

City of San Jose Police and Fire Department Retirement Plan

As of September 30, 2022

Quarterly Review

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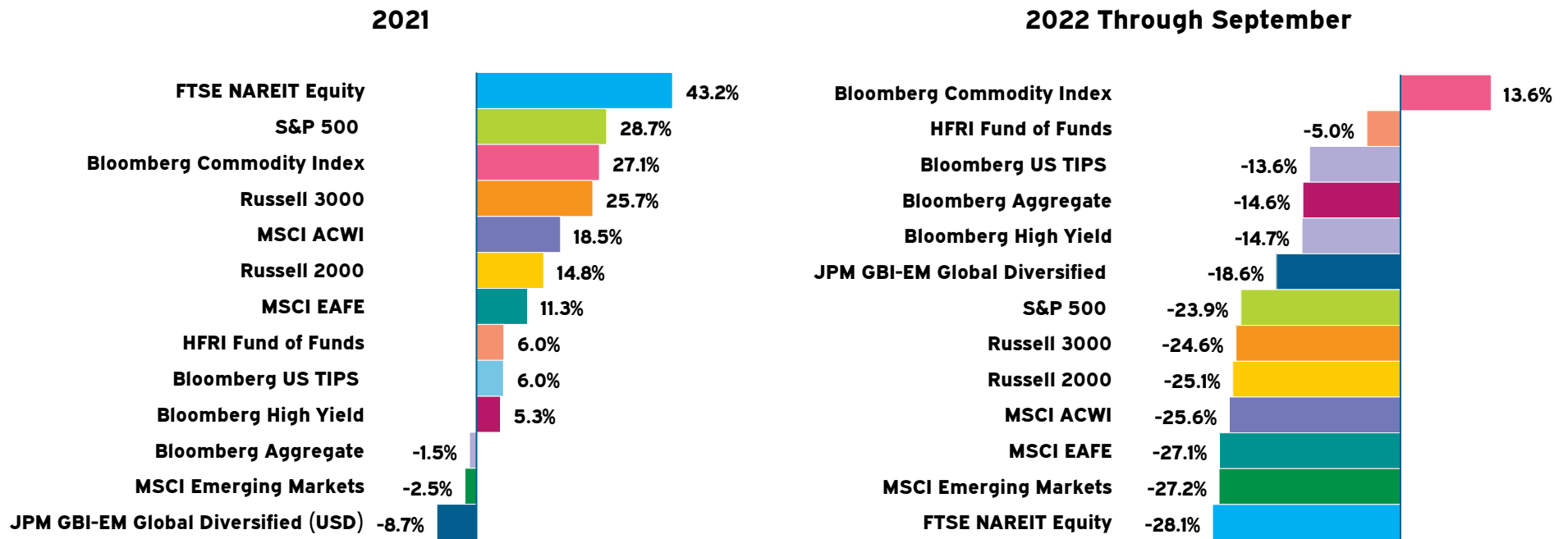
Economic and Market Update

Data as of September 30, 2022

Commentary

- After a strong July, global markets sold off in August and September, leading to quarterly declines as slower growth and higher inflation weighed on sentiment.
- The Federal Reserve maintained its aggressive tightening campaign with future hikes expected as US inflation continues to surprise to the upside and labor markets remain tight.
 - In Europe, inflation hit a multi-decade high on energy prices. In the UK, Liz Truss became the new prime minister with her government quickly announcing a fiscal package in September. The proposal was poorly received by markets, as it undermined efforts of the central bank to lower inflation.
 - Equity markets significantly declined for the month leading to quarterly losses with international markets declining the most. The war in Ukraine has elevated prices in Europe, while tight COVID-19 policies, slowing growth, and property market issues have weighed on China. Continued US dollar strength has been a further headwind.
 - For the quarter, in a reversal of the prior trend, growth outpaced value across the capitalization spectrum but continued to trail year-to-date.
 - Interest rates rose significantly across the US yield curve for the month and quarter with the curve remaining inverted (ten-year yield minus the two-year yield) by 44 basis points. This is by far the worst start to a calendar year for bond investors.
- Persistently high inflation and the likely increased pace of the policy response, the war in Ukraine, lingering COVID-19 issues, and lockdowns in China will all have considerable consequences for the global economy.

Index Returns¹



→ Except for emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes appreciated in 2021.

→ After a brief rally in July most asset classes declined significantly in August and September as it became clear further policy tightening would be taken to try to control inflation. Except for commodities, all major assets classes have experienced significant declines year-to-date.

¹ Source: Bloomberg and FactSet. Data is as of September 30, 2022.

Domestic Equity Returns¹

Domestic Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-9.2	-4.9	-23.9	-15.5	8.2	9.2	11.7
Russell 3000	-9.3	-4.5	-24.6	-17.6	7.7	8.6	11.4
Russell 1000	-9.3	-4.6	-24.6	-17.2	7.9	9.0	11.6
Russell 1000 Growth	-9.7	-3.6	-30.7	-22.6	10.7	12.2	13.7
Russell 1000 Value	-8.8	-5.6	-17.8	-11.4	4.4	5.3	9.2
Russell MidCap	-9.3	-3.4	-24.3	-19.4	5.2	6.5	10.3
Russell MidCap Growth	-8.5	-0.7	-31.5	-29.5	4.3	7.6	10.8
Russell MidCap Value	-9.7	-4.9	-20.4	-13.6	4.5	4.7	9.4
Russell 2000	-9.6	-2.2	-25.1	-23.5	4.3	3.6	8.5
Russell 2000 Growth	-9.0	0.2	-29.3	-29.3	2.9	3.6	8.8
Russell 2000 Value	-10.2	-4.6	-21.1	-17.7	4.7	2.9	7.9

US Equities: Russell 3000 Index fell 9.3% for September and 4.5% for the quarter.

- US stocks fell sharply during September and finished down for the third quarter.
- Each of the 11 sectors declined in September with six sectors (Real Estate, Communication Services, Technology, Utilities, Materials, and Industrials) falling by 10% or more. Health Care stocks fared best and declined 3.1%. For the quarter all sectors were down except for consumer discretionary and energy.
- For the second straight month, value stocks outperformed growth stocks in the large cap segment of the market, while the reverse was true in the small cap segment. The underperformance of technology stocks, which account for 43% of the large cap growth market, drove this dynamic.

¹ Source: Bloomberg. Data is as of September 30, 2022.

Foreign Equity Returns¹

Foreign Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-10.0	-9.9	-26.5	-25.2	-1.5	-0.8	3.0
MSCI EAFE	-9.4	-9.4	-27.1	-25.1	-1.8	-0.8	3.7
MSCI EAFE (Local Currency)	-6.2	-3.6	-14.5	-11.1	2.5	2.8	7.4
MSCI EAFE Small Cap	-11.5	-9.8	-32.1	-32.1	-2.2	-1.8	5.3
MSCI Emerging Markets	-11.7	-11.6	-27.2	-28.1	-2.1	-1.8	1.0
MSCI Emerging Markets (Local Currency)	-9.4	-8.2	-20.8	-21.5	1.1	1.1	4.5
MSCI China	-14.6	-22.5	-31.2	-35.4	-7.2	-5.5	2.4

International equities (MSCI EAFE) fell 9.4%, while emerging markets (MSCI EM) returned -11.7% in September leading to quarterly declines of similar amounts.

- Non-US developed market stocks again broadly trailed the US for the month, leading to the steepest declines year-to-date. High inflation in Europe, particularly related to gas and electricity, the ongoing war in Ukraine, and relatively slower growth globally continue to weigh on sentiment.
- Emerging market equities were deep in the red for the month, driven by China's (-14.6%) on-going property market issues and strict COVID-19 policies. The upcoming National Communist Party Congress in China in October is highly anticipated.
- The strength of the US dollar continued as a headwind to international equities for the month and year-to-date, both in developed and emerging markets.

¹ Source: Bloomberg. Data is as of September 30, 2022.

Fixed Income Returns¹

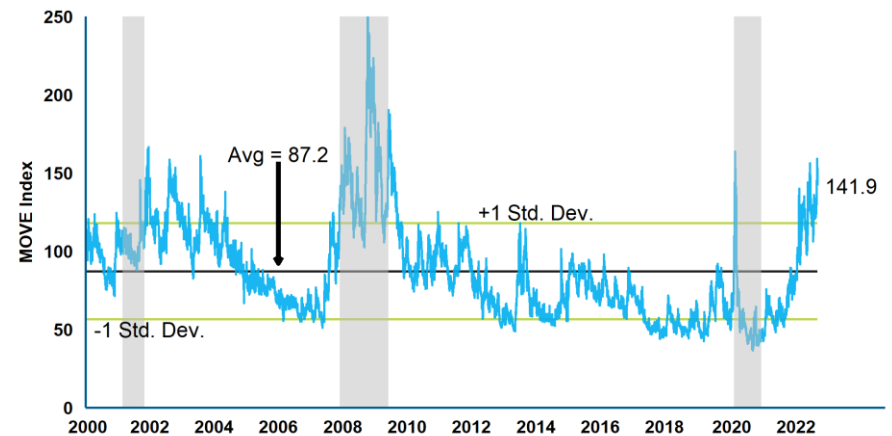
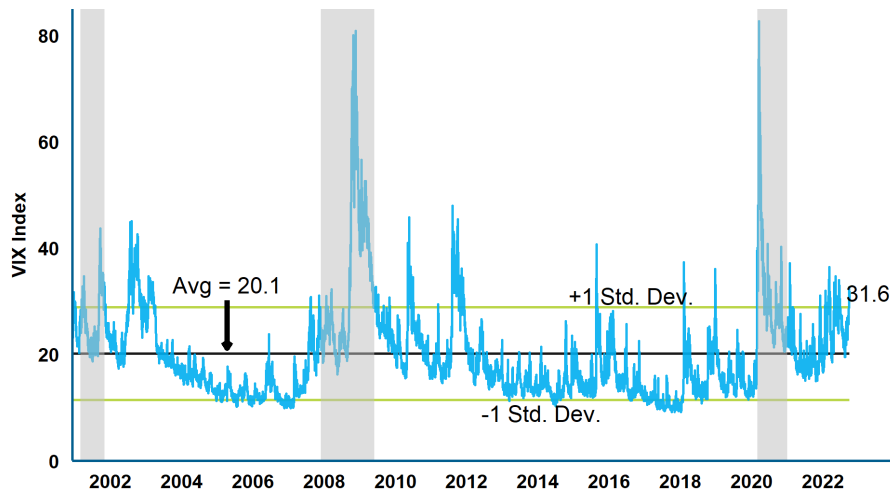
Fixed Income	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-4.3	-4.5	-14.9	-14.9	-3.1	-0.2	1.2	5.2	6.2
Bloomberg Aggregate	-4.3	-4.8	-14.6	-14.6	-3.3	-0.3	0.9	4.8	6.4
Bloomberg US TIPS	-6.6	-5.1	-13.6	-11.6	0.8	1.9	1.0	4.3	6.9
Bloomberg High Yield	-4.0	-0.6	-14.7	-14.1	-0.5	1.6	3.9	9.7	4.6
JPM GBI-EM Global Diversified (USD)	-4.9	-4.7	-18.6	-20.6	-7.1	-3.9	-2.4	7.6	4.8

Fixed Income: The Bloomberg Universal declined 4.3% in September and 4.5% for the quarter.

- A sharp rise in bond yields driven by central banks confirming commitments to fight inflation weighed on fixed income in September leading to declines for the quarter as well. Year-to-date the US bond market is off by far to its worst calendar year start on record.
- TIPS declined the most for the month and quarter as investors' confidence grew that tighter monetary policy would ultimately get inflation under control.
- Riskier US bonds declined the least with the high yield index falling slightly less than the broad US bond market (-4.0% versus -4.3%). Emerging market bonds finished down close to 5% for the month with significant declines year-to-date.

¹ Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of September 30, 2022.

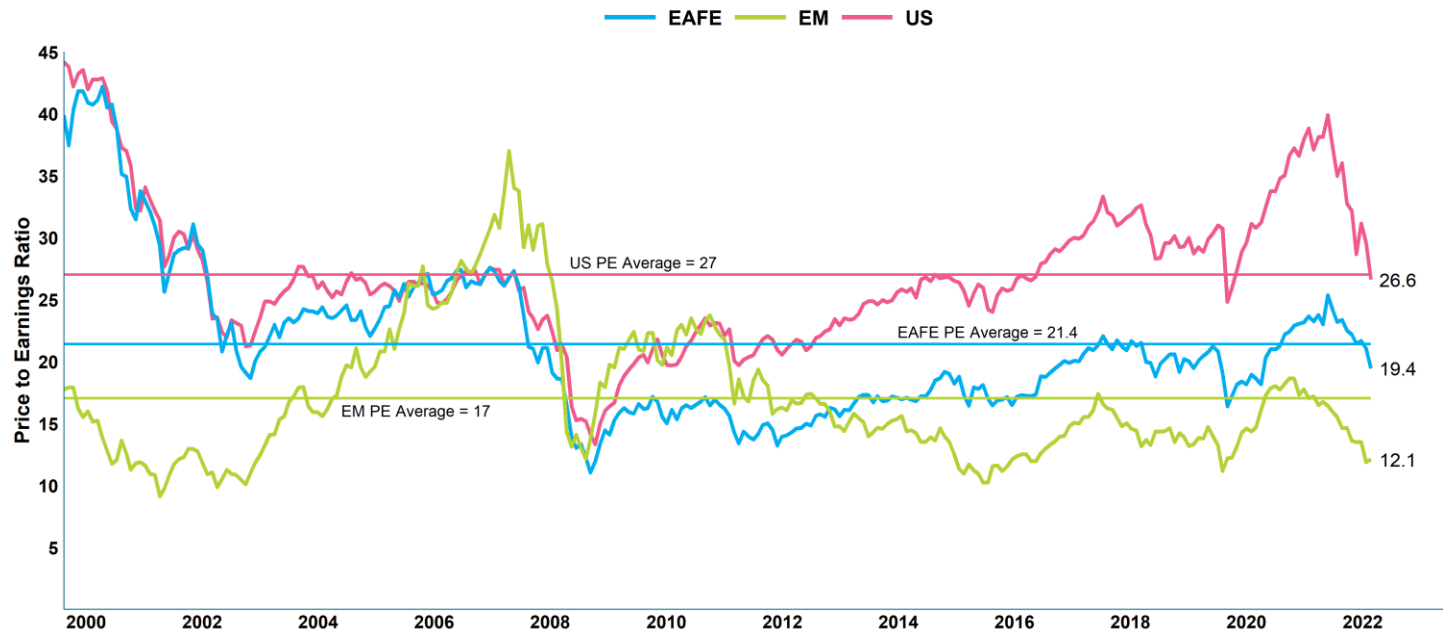
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) and fixed income (MOVE) rose in September and finished higher overall for the quarter as the Federal Reserve and other central banks made it clear that they were committed to aggressively tightening monetary policy to fight high inflation.
- Fixed income volatility remains particularly high due to the uncertain path of short-term interest rates given stubbornly high inflation. Issues related to the UK's announcement to offer tax breaks despite the central bank's efforts to fight inflation also contributed to volatility in fixed income markets.

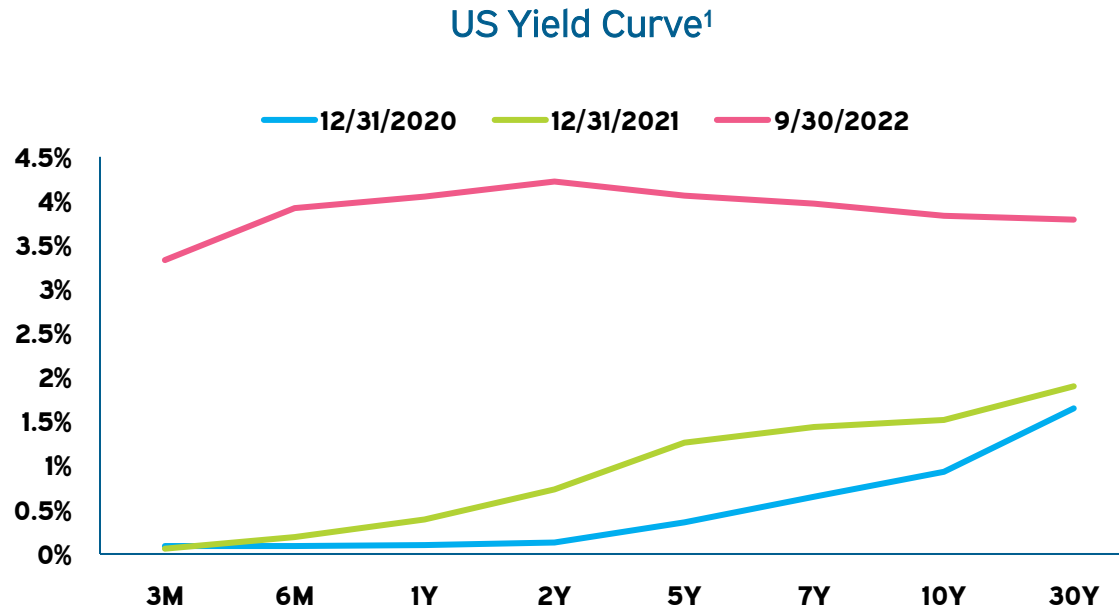
¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of September 2022. The average line indicated is the average of the VIX and MOVE values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

Equity Cyclically Adjusted P/E Ratios¹



- September price declines brought US equity price-to-earnings ratios slightly below the long-term (21st Century) average.
- International developed market valuations remain below the US and are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

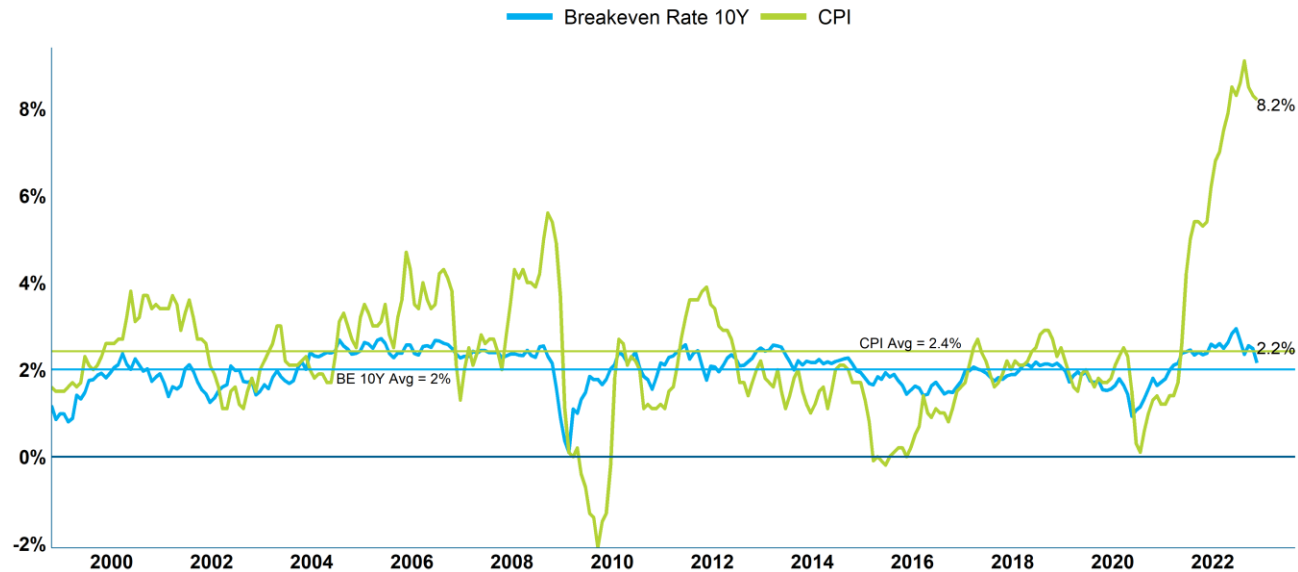
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of September 30, 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.



- Rates across the yield curve remain far higher than at the start of the year.
- In September, rates rose across the yield curve, finishing the quarter significantly higher. Yields on two-year Treasuries increased 0.79% just in the month of September bring the quarterly increase to 1.32%, while ten-year Treasuries rose 0.64% for the month and 0.82% for the quarter.
- The Fed remains strongly committed to fighting inflation, as it increased rates another 75 basis points to a range of 3.0% and 3.25%. This was the fifth increase this year and the third consecutive increase of this amount.
- The yield spread between two-year and ten-year Treasuries remained negative, finishing September at -0.44%. Inversions in the yield curve have historically often preceded recessions.

¹ Source: Bloomberg. Data is as of September 30, 2022.

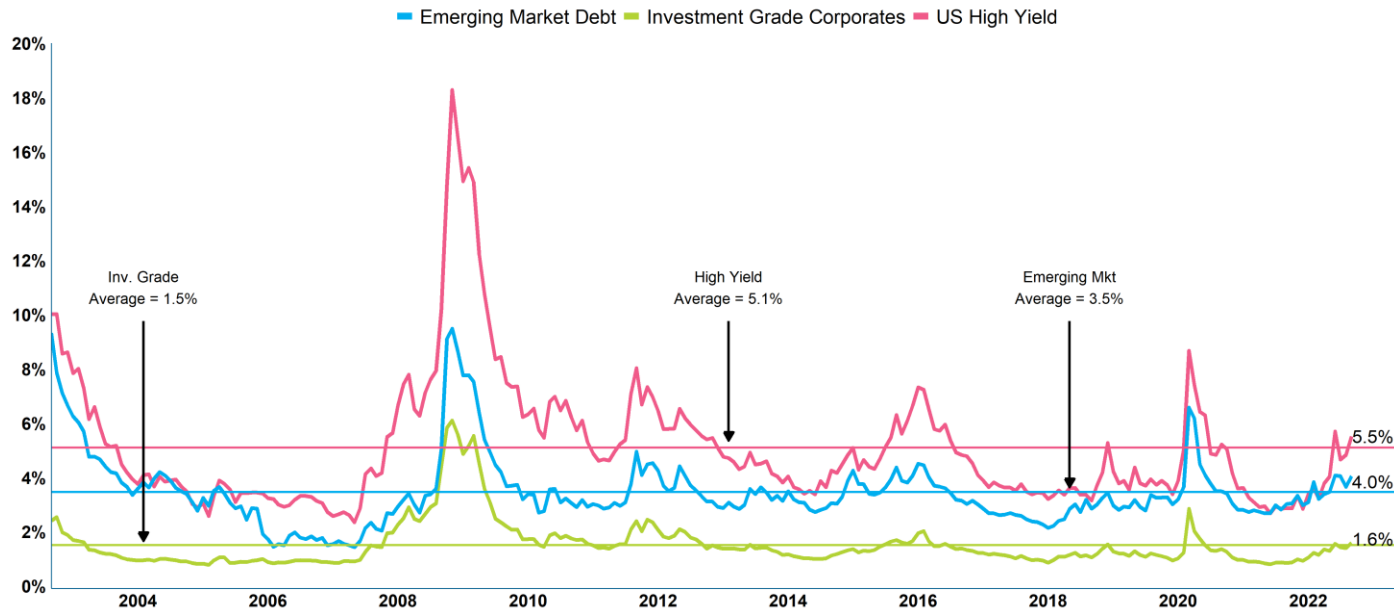
Ten-Year Breakeven Inflation and CPI¹



- Inflation expectations (breakevens) declined for the month and finished the quarter slightly below the long-run average on the belief that tighter monetary policy would lower long-run inflation.
- Trailing twelve-month CPI declined in September (8.2% versus 8.3%) but surprised markets by coming in above expectations.
- Over the last year rising prices for energy (particularly oil), food, housing, and for new and used cars remain key drivers of inflation.

¹ Source: Bloomberg. Data is as of September 30, 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 Bonds¹



- Credit spreads (the spread above a comparable maturity Treasury) widened in September, finishing the quarter above long-term averages. Fears related to the impact of tighter monetary policy on economic growth was a key driver of wider spreads.
- In the US, spreads for high yield increased sharply (5.5% versus 4.8%), with investment grade spreads rising more modestly (1.6% versus 1.4%). Emerging market spreads also increased (4.0% versus 3.6%).

¹ Sources: Bloomberg. Data is as of September 30, 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 Economic Outlook

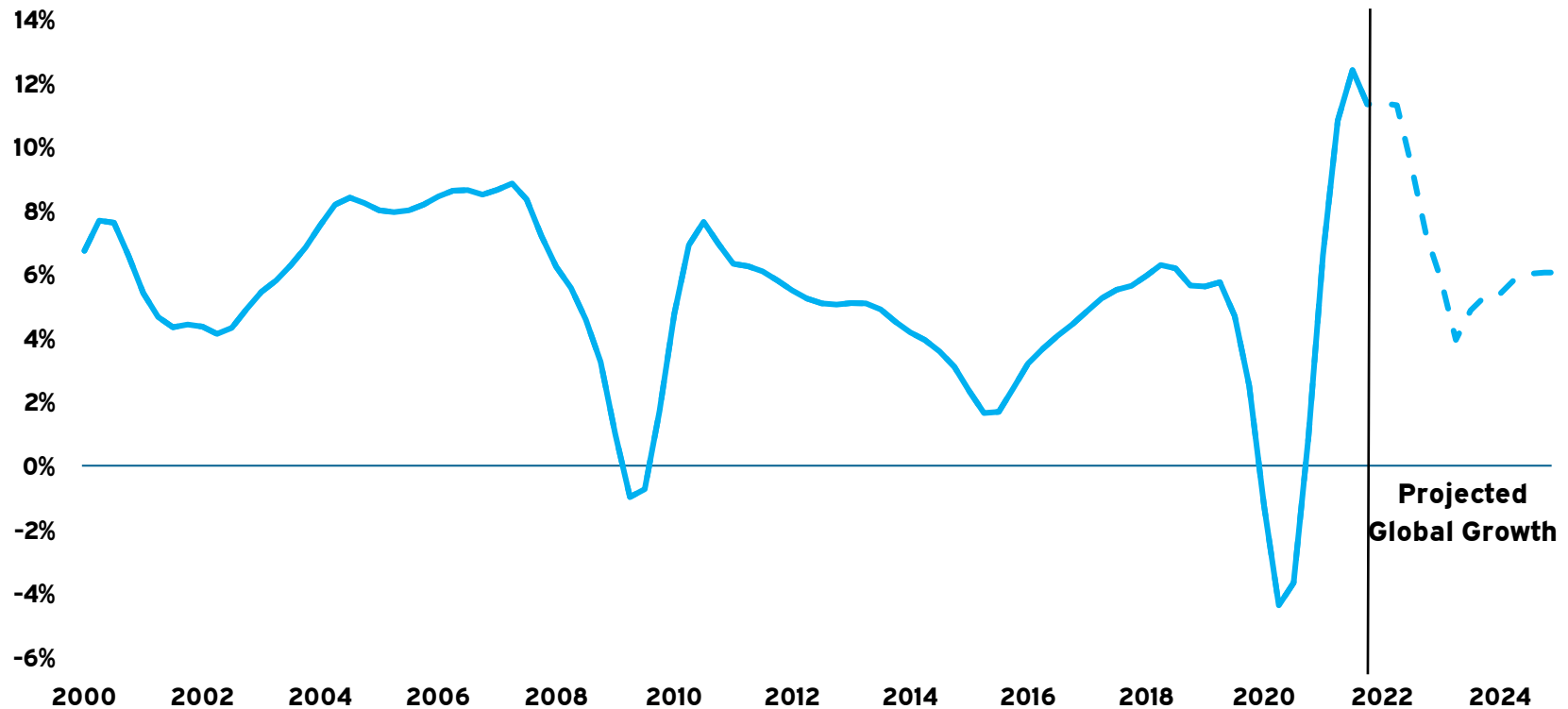
In their October update, the IMF maintained lowered global growth forecasts, driven by the economic impacts of persistent inflation and corresponding tighter policy, as well as issues related to the war in Ukraine and the lingering pandemic.

- The IMF forecasts global GDP growth to come in at 3.2% in 2022 (like the July estimate) and 2.7% in 2023 (0.2% below the prior estimate).
- In advanced economies, GDP is projected to grow 2.4% in 2022 and 1.1% in 2023. The US saw another downgrade in the 2022 (1.6% versus 2.3%) forecast largely due to accelerated policy tightening, given persistently high inflation. The euro area saw an upgrade in expected growth (3.1% versus 2.6%) on substantial fiscal stimulus in 2022 but a downgrade in 2023 (0.5% versus 1.2%) as rising energy prices weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 1.7% this year and 1.6% in 2023.
- Growth projections for emerging markets are higher than developed markets, at 3.7% in 2022 and 2023. China's growth was downgraded for 2022 (3.2% versus 3.3%) and 2023 (4.4% versus 4.6%) given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (8.8% versus 7.4%).

	Real GDP (%) ¹			Inflation (%) ¹		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.2	2.7	3.2	8.8	6.5	3.6
Advanced Economies	2.4	1.1	1.6	7.2	4.3	1.6
US	1.6	1.0	2.1	8.1	3.5	2.0
Euro Area	3.1	0.5	1.0	8.3	5.7	1.3
Japan	1.7	1.6	0.8	2.0	1.4	0.4
Emerging Economies	3.7	3.7	4.4	9.9	8.1	5.3
China	3.2	4.4	7.3	2.2	2.2	2.4

¹ Source: IMF World Economic Outlook. Real GDP and Inflation forecasts from October 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

Global Nominal Gross Domestic Product (GDP) Growth¹



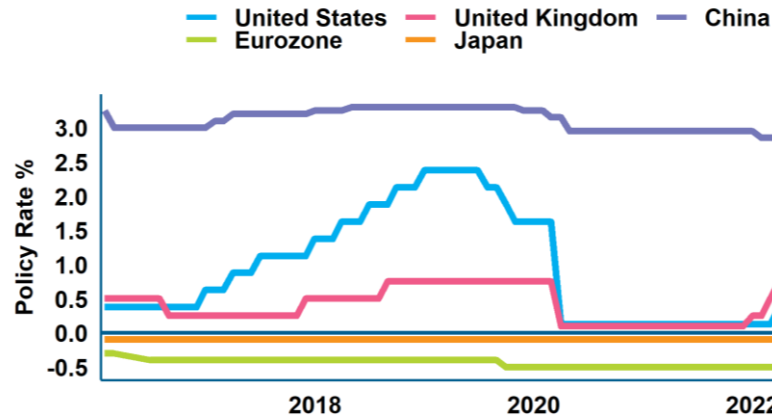
→ Global economies are expected to slow in 2022 compared to 2021, with risks of recession increasing given persistently high inflation and related tighter monetary policy.

→ The delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

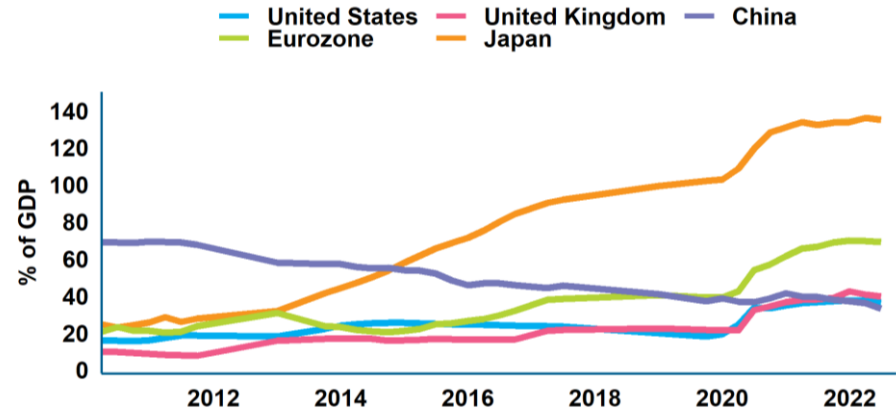
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated September 2022. Nominal expectations for GDP remain much higher than real GDP expectations given the elevated inflation levels.

Central Bank Response¹

Policy Rates



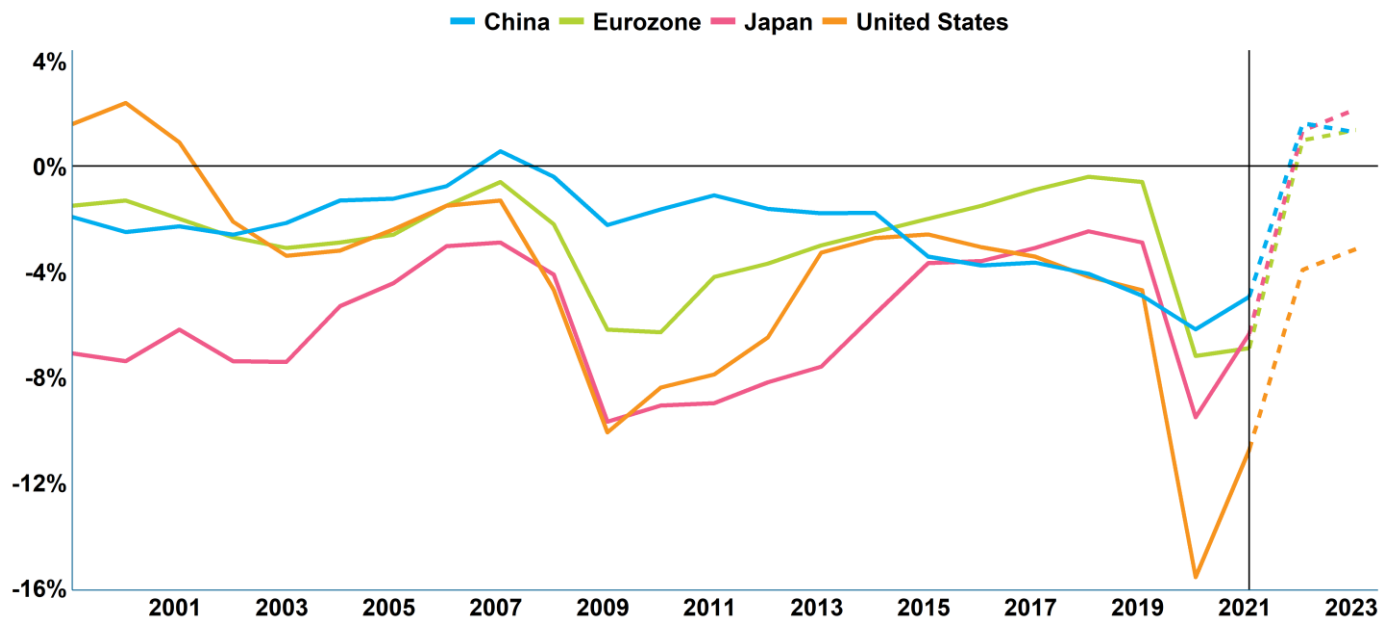
Balance Sheet as % of GDP



- After global central banks took extraordinary action to support economies during the pandemic, including policy rate cuts and emergency stimulus through quantitative easing (QE), many are now aggressively reducing support in the face of high inflation.
- The pace of withdrawing support varies across central banks with the US taking a more aggressive approach. The UK is also aggressively increasing rates, but recent talks of easing fiscal policy (this ultimately did not happen) created significant volatility that spilled over into other markets.
- 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, the war in Ukraine, and a tough COVID-19 policy in China could suppress global growth.

¹ Source: Bloomberg. Policy rate data is as of September 30, 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 June 30, 2022.

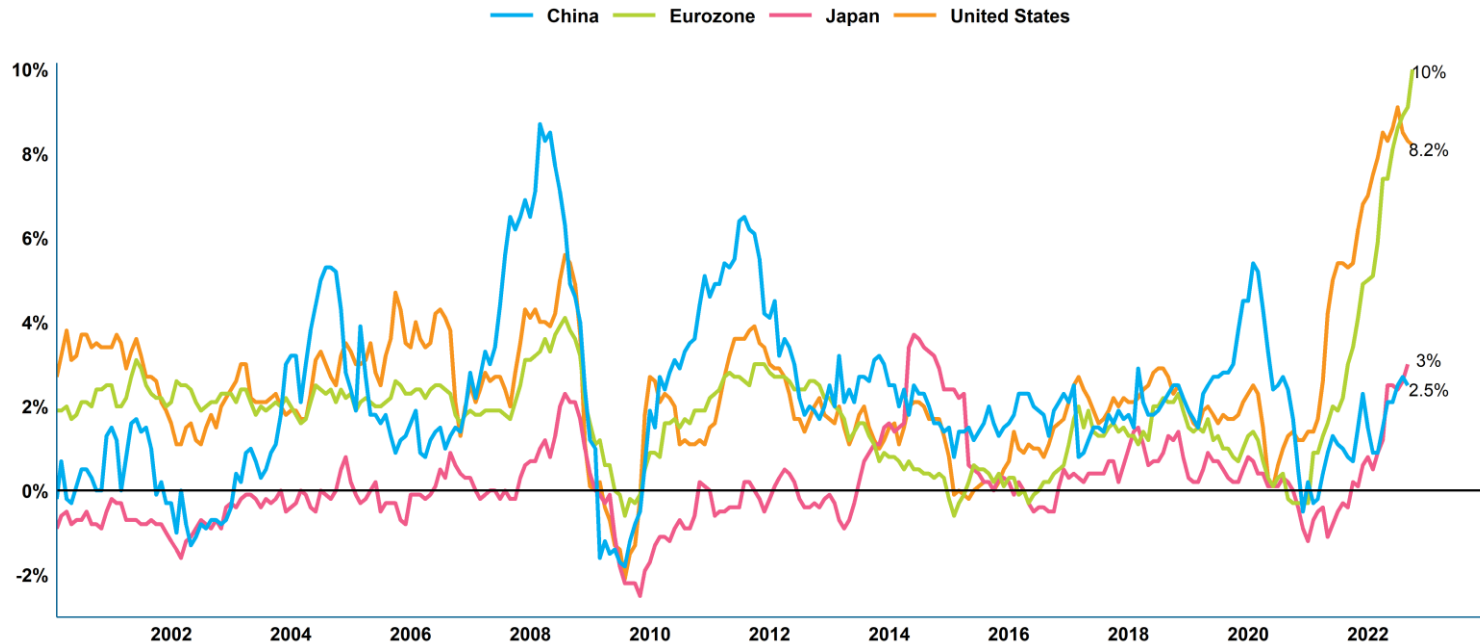
Budget Surplus / Deficit as a Percentage of GDP¹



- Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.
- As fiscal stimulus programs end, and economic recoveries continue, deficits should improve.
- Questions remain about how some countries will respond fiscally as inflation, particularly energy prices, weigh on consumers. Policies that undermine central banks' efforts to fight inflation could lead to additional market volatility like was seen in the UK.

¹ Source: Bloomberg. Data is as of September 30, 2022. Projections via IMF Forecasts from October 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

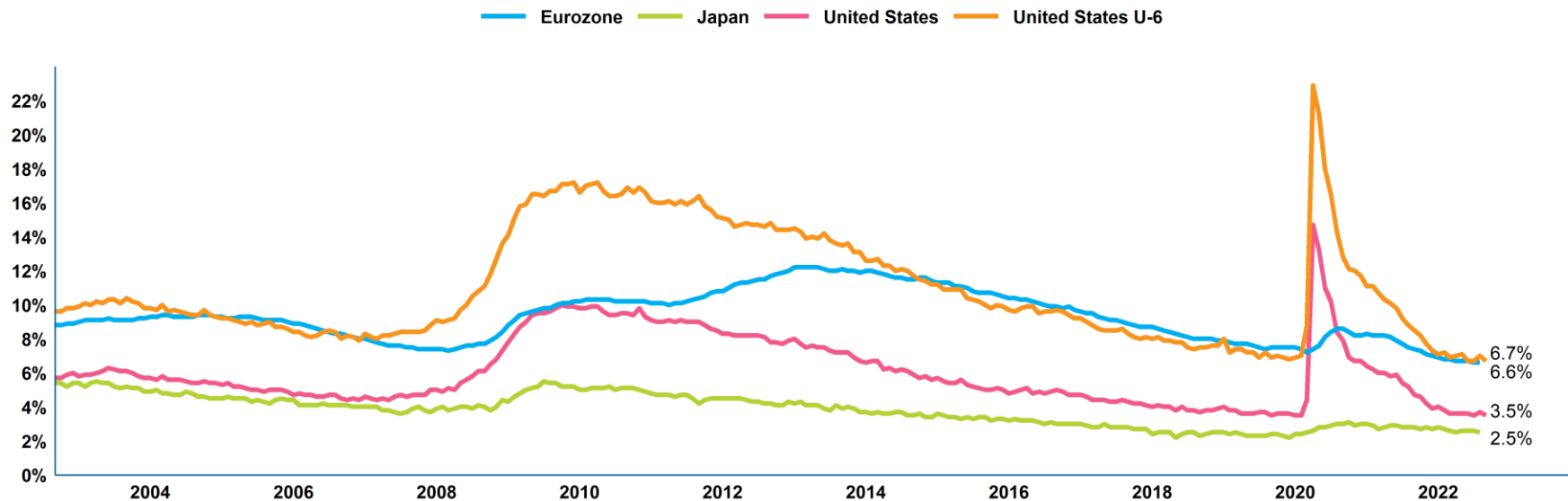
Inflation (CPI Trailing Twelve Months)¹



- 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.
- Supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher prices in many commodities driven by the war in Ukraine have been key global drivers of inflation.

¹ Source: Bloomberg. Data is as of September 2022. The most recent data for Japan and China is as of August 31, 2022.

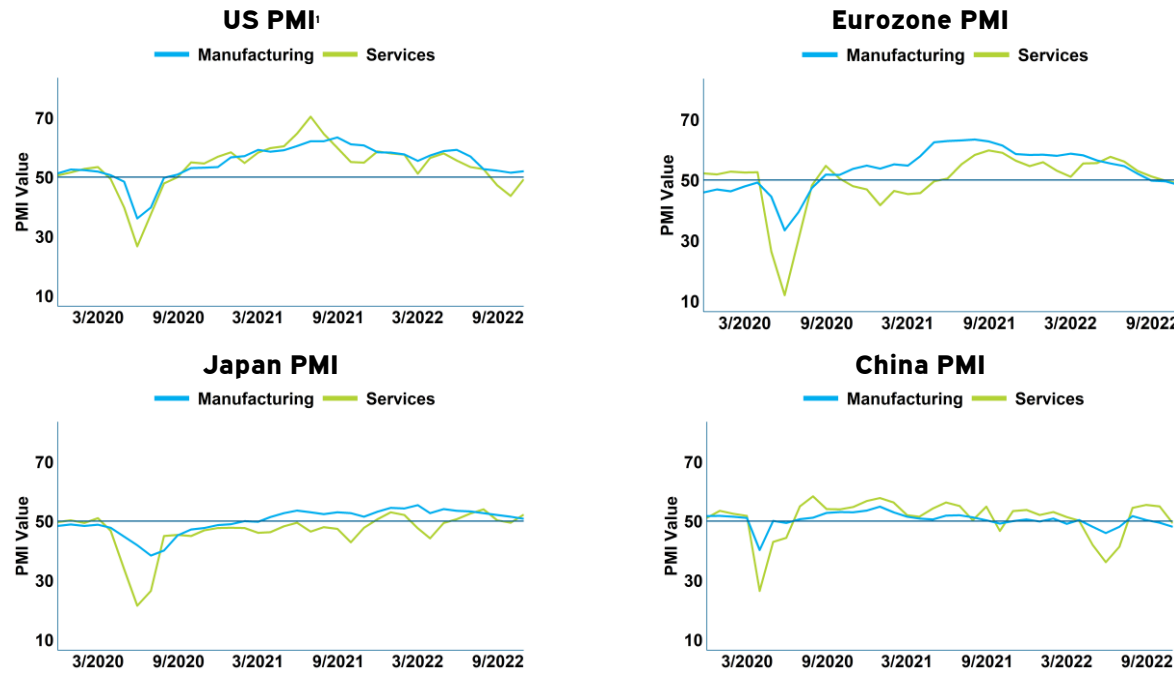
Unemployment¹



- 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, declined to pre-pandemic (3.5%) levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 6.7%.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to eventually higher unemployment.

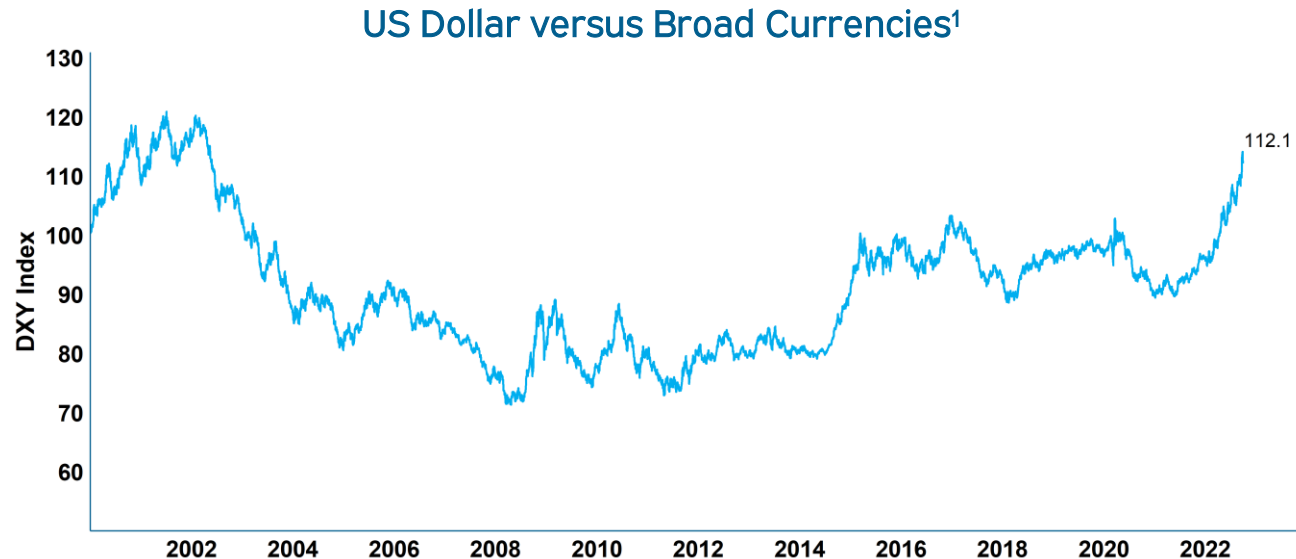
¹ Source: Bloomberg. Data is as of September 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of August 31, 2022.

Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have largely experienced downward pressure recently.
- Service sector PMIs, except Japan, are all in contraction territory. The US service sector recovered somewhat but remains in negative territory due to weak demand, a sharp decline in new orders, and softening employment.
- Manufacturing PMIs are also slowing across China and developed markets given declines in demand and inflationary pressures with the Eurozone and China in contraction territory.

¹ Source: Bloomberg. US Markit Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Markit Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of September 2022. Readings below 50 represent economic contractions.



- The US dollar continued to strengthen in September, increasing 7.1% overall for the quarter and reaching levels not seen in two decades.
- The increased pace of policy tightening, stronger relative growth, and safe-haven flows all contributed to the dollar's strength this year.
- The euro, yen, pound, and yuan have all experienced significant declines versus the dollar this year, adding to inflation.

¹ Source: Bloomberg. Data as of September 30, 2022.

Summary

Key Trends in 2022:

- The impacts of record high inflation will remain key, with market volatility likely to remain high.
- The pace of monetary tightening globally will be faster than previously expected, with the risk of overtightening.
- Expect growth to slow globally in 2022 and into 2023 to the long-term trend or below. 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 will depress consumers' spending in other areas.
- Valuations have significantly declined in the US to below long-term averages.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but major risks remain, including continued strength in the US dollar, higher inflation particularly weighing on Europe, and China maintaining its restrictive COVID-19 policies.

Executive Summary
As of September 30, 2022

The value of the City of San Jose Police & Fire Department Retirement Plan's assets on September 30, 2022 was roughly the same as at the end of the prior quarter (\$4.4 billion). The Plan had net cash inflows of \$136 million and investment losses of \$156 million during the quarter.

- The Retirement Plan's net of fees performance for the quarter was -3.5%, outperforming the Policy Benchmark (-3.9%), the Investable Benchmark Portfolio (-3.9%), and a 60/40 global portfolio (-6.7%). The peer median return was -4.0%. The Plan ranked in the top quartile of the peer group for the quarter.
- The Retirement Plan returned -9.3% over the trailing one-year period, outperforming the Policy Benchmark (-9.9%), the Investable Benchmark (-10.4%) and a 60/40 global portfolio (-20.7%). The Retirement Plan's standard deviation of returns was 9.9% over the trailing one-year period, exhibiting lower volatility vs. the peer median (10.5%).
 - Growth returned -4.6% for the quarter and -13.8% over the trailing one-year period, compared to the -4.8% and -13.3% returns for the Growth Benchmark over the same periods, respectively.
 - Low Beta returned -0.1% for the quarter and +4.1% over the trailing one-year period, compared to -2.0% and -2.2% returns for the Low Beta Benchmark over the same periods, respectively.
 - Other returned -0.7% for the quarter and +1.3% over the trailing one-year period, compared to the -1.4% and -0.3% returns for the Other Benchmark over the same periods, respectively.
- During the quarter, the Plan added six new investments: BSF II (Venture Capital), Centerbridge RE II (Growth Real Estate), Eagle Point Defensive II (Private Debt), GCP SecureSpace Property Partners, LP (Growth Real Estate), Hull Street Energy II (Private Real Assets), and Lerer Hippeau VIII (Venture Capital). The Plan did not liquidate any investments.

Artisan

→ Artisan Global Opportunities returned -3.7% for the quarter, outperforming the MSCI ACWI Growth NR USD benchmark by 220 basis points. Outperformance for the quarter was driven by ON Semiconductor (shift to higher margin products), Chipotle (earnings better than expected), and Atlassian (strong revenue growth). Compared to peers, Artisan ranks in the 12th percentile since inception (1st is best and 100th is worst).

GQG

→ GQG Global Emerging Markets returned -6.6% for the quarter, outperforming the MSCI Emerging Markets benchmark by 500 basis points. Outperformance for the quarter was driven by Petrobras (Brazilian oil and gas exploration), ITC Limited (Indian consumer staples), and Itau Unibanco (Brazilian financial institution). Compared to peers, GQG ranks above the median of its peer group for the 1-year period, and in the 14th percentile since inception (1st is best and 100th is worst).

Wellington

→ Wellington Iguazu Partners LP Fund returned +0.2% for the quarter, outperforming the 50% JPM EMBI GD/50% JPM GBI-EM benchmark by 480 basis points. Wellington uses an absolute return approach to investing in emerging markets debt. Compared to peers, Wellington ranks in the 1st percentile since inception.

Investment Manager	Asset Class	Changes/ Announcements	Meketa Recommendation ¹	Comments
Artisan Global Value	Global Equity	---	---	---
Artisan Global Opportunities	Global Equity	---	Hold	Watch List
Cove Street Small Cap Value	US Equity	---	Hold	Watch List
Oberweis International Opps	International Equity	---	---	---
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	---	---	---
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 retiring 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	Minority firm ownership change, PM addition, and Executive Team changes
Invesco Core Bonds	Investment Grade Bonds	---	---	---

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

Watch List^{1,2}

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

¹ Watch List excludes Private Markets and Passive Funds.

² 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.

Artisan Global Opportunities

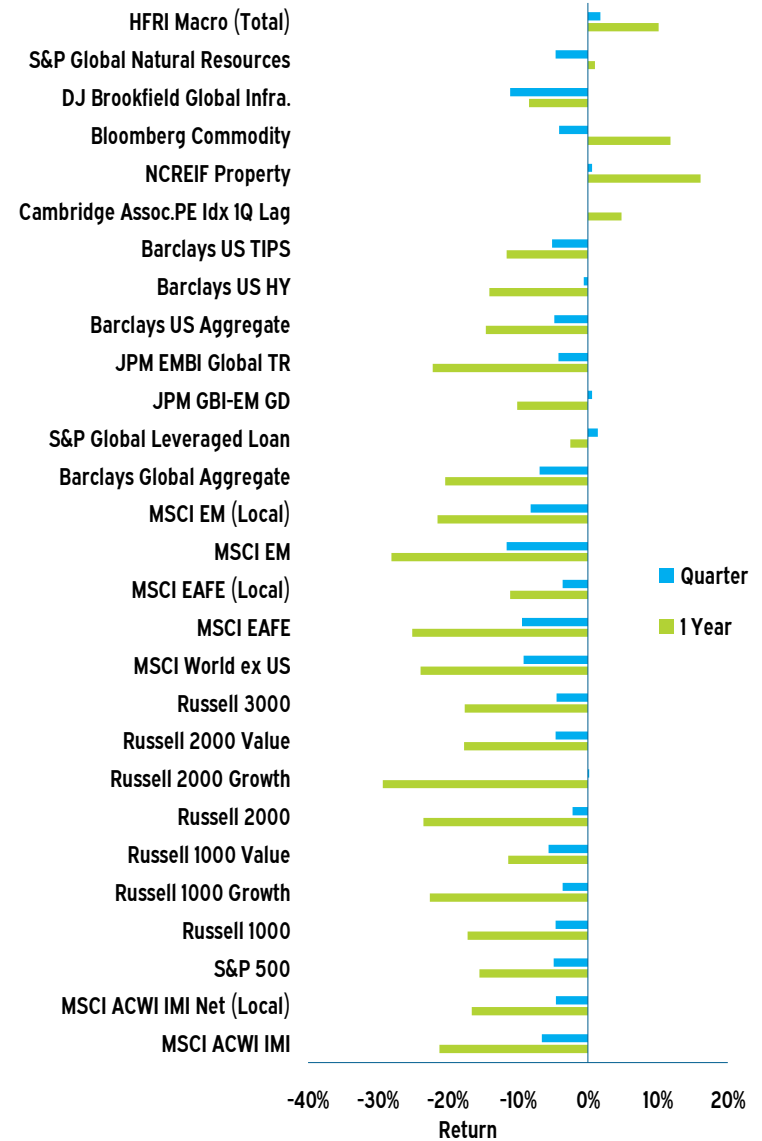
→ Over the three-year period, Artisan (+5.1%) has underperformed the MSCI ACWI Growth by 30 basis points. Since inception in May 2013, Artisan has outperformed the benchmark by 110 basis points per year, on average, and ranked in the 12th percentile compared to peers.

Cove Street

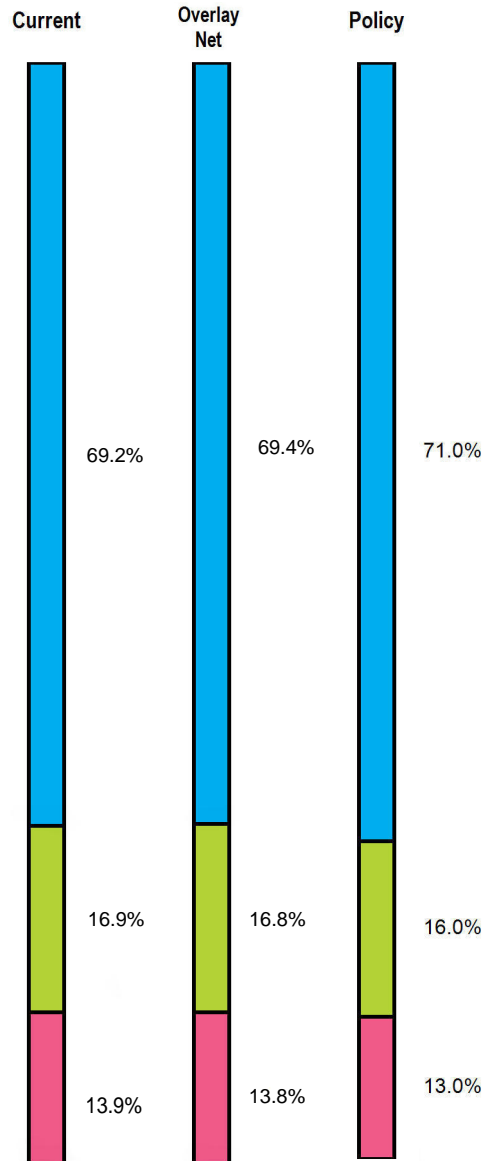
→ Over the three-year period, Cove Street (+1.7%) has underperformed the Russell 2000 Value by 300 basis points. Since inception in December 2017, Cove Street has underperformed the benchmark by 40 basis points per year, on average, and ranked in the 67th percentile compared to peers.

Market Environment – 3Q22 Overview

Benchmark	Scope	3Q22 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Global Equity						
MSCI ACWI IMI	World	-6.6	-21.2	3.6	4.2	7.2
MSCI ACWI IMI Net (Local)	World (Local Currency)	-4.6	-16.6	5.2	5.6	9.0
Domestic Equity						
S&P 500	Large Core	-4.9	-15.5	8.2	9.2	11.7
Russell 1000	Large Core	-4.6	-17.2	7.9	9.0	11.6
Russell 1000 Growth	Large Growth	-3.6	-22.6	10.7	12.2	13.7
Russell 1000 Value	Large Value	-5.6	-11.4	4.4	5.3	9.2
Russell 2000	Small Core	-2.2	-23.5	4.3	3.6	8.6
Russell 2000 Growth	Small Growth	0.2	-29.3	2.9	3.6	8.8
Russell 2000 Value	Small Value	-4.6	-17.7	4.7	2.9	7.9
Russell 3000	All Cap Core	-4.5	-17.6	7.7	8.6	11.4
International Equity						
MSCI World ex US	World ex-US	-9.2	-23.9	-1.2	-0.4	3.6
MSCI EAFE	International Developed	-9.4	-25.1	-1.8	-0.8	3.7
MSCI EAFE (Local)	International Developed (Local Currency)	-3.6	-11.1	2.5	2.8	7.4
MSCI EM	Emerging Markets	-11.6	-28.1	-2.1	-1.8	1.0
MSCI EM (Local)	Emerging Markets (Local Currency)	-8.2	-21.5	1.1	1.1	4.5
Global Fixed Income						
Barclays Global Aggregate	Global Core Bonds	-6.9	-20.4	-5.7	-2.3	-0.9
S&P Global Leveraged Loan	Bank Loans	1.4	-2.5	2.4	2.5	3.3
JPM GBI-EM GD	Emerging Markets Bonds (Local Currency)	0.6	-10.1	-1.0	2.3	4.4
JPM EMBI Global TR	Emerging Market Bonds	-4.2	-22.2	-6.1	-2.3	1.0
Domestic Fixed Income						
Barclays US Aggregate	Core Bonds	-4.8	-14.6	-3.3	-0.3	0.9
Barclays US HY	High Yield	-0.6	-14.1	-0.5	1.6	3.9
Barclays US TIPS	Inflation	-5.1	-11.6	0.8	2.0	1.0
Other						
Cambridge Associates PE Index 1Qtr Lag	Private Equity	0.0	4.8	24.8	22.1	18.1
NCREIF Property	Real Estate	0.6	16.1	9.9	8.6	9.5
Bloomberg Commodity	Commodities	-4.1	11.8	13.5	7.0	-2.1
DJ Brookfield Global Infrastructure	Infrastructure	-11.1	-8.4	-0.4	2.5	5.7
S&P Global Natural Resources	Natural Resources	-4.6	1.0	9.1	5.7	3.4
HFRI Macro	Hedge Funds	1.8	10.1	7.8	5.6	3.1



3Q22 Review



Allocation vs. Targets and Policy				
	Current Balance	Current Allocation	Russell Overlay Net Position	Policy
Growth	\$3,038,536,719	69.2%	69.4%	71.0%
Public Equity	\$1,749,608,002	39.8%	40.0%	42.0%
Private Markets	\$1,109,642,436	25.3%	25.3%	25.0%
Emerging Markets Debt	\$93,063,896	2.1%	2.1%	2.0%
High Yield Bonds	\$86,222,385	2.0%	2.0%	2.0%
Low Beta	\$741,853,676	16.9%	16.8%	16.0%
Market Neutral Strategies	\$142,885,676	3.3%	3.3%	3.0%
Immunized Cash Flows	\$593,441,472	13.5%	13.5%	13.0%
Cash	\$5,526,554	0.1%	0.0%	0.0%
Other	\$611,553,644	13.9%	13.8%	13.0%
Core Real Estate	\$268,837,504	6.1%	6.1%	5.0%
TIPS	\$88,291,162	2.0%	2.0%	2.0%
Investment Grade Bonds	\$191,587,723	4.4%	4.3%	4.5%
Long Term Govt Bonds	\$62,837,255	1.4%	1.4%	1.5%
Total	\$4,391,944,039	100.0%	100.0%	100.0%

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

² Policy Targets represent approved asset allocation from March of 2022.

³ All data on this page is from Russell Investments and reflects trades made on or before 9/30/2022. Data on subsequent pages is from the custodian and may not reflect all trades made on or before 9/30/2022 depending on the settlement date of transaction.

Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	4,386,635,735	100.0	-3.5	-12.8	-9.3	6.0	5.3	5.4	8.2	Mar-71
<i>Policy Benchmark</i>			-3.9	-13.7	-9.9	5.3	4.9	5.5	--	Mar-71
<i>Investable Benchmark Portfolio</i>			-3.9	-14.2	-10.4	5.1	4.8	5.3	--	Mar-71
<i>Low-Cost Passive Portfolio</i>			-5.3	-20.2	-16.7	1.2	--	--	--	Mar-71
<i>60/40 MSCI ACWI IMI/BBgBarc Global Aggregate</i>			-6.7	-23.3	-20.7	0.1	1.8	4.1	--	Mar-71
<i>Liability Benchmark Portfolio</i>			-9.6	-28.8	-26.6	-8.5	--	--	--	Mar-71
<i>InvMetrics Public DB > \$1B Net Median</i>			-4.0	-14.4	-10.7	4.7	5.1	7.0	--	Mar-71
<i>InvMetrics Public DB > \$1B Net Rank</i>			22	30	34	26	45	92	--	Mar-71
Growth	3,007,823,909	68.6	-4.6	-18.3	-13.8	7.3	6.4	--	--	Jul-15
<i>Growth Benchmark</i>			-4.8	-18.1	-13.3	7.2	6.6	--	--	Jul-15
Public Equity	1,722,679,557	39.3	-6.6	-26.8	-23.3	3.9	3.8	7.0	5.2	Apr-08
<i>Public Equity Benchmark</i>			-6.8	-25.7	-21.6	3.4	4.0	7.2	5.4	Apr-08
Global Equity	419,239,553	9.6	-6.9	-28.1	-25.1	4.0	5.0	--	8.6	Mar-13
<i>eV All Global Equity Net Median</i>			-6.9	-26.5	-21.7	3.4	4.3	7.3	6.8	Mar-13
<i>eV All Global Equity Net Rank</i>			53	61	68	43	41	--	21	Mar-13
U.S. Equity	729,858,562	16.6	-4.2	-24.2	-17.5	8.4	8.5	11.8	9.4	Jun-95
<i>MSCI USA IMI NR USD</i>			-4.6	-24.9	-18.0	7.4	8.2	10.8	9.0	Jun-95
<i>eV All US Equity Net Median</i>			-4.5	-23.8	-17.3	6.1	6.7	10.0	9.9	Jun-95
<i>eV All US Equity Net Rank</i>			45	54	52	21	29	17	63	Jun-95

¹ Fiscal Year begins July 1.

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

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

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Equity	349,228,620	8.0	-9.5	-31.4	-30.2	-0.4	-0.5	3.8	6.4	Jun-95
<i>MSCI World ex USA IMI NR USD</i>			-9.2	-27.0	-25.0	-1.2	-0.5	3.8	--	Jun-95
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-9.4	-29.7	-27.3	-0.4	-0.1	4.4	6.1	Jun-95
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			52	61	61	51	62	74	48	Jun-95
Emerging Markets Equity	224,352,822	5.1	-9.1	-25.7	-25.9	0.6	-1.5	1.0	7.4	Sep-01
<i>MSCI Emerging Markets IMI Net</i>			-10.8	-26.8	-27.5	-1.2	-1.4	1.3	7.9	Sep-01
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	8.2	Sep-01
<i>eV Emg Mkts Equity Net Rank</i>			41	35	35	32	50	73	78	Sep-01
Private Markets	1,108,896,391	25.3	-2.0	-2.9	4.9	13.1	10.6	--	9.4	Jul-15
<i>Private Markets Benchmark</i>			-2.0	-2.9	4.9	13.1	10.6	--	10.0	Jul-15
<i>MSCI ACWI IMI + 100bps</i>			-6.4	-25.1	-20.4	4.7	5.2	--	6.6	Jul-15
Private Markets ex Russell 3000	892,754,036	20.4	-2.1	-2.9	4.9	13.1	10.6	--	9.9	Jul-15
<i>Custom PE Benchmark</i>			-5.0	0.4	6.6	21.0	17.9	--	15.6	Jul-15
Private Equity	383,727,764	8.7	-4.2	-0.6	8.3	21.6	18.7	15.6	12.2	Oct-05
<i>Custom PE Benchmark</i>			-5.0	0.4	6.6	21.0	17.9	15.6	13.4	Oct-05
Venture Capital	37,830,866	0.9	-2.8	-2.8	19.0	--	--	--	16.6	Sep-20
Private Debt	188,017,665	4.3	-1.2	6.3	7.6	11.3	7.3	--	6.8	Oct-15
<i>S&P Global Leveraged Loan + 2%</i>			1.9	-1.8	-0.6	4.4	4.6	--	5.5	Oct-15
Growth Real Estate	199,215,196	4.5	3.7	14.9	25.1	14.9	12.7	--	11.1	Jul-15
<i>NCREIF Property Index</i>			0.6	9.4	16.1	9.9	8.6	--	8.6	Jul-15
Private Real Assets	83,962,545	1.9	-0.5	11.7	20.3	12.5	9.6	--	8.9	Jun-16

¹ Please see the Appendix for composition of the Private Markets Benchmark.

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

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Northern Trust Russell 3000	216,142,355	4.9	-4.4	-24.6	-17.6	7.7	8.6	--	9.5	Apr-14
<i>Russell 3000</i>			-4.5	-24.6	-17.6	7.7	8.6	--	9.4	Apr-14
High Yield Bonds	86,202,984	2.0	-0.1	-13.5	-12.7	--	--	--	0.6	Jun-20
<i>Bloomberg US Corporate High Yield TR</i>			-0.6	-14.7	-14.1	--	--	--	0.4	Jun-20
<i>eV US High Yield Fixed Inc Net Median</i>			-0.5	-13.5	-12.9	-0.3	1.5	3.6	0.7	Jun-20
<i>eV US High Yield Fixed Inc Net Rank</i>			30	49	47	--	--	--	53	Jun-20
Emerging Market Debt	90,044,978	2.1	-0.3	2.4	3.1	6.4	5.3	--	2.8	Jan-13
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			-4.6	-21.3	-22.5	-7.1	-3.2	--	-1.0	Jan-13
<i>eV All Emg Mkts Fixed Inc Net Median</i>			-4.1	-19.0	-20.3	-5.6	-2.5	0.4	0.0	Jan-13
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			2	1	1	1	1	--	2	Jan-13
Low Beta	804,201,121	18.3	-0.1	3.1	4.1	3.6	3.4	--	2.6	Jul-15
<i>Low Beta Benchmark</i>			-2.0	-2.2	-2.2	0.2	0.7	--	0.5	Jul-15
Immunized Cash Flows	443,011,946	10.1	-2.7	-5.6	-6.1	-0.8	--	--	0.5	Oct-18
<i>Immunized Cash Flow Benchmark</i>			-2.7	-5.6	-6.1	-0.8	--	--	0.5	Oct-18
Market Neutral Strategies	149,729,723	3.4	7.3	27.5	32.0	15.5	11.1	--	6.7	Nov-12
<i>Market Neutral Strategies Benchmark</i>			0.9	1.6	1.7	1.0	1.2	--	1.2	Nov-12
Relative Value	149,729,723	3.4	7.3	27.5	32.0	15.3	11.7	--	8.8	Jul-15
<i>HFRI Relative Value (Total) Index</i>			0.0	-2.1	-1.9	3.5	3.3	--	3.5	Jul-15
<i>Relative Value Arbitrage MStar MF Median</i>			0.2	-5.2	-5.0	2.8	2.8	2.7	2.8	Jul-15
<i>Relative Value Arbitrage MStar MF Rank</i>			1	1	1	1	1	--	1	Jul-15

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

² Cash Composite includes the cash account and residuals from terminated manager assets.

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Cash	120,713,964	2.8	0.4	0.6	0.6	0.7	1.2	0.7	7.5	Jul-02
<i>ICE BofA 91 Days T-Bills TR</i>			0.5	0.6	0.6	0.6	1.1	0.7	1.3	Jul-02
Short Term IG Bonds	90,745,488	2.1	0.5	--	--	--	--	--	--	May-22
<i>ICE BofA 3M US Treasury TR USD</i>			0.5	--	--	--	--	--	--	May-22
Other	567,488,283	12.9	-0.7	0.0	1.3	0.5	1.6	--	1.9	Jul-15
<i>Other Benchmark</i>			-1.4	-2.0	-0.3	0.0	1.0	--	1.5	Jul-15
Core Real Estate	225,937,006	5.2	7.2	26.0	32.4	13.6	10.9	--	10.1	Jul-15
<i>Core Real Estate Benchmark</i>			4.5	20.6	28.3	11.3	9.2	--	9.0	Jul-15
TIPS	88,291,162	2.0	-2.7	-3.9	-2.8	2.5	--	--	2.7	Oct-18
<i>Bloomberg US Treasury TIPS 0-5 Yr TR</i>			-2.6	-4.0	-2.9	2.4	--	--	2.7	Oct-18
Investment Grade Bonds	190,407,178	4.3	-4.7	-14.3	-14.3	--	--	--	-5.2	May-20
<i>Custom IG Bonds Benchmark</i>			-4.9	-13.6	-13.8	--	--	--	-5.8	May-20
Long-Term Government Bonds	62,852,937	1.4	-9.6	-28.6	-26.6	--	--	--	-16.2	May-20
<i>Long-Term Government Bonds Benchmark</i>			-9.6	-28.8	-26.6	--	--	--	-16.2	May-20
Overlay	7,122,423	0.2								

Core Real Estate values are one-quarter lagged.

¹Please see the Appendix for composition of the Other Benchmark.

Trailing Net Performance										
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	4,386,635,735	100.0	-3.5	-12.8	-9.3	6.0	5.3	5.4	8.2	Mar-71
<i>Policy Benchmark</i>			-3.9	-13.7	-9.9	5.3	4.9	5.5	--	Mar-71
<i>Investable Benchmark Portfolio</i>			-3.9	-14.2	-10.4	5.1	4.8	5.3	--	Mar-71
<i>Low-Cost Passive Portfolio</i>			-5.3	-20.2	-16.7	1.2	--	--	--	Mar-71
<i>60/40 MSCI ACWI IMI/BBgBarc Global Aggregate</i>			-6.7	-23.3	-20.7	0.1	1.8	4.1	--	Mar-71
<i>Liability Benchmark Portfolio</i>			-9.6	-28.8	-26.6	-8.5	--	--	--	Mar-71
<i>InvMetrics Public DB > \$1B Net Median</i>			-4.0	-14.4	-10.7	4.7	5.1	7.0	--	Mar-71
<i>InvMetrics Public DB > \$1B Net Rank</i>			22	30	34	26	45	92	--	Mar-71
Growth	3,007,823,909	68.5	-4.6	-18.3	-13.8	7.3	6.4	--	--	Jul-15
<i>Growth Benchmark</i>			-4.8	-18.1	-13.3	7.2	6.6	--	--	Jul-15
Public Equity	1,722,679,557	39.3	-6.6	-26.8	-23.3	3.9	3.8	7.0	5.2	Apr-08
<i>Public Equity Benchmark</i>			-6.8	-25.7	-21.6	3.4	4.0	7.2	5.4	Apr-08
Global Equity	419,239,553	9.6	-6.9	-28.1	-25.1	4.0	5.0	--	8.6	Mar-13
<i>eV All Global Equity Net Median</i>			-6.9	-26.5	-21.7	3.4	4.3	7.3	6.8	Mar-13
<i>eV All Global Equity Net Rank</i>			53	61	68	43	41	--	21	Mar-13
<i>Artisan Global Value</i>	228,979,425	5.2	-9.4	-22.8	-19.7	2.2	2.7	--	7.1	Mar-13
<i>MSCI ACWI Value NR USD</i>			-7.7	-19.1	-14.0	1.3	1.7	--	4.7	Mar-13
<i>eV All Global Equity Net Median</i>			-6.9	-26.5	-21.7	3.4	4.3	7.3	6.8	Mar-13
<i>eV All Global Equity Net Rank</i>			84	28	39	64	70	--	45	Mar-13

¹ 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 September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Artisan Global Opportunities	190,260,128	4.3	-3.7	-33.8	-30.8	5.1	6.6	--	9.3	May-13
<i>MSCI ACWI Growth NR USD</i>			-5.9	-32.2	-27.5	5.4	6.6	--	8.2	May-13
<i>eV All Global Equity Net Median</i>			-6.9	-26.5	-21.7	3.4	4.3	7.3	6.4	May-13
<i>eV All Global Equity Net Rank</i>			10	86	86	29	20	--	12	May-13
U.S. Equity	729,858,562	16.6	-4.2	-24.2	-17.5	8.4	8.5	11.8	9.4	Jun-95
<i>MSCI USA IMI NR USD</i>			-4.6	-24.9	-18.0	7.4	8.2	10.8	9.0	Jun-95
<i>eV All US Equity Net Median</i>			-4.5	-23.8	-17.3	6.1	6.7	10.0	9.9	Jun-95
<i>eV All US Equity Net Rank</i>			45	54	52	21	29	17	63	Jun-95
Northern Trust Russell 3000	699,097,397	15.9	-4.4	-24.6	-17.6	--	--	--	16.0	Apr-20
<i>Russell 3000</i>			-4.5	-24.6	-17.6	--	--	--	15.9	Apr-20
Cove Street Small Cap Value	30,761,164	0.7	-4.7	-19.3	-18.8	1.7	--	--	1.9	Dec-17
<i>Russell 2000 Value</i>			-4.6	-21.1	-17.7	4.7	--	--	2.3	Dec-17
<i>eV US Small Cap Value Equity Net Median</i>			-4.9	-20.3	-14.9	5.1	3.3	8.5	2.6	Dec-17
<i>eV US Small Cap Value Equity Net Rank</i>			49	41	78	87	--	--	67	Dec-17
International Equity	349,228,620	8.0	-9.5	-31.4	-30.2	-0.4	-0.5	3.8	6.4	Jun-95
<i>MSCI World ex USA IMI NR USD</i>			-9.2	-27.0	-25.0	-1.2	-0.5	3.8	--	Jun-95
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-9.4	-29.7	-27.3	-0.4	-0.1	4.4	6.1	Jun-95
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			52	61	61	51	62	74	48	Jun-95
Northern Trust MSCI World ex US	182,347,611	4.2	-9.6	-26.2	-23.5	-0.9	-0.1	--	1.4	Apr-14
<i>MSCI World ex USA</i>			-9.2	-26.2	-23.9	-1.2	-0.4	--	1.2	Apr-14

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Oberweis Intl Opportunities	46,347,616	1.1	-11.2	-43.3	-45.5	1.2	-0.2	--	3.4	Mar-14
<i>MSCI World ex USA Small Cap Growth NR USD</i>			-8.8	-35.7	-35.7	-1.4	-0.7	--	2.5	Mar-14
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-9.4	-29.7	-27.3	-0.4	-0.1	4.4	1.9	Mar-14
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			80	98	98	23	54	--	21	Mar-14
Morgan Stanley International Equity	51,692,158	1.2	-9.7	--	--	--	--	--	--	
<i>MSCI World ex USA</i>			-9.2	--	--	--	--	--	--	
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-9.4	-29.7	-27.3	-0.4	-0.1	4.4	--	
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			58	--	--	--	--	--	--	
First Eagle International Equity	68,841,236	1.6	-8.1	--	--	--	--	--	-8.2	Jun-22
<i>MSCI World ex USA</i>			-9.2	--	--	--	--	--	-17.7	Jun-22
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-9.4	-29.7	-27.3	-0.4	-0.1	4.4	-17.8	Jun-22
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			22	--	--	--	--	--	1	Jun-22
Emerging Markets Equity	224,352,822	5.1	-9.1	-25.7	-25.9	0.6	-1.5	1.0	7.4	Sep-01
<i>MSCI Emerging Markets IMI Net</i>			-10.8	-26.8	-27.5	-1.2	-1.4	1.3	7.9	Sep-01
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	8.2	Sep-01
<i>eV Emg Mkts Equity Net Rank</i>			41	35	35	32	50	73	78	Sep-01
Northern Trust MSCI EM IMI	51,643,051	1.2	-11.1	-26.8	-27.1	-1.3	--	--	-1.6	Oct-18
<i>MSCI Emerging Markets IMI Net</i>			-10.8	-26.8	-27.5	-1.2	--	--	-1.5	Oct-18
Dimensional Fund Adv EM Value	46,900,311	1.1	-9.8	-19.0	-18.7	0.8	-0.6	--	2.0	Jul-15
<i>MSCI Emerging Markets Value NR USD</i>			-11.0	-23.3	-23.6	-2.6	-2.1	--	-0.2	Jul-15
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	1.5	Jul-15
<i>eV Emg Mkts Equity Net Rank</i>			48	8	9	30	35	--	37	Jul-15

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GQG Global Emerging Markets	41,024,470	0.9	-6.6	-26.4	-26.5	1.0	1.4	--	3.3	Jul-17
<i>MSCI Emerging Markets</i>			-11.6	-27.2	-28.1	-2.1	-1.8	--	-0.3	Jul-17
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	0.0	Jul-17
<i>eV Emg Mkts Equity Net Rank</i>			23	41	38	30	18	--	14	Jul-17
Redwheel Emerging Markets Equity	31,754,852	0.7	-11.0	-30.5	-31.5	0.0	--	--	0.9	Sep-19
<i>MSCI Emerging Markets</i>			-11.6	-27.2	-28.1	-2.1	--	--	-1.4	Sep-19
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	-0.7	Sep-19
<i>eV Emg Mkts Equity Net Rank</i>			65	74	71	36	--	--	33	Sep-19
Wellington Emerging Markets Systematic	38,636,255	0.9	-12.0	-28.1	-28.2	-0.4	--	--	-0.1	Sep-19
<i>MSCI Emerging Markets</i>			-11.6	-27.2	-28.1	-2.1	--	--	-1.4	Sep-19
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	-0.7	Sep-19
<i>eV Emg Mkts Equity Net Rank</i>			79	60	53	39	--	--	41	Sep-19
Kotak India Midcap	14,393,882	0.3	8.3	-11.4	-11.0	--	--	--	-3.2	Jul-21
<i>eV Emg Mkts Equity Net Median</i>			-10.1	-27.3	-28.1	-1.4	-1.6	1.6	-27.4	Jul-21
<i>eV Emg Mkts Equity Net Rank</i>			1	1	1	--	--	--	1	Jul-21
Private Markets	1,108,896,391	25.3	-2.0	-2.9	4.9	13.1	10.6	--	9.4	Jul-15
<i>Private Markets Benchmark</i>			-2.0	-2.9	4.9	13.1	10.6	--	10.0	Jul-15
<i>MSCI ACWI IMI + 100bps</i>			-6.4	-25.1	-20.4	4.7	5.2	--	6.6	Jul-15
Private Markets ex Russell 3000	892,754,036	20.3	-2.1	-2.9	4.9	13.1	10.6	--	9.9	Jul-15
<i>Custom PE Benchmark</i>			-5.0	0.4	6.6	21.0	17.9	--	15.6	Jul-15
Private Equity	383,727,764	8.7	-4.2	-0.6	8.3	21.6	18.7	15.6	12.2	Oct-05
<i>Custom PE Benchmark</i>			-5.0	0.4	6.6	21.0	17.9	15.6	13.4	Oct-05

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
PE Strategic Partnership, LP	292,329,618	6.7	-2.8	4.7	18.2	26.8	18.7	--	18.0	Aug-17
Pantheon USA Fund VI, LP	405,678	0.0	-1.8	-13.3	-24.0	-16.8	-7.7	-0.3	1.5	Oct-05
Portfolio Advisors Private Eq	2,948,013	0.1	0.0	-5.7	-10.3	9.1	6.5	7.7	6.5	Nov-05
HarbourVest Partners VII	124,217	0.0	4.1	3.7	3.3	-2.7	-2.9	4.5	6.0	Dec-05
TCW/Crescent Mezzanine	71,152	0.0	-7.2	-15.1	-30.1	55.9	27.8	18.8	15.8	Dec-08
TPG Opportunities Partners II	588,539	0.0	5.3	9.7	20.8	5.8	7.8	--	11.7	Oct-12
Crescent Mezzanine Partners VI	2,622,457	0.1	-5.4	-9.4	-10.8	12.7	11.1	--	8.6	Feb-13
Warburg Pincus (Europa) XI	8,596,505	0.2	-9.0	-8.0	-8.4	5.7	9.9	--	10.4	May-13
57 Stars Global Opportunity	26,647,568	0.6	-3.2	-10.5	-9.6	6.7	5.3	--	3.0	Jan-14
TPG Opportunities Partners III	3,861,954	0.1	-9.3	-8.4	-6.0	10.6	10.5	--	6.0	Mar-14
CCMP Capital Investors III, LP	6,869,280	0.2	-20.6	-33.2	-37.4	11.3	8.5	--	9.0	Aug-14
Francisco Partners	15,052,067	0.3	-23.0	-39.8	-33.4	18.9	25.6	--	19.2	May-15
Innovation Endeavors III	11,895,695	0.3	-1.6	39.7	77.0	62.2	--	--	29.4	Jun-18
Crestline Portfolio Financing	11,715,020	0.3	3.0	5.0	3.8	10.0	--	--	9.3	Jun-18
Venture Capital	37,830,866	0.9	-2.8	-2.8	19.0	--	--	--	16.6	Sep-20
Top Tier Capital Partners IX	6,968,364	0.2	-5.9	-10.0	1.5	--	--	--	22.1	Sep-20

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Northgate Venture Partners IX LP	9,082,238	0.2	-4.3	12.5	14.9	--	--	--	5.6	Sep-20
Canvas III	2,726,679	0.1	-0.7	22.5	20.8	--	--	--	4.0	Nov-20
Innovation Endeavors IV	1,324,552	0.0	-2.1	0.1	-5.2	--	--	--	-6.7	Jun-21
Invesco Alpha II	6,495,501	0.1	5.8	-17.2	67.0	--	--	--	67.0	Sep-21
Next Play Capital III	3,905,359	0.1	-2.8	-2.4	--	--	--	--	-2.4	Dec-21
Tiger Iron SJPF	4,846,798	0.1	-6.5	--	--	--	--	--	-10.2	Mar-22
Bow Capital Fund II	1,347,964	0.0	-5.6	--	--	--	--	--	-5.6	Jun-22
Lerer Hippeau VIII	508,412	0.0	--	--	--	--	--	--	0.0	Sep-22
BSF II	625,000	0.0	--	--	--	--	--	--	0.0	Jul-22
Private Debt	188,017,665	4.3	-1.2	6.3	7.6	11.3	7.3	--	6.8	Oct-15
<i>S&P Global Leveraged Loan + 2%</i>			<i>1.9</i>	<i>-1.8</i>	<i>-0.6</i>	<i>4.4</i>	<i>4.6</i>	<i>--</i>	<i>5.5</i>	<i>Oct-15</i>
White Oak Direct Lending	35,928,305	0.8	-2.1	25.9	32.6	49.2	25.0	10.6	9.1	Nov-10
Blackstone/GSO Cap Partners	3,421,436	0.1	-10.0	-7.4	-8.2	-27.7	-16.5	-6.5	-2.0	Dec-10
Medley Opportunity Fund II LP	4,378,782	0.1	0.0	-9.8	-13.4	-10.3	-11.0	-3.2	-1.6	Mar-11
Cross Ocean USD ESS Fund I, LP	6,940,465	0.2	0.9	-0.9	-0.4	15.4	7.6	--	8.4	Apr-14
Park Square Credit Opp II, LP	117,547	0.0	-0.6	195.3	-42.7	20.1	13.5	--	10.8	Nov-14
Shoreline China Value III, LP	7,497,385	0.2	-1.1	4.1	-5.9	1.5	1.5	--	4.4	Jul-15
Cross Ocean USD ESS Fund II LP	12,997,101	0.3	-0.6	-0.4	2.1	5.0	5.4	--	7.6	May-16

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Cross Ocean USD ESS Fund III, LP	38,439,936	0.9	0.8	4.4	6.3	13.9	--	--	12.4	Jun-19
Arbour Lane Credit Opportunity Fund II, L.P.	15,987,191	0.4	-1.0	2.2	7.7	--	--	--	20.1	Apr-20
Eagle Point Defensive Income Fund	10,836,987	0.2	-7.2	-3.9	-10.1	--	--	--	3.0	Jun-20
HPS Special Situations Opportunity	9,504,563	0.2	5.8	12.2	16.6	--	--	--	24.2	Dec-20
Crestline Portfolio Fin II	4,129,487	0.1	2.5	7.1	8.5	--	--	--	8.3	Dec-20
SVP Special Situations V	5,553,612	0.1	0.7	12.0	9.6	--	--	--	7.6	Jun-21
Arbour Lane COF III	8,172,361	0.2	-8.7	-8.9	--	--	--	--	-8.8	Nov-21
Angelo Gordon CS II	8,344,776	0.2	-5.3	--	--	--	--	--	-4.1	Feb-22
Octagon CLO Opp Fund IV	14,717,731	0.3	0.2	--	--	--	--	--	0.2	Mar-22
Eagle Point Defensive II	2,500,000	0.1	--	--	--	--	--	--	0.0	Sep-22
Growth Real Estate	199,215,196	4.5	3.7	14.9	25.1	14.9	12.7	--	11.1	Jul-15
<i>NCREIF Property Index</i>			<i>0.6</i>	<i>9.4</i>	<i>16.1</i>	<i>9.9</i>	<i>8.6</i>	<i>--</i>	<i>8.6</i>	<i>Jul-15</i>
TA Realty Associates Fund X	7,507	0.0	6.7	31.9	34.4	9.0	13.1	--	12.1	Mar-13
Brookfield SREP I	3,456,824	0.1	2.9	6.7	11.7	5.9	11.6	--	15.2	Sep-13
Tristan - EPISO III	2,545,260	0.1	-6.5	-6.7	-8.5	-6.5	-5.2	--	1.5	Dec-13
Orion Euro Real Estate IV LP	3,185,562	0.1	-6.4	-11.2	-9.0	-11.4	-12.5	--	-8.9	Apr-14

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Sculptor Real Estate Fund III	4,349,678	0.1	74.1	106.0	113.5	43.5	36.9	--	24.4	Oct-14
Tristan - EPISO IV	16,420,625	0.4	-4.8	-6.2	-5.3	6.8	6.9	--	6.1	Dec-15
KSL Capital Partners IV, LP	21,574,616	0.5	1.2	10.4	27.0	19.9	19.6	--	6.1	Apr-16
Brookfield SREP II	19,900,238	0.5	4.0	28.6	36.0	19.4	16.0	--	14.4	Jun-16
DRA Growth & Income Fund IX	14,775,560	0.3	4.0	15.2	44.1	24.2	20.3	--	18.8	Feb-17
GEM Realty Fund VI	7,783,176	0.2	2.0	17.0	25.4	18.0	--	--	10.3	Nov-17
Torchlight Debt Opportunity VI	22,209,623	0.5	2.6	11.6	20.0	9.6	--	--	6.3	Apr-18
Tristan - EPISO V	16,267,187	0.4	-3.7	-1.7	-3.6	-17.4	--	--	-30.9	May-19
DRA Growth and Income Fund X, LLC	12,236,632	0.3	1.5	16.9	46.6	--	--	--	27.4	Mar-20
Rockpoint Real Estate Fund VI, L.P.	9,697,175	0.2	2.3	17.3	22.2	--	--	--	20.1	May-20
Exeter Industrial Value Fund V	11,117,035	0.3	0.9	32.6	58.4	--	--	--	41.9	Oct-20
Torchlight Debt Fund VII	4,668,036	0.1	3.9	5.5	6.1	--	--	--	3.8	Feb-21
HIG Realty Partners IV	5,802,285	0.1	9.4	--	--	--	--	--	95.9	Feb-22
Praedium X MidInc	4,129,309	0.1	6.1	--	--	--	--	--	6.1	Apr-22
AIGGRE Fund IV	12,910,239	0.3	45.9	--	--	--	--	--	39.0	Jun-22
GCP SecureSpace Property Partners, L.P	4,218,845	0.1	--	--	--	--	--	--	-1.3	Aug-22

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Centerbridge RE II	1,959,784	0.0	--	--	--	--	--	--	-13.5	Jul-22
Private Real Assets	83,962,545	1.9	-0.5	11.7	20.3	12.5	9.6	--	8.9	Jun-16
Brookfield Infrastructure III	18,560,829	0.4	0.5	11.1	15.7	11.9	11.8	--	10.9	Jun-16
Global Infra Part III-A/B, LP	22,131,569	0.5	2.9	21.9	25.0	12.8	8.2	--	6.9	Sep-16
Lime Rock Partners VIII	6,735,126	0.2	3.1	33.6	31.7	14.1	--	--	11.0	Dec-18
Kimmeridge Energy Fund V, L.P.	10,814,357	0.2	-7.2	8.7	7.8	12.6	--	--	11.9	Aug-19
Global Infra Partners IV	3,953,899	0.1	1.5	10.6	8.7	-71.7	--	--	-70.8	Aug-19
Lime Rock New Energy, L.P.	2,898,077	0.1	0.0	-56.2	-25.9	--	--	--	-5.3	Aug-20
Orion Mine Finance Fund III, L.P.	6,931,938	0.2	-3.5	3.6	28.1	--	--	--	7.3	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	5,576,728	0.1	-1.4	47.8	56.0	--	--	--	40.7	Feb-21
Tembo Cap Mining III	2,498,391	0.1	-12.2	-6.7	-6.7	--	--	--	-6.7	Oct-21
Mountain Capital II	1,584,731	0.0	-4.7	12.9	--	--	--	--	12.9	Jan-22
Aether Seed Partners I	232,571	0.0	0.0	--	--	--	--	--	0.0	May-22
Hull Street Energy II	244,332	0.0	0.0	--	--	--	--	--	0.0	Jul-22
Northern Trust Russell 3000	216,142,355	4.9	-4.4	-24.6	-17.6	7.7	8.6	--	9.5	Apr-14
<i>Russell 3000</i>			<i>-4.5</i>	<i>-24.6</i>	<i>-17.6</i>	<i>7.7</i>	<i>8.6</i>	<i>--</i>	<i>9.4</i>	<i>Apr-14</i>

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
High Yield Bonds	86,202,984	2.0	-0.1	-13.5	-12.7	--	--	--	0.6	Jun-20
<i>Bloomberg US Corporate High Yield TR</i>			-0.6	-14.7	-14.1	--	--	--	0.4	Jun-20
<i>eV US High Yield Fixed Inc Net Median</i>			-0.5	-13.5	-12.9	-0.3	1.5	3.6	0.7	Jun-20
<i>eV US High Yield Fixed Inc Net Rank</i>			30	49	47	--	--	--	53	Jun-20
Mellon High Yield Beta	8,418,737	0.2	-0.5	-14.6	-14.1	--	--	--	0.2	Jun-20
<i>Bloomberg US Corporate High Yield TR</i>			-0.6	-14.7	-14.1	--	--	--	0.0	Jun-20
<i>eV US High Yield Fixed Inc Net Median</i>			-0.5	-13.5	-12.9	-0.3	1.5	3.6	0.3	Jun-20
<i>eV US High Yield Fixed Inc Net Rank</i>			53	73	76	--	--	--	54	Jun-20
Columbia High Yield Fixed Income	77,784,246	1.8	-0.1	-13.4	-12.6	--	--	--	-5.2	Dec-20
<i>Bloomberg US Corporate High Yield TR</i>			-0.6	-14.7	-14.1	--	--	--	-6.0	Dec-20
<i>eV US High Yield Fixed Inc Net Median</i>			-0.5	-13.5	-12.9	-0.3	1.5	3.6	-5.3	Dec-20
<i>eV US High Yield Fixed Inc Net Rank</i>			29	46	44	--	--	--	47	Dec-20
Emerging Market Debt	90,044,978	2.1	-0.3	2.4	3.1	6.4	5.3	--	2.8	Jan-13
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			-4.6	-21.3	-22.5	-7.1	-3.2	--	-1.0	Jan-13
<i>eV All Emg Mkts Fixed Inc Net Median</i>			-4.1	-19.0	-20.3	-5.6	-2.5	0.4	0.0	Jan-13
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			2	1	1	1	1	--	2	Jan-13
Wellington Iguazu Partners LP Fund	79,433,951	1.8	0.2	13.6	16.1	12.4	10.5	--	9.0	Feb-14
<i>50% JPM EMBI GD + 50% JPM GBI EM GD</i>			-4.6	-21.3	-22.5	-7.1	-3.2	--	0.0	Feb-14
<i>eV All Emg Mkts Fixed Inc Net Median</i>			-4.1	-19.0	-20.3	-5.6	-2.5	0.4	0.9	Feb-14
<i>eV All Emg Mkts Fixed Inc Net Rank</i>			2	1	1	1	1	--	1	Feb-14

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Payden EMD Blended Currency	10,611,027	0.2	-3.9	-22.0	-23.3	--	--	--	-15.7	Dec-20
50% JPM EMBI GD / 50% JPM GBI-EM			-4.6	-21.3	-22.5	--	--	--	-15.5	Dec-20
eV Emg Mkts Fixed Inc - Blended Currency Net Median			-4.1	-20.6	-22.0	-5.7	-2.7	-0.1	-14.5	Dec-20
eV Emg Mkts Fixed Inc - Blended Currency Net Rank			45	72	74	--	--	--	78	Dec-20
Low Beta	804,201,121	18.3	-0.1	3.1	4.1	3.6	3.4	--	2.6	Jul-15
Low Beta Benchmark			-2.0	-2.2	-2.2	0.2	0.7	--	0.5	Jul-15
Immunized Cash Flows	443,011,946	10.1	-2.7	-5.6	-6.1	-0.8	--	--	0.5	Oct-18
Immunized Cash Flow Benchmark			-2.7	-5.6	-6.1	-0.8	--	--	0.5	Oct-18
Insight Immunized Cash Flow	443,011,946	10.1	-2.7	-5.6	-6.1	-0.8	--	--	-0.5	Jun-19
Bloomberg US Govt/Credit 1-3 Yr. TR			-1.5	-4.5	-5.1	-0.4	--	--	0.0	Jun-19
Market Neutral Strategies	149,729,723	3.4	7.3	27.5	32.0	15.5	11.1	--	6.7	Nov-12
Market Neutral Strategies Benchmark			0.9	1.6	1.7	1.0	1.2	--	1.2	Nov-12
Relative Value	149,729,723	3.4	7.3	27.5	32.0	15.3	11.7	--	8.8	Jul-15
HFRI Relative Value (Total) Index			0.0	-2.1	-1.9	3.5	3.3	--	3.5	Jul-15
Relative Value Arbitrage MStar MF Median			0.2	-5.2	-5.0	2.8	2.8	2.7	2.8	Jul-15
Relative Value Arbitrage MStar MF Rank			1	1	1	1	1	--	1	Jul-15
Pine River Fund, Ltd	292,158	0.0	7.1	-6.3	-2.3	5.4	5.8	--	4.2	Jan-13
HFRI Relative Value (Total) Index			0.0	-2.1	-1.9	3.5	3.3	--	4.0	Jan-13
DE Shaw Composite Fund, LLC	69,656,796	1.6	5.9	21.5	29.1	21.5	16.9	--	14.4	Apr-13
HFRI Fund Weighted Composite Index			-0.7	-6.3	-5.9	6.1	4.5	--	4.3	Apr-13

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	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Hudson Bay	14,711,171	0.3	4.9	8.2	10.1	12.7	10.5	--	10.2	Aug-17
<i>HFRI Relative Value (Total) Index</i>			0.0	-2.1	-1.9	3.5	3.3	--	3.3	Aug-17
Crabel Advanced Trend	65,069,598	1.5	9.5	38.4	40.0	--	--	--	25.1	Jun-21
<i>Barclay CTA Index</i>			1.2	9.5	9.6	--	--	--	8.1	Jun-21
Cash	120,713,964	2.8	0.4	0.6	0.6	0.7	1.2	0.7	7.5	Jul-02
<i>ICE BofA 91 Days T-Bills TR</i>			0.5	0.6	0.6	0.6	1.1	0.7	1.3	Jul-02
Short Term IG Bonds	90,745,488	2.1	0.5	--	--	--	--	--	--	May-22
<i>ICE BofA 3M US Treasury TR USD</i>			0.5	--	--	--	--	--	--	May-22
Blackrock 3-Month T-Bill	90,745,488	2.1	0.5	--	--	--	--	--	0.6	May-22
<i>ICE BofA 3M US Treasury TR USD</i>			0.5	--	--	--	--	--	0.6	May-22
Other	567,488,283	12.9	-0.7	0.0	1.3	0.5	1.6	--	1.9	Jul-15
<i>Other Benchmark</i>			-1.4	-2.0	-0.3	0.0	1.0	--	1.5	Jul-15
Core Real Estate	225,937,006	5.1	7.2	26.0	32.4	13.6	10.9	--	10.1	Jul-15
<i>Core Real Estate Benchmark</i>			4.5	20.6	28.3	11.3	9.2	--	9.0	Jul-15
BlackRock Core Property Fund	59,010,325	1.3	8.5	29.7	35.5	14.6	--	--	12.6	Feb-19
<i>Core Real Estate Benchmark 2</i>			4.5	20.6	28.3	11.3	--	--	9.9	Feb-19
Clarion Lion Properties Fund	108,686,545	2.5	7.2	23.3	30.6	13.2	--	--	12.2	Mar-19
<i>Core Real Estate Benchmark 2</i>			4.5	20.6	28.3	11.3	--	--	10.2	Mar-19
Clarion Lion Industrial Trust	24,349,683	0.6	7.3	31.6	--	--	--	--	31.6	Jan-22
<i>Core Real Estate Benchmark 2</i>			4.5	20.6	--	--	--	--	20.6	Jan-22

Total Fund | As of September 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
TA Realty Core Property Fund	33,890,453	0.8	4.9	23.4	--	--	--	--	23.4	Jan-22
<i>Core Real Estate Benchmark 2</i>			4.5	20.6	--	--	--	--	20.6	Jan-22
TIPS	88,291,162	2.0	-2.7	-3.9	-2.8	2.5	--	--	2.7	Oct-18
<i>Bloomberg US Treasury TIPS 0-5 Yr TR</i>			-2.6	-4.0	-2.9	2.4	--	--	2.7	Oct-18
Northern Trust 0-5 Year TIPS	88,291,162	2.0	-2.7	-3.9	-2.8	2.5	--	--	2.7	Oct-18
<i>BBg U.S. TIPS 0-5 Years</i>			-2.6	-4.0	-2.9	2.4	--	--	2.7	Oct-18
Investment Grade Bonds	190,407,178	4.3	-4.7	-14.3	-14.3	--	--	--	-5.2	May-20
<i>Custom IG Bonds Benchmark</i>			-4.9	-13.6	-13.8	--	--	--	-5.8	May-20
Voya Securitized Credit	38,608,440	0.9	-4.0	-14.5	-14.1	--	--	--	-2.6	Apr-20
<i>Bloomberg US Securitized MBS ABS CMBS TR</i>			-5.2	-13.4	-13.8	--	--	--	-5.9	Apr-20
Invesco Core Bonds	151,798,738	3.5	-4.9	-15.3	-15.3	--	--	--	-9.5	Feb-21
<i>Bloomberg US Aggregate TR</i>			-4.8	-14.6	-14.6	--	--	--	-9.1	Feb-21
Long-Term Government Bonds	62,852,937	1.4	-9.6	-28.6	-26.6	--	--	--	-16.2	May-20
<i>Long-Term Government Bonds Benchmark</i>			-9.6	-28.8	-26.6	--	--	--	-16.2	May-20
BlackRock Long-Term Gov Bonds	62,852,937	1.4	-9.6	-28.6	-26.6	--	--	--	-16.2	May-20
<i>Bloomberg US Govt Long TR</i>			-9.6	-28.8	-26.6	--	--	--	-16.2	May-20
Overlay	7,122,423	0.2								
Russell Overlay	6,911,256	0.2								

Cash Flow Summary						
Quarter Ending September 30, 2022						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
57 Stars Global Opportunity	\$28,824,736	\$0	-\$1,291,170	-\$1,291,170	-\$885,998	\$26,647,568
Aether Seed Partners I	\$232,571	\$0	\$0	\$0	\$0	\$232,571
AIGGRE Fund IV	\$9,593,383	\$943,531	-\$1,412,299	-\$468,768	\$3,785,624	\$12,910,239
Angelo Gordon CS II	\$4,758,870	\$4,206,237	-\$322,307	\$3,883,930	-\$298,024	\$8,344,776
Arbour Lane COF III	\$5,927,590	\$2,914,479	\$0	\$2,914,479	-\$669,708	\$8,172,361
Arbour Lane Credit Opportunity Fund II, L.P.	\$16,148,643	\$41,247	\$0	\$41,247	-\$202,699	\$15,987,191
Artisan Global Opportunities	\$197,658,756	\$0	\$0	\$0	-\$7,398,628	\$190,260,128
Artisan Global Value	\$252,694,088	\$0	\$0	\$0	-\$23,714,663	\$228,979,425
Blackrock 3-Month T-Bill	\$300,252,320	\$0	-\$210,000,000	-\$210,000,000	\$493,168	\$90,745,488
BlackRock Core Property Fund	\$113,493,111	\$0	-\$59,080,912	-\$59,080,912	\$4,598,127	\$59,010,325
BlackRock Long-Term Gov Bonds	\$69,519,878	\$0	\$0	\$0	-\$6,666,941	\$62,852,937
Blackstone/GSO Cap Partners	\$3,799,965	\$0	\$0	\$0	-\$378,529	\$3,421,436
Bow Capital Fund II	\$1,113,918	\$314,119	\$0	\$314,119	-\$80,073	\$1,347,964
Brookfield Infrastructure III	\$18,579,269	\$0	-\$107,499	-\$107,499	\$89,059	\$18,560,829
Brookfield SREP I	\$3,542,917	\$0	-\$188,572	-\$188,572	\$102,479	\$3,456,824
Brookfield SREP II	\$19,763,611	\$0	-\$632,745	-\$632,745	\$769,372	\$19,900,238
BSF II	\$0	\$625,000	\$0	\$625,000	\$0	\$625,000
Canvas III	\$2,492,530	\$253,975	\$0	\$253,975	-\$19,826	\$2,726,679
Cash	\$58,521,738	\$640,253,892	-\$578,565,354	\$61,688,539	\$503,688	\$120,713,964
CCMP Capital Investors III, LP	\$9,577,767	\$493,851	-\$733,439	-\$239,588	-\$2,468,899	\$6,869,280
Centerbridge RE II	\$0	\$2,265,302	\$0	\$2,265,302	-\$305,518	\$1,959,784
Clarion Lion Industrial Trust	\$22,688,210	\$0	\$0	\$0	\$1,661,473	\$24,349,683

Total Fund | As of September 30, 2022

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Clarion Lion Properties Fund	\$102,107,057	\$0	-\$683,597	-\$683,597	\$7,263,085	\$108,686,545
Columbia High Yield Fixed Income	\$77,830,643	\$9,068	-\$9,068	\$0	-\$46,397	\$77,784,246
Cove Street Small Cap Value	\$32,267,775	\$0	\$0	\$0	-\$1,506,610	\$30,761,164
Crabel Advanced Trend	\$59,432,104	\$0	\$0	\$0	\$5,637,494	\$65,069,598
Crescent Mezzanine Partners VI	\$2,771,862	\$37,351	\$0	\$37,351	-\$186,756	\$2,622,457
Crestline Co-Investment II	\$5,644,180	\$20,821	\$0	\$20,821	-\$88,274	\$5,576,728
Crestline Portfolio Fin II	\$4,029,228	\$0	\$0	\$0	\$100,259	\$4,129,487
Crestline Portfolio Financing	\$12,755,999	\$524,747	-\$1,902,206	-\$1,377,459	\$336,481	\$11,715,020
Cross Ocean USD ESS Fund I, LP	\$6,875,920	\$0	\$0	\$0	\$64,545	\$6,940,465
Cross Ocean USD ESS Fund II LP	\$16,032,178	\$15,837	-\$2,945,334	-\$2,929,497	-\$105,580	\$12,997,101
Cross Ocean USD ESS Fund III, LP	\$39,621,923	\$0	-\$1,494,006	-\$1,494,006	\$312,019	\$38,439,936
DE Shaw Composite Fund, LLC	\$65,778,474	\$0	\$0	\$0	\$3,878,322	\$69,656,796
Dimensional Fund Adv EM Value	\$51,997,686	\$0	\$0	\$0	-\$5,097,375	\$46,900,311
DRA Growth & Income Fund IX	\$14,920,256	\$0	-\$720,802	-\$720,802	\$576,106	\$14,775,560
DRA Growth and Income Fund X, LLC	\$10,645,290	\$2,709,474	-\$1,298,692	\$1,410,782	\$180,560	\$12,236,632
Eagle Point Defensive II	--	\$2,500,000	\$0	\$2,500,000	\$0	\$2,500,000
Eagle Point Defensive Income Fund	\$11,089,863	\$753,812	-\$139,479	\$614,334	-\$867,210	\$10,836,987
Exeter Industrial Value Fund V	\$11,022,991	\$0	\$0	\$0	\$94,044	\$11,117,035
First Eagle International Equity	\$74,939,900	\$0	\$0	\$0	-\$6,098,665	\$68,841,236
Francisco Partners	\$19,546,988	\$1,123,730	\$0	\$1,123,730	-\$5,618,651	\$15,052,067
GCP SecureSpace Property Partners, L.P	--	\$4,274,136	\$0	\$4,274,136	-\$55,291	\$4,218,845
GEM Realty Fund VI	\$7,287,773	\$750,000	-\$406,875	\$343,125	\$152,278	\$7,783,176
Global Infra Part III-A/B, LP	\$22,163,023	\$0	-\$670,764	-\$670,764	\$639,310	\$22,131,569
Global Infra Partners IV	\$3,198,165	\$708,208	\$0	\$708,208	\$47,526	\$3,953,899
GQG Global Emerging Markets	\$43,930,348	\$0	\$0	\$0	-\$2,905,878	\$41,024,470

Total Fund | As of September 30, 2022

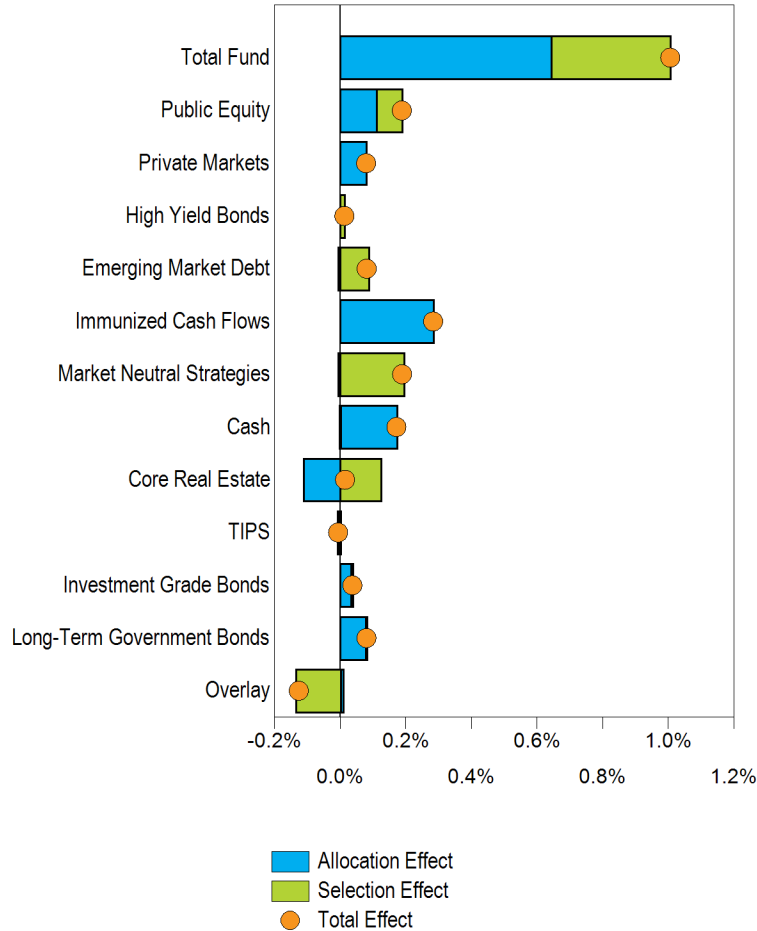
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
HarbourVest Partners VII	\$119,301	\$0	\$0	\$0	\$4,916	\$124,217
HIG Realty Partners IV	\$2,019,054	\$3,593,802	\$0	\$3,593,802	\$189,429	\$5,802,285
HPS Special Situations Opportunity	\$8,037,363	\$978,802	\$0	\$978,802	\$488,398	\$9,504,563
Hudson Bay	\$14,025,609	\$0	\$0	\$0	\$685,562	\$14,711,171
Hull Street Energy II	\$0	\$244,332	\$0	\$244,332	\$0	\$244,332
Innovation Endeavors III	\$12,092,066	\$49,093	\$0	\$49,093	-\$245,464	\$11,895,695
Innovation Endeavors IV	\$1,034,645	\$315,000	\$0	\$315,000	-\$25,093	\$1,324,552
Insight Immunized Cash Flow	\$170,490,665	\$296,000,000	-\$10,990,748	\$285,009,252	-\$12,487,971	\$443,011,946
Invesco Alpha II	\$5,438,994	\$750,270	\$0	\$750,270	\$306,237	\$6,495,501
Invesco Core Bonds	\$159,618,835	\$1,965	-\$1,965	\$0	-\$7,820,097	\$151,798,738
Kimmeridge Energy Fund V, L.P.	\$8,217,022	\$3,374,946	\$0	\$3,374,946	-\$777,611	\$10,814,357
Kotak India Midcap	\$13,295,554	\$0	\$0	\$0	\$1,098,328	\$14,393,882
KSL Capital Partners IV, LP	\$22,159,626	\$0	-\$851,565	-\$851,565	\$266,555	\$21,574,616
Lerer Hippeau VIII	--	\$508,412	\$0	\$508,412	\$0	\$508,412
Lime Rock New Energy, L.P.	\$1,969,385	\$928,692	\$0	\$928,692	\$0	\$2,898,077
Lime Rock Partners VIII	\$6,739,607	\$0	-\$210,788	-\$210,788	\$206,307	\$6,735,126
Medley Opportunity Fund II LP	\$4,378,782	\$0	\$0	\$0	\$0	\$4,378,782
Mellon High Yield Beta	\$8,462,705	\$0	\$0	\$0	-\$43,967	\$8,418,737
Morgan Stanley International Equity	\$57,238,890	\$0	\$0	\$0	-\$5,546,732	\$51,692,158
Mountain Capital II	\$1,850,276	\$56,687	-\$213,652	-\$156,965	-\$108,580	\$1,584,731
Next Play Capital III	\$4,017,306	\$0	\$0	\$0	-\$111,948	\$3,905,359
Northern Trust 0-5 Year TIPS	\$90,709,638	\$0	\$0	\$0	-\$2,418,476	\$88,291,162
Northern Trust MSCI EM IMI	\$38,115,265	\$25,000,000	-\$5,000,000	\$20,000,000	-\$6,472,214	\$51,643,051
Northern Trust MSCI World ex US	\$162,025,017	\$40,000,000	\$0	\$40,000,000	-\$19,677,406	\$182,347,611
Northern Trust Russell 3000	\$275,835,707	\$0	-\$50,000,000	-\$50,000,000	-\$9,693,352	\$216,142,355

Total Fund | As of September 30, 2022

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Northern Trust Russell 3000	\$710,256,043	\$88,000,000	-\$70,000,000	\$18,000,000	-\$29,158,646	\$699,097,397
Northgate Venture Partners IX LP	\$9,095,200	\$400,000	\$0	\$400,000	-\$412,962	\$9,082,238
Oberweis Intl Opportunities	\$52,183,000	\$0	\$0	\$0	-\$5,835,384	\$46,347,616
Octagon CLO Opp Fund IV	\$7,352,066	\$7,350,086	\$0	\$7,350,086	\$15,579	\$14,717,731
Orion Euro Real Estate IV LP	\$3,403,971	\$0	\$0	\$0	-\$218,409	\$3,185,562
Orion Mine Finance Fund III, L.P.	\$6,458,024	\$889,730	\$0	\$889,730	-\$415,816	\$6,931,938
Pantheon USA Fund VI, LP	\$413,249	\$0	\$0	\$0	-\$7,571	\$405,678
Park Square Credit Opp II, LP	\$118,263	\$0	\$0	\$0	-\$716	\$117,547
Payden EMD Blended Currency	\$11,041,887	\$0	\$0	\$0	-\$430,860	\$10,611,027
PE Strategic Partnership, LP	\$294,685,049	\$6,957,087	\$0	\$6,957,087	-\$9,312,518	\$292,329,618
Pine River Fund, Ltd	\$272,732	\$0	\$0	\$0	\$19,426	\$292,158
Portfolio Advisors Private Eq	\$2,948,013	\$0	\$0	\$0	\$0	\$2,948,013
Praedium X MidInc	\$3,940,106	\$0	-\$49,444	-\$49,444	\$238,647	\$4,129,309
Real Assets Coinvest I	\$1,799,998	\$0	\$0	\$0	\$0	\$1,799,998
Redwheel Emerging Markets Equity	\$35,692,853	\$0	\$0	\$0	-\$3,938,001	\$31,754,852
Rockpoint Real Estate Fund VI, L.P.	\$9,275,932	\$368,547	-\$166,957	\$201,590	\$219,653	\$9,697,175
Russell Overlay	\$18,961,617	\$0	-\$5,000,000	-\$5,000,000	-\$7,050,361	\$6,911,256
Sculptor Real Estate Fund III	\$2,684,503	\$170,241	-\$288,860	-\$118,619	\$1,783,794	\$4,349,678
Shoreline China Value III, LP	\$7,582,508	\$0	\$0	\$0	-\$85,123	\$7,497,385
SVP Special Situations V	\$5,516,250	\$3,875	-\$3,875	\$0	\$37,362	\$5,553,612
TA Realty Associates Fund X	\$7,036	\$0	\$0	\$0	\$471	\$7,507
TA Realty Core Property Fund	\$30,659,499	\$2,000,000	-\$345,863	\$1,654,137	\$1,576,817	\$33,890,453
TCW/Crescent Mezzanine	\$76,675	\$0	\$0	\$0	-\$5,523	\$71,152
Tembo Cap Mining III	\$2,277,309	\$598,466	\$0	\$598,466	-\$377,384	\$2,498,391
Terminated Manager Assets	\$211,133	\$0	\$0	\$0	\$34	\$211,167

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Tiger Iron SJPF	\$4,282,807	\$862,612	\$0	\$862,612	-\$298,621	\$4,846,798
Top Tier Capital Partners IX	\$7,049,653	\$394,968	\$0	\$394,968	-\$476,257	\$6,968,364
Torchlight Debt Fund VII	\$2,759,251	\$1,800,000	\$0	\$1,800,000	\$108,785	\$4,668,036
Torchlight Debt Opportunity VI	\$25,755,563	\$0	-\$4,165,300	-\$4,165,300	\$619,360	\$22,209,623
TPG Opportunities Partners II	\$642,882	\$0	-\$86,324	-\$86,324	\$31,981	\$588,539
TPG Opportunities Partners III	\$4,379,277	\$101,354	-\$111,908	-\$10,554	-\$506,769	\$3,861,954
Tristan - EPISO III	\$2,722,405	\$0	\$0	\$0	-\$177,145	\$2,545,260
Tristan - EPISO IV	\$17,373,585	\$3	-\$125,447	-\$125,444	-\$827,516	\$16,420,625
Tristan - EPISO V	\$17,821,009	\$523,740	-\$1,437,661	-\$913,921	-\$639,901	\$16,267,187
Voya Securitized Credit	\$40,198,715	\$0	\$0	\$0	-\$1,590,275	\$38,608,440
Warburg Pincus (Europa) XI	\$9,447,140	\$0	\$0	\$0	-\$850,635	\$8,596,505
Wellington Emerging Markets Systematic	\$44,018,881	\$0	-\$113,459	-\$113,459	-\$5,269,167	\$38,636,255
Wellington Iguazu Partners LP Fund	\$79,251,913	\$0	\$0	\$0	\$182,038	\$79,433,951
White Oak Direct Lending	\$36,701,596	\$0	\$0	\$0	-\$773,291	\$35,928,305
Total	\$4,412,282,401	\$1,146,526,453	-\$1,011,769,371	\$136,196,331	-\$155,842,997	\$4,386,635,735

Attribution Effects 3 Months Ending September 30, 2022



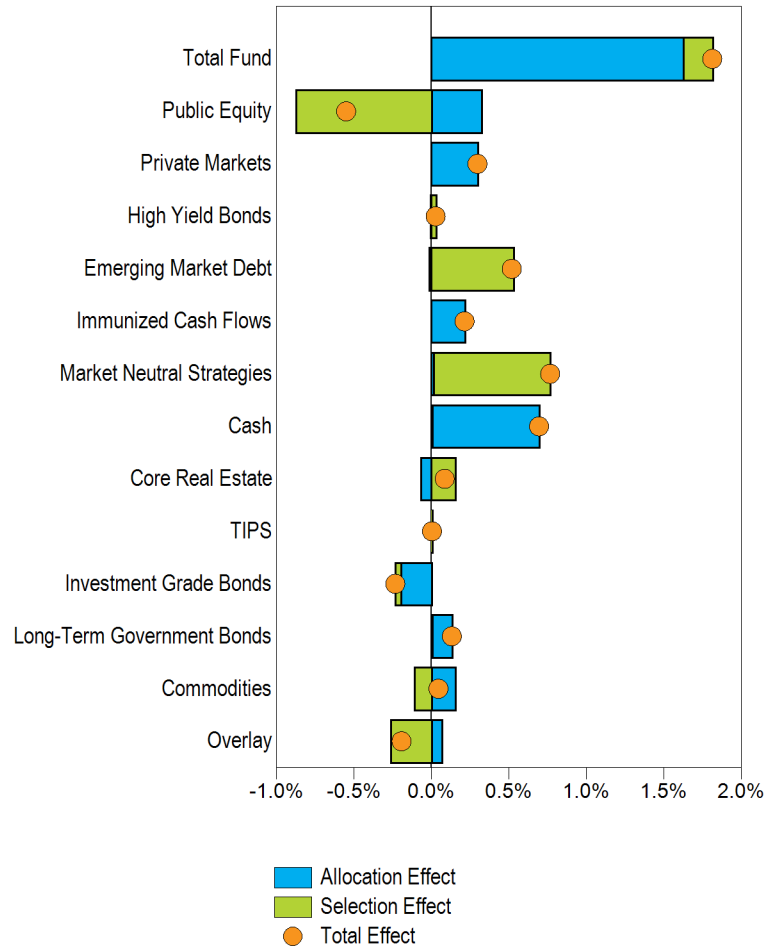
Attribution Summary

3 Months Ending September 30, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	-6.6%	-6.8%	0.2%	0.1%	0.1%	0.2%
Private Markets	-2.0%	-2.0%	0.0%	0.0%	0.1%	0.1%
High Yield Bonds	-0.1%	-0.6%	0.5%	0.0%	0.0%	0.0%
Emerging Market Debt	-0.3%	-4.6%	4.4%	0.1%	0.0%	0.1%
Immunized Cash Flows	-2.7%	-2.7%	0.0%	0.0%	0.3%	0.3%
Market Neutral Strategies	7.3%	0.9%	6.4%	0.2%	0.0%	0.2%
Cash	0.4%	0.5%	0.0%	0.0%	0.2%	0.2%
Core Real Estate	7.2%	4.5%	2.6%	0.1%	-0.1%	0.0%
TIPS	-2.7%	-2.6%	0.0%	0.0%	0.0%	0.0%
Investment Grade Bonds	-4.7%	-4.9%	0.1%	0.0%	0.0%	0.0%
Long-Term Government Bonds	-9.6%	-9.6%	0.0%	0.0%	0.1%	0.1%
Overlay	-49.7%	0.5%	-50.2%	-0.1%	0.0%	-0.1%
Total	-3.4%	-4.3%	0.9%	0.4%	0.6%	1.0%

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.

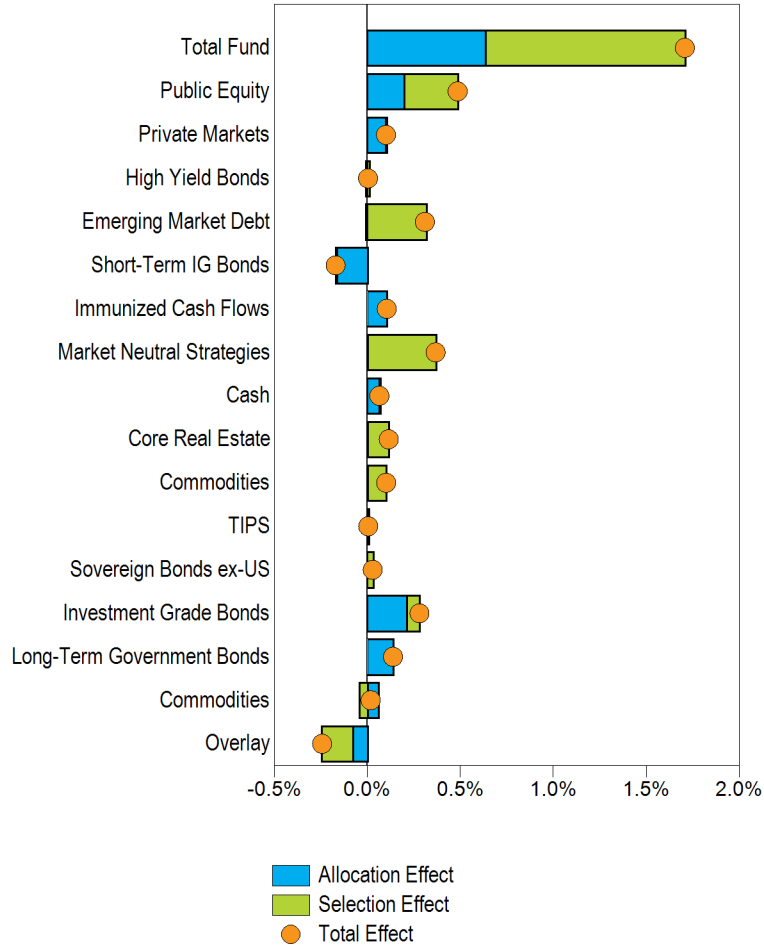
Attribution Effects 1 Year Ending September 30, 2022



Attribution Summary 1 Year Ending September 30, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	-23.3%	-21.6%	-1.7%	-0.9%	0.3%	-0.5%
Private Markets	4.9%	4.9%	0.0%	0.0%	0.3%	0.3%
High Yield Bonds	-12.7%	-14.1%	1.4%	0.0%	0.0%	0.0%
Emerging Market Debt	3.1%	-22.5%	25.6%	0.5%	0.0%	0.5%
Immunized Cash Flows	-6.1%	-6.1%	0.0%	0.0%	0.2%	0.2%
Market Neutral Strategies	32.0%	1.7%	30.3%	0.7%	0.0%	0.8%
Cash	0.6%	0.6%	0.0%	0.0%	0.7%	0.7%
Core Real Estate	32.4%	28.3%	4.0%	0.2%	-0.1%	0.1%
TIPS	-2.8%	-2.9%	0.1%	0.0%	0.0%	0.0%
Investment Grade Bonds	-14.3%	-13.8%	-0.5%	0.0%	-0.2%	-0.2%
Long-Term Government Bonds	-26.6%	-26.6%	0.0%	0.0%	0.1%	0.1%
Commodities	--	--	--	-0.1%	0.2%	0.0%
Overlay	-60.3%	0.6%	-60.9%	-0.3%	0.1%	-0.2%
Total	-9.5%	-11.2%	1.7%	0.2%	1.6%	1.8%

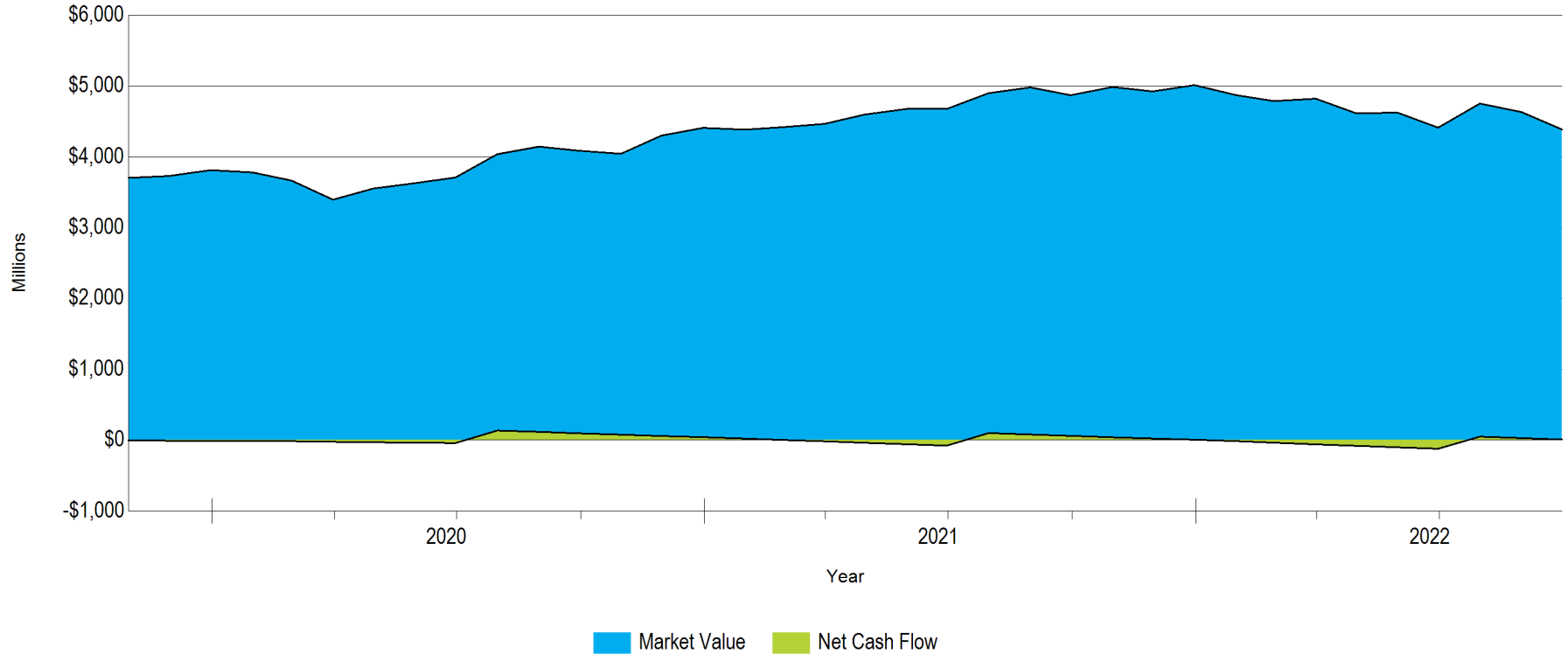
Attribution Effects 3 Years Ending September 30, 2022



Attribution Summary 3 Years Ending September 30, 2022

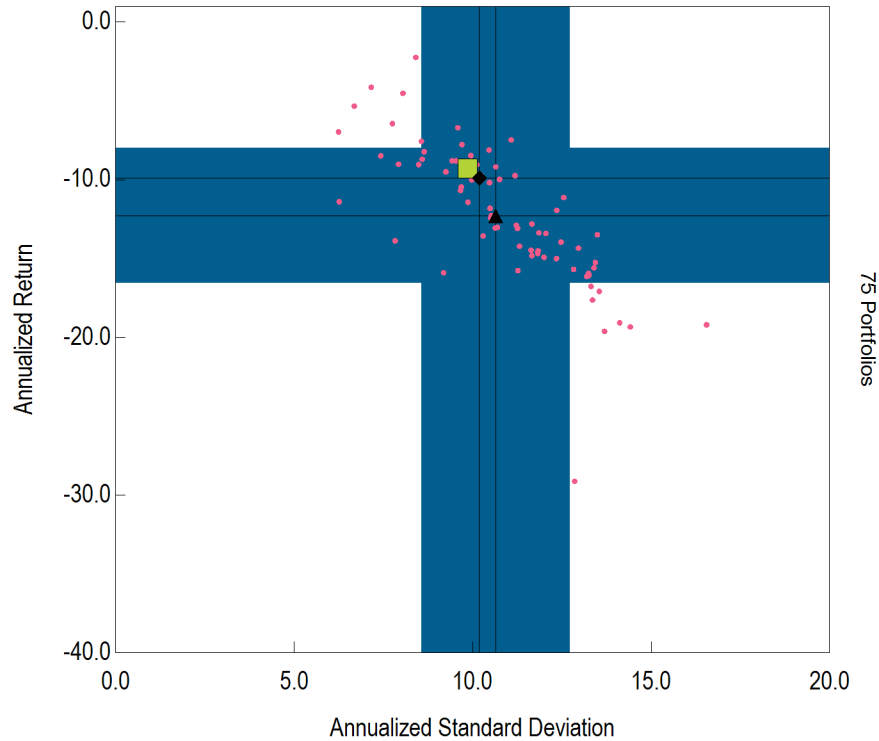
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	3.9%	3.4%	0.5%	0.3%	0.2%	0.5%
Private Markets	13.1%	13.1%	0.0%	0.0%	0.1%	0.1%
High Yield Bonds	0.4%	-0.5%	0.9%	0.0%	0.0%	0.0%
Emerging Market Debt	6.4%	-7.1%	13.4%	0.3%	0.0%	0.3%
Short-Term IG Bonds	1.1%	1.3%	-0.2%	0.0%	-0.2%	-0.2%
Immunized Cash Flows	-0.8%	-0.8%	0.0%	0.0%	0.1%	0.1%
Market Neutral Strategies	15.5%	1.0%	14.5%	0.4%	0.0%	0.4%
Cash	0.7%	0.6%	0.1%	0.0%	0.1%	0.1%
Core Real Estate	13.6%	11.3%	2.4%	0.1%	0.0%	0.1%
Commodities	-2.2%	9.3%	-11.5%	0.1%	0.0%	0.1%
TIPS	2.5%	2.4%	0.1%	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	-4.2%	-4.4%	0.2%	0.1%	0.2%	0.3%
Long-Term Government Bonds	-12.8%	-12.8%	0.0%	0.0%	0.1%	0.1%
Commodities	10.2%	18.9%	-8.7%	0.0%	0.1%	0.0%
Overlay	-23.1%	0.5%	-23.6%	-0.2%	-0.1%	-0.2%
Total	6.2%	4.5%	1.7%	1.1%	0.6%	1.7%

Market Value History
3 Years Ending September 30, 2022



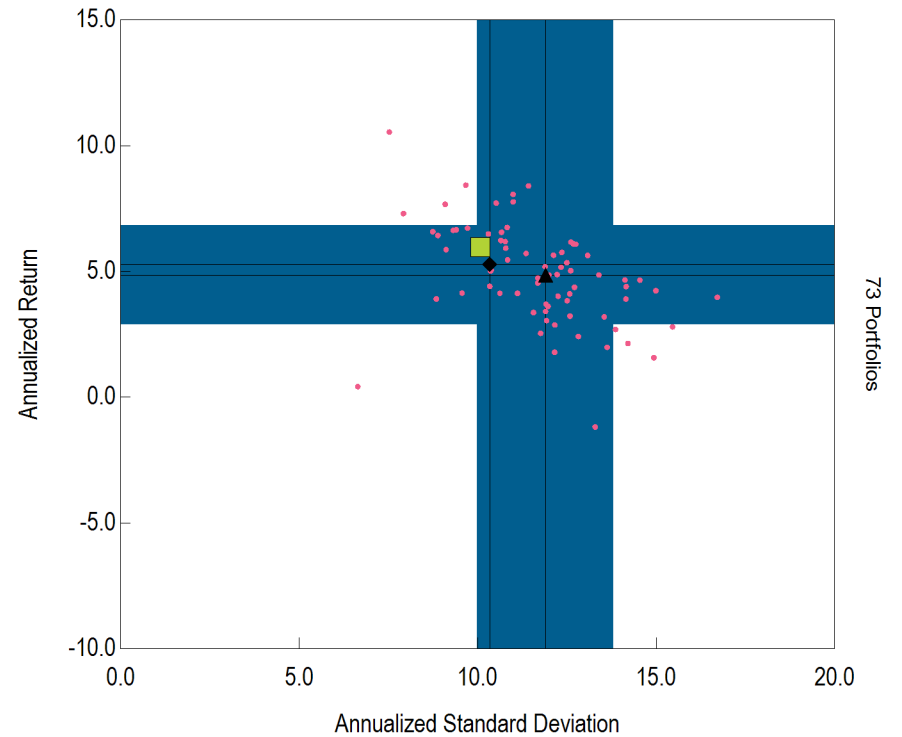
	Third Quarter	Year-To-Date	One Year	Three Years
Beginning Market Value	\$4,412,282,401	\$5,012,674,479	\$4,870,707,176	\$3,647,566,683
Net Cash Flow	\$130,196,331	\$2,386,276	-\$52,280,697	\$7,179,670
Net Investment Change	-\$155,842,997	-\$628,425,020	-\$431,790,744	\$731,889,382
Ending Market Value	\$4,386,635,735	\$4,386,635,735	\$4,386,635,735	\$4,386,635,735

Annualized Return vs. Annualized Standard Deviation
1 Year Ending September 30, 2022



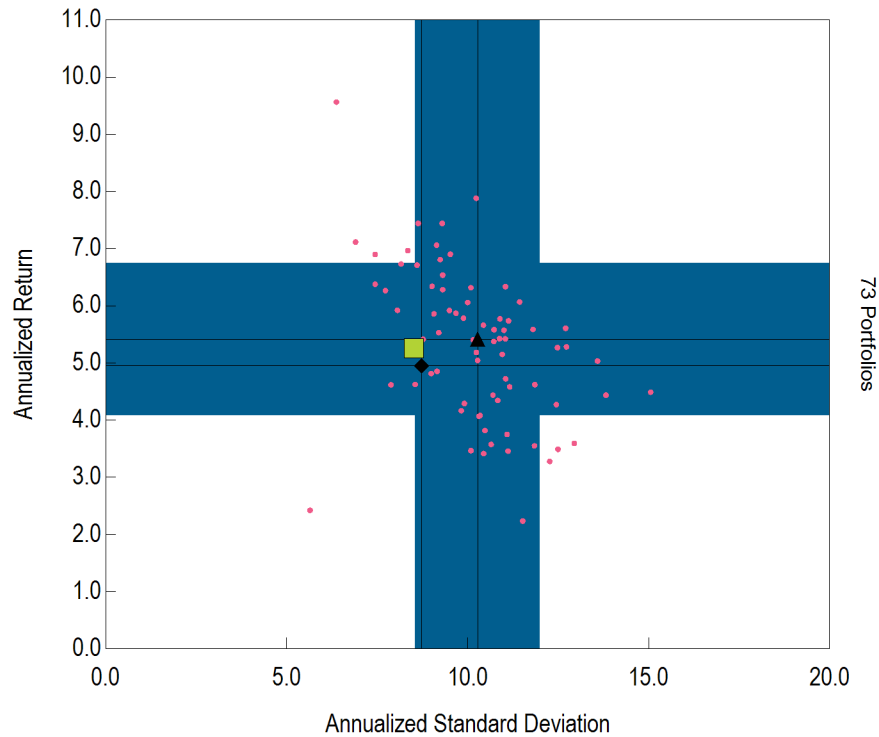
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2022



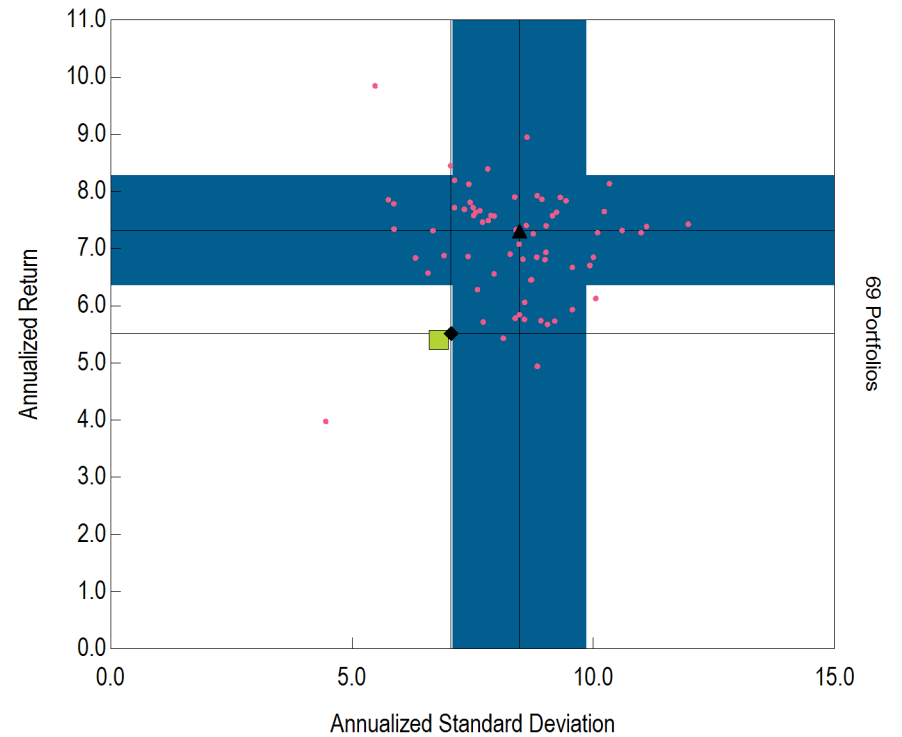
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2022



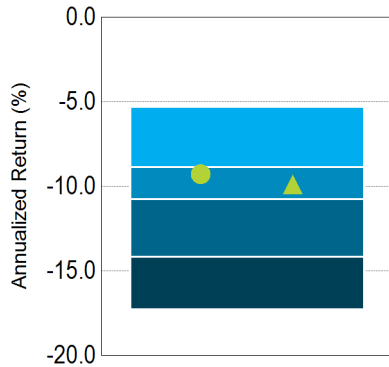
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation
10 Years Ending September 30, 2022



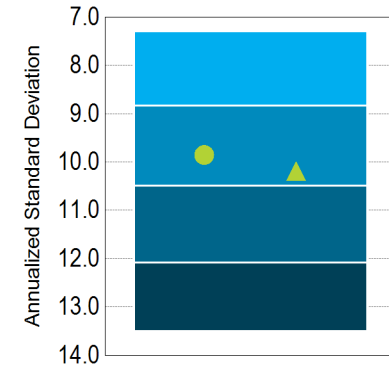
- Total Fund
- ◆ Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

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



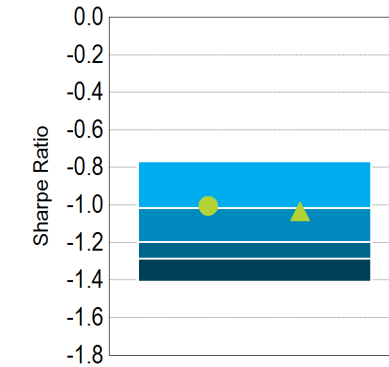
● Total Fund	
Value	-9.3
Rank	34
▲ Policy Benchmark	
Value	-9.9
Rank	41
Universe	
5th %tile	-5.3
25th %tile	-8.8
Median	-10.7
75th %tile	-14.1
95th %tile	-17.3

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



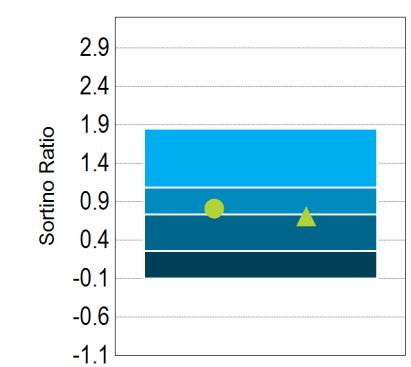
● Total Fund	
Value	9.9
Rank	42
▲ Policy Benchmark	
Value	10.2
Rank	48
Universe	
5th %tile	7.3
25th %tile	8.8
Median	10.5
75th %tile	12.1
95th %tile	13.5

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



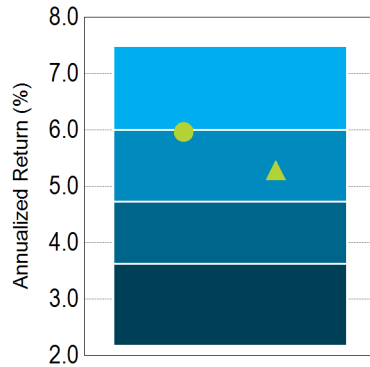
● Total Fund	
Value	-1.0
Rank	24
▲ Policy Benchmark	
Value	-1.0
Rank	31
Universe	
5th %tile	-0.8
25th %tile	-1.0
Median	-1.2
75th %tile	-1.3
95th %tile	-1.4

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



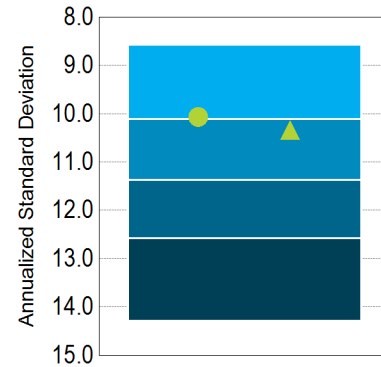
● Total Fund	
Value	0.8
Rank	43
▲ Policy Benchmark	
Value	0.7
Rank	51
Universe	
5th %tile	1.8
25th %tile	1.1
Median	0.7
75th %tile	0.3
95th %tile	-0.1

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



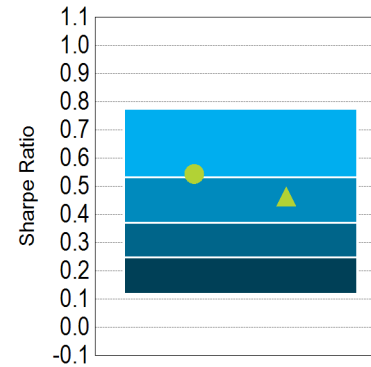
● Total Fund	
Value	6.0
Rank	26
▲ Policy Benchmark	
Value	5.3
Rank	42
Universe	
5th %tile	7.5
25th %tile	6.0
Median	4.7
75th %tile	3.6
95th %tile	2.2

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



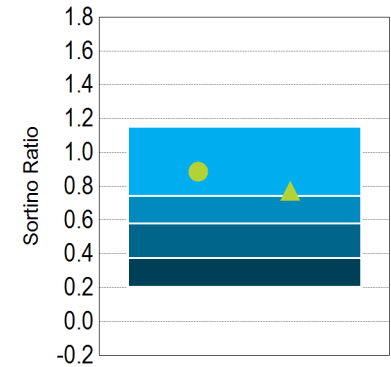
● Total Fund	
Value	10.1
Rank	25
▲ Policy Benchmark	
Value	10.3
Rank	31
Universe	
5th %tile	8.6
25th %tile	10.1
Median	11.4
75th %tile	12.6
95th %tile	14.3

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



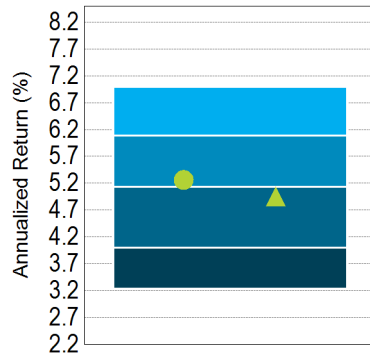
● Total Fund	
Value	0.5
Rank	25
▲ Policy Benchmark	
Value	0.5
Rank	33
Universe	
5th %tile	0.8
25th %tile	0.5
Median	0.4
75th %tile	0.2
95th %tile	0.1

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



● Total Fund	
Value	0.9
Rank	18
▲ Policy Benchmark	
Value	0.8
Rank	25
Universe	
5th %tile	1.2
25th %tile	0.7
Median	0.6
75th %tile	0.4
95th %tile	0.2

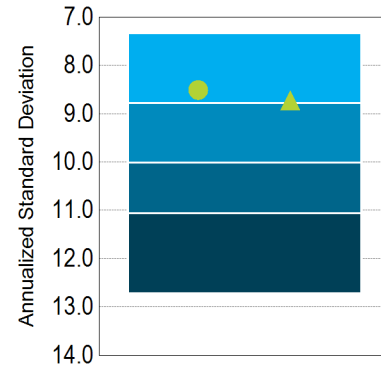
Annualized Return (%) vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	5.3
Rank	45
▲ Policy Benchmark	
Value	4.9
Rank	58

Universe	
5th %tile	7.0
25th %tile	6.1
Median	5.1
75th %tile	4.0
95th %tile	3.2

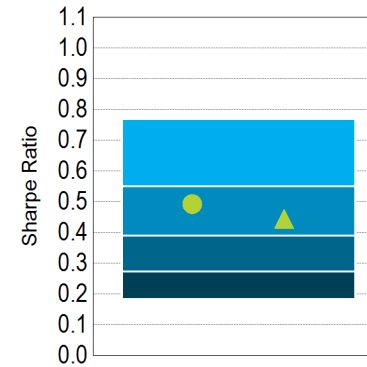
Annualized Standard Deviation vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	8.5
Rank	22
▲ Policy Benchmark	
Value	8.7
Rank	25

Universe	
5th %tile	7.3
25th %tile	8.8
Median	10.0
75th %tile	11.0
95th %tile	12.7

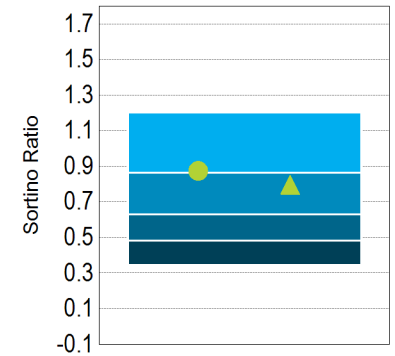
Sharpe Ratio vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.5
Rank	32
▲ Policy Benchmark	
Value	0.4
Rank	43

Universe	
5th %tile	0.8
25th %tile	0.6
Median	0.4
75th %tile	0.3
95th %tile	0.2

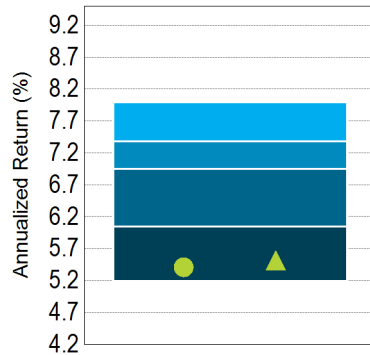
Sortino Ratio vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	0.9
Rank	23
▲ Policy Benchmark	
Value	0.8
Rank	33

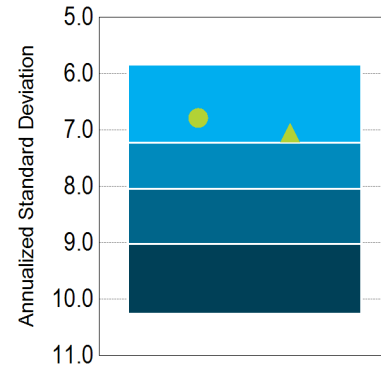
Universe	
5th %tile	1.2
25th %tile	0.9
Median	0.6
75th %tile	0.5
95th %tile	0.3

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



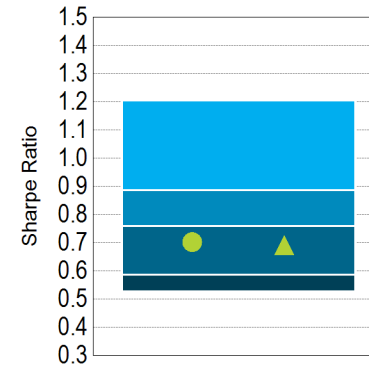
● Total Fund	
Value	5.4
Rank	92
▲ Policy Benchmark	
Value	5.5
Rank	91
Universe	
5th %tile	8.0
25th %tile	7.4
Median	7.0
75th %tile	6.1
95th %tile	5.2

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



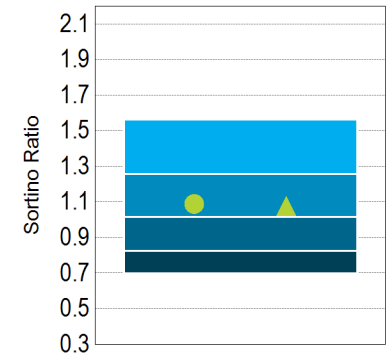
● Total Fund	
Value	6.8
Rank	16
▲ Policy Benchmark	
Value	7.1
Rank	22
Universe	
5th %tile	5.8
25th %tile	7.2
Median	8.0
75th %tile	9.0
95th %tile	10.3

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

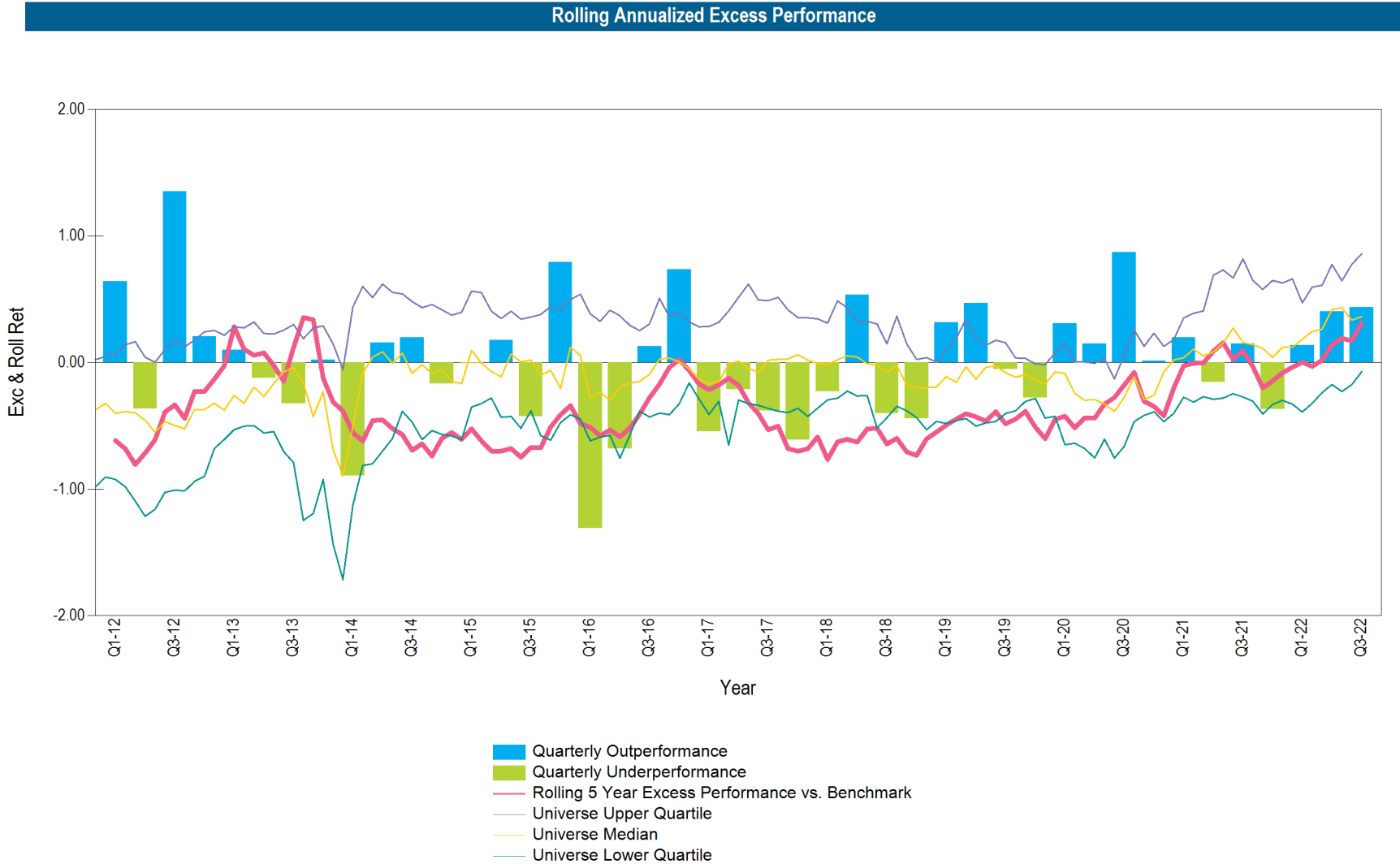


● Total Fund	
Value	0.7
Rank	61
▲ Policy Benchmark	
Value	0.7
Rank	66
Universe	
5th %tile	1.2
25th %tile	0.9
Median	0.8
75th %tile	0.6
95th %tile	0.5

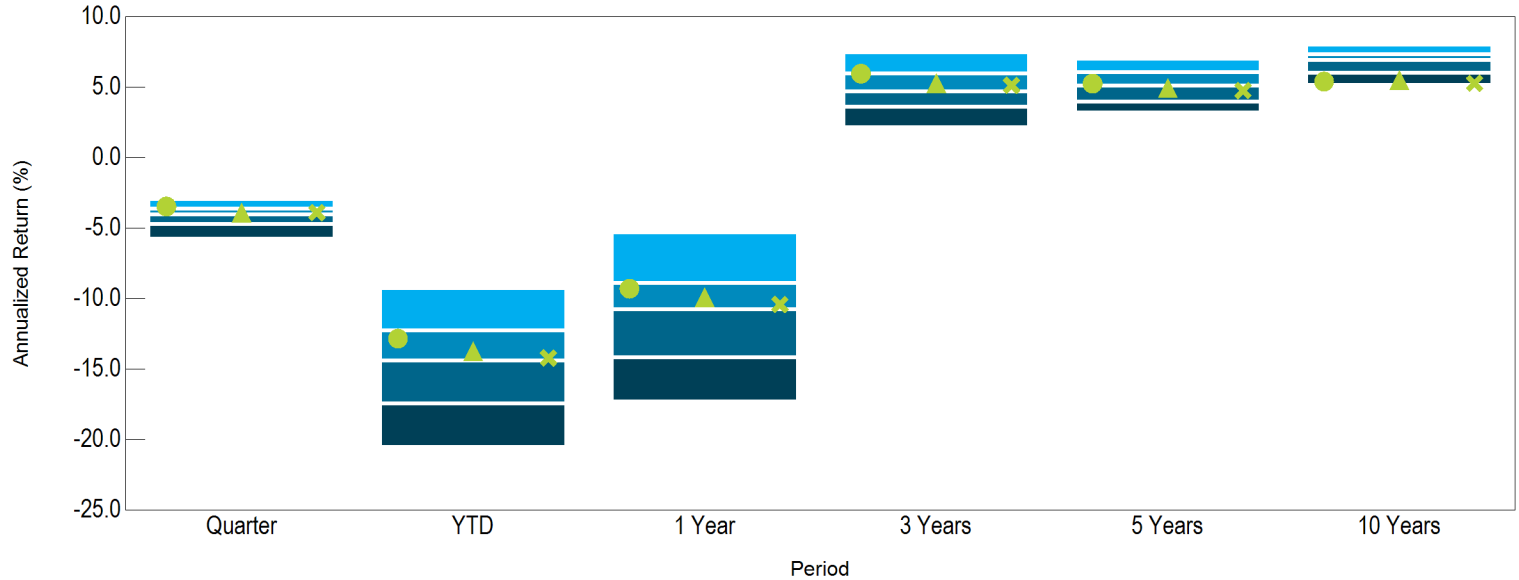
Sortino Ratio vs. InvMetrics Public DB > \$1B Net



● Total Fund	
Value	1.1
Rank	43
▲ Policy Benchmark	
Value	1.1
Rank	44
Universe	
5th %tile	1.6
25th %tile	1.3
Median	1.0
75th %tile	0.8
95th %tile	0.7



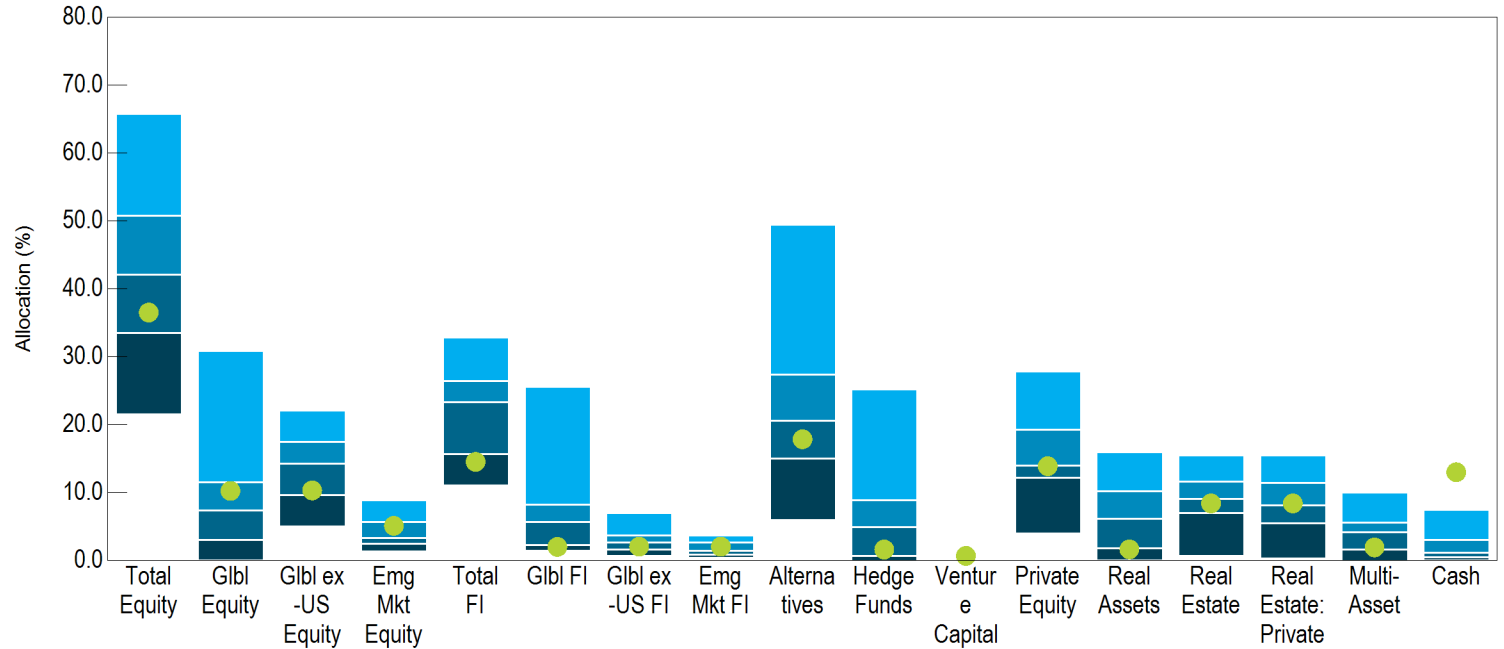
InvMetrics Public DB > \$1B Net Return Comparison Ending September 30, 2022



	Return (Rank)					
	Quarter	YTD	1 Year	3 Years	5 Years	10 Years
5th Percentile	-2.9	-9.3	-5.3	7.5	7.0	8.0
25th Percentile	-3.6	-12.2	-8.8	6.0	6.1	7.4
Median	-4.0	-14.4	-10.7	4.7	5.1	7.0
75th Percentile	-4.7	-17.4	-14.1	3.6	4.0	6.1
95th Percentile	-5.7	-20.5	-17.3	2.2	3.2	5.2
# of Portfolios	59	59	59	57	57	54
● Total Fund	-3.5 (22)	-12.8 (30)	-9.3 (34)	6.0 (26)	5.3 (45)	5.4 (92)
▲ Policy Benchmark	-3.9 (47)	-13.7 (41)	-9.9 (41)	5.3 (42)	4.9 (58)	5.5 (91)
✕ Investable Benchmark Portfolio	-3.9 (47)	-14.2 (48)	-10.4 (49)	5.1 (43)	4.8 (62)	5.3 (93)

¹ Fiscal Year begins July 1.

Total Plan Allocation vs. InvMetrics Public DB > \$1B Net
As of September 30, 2022



	Allocation																	
5th Percentile	65.8	30.9	22.1	8.8	32.8	25.6	7.0	3.7	49.4	25.2	0.0	27.9	16.0	15.5	15.5	10.0	7.5	--
25th Percentile	50.8	11.7	17.6	5.8	26.6	8.4	3.8	2.7	27.5	9.0	0.0	19.4	10.3	11.7	11.6	5.7	3.2	--
Median	42.2	7.5	14.4	3.4	23.4	5.8	2.8	1.5	20.7	5.0	0.0	14.1	6.2	9.2	8.2	4.2	1.3	--
75th Percentile	33.6	3.2	9.8	2.6	15.8	2.4	1.7	0.9	15.2	0.8	0.0	12.3	1.9	7.1	5.6	1.7	0.6	--
95th Percentile	21.6	0.1	5.1	1.4	11.2	1.5	0.8	0.5	6.1	0.0	0.0	4.0	0.1	0.8	0.4	0.0	0.1	--
# of Portfolios	58	24	55	35	58	17	24	11	53	32	4	44	38	51	49	20	56	--
● Total Fund Rank	36.5	10.3	10.3	5.1	14.5	2.0	2.1	2.1	17.9	1.6	0.7	13.9	1.6	8.4	8.4	1.9	13.0	--
	69	33	74	29	83	85	66	44	64	70	1	52	76	60	49	74	1	

Major Benchmark Returns						
Periods Ending September 30, 2022						
Name	Q3-22	1 Yr	3 Yrs	5 Yrs	10 Yrs	
US Equity						
Russell 3000	-4.5	-17.6	7.7	8.6	11.4	
S&P 500	-4.9	-15.5	8.2	9.2	11.7	
Russell 1000	-4.6	-17.2	7.9	9.0	11.6	
Russell 1000 Growth	-3.6	-22.6	10.7	12.2	13.7	
Russell 1000 Value	-5.6	-11.4	4.4	5.3	9.2	
Russell MidCap	-3.4	-19.4	5.2	6.5	10.3	
Russell 2000	-2.2	-23.5	4.3	3.6	8.6	
Russell 2000 Growth	0.2	-29.3	2.9	3.6	8.8	
Russell 2000 Value	-4.6	-17.7	4.7	2.9	7.9	
International Equity						
MSCI ACWI	-6.8	-20.7	3.7	4.4	7.3	
MSCI World ex USA	-9.2	-23.9	-1.2	-0.4	3.6	
MSCI EAFE	-9.4	-25.1	-1.8	-0.8	3.7	
MSCI Emerging Markets	-11.6	-28.1	-2.1	-1.8	1.0	
Fixed Income						
91 Day T-Bills	0.5	0.6	0.5	1.1	0.6	
Bloomberg US Aggregate TR	-4.8	-14.6	-3.3	-0.3	0.9	
Bloomberg US Govt/Credit TR	-4.6	-14.9	-3.1	-0.1	1.0	
Bloomberg US Municipal TR	-3.5	-11.5	-1.9	0.6	1.8	
Bloomberg US High Yield TR	-0.6	-14.1	-0.5	1.6	3.9	
FTSE WGBI TR	-7.6	-22.1	-7.0	-3.1	-1.8	
FTSE WGBI ex US TR	-10.0	-28.3	-9.9	-5.1	-3.1	
Real Estate						
FTSE NAREIT All REIT	-11.2	-17.4	-1.7	3.5	6.6	
NCREIF Property Index	0.6	16.1	9.9	8.6	9.5	
Alternatives						
HFRI Fund of Funds Composite Index	-0.2	-6.3	4.2	3.1	3.5	
Inflation						
Consumer Price Index	0.2	8.2	5.0	3.8	2.5	

Statistics Summary												
3 Years Ending September 30, 2022												
	% 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
Total Fund	100.00%	5.96%	26	10.07%	25	0.81%	45	0.80%	0.84	13	0.97	0.54
Policy Benchmark	--	5.29%	42	10.34%	31	0.00%	85	0.00%	--	--	1.00	0.46
Growth	68.57%	7.34%	--	14.41%	--	0.47%	--	1.53%	0.10	--	0.95	0.47
Growth Benchmark	--	7.19%	--	15.06%	--	0.00%	--	0.00%	--	--	1.00	0.44
Public Equity	39.27%	3.89%	35	19.82%	85	0.47%	28	1.63%	0.29	5	1.00	0.17
Public Equity Benchmark	--	3.41%	65	19.69%	84	0.00%	48	0.00%	--	--	1.00	0.15
Global Equity	9.56%	4.00%	43	20.03%	49	--	--	--	--	--	--	0.18
MSCI All Country World Investable Market Net Index	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Equity	16.64%	8.44%	21	20.48%	30	1.26%	20	1.42%	0.76	3	0.97	0.39
MSCI USA IMI NR USD	--	7.36%	35	20.99%	36	0.00%	35	0.00%	--	--	1.00	0.33
International Equity	7.96%	-0.42%	51	20.60%	58	0.86%	51	3.49%	0.23	38	1.03	-0.04
MSCI World ex USA IMI NR USD	--	-1.24%	63	19.75%	45	0.00%	64	0.00%	--	--	1.00	-0.09
Emerging Markets Equity	5.11%	0.56%	32	19.72%	34	1.76%	32	2.38%	0.74	9	1.00	0.00
MSCI Emerging Markets IMI Net	--	-1.20%	48	19.48%	28	0.00%	47	0.00%	--	--	1.00	-0.09
Private Markets	25.28%	13.08%	--	8.19%	--	0.00%	--	0.01%	0.49	--	1.00	1.54
Private Markets Benchmark	--	13.08%	--	8.19%	--	0.00%	--	0.00%	--	--	1.00	1.54
Private Markets ex Russell 3000	20.35%	13.08%	--	8.19%	--	12.81%	--	18.96%	-0.42	--	-0.01	1.54
Custom PE Benchmark	--	20.99%	--	16.92%	--	0.00%	--	0.00%	--	--	1.00	1.21
Private Equity	8.75%	21.60%	32	11.60%	27	21.53%	10	20.80%	0.03	36	-0.02	1.82
Custom PE Benchmark	--	20.99%	35	16.92%	77	0.00%	91	0.00%	--	--	1.00	1.21
Private Equity ex Russell 3000	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Custom Private Equity Benchmark	--	--	--	--	--	--	--	--	--	--	--	--
Private Equity ex Russell 3000	8.75%	21.51%	--	11.54%	--	21.42%	--	20.76%	0.03	--	-0.02	1.82
Custom PE Benchmark	--	20.99%	--	16.92%	--	0.00%	--	0.00%	--	--	1.00	1.21
Private Debt	4.29%	11.26%	1	7.31%	91	9.73%	1	9.55%	0.72	20	0.26	1.47
S&P Global Leveraged Loan + 2%	--	4.43%	2	8.94%	99	0.00%	87	0.00%	--	--	1.00	0.44
Growth Real Estate	4.54%	14.91%	1	7.71%	70	16.43%	1	10.48%	0.48	6	-0.21	1.87
NCREIF Property Index	--	9.92%	77	5.93%	26	0.00%	49	0.00%	--	--	1.00	1.59
Northern Trust Russell 3000	4.93%	7.71%	--	20.93%	--	0.02%	--	0.04%	0.30	--	1.00	0.34
Russell 3000	--	7.70%	--	20.96%	--	0.00%	--	0.00%	--	--	1.00	0.34

	% 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	2.05%	6.38%	1	6.50%	2	9.05%	1	8.11%	1.66	1	0.42	0.91
50% JPM EMBI GD / 50% JPM GBI-EM	--	-7.07%	80	12.04%	37	0.00%	90	0.00%	--	--	1.00	-0.63
Low Beta	18.33%	3.58%	--	1.57%	--	3.15%	--	1.89%	1.82	--	0.18	1.97
Low Beta Benchmark	--	0.15%	--	1.31%	--	0.00%	--	0.00%	--	--	1.00	-0.26
Immunized Cash Flows	10.10%	-0.85%	99	2.09%	95	0.00%	65	0.12%	-0.04	99	1.00	-0.64
Immunized Cash Flow Benchmark	--	-0.84%	99	2.08%	95	0.00%	65	0.00%	--	--	1.00	-0.64
Market Neutral Strategies	3.41%	15.48%	1	7.19%	58	13.16%	1	7.14%	2.03	1	3.72	2.08
Market Neutral Strategies Benchmark	--	0.98%	74	0.32%	1	0.00%	86	0.00%	--	--	1.00	1.51
Relative Value	3.41%	15.32%	1	8.70%	94	12.45%	1	6.87%	1.72	1	0.79	1.70
HFRI Relative Value (Total) Index	--	3.50%	20	6.99%	81	0.00%	57	0.00%	--	--	1.00	0.43
Cash	2.75%	0.67%	--	0.36%	--	0.08%	--	0.25%	0.29	--	0.96	0.48
ICE BofA 91 Days T-Bills TR	--	0.59%	--	0.27%	--	0.00%	--	0.00%	--	--	1.00	0.38
Other	12.94%	0.45%	--	3.66%	--	0.40%	--	1.12%	0.39	--	0.92	-0.01
Other Benchmark	--	0.02%	--	3.80%	--	0.00%	--	0.00%	--	--	1.00	-0.13
Core Real Estate	5.15%	13.64%	--	8.46%	--	1.55%	--	2.53%	0.94	--	1.08	1.55
Core Real Estate Benchmark	--	11.26%	--	7.52%	--	0.00%	--	0.00%	--	--	1.00	1.43
TIPS	2.01%	2.49%	12	3.19%	1	0.08%	8	0.40%	0.14	10	0.98	0.63
Bloomberg US Treasury TIPS 0-5 Yr TR	--	2.43%	12	3.22%	1	0.00%	8	0.00%	--	--	1.00	0.60
Overlay	0.16%	-23.09%	--	48.50%	--	-23.58%	--	48.55%	-0.49	--	-46.87	-0.49
91 Day T-Bills	--	0.49%	--	0.21%	--	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% Immunizing 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% BBgBac 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. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

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.