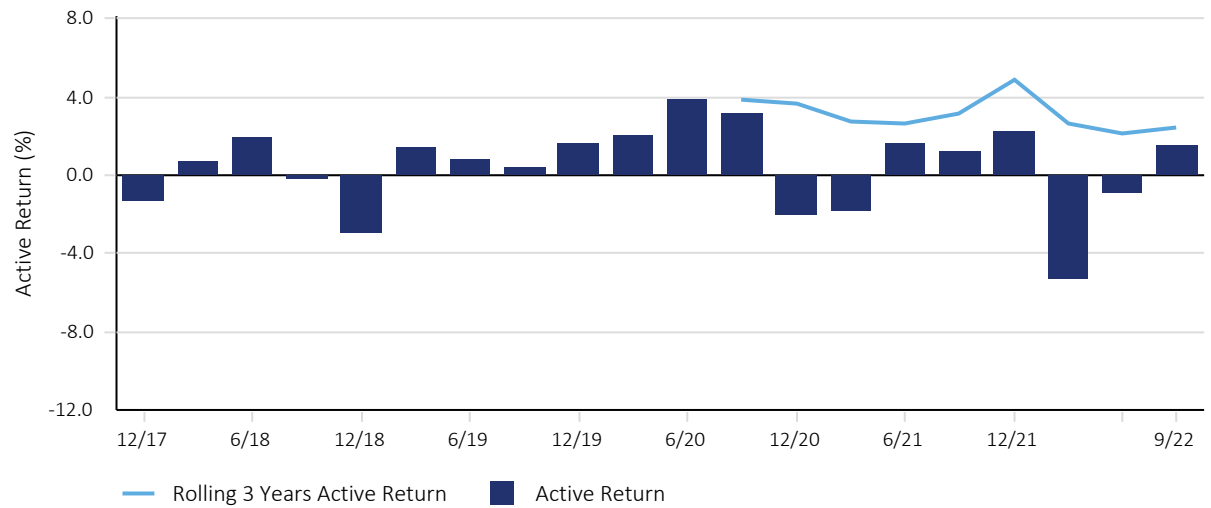
Peer Group Analysis: All Master Trust-Intl. Equity Segment



Comparative Performance



Rolling 3 Years Performance

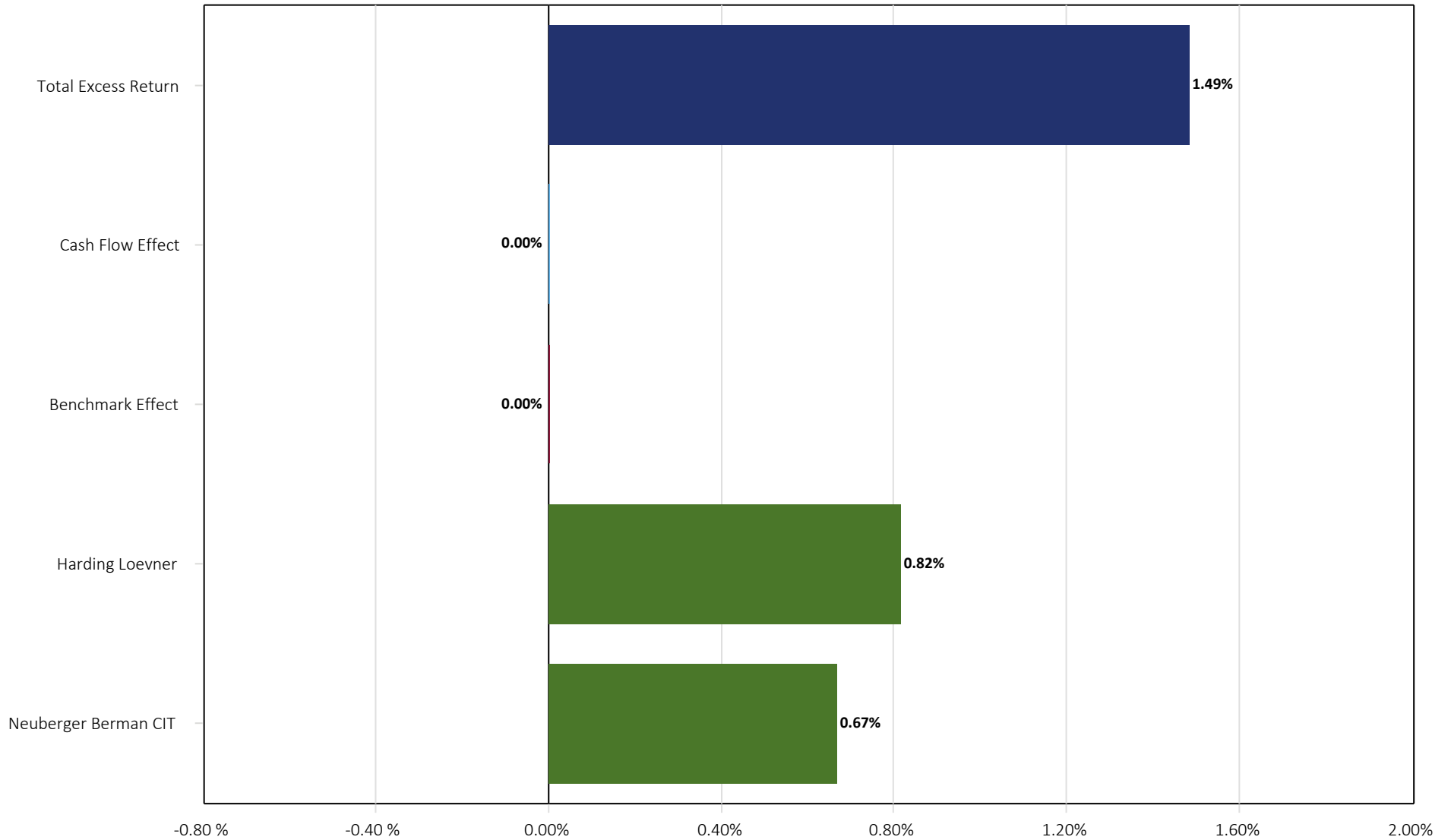


Asset Class Attribution

Non-U.S. Equity

Periods Ended 1 Quarter Ending September 30, 2022

1 Quarter



Asset Allocation & Performance

Non-U.S. Equity

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Non-U.S. Equity	64,344,400	100.00	-8.42	-30.29	-30.29	-27.50	0.46	0.38	4.19	4.36	7.11	1/1/1990
International Equity Composite Policy			-9.91	-26.50	-26.50	-25.17	-1.52	-0.81	3.29	3.01	3.84	
Value Added			1.49	-3.79	-3.79	-2.33	1.98	1.19	0.90	1.35	3.27	
Harding Loevner	31,798,378	49.42	-8.25	-30.03	-30.03	-26.94	0.58	0.25	4.75		2.73	4/1/2015
MSCI AC World ex USA (Net)			-9.91	-26.50	-26.50	-25.17	-1.52	-0.81	3.29		1.37	
Value Added			1.66	-3.53	-3.53	-1.77	2.10	1.06	1.46		1.36	
Neuberger Berman CIT	32,546,022	50.58	-8.58	-30.53	-30.53	-28.04	0.23				0.03	7/1/2018
MSCI AC World ex USA (Net)			-9.91	-26.50	-26.50	-25.17	-1.52				-1.20	
Value Added			1.33	-4.03	-4.03	-2.87	1.75				1.23	

Private Equity

Private Equity Composite Overview

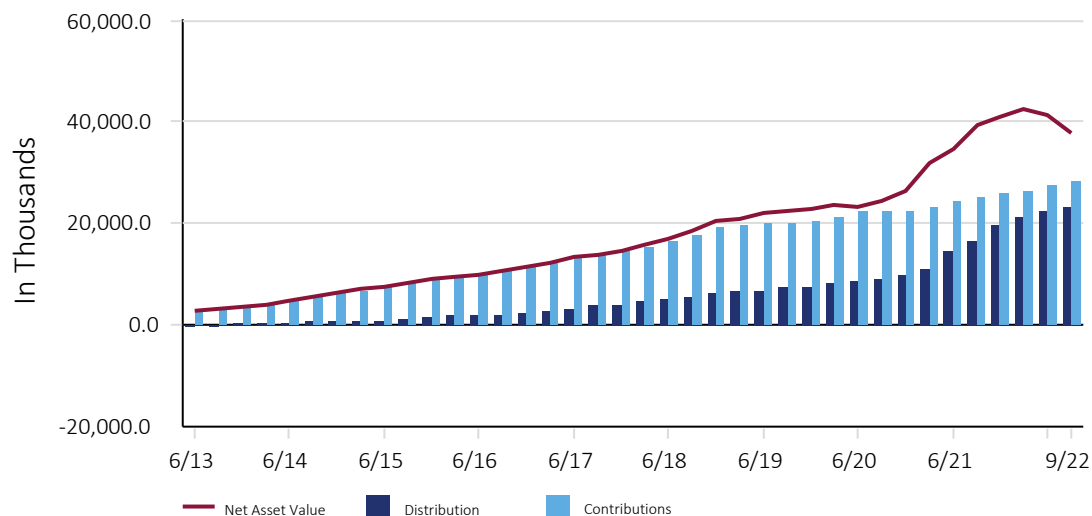
Private Equity

Periods Ended As of September 30, 2022

Cash Flow Summary

Capital Committed:	34,500,000
Capital Invested:	8,595,083
Total Contributions:	28,376,357
Remaining Capital Commitment:	6,492,398
Total Distributions:	23,403,082
Market Value:	37,980,029
Inception Date:	5/1/2010
Inception IRR:	18.5
TVPI:	2.2

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	684,378	228,487	12.1	1.9
Adams Street 2010 EM Fund	500,000	449,000	423,670	521,279	11.4	2.1
Adams Street 2010 Non-US Fund	1,500,000	1,350,750	1,817,892	696,979	12.6	1.9
Adams Street 2010 US Fund	2,500,000	2,202,500	3,829,068	1,842,322	17.1	2.6
Adams Street 2013 Global Fund	5,000,000	4,549,808	3,993,433	6,043,477	15.6	2.2
Adams Street 2015 Global	6,500,000	5,689,817	3,830,661	9,148,023	25.8	2.3
Adams Street 2017 Global Fund	6,000,000	4,792,008	1,486,406	7,921,611	26.7	2.0
Aberdeen Global	5,000,000	4,950,000	6,966,518	5,824,691	16.9	2.6
Adams Street 2019 Global	7,000,000	3,911,974	371,056	5,753,160	52.5	1.6

Private Equity Composite Overview

Private Equity

Periods Ended As of September 30, 2022

Partnerships	Capital Committed \$	Total Contribution \$	Total Distribution \$	Market Value \$	IRR (%)	TVPI Multiple (%)
Private Equity	34,500,000	28,376,357	23,403,082	37,980,029	18.5	2.2

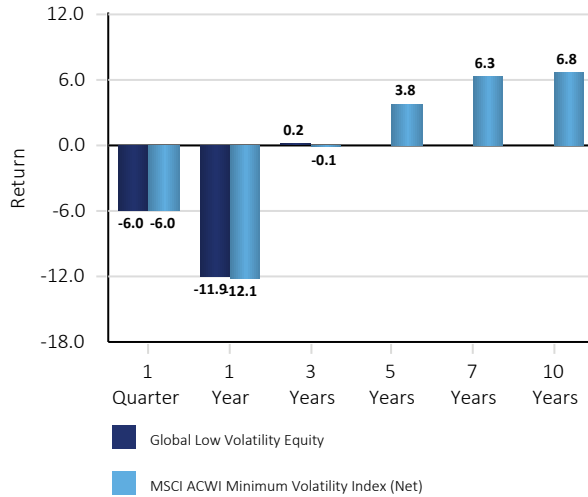
Global Low Volatility Equity

Performance Summary

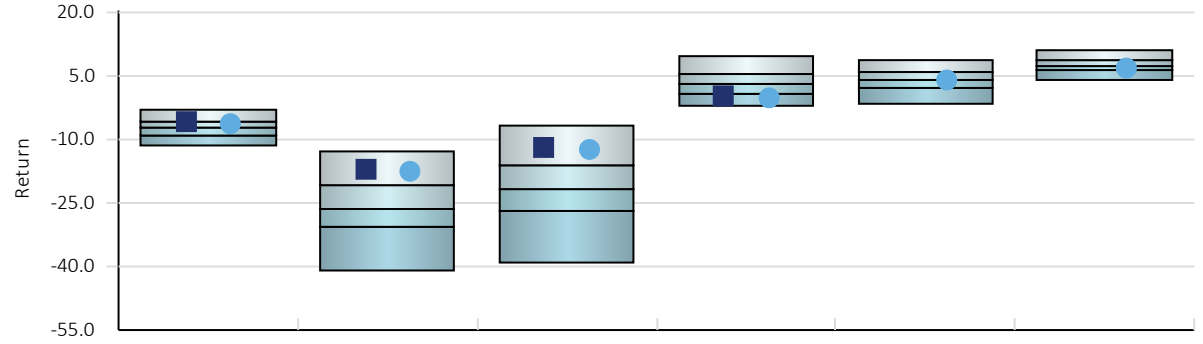
Global Low Volatility Equity

Periods Ended September 30, 2022

Comparative Performance

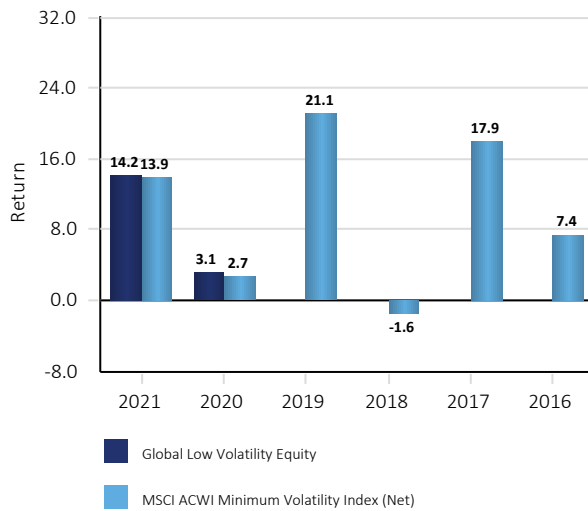


Peer Group Analysis: IM Global Equity (SA+CF)

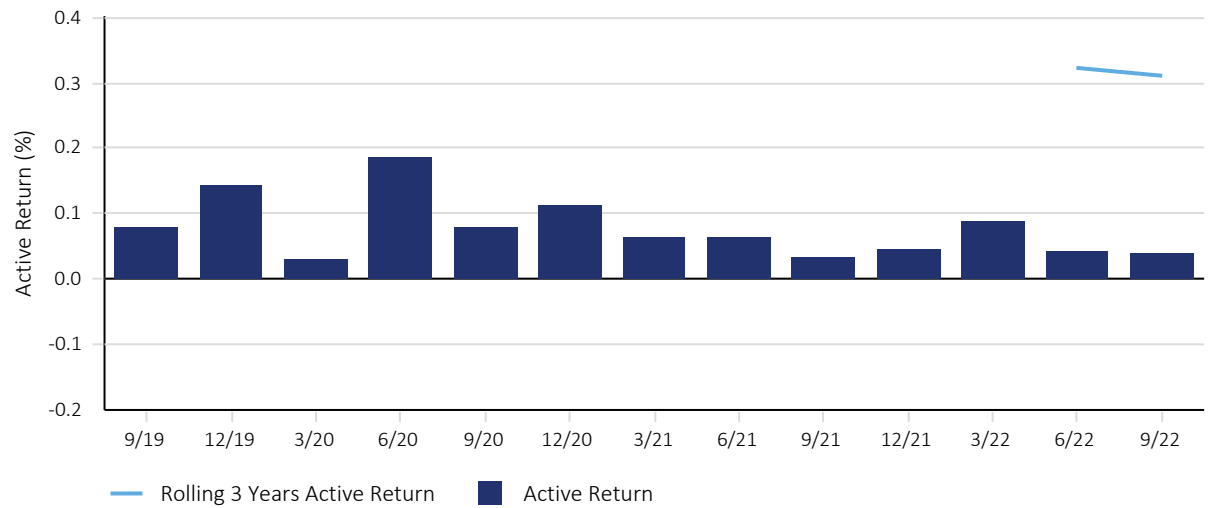


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-6.00 (30)	-17.17 (15)	-11.93 (15)	0.17 (84)		
● Benchmark	-6.03 (31)	-17.32 (16)	-12.12 (15)	-0.13 (86)	3.85 (55)	6.78 (66)
Median	-7.05	-26.28	-21.74	3.07	4.12	7.40

Comparative Performance



Rolling 3 Years Performance



Asset Allocation & Performance

Global Low Volatility Equity

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Global Low Volatility Equity	42,233,983	100.00	-6.00	-17.17	-17.17	-11.93	0.17				2.29	6/1/2019
MSCI ACWI Minimum Volatility Index (Net)			-6.03	-17.32	-17.32	-12.12	-0.13				1.97	
Value Added			0.03	0.15	0.15	0.19	0.30				0.32	
BlackRock MSCI ACWI Min Vol	42,233,983	100.00	-6.00	-17.17	-17.17	-11.93	0.17				2.29	6/1/2019
MSCI ACWI Minimum Volatility Index (Net)			-6.03	-17.32	-17.32	-12.12	-0.13				1.97	
Value Added			0.03	0.15	0.15	0.19	0.30				0.32	

Private Credit

Private Credit Composite Overview

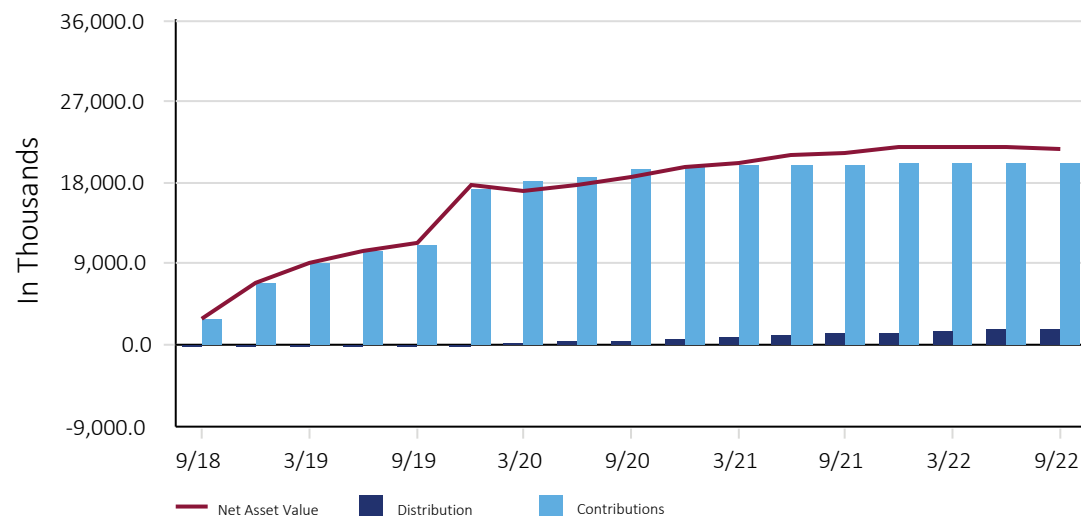
Private Credit

Periods Ended As of September 30, 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:	1,744,033
Market Value:	21,805,467
Inception Date:	10/1/2018
Inception IRR:	5.1
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	1,744,033	5,679,877	7.6	1.2
Grosvenor PC	14,000,000	14,000,000		16,125,590	4.3	1.2
Private Credit	21,000,000	20,191,428	1,744,033	21,805,467	5.1	1.2

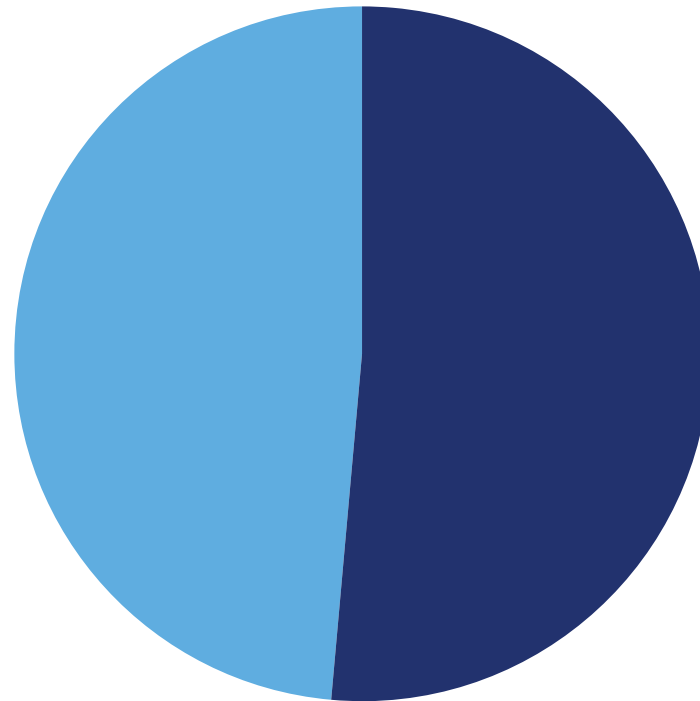
Core Fixed Income

Asset Allocation By Manager

Core Fixed Income

Periods Ended September 30, 2022

Sep-2022 : 106,513,033



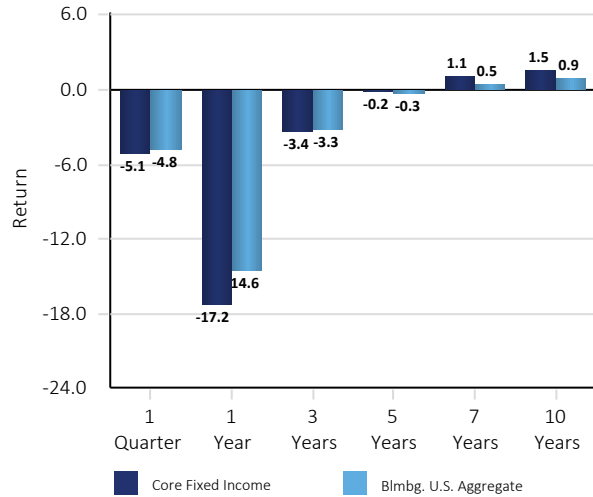
	Market Value \$	Allocation (%)
■ Baird Advisors	54,766,055	51.4
■ Western Asset Management	51,746,978	48.6

Performance Summary

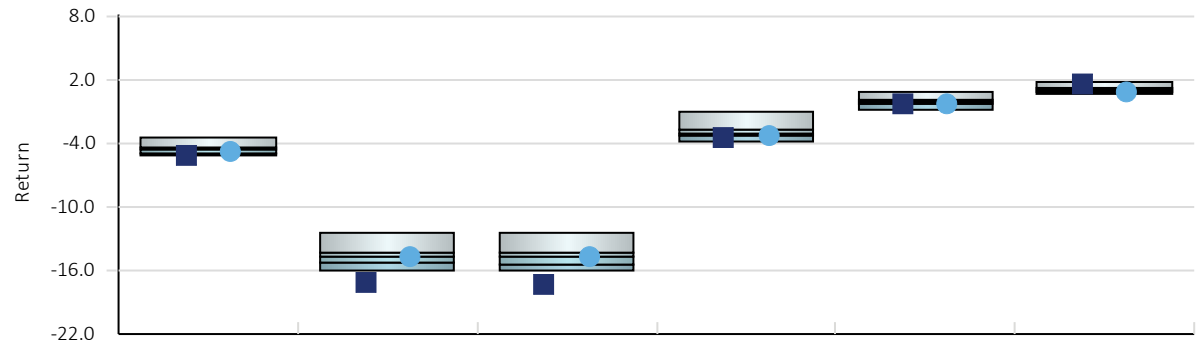
Core Fixed Income

Periods Ended September 30, 2022

Comparative Performance

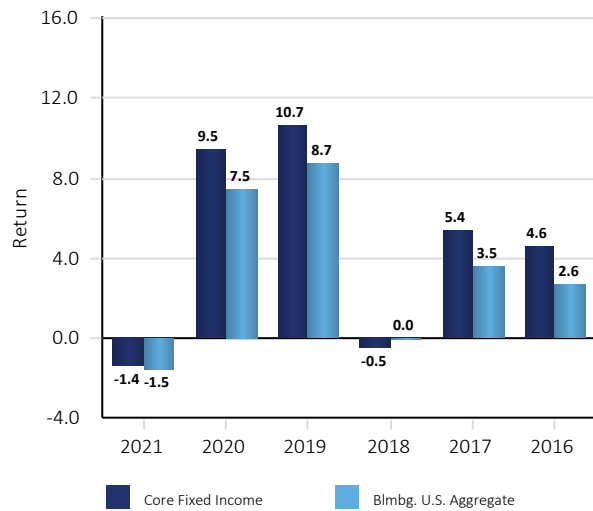


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

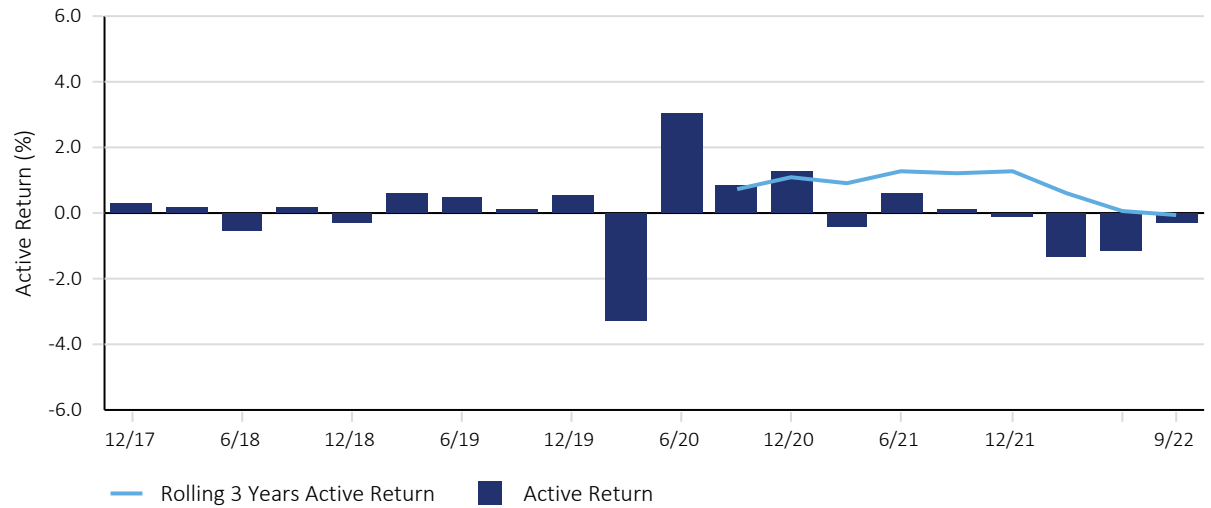


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-5.07 (91)	-17.15 (98)	-17.25 (99)	-3.42 (85)	-0.17 (62)	1.55 (10)
● Benchmark	-4.75 (62)	-14.61 (48)	-14.60 (44)	-3.26 (71)	-0.27 (69)	0.89 (74)
Median	-4.63	-14.64	-14.74	-3.03	-0.10	1.08

Comparative Performance



Rolling 3 Years Performance

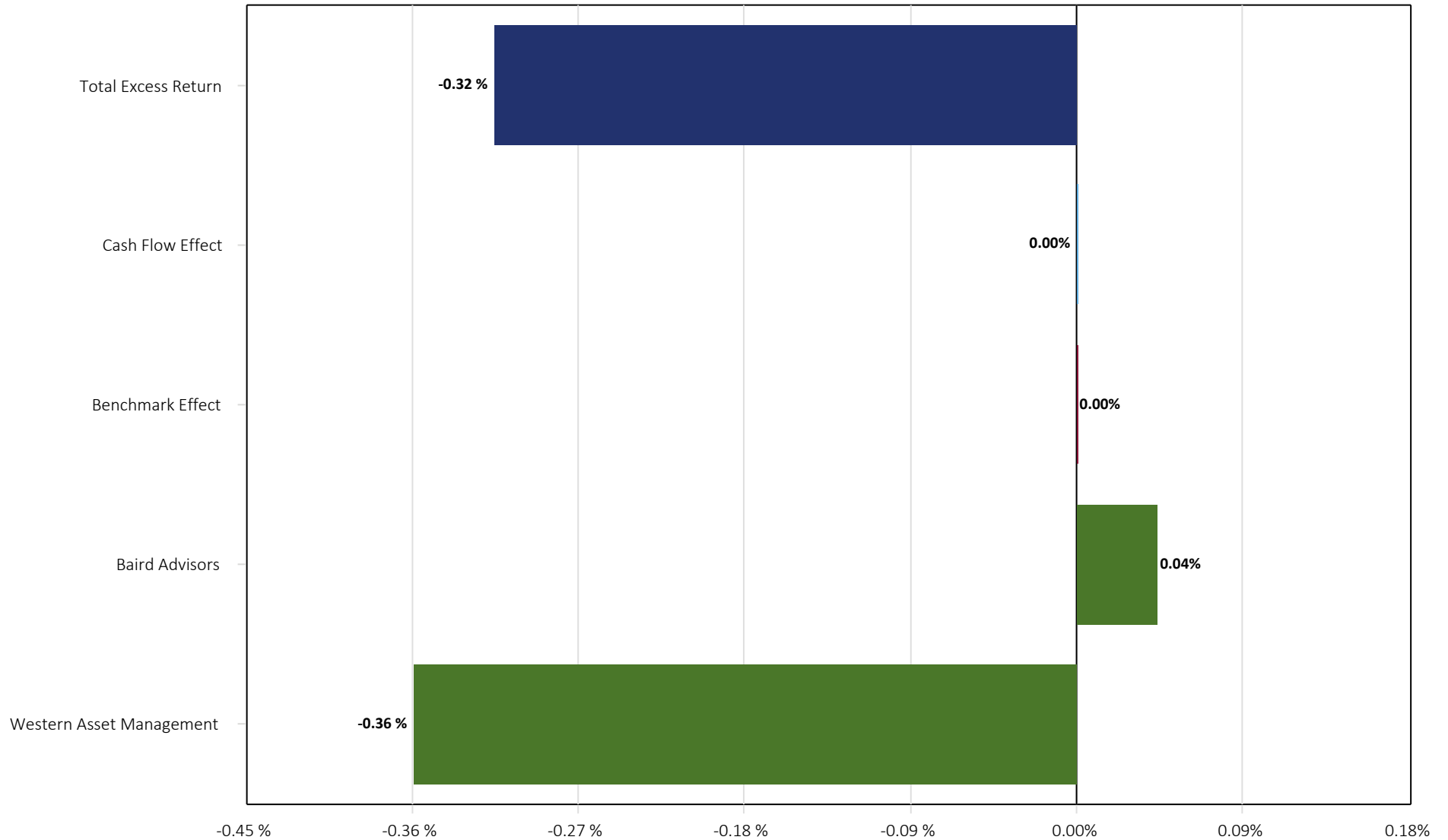


Asset Class Attribution

Core Fixed Income

Periods Ended 1 Quarter Ending September 30, 2022

1 Quarter



Asset Allocation & Performance

Core Fixed Income

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Core Fixed Income	106,513,033	100.00	-5.07	-17.15	-17.15	-17.25	-3.42	-0.17	1.12	1.55	5.92	10/1/1987
Blmbg. U.S. Aggregate			-4.75	-14.61	-14.61	-14.60	-3.26	-0.27	0.54	0.89	5.55	
Value Added			-0.32	-2.54	-2.54	-2.65	-0.16	0.10	0.58	0.66	0.37	
Baird Advisors	54,766,055	51.42	-4.67	-14.76	-14.76	-14.87	-2.98	0.06	1.00	1.37	3.36	12/1/2002
Blmbg. U.S. Aggregate			-4.75	-14.61	-14.61	-14.60	-3.26	-0.27	0.54	0.89	3.14	
Value Added			0.08	-0.15	-0.15	-0.27	0.28	0.33	0.46	0.48	0.22	
Western Asset Management	51,746,978	48.58	-5.49	-19.53	-19.53	-19.63	-3.90	-0.45	1.20	1.68	3.76	1/1/2004
Blmbg. U.S. Aggregate			-4.75	-14.61	-14.61	-14.60	-3.26	-0.27	0.54	0.89	2.99	
Value Added			-0.74	-4.92	-4.92	-5.03	-0.64	-0.18	0.66	0.79	0.77	

TIPS

Asset Allocation & Performance

TIPS

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
TIPS	20,714,481	100.00	-5.05	-13.76	-13.76	-11.88	0.45	1.70	2.04		1.53	5/1/2015
Blmbg. U.S. TIPS			-5.14	-13.61	-13.61	-11.57	0.79	1.95	2.21		1.68	
Value Added			0.09	-0.15	-0.15	-0.31	-0.34	-0.25	-0.17		-0.15	
Brown Brothers Harriman	20,714,481	100.00	-5.05	-13.76	-13.76	-11.88	0.45	1.70	2.04		1.53	5/1/2015
Blmbg. U.S. TIPS			-5.14	-13.61	-13.61	-11.57	0.79	1.95	2.21		1.68	
Value Added			0.09	-0.15	-0.15	-0.31	-0.34	-0.25	-0.17		-0.15	

Real Estate

Asset Allocation & Performance

Real Estate

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Real Estate	20,556,301	100.00	-10.41	-27.23	-27.23	-16.05	-0.39	2.78	3.41	4.15	7.24	6/1/2009
Real Estate Policy Index			-10.37	-29.32	-29.32	-17.15	-3.29	1.16	2.93	3.91	7.38	
Value Added			-0.04	2.09	2.09	1.10	2.90	1.62	0.48	0.24	-0.14	
Centersquare	20,556,301	100.00	-10.41	-27.23	-27.23	-16.05	-0.33				-0.33	10/1/2019
Dow Jones U.S. Select REIT			-10.37	-29.32	-29.32	-17.15	-3.29				-3.29	
Value Added			-0.04	2.09	2.09	1.10	2.96				2.96	

Commodities

Asset Allocation & Performance

Commodities

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Commodities	23,287,099	100.00	-7.89	3.44	3.44	6.70	12.78	7.52	5.74		-1.12	2/1/2013
Bloomberg Commodity Index Total Return			-4.11	13.57	13.57	11.80	13.45	6.96	4.49		-1.79	
Value Added			-3.78	-10.13	-10.13	-5.10	-0.67	0.56	1.25		0.67	
Wellington Commodities	23,287,099	100.00	-7.89	3.44	3.44	6.70	12.78	7.52	5.74		-1.12	2/1/2013
Bloomberg Commodity Index Total Return			-4.11	13.57	13.57	11.80	13.45	6.96	4.49		-1.79	
Value Added			-3.78	-10.13	-10.13	-5.10	-0.67	0.56	1.25		0.67	

Midstream Energy

Asset Allocation & Performance

Midstream Energy Composite

Periods Ended September 30, 2022

	Allocation		Performance (%) net of fees									
	Market Value \$	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Midstream Energy Composite	25,451,095	100.00	6.68	21.34	21.34	23.00	7.87	4.16	4.08		-0.44	3/1/2015
Midstream Energy Policy Index			-0.98	12.13	12.13	11.73	-1.24	-2.16	-2.62		-7.44	
Value Added			7.66	9.21	9.21	11.27	9.11	6.32	6.70		7.00	
Harvest MLP	25,451,095	100.00	6.68	21.34	21.34	23.00	7.87	4.16	4.08		-0.44	3/1/2015
Midstream Energy Policy Index			-0.98	12.13	12.13	11.73	-1.24	-2.16	-2.62		-7.44	
Value Added			7.66	9.21	9.21	11.27	9.11	6.32	6.70		7.00	

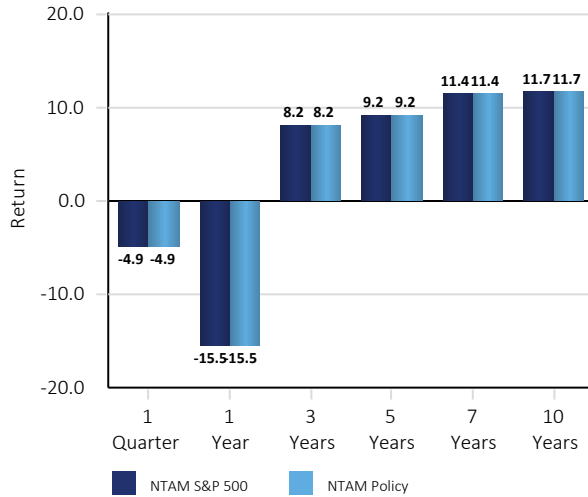
Appendix

Performance Summary

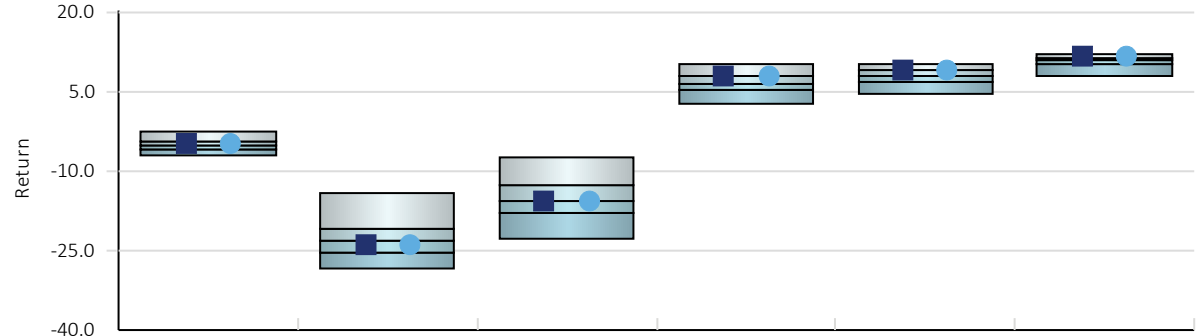
NTAM S&P 500

Periods Ended September 30, 2022

Comparative Performance

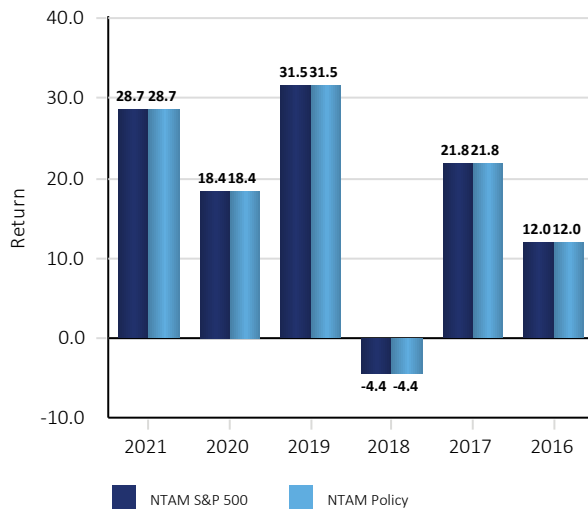


Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)

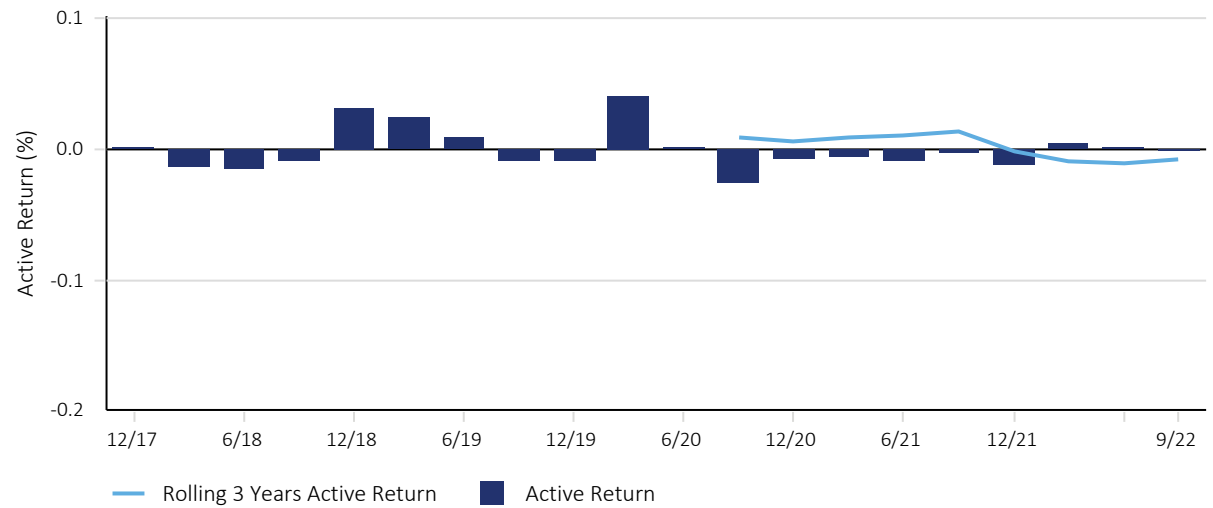


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-4.88 (44)	-23.86 (56)	-15.48 (46)	8.16 (22)	9.24 (21)	11.72 (13)
● Benchmark	-4.88 (45)	-23.87 (56)	-15.47 (45)	8.16 (22)	9.24 (22)	11.70 (13)
Median	-4.96	-23.25	-15.77	6.63	8.10	10.97

Comparative Performance



Rolling 3 Years Performance

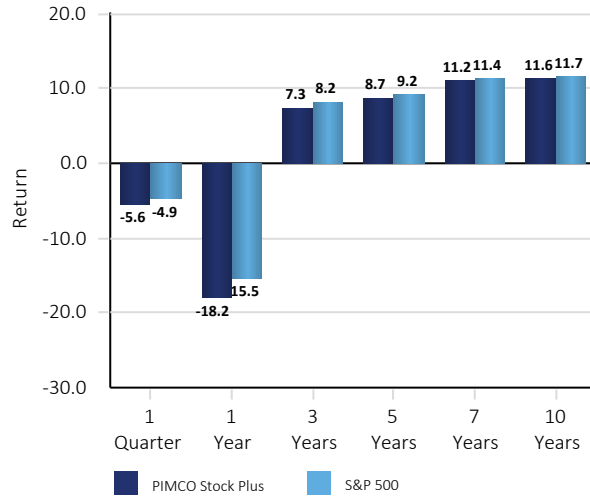


Performance Summary

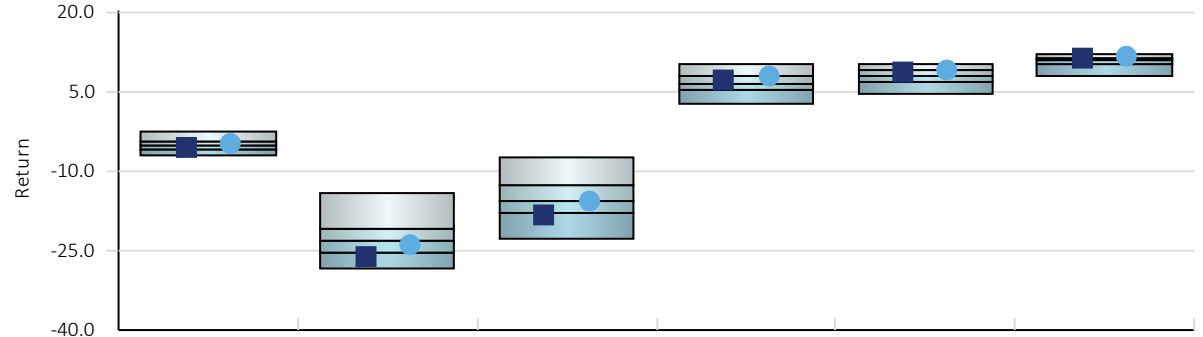
PIMCO Stock Plus

Periods Ended September 30, 2022

Comparative Performance

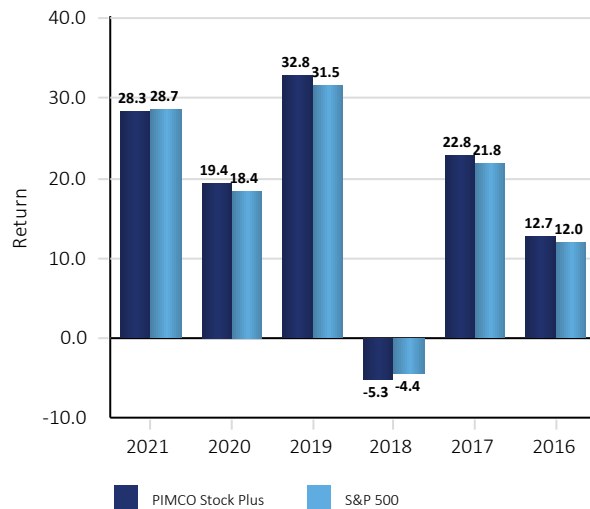


Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)

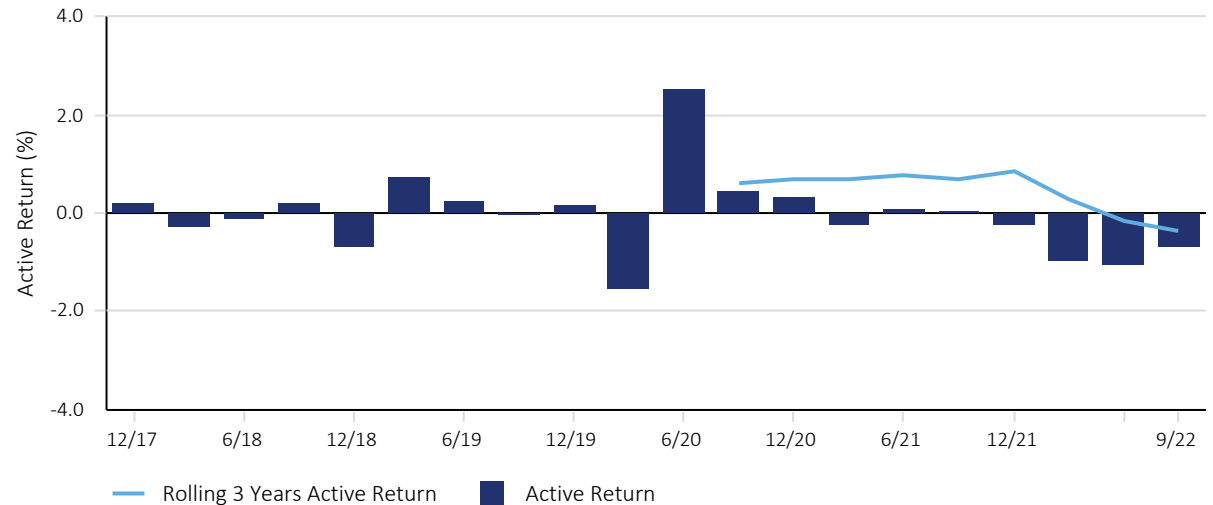


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-5.59 (72)	-26.12 (82)	-18.15 (77)	7.34 (39)	8.74 (32)	11.55 (17)
● Benchmark	-4.88 (45)	-23.87 (56)	-15.47 (45)	8.16 (22)	9.24 (22)	11.70 (13)
Median	-4.96	-23.25	-15.77	6.63	8.10	10.97

Comparative Performance



Rolling 3 Years Performance

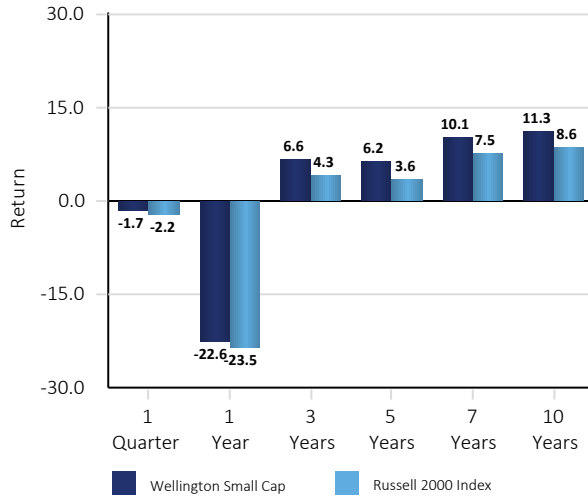


Performance Summary

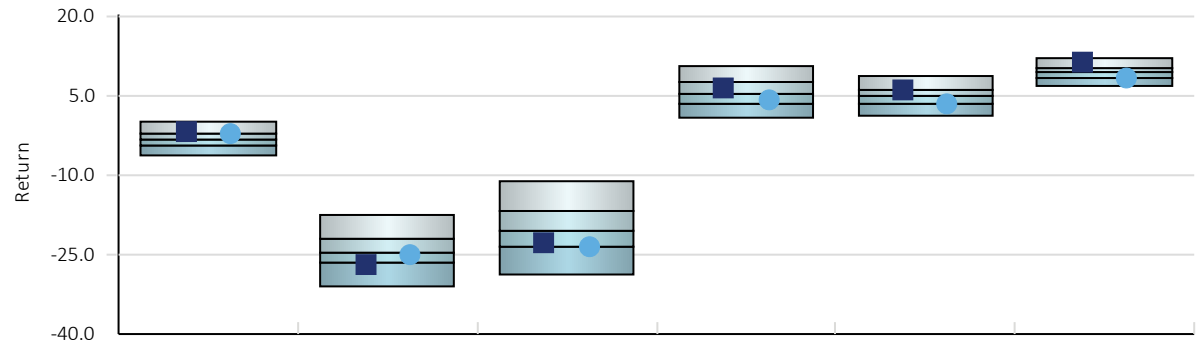
Wellington Small Cap

Periods Ended September 30, 2022

Comparative Performance

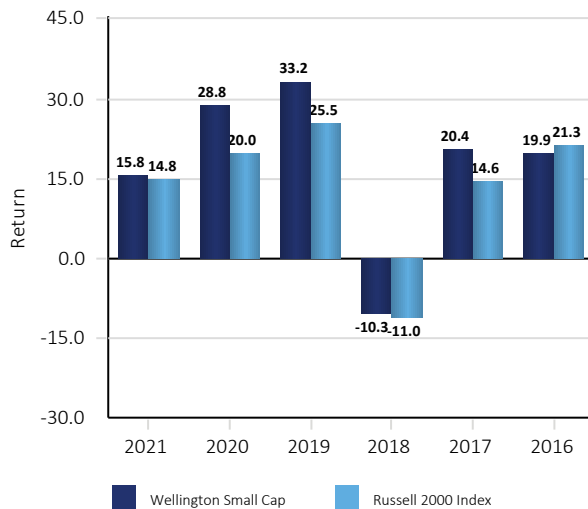


Peer Group Analysis: IM U.S. Small Cap Core Equity (SA+CF)

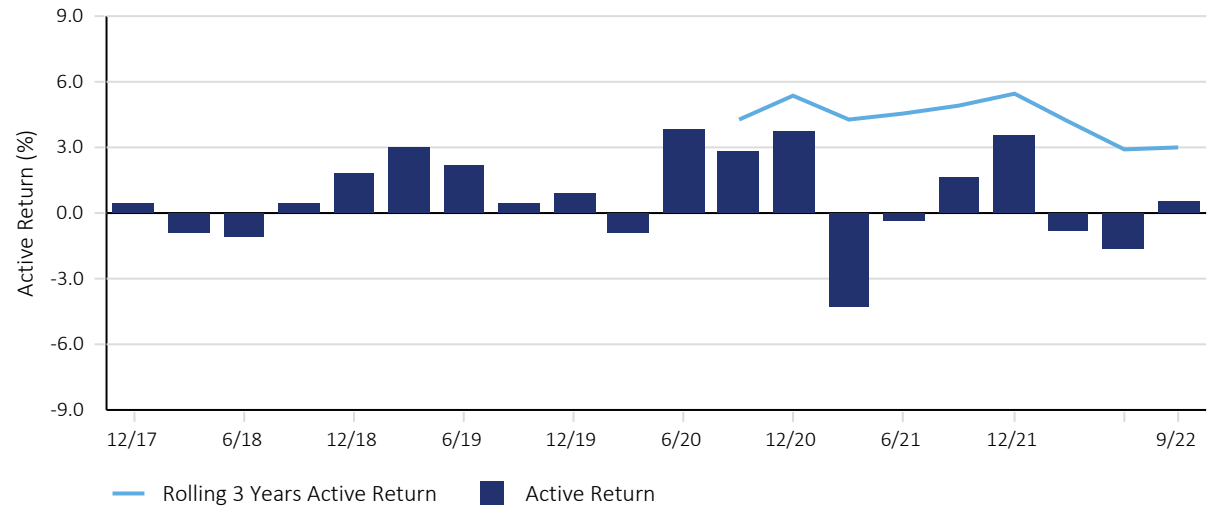


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-1.66 (19)	-26.79 (77)	-22.64 (67)	6.56 (36)	6.25 (26)	11.29 (9)
● Benchmark	-2.19 (27)	-25.10 (55)	-23.50 (78)	4.29 (64)	3.55 (73)	8.55 (71)
Median	-3.15	-24.55	-20.46	5.50	4.93	9.63

Comparative Performance



Rolling 3 Years Performance

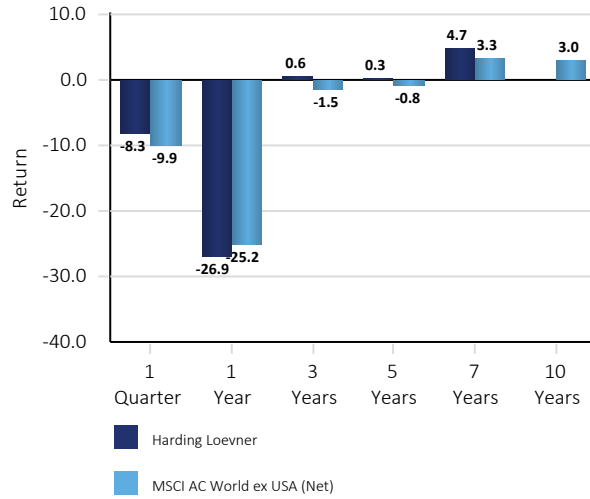


Performance Summary

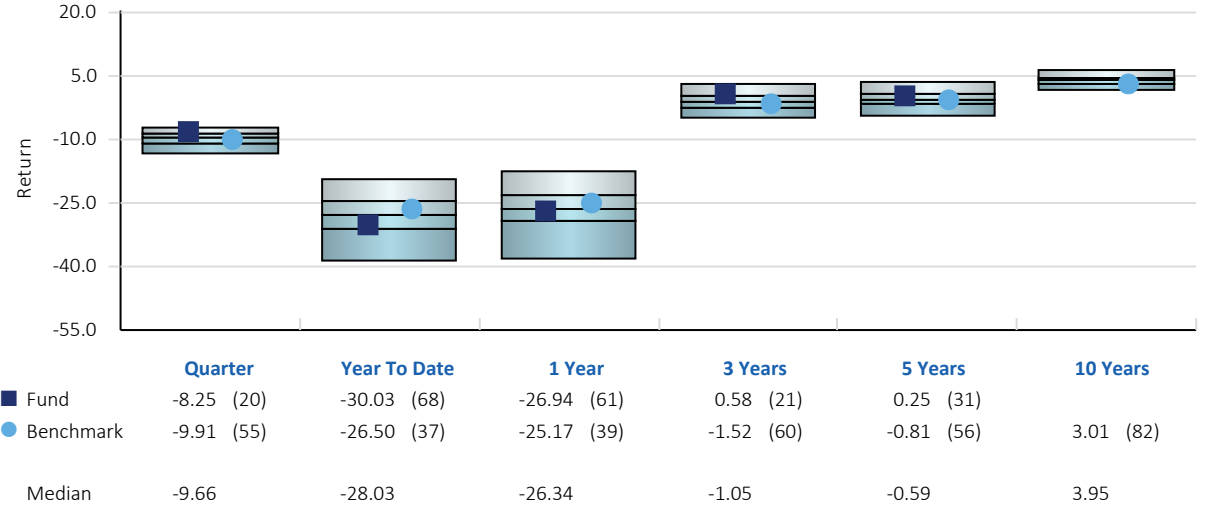
Harding Loevner

Periods Ended September 30, 2022

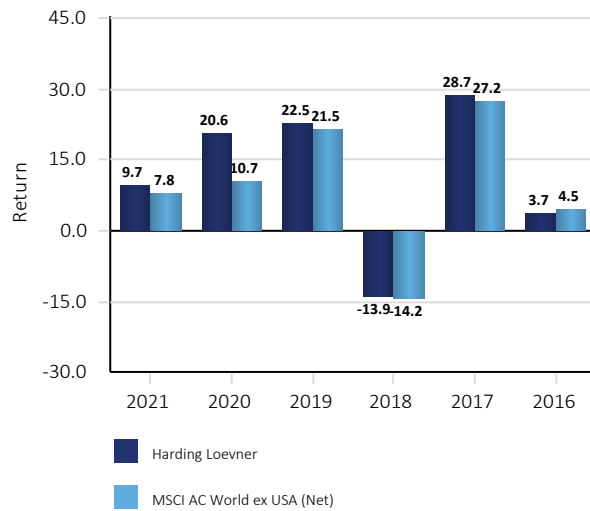
Comparative Performance



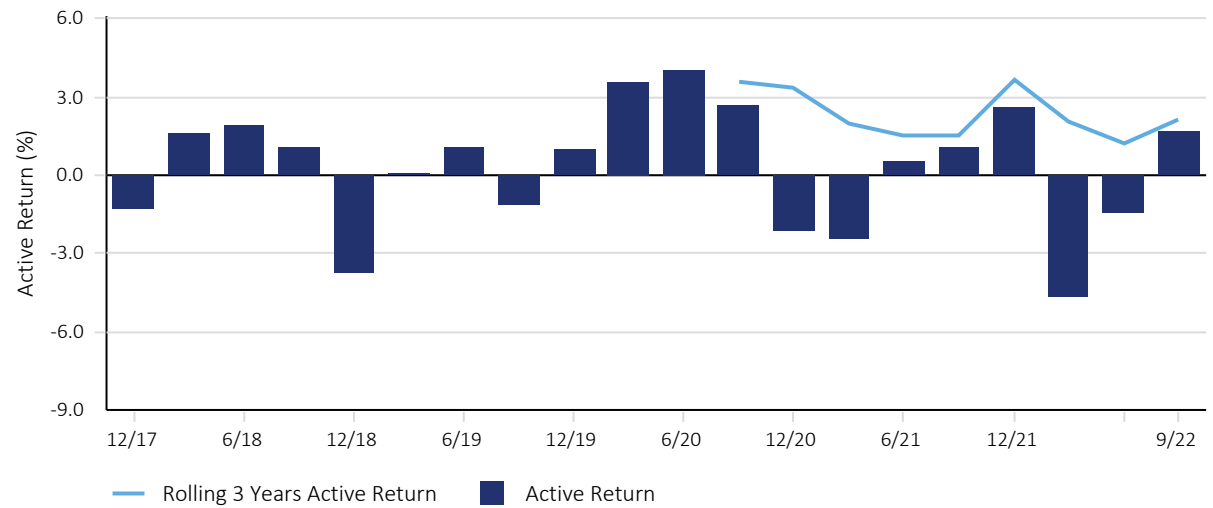
Peer Group Analysis: IM International Large Cap Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance

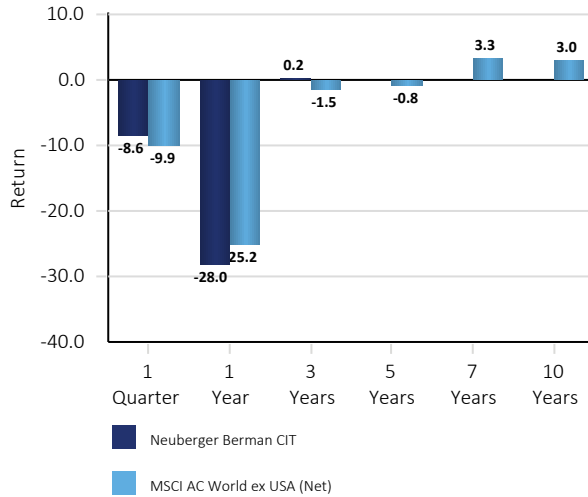


Performance Summary

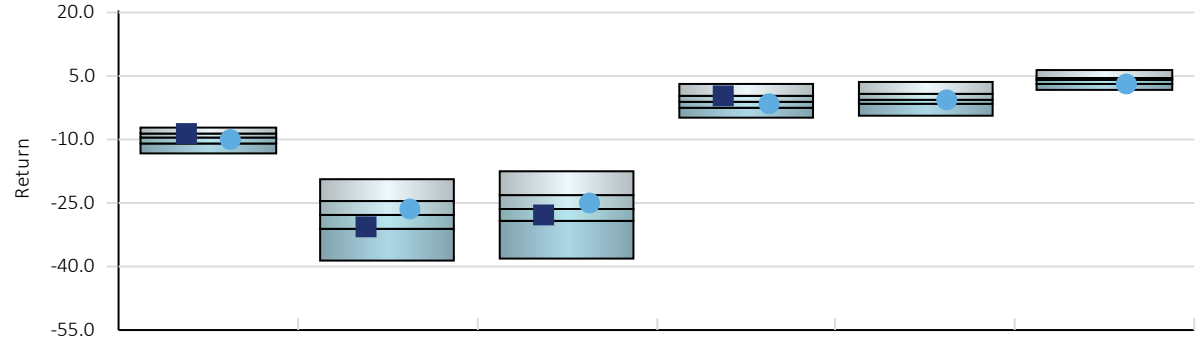
Neuberger Berman CIT

Periods Ended September 30, 2022

Comparative Performance

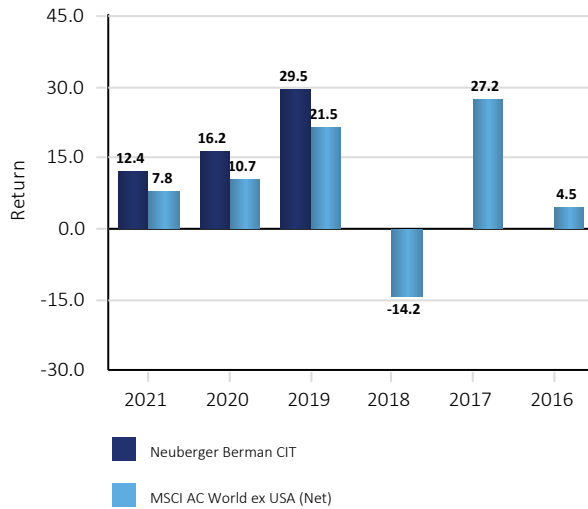


Peer Group Analysis: IM International Large Cap Equity (SA+CF)

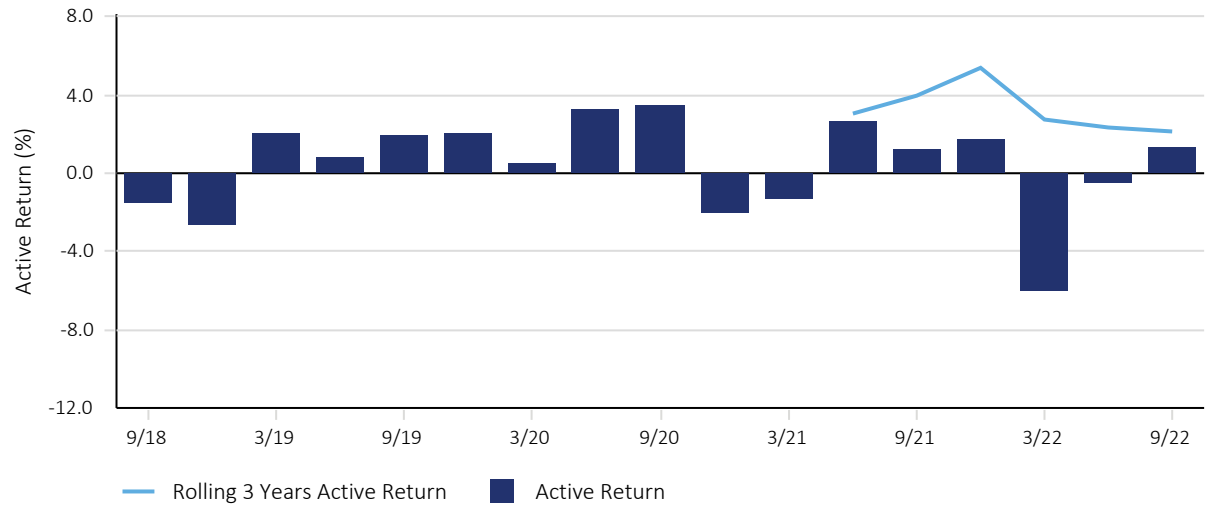


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	-8.58 (24)	-30.53 (72)	-28.04 (69)	0.23 (25)	-0.81 (56)	3.01 (82)
Benchmark	-9.91 (55)	-26.50 (37)	-25.17 (39)	-1.52 (60)	-0.81 (56)	3.01 (82)
Median	-9.66	-28.03	-26.34	-1.05	-0.59	3.95

Comparative Performance



Rolling 3 Years Performance

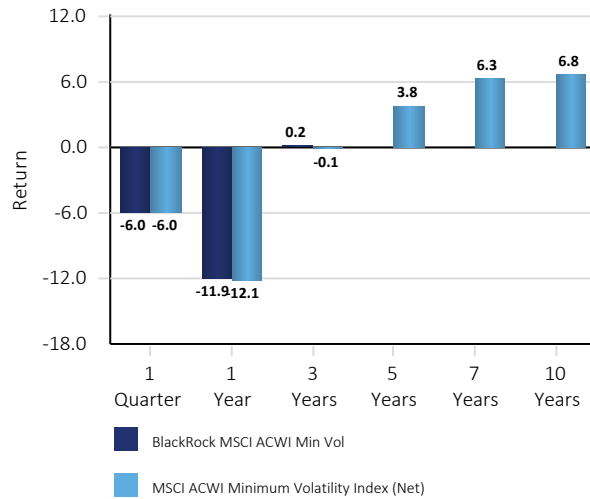


Performance Summary

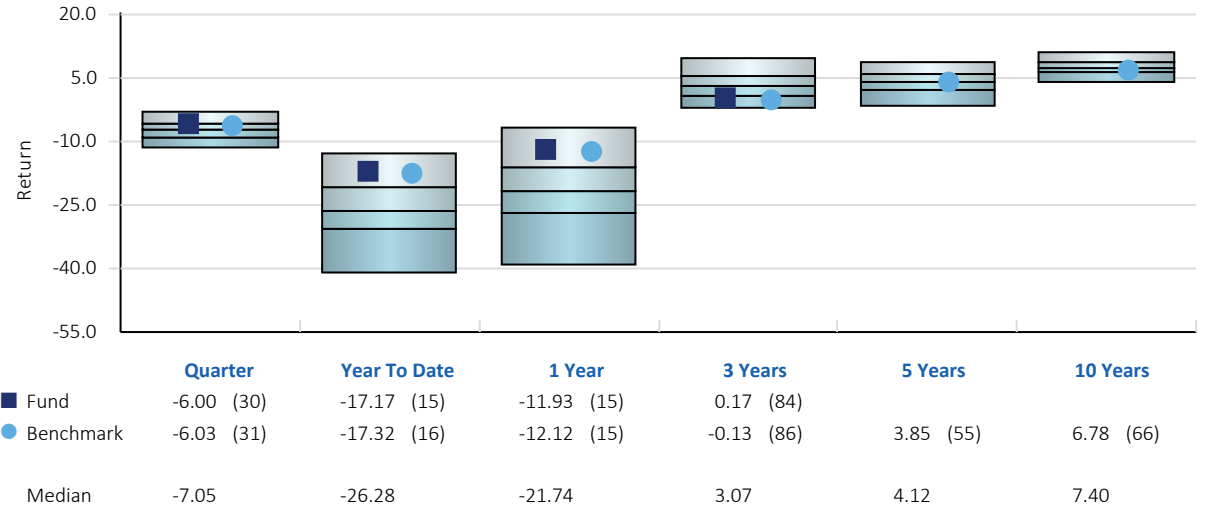
BlackRock MSCI ACWI Min Vol

Periods Ended September 30, 2022

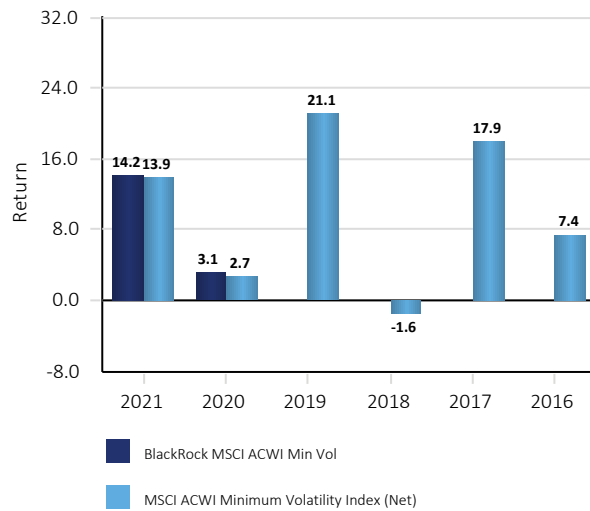
Comparative Performance



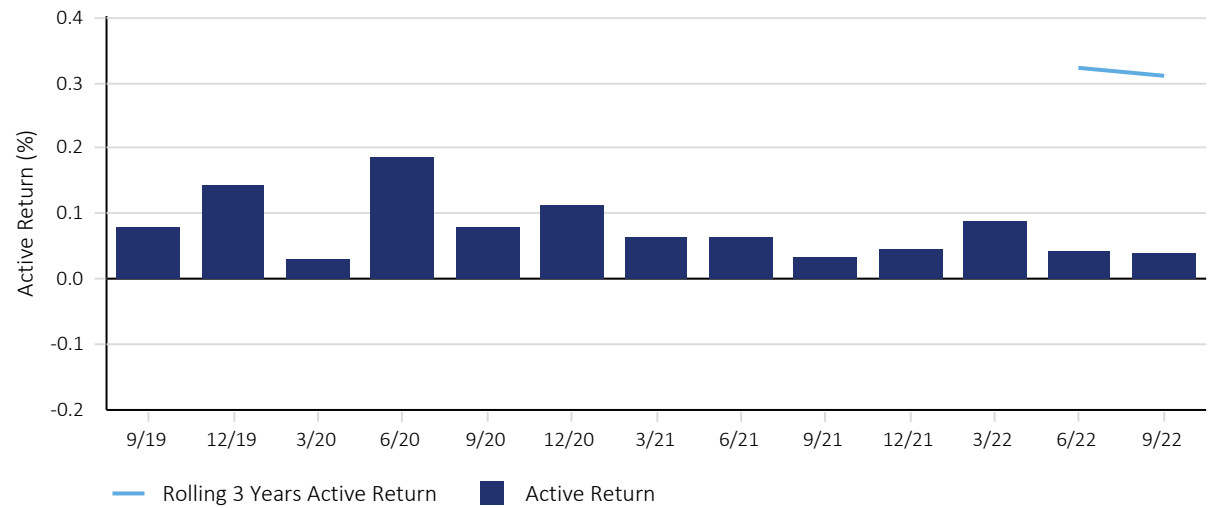
Peer Group Analysis: IM Global Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance

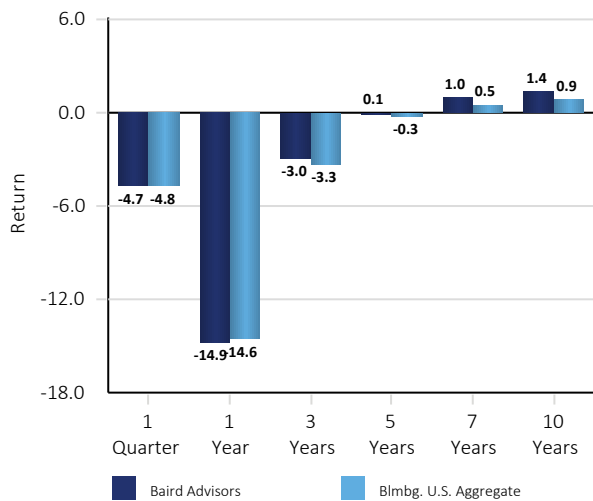


Performance Summary

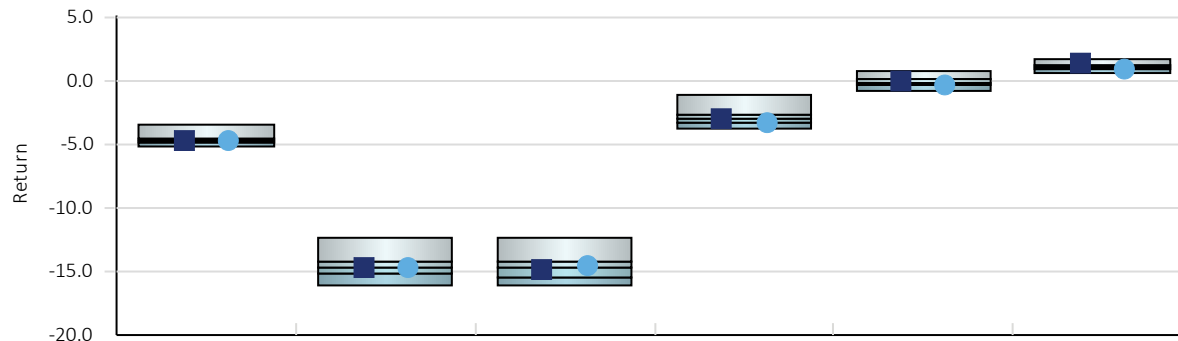
Baird Advisors

Periods Ended September 30, 2022

Comparative Performance

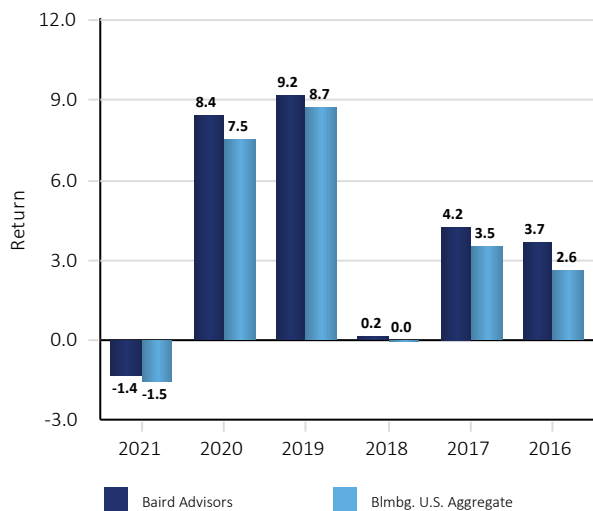


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

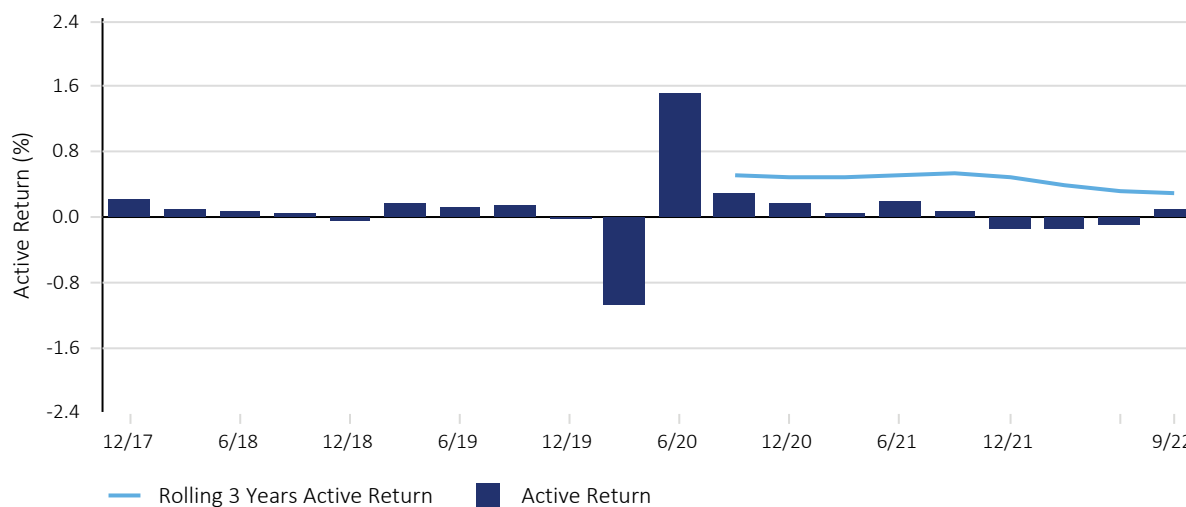


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-4.67 (56)	-14.76 (56)	-14.87 (57)	-2.98 (47)	0.06 (31)	1.37 (19)
● Benchmark	-4.75 (62)	-14.61 (48)	-14.60 (44)	-3.26 (71)	-0.27 (69)	0.89 (74)
Median	-4.63	-14.64	-14.74	-3.03	-0.10	1.08

Comparative Performance



Rolling 3 Years Performance

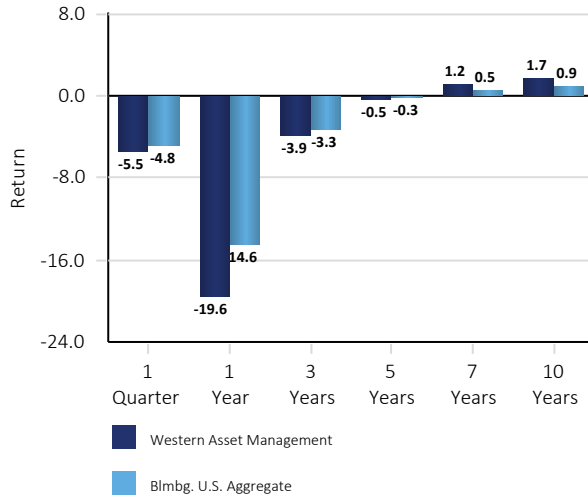


Performance Summary

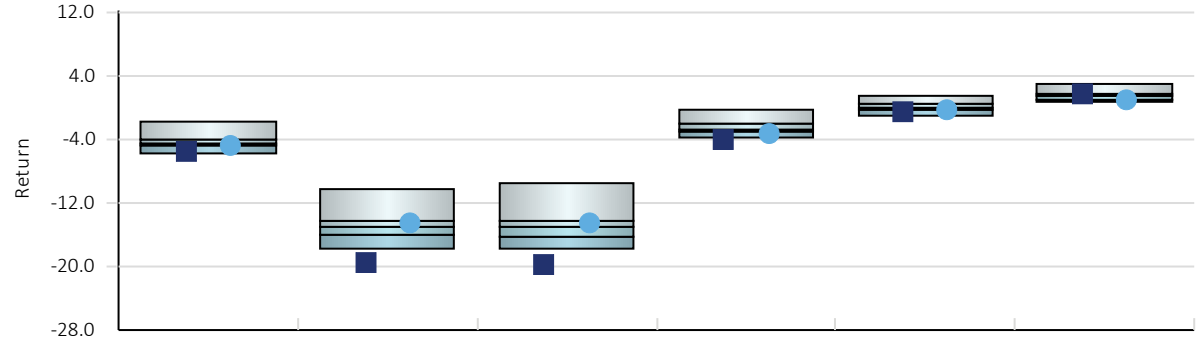
Western Asset Management

Periods Ended September 30, 2022

Comparative Performance

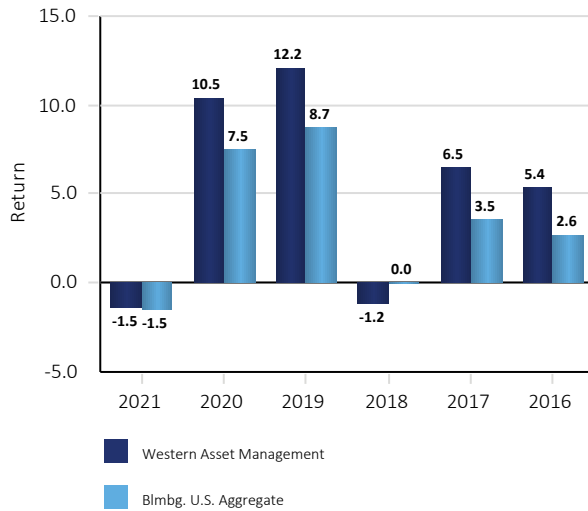


Peer Group Analysis: IM U.S. Broad Market Core+ Fixed Income (SA+CF)

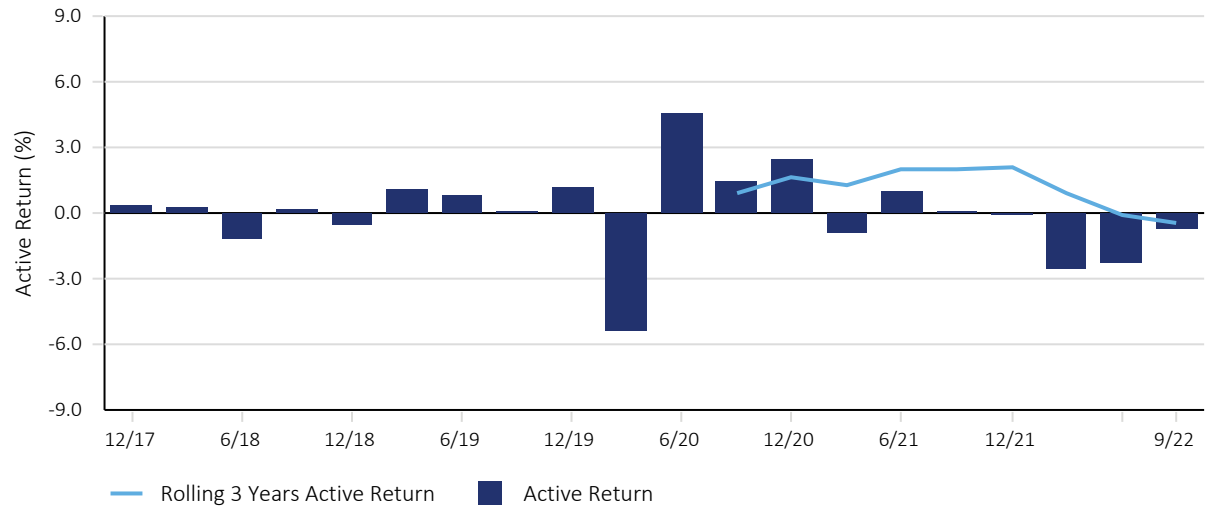


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
■ Fund	-5.49 (95)	-19.53 (97)	-19.63 (97)	-3.90 (96)	-0.45 (90)	1.68 (37)
● Benchmark	-4.75 (77)	-14.61 (35)	-14.60 (35)	-3.26 (85)	-0.27 (84)	0.89 (92)
Median	-4.41	-14.98	-15.00	-2.68	0.10	1.43

Comparative Performance



Rolling 3 Years Performance

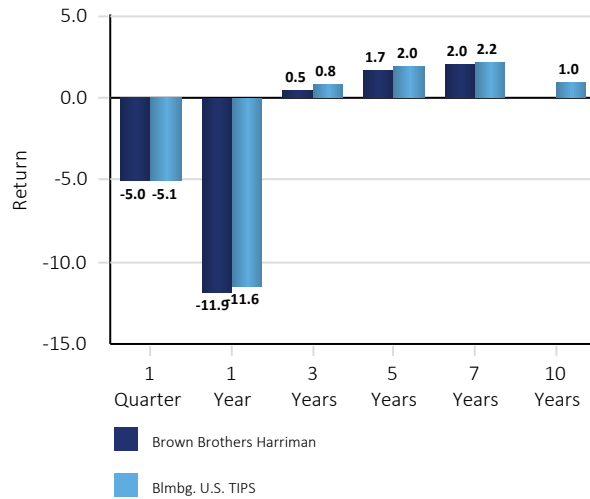


Performance Summary

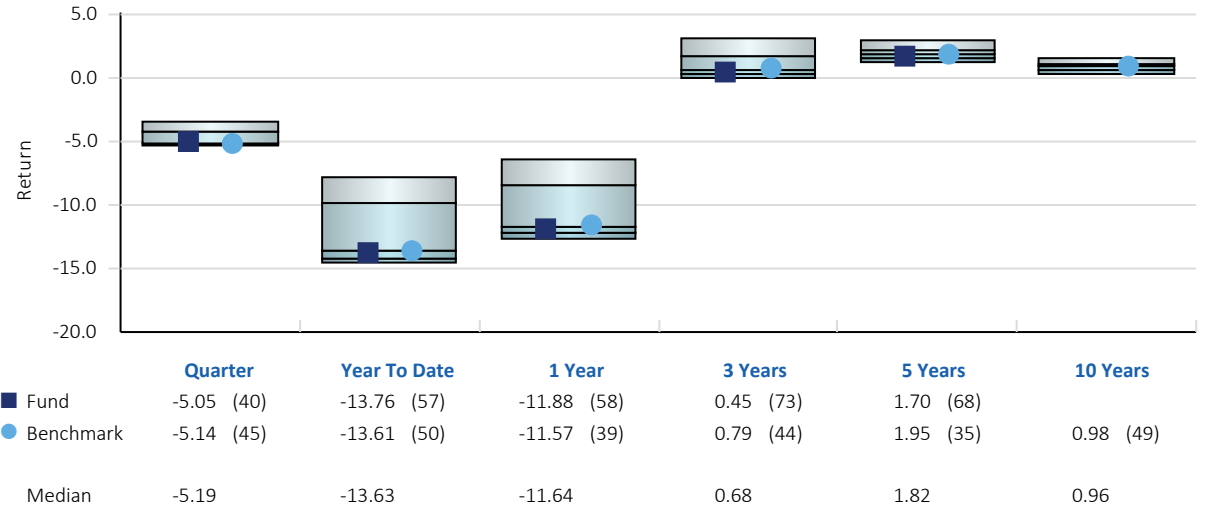
Brown Brothers Harriman

Periods Ended September 30, 2022

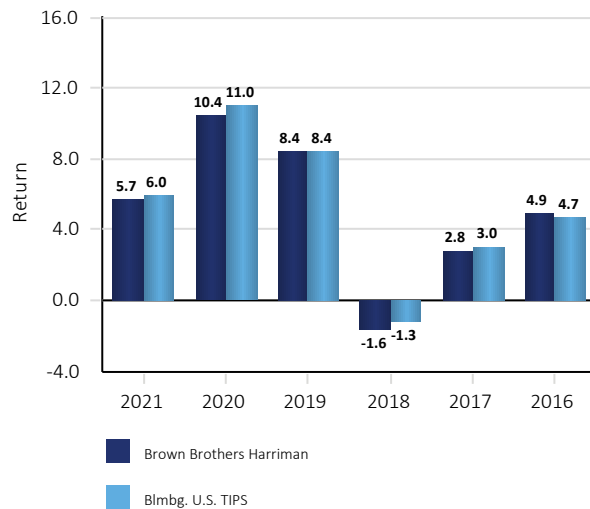
Comparative Performance



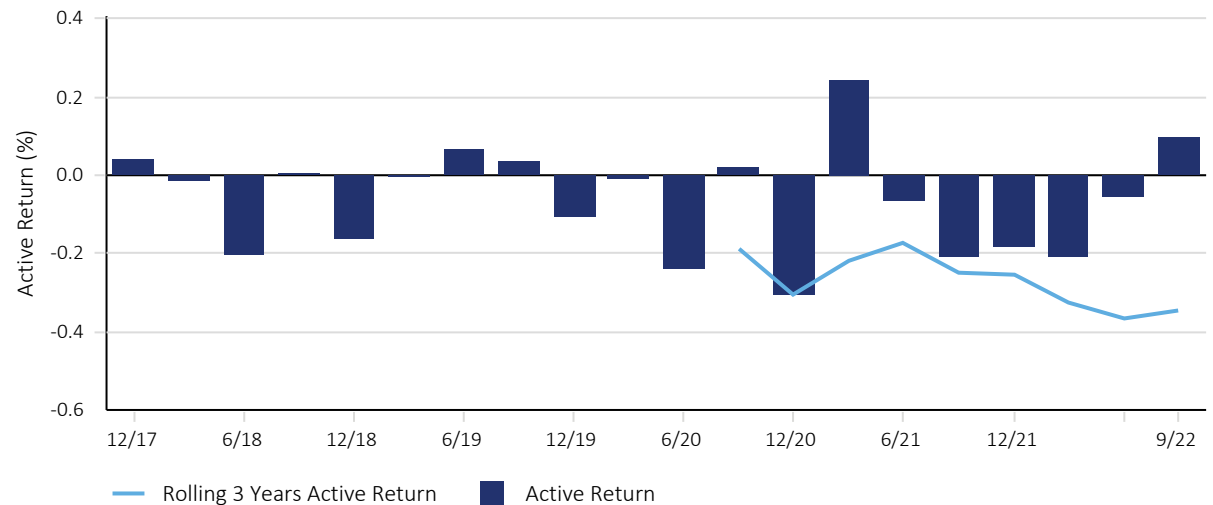
Peer Group Analysis: IM U.S. TIPS (SA+CF)



Comparative Performance



Rolling 3 Years Performance

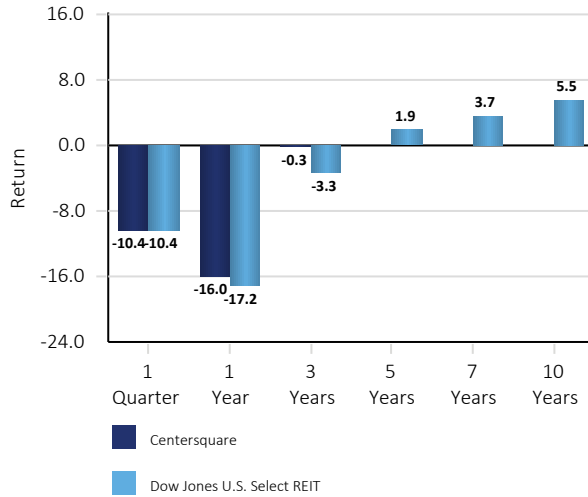


Performance Summary

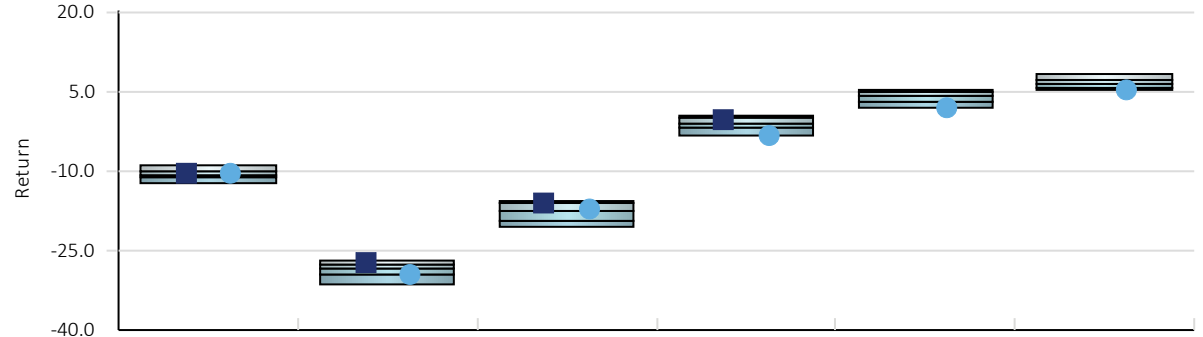
Centersquare

Periods Ended September 30, 2022

Comparative Performance

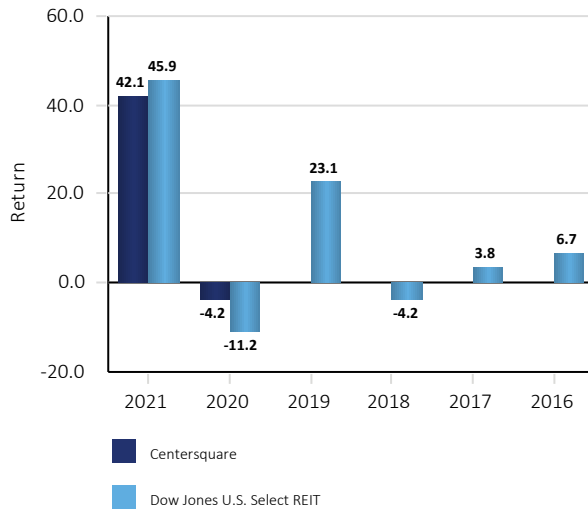


Peer Group Analysis: IM U.S. REIT (SA+CF)

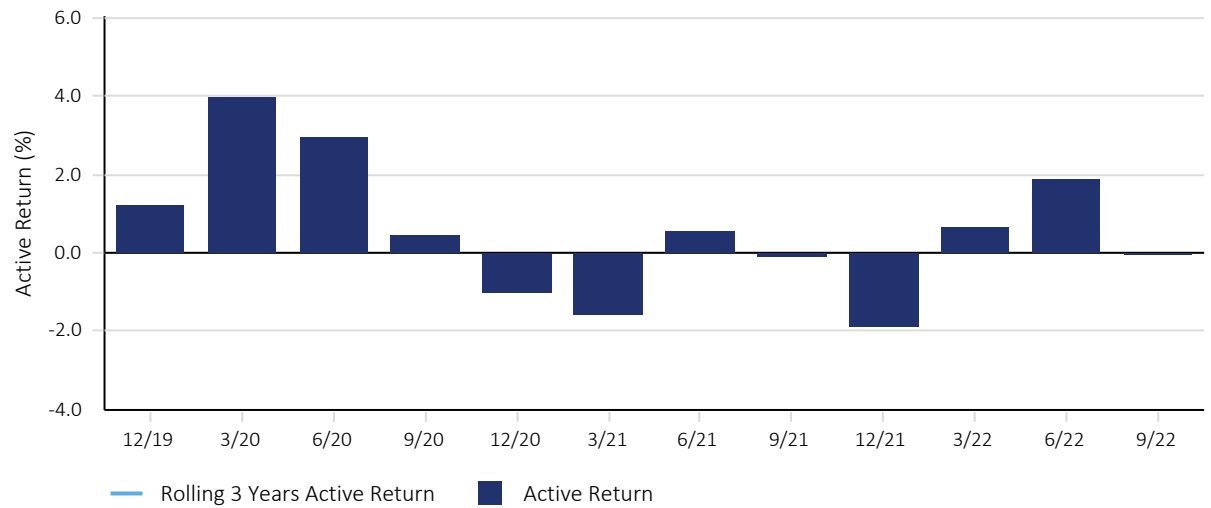


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	-10.41 (41)	-27.23 (15)	-16.05 (30)	-0.33 (40)		
Benchmark	-10.37 (40)	-29.32 (68)	-17.15 (45)	-3.29 (100)	1.95 (88)	5.49 (93)
Median	-10.79	-28.48	-17.59	-0.87	4.09	6.33

Comparative Performance



Rolling 3 Years Performance

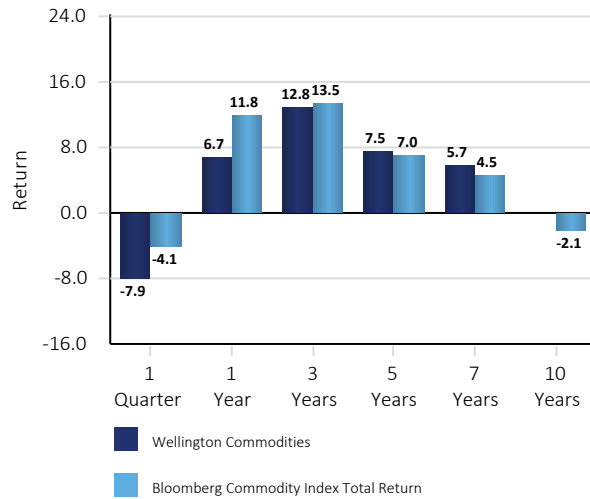


Performance Summary

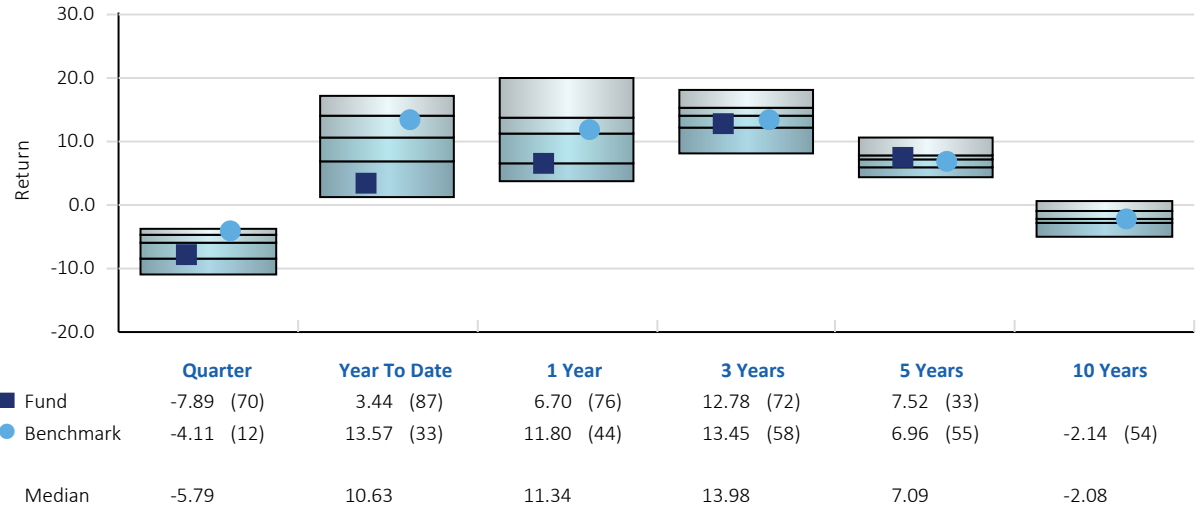
Wellington Commodities

Periods Ended September 30, 2022

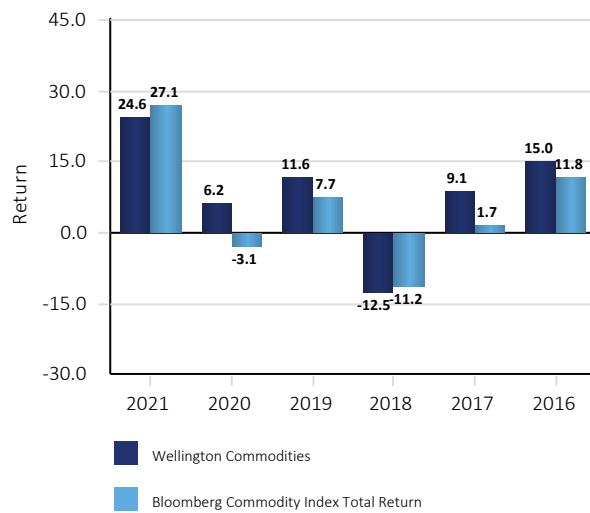
Comparative Performance



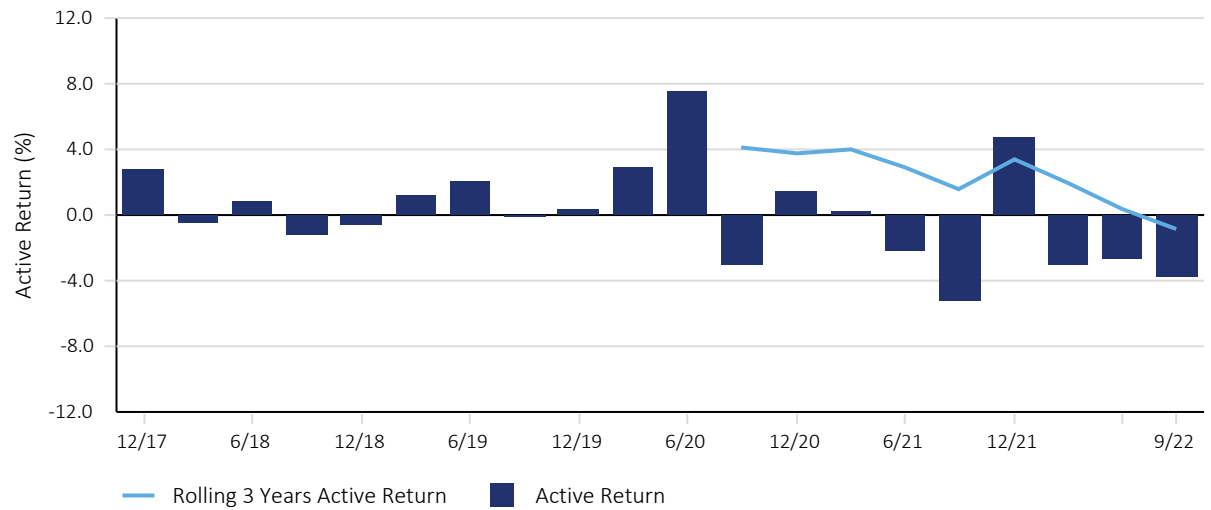
Peer Group Analysis: Commodities Broad Basket



Comparative Performance



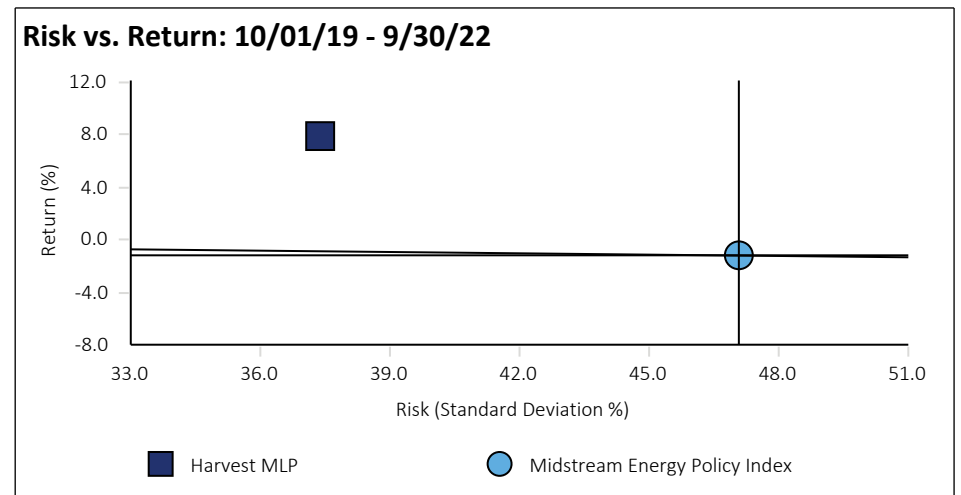
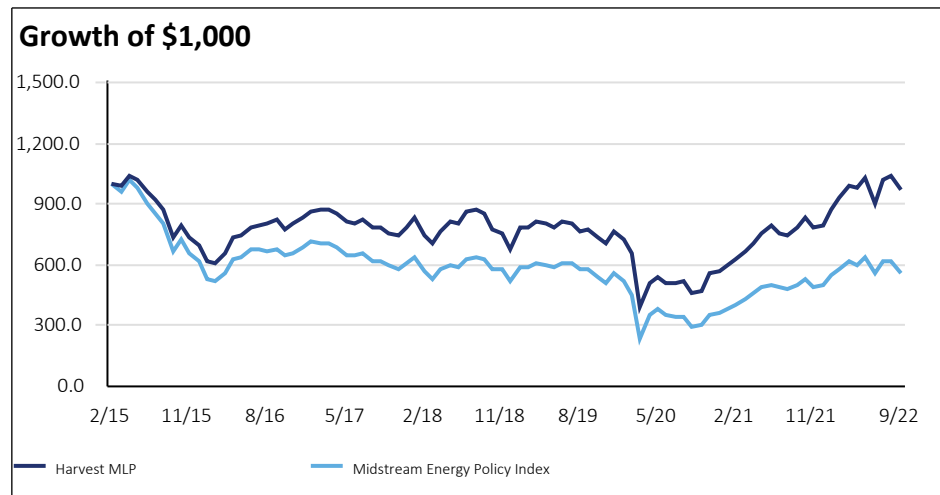
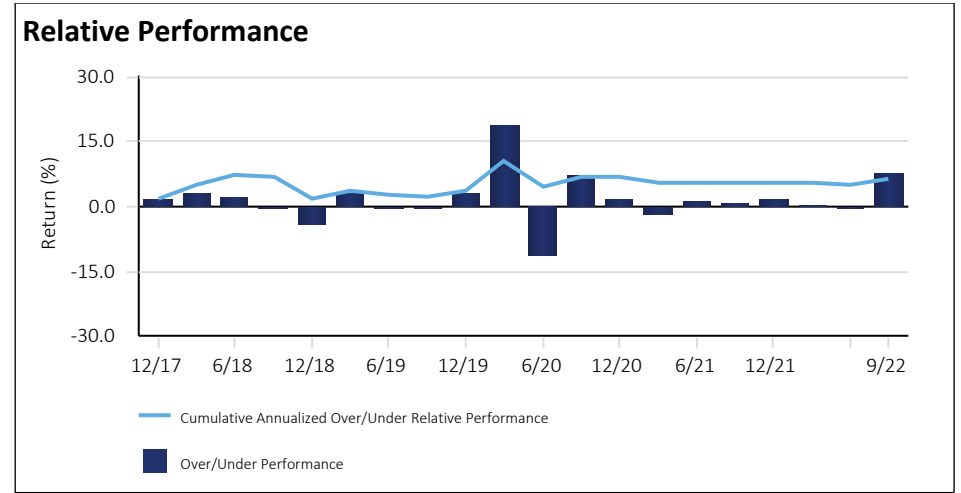
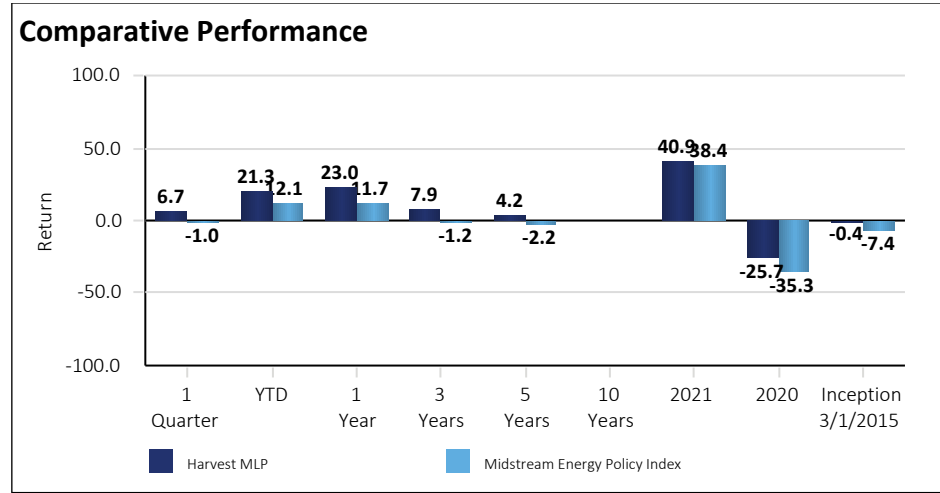
Rolling 3 Years Performance



Manager Summary

Harvest MLP

Periods Ended September 30, 2022



Historical Statistics: 10/01/19 - 9/30/22

	<u>Alpha</u>	<u>Tracking Error</u>	<u>Information Ratio</u>	<u>Beta</u>	<u>Standard Deviation</u>	<u>Sharpe Ratio</u>	<u>Maximum Drawdown</u>	<u>Up Capture</u>	<u>Down Capture</u>
Fund	6.77	12.77	0.30	0.81	41.61	0.42	-49.63	87.85	69.00
Benchmark	0.00	0.00		1.00	50.59	0.27	-58.93	100.00	100.00