

# City of San Jose Police and Fire Department Retirement Plan

As of December 31, 2022

Quarterly Review

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## **Economic and Market Update**

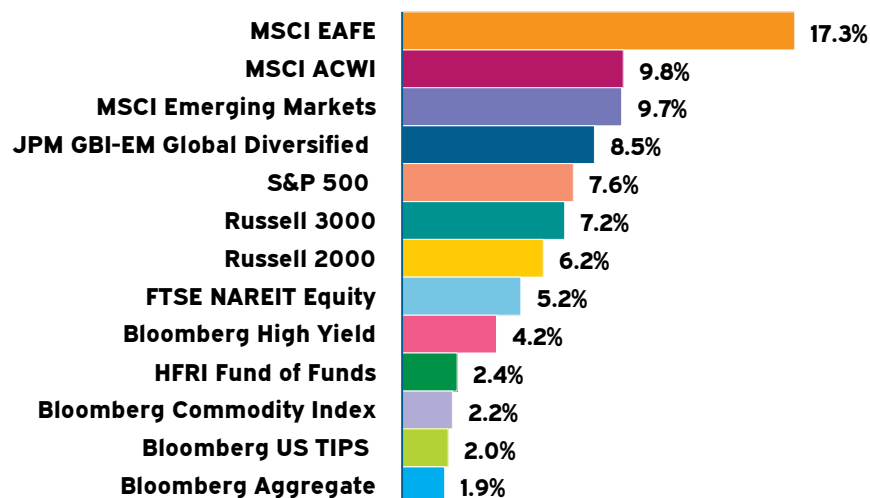
Data as of December 31, 2022

### Commentary

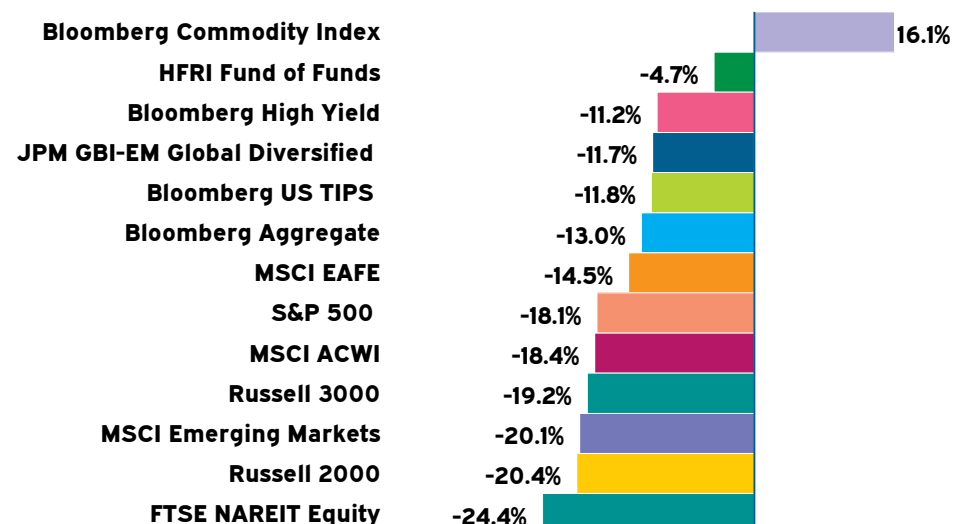
- Ending a very tough year, most asset classes posted gains in the fourth quarter on signs that policy tightening would slow given cooling inflation.
- Chairman Powell's testimony in November reiterated previous messaging on persistent and high inflation and the need for an extended period of monetary tightening weighing on assets in December. Markets remained focused though on signs that inflation is falling and that the size of future Fed rate hikes could be lower.
  - US equity markets sold off (-5.9%) in December but returned 7.2% in the fourth quarter as investors balanced the Fed's caution with improving inflation data.
  - In developed equity markets outside the US, sentiment deteriorated somewhat in December, but they posted a strong fourth quarter return of 17.3% driven by a falling US dollar and results in Europe where inflation started to slow.
  - Emerging market equities declined in December too (-1.4%) but less than the US and also had a strong fourth quarter (+9.7%). A weaker US dollar, declining inflation globally, and signs of China reopening its economy all contributed to the results.
  - Bonds experienced one of the worst years on record given inflation levels and the rapid rise in interest rates. Optimism over declining inflation and a slower pace of policy tightening benefited bonds overall in the fourth quarter though.
- Looking to 2023, the path of inflation and monetary policy, slowing growth globally, China reopening its economy, and the war in Ukraine will all be key.

### Index Returns<sup>1</sup>

#### Fourth Quarter



#### 2022



- After broad declines in Q3 driven by expectations for further policy tightening, most major asset classes were up in the fourth quarter on hopes of inflation and policy tightening peaking.
- Outside of commodities, all other public market asset classes declined in 2022. It was the first time since the 1960s that both stocks and bonds declined together in a calendar year.

<sup>1</sup> Source: Bloomberg and FactSet. Data is as of December 31, 2022.

### Domestic Equity Returns<sup>1</sup>

Domestic Equity	December (%)	Q4 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-5.8	7.6	-18.1	7.7	9.4	12.6
Russell 3000	-5.9	7.2	-19.2	7.1	8.8	12.1
Russell 1000	-5.8	7.2	-19.1	7.3	9.1	12.4
Russell 1000 Growth	-7.7	2.2	-29.1	7.8	11.0	14.1
Russell 1000 Value	-4.0	12.4	-7.5	6.0	6.7	10.3
Russell MidCap	-5.4	9.2	-17.3	5.9	7.1	11.0
Russell MidCap Growth	-6.0	6.9	-26.7	3.9	7.6	11.4
Russell MidCap Value	-5.1	10.5	-12.0	5.8	5.7	10.1
Russell 2000	-6.5	6.2	-20.4	3.1	4.1	9.0
Russell 2000 Growth	-6.4	4.1	-26.4	0.6	3.5	9.2
Russell 2000 Value	-6.6	8.4	-14.5	4.7	4.1	8.5

**US Equities: Russell 3000 Index declined 5.9% for December but gained 7.2% for the quarter. Historic inflation and rapidly rising interest rates led to significant declines (-19.2%) for the full year.**

- US stocks fell broadly in December on the Federal Reserve signaling its continued resolve to raise rates but gained overall for the quarter on hopes that interest rates could be peaking soon given slowing inflation.
- All sectors declined during December, led by consumer discretionary and technology with defensive sectors declining less. For the quarter though, most sectors were up led by energy and industrials.
- In a continuation on the overall trend in 2022 value stocks outperformed growth stocks in the fourth quarter given higher interest rates and slowing growth.

<sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.

### Foreign Equity Returns<sup>1</sup>

Foreign Equity	December (%)	Q4 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-0.7	14.3	-16.0	0.1	0.9	3.8
MSCI EAFE	0.1	17.3	-14.5	0.9	1.5	4.7
MSCI EAFE (Local Currency)	-3.0	8.7	-7.0	3.6	3.8	7.6
MSCI EAFE Small Cap	1.1	15.8	-21.4	-0.9	0.0	6.2
MSCI Emerging Markets	-1.4	9.7	-20.1	-2.7	-1.4	1.4
MSCI Emerging Markets (Local Currency)	-2.0	6.6	-15.5	0.1	1.3	4.6
MSCI China	5.2	13.5	-21.9	-7.5	-4.5	2.4

Developed international equities (MSCI EAFE) rose 0.1% in December and an impressive 17.3% in the fourth quarter. Emerging markets (MSCI EM) fell -1.4% in December but gained 9.7% for the quarter. Inflation and rising rates also weighed on international equities last year, as well as a strong US dollar for most of the year.

- International developed market equities, specifically Europe, held up better relative to the rest of the world in December with the MSCI EAFE up 0.1%. In the fourth quarter, they returned a significant 17.3% due in part to the recent weakness in the US dollar (they returned only 8.7% in local terms) leading to lower declines for the year.
- In December emerging markets outperformed the US but trailed developed market equities as China's rally was not enough to offset weakness elsewhere (e.g., India -5.5%). For the quarter, a weakening US dollar and China reopening led to strong results (+9.7%), but emerging markets remained the weakest for 2022 due to China.
- Like the US, value outpaced growth globally in 2022.

<sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.

### Fixed Income Returns<sup>1</sup>

Fixed Income	December (%)	Q4 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.3	2.2	-13.0	-2.5	0.2	1.3	5.1	6.2
Bloomberg Aggregate	-0.5	1.9	-13.0	-2.7	0.0	1.1	4.7	6.4
Bloomberg US TIPS	-1.0	2.0	-11.8	1.2	2.1	1.1	4.4	6.7
Bloomberg High Yield	-0.6	4.2	-11.2	0.0	2.3	4.0	9.0	4.4
JPM GBI-EM Global Diversified (USD)	2.2	8.5	-11.7	-6.1	-2.5	-2.0	5.8	4.9

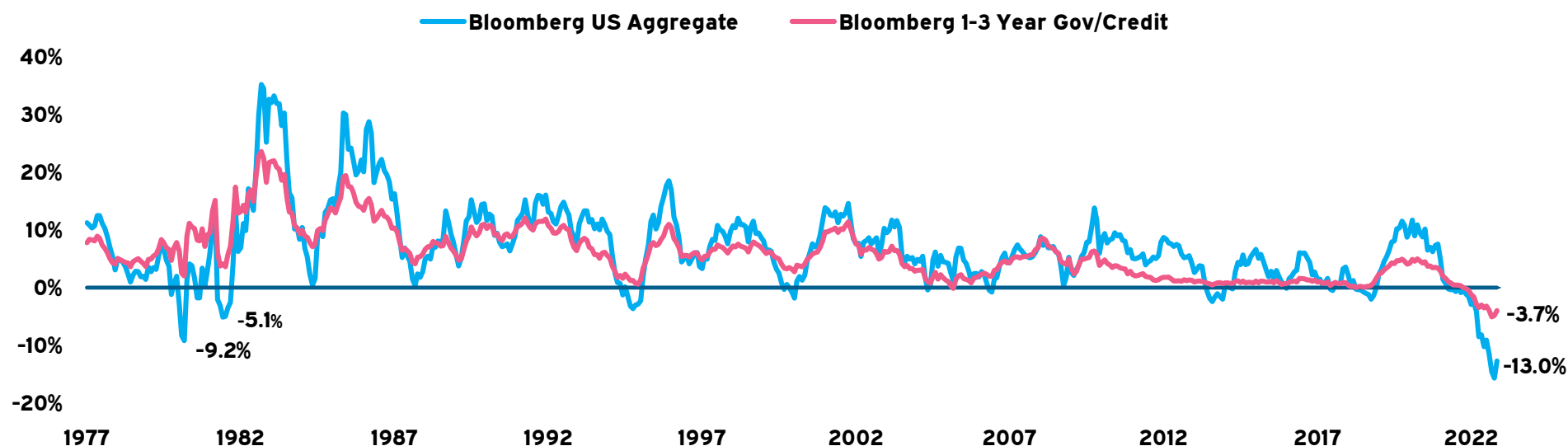
**Fixed Income: The Bloomberg Universal fell -0.3% in December but rose 2.2% for the fourth quarter. Last year was one of the worst on record, with the broad bond market declining 13%.**

- The Federal Reserve reconfirming its commitment to tighten policy in the face of high inflation weighed on US fixed income in December. For the quarter though the broad US bond market (Bloomberg Aggregate) was up 1.9% on hopes that inflation would continue to decline and corresponding expectations for the slowing of policy rate hikes.
- TIPS produced similar results to the broad US bond market for the quarter but outperformed for the year given their inflation adjustment.
- Riskier bonds outperformed for the quarter due to improving risk sentiment with emerging market bonds performing particularly well.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of December 31, 2022. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.



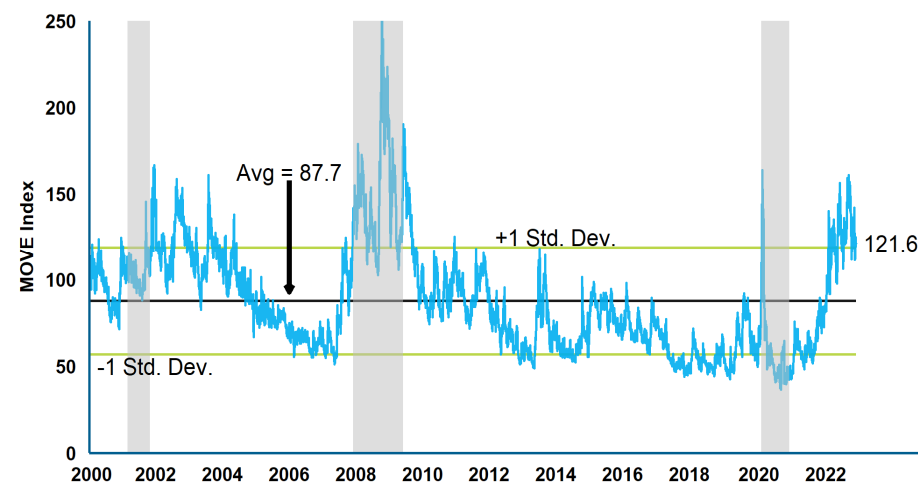
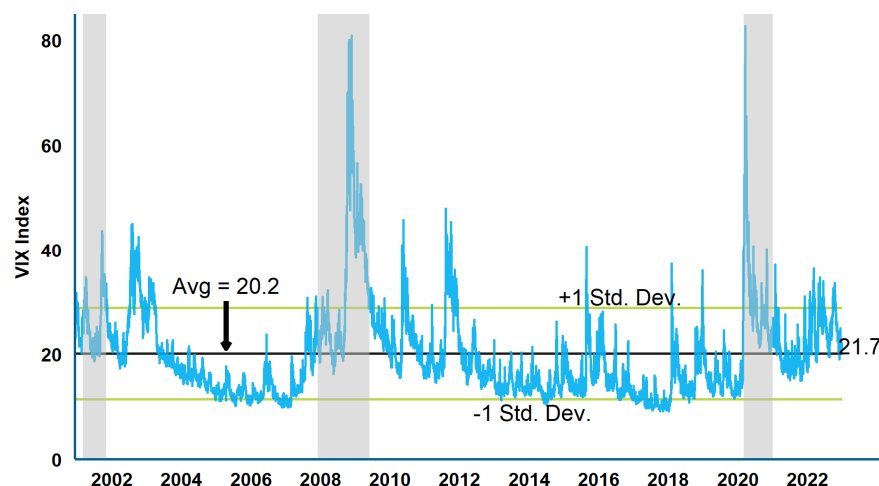
### Fixed Income Rolling One-year Returns<sup>1</sup>



- Last year was one of the worst return periods for the US bond market given the historic inflation levels and the corresponding rapid rise in interest rates.
- The broad bond market (Bloomberg US Aggregate) declined 13% in 2022 making it one of the worst periods on record.
- Short-term bond declines were far smaller (-3.7%) last year, but also were one of the worst on record.

<sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.

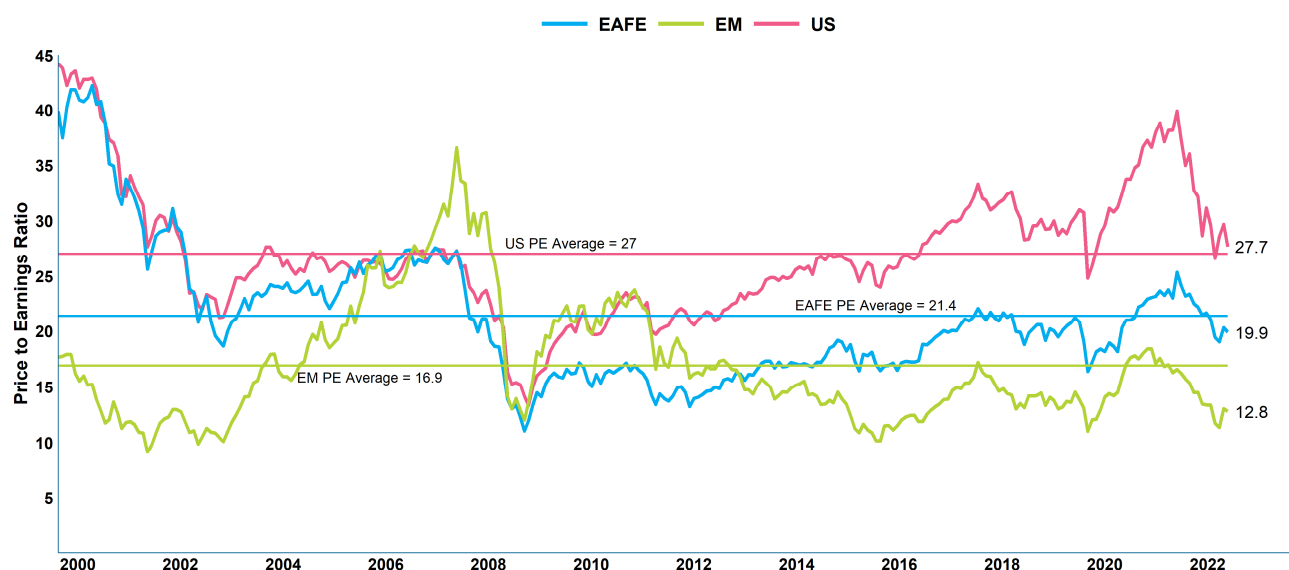
### Equity and Fixed Income Volatility<sup>1</sup>



- Volatility in equities (VIX) finished the year down from its highs and near its long run average as investors anticipated the potential end of Fed rate hikes this year.
- Fixed income (MOVE) remained elevated and well above its long-run average at year-end due to the uncertain path of US interest rates as the Federal Reserve continues its hawkish stance on inflation.

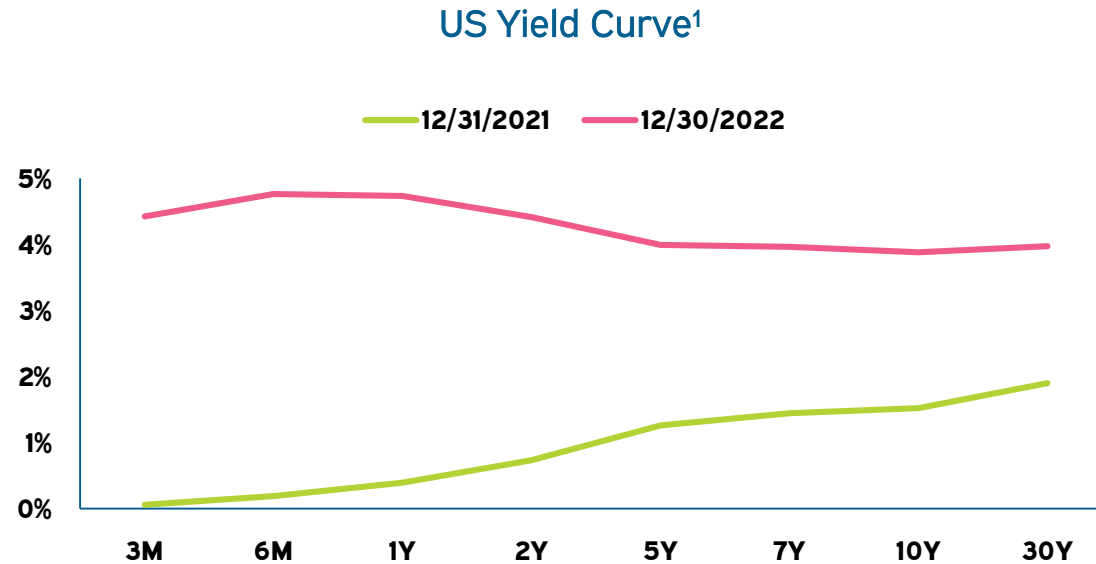
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of December 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the recent month-end respectively.

## Equity Cyclically Adjusted P/E Ratios<sup>1</sup>



- After December's sell-off, US equity price-to-earnings ratio finished the year near its long-term (21st century) average.
- International developed market valuations rose but remain below their own long-term average, with those for emerging markets the lowest and well under the long-term average.
- Price declines have been the main driver of recent multiple compression as earnings have remained resilient. Concerns remain over whether earnings strength will continue in the face of slowing growth.

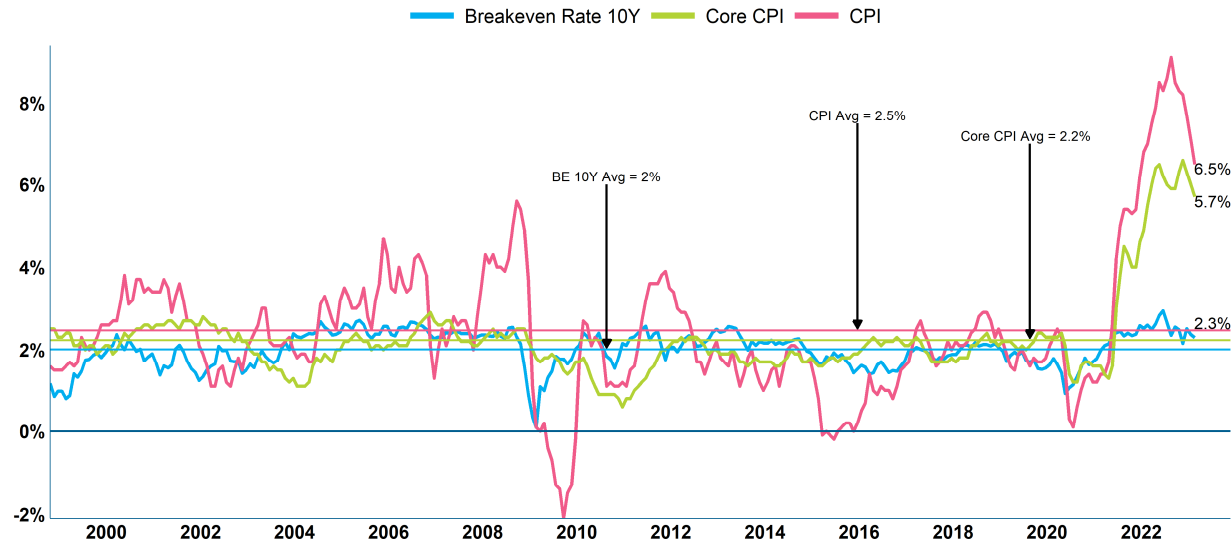
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of December 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



- In December, policy-sensitive interest rates at the front-end of the curve continued to rise with the two-year Treasury yield increasing from 4.3% to 4.4%. Longer dated ten-year Treasury yields also increased (3.6% to 3.9%). For the year, the yield curve rose dramatically across maturities and moved from steep to inverted.
- The Fed remains strongly committed to fighting inflation, as it increased rates another 50 basis points to a range of 4.0% to 4.5% at its December meeting. This brought the total number of increases for 2022 to seven.
- The yield spread between two-year and ten-year Treasuries narrowed somewhat to -0.54% after finishing November at -0.70%. The more closely watched measure by the Fed of three-month and ten-year Treasuries also remained inverted. Historically, inversions in the yield curve have often preceded recessions.

<sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.

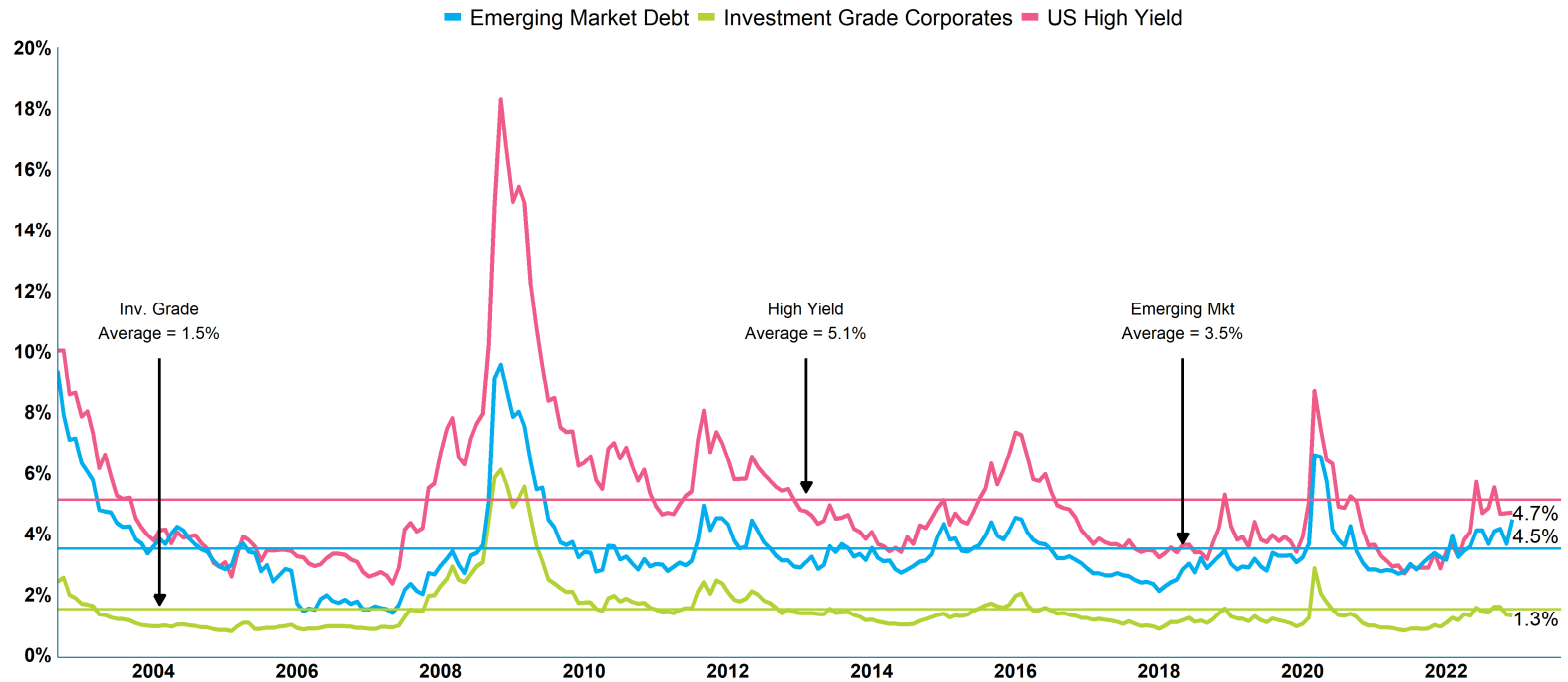
### Ten-Year Breakeven Inflation and CPI<sup>1</sup>



- In December inflation continued to decline (6.5% versus 7.1%) matching expectations and providing support for the Fed to slow the pace of policy tightening. Energy prices fell again for the month but remain up 7.3% from a year prior, while food prices fell slightly, and stickier service prices continued to increase.
- Core inflation – excluding food and energy – also continued to decline in December (5.7% versus 6.0%) and matched estimates.
- Inflation expectations (breakevens) declined slightly for the month (2.3% versus 2.4%) and remain well below current inflation levels as investors anticipate a significant moderation in inflation.

<sup>1</sup> Source: Bloomberg. Data is as of December 2022. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end respectively. Breakeven values represent month-end values for comparative purposes.

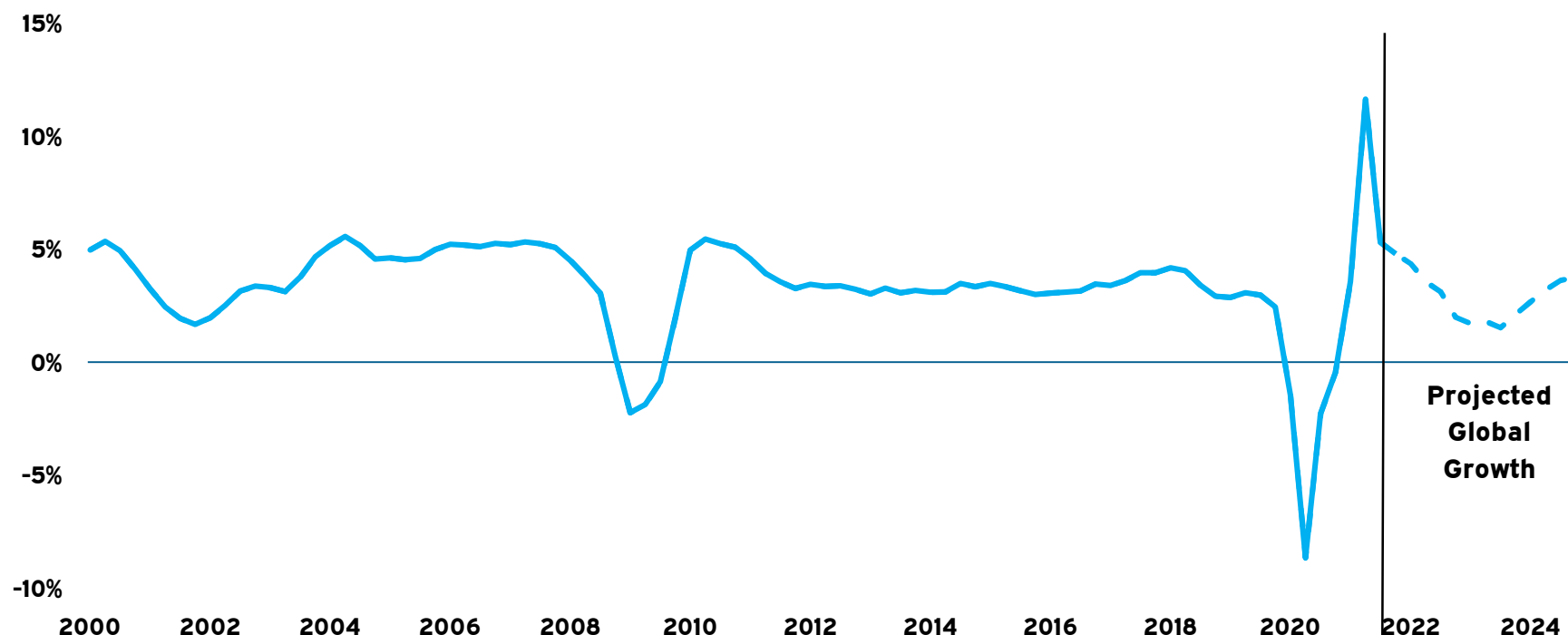
## Credit Spreads vs. US Treasury Bonds<sup>1</sup>



- High yield spreads (the added yield above a comparable maturity Treasury) finished December at 4.7% (the same as the end of November) remaining below their long-run average.
- Investment grade spreads also held steady at 1.3% as attractive yields and strong balance sheets continued to attract investors, while emerging market spreads rose (4.5% versus 3.6%) due to concerns regarding slower growth and lower commodity prices.

<sup>1</sup> Sources: Bloomberg. Data is as of December 31, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end respectively.

### Global Real Gross Domestic Product (GDP) Growth<sup>1</sup>

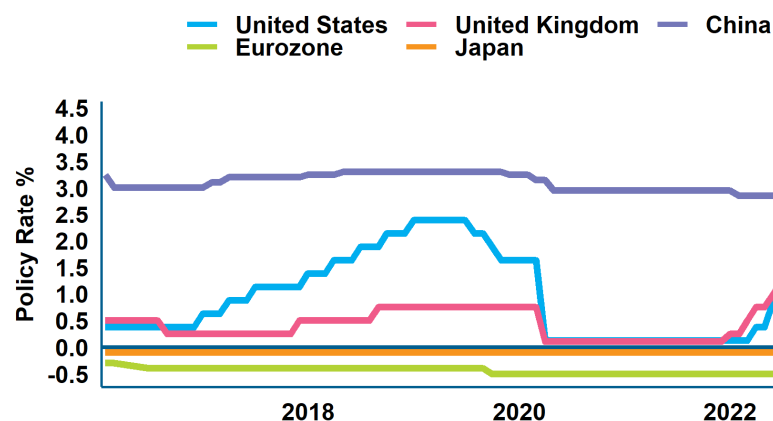


- Global economies are expected to slow in 2023 compared to 2022, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- The delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

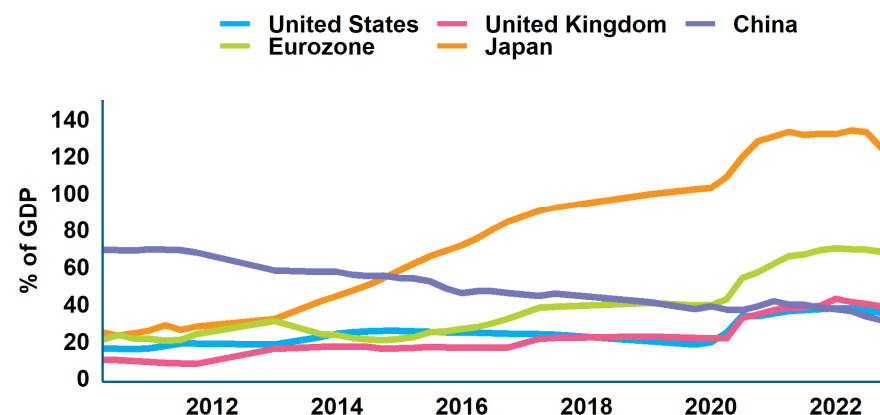
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated December 2022.

### Central Bank Response<sup>1</sup>

#### Policy Rates



#### Balance Sheet as % of GDP

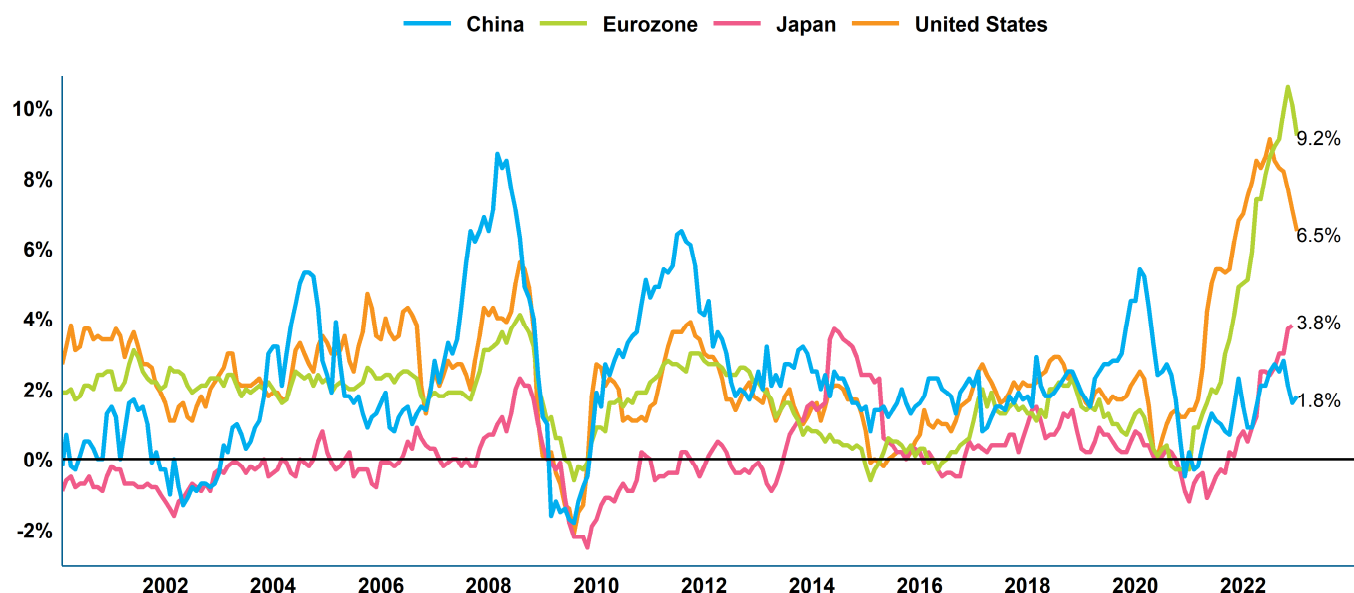


- In 2022 many central banks aggressively reduced pandemic-era policy support in the face of high inflation with the US taking a more aggressive approach.
- In December, the Bank of Japan relaxed its target yield for the 10-year bond which may mark an incremental step toward policy normalization after eight years of quantitative easing.
- The one notable central bank outlier is China, where the central bank has lowered rates and reserve requirements in response to slowing growth.
- The risk remains for a policy error, particularly overtightening, as record inflation and aggressive tightening to date could heavily weigh on global growth. The Federal Reserve's policy rate path could diverge from others this year given their strong early start to tightening.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of December 31, 2022. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of December 31, 2022.



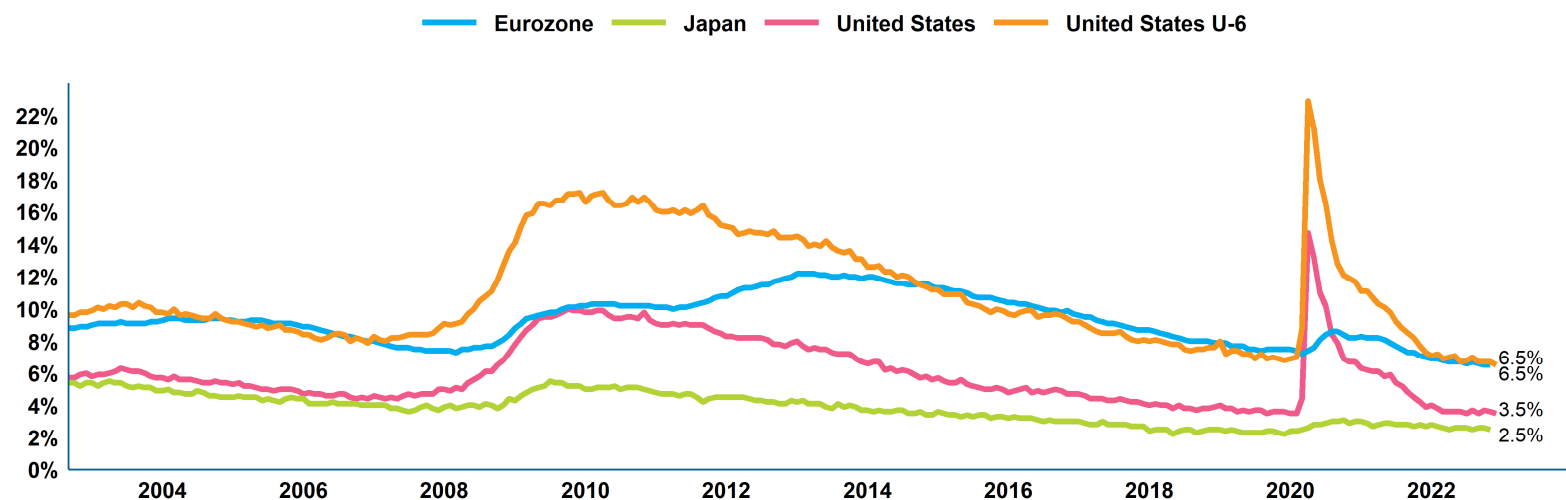
## Inflation (CPI Trailing Twelve Months)<sup>1</sup>



- Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it has reached levels not seen in many decades.
- Inflation pressures are slowly declining in the US, but they remain elevated, while in Europe they have reached historic levels due to skyrocketing energy prices and a weak euro.
- Supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher commodity prices driven by the war in Ukraine have been key global drivers of inflation.

<sup>1</sup> Source: Bloomberg. Data is as of December 2022. The most recent Japanese inflation data is as of November 2022.

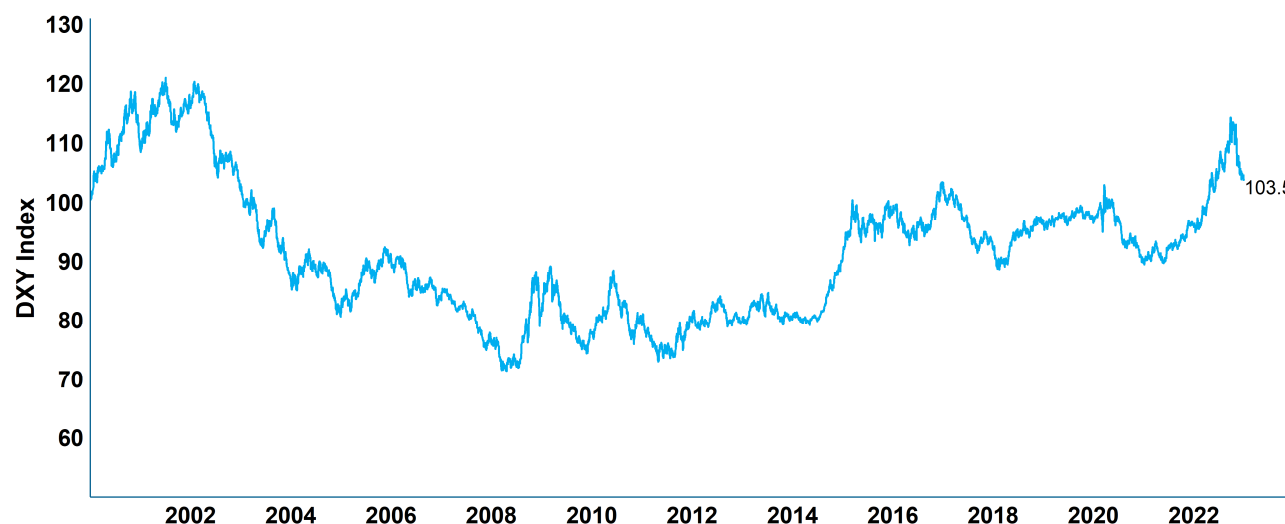
### Unemployment<sup>1</sup>



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- Despite slowing growth and high inflation, the US labor market remains a bright spot. Unemployment in the US, which experienced the steepest rise from the pandemic, has remained in a tight 3.5%-3.7% range for most of the year.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to higher unemployment.

<sup>1</sup> Source: Bloomberg. Data is as December 31, 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of November 30, 2022.

### US Dollar versus Broad Currencies<sup>1</sup>



- Overall, the US dollar continued to weaken from its recent peak in December as declining inflation supported the case for the Federal Reserve to slow its tightening.
- The dollar finished the year much higher than it started though due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- As we look to 2023, the track of inflation across economies and the corresponding monetary policy will likely be key drivers of currency moves.

<sup>1</sup> Source: Bloomberg. Data as of December 31, 2022.

## Summary

### Key Trends:

- The impacts of record high inflation will remain key, with market volatility likely to stay high.
- Monetary policy could diverge in 2023 with the Fed pausing and others continuing to tighten. The risk of policy errors in both directions remains.
- Growth will continue to slow globally next year, with many economies likely falling into recessions. Inflation, monetary policy, and the war will all be key.
- In the US the end of many fiscal programs is expected to put the burden of continued growth on consumers. Higher energy and food prices could weigh on consumer spending.
- Valuations have significantly declined in the US to around long-term averages, largely driven by price declines. The key going forward will be whether earnings can remain resilient if growth continues to slow.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation particularly weighing on Europe, and China's rushed exit from COVID-19 restrictions and on-going weakness in the real estate sector.

## **Executive Summary**

### **As of December 31, 2022**

The value of the City of San Jose Police & Fire Department Retirement Plan's assets on December 31, 2022 was \$4.5 billion, compared to \$4.4 billion at the end of the prior quarter. The Plan had net cash outflows of \$151 million and investment gains of \$191 million during the quarter.

- The Retirement Plan's net of fees performance for the quarter was +4.4%, compared to +5.0% for the Policy Benchmark and +4.9% for the Investable Benchmark Portfolio. The peer median return was +5.0%, and the Retirement Plan had a lower total equity allocation than the peer group median.
- The Retirement Plan returned -9.0% over the trailing one-year period, outperforming the Policy Benchmark (-9.4%), the Investable Benchmark (-10.0%) and a 60/40 global portfolio (-17.4%). The Retirement Plan's standard deviation of returns was 10.6% over the trailing one-year period, exhibiting lower volatility vs. the peer median (10.9%).
  - Growth returned +6.1% for the quarter and -13.3% over the trailing one-year period, compared to the +6.7% and -12.7% returns for the Growth Benchmark over the same periods, respectively.
  - Low Beta returned +0.2% for the quarter and +3.3% over the trailing one-year period, compared to +1.1% and -1.2% returns for the Low Beta Benchmark over the same periods, respectively.
  - Other returned +0.9% for the quarter and +0.9% over the trailing one-year period, compared to the +1.0% and -1.1% returns for the Other Benchmark over the same periods, respectively.
- During the quarter, the Plan added four new investments: HPS Special Situations Opportunity Fund II (Private Debt), Kimmeridge Fund VI (Private Real Assets), Next Play SJPF (Venture Capital), and Signia Venture Partners IV (Venture Capital). The Plan did not liquidate any investments.

### Artisan

→ Artisan Global Value returned +13.6% for the quarter, slightly trailing the MSCI ACWI Value NR USD benchmark by 60 basis points, but still ranking in the top quartile of its peer group. Performance for the quarter was driven by UBS (too discounted relative to US peers), HeidelbergCement (good operating results), and Richemont (China economic rebound). Compared to peers, Artisan ranks in the 42nd percentile since inception (1st is best and 100th is worst).

### Morgan Stanley

→ Morgan Stanley International Equity returned +17.1% for the quarter, outperforming the MSCI World ex USA benchmark by 90 basis points. Outperformance for the quarter was driven by stock selection in consumer staples and industrials. Compared to peers, Morgan Stanley ranks in the top quintile of its peer group for the quarter.

### BlackRock

→ BlackRock Core Property Fund returned +1.4% for the quarter, outperforming the Core Real Estate benchmark (2) by 110 basis points. Since inception in February of 2019, BlackRock has outperformed by 280 basis points per year on average.

Investment Manager	Asset Class	Changes/ Announcements	Meketa Recommendation <sup>1</sup>	Comments
Artisan Global Value	Global Equity	---	---	---
Artisan Global Opportunities	Global Equity	---	---	---
Cove Street Small Cap Value	US Equity	---	Hold	Watch List
Oberweis International Opps	International Equity	Yes	Hold	CFO/CCO retired
Morgan Stanley Int'l Equity	International Equity	---	---	---
First Eagle Int'l Equity	International Equity	---	---	---
Dimensional EM Value	Emerging Markets Equity	---	---	---
GQG Partners Global EM	Emerging Markets Equity	Yes	Hold	Co-PM departure
RWC Emerging Markets Equity	Emerging Markets Equity	---	---	---
Wellington EM Systematic	Emerging Markets Equity	---	---	---
Kotak India Midcap	Emerging Markets Equity	---	---	---
Mellon High Yield Beta	High Yield Bonds	---	---	---
Columbia High Yield	High Yield Bonds	Yes	Hold	Senior PM retired 1Q23
Wellington Iguazu Partners LP	Emerging Markets Debt	---	---	---
Payden EMD Blended Currency	Emerging Markets Debt	---	---	---
BlackRock Core Property	Core Real Estate	---	---	---
Clarion Lion Properties	Core Real Estate	---	---	---
TA Realty Core Property	Core Real Estate	---	---	---
Clarion Lion Industrial Trust	Core Real Estate	---	---	---
Voya Securitized Credit	Investment Grade Bonds	Yes	Hold	Executive Team changes
Invesco Core Bonds	Investment Grade Bonds	---	---	---

<sup>1</sup> The Meketa Investment Group recommendations are based on the noted organizational or resource changes at each manager.



Watch List<sup>1,2</sup>

Investment Manager	Asset Class	Watch List Status	Comments
Cove Street Small Cap Value	US Equity	Monitoring	Underperformance

<sup>1</sup> Watch List excludes Private Markets and Passive Funds.

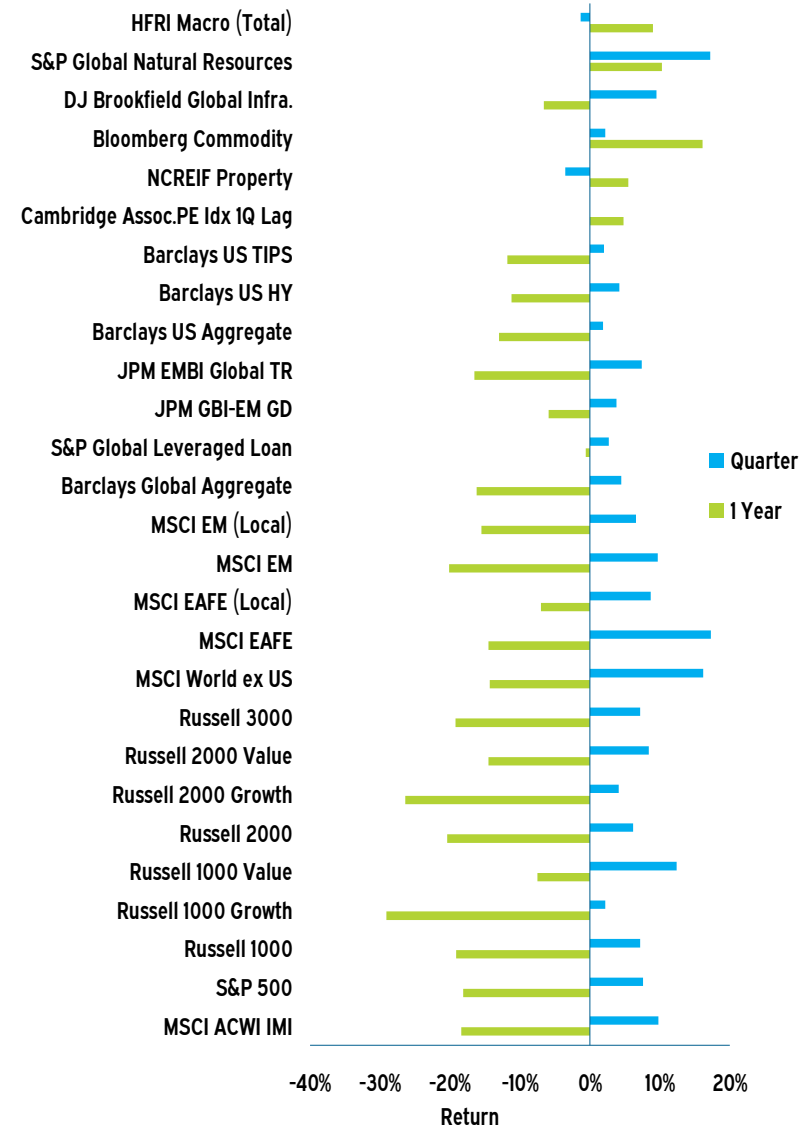
<sup>2</sup> Placement on the Watch List includes qualitative reasons and manager underperformance versus the appropriate benchmark over a three and/or five year period as outlined in the Investment Policy Statement.

### Cove Street

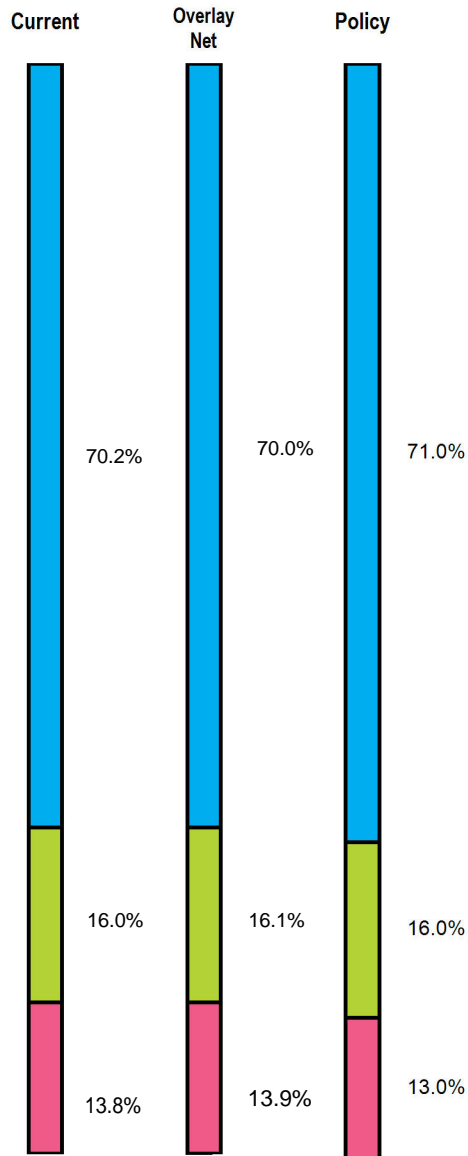
→ Over the three-year period, Cove Street (+1.8%) has underperformed the Russell 2000 Value by 290 basis points. Since inception in December 2017, Cove Street has underperformed the benchmark by 30 basis points per year, on average, and ranked in the 72nd percentile compared to peers.

### Market Environment – 4Q22 Overview

Benchmark	Scope	4Q22 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Global Equity</b>						
MSCI ACWI IMI	World	9.8%	-18.4%	3.9%	5.0%	7.9%
<b>Domestic Equity</b>						
S&P 500	Large Core	7.6%	-18.1%	7.7%	9.4%	12.6%
Russell 1000	Large Core	7.2%	-19.1%	7.3%	9.1%	12.4%
Russell 1000 Growth	Large Growth	2.2%	-29.1%	7.8%	11.0%	14.1%
Russell 1000 Value	Large Value	12.4%	-7.5%	6.0%	6.7%	10.3%
Russell 2000	Small Core	6.2%	-20.4%	3.1%	4.1%	9.0%
Russell 2000 Growth	Small Growth	4.1%	-26.4%	0.6%	3.5%	9.2%
Russell 2000 Value	Small Value	8.4%	-14.5%	4.7%	4.1%	8.5%
Russell 3000	All Cap Core	7.2%	-19.2%	7.1%	8.8%	12.1%
<b>International Equity</b>						
MSCI World ex US	World ex-US	16.2%	-14.3%	1.3%	1.8%	4.6%
MSCI EAFE	International Developed	17.3%	-14.5%	0.9%	1.5%	4.7%
MSCI EAFE (Local)	International Developed (Local Currency)	8.7%	-7.0%	3.6%	3.8%	7.6%
MSCI EM	Emerging Markets	9.7%	-20.1%	-2.7%	-1.4%	1.4%
MSCI EM (Local)	Emerging Markets (Local Currency)	6.6%	-15.5%	0.1%	1.3%	4.6%
<b>Global Fixed Income</b>						
Barclays Global Aggregate	Global Core Bonds	4.5%	-16.2%	-4.5%	-1.7%	-0.4%
S&P Global Leveraged Loan	Bank Loans	2.7%	-0.6%	2.5%	2.8%	3.4%
JPM GBI-EM GD	Emerging Markets Bonds (Local Currency)	3.8%	-5.9%	-0.3%	2.9%	4.4%
JPM EMBI Global TR	Emerging Market Bonds	7.4%	-16.5%	-4.5%	-1.0%	1.3%
<b>Domestic Fixed Income</b>						
Barclays US Aggregate	Core Bonds	1.9%	-13.0%	-2.7%	0.0%	1.1%
Barclays US HY	High Yield	4.2%	-11.2%	0.0%	2.3%	4.0%
Barclays US TIPS	Inflation	2.0%	-11.8%	1.2%	2.1%	1.1%
<b>Other</b>						
Cambridge AssociatesPE Index 1Qtr Lag	Private Equity	0.0%	4.8%	24.8%	22.1%	18.1%
NCREIF Property	Real Estate	-3.5%	5.5%	8.1%	7.5%	8.8%
Bloomberg Commodity	Commodities	2.2%	16.1%	12.7%	6.4%	-1.3%
DJ Brookfield Global Infrastructure	Infrastructure	9.5%	-6.6%	1.4%	4.3%	6.4%
S&P Global Natural Resources	Natural Resources	17.2%	10.3%	11.6%	7.3%	4.9%
HFRI Macro	Hedge Funds	-1.3%	9.0%	7.3%	4.8%	3.1%



## 4Q22 Review



Allocation vs. Targets and Policy				
	Current Balance	Current Allocation	Russell Overlay Net Position	Policy
<b>Growth</b>	<b>\$3,179,849,432</b>	<b>70.2%</b>	<b>70.0%</b>	<b>71.0%</b>
Public Equity	\$1,859,164,089	41.0%	40.8%	42.0%
Private Markets	\$1,137,097,394	25.1%	25.1%	25.0%
Emerging Markets Debt	\$93,712,514	2.1%	2.1%	2.0%
High Yield Bonds	\$89,875,435	2.0%	2.0%	2.0%
<b>Low Beta</b>	<b>\$727,041,618</b>	<b>16.0%</b>	<b>16.1%</b>	<b>16.0%</b>
Market Neutral Strategies	\$144,803,536	3.2%	3.2%	3.0%
Immunized Cash Flows	\$585,966,180	12.9%	12.9%	13.0%
Cash	\$-3,728,098	-0.1%	0.0%	0.0%
<b>Other</b>	<b>\$625,746,859</b>	<b>13.8%</b>	<b>13.9%</b>	<b>13.0%</b>
Core Real Estate	\$279,683,283	6.2%	6.2%	5.0%
TIPS	\$89,386,346	2.0%	2.0%	2.0%
Investment Grade Bonds	\$194,227,337	4.3%	4.3%	4.5%
Long Term Govt Bonds	\$62,494,892	1.4%	1.4%	1.5%

<sup>1</sup> Data in the column titled "Russel Overlay Net Position" is based on physical exposures, adjusted for synthetic positions provided by Russell Investments.

<sup>2</sup> Policy Targets represent approved asset allocation from March of 2022.

<sup>3</sup> All data on this page is from Russell Investments and reflects trades made on or before 12/31/2022. Data on subsequent pages is from the custodian and may not reflect all trades made on or before 12/31/2022 depending on the settlement date of transaction.

### Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund</b>	<b>4,521,059,364</b>	<b>100.0</b>	<b>4.4</b>	<b>0.8</b>	<b>-9.0</b>	<b>5.8</b>	<b>5.6</b>	<b>5.6</b>	<b>8.2</b>	<b>Mar-71</b>
<i>Policy Benchmark</i>			5.0	0.9	-9.4	5.3	5.3	5.8	--	Mar-71
<i>Investable Benchmark Portfolio</i>			4.9	0.8	-10.0	4.8	5.0	5.6	--	Mar-71
<i>Low-Cost Passive Portfolio</i>			7.1	1.4	-14.6	1.7	--	--	--	Mar-71
<i>60/40 MSCI ACWI IMI/BBgBarc Global Aggregate</i>			7.8	0.6	-17.4	0.8	2.6	4.7	--	Mar-71
<i>Liability Benchmark Portfolio</i>			-0.6	-10.2	-29.3	-7.4	--	--	--	Mar-71
<i>InvMetrics Public DB &gt; \$1B Net Median</i>			5.0	0.8	-11.1	4.5	5.4	6.9	--	Mar-71
<i>InvMetrics Public DB &gt; \$1B Net Rank</i>			76	51	28	21	42	97	--	Mar-71
<b>Growth</b>	<b>3,159,635,378</b>	<b>69.9</b>	<b>6.1</b>	<b>1.2</b>	<b>-13.3</b>	<b>7.0</b>	<b>7.0</b>	<b>--</b>	<b>--</b>	<b>Jul-15</b>
<i>Growth Benchmark</i>			6.7	1.5	-12.7	6.9	7.2	--	--	Jul-15
<b>Public Equity</b>	<b>1,844,169,636</b>	<b>40.8</b>	<b>9.7</b>	<b>2.4</b>	<b>-19.8</b>	<b>4.1</b>	<b>4.8</b>	<b>7.6</b>	<b>5.8</b>	<b>Apr-08</b>
<i>Public Equity Benchmark</i>			9.9	2.5	-18.3	3.5	4.8	7.8	5.9	Apr-08
<b>Global Equity</b>	<b>460,960,349</b>	<b>10.2</b>	<b>10.0</b>	<b>2.4</b>	<b>-20.9</b>	<b>4.4</b>	<b>6.1</b>	<b>--</b>	<b>9.5</b>	<b>Mar-13</b>
<i>eV All Global Equity Net Median</i>			10.7	3.3	-18.3	4.4	5.5	8.2	7.9	Mar-13
<i>eV All Global Equity Net Rank</i>			60	64	63	51	39	--	21	Mar-13
<b>U.S. Equity</b>	<b>760,395,634</b>	<b>16.8</b>	<b>7.1</b>	<b>2.6</b>	<b>-18.8</b>	<b>7.8</b>	<b>8.8</b>	<b>12.2</b>	<b>9.6</b>	<b>Jun-95</b>
<i>MSCI USA IMI NR USD</i>			7.1	2.2	-19.6	6.7	8.4	11.6	9.2	Jun-95
<i>eV All US Equity Net Median</i>			8.7	3.9	-16.9	6.4	7.4	10.9	10.0	Jun-95
<i>eV All US Equity Net Rank</i>			65	65	59	29	30	24	65	Jun-95

<sup>1</sup> Fiscal Year begins July 1.

<sup>2</sup> Please see the Appendix for composition of the Policy Benchmark, Low-Cost Passive Portfolio, Liability Benchmark Portfolio, Growth Benchmark, and Public Equity Benchmark.

<sup>3</sup> Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.

Total Fund | As of December 31, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>International Equity</b>	<b>380,734,461</b>	<b>8.4</b>	<b>15.6</b>	<b>4.6</b>	<b>-20.7</b>	<b>1.9</b>	<b>1.5</b>	<b>4.7</b>	<b>6.9</b>	<b>Jun-95</b>
MSCI World ex USA IMI NR USD			16.0	5.3	-15.3	1.0	1.6	4.7	--	Jun-95
eV ACWI ex-US All Cap Equity Net Median			14.3	3.4	-19.1	1.1	1.5	5.2	6.5	Jun-95
eV ACWI ex-US All Cap Equity Net Rank			29	28	60	33	50	68	47	Jun-95
<b>Emerging Markets Equity</b>	<b>242,079,192</b>	<b>5.4</b>	<b>7.9</b>	<b>-2.0</b>	<b>-19.9</b>	<b>-0.2</b>	<b>-1.2</b>	<b>1.0</b>	<b>7.7</b>	<b>Sep-01</b>
MSCI Emerging Markets IMI Net			9.5	-2.3	-19.8	-1.8	-1.1	1.6	8.3	Sep-01
eV Emg Mkts Equity Net Median			10.3	-0.7	-19.8	-1.6	-0.7	2.1	8.9	Sep-01
eV Emg Mkts Equity Net Rank			78	62	51	37	60	85	82	Sep-01
<b>Private Markets</b>	<b>1,136,697,226</b>	<b>25.1</b>	<b>1.2</b>	<b>-0.9</b>	<b>-1.7</b>	<b>11.8</b>	<b>10.3</b>	<b>--</b>	<b>9.3</b>	<b>Jul-15</b>
Private Markets Benchmark			1.2	-0.9	-1.7	11.8	10.3	--	9.8	Jul-15
MSCI ACWI IMI + 100bps			10.1	3.1	-17.6	4.9	6.0	--	7.7	Jul-15
<b>Private Markets ex Proxy</b>	<b>927,592,106</b>	<b>20.5</b>	<b>-0.4</b>	<b>-2.5</b>	<b>-3.3</b>	<b>11.2</b>	<b>9.9</b>	<b>--</b>	<b>9.5</b>	<b>Jul-15</b>
Custom PE Benchmark			-0.3	-5.2	0.1	20.6	16.8	--	15.0	Jul-15
<b>Private Equity</b>	<b>383,139,810</b>	<b>8.5</b>	<b>-2.4</b>	<b>-6.6</b>	<b>-3.0</b>	<b>18.7</b>	<b>17.1</b>	<b>15.1</b>	<b>11.8</b>	<b>Oct-05</b>
Custom PE Benchmark			-0.3	-5.2	0.1	20.6	16.8	15.1	13.2	Oct-05
<b>Venture Capital</b>	<b>42,987,802</b>	<b>1.0</b>	<b>-0.3</b>	<b>-3.1</b>	<b>-3.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>14.6</b>	<b>Sep-20</b>
<b>Private Debt</b>	<b>196,515,215</b>	<b>4.3</b>	<b>-0.3</b>	<b>-1.6</b>	<b>5.9</b>	<b>11.1</b>	<b>7.0</b>	<b>--</b>	<b>6.5</b>	<b>Oct-15</b>
S&P Global Leveraged Loan + 2%			3.2	5.2	1.4	4.6	4.9	--	5.8	Oct-15
<b>Growth Real Estate</b>	<b>208,771,456</b>	<b>4.6</b>	<b>2.5</b>	<b>6.3</b>	<b>17.7</b>	<b>14.5</b>	<b>12.2</b>	<b>--</b>	<b>11.1</b>	<b>Jul-15</b>
NCREIF Property Index			-3.5	-3.0	5.5	8.1	7.5	--	7.8	Jul-15
<b>Private Real Assets</b>	<b>96,177,822</b>	<b>2.1</b>	<b>1.6</b>	<b>1.2</b>	<b>13.6</b>	<b>12.4</b>	<b>9.7</b>	<b>--</b>	<b>8.9</b>	<b>Jun-16</b>

<sup>1</sup> Please see the Appendix for composition of the Private Markets Benchmark.

<sup>2</sup> Private Equity composite includes Russell 3000 proxy performance history prior to October 1, 2018.

Total Fund | As of December 31, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Northern Trust Russell 3000</b>	<b>113,951,132</b>	<b>2.5</b>	<b>7.2</b>	<b>2.4</b>	<b>-19.1</b>	<b>7.1</b>	<b>8.8</b>	<b>--</b>	<b>10.1</b>	<b>Apr-14</b>
<i>Russell 3000</i>			7.2	2.4	-19.2	7.1	8.8	--	10.0	Apr-14
<b>Blackrock Liquid Fed Trust Fund</b>	<b>95,153,988</b>	<b>2.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Dec-22</b>
<b>High Yield Bonds</b>	<b>89,871,565</b>	<b>2.0</b>	<b>4.3</b>	<b>4.1</b>	<b>-9.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.2</b>	<b>Jun-20</b>
<i>Bloomberg US Corporate High Yield TR</i>			4.2	3.5	-11.2	--	--	--	2.0	Jun-20
<i>eV US High Yield Fixed Inc Net Median</i>			3.9	3.5	-10.0	0.3	2.3	3.7	2.1	Jun-20
<i>eV US High Yield Fixed Inc Net Rank</i>			31	15	46	--	--	--	49	Jun-20
<b>Emerging Market Debt</b>	<b>88,896,951</b>	<b>2.0</b>	<b>-1.3</b>	<b>-1.5</b>	<b>1.1</b>	<b>4.4</b>	<b>4.8</b>	<b>2.6</b>	<b>2.6</b>	<b>Jan-13</b>
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			8.3	3.3	-14.8	-5.7	-1.9	-0.2	-0.2	Jan-13
<i>eV All Emg Mkts Fixed Inc Net Median</i>			8.3	3.8	-12.8	-4.1	-1.0	1.0	1.0	Jan-13
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			99	99	1	1	1	12	12	Jan-13
<b>Low Beta</b>	<b>722,904,262</b>	<b>16.0</b>	<b>0.2</b>	<b>0.0</b>	<b>3.3</b>	<b>3.4</b>	<b>3.4</b>	<b>--</b>	<b>2.6</b>	<b>Jul-15</b>
<i>Low Beta Benchmark</i>			1.1	-1.0	-1.2	0.3	0.5	--	0.6	Jul-15
<b>Immunized Cash Flows</b>	<b>436,389,131</b>	<b>9.7</b>	<b>1.0</b>	<b>-1.7</b>	<b>-4.6</b>	<b>-0.6</b>	<b>--</b>	<b>--</b>	<b>0.7</b>	<b>Oct-18</b>
<i>Immunized Cash Flow Benchmark</i>			1.0	-1.7	-4.6	-0.6	--	--	0.7	Oct-18
<b>Market Neutral Strategies</b>	<b>145,172,124</b>	<b>3.2</b>	<b>-3.0</b>	<b>4.1</b>	<b>23.6</b>	<b>13.7</b>	<b>10.4</b>	<b>6.3</b>	<b>6.2</b>	<b>Nov-12</b>
<i>Market Neutral Strategies Benchmark</i>			1.3	2.2	2.9	1.2	1.0	1.2	1.3	Nov-12

<sup>1</sup> Please see the Appendix for composition of the Low Beta Benchmark, Immunized Cash Flows Benchmark, and Market Neutral Strategies Benchmark.

<sup>2</sup> Cash Composite includes the cash account and residuals from terminated manager assets.



Total Fund | As of December 31, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Relative Value</b>	<b>145,172,124</b>	<b>3.2</b>	<b>-3.0</b>	<b>4.1</b>	<b>23.6</b>	<b>13.4</b>	<b>10.8</b>	<b>--</b>	<b>8.1</b>	<b>Jul-15</b>
HFRI Relative Value (Total) Index			1.5	1.5	-0.7	3.4	3.4	--	3.6	Jul-15
Relative Value Arbitrage MStar MF Median			1.7	2.2	-3.8	3.0	3.3	2.9	3.1	Jul-15
Relative Value Arbitrage MStar MF Rank			99	1	1	1	1	--	1	Jul-15
<b>Cash</b>	<b>49,704,672</b>	<b>1.1</b>	<b>0.8</b>	<b>1.3</b>	<b>1.4</b>	<b>0.7</b>	<b>1.3</b>	<b>0.8</b>	<b>7.5</b>	<b>Jul-02</b>
ICE BofA 91 Days T-Bills TR			0.8	1.3	1.5	0.7	1.3	0.8	1.3	Jul-02
<b>Short Term IG Bonds</b>	<b>91,638,336</b>	<b>2.0</b>	<b>1.0</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>May-22</b>
ICE BofA 3M US Treasury TR USD			0.8	1.3	--	--	--	--	--	May-22
<b>Other</b>	<b>626,814,603</b>	<b>13.9</b>	<b>0.9</b>	<b>0.2</b>	<b>0.9</b>	<b>0.4</b>	<b>1.3</b>	<b>--</b>	<b>1.9</b>	<b>Jul-15</b>
Other Benchmark			1.0	-0.5	-1.1	-0.1	0.6	--	1.6	Jul-15
<b>Core Real Estate</b>	<b>282,421,856</b>	<b>6.2</b>	<b>1.0</b>	<b>8.2</b>	<b>27.3</b>	<b>13.7</b>	<b>10.8</b>	<b>--</b>	<b>9.9</b>	<b>Jul-15</b>
Core Real Estate Benchmark			0.3	4.9	21.0	10.9	8.9	--	8.7	Jul-15
<b>TIPS</b>	<b>89,389,137</b>	<b>2.0</b>	<b>1.2</b>	<b>-1.5</b>	<b>-2.7</b>	<b>2.5</b>	<b>--</b>	<b>--</b>	<b>2.9</b>	<b>Oct-18</b>
Bloomberg US Treasury TIPS 0-5 Yr TR			1.3	-1.4	-2.7	2.5	--	--	2.8	Oct-18
<b>Investment Grade Bonds</b>	<b>192,801,495</b>	<b>4.3</b>	<b>1.3</b>	<b>-3.5</b>	<b>-13.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-4.2</b>	<b>May-20</b>
Custom IG Bonds Benchmark			1.9	-3.0	-11.9	--	--	--	-4.6	May-20
<b>Long-Term Government Bonds</b>	<b>62,202,114</b>	<b>1.4</b>	<b>-1.0</b>	<b>-10.5</b>	<b>-29.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-15.1</b>	<b>May-20</b>
Long-Term Government Bonds Benchmark			-0.6	-10.2	-29.3	--	--	--	-14.9	May-20
<b>Overlay</b>	<b>11,705,121</b>	<b>0.3</b>								

Core Real Estate values are one-quarter lagged.

<sup>1</sup> Please see the Appendix for composition of the Other Benchmark.

Trailing Net Performance										
	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund</b>	<b>4,521,059,364</b>	<b>100.0</b>	<b>4.4</b>	<b>0.8</b>	<b>-9.0</b>	<b>5.8</b>	<b>5.6</b>	<b>5.6</b>	<b>8.2</b>	<b>Mar-71</b>
<i>Policy Benchmark</i>			5.0	0.9	-9.4	5.3	5.3	5.8	--	Mar-71
<i>Investable Benchmark Portfolio</i>			4.9	0.8	-10.0	4.8	5.0	5.6	--	Mar-71
<i>Low-Cost Passive Portfolio</i>			7.1	1.4	-14.6	1.7	--	--	--	Mar-71
<i>60/40 MSCI ACWI IMI/BBgBarc Global Aggregate</i>			7.8	0.6	-17.4	0.8	2.6	4.7	--	Mar-71
<i>Liability Benchmark Portfolio</i>			-0.6	-10.2	-29.3	-7.4	--	--	--	Mar-71
<i>InvMetrics Public DB &gt; \$1B Net Median</i>			5.0	0.8	-11.1	4.5	5.4	6.9	--	Mar-71
<i>InvMetrics Public DB &gt; \$1B Net Rank</i>			76	51	28	21	42	97	--	Mar-71
<b>Growth</b>	<b>3,159,635,378</b>	<b>69.9</b>	<b>6.1</b>	<b>1.2</b>	<b>-13.3</b>	<b>7.0</b>	<b>7.0</b>	<b>--</b>	<b>--</b>	<b>Jul-15</b>
<i>Growth Benchmark</i>			6.7	1.5	-12.7	6.9	7.2	--	--	Jul-15
<b>Public Equity</b>	<b>1,844,169,636</b>	<b>40.8</b>	<b>9.7</b>	<b>2.4</b>	<b>-19.8</b>	<b>4.1</b>	<b>4.8</b>	<b>7.6</b>	<b>5.8</b>	<b>Apr-08</b>
<i>Public Equity Benchmark</i>			9.9	2.5	-18.3	3.5	4.8	7.8	5.9	Apr-08
<b>Global Equity</b>	<b>460,960,349</b>	<b>10.2</b>	<b>10.0</b>	<b>2.4</b>	<b>-20.9</b>	<b>4.4</b>	<b>6.1</b>	<b>--</b>	<b>9.5</b>	<b>Mar-13</b>
<i>eV All Global Equity Net Median</i>			10.7	3.3	-18.3	4.4	5.5	8.2	7.9	Mar-13
<i>eV All Global Equity Net Rank</i>			60	64	63	51	39	--	21	Mar-13
<i>Artisan Global Value</i>	260,179,237	5.8	13.6	3.0	-12.3	3.9	4.5	--	8.3	Mar-13
<i>MSCI ACWI Value NR USD</i>			14.2	5.5	-7.5	3.3	3.5	--	6.0	Mar-13
<i>eV All Global Equity Net Median</i>			10.7	3.3	-18.3	4.4	5.5	8.2	7.9	Mar-13
<i>eV All Global Equity Net Rank</i>			22	56	27	58	62	--	42	Mar-13

<sup>1</sup> Please see the Appendix for composition of the Policy Benchmark, Low-Cost Passive Portfolio, Liability Benchmark Portfolio, Growth Benchmark, and Public Equity Benchmark.

Total Fund | As of December 31, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Artisan Global Opportunities	200,781,112	4.4	5.5	1.6	-30.1	3.8	6.8	--	9.7	May-13
MSCI ACWI Growth NR USD			5.3	-1.0	-28.6	3.8	6.4	--	8.6	May-13
eV All Global Equity Net Median			10.7	3.3	-18.3	4.4	5.5	8.2	7.5	May-13
eV All Global Equity Net Rank			92	73	88	59	27	--	17	May-13
<b>U.S. Equity</b>	<b>760,395,634</b>	<b>16.8</b>	<b>7.1</b>	<b>2.6</b>	<b>-18.8</b>	<b>7.8</b>	<b>8.8</b>	<b>12.2</b>	<b>9.6</b>	<b>Jun-95</b>
MSCI USA IMI NR USD			7.1	2.2	-19.6	6.7	8.4	11.6	9.2	Jun-95
eV All US Equity Net Median			8.7	3.9	-16.9	6.4	7.4	10.9	10.0	Jun-95
eV All US Equity Net Rank			65	65	59	29	30	24	65	Jun-95
Northern Trust Russell 3000	726,835,645	16.1	7.2	2.4	-19.2	--	--	--	17.3	Apr-20
Russell 3000			7.2	2.4	-19.2	--	--	--	17.3	Apr-20
Cove Street Small Cap Value	33,559,988	0.7	9.1	4.0	-12.0	1.8	3.7	--	3.6	Dec-17
Russell 2000 Value			8.4	3.4	-14.5	4.7	4.1	--	3.9	Dec-17
eV US Small Cap Value Equity Net Median			10.8	5.2	-11.7	6.3	4.6	9.2	4.5	Dec-17
eV US Small Cap Value Equity Net Rank			74	65	52	91	76	--	72	Dec-17
<b>International Equity</b>	<b>380,734,461</b>	<b>8.4</b>	<b>15.6</b>	<b>4.6</b>	<b>-20.7</b>	<b>1.9</b>	<b>1.5</b>	<b>4.7</b>	<b>6.9</b>	<b>Jun-95</b>
MSCI World ex USA IMI NR USD			16.0	5.3	-15.3	1.0	1.6	4.7	--	Jun-95
eV ACWI ex-US All Cap Equity Net Median			14.3	3.4	-19.1	1.1	1.5	5.2	6.5	Jun-95
eV ACWI ex-US All Cap Equity Net Rank			29	28	60	33	50	68	47	Jun-95
Northern Trust MSCI World ex US	190,873,495	4.2	17.2	6.0	-13.4	1.9	2.3	--	3.3	Apr-14
MSCI World ex USA			16.2	5.5	-14.3	1.3	1.8	--	2.9	Apr-14

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Oberweis Intl Opportunities	52,285,087	1.2	12.8	0.2	-36.1	2.6	0.7	--	4.7	Mar-14
<i>MSCI World ex USA Small Cap Growth NR USD</i>			13.6	3.6	-27.0	-0.8	0.5	--	3.9	Mar-14
<i>eV ACWI ex-US All Cap Equity Net Median</i>			14.3	3.4	-19.1	1.1	1.5	5.2	3.4	Mar-14
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			73	93	96	24	68	--	21	Mar-14
Morgan Stanley International Equity	60,512,771	1.3	17.1	5.7	--	--	--	--	-24.4	Feb-22
<i>MSCI World ex USA</i>			16.2	5.5	--	--	--	--	-10.3	Feb-22
<i>eV ACWI ex-US All Cap Equity Net Median</i>			14.3	3.4	-19.1	1.1	1.5	5.2	-14.8	Feb-22
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			17	12	--	--	--	--	96	Feb-22
First Eagle International Equity	77,063,108	1.7	11.9	2.8	--	--	--	--	2.8	Jun-22
<i>MSCI World ex USA</i>			16.2	5.5	--	--	--	--	-4.4	Jun-22
<i>eV ACWI ex-US All Cap Equity Net Median</i>			14.3	3.4	-19.1	1.1	1.5	5.2	-5.5	Jun-22
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			82	68	--	--	--	--	1	Jun-22
<b>Emerging Markets Equity</b>	<b>242,079,192</b>	<b>5.4</b>	<b>7.9</b>	<b>-2.0</b>	<b>-19.9</b>	<b>-0.2</b>	<b>-1.2</b>	<b>1.0</b>	<b>7.7</b>	<b>Sep-01</b>
<i>MSCI Emerging Markets IMI Net</i>			9.5	-2.3	-19.8	-1.8	-1.1	1.6	8.3	Sep-01
<i>eV Emg Mkts Equity Net Median</i>			10.3	-0.7	-19.8	-1.6	-0.7	2.1	8.9	Sep-01
<i>eV Emg Mkts Equity Net Rank</i>			78	62	51	37	60	85	82	Sep-01
Northern Trust MSCI EM IMI	56,887,759	1.3	10.2	-2.1	-19.3	-1.6	--	--	0.8	Oct-18
<i>MSCI Emerging Markets IMI Net</i>			9.5	-2.3	-19.8	-1.8	--	--	0.7	Oct-18
Dimensional Fund Adv EM Value	51,715,882	1.1	10.3	-0.5	-10.7	1.0	-0.2	--	3.2	Jul-15
<i>MSCI Emerging Markets Value NR USD</i>			9.8	-2.3	-15.8	-2.6	-1.6	--	1.1	Jul-15
<i>eV Emg Mkts Equity Net Median</i>			10.3	-0.7	-19.8	-1.6	-0.7	2.1	2.9	Jul-15
<i>eV Emg Mkts Equity Net Rank</i>			51	48	11	27	38	--	37	Jul-15

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GQG Global Emerging Markets	42,353,506	0.9	3.2	-3.6	-24.0	0.0	0.9	--	3.7	Jul-17
<i>MSCI Emerging Markets</i>			9.7	-3.0	-20.1	-2.7	-1.4	--	1.4	Jul-17
<i>eV Emg Mkts Equity Net Median</i>			10.3	-0.7	-19.8	-1.6	-0.7	2.1	1.9	Jul-17
<i>eV Emg Mkts Equity Net Rank</i>			97	80	76	36	24	--	20	Jul-17
Redwheel Emerging Markets Equity	34,430,627	0.8	8.4	-3.5	-24.6	-0.9	--	--	3.3	Sep-19
<i>MSCI Emerging Markets</i>			9.7	-3.0	-20.1	-2.7	--	--	1.5	Sep-19
<i>eV Emg Mkts Equity Net Median</i>			10.3	-0.7	-19.8	-1.6	-0.7	2.1	2.2	Sep-19
<i>eV Emg Mkts Equity Net Rank</i>			74	79	77	43	--	--	36	Sep-19
Wellington Emerging Markets Systematic	42,496,720	0.9	10.0	-3.2	-21.0	-0.9	--	--	2.8	Sep-19
<i>MSCI Emerging Markets</i>			9.7	-3.0	-20.1	-2.7	--	--	1.5	Sep-19
<i>eV Emg Mkts Equity Net Median</i>			10.3	-0.7	-19.8	-1.6	-0.7	2.1	2.2	Sep-19
<i>eV Emg Mkts Equity Net Rank</i>			58	76	59	43	--	--	44	Sep-19
Kotak India Midcap	14,194,699	0.3	-1.4	6.8	-12.6	--	--	--	-3.6	Jul-21
<i>eV Emg Mkts Equity Net Median</i>			10.3	-0.7	-19.8	-1.6	-0.7	2.1	-18.3	Jul-21
<i>eV Emg Mkts Equity Net Rank</i>			99	4	16	--	--	--	1	Jul-21
<b>Private Markets</b>	<b>1,136,697,226</b>	<b>25.1</b>	<b>1.2</b>	<b>-0.9</b>	<b>-1.7</b>	<b>11.8</b>	<b>10.3</b>	<b>--</b>	<b>9.3</b>	<b>Jul-15</b>
<i>Private Markets Benchmark</i>			1.2	-0.9	-1.7	11.8	10.3	--	9.8	Jul-15
<i>MSCI ACWI IMI + 100bps</i>			10.1	3.1	-17.6	4.9	6.0	--	7.7	Jul-15
<b>Private Markets ex Proxy</b>	<b>927,592,106</b>	<b>20.5</b>	<b>-0.4</b>	<b>-2.5</b>	<b>-3.3</b>	<b>11.2</b>	<b>9.9</b>	<b>--</b>	<b>9.5</b>	<b>Jul-15</b>
<i>Custom PE Benchmark</i>			-0.3	-5.2	0.1	20.6	16.8	--	15.0	Jul-15

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Private Equity</b>	<b>383,139,810</b>	<b>8.5</b>	<b>-2.4</b>	<b>-6.6</b>	<b>-3.0</b>	<b>18.7</b>	<b>17.1</b>	<b>15.1</b>	<b>11.8</b>	<b>Oct-05</b>
<i>Custom PE Benchmark</i>			-0.3	-5.2	0.1	20.6	16.8	15.1	13.2	Oct-05
PE Strategic Partnership, LP	296,806,816	6.6	-2.2	-4.9	2.4	24.7	19.5	--	16.6	Aug-17
Pantheon USA Fund VI, LP	395,646	0.0	-2.5	-4.3	-15.4	-17.4	-8.7	-1.2	1.3	Oct-05
Portfolio Advisors Private Eq	2,664,724	0.1	-5.6	-5.6	-10.9	6.8	4.7	6.6	6.0	Nov-05
HarbourVest Partners VII	124,471	0.0	0.2	4.3	3.9	-3.2	-3.4	4.3	5.9	Dec-05
TCW/Crescent Mezzanine	71,742	0.0	0.8	-6.4	-14.4	56.3	27.0	18.5	15.6	Dec-08
TPG Opportunities Partners II	529,134	0.0	5.8	11.4	16.1	7.5	8.7	12.2	12.0	Oct-12
Crescent Mezzanine Partners VI	2,556,403	0.1	-2.5	-7.8	-11.7	10.8	10.1	--	8.1	Feb-13
Warburg Pincus (Europa) XI	7,353,271	0.2	-14.5	-22.2	-21.3	0.2	5.3	--	8.3	May-13
57 Stars Global Opportunity	25,890,376	0.6	-1.7	-4.9	-12.1	5.3	4.2	--	2.7	Jan-14
TPG Opportunities Partners III	3,758,789	0.1	-0.4	-9.6	-8.8	10.8	10.0	--	5.8	Mar-14
CCMP Capital Investors III, LP	4,218,373	0.1	-21.8	-37.9	-47.8	1.7	4.2	--	5.6	Aug-14
Francisco Partners	14,796,598	0.3	-1.7	-24.3	-40.9	12.4	23.6	--	18.3	May-15
Innovation Endeavors III	12,459,753	0.3	3.7	2.0	44.8	64.9	--	--	28.6	Jun-18
Crestline Portfolio Financing	11,513,714	0.3	1.6	4.7	6.7	9.4	--	--	9.2	Jun-18

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Venture Capital</b>	<b>42,987,802</b>	<b>1.0</b>	<b>-0.3</b>	<b>-3.1</b>	<b>-3.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>14.6</b>	<b>Sep-20</b>
Top Tier Capital Partners IX	7,794,460	0.2	-0.4	-6.3	-10.3	--	--	--	19.3	Sep-20
Northgate Venture Partners IX LP	9,275,857	0.2	-0.1	-4.4	12.4	--	--	--	4.9	Sep-20
Canvas III	3,361,780	0.1	9.8	9.0	34.6	--	--	--	8.3	Nov-20
Innovation Endeavors IV	1,317,919	0.0	-0.5	-2.6	-0.4	--	--	--	-6.0	Jun-21
Invesco Alpha II	6,906,719	0.2	0.0	5.8	-17.2	--	--	--	50.7	Sep-21
Next Play Capital III	3,807,477	0.1	-2.5	-5.2	-4.8	--	--	--	-4.5	Dec-21
Tiger Iron SJPF	5,405,962	0.1	-2.5	-8.8	--	--	--	--	-12.4	Mar-22
Bow Capital Fund II	1,324,102	0.0	-1.8	-7.3	--	--	--	--	-7.3	Jun-22
Lerer Hippeau VIII	1,008,412	0.0	0.0	--	--	--	--	--	0.0	Sep-22
BSF II	1,174,701	0.0	-7.9	--	--	--	--	--	-7.9	Jul-22
Signia Venture Partners IV	550,551	0.0	-8.2	--	--	--	--	--	--	Sep-22
Next Play SJPF	1,059,863	0.0	--	--	--	--	--	--	0.0	Nov-22
<b>Private Debt</b>	<b>196,515,215</b>	<b>4.3</b>	<b>-0.3</b>	<b>-1.6</b>	<b>5.9</b>	<b>11.1</b>	<b>7.0</b>	<b>--</b>	<b>6.5</b>	<b>Oct-15</b>
<i>S&amp;P Global Leveraged Loan + 2%</i>			3.2	5.2	1.4	4.6	4.9	--	5.8	Oct-15
White Oak Direct Lending	36,832,370	0.8	2.5	0.4	29.1	43.4	29.3	10.7	9.1	Nov-10
Blackstone/GSO Cap Partners	3,988,662	0.1	16.6	5.0	7.9	-21.7	-14.0	-5.3	-0.7	Dec-10

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Medley Opportunity Fund II LP	4,378,782	0.1	0.0	0.0	-9.8	-8.3	-10.6	-2.9	-1.6	Mar-11
Cross Ocean USD ESS Fund I, LP	6,847,202	0.2	-1.3	-0.4	-2.2	14.7	6.5	--	8.0	Apr-14
Park Square Credit Opp II, LP	116,007	0.0	-1.3	-1.9	191.5	18.6	13.0	--	10.3	Nov-14
Shoreline China Value III, LP	5,108,322	0.1	-26.1	-26.9	-23.1	-5.7	-5.2	--	0.1	Jul-15
Cross Ocean USD ESS Fund II LP	13,160,817	0.3	1.3	0.6	0.9	4.7	5.2	--	7.5	May-16
Cross Ocean USD ESS Fund III, LP	38,748,907	0.9	0.8	1.6	5.2	14.9	--	--	11.7	Jun-19
Arbour Lane Credit Opportunity Fund II, L.P.	15,986,436	0.4	0.0	-1.0	2.2	--	--	--	18.0	Apr-20
Eagle Point Defensive Income Fund	10,531,406	0.2	-1.1	-8.2	-5.0	--	--	--	2.2	Jun-20
HPS Special Situations Opportunity	10,919,845	0.2	1.4	7.2	13.7	--	--	--	21.7	Dec-20
Crestline Portfolio Fin II	3,429,689	0.1	2.5	5.1	9.8	--	--	--	8.5	Dec-20
SVP Special Situations V	6,431,209	0.1	-4.2	-3.5	7.3	--	--	--	3.3	Jun-21
Arbour Lane COF III	8,103,057	0.2	-0.8	-9.5	-9.6	--	--	--	-8.3	Nov-21
Angelo Gordon CS II	9,616,459	0.2	-1.7	-6.9	--	--	--	--	-5.8	Feb-22
Octagon CLO Opp Fund IV	17,738,516	0.4	-0.9	-0.7	--	--	--	--	-0.7	Mar-22
Eagle Point Defensive II	2,474,151	0.1	-3.2	--	--	--	--	--	-3.2	Sep-22
HPS Special Situations Opportunity Fund II	2,103,378	0.0	--	--	--	--	--	--	--	Sep-22



	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Growth Real Estate</b>	<b>208,771,456</b>	<b>4.6</b>	<b>2.5</b>	<b>6.3</b>	<b>17.7</b>	<b>14.5</b>	<b>12.2</b>	<b>--</b>	<b>11.1</b>	<b>Jul-15</b>
<i>NCREIF Property Index</i>			-3.5	-3.0	5.5	8.1	7.5	--	7.8	Jul-15
TA Realty Associates Fund X	8,695	0.0	15.8	23.6	52.8	14.2	15.4	--	13.4	Mar-13
Brookfield SREP I	3,413,210	0.1	-1.3	1.6	5.4	4.8	8.1	--	14.6	Sep-13
Tristan - EPISO III	2,862,423	0.1	12.5	5.1	4.9	-2.3	-4.1	--	2.8	Dec-13
Orion Euro Real Estate IV LP	3,554,784	0.1	10.0	2.9	-2.3	-9.8	-12.1	--	-7.6	Apr-14
Sculptor Real Estate Fund III	4,155,844	0.1	6.3	85.0	119.0	44.4	37.2	--	24.5	Oct-14
Tristan - EPISO IV	18,107,277	0.4	10.3	5.0	3.4	8.3	8.4	--	7.3	Dec-15
KSL Capital Partners IV, LP	21,461,016	0.5	0.2	1.4	10.6	18.2	19.2	--	5.9	Apr-16
Brookfield SREP II	18,784,034	0.4	0.0	4.1	28.7	17.7	15.3	--	13.8	Jun-16
DRA Growth & Income Fund IX	15,142,032	0.3	3.4	7.5	19.1	24.5	20.2	--	18.6	Feb-17
GEM Realty Fund VI	7,582,306	0.2	-2.7	-0.7	13.9	18.7	9.6	--	9.2	Nov-17
Torchlight Debt Opportunity VI	21,715,127	0.5	1.7	4.3	13.5	9.1	--	--	6.3	Apr-18
Tristan - EPISO V	17,602,089	0.4	12.8	8.6	10.8	-14.9	--	--	-26.7	May-19
DRA Growth and Income Fund X, LLC	14,408,277	0.3	7.3	8.9	25.5	--	--	--	27.8	Mar-20
Rockpoint Real Estate Fund VI, L.P.	9,972,045	0.2	-2.5	-0.2	14.4	--	--	--	16.8	May-20
Exeter Industrial Value Fund V	13,192,992	0.3	-5.0	-4.2	26.0	--	--	--	33.1	Oct-20

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Torchlight Debt Fund VII	4,719,780	0.1	1.1	5.1	6.7	--	--	--	3.9	Feb-21
HIG Realty Partners IV	7,128,639	0.2	4.6	14.4	--	--	--	--	104.9	Feb-22
Praedium X MidInc	5,919,689	0.1	-6.4	-0.7	--	--	--	--	-0.7	Apr-22
AIGGRE Fund IV	13,657,216	0.3	-4.7	39.1	--	--	--	--	32.4	Jun-22
GCP SecureSpace Property Partners, L.P	3,442,728	0.1	4.7	--	--	--	--	--	3.4	Aug-22
Centerbridge RE II	1,941,253	0.0	-0.9	--	--	--	--	--	-14.3	Jul-22
<b>Private Real Assets</b>	<b>96,177,822</b>	<b>2.1</b>	<b>1.6</b>	<b>1.2</b>	<b>13.6</b>	<b>12.4</b>	<b>9.7</b>	<b>--</b>	<b>8.9</b>	<b>Jun-16</b>
Brookfield Infrastructure III	17,508,635	0.4	0.4	0.9	11.6	10.3	11.2	--	10.6	Jun-16
Global Infra Part III-A/B, LP	19,508,371	0.4	-2.6	0.3	18.7	11.3	10.3	--	6.2	Sep-16
Lime Rock Partners VIII	6,752,236	0.1	2.0	5.1	36.2	15.3	--	--	10.8	Dec-18
Kimmeridge Energy Fund V, L.P.	10,060,129	0.2	4.6	-2.9	13.7	25.8	--	--	12.4	Aug-19
Global Infra Partners IV	4,792,505	0.1	1.9	3.5	12.8	-71.6	--	--	-67.7	Aug-19
Lime Rock New Energy, L.P	3,055,386	0.1	7.0	7.0	-53.1	--	--	--	-2.0	Aug-20
Orion Mine Finance Fund III, L.P.	7,335,071	0.2	2.3	-1.2	6.0	--	--	--	7.6	Sep-20
Real Assets Coinvest I	1,799,998	0.0	0.0	0.0	0.0	--	--	--	0.0	Sep-20
Crestline Co-Investment II	5,843,618	0.1	4.8	3.3	54.8	--	--	--	37.9	Feb-21
Tembo Cap Mining III	2,342,960	0.1	-8.0	-19.3	-14.2	--	--	--	-11.5	Oct-21

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Mountain Capital II	1,600,809	0.0	-3.3	-7.9	9.2	--	--	--	9.2	Jan-22
Aether Seed Partners I	1,504,507	0.0	304.3	304.3	--	--	--	--	304.3	May-22
Hull Street Energy II	477,047	0.0	0.0	0.0	--	--	--	--	0.0	Jul-22
Kimmeridge Fund VI	13,596,550	0.3	0.0	--	--	--	--	--	0.0	Sep-22
<b>Northern Trust Russell 3000</b>	<b>113,951,132</b>	<b>2.5</b>	<b>7.2</b>	<b>2.4</b>	<b>-19.1</b>	<b>7.1</b>	<b>8.8</b>	<b>--</b>	<b>10.1</b>	<b>Apr-14</b>
<i>Russell 3000</i>			7.2	2.4	-19.2	7.1	8.8	--	10.0	Apr-14
<b>Blackrock Liquid Fed Trust Fund</b>	<b>95,153,988</b>	<b>2.1</b>	--	--	--	--	--	--	--	<b>Dec-22</b>
<b>High Yield Bonds</b>	<b>89,871,565</b>	<b>2.0</b>	<b>4.3</b>	<b>4.1</b>	<b>-9.8</b>	--	--	--	<b>2.2</b>	<b>Jun-20</b>
<i>Bloomberg US Corporate High Yield TR</i>			4.2	3.5	-11.2	--	--	--	2.0	Jun-20
<i>eV US High Yield Fixed Inc Net Median</i>			3.9	3.5	-10.0	0.3	2.3	3.7	2.1	Jun-20
<i>eV US High Yield Fixed Inc Net Rank</i>			31	15	46	--	--	--	49	Jun-20
Mellon High Yield Beta	8,807,294	0.2	4.6	4.1	-10.7	--	--	--	2.0	Jun-20
<i>Bloomberg US Corporate High Yield TR</i>			4.2	3.5	-11.2	--	--	--	1.6	Jun-20
<i>eV US High Yield Fixed Inc Net Median</i>			3.9	3.5	-10.0	0.3	2.3	3.7	1.9	Jun-20
<i>eV US High Yield Fixed Inc Net Rank</i>			15	18	64	--	--	--	45	Jun-20
Columbia High Yield Fixed Income	81,064,271	1.8	4.2	4.2	-9.7	--	--	--	-2.6	Dec-20
<i>Bloomberg US Corporate High Yield TR</i>			4.2	3.5	-11.2	--	--	--	-3.3	Dec-20
<i>eV US High Yield Fixed Inc Net Median</i>			3.9	3.5	-10.0	0.3	2.3	3.7	-2.8	Dec-20
<i>eV US High Yield Fixed Inc Net Rank</i>			32	14	44	--	--	--	46	Dec-20

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Market Debt</b>	<b>88,896,951</b>	<b>2.0</b>	<b>-1.3</b>	<b>-1.5</b>	<b>1.1</b>	<b>4.4</b>	<b>4.8</b>	<b>2.6</b>	<b>2.6</b>	<b>Jan-13</b>
50% JPM EMBI GD / 50% JPM GBI-EM			8.3	3.3	-14.8	-5.7	-1.9	-0.2	-0.2	Jan-13
eV All Emg Mkts Fixed Inc Net Median			8.3	3.8	-12.8	-4.1	-1.0	1.0	1.0	Jan-13
eV All Emg Mkts Fixed Inc Net Rank			99	99	1	1	1	12	12	Jan-13
Wellington Iguazu Partners LP Fund	77,177,837	1.7	-2.8	-2.6	10.4	9.5	9.7	--	8.4	Feb-14
50% JPM EMBI GD + 50% JPM GBI EM GD			8.3	3.3	-14.8	-5.7	-1.9	--	0.9	Feb-14
eV All Emg Mkts Fixed Inc Net Median			8.3	3.8	-12.8	-4.1	-1.0	1.0	1.9	Feb-14
eV All Emg Mkts Fixed Inc Net Rank			99	99	1	1	1	--	1	Feb-14
Payden EMD Blended Currency	11,719,114	0.3	10.4	6.1	-13.9	--	--	--	-9.5	Dec-20
50% JPM EMBI GD / 50% JPM GBI-EM			8.3	3.3	-14.8	--	--	--	-10.2	Dec-20
eV Emg Mkts Fixed Inc - Blended Currency Net Median			8.4	4.1	-13.6	-4.1	-1.1	0.4	-9.0	Dec-20
eV Emg Mkts Fixed Inc - Blended Currency Net Rank			6	17	56	--	--	--	64	Dec-20
<b>Low Beta</b>	<b>722,904,262</b>	<b>16.0</b>	<b>0.2</b>	<b>0.0</b>	<b>3.3</b>	<b>3.4</b>	<b>3.4</b>	<b>--</b>	<b>2.6</b>	<b>Jul-15</b>
Low Beta Benchmark			1.1	-1.0	-1.2	0.3	0.5	--	0.6	Jul-15
<b>Immunized Cash Flows</b>	<b>436,389,131</b>	<b>9.7</b>	<b>1.0</b>	<b>-1.7</b>	<b>-4.6</b>	<b>-0.6</b>	<b>--</b>	<b>--</b>	<b>0.7</b>	<b>Oct-18</b>
Immunized Cash Flow Benchmark			1.0	-1.7	-4.6	-0.6	--	--	0.7	Oct-18
Insight Immunized Cash Flow	436,389,131	9.7	1.0	-1.7	-4.6	-0.6	--	--	-0.2	Jun-19
Bloomberg US Govt/Credit 1-3 Yr. TR			0.9	-0.6	-3.7	-0.3	--	--	0.2	Jun-19
<b>Market Neutral Strategies</b>	<b>145,172,124</b>	<b>3.2</b>	<b>-3.0</b>	<b>4.1</b>	<b>23.6</b>	<b>13.7</b>	<b>10.4</b>	<b>6.3</b>	<b>6.2</b>	<b>Nov-12</b>
Market Neutral Strategies Benchmark			1.3	2.2	2.9	1.2	1.0	1.2	1.3	Nov-12

Total Fund | As of December 31, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Relative Value</b>	<b>145,172,124</b>	<b>3.2</b>	<b>-3.0</b>	<b>4.1</b>	<b>23.6</b>	<b>13.4</b>	<b>10.8</b>	<b>--</b>	<b>8.1</b>	<b>Jul-15</b>
<i>HFRI Relative Value (Total) Index</i>			1.5	1.5	-0.7	3.4	3.4	--	3.6	Jul-15
<i>Relative Value Arbitrage MStar MF Median</i>			1.7	2.2	-3.8	3.0	3.3	2.9	3.1	Jul-15
<i>Relative Value Arbitrage MStar MF Rank</i>			99	1	1	1	1	--	1	Jul-15
Pine River Fund, Ltd	288,761	0.0	-1.2	5.9	-7.4	1.1	5.9	4.0	4.0	Jan-13
<i>HFRI Relative Value (Total) Index</i>			1.5	1.5	-0.7	3.4	3.4	4.0	4.0	Jan-13
DE Shaw Composite Fund, LLC	71,533,295	1.6	2.7	8.7	24.8	21.3	17.1	--	14.3	Apr-13
<i>HFRI Fund Weighted Composite Index</i>			2.3	1.6	-4.1	5.7	4.4	--	4.4	Apr-13
Hudson Bay	14,854,286	0.3	1.0	5.9	9.3	12.7	10.4	--	9.9	Aug-17
<i>HFRI Relative Value (Total) Index</i>			1.5	1.5	-0.7	3.4	3.4	--	3.4	Aug-17
Crabel Advanced Trend	58,495,782	1.3	-10.1	-1.6	24.4	--	--	--	12.3	Jun-21
<i>Barclay CTA Index</i>			-2.1	-0.9	7.1	--	--	--	5.2	Jun-21
<b>Cash</b>	<b>49,704,672</b>	<b>1.1</b>	<b>0.8</b>	<b>1.3</b>	<b>1.4</b>	<b>0.7</b>	<b>1.3</b>	<b>0.8</b>	<b>7.5</b>	<b>Jul-02</b>
<i>ICE BofA 91 Days T-Bills TR</i>			0.8	1.3	1.5	0.7	1.3	0.8	1.3	Jul-02
<b>Short Term IG Bonds</b>	<b>91,638,336</b>	<b>2.0</b>	<b>1.0</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>May-22</b>
<i>ICE BofA 3M US Treasury TR USD</i>			0.8	1.3	--	--	--	--	--	May-22
Blackrock 3-Month T-Bill	91,638,336	2.0	1.0	1.5	--	--	--	--	1.6	May-22
<i>ICE BofA 3M US Treasury TR USD</i>			0.8	1.3	--	--	--	--	1.4	May-22

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Other</b>	<b>626,814,603</b>	<b>13.9</b>	<b>0.9</b>	<b>0.2</b>	<b>0.9</b>	<b>0.4</b>	<b>1.3</b>	<b>--</b>	<b>1.9</b>	<b>Jul-15</b>
Other Benchmark			1.0	-0.5	-1.1	-0.1	0.6	--	1.6	Jul-15
<b>Core Real Estate</b>	<b>282,421,856</b>	<b>6.2</b>	<b>1.0</b>	<b>8.2</b>	<b>27.3</b>	<b>13.7</b>	<b>10.8</b>	<b>--</b>	<b>9.9</b>	<b>Jul-15</b>
Core Real Estate Benchmark			0.3	4.9	21.0	10.9	8.9	--	8.7	Jul-15
BlackRock Core Property Fund	57,166,502	1.3	1.4	9.9	31.4	14.7	--	--	12.1	Feb-19
Core Real Estate Benchmark 2			0.3	4.9	21.0	10.9	--	--	9.3	Feb-19
Clarion Lion Properties Fund	108,452,719	2.4	0.4	7.6	23.8	13.3	--	--	11.4	Mar-19
Core Real Estate Benchmark 2			0.3	4.9	21.0	10.9	--	--	9.6	Mar-19
Clarion Lion Industrial Trust	25,465,801	0.6	4.6	12.2	37.7	--	--	--	37.7	Jan-22
Core Real Estate Benchmark 2			0.3	4.9	21.0	--	--	--	21.0	Jan-22
TA Realty Core Property Fund	91,336,834	2.0	0.5	5.4	24.0	--	--	--	24.0	Jan-22
Core Real Estate Benchmark 2			0.3	4.9	21.0	--	--	--	21.0	Jan-22
<b>TIPS</b>	<b>89,389,137</b>	<b>2.0</b>	<b>1.2</b>	<b>-1.5</b>	<b>-2.7</b>	<b>2.5</b>	<b>--</b>	<b>--</b>	<b>2.9</b>	<b>Oct-18</b>
Bloomberg US Treasury TIPS 0-5 Yr TR			1.3	-1.4	-2.7	2.5	--	--	2.8	Oct-18
Northern Trust 0-5 Year TIPS	89,389,137	2.0	1.2	-1.5	-2.7	2.5	--	--	2.9	Oct-18
BBg U.S. TIPS 0-5 Years			1.3	-1.4	-2.7	2.5	--	--	2.8	Oct-18

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Investment Grade Bonds</b>	<b>192,801,495</b>	<b>4.3</b>	<b>1.3</b>	<b>-3.5</b>	<b>-13.2</b>	--	--	--	<b>-4.2</b>	<b>May-20</b>
Custom IG Bonds Benchmark			1.9	-3.0	-11.9	--	--	--	-4.6	May-20
Voya Securitized Credit	38,206,963	0.8	-1.0	-5.0	-15.4	--	--	--	-2.8	Apr-20
Bloomberg US Securitized MBS ABS CMBS TR			2.1	-3.3	-11.7	--	--	--	-4.6	Apr-20
Invesco Core Bonds	154,594,532	3.4	1.8	-3.1	-13.7	--	--	--	-7.3	Feb-21
Bloomberg US Aggregate TR			1.9	-3.0	-13.0	--	--	--	-7.0	Feb-21
<b>Long-Term Government Bonds</b>	<b>62,202,114</b>	<b>1.4</b>	<b>-1.0</b>	<b>-10.5</b>	<b>-29.3</b>	--	--	--	<b>-15.1</b>	<b>May-20</b>
Long-Term Government Bonds Benchmark			-0.6	-10.2	-29.3	--	--	--	-14.9	May-20
BlackRock Long-Term Gov Bonds	62,202,114	1.4	-1.0	-10.5	-29.3	--	--	--	-15.1	May-20
Bloomberg US Govt Long TR			-0.6	-10.1	-29.2	--	--	--	-15.0	May-20
<b>Overlay</b>	<b>11,705,121</b>	<b>0.3</b>								
Russell Overlay	11,493,617	0.3								

	Cash Flow Summary					
	Quarter Ending December 31, 2022					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
57 Stars Global Opportunity	\$26,647,568	\$0	-\$301,026	-\$301,026	-\$456,166	\$25,890,376
Aether Seed Partners I	\$232,571	\$301,514	\$0	\$301,514	\$970,422	\$1,504,507
AIGGRE Fund IV	\$12,910,239	\$1,666,317	-\$200,499	\$1,465,818	-\$718,841	\$13,657,216
Angelo Gordon CS II	\$8,344,776	\$1,575,000	-\$147,088	\$1,427,912	-\$156,229	\$9,616,459
Arbour Lane COF III	\$8,172,361	\$0	\$0	\$0	-\$69,304	\$8,103,057
Arbour Lane Credit Opportunity Fund II, L.P.	\$15,987,191	\$0	\$0	\$0	-\$755	\$15,986,436
Artisan Global Opportunities	\$190,260,128	\$0	\$0	\$0	\$10,520,985	\$200,781,112
Artisan Global Value	\$228,979,425	\$0	\$0	\$0	\$31,199,812	\$260,179,237
Blackrock 3-Month T-Bill	\$90,745,488	\$0	\$0	\$0	\$892,848	\$91,638,336
BlackRock Core Property Fund	\$59,010,325	\$0	-\$2,605,444	-\$2,605,444	\$761,620	\$57,166,502
BlackRock Liquid Fed Trust Fund	--	\$95,000,000	\$0	\$95,000,000	\$153,988	\$95,153,988
BlackRock Long-Term Gov Bonds	\$62,852,937	\$0	\$0	\$0	-\$650,822	\$62,202,114
Blackstone/GSO Cap Partners	\$3,421,436	\$0	\$0	\$0	\$567,226	\$3,988,662
Bow Capital Fund II	\$1,347,964	\$0	\$0	\$0	-\$23,862	\$1,324,102
Brookfield Infrastructure III	\$18,560,829	\$0	-\$1,131,959	-\$1,131,959	\$79,766	\$17,508,635
Brookfield SREP I	\$3,456,824	\$3,126	\$0	\$3,126	-\$46,740	\$3,413,210
Brookfield SREP II	\$19,900,238	\$33,000	-\$1,124,966	-\$1,091,966	-\$24,238	\$18,784,034
BSF II	\$625,000	\$625,000	\$0	\$625,000	-\$75,299	\$1,174,701
Canvas III	\$2,726,679	\$352,743	\$0	\$352,743	\$282,358	\$3,361,780
Cash	\$120,713,964	\$211,106,239	-\$282,689,832	-\$71,583,593	\$574,300	\$49,704,672
CCMP Capital Investors III, LP	\$6,869,280	\$415,635	-\$1,152,624	-\$736,989	-\$1,913,918	\$4,218,373
Centerbridge RE II	\$1,959,784	\$0	\$0	\$0	-\$18,531	\$1,941,253



**Total Fund | As of December 31, 2022**

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Clarion Lion Industrial Trust	\$24,349,683	\$0	\$0	\$0	\$1,116,118	\$25,465,801
Clarion Lion Properties Fund	\$108,686,545	\$0	-\$668,160	-\$668,160	\$434,334	\$108,452,719
Columbia High Yield Fixed Income	\$77,784,246	\$3,971	-\$3,971	\$0	\$3,280,025	\$81,064,271
Cove Street Small Cap Value	\$30,761,164	\$0	\$0	\$0	\$2,798,824	\$33,559,988
Crabel Advanced Trend	\$65,069,598	\$0	\$0	\$0	-\$6,573,816	\$58,495,782
Crescent Mezzanine Partners VI	\$2,622,457	\$16,513	\$0	\$16,513	-\$82,567	\$2,556,403
Crestline Co-Investment II	\$5,576,728	\$0	\$0	\$0	\$266,890	\$5,843,618
Crestline Portfolio Fin II	\$4,129,487	\$0	-\$802,040	-\$802,040	\$102,241	\$3,429,689
Crestline Portfolio Financing	\$11,715,020	\$655,933	-\$1,051,568	-\$395,635	\$194,328	\$11,513,714
Cross Ocean USD ESS Fund I, LP	\$6,940,465	\$0	\$0	\$0	-\$93,262	\$6,847,202
Cross Ocean USD ESS Fund II LP	\$12,997,101	\$0	\$0	\$0	\$163,716	\$13,160,817
Cross Ocean USD ESS Fund III, LP	\$38,439,936	\$0	\$0	\$0	\$308,971	\$38,748,907
DE Shaw Composite Fund, LLC	\$69,656,796	\$0	\$0	\$0	\$1,876,499	\$71,533,295
Dimensional Fund Adv EM Value	\$46,900,311	\$0	\$0	\$0	\$4,815,571	\$51,715,882
DRA Growth & Income Fund IX	\$14,775,560	\$0	-\$126,904	-\$126,904	\$493,376	\$15,142,032
DRA Growth and Income Fund X, LLC	\$12,236,632	\$1,563,158	-\$269,484	\$1,293,674	\$877,971	\$14,408,277
Eagle Point Defensive II	\$1,050,000	\$1,505,700	\$0	\$1,505,700	-\$81,549	\$2,474,151
Eagle Point Defensive Income Fund	\$10,836,987	\$0	-\$184,797	-\$184,797	-\$120,785	\$10,531,406
Exeter Industrial Value Fund V	\$11,117,035	\$2,860,471	\$0	\$2,860,471	-\$784,515	\$13,192,992
First Eagle International Equity	\$68,841,236	\$0	\$0	\$0	\$8,221,872	\$77,063,108
Francisco Partners	\$15,052,067	\$63,867	\$0	\$63,867	-\$319,336	\$14,796,598
GCP SecureSpace Property Partners, L.P	\$4,218,845	\$0	-\$936,930	-\$936,930	\$160,813	\$3,442,728
GEM Realty Fund VI	\$7,783,176	\$798,819	-\$755,625	\$43,194	-\$244,064	\$7,582,306
Global Infra Part III-A/B, LP	\$22,131,569	\$0	-\$2,079,341	-\$2,079,341	-\$543,857	\$19,508,371
Global Infra Partners IV	\$3,953,899	\$759,632	\$0	\$759,632	\$78,974	\$4,792,505

## Total Fund | As of December 31, 2022

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
GQG Global Emerging Markets	\$41,024,470	\$0	\$0	\$0	\$1,329,036	\$42,353,506
HarbourVest Partners VII	\$124,217	\$0	\$0	\$0	\$254	\$124,471
HIG Realty Partners IV	\$5,802,285	\$1,037,364	\$0	\$1,037,364	\$288,990	\$7,128,639
HPS Special Situations Opportunity	\$9,504,563	\$1,284,118	\$0	\$1,284,118	\$131,164	\$10,919,845
HPS Special Situations Opportunity Fund II	--	\$2,103,378	\$0	\$2,103,378	\$0	\$2,103,378
Hudson Bay	\$14,711,171	\$0	\$0	\$0	\$143,115	\$14,854,286
Hull Street Energy II	\$244,332	\$2,103,378	\$0	\$2,103,378	-\$244,332	\$2,103,378
Innovation Endeavors III	\$11,895,695	\$126,000	\$0	\$126,000	\$438,058	\$12,459,753
Innovation Endeavors IV	\$1,324,552	\$0	\$0	\$0	-\$6,633	\$1,317,919
Insight Immunized Cash Flow	\$443,011,946	\$0	-\$10,990,748	-\$10,990,748	\$4,367,933	\$436,389,131
Invesco Alpha II	\$6,495,501	\$411,218	\$0	\$411,218	\$0	\$6,906,719
Invesco Core Bonds	\$151,798,738	\$10,194	-\$10,194	\$0	\$2,795,794	\$154,594,532
Kimmeridge Energy Fund V, L.P.	\$10,814,357	\$0	-\$1,228,625	-\$1,228,625	\$474,397	\$10,060,129
Kimmeridge Fund VI	\$0	\$14,021,353	-\$424,803	\$13,596,550	\$0	\$13,596,550
Kotak India Midcap	\$14,393,882	\$0	\$0	\$0	-\$199,183	\$14,194,699
KSL Capital Partners IV, LP	\$21,574,616	\$190,129	-\$339,704	-\$149,576	\$35,976	\$21,461,016
Lerer Hippeau VIII	\$508,412	\$500,000	\$0	\$500,000	\$0	\$1,008,412
Lime Rock New Energy, L.P.	\$2,898,077	\$0	-\$46,826	-\$46,826	\$204,135	\$3,055,386
Lime Rock Partners VIII	\$6,735,126	\$339,988	-\$457,076	-\$117,088	\$134,198	\$6,752,236
Medley Opportunity Fund II LP	\$4,378,782	\$0	\$0	\$0	\$0	\$4,378,782
Mellon High Yield Beta	\$8,418,737	\$0	\$0	\$0	\$388,556	\$8,807,294
Morgan Stanley International Equity	\$51,692,158	\$0	\$0	\$0	\$8,820,613	\$60,512,771
Mountain Capital II	\$1,584,731	\$68,057	\$0	\$68,057	-\$51,979	\$1,600,809
Next Play Capital III	\$3,905,359	\$0	\$0	\$0	-\$97,882	\$3,807,477
Next Play SJPF	--	\$1,059,863	\$0	\$1,059,863	\$0	\$1,059,863

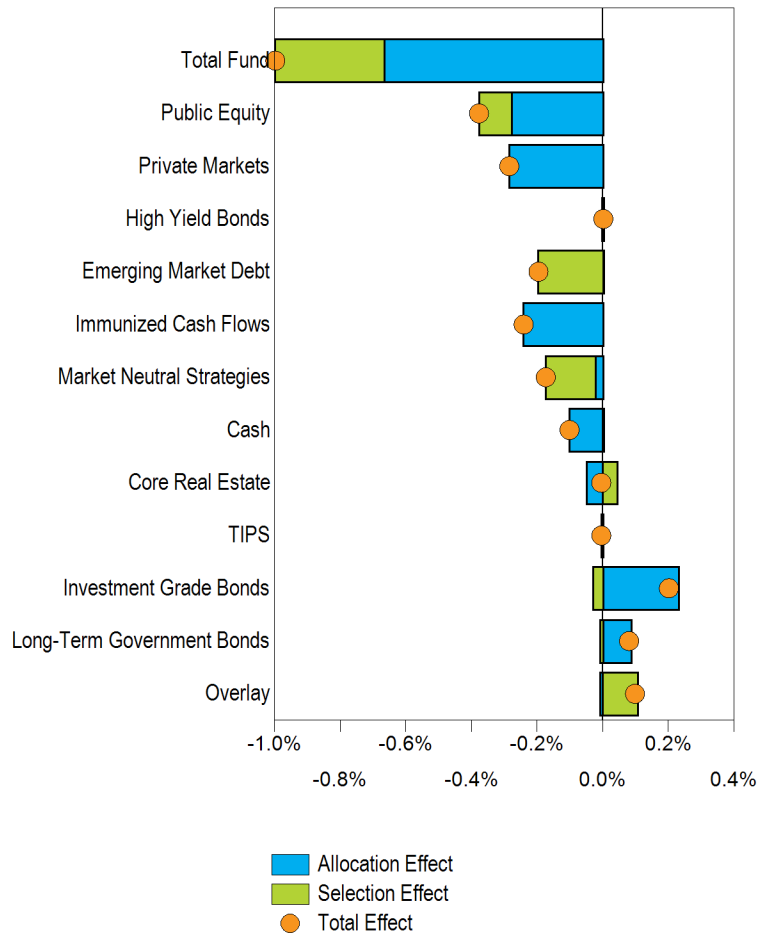
**Total Fund | As of December 31, 2022**

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Northern Trust 0-5 Year TIPS	\$88,291,162	\$0	\$0	\$0	\$1,097,976	\$89,389,137
Northern Trust MSCI EM IMI	\$51,643,051	\$0	\$0	\$0	\$5,244,707	\$56,887,759
Northern Trust MSCI World ex US	\$182,347,611	\$0	-\$23,000,000	-\$23,000,000	\$31,525,884	\$190,873,495
Northern Trust Russell 3000	\$699,097,397	\$0	-\$22,000,000	-\$22,000,000	\$49,738,248	\$726,835,645
Northern Trust Russell 3000	\$216,142,355	\$0	-\$119,000,000	-\$119,000,000	\$16,808,777	\$113,951,132
Northgate Venture Partners IX LP	\$9,082,238	\$200,000	\$0	\$200,000	-\$6,381	\$9,275,857
Oberweis Intl Opportunities	\$46,347,616	\$0	\$0	\$0	\$5,937,471	\$52,285,087
Octagon CLO Opp Fund IV	\$14,717,731	\$3,150,000	\$0	\$3,150,000	-\$129,215	\$17,738,516
Orion Euro Real Estate IV LP	\$3,185,562	\$110,166	-\$57,840	\$52,326	\$316,896	\$3,554,784
Orion Mine Finance Fund III, L.P.	\$6,931,938	\$242,375	\$0	\$242,375	\$160,758	\$7,335,071
Pantheon USA Fund VI, LP	\$405,678	\$0	\$0	\$0	-\$10,032	\$395,646
Park Square Credit Opp II, LP	\$117,547	\$0	\$0	\$0	-\$1,540	\$116,007
Payden EMD Blended Currency	\$10,611,027	\$0	\$0	\$0	\$1,108,088	\$11,719,114
PE Strategic Partnership, LP	\$292,329,618	\$11,469,864	\$0	\$11,469,864	-\$6,992,666	\$296,806,816
Pine River Fund, Ltd	\$292,158	\$0	\$0	\$0	-\$3,397	\$288,761
Portfolio Advisors Private Eq	\$2,948,013	\$0	-\$119,320	-\$119,320	-\$163,969	\$2,664,724
Praedium X MidInc	\$4,129,309	\$2,205,795	-\$49,444	\$2,156,351	-\$365,971	\$5,919,689
Real Assets Coinvest I	\$1,799,998	\$0	\$0	\$0	\$0	\$1,799,998
Redwheel Emerging Markets Equity	\$31,754,852	\$0	\$0	\$0	\$2,675,774	\$34,430,627
Rockpoint Real Estate Fund VI, L.P.	\$9,697,175	\$521,375	\$0	\$521,375	-\$246,505	\$9,972,045
Russell Overlay	\$6,911,256	\$0	\$0	\$0	\$4,582,361	\$11,493,617
Sculptor Real Estate Fund III	\$4,349,678	\$12,765	-\$481,909	-\$469,144	\$275,310	\$4,155,844
Shoreline China Value III, LP	\$7,497,385	\$0	-\$459,002	-\$459,002	-\$1,930,061	\$5,108,322
Signia Venture Partners IV	\$0	\$600,000	\$0	\$600,000	-\$49,449	\$550,551
SVP Special Situations V	\$5,553,612	\$1,295,173	-\$3,875	\$1,291,298	-\$413,701	\$6,431,209

**Total Fund | As of December 31, 2022**

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
TA Realty Associates Fund X	\$7,507	\$0	\$0	\$0	\$1,188	\$8,695
TA Realty Core Property Fund	\$33,890,453	\$58,000,000	-\$1,025,120	\$56,974,880	\$471,501	\$91,336,834
TCW/Crescent Mezzanine	\$71,152	\$0	\$0	\$0	\$590	\$71,742
Tembo Cap Mining III	\$2,498,391	\$47,926	\$0	\$47,926	-\$203,357	\$2,342,960
Terminated Manager Assets	\$211,167	\$0	\$0	\$0	\$338	\$211,504
Tiger Iron SJPF	\$4,846,798	\$686,410	\$0	\$686,410	-\$127,246	\$5,405,962
Top Tier Capital Partners IX	\$6,968,364	\$856,191	\$0	\$856,191	-\$30,095	\$7,794,460
Torchlight Debt Fund VII	\$4,668,036	\$0	\$0	\$0	\$51,744	\$4,719,780
Torchlight Debt Opportunity VI	\$22,209,623	\$105,502	-\$851,258	-\$745,756	\$251,260	\$21,715,127
TPG Opportunities Partners II	\$588,539	\$0	-\$91,593	-\$91,593	\$32,188	\$529,134
TPG Opportunities Partners III	\$3,861,954	\$3,348	-\$88,940	-\$85,592	-\$17,573	\$3,758,789
Tristan - EPI SO III	\$2,545,260	\$0	\$0	\$0	\$317,163	\$2,862,423
Tristan - EPI SO IV	\$16,420,625	\$0	\$0	\$0	\$1,686,652	\$18,107,277
Tristan - EPI SO V	\$16,267,187	\$0	-\$704,944	-\$704,944	\$2,039,846	\$17,602,089
Voya Securitized Credit	\$38,608,440	\$0	\$0	\$0	-\$401,477	\$38,206,963
Warburg Pincus (Europa) XI	\$8,596,505	\$0	\$0	\$0	-\$1,243,234	\$7,353,271
Wellington Emerging Markets Systematic	\$38,636,255	\$0	\$0	\$0	\$3,860,465	\$42,496,720
Wellington Iguazu Partners LP Fund	\$79,433,951	\$0	\$0	\$0	-\$2,256,114	\$77,177,837
White Oak Direct Lending	\$35,928,305	\$0	\$0	\$0	\$904,065	\$36,832,370
<b>Total</b>	<b>\$4,386,635,735</b>	<b>\$420,197,906</b>	<b>-\$477,663,478</b>	<b>-\$60,286,615</b>	<b>\$194,710,244</b>	<b>\$4,521,059,364</b>

#### Attribution Effects 3 Months Ending December 31, 2022



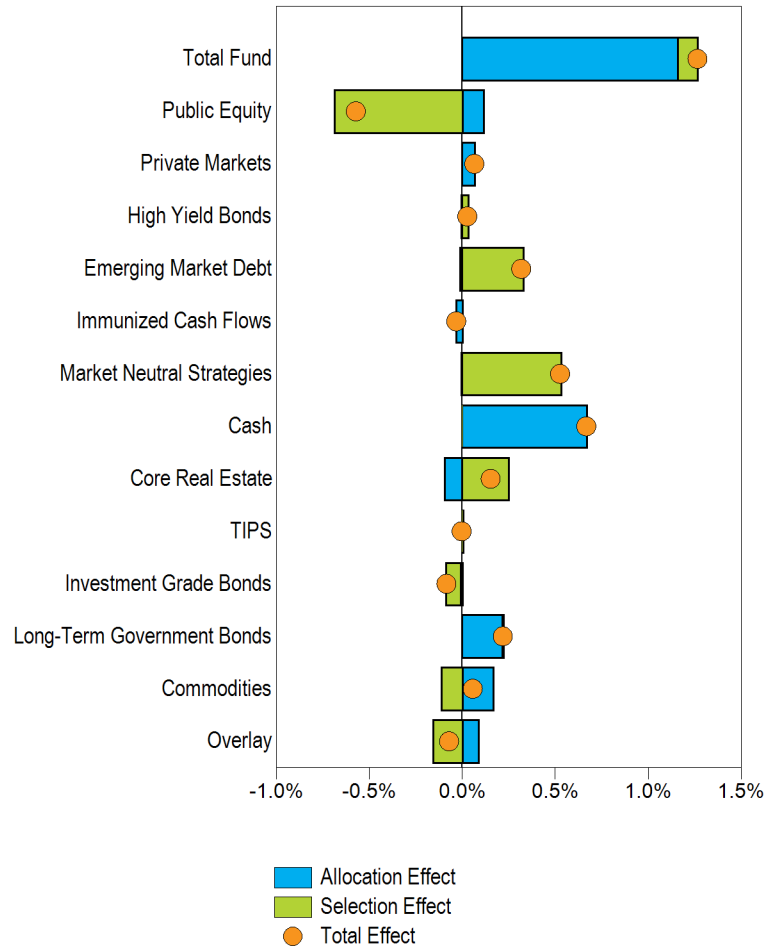
#### Attribution Summary

##### 3 Months Ending December 31, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	9.7%	9.9%	-0.3%	-0.1%	-0.3%	-0.4%
Private Markets	1.2%	1.2%	0.0%	0.0%	-0.3%	-0.3%
High Yield Bonds	4.3%	4.2%	0.1%	0.0%	0.0%	0.0%
Emerging Market Debt	-1.3%	8.3%	-9.6%	-0.2%	0.0%	-0.2%
Immunized Cash Flows	1.0%	1.0%	0.0%	0.0%	-0.2%	-0.2%
Market Neutral Strategies	-3.0%	1.3%	-4.3%	-0.1%	0.0%	-0.2%
Cash	0.8%	0.8%	0.0%	0.0%	-0.1%	-0.1%
Core Real Estate	1.0%	0.3%	0.7%	0.0%	0.0%	0.0%
TIPS	1.2%	1.3%	0.0%	0.0%	0.0%	0.0%
Investment Grade Bonds	1.3%	1.9%	-0.7%	0.0%	0.2%	0.2%
Long-Term Government Bonds	-1.0%	-0.6%	-0.4%	0.0%	0.1%	0.1%
Overlay	64.3%	0.8%	63.5%	0.1%	0.0%	0.1%
<b>Total</b>	<b>4.5%</b>	<b>5.4%</b>	<b>-0.9%</b>	<b>-0.3%</b>	<b>-0.7%</b>	<b>-1.0%</b>

Difference in attribution returns and returns in the performance summary may occur as a result of the different calculation methodologies that are applied by InvestorForce.

#### Attribution Effects 1 Year Ending December 31, 2022



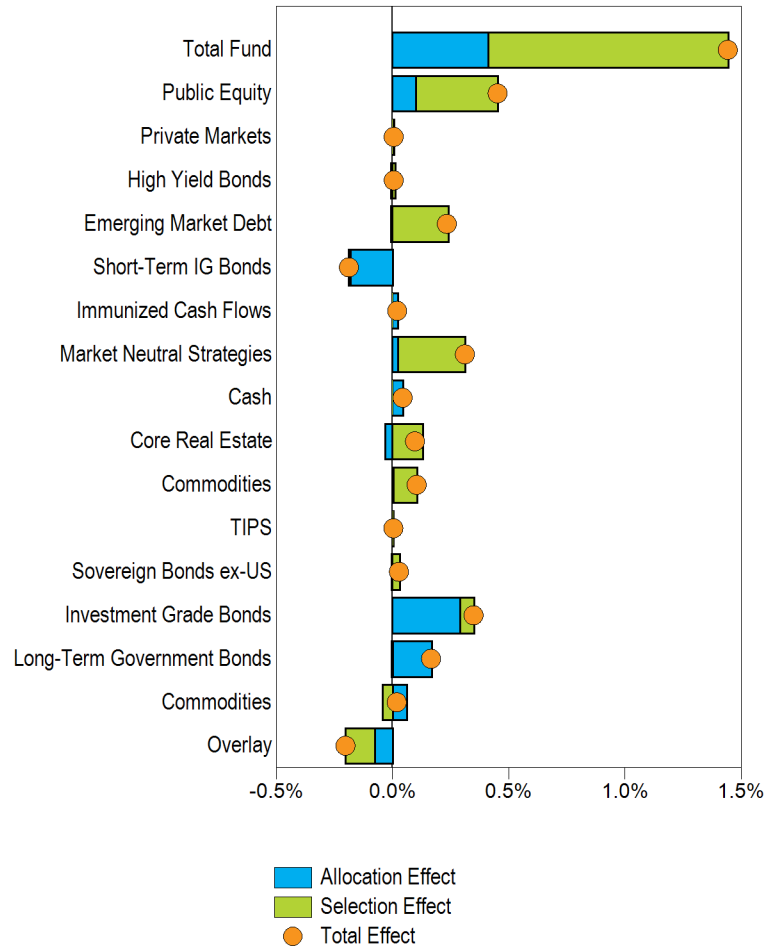
#### Attribution Summary

##### 1 Year Ending December 31, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	-19.8%	-18.3%	-1.4%	-0.7%	0.1%	-0.6%
Private Markets	-1.7%	-1.7%	0.0%	0.0%	0.1%	0.1%
High Yield Bonds	-9.8%	-11.2%	1.4%	0.0%	0.0%	0.0%
Emerging Market Debt	1.1%	-14.8%	15.9%	0.3%	0.0%	0.3%
Immunized Cash Flows	-4.6%	-4.6%	0.0%	0.0%	0.0%	0.0%
Market Neutral Strategies	23.6%	2.9%	20.7%	0.5%	0.0%	0.5%
Cash	1.4%	1.5%	0.0%	0.0%	0.7%	0.7%
Core Real Estate	27.3%	21.0%	6.3%	0.2%	-0.1%	0.2%
TIPS	-2.7%	-2.7%	0.1%	0.0%	0.0%	0.0%
Investment Grade Bonds	-13.2%	-11.9%	-1.2%	-0.1%	0.0%	-0.1%
Long-Term Government Bonds	-29.3%	-29.3%	-0.1%	0.0%	0.2%	0.2%
Commodities	--	--	--	-0.1%	0.2%	0.1%
Overlay	-32.9%	1.5%	-34.3%	-0.2%	0.1%	-0.1%
<b>Total</b>	<b>-9.1%</b>	<b>-10.4%</b>	<b>1.2%</b>	<b>0.1%</b>	<b>1.2%</b>	<b>1.3%</b>

Total Fund | As of December 31, 2022

### Attribution Effects 3 Years Ending December 31, 2022

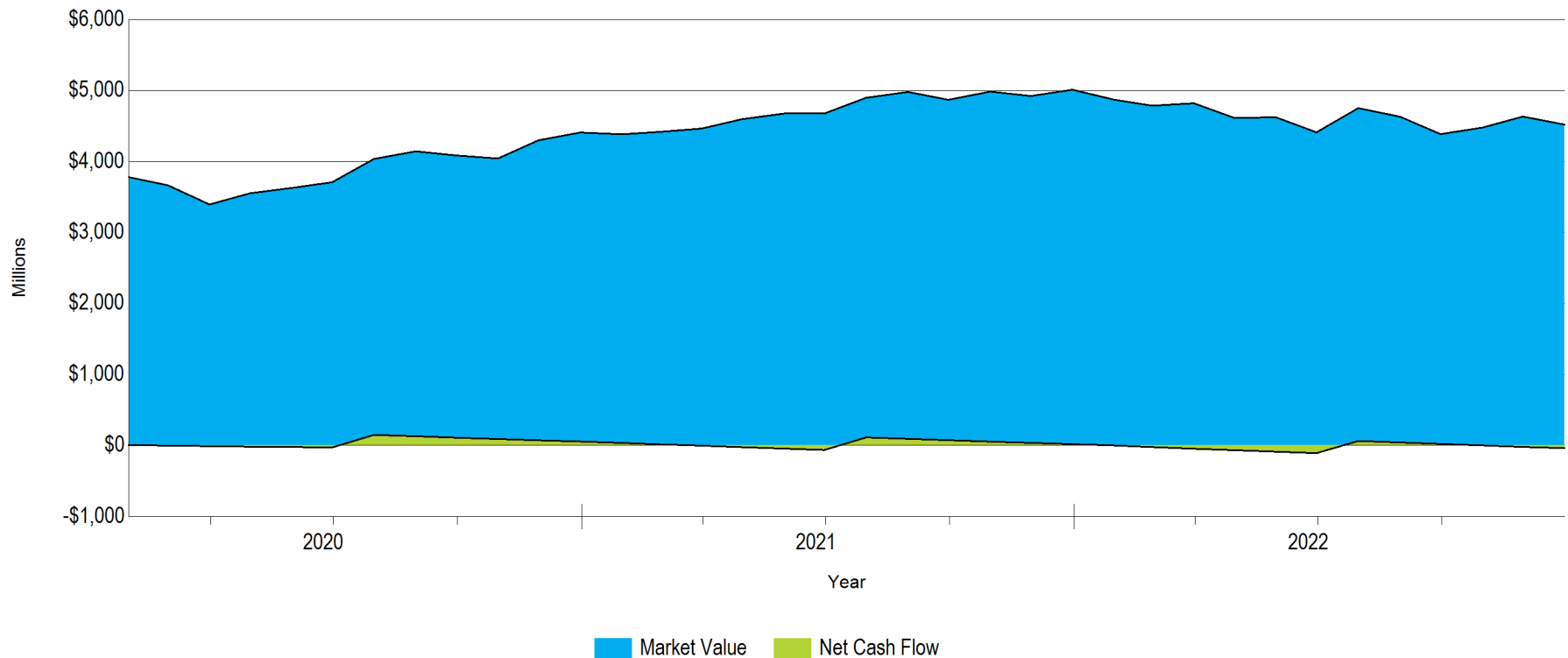


### Attribution Summary

3 Years Ending December 31, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	4.1%	3.5%	0.7%	0.4%	0.1%	0.5%
Private Markets	11.8%	11.8%	0.0%	0.0%	0.0%	0.0%
High Yield Bonds	1.9%	0.0%	1.8%	0.0%	0.0%	0.0%
Emerging Market Debt	4.4%	-5.7%	10.1%	0.2%	0.0%	0.2%
Short-Term IG Bonds	0.9%	1.1%	-0.3%	0.0%	-0.2%	-0.2%
Immunized Cash Flows	-0.6%	-0.6%	0.0%	0.0%	0.0%	0.0%
Market Neutral Strategies	13.7%	1.2%	12.5%	0.3%	0.0%	0.3%
Cash	0.7%	0.7%	-0.1%	0.0%	0.0%	0.0%
Core Real Estate	13.7%	10.9%	2.8%	0.1%	0.0%	0.1%
Commodities	-3.5%	7.8%	-11.2%	0.1%	0.0%	0.1%
TIPS	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%
Sovereign Bonds ex-US	0.3%	0.7%	-0.4%	0.0%	0.0%	0.0%
Investment Grade Bonds	-3.8%	-3.8%	0.0%	0.1%	0.3%	0.3%
Long-Term Government Bonds	-13.1%	-13.0%	-0.1%	0.0%	0.2%	0.2%
Commodities	10.2%	17.2%	-7.0%	0.0%	0.1%	0.0%
Overlay	-6.9%	0.6%	-7.5%	-0.1%	-0.1%	-0.2%
<b>Total</b>	<b>6.1%</b>	<b>4.6%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>0.4%</b>	<b>1.4%</b>

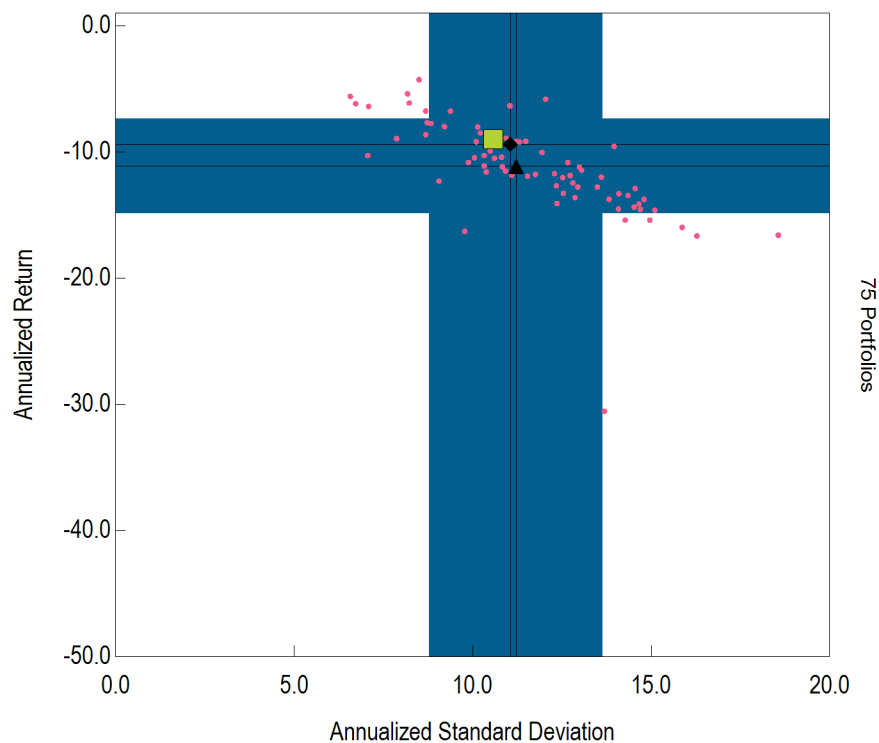
Market Value History  
3 Years Ending December 31, 2022



	Fourth Quarter	Year-To-Date	One Year	Three Years
Beginning Market Value	\$4,386,635,735	\$5,012,674,479	\$5,012,674,479	\$3,812,166,344
Net Cash Flow	-\$60,286,615	-\$57,900,339	-\$57,900,339	-\$39,648,788
Net Investment Change	\$194,710,244	-\$433,714,775	-\$433,714,775	\$748,541,809
Ending Market Value	\$4,521,059,364	\$4,521,059,364	\$4,521,059,364	\$4,521,059,364

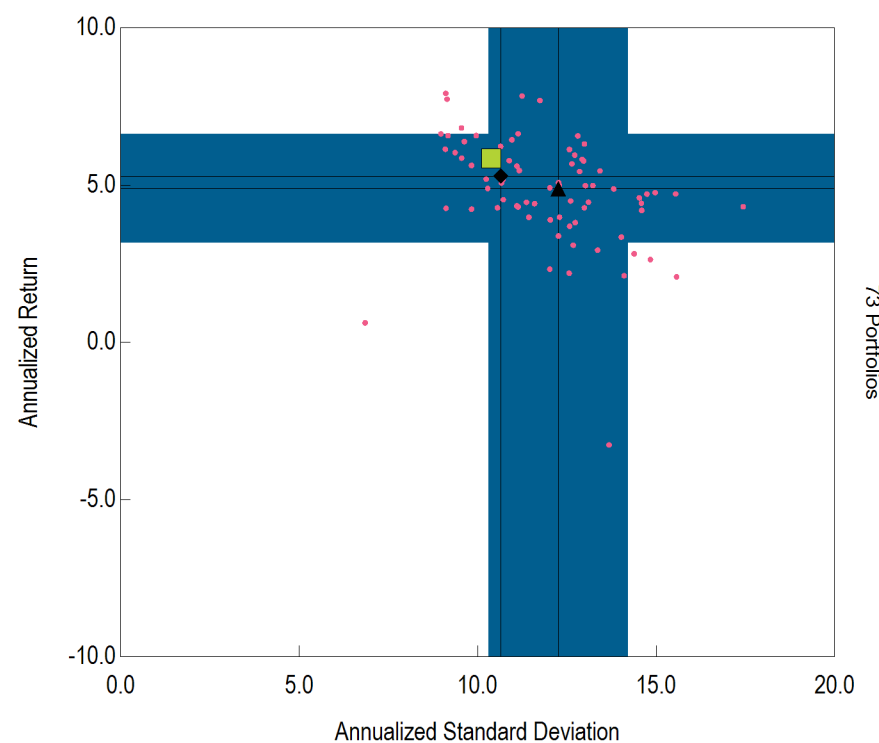


Annualized Return vs. Annualized Standard Deviation  
1 Year Ending December 31, 2022



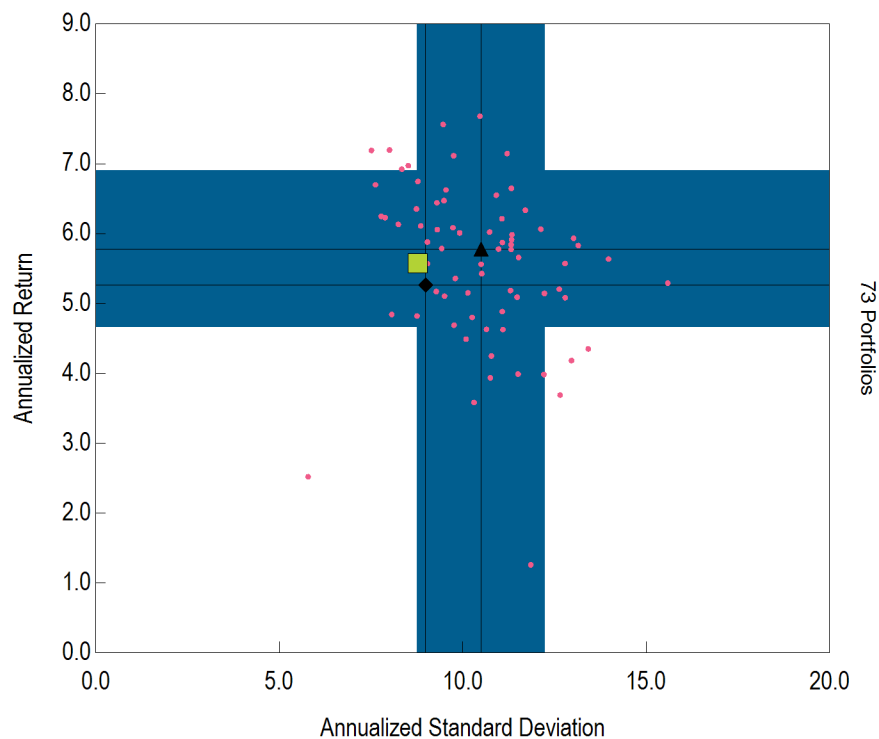
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending December 31, 2022



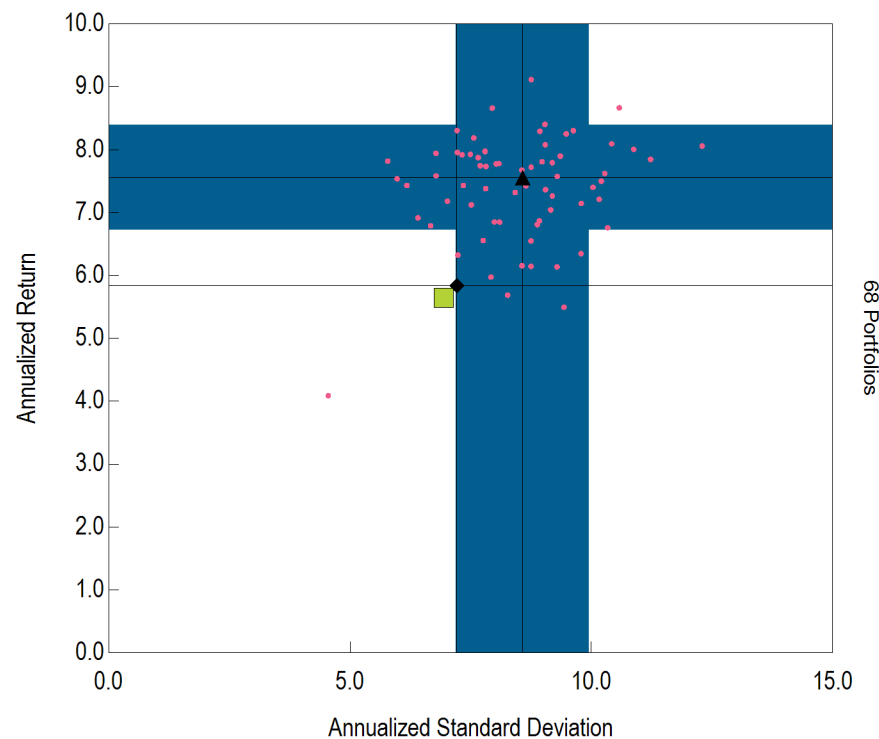
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending December 31, 2022



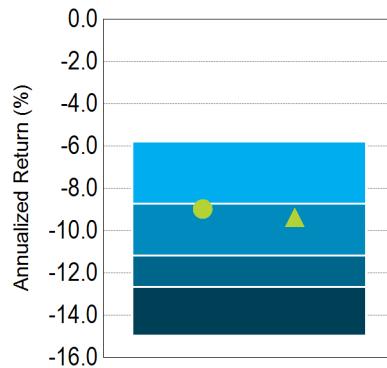
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation  
10 Years Ending December 31, 2022



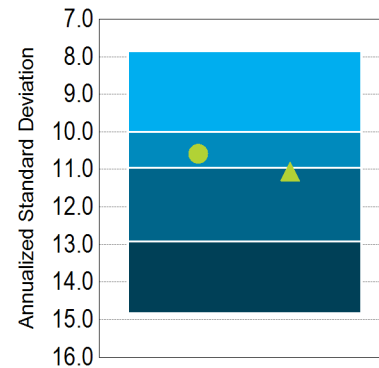
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

**Annualized Return (%)**  
vs. InvMetrics Public DB > \$1B Net



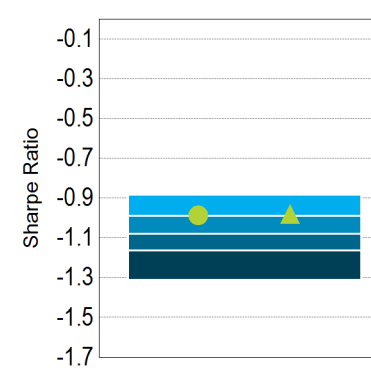
● Total Fund	
Value	-9.0
Rank	28
▲ Policy Benchmark	
Value	-9.4
Rank	35
Universe	
5th %tile	-5.8
25th %tile	-8.7
Median	-11.1
75th %tile	-12.7
95th %tile	-15.0

**Annualized Standard Deviation**  
vs. InvMetrics Public DB > \$1B Net



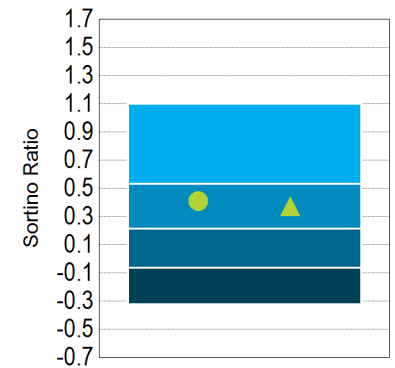
● Total Fund	
Value	10.6
Rank	41
▲ Policy Benchmark	
Value	11.1
Rank	52
Universe	
5th %tile	7.9
25th %tile	10.0
Median	10.9
75th %tile	12.9
95th %tile	14.8

**Sharpe Ratio**  
vs. InvMetrics Public DB > \$1B Net



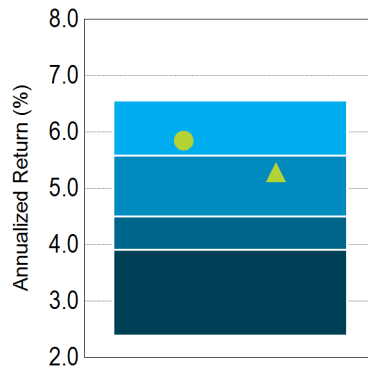
● Total Fund	
Value	-1.0
Rank	25
▲ Policy Benchmark	
Value	-1.0
Rank	24
Universe	
5th %tile	-0.9
25th %tile	-1.0
Median	-1.1
75th %tile	-1.2
95th %tile	-1.3

**Sortino Ratio**  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.4
Rank	35
▲ Policy Benchmark	
Value	0.4
Rank	43
Universe	
5th %tile	1.1
25th %tile	0.5
Median	0.2
75th %tile	-0.1
95th %tile	-0.3

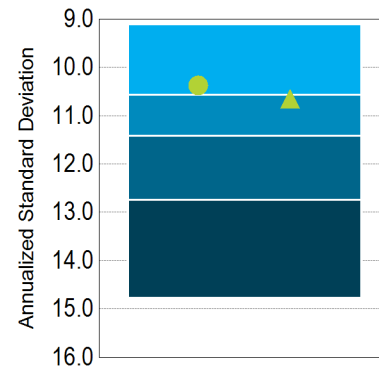
**Annualized Return (%)**  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	5.8
Rank	21
▲ Policy Benchmark	
Value	5.3
Rank	32

Universe	
5th %tile	6.6
25th %tile	5.6
Median	4.5
75th %tile	3.9
95th %tile	2.4

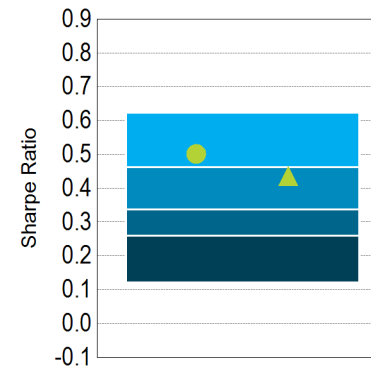
**Annualized Standard Deviation**  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	10.4
Rank	24
▲ Policy Benchmark	
Value	10.7
Rank	28

Universe	
5th %tile	9.1
25th %tile	10.5
Median	11.4
75th %tile	12.7
95th %tile	14.8

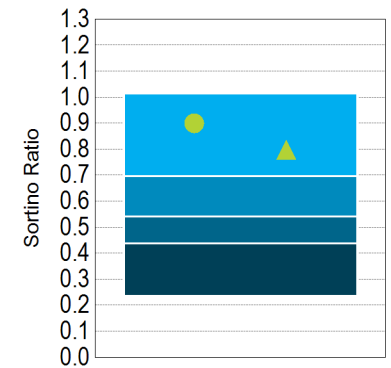
**Sharpe Ratio**  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.5
Rank	19
▲ Policy Benchmark	
Value	0.4
Rank	27

Universe	
5th %tile	0.6
25th %tile	0.5
Median	0.3
75th %tile	0.3
95th %tile	0.1

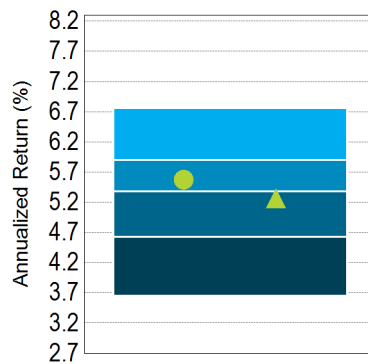
**Sortino Ratio**  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.9
Rank	12
▲ Policy Benchmark	
Value	0.8
Rank	18

Universe	
5th %tile	1.0
25th %tile	0.7
Median	0.5
75th %tile	0.4
95th %tile	0.2

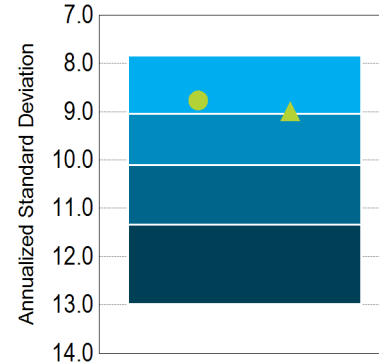
Annualized Return (%)  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	5.6
Rank	42
▲ Policy Benchmark	
Value	5.3
Rank	54

Universe	
5th %tile	6.8
25th %tile	5.9
Median	5.4
75th %tile	4.6
95th %tile	3.7

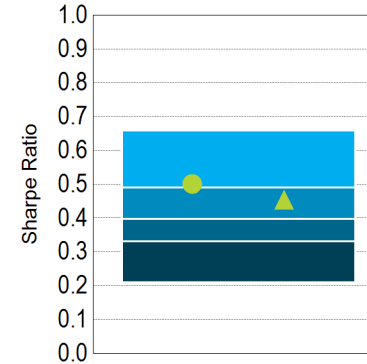
Annualized Standard Deviation  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	8.8
Rank	19
▲ Policy Benchmark	
Value	9.0
Rank	23

Universe	
5th %tile	7.8
25th %tile	9.0
Median	10.1
75th %tile	11.3
95th %tile	13.0

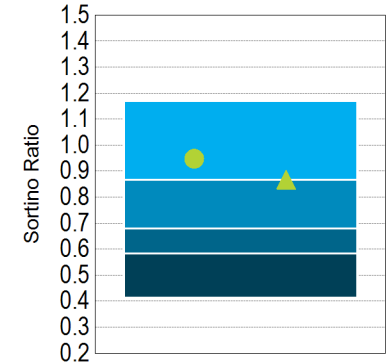
Sharpe Ratio  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.5
Rank	25
▲ Policy Benchmark	
Value	0.5
Rank	37

Universe	
5th %tile	0.7
25th %tile	0.5
Median	0.4
75th %tile	0.3
95th %tile	0.2

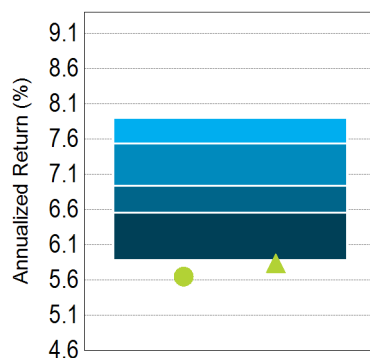
Sortino Ratio  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.9
Rank	16
▲ Policy Benchmark	
Value	0.9
Rank	26

Universe	
5th %tile	1.2
25th %tile	0.9
Median	0.7
75th %tile	0.6
95th %tile	0.4

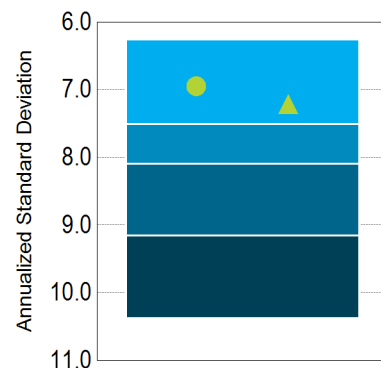
Annualized Return (%)  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	5.6
Rank	97
▲ Policy Benchmark	
Value	5.8
Rank	96

Universe	
5th %tile	7.9
25th %tile	7.5
Median	6.9
75th %tile	6.6
95th %tile	5.9

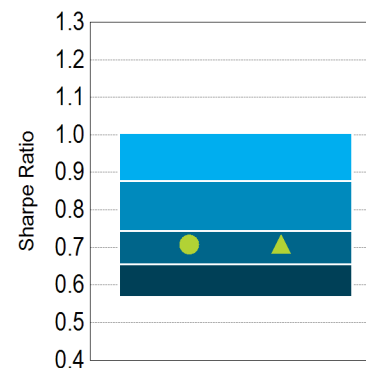
Annualized Standard Deviation  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	6.9
Rank	13
▲ Policy Benchmark	
Value	7.2
Rank	17

Universe	
5th %tile	6.3
25th %tile	7.5
Median	8.1
75th %tile	9.1
95th %tile	10.4

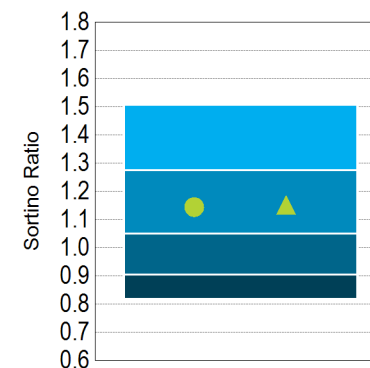
Sharpe Ratio  
vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.7
Rank	68
▲ Policy Benchmark	
Value	0.7
Rank	68

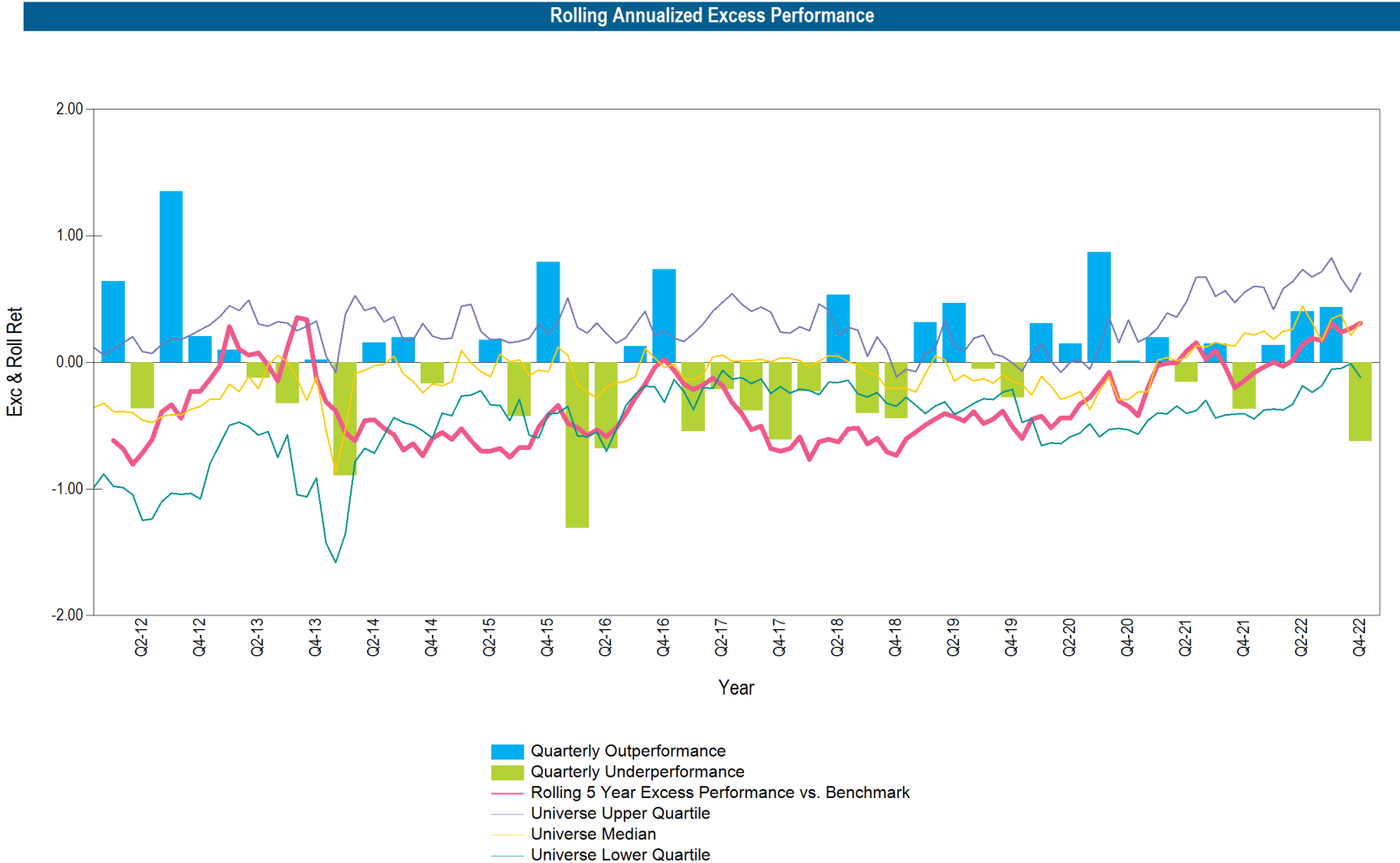
Universe	
5th %tile	1.0
25th %tile	0.9
Median	0.7
75th %tile	0.7
95th %tile	0.6

Sortino Ratio  
vs. InvMetrics Public DB > \$1B Net

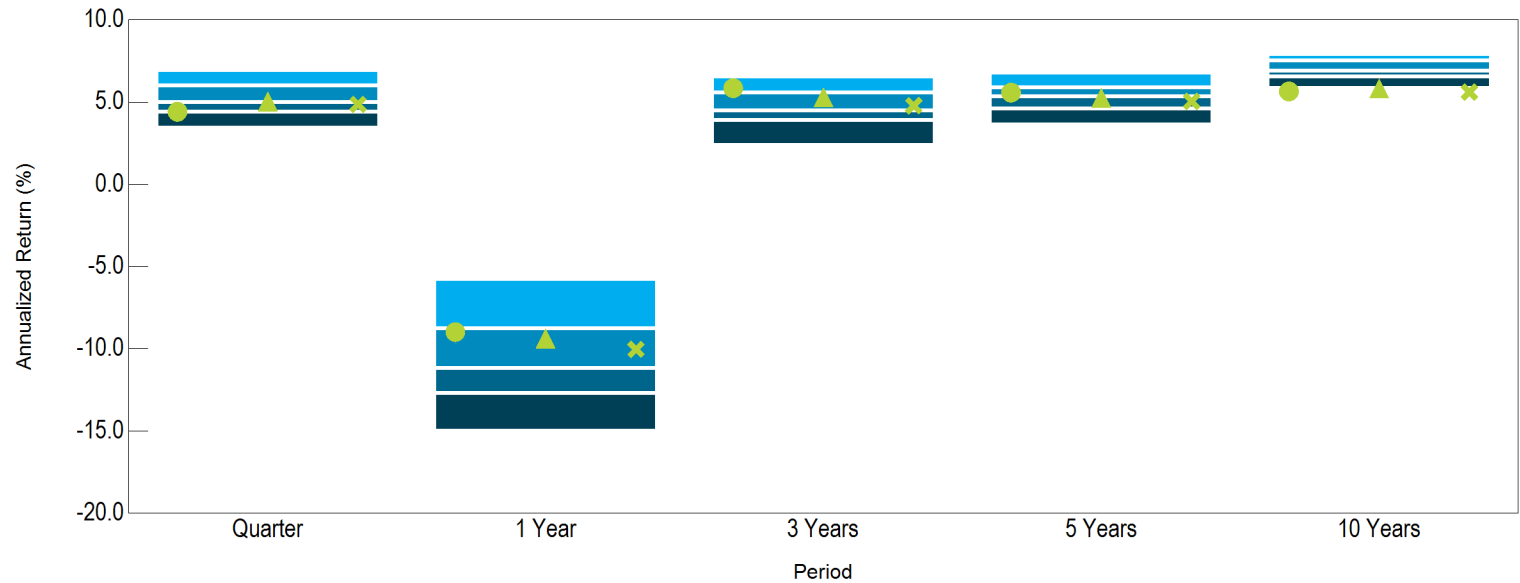


● Total Fund	
Value	1.1
Rank	43
▲ Policy Benchmark	
Value	1.2
Rank	42

Universe	
5th %tile	1.5
25th %tile	1.3
Median	1.1
75th %tile	0.9
95th %tile	0.8



#### InvMetrics Public DB > \$1B Net Return Comparison Ending December 31, 2022

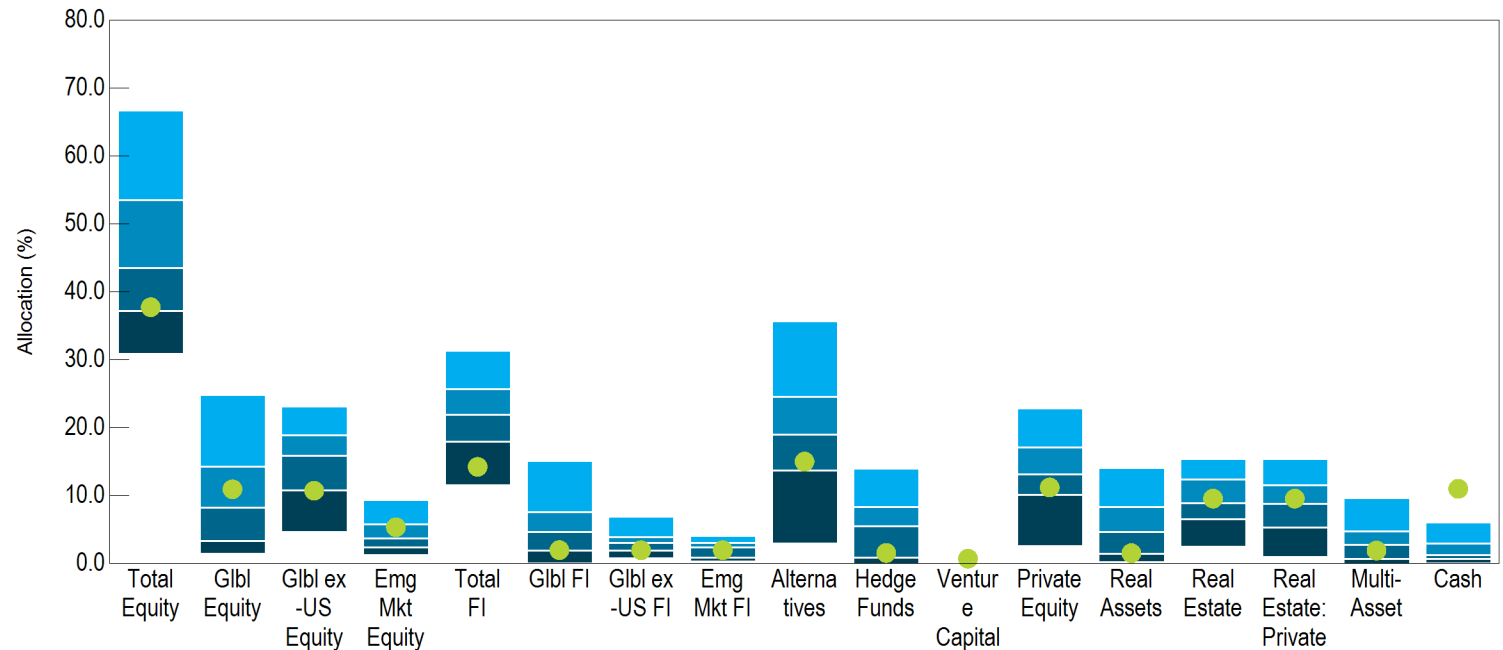


	Return (Rank)									
5th Percentile	6.9		-5.8		6.6		6.8		7.9	
25th Percentile	6.0		-8.7		5.6		5.9		7.5	
Median	5.0		-11.1		4.5		5.4		6.9	
75th Percentile	4.4		-12.7		3.9		4.6		6.6	
95th Percentile	3.5		-15.0		2.4		3.7		5.9	
# of Portfolios	59		59		57		57		54	
● Total Fund	4.4	(76)	-9.0	(28)	5.8	(21)	5.6	(42)	5.6	(97)
▲ Policy Benchmark	5.0	(50)	-9.4	(35)	5.3	(32)	5.3	(54)	5.8	(96)
✕ Investable Benchmark Portfolio	4.9	(55)	-10.0	(43)	4.8	(44)	5.0	(59)	5.6	(98)

<sup>1</sup> Fiscal Year begins July 1.



Total Plan Allocation vs. InvMetrics Public DB > \$1B Net  
As of December 31, 2022



	Allocation																	
5th Percentile	66.7	24.8	23.1	9.4	31.3	15.1	6.9	4.1	35.7	14.0	0.0	22.8	14.1	15.4	15.4	9.7	6.1	--
25th Percentile	53.6	14.4	18.9	5.9	25.8	7.7	4.0	3.1	24.6	8.4	0.0	17.2	8.4	12.5	11.6	4.8	3.0	--
Median	43.6	8.3	15.9	3.8	22.0	4.8	3.1	2.5	19.1	5.6	0.0	13.3	4.7	9.0	8.8	2.9	1.3	--
75th Percentile	37.2	3.4	10.9	2.4	18.1	2.0	2.0	1.0	13.8	1.0	0.0	10.2	1.5	6.6	5.4	0.8	0.7	--
95th Percentile	31.0	1.5	4.8	1.3	11.6	0.1	0.8	0.4	3.0	0.0	0.0	2.7	0.3	2.5	1.0	0.0	0.1	--
# of Portfolios	59	22	57	35	59	23	28	11	55	36	4	47	38	52	50	19	59	--
● Total Fund Rank	37.7	10.9	10.7	5.4	14.2	2.0	2.0	2.0	15.0	1.6	0.7	11.2	1.5	9.6	9.6	1.9	11.0	--
	74	36	76	29	88	77	78	56	66	70	1	71	76	46	42	63	1	

Major Benchmark Returns					
Periods Ending December 31, 2022					
Name	Q4-22	1 Yr	3 Yrs	5 Yrs	10 Yrs
US Equity					
Russell 3000	7.2	-19.2	7.1	8.8	12.1
S&P 500	7.6	-18.1	7.7	9.4	12.6
Russell 1000	7.2	-19.1	7.3	9.1	12.4
Russell 1000 Growth	2.2	-29.1	7.8	11.0	14.1
Russell 1000 Value	12.4	-7.5	6.0	6.7	10.3
Russell MidCap	9.2	-17.3	5.9	7.1	11.0
Russell 2000	6.2	-20.4	3.1	4.1	9.0
Russell 2000 Growth	4.1	-26.4	0.6	3.5	9.2
Russell 2000 Value	8.4	-14.5	4.7	4.1	8.5
International Equity					
MSCI ACWI	9.8	-18.4	4.0	5.2	8.0
MSCI World ex USA	16.2	-14.3	1.3	1.8	4.6
MSCI EAFE	17.3	-14.5	0.9	1.5	4.7
MSCI Emerging Markets	9.7	-20.1	-2.7	-1.4	1.4
Fixed Income					
91 Day T-Bills	0.8	1.5	0.6	1.2	0.7
Bloomberg US Aggregate TR	1.9	-13.0	-2.7	0.0	1.1
Bloomberg US Govt/Credit TR	1.8	-13.6	-2.6	0.2	1.2
Bloomberg US Municipal TR	4.1	-8.5	-0.8	1.3	2.1
Bloomberg US High Yield TR	4.2	-11.2	0.0	2.3	4.0
FTSE WGBI TR	3.8	-18.3	-5.7	-2.5	-1.2
FTSE WGBI ex US TR	6.5	-22.1	-8.0	-4.2	-2.3
Real Estate					
FTSE NAREIT All REIT	4.5	-25.1	-0.5	3.9	6.9
NCREIF Property Index	-3.5	5.5	8.1	7.5	8.8
Alternatives					
HFRI Fund of Funds Composite Index	1.7	-5.3	3.7	3.0	3.5
Inflation					
Consumer Price Index	0.0	6.5	4.9	3.8	2.6

Statistics Summary												
3 Years Ending December 31, 2022												
	% of Total MV	Anlzd Return	Anlzd Return	Anlzd Standard	Anlzd Standard	Anlzd Alpha	Anlzd Alpha	Tracking	Information	Information	Beta	Sharpe Ratio
			Rank	Deviation	Deviation	J	J Rank	Error	Ratio	Ratio Rank		
				Rank	Rank							
Total Fund	100.00%	5.84%	21	10.37%	24	0.69%	48	0.83%	0.67	15	0.97	0.50
Policy Benchmark	--	5.28%	32	10.65%	28	0.00%	86	0.00%	--	--	1.00	0.44
Growth	69.89%	6.96%	--	14.82%	--	0.37%	--	1.54%	0.07	--	0.96	0.43
Growth Benchmark	--	6.86%	--	15.42%	--	0.00%	--	0.00%	--	--	1.00	0.40
Public Equity	40.79%	4.13%	60	20.55%	86	0.64%	33	1.61%	0.41	6	1.01	0.17
Public Equity Benchmark	--	3.47%	78	20.34%	85	0.00%	70	0.00%	--	--	1.00	0.14
Global Equity	10.20%	4.36%	51	20.74%	48	--	--	--	--	--	--	0.18
MSCI All Country World Investable Market Net Index	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Equity	16.82%	7.84%	29	21.33%	30	1.24%	29	1.43%	0.76	4	0.98	0.34
MSCI USA IMI NR USD	--	6.75%	46	21.83%	36	0.00%	47	0.00%	--	--	1.00	0.28
International Equity	8.42%	1.91%	33	21.79%	65	0.85%	33	3.68%	0.24	22	1.04	0.06
MSCI World ex USA IMI NR USD	--	1.05%	52	20.70%	44	0.00%	53	0.00%	--	--	1.00	0.02
Emerging Markets Equity	5.35%	-0.21%	37	20.68%	31	1.59%	37	2.73%	0.59	15	0.99	-0.04
MSCI Emerging Markets IMI Net	--	-1.82%	53	20.65%	31	0.00%	53	0.00%	--	--	1.00	-0.12
Private Markets	25.14%	11.79%	--	8.28%	--	0.00%	--	0.01%	-0.05	--	1.00	1.35
Private Markets Benchmark	--	11.79%	--	8.28%	--	0.00%	--	0.00%	--	--	1.00	1.35
Private Markets ex Proxy	20.52%	11.20%	--	8.26%	--	10.56%	--	18.86%	-0.50	--	0.00	1.28
Custom PE Benchmark	--	20.60%	--	16.95%	--	0.00%	--	0.00%	--	--	1.00	1.18
Private Equity	8.47%	18.73%	66	11.87%	31	18.20%	19	20.77%	-0.09	60	-0.01	1.52
Custom PE Benchmark	--	20.60%	41	16.95%	80	0.00%	99	0.00%	--	--	1.00	1.18
Private Equity ex Russell 3000	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Custom Private Equity Benchmark	--	--	--	--	--	--	--	--	--	--	--	--
Private Equity ex Russell 3000	8.47%	18.65%	--	11.80%	--	18.11%	--	20.72%	-0.09	--	0.00	1.53
Custom PE Benchmark	--	20.60%	--	16.95%	--	0.00%	--	0.00%	--	--	1.00	1.18
Private Debt	4.35%	11.08%	1	7.34%	88	9.40%	1	9.58%	0.68	24	0.26	1.42
S&P Global Leveraged Loan + 2%	--	4.59%	2	8.93%	99	0.00%	86	0.00%	--	--	1.00	0.44
Growth Real Estate	4.62%	14.52%	1	7.62%	35	15.02%	1	10.57%	0.61	16	-0.15	1.82
NCREIF Property Index	--	8.07%	80	6.41%	23	0.00%	65	0.00%	--	--	1.00	1.16
Northern Trust Russell 3000	2.52%	7.08%	--	21.76%	--	0.02%	--	0.04%	0.40	--	1.00	0.30
Russell 3000	--	7.07%	--	21.79%	--	0.00%	--	0.00%	--	--	1.00	0.29

	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Emerging Market Debt	1.97%	4.39%	1	7.16%	2	6.04%	4	9.75%	1.03	8	0.36	0.52
50% JPM EMBI GD / 50% JPM GBI-EM	--	-5.66%	83	12.69%	35	0.00%	91	0.00%	--	--	1.00	-0.50
Low Beta	15.99%	3.37%	--	1.59%	--	2.77%	--	1.99%	1.53	--	0.15	1.71
Low Beta Benchmark	--	0.33%	--	1.43%	--	0.00%	--	0.00%	--	--	1.00	-0.22
Immunized Cash Flows	9.65%	-0.64%	99	2.20%	96	0.00%	71	0.12%	-0.04	99	1.00	-0.58
Immunized Cash Flow Benchmark	--	-0.63%	99	2.19%	96	0.00%	69	0.00%	--	--	1.00	-0.58
Market Neutral Strategies	3.21%	13.72%	1	7.56%	60	13.94%	1	7.62%	1.64	1	-1.43	1.73
Market Neutral Strategies Benchmark	--	1.25%	87	0.46%	1	0.00%	85	0.00%	--	--	1.00	1.31
Relative Value	3.21%	13.43%	1	9.02%	97	10.66%	1	7.36%	1.37	1	0.78	1.42
HFRI Relative Value (Total) Index	--	3.38%	32	6.98%	80	0.00%	81	0.00%	--	--	1.00	0.39
Cash	1.10%	0.66%	--	0.31%	--	-0.05%	--	0.10%	-0.58	--	0.84	0.06
ICE BofA 91 Days T-Bills TR	--	0.72%	--	0.35%	--	0.00%	--	0.00%	--	--	1.00	0.22
Other	13.86%	0.36%	--	3.71%	--	0.45%	--	1.13%	0.45	--	0.92	-0.08
Other Benchmark	--	-0.15%	--	3.87%	--	0.00%	--	0.00%	--	--	1.00	-0.21
Core Real Estate	6.25%	13.72%	--	8.46%	--	1.96%	--	2.40%	1.17	--	1.08	1.54
Core Real Estate Benchmark	--	10.91%	--	7.52%	--	0.00%	--	0.00%	--	--	1.00	1.37
TIPS	1.98%	2.52%	10	3.20%	1	0.07%	5	0.44%	0.07	9	0.98	0.58
Bloomberg US Treasury TIPS 0-5 Yr TR	--	2.49%	10	3.25%	1	0.00%	5	0.00%	--	--	1.00	0.57
Overlay	0.26%	-6.86%	--	54.26%	--	-7.50%	--	54.23%	-0.14	--	15.21	-0.14
91 Day T-Bills	--	0.64%	--	0.32%	--	0.00%	--	0.00%	--	--	1.00	0.00

### Benchmark History As of September 30, 2022

#### Total Fund

4/1/2022	Present	24% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 7% MSCI Emerging Markets / 25% Private Markets Benchmark / 5% NCREIF-ODCE NR USD / 2% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% Bloomberg US Corporate High Yield TR / 3% SOFR +1.5% / 13% Immunized Cash Flow Benchmark / 2% Bloomberg US Treasury TIPS 0-5 Yr TR / 4.5% Custom IG Bonds Benchmark / 1.5% Bloomberg US Treasury Long TR
3/1/2022	3/31/2022	25% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 9% MSCI Emerging Markets / 19% Private Markets Benchmark / 5% NCREIF-ODCE NR USD / 2% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% Bloomberg US Corporate High Yield TR / 3% SOFR +1.5% / 5% Immunized Cash Flow Benchmark / 2% Bloomberg Commodity Index TR USD / 2% Bloomberg US Treasury TIPS 0-5 Yr TR / 11% Custom IG Bonds Benchmark / 3% Bloomberg US Treasury Long TR
6/1/2021	2/28/2022	25% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 9% MSCI Emerging Markets / 19% Private Markets Benchmark / 5% NCREIF-ODCE NR USD / 2% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% Bloomberg US Corporate High Yield TR / 3% LIBOR 3-Month +1.5% / 5% Immunized Cash Flow Benchmark / 2% Bloomberg Commodity Index TR USD / 2% Bloomberg US Treasury TIPS 0-5 Yr TR / 11% Custom IG Bonds Benchmark / 3% Bloomberg US Treasury Long TR
4/1/2020	5/31/2021	23% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 21% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% Bloomberg US Corporate High Yield TR / 5% Immunized Cash Flow Benchmark / 3% Market Neutral Strategies / 5% NCREIF-ODCE / 2% Bloomberg US Govt Long TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR / 8% BBgBarc Global Aggregate TR
1/1/2020	3/31/2020	14% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 22% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 14% Bloomberg US Govt/Credit 1-3 Yr. TR / 5% Immunized Cash Flow Benchmark / 5% Market Neutral Strategies / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
12/1/2019	12/31/2019	14% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 22% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 15% Bloomberg US Govt/Credit 1-3 Yr. TR / 5% Immunized Cash Flow Benchmark / 5% Market Neutral Strategies / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
11/1/2019	11/30/2019	13% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 22% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 16% Bloomberg US Govt/Credit 1-3 Yr. TR / 5% Immunized Cash Flow Benchmark / 5% Market Neutral Strategies / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
9/1/2019	10/31/2019	13% MSCI USA IMI NR USD / 10% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 22% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 17% Bloomberg US Govt/Credit 1-3 Yr. TR / 5% Immunized Cash Flow Benchmark / 5% Market Neutral Strategies / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
10/1/2018	8/31/2019	13% MSCI USA IMI NR USD / 8% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 22% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 20% ICE BofA 91 Days T-Bills TR / 5% Immunized Cash Flow Benchmark / 7% Market Neutral Strategies / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
5/1/2018	9/30/2018	34% MSCI ACWI IMI (Net) / 8% San Jose Custom Total Private Equity Index / 22.4% Bloomberg Global Aggregate TR / 1.4% S&P Global Leveraged Loan / 1.4% JP Morgan EMBI Global Diversified / 1.4% JP Morgan GBI EM Global Diversified TR USD / 6% HFRI Macro (Total) Index / 2% DJ Brookfield Global Infrastructure Net TR USD / 6% Bloomberg Commodity Index TR USD / 8% S&P Global Leveraged Loan + 2% / 8% NCREIF Property Index / 1.4% ICE BofA Global High Yield TR

Low-Cost Passive Portfolio		
4/1/2022	Present	24% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 7% MSCI Emerging Markets / 13% Russell 3000 / 4% BBgBarc US Aggregate TR / 4% S&P Global Natural Resources / 2% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% BBgBarc US Corporate High Yield TR / 9% FTSE EPRA/NAREIT Global NR USD / 1.5% BBgBarc US Treasury Long TR / 13% BBgBarc Gov/Credit 1-3 Yr / 3% SOFR / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 4.5% Custom IG Bonds Benchmark
6/1/21	3/31/2022	25% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 9% MSCI Emerging Markets / 10% Russell 3000 / 3% BBgBarc US Aggregate TR / 3% S&P Global Natural Resources / 2% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% BBgBarc US Corporate High Yield TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% BBgBarc US Treasury Long TR / 5% BBgBarc Gov/Credit 1-3 Yr / 3% LIBOR 3-Month / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 11% Custom IG Bonds Benchmark / 2% Bloomberg Commodity Index TR USD
4/1/2020	5/31/2021	23% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 10% Russell 3000 / 15% BBgBarc US Aggregate TR / 2% BBgBarc US Corporate High Yield TR 8% / 3% FTSE EPRA/NAREIT Global NR USD / 2% BBgBarc US Govt Long TR / 5% ICE BofAML 91 Days T-Bills TR / 5% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 3% FTSE WGBI ex US TR
1/1/2020	3/31/2020	14% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 12% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% ICE BofAML 91 Days T-Bills TR / 5% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR/14% BBgBarc US Govt/Credit 1-3 Yr. TR
12/1/2019	12/31/2019	14% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 12% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% ICE BofAML 91 Days T-Bills TR / 5% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR/15% BBgBarc US Govt/Credit 1-3 Yr. TR
11/1/2019	11/30/2019	13% MSCI USA IMI NR USD / 11% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 12% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% ICE BofAML 91 Days T-Bills TR / 5% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR/16% BBgBarc US Govt/Credit 1-3 Yr. TR
9/1/2019	10/31/2019	13% MSCI USA IMI NR USD / 10% MSCI World ex USA IMI NR USD / 13% MSCI Emerging Market IMI Net / 12% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% ICE BofAML 91 Days T-Bills TR / 5% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR/17% BBgBarc US Govt/Credit 1-3 Yr. TR
10/1/2018	8/31/2019	13% MSCI USA IMI NR USD / 8% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 12% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 25% ICE BofAML 91 Days T-Bills TR / 7% 3-Month Libor + 1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 2% Bloomberg Commodity Index TR USD / 3% FTSE WGBI ex US TR
Liability Driven Benchmark Portfolio		
10/1/2018	Present	BBgBarc US Treasury Long TR

Growth		
4/1/2022	Present	59.15% Public Equity Benchmark / 35.21% Private Markets Benchmark / 2.82% 50% JPM EMBI GD / 50% JPM GBI-EM / 2.82% BBgBarc US Corporate High Yield TR
6/1/2021	3/31/2022	66.67% Public Equity Benchmark / 27.54% Private Markets Benchmark / 2.90% 50% JPM EMBI GD / 50% JPM GBI-EM / 2.90% BBgBarc US Corporate High Yield TR
4/1/2020	5/31/2021	65.71% Public Equity Benchmark / 27.14% Private Markets Benchmark / 4.29% 50% JPM EMBI GD / 50% JPM GBI-EM / 2.86% BBgBarc US Corporate High Yield TR
1/1/2020	3/31/2020	60.94% Public Equity Benchmark / 34.38% Private Markets Benchmark / 4.69% 50% JPM EMBI GD / 50% JPM GBI-EM
12/1/2019	12/31/2019	60.32% Public Equity Benchmark / 34.92% Private Markets Benchmark / 4.76% 50% JPM EMBI GD / 50% JPM GBI-EM
11/1/2019	11/30/2019	59.68% Public Equity Benchmark / 35.48% Private Markets Benchmark / 4.88% 50% JPM EMBI GD / 50% JPM GBI-EM
9/1/2019	10/31/2019	59.02% Public Equity Benchmark / 36.07% Private Markets Benchmark / 4.92% 50% JPM EMBI GD / 50% JPM GBI-EM
10/1/2018	8/31/2019	51.73% Public Equity Benchmark / 43.1% Private Markets Benchmark / 5.17% 50% JPM EMBI GD / 50% JPM GBI-EM
5/1/2018	9/30/2018	55.18% MSCI ACWI IMI Net USD / 12.99% S&P Global Leveraged Loan Index +2% / 12.99% Private Markets Benchmark / 6.49% NCREIF Property Index / 4.55% 50% JPM EMBI GD / 50% JPM GBI-EM / 4.55% 50% BAML Global HY / 50% S&P Global Leveraged Loan / 3.25% DJ Brookfield Global Infrastructure Net TR USD
7/31/2015	4/30/2018	51.92% MSCI ACWI IMI Net USD / 18.43% S&P Global Leveraged Loan Index +2% / 13.4% Private Markets Benchmark / 2.68% 50% JPM EMBI GD / 50% JPM GBI-EM / 2.68% 50% BAML Global HY / 50% S&P Global Leveraged Loan
Public Equity		
4/1/2022	Present	57.14% MSCI USA IMI NR USD / 26.19% MSCI World ex USA IMI NR USD / 16.67% MSCI Emerging Market IMI Net
6/1/2021	3/31/2022	54.35% MSCI USA IMI NR USD / 26.09% MSCI World ex USA IMI NR USD / 19.56% MSCI Emerging Market IMI Net
4/1/2020	5/31/2021	50% MSCI USA IMI NR USD / 23.91% MSCI World ex USA IMI NR USD / 26.09% MSCI Emerging Market IMI Net
1/1/2020	3/31/2020	35.9% MSCI USA IMI NR USD / 30.77% MSCI World ex USA IMI NR USD / 33.33% MSCI Emerging Market IMI Net
12/1/2019	12/31/2019	36.84% MSCI USA IMI NR USD / 28.95% MSCI World ex USA IMI NR USD / 34.21% MSCI Emerging Market IMI Net
11/1/2019	11/30/2019	35.13% MSCI USA IMI NR USD / 29.73% MSCI World ex USA IMI NR USD / 35.13% MSCI Emerging Market IMI Net
9/1/2019	10/31/2019	36.11% MSCI USA IMI NR USD / 27.78% MSCI World ex USA IMI NR USD / 36.11% MSCI Emerging Market IMI Net
10/1/2018	8/31/2019	41.93% MSCI USA IMI NR USD / 25.81% MSCI World ex USA IMI NR USD / 32.26% MSCI Emerging Market IMI Net
4/1/2008	9/30/2018	MSCI ACWI IMI (Net)
Global Equity		
3/1/2013	Present	MSCI ACWI IMI Index
U.S. Equity		
6/1/1995	Present	MSCI USA IMI NR USD

International Equity		
6/1/1995	Present	MSCI World ex USA IMI NR USD
Emerging Markets Equity		
9/1/2001	Present	MSCI Emerging Market IMI Net
Private Markets		
10/1/2018	Present	Private Markets
5/1/2018	9/30/2018	36.36% Cambridge Associates PE Composite BM / 36.36% S&P Global Leveraged Loan Index +2% / 18.18% NCREIF Property Index / 9.1% DJ Brookfield Global Infrastructure Net TR USD
7/1/2015	4/30/2018	19.61% Cambridge Associates PE Composite BM / 11.76% Russell 3000 / 43.14% S&P Global Leveraged Loan Index +2% / 13.73% NCREIF Property Index / 11.76% DJ Brookfield Global Infrastructure Net TR USD
Private Markets ex Russell 3000		
No Benchmark Selected		
Private Equity		
11/1/2016	Present	Custom Private Equity BM (100% Cambridge US PE)
10/1/2005	10/31/2016	Cambridge Associates US All PE (1 Qtr Lag)
Private Equity ex Russell 3000		
11/1/2016	9/30/2021	Custom Private Equity BM
10/1/2005	10/31/2016	Cambridge Associates US All PE (1 Qtr Lag)
Northern Trust Russell 3000		
4/1/2014	Present	Russell 3000
Private Debt		
10/1/2015	Present	S&P Global Leveraged Loan + 2%
Private Real Estate		
7/1/2015	Present	NCREIF ODCE Equal Weighted
Private Real Assets		
No Benchmark Selected		



High Yield Bonds		
6/1/2020	Present	BBgBarc US Corporate High Yield TR
Emerging Market Debt		
1/1/2013	Present	50% JP Morgan GBI EM Global Diversified TR USD / 50% JP Morgan EMBI Global Diversified
Low Beta		
4/1/2022	Present	81.3% Immunized Cash Flow Benchmark / 18.7% SOFR +1.5%
3/1/2022	3/31/2022	62.5% Immunized Cash Flow Benchmark / 37.5% SOFR +1.5%
6/1/2021	2/28/2022	62.5% Immunized Cash Flow Benchmark / 37.5% LIBOR 3-Month +1.5%
4/1/2020	5/31/2021	62.5% ICE BofA 91 Days T-Bills TR / 37.5% Market Neutral Strategies
1/1/2020	3/31/2020	35.71% ICE BofA 91 Days T-Bills TR / 58.33% BBgBarc US Govt/Credit 1-3 Yr. TR / 35.71% Market Neutral Strategies
12/1/2019	12/31/2019	20% ICE BofA 91 Days T-Bills TR / 60% BBgBarc US Govt/Credit 1-3 Yr. TR / 20% Market Neutral Strategies
11/1/2019	11/30/2019	19.23% ICE BofA 91 Days T-Bills TR / 61.54% BBgBarc US Govt/Credit 1-3 Yr. TR / 19.23% Market Neutral Strategies
9/1/2019	10/31/2019	18.52% ICE BofA 91 Days T-Bills TR / 62.96% BBgBarc US Govt/Credit 1-3 Yr. TR / 18.52% Market Neutral Strategies
10/1/2018	8/31/2019	62.5% ICE BofA 91 Days T-Bills TR / 15.62% Immunized Cash Flow Benchmark / 21.88% Market Neutral Strategies
5/1/2018	9/30/2018	HFRI Macro (Total) Index
7/1/2015	4/30/2018	85.71% HFRI Macro (Total) Index / 14.29% ICE BofA 91 Days T-Bills TR
Immunized Cash Flows		
10/1/2018	Present	Immunized Cash Flows
Market Neutral Strategies		
3/1/2022	Present	SOFR +1.5%
6/1/2021	2/28/2022	LIBOR 3-Month +1.5%
10/1/2018	5/31/2021	ICE BofA 91 Days T-Bills TR
11/1/2012	9/30/2018	HFRI Macro (Total) Index
Macro		
7/1/2015	Present	HFRI Macro (Total) Index
Relative Value		
7/1/2015	Present	HFRI Relative Value (Total) Index
Cash		
7/1/2002	Present	ICE BofA 91 Days T-Bills TR

Other		
4/1/2022	Present	38.46% NCREIF ODCE Value Weighted (Net) (1 Qtr Lag) / 34.62% Custom IG Bonds Benchmark / 11.54% BBgBarc US Treasury Long TR / 15.38% BBgBarc US Treasury TIPS 0-5 Yr TR
6/1/2021	3/31/2022	21.74% NCREIF ODCE Value Weighted (Net) (1 Qtr Lag) / 47.83% Custom IG Bonds Benchmark / 13.04% BBgBarc US Treasury Long TR / 8.70% BBgBarc US Treasury TIPS 0-5 Yr TR / 8.70% Bloomberg Commodity Index TR USD
4/1/2020	5/31/2021	22.73% NCREIF ODCE Equal Weighted / 54.55% Custom IG Bonds Benchmark / 13.64% BBgBarc US Govt Long TR / 9.09% BBgBarc US Treasury TIPS 0-5 Yr TR
10/1/2018	3/31/2020	41.67% NCREIF ODCE Equal Weighted / 16.67% Bloomberg Commodity Index TR USD / 25% FTSE WGBI ex US TR / 16.66% BBgBarc US Treasury TIPS 0-5 Yr TR
5/1/2018	9/30/2018	69.14% BBgBarc Global Aggregate TR / 18.52% Bloomberg Commodity Index TR USD / 12.34% NCREIF Property Index
7/1/2015	4/30/2018	38.44% BBgBarc Global Aggregate TR / 30.03% 60% MSCI World & 40% Citigroup WGBI / 21.02% Bloomberg Commodity Index TR USD / 10.51% NCREIF Property Index
Core Real Estate		
6/1/2021	Present	NCREIF ODCE Value Weighted (Net) (1 Qtr Lag)
9/1/2011	5/31/2021	NCREIF ODCE Equal Weighted (Net)
TIPS		
10/1/2018	Present	BBgBarc US Treasury TIPS 0-5 Yr TR
Sovereign Bonds ex-US		
10/1/2018	Present	FTSE WGBI ex US TR
Investment Grade Bonds		
5/1/2020	Present	Custom IG Bonds Benchmark (25% BBgBarc 1-3 Year Government/Credit, 56% US Aggregate, 19% US Securitized MBS/ABS/CMBS)
Long Term Government Bonds		
6/1/2020	Present	Long Term Government Bonds
Overlay		
	Present	91 Day T-Bills

## **Glossary and Notes**

**Credit Risk:** Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

**Duration:** Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

**Information Ratio:** This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

**Jensen's Alpha:** A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk.  $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} \times (\text{market return} - \text{Risk Free Rate})]$ .

**Market Capitalization:** For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

**Market Weighted:** Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

**Maturity:** The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

**Prepayment Risk:** The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

**Price-Book Value (P/B) Ratio:** The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

**Price-Earnings (P/E) Ratio:** A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

**Quality Rating:** The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

**Sharpe Ratio:** A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

**STIF Account:** Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

**Standard Deviation:** A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

**Style:** The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

**Tracking Error:** A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

**Yield to Maturity:** The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

**Yield to Worst:** The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

**NCREIF Property Index (NPI):** Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

**NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE):** Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.

The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.