

# San Jose Federated City Employees' Retirement System

As of June 30, 2022

Quarterly Review

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## **Economic and Market Update**

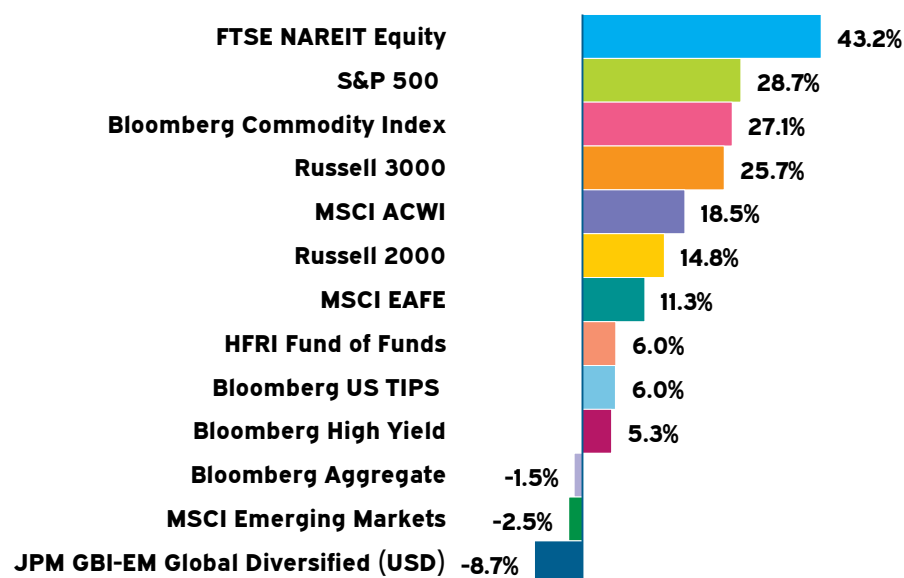
Data as of July 31, 2022

### Commentary

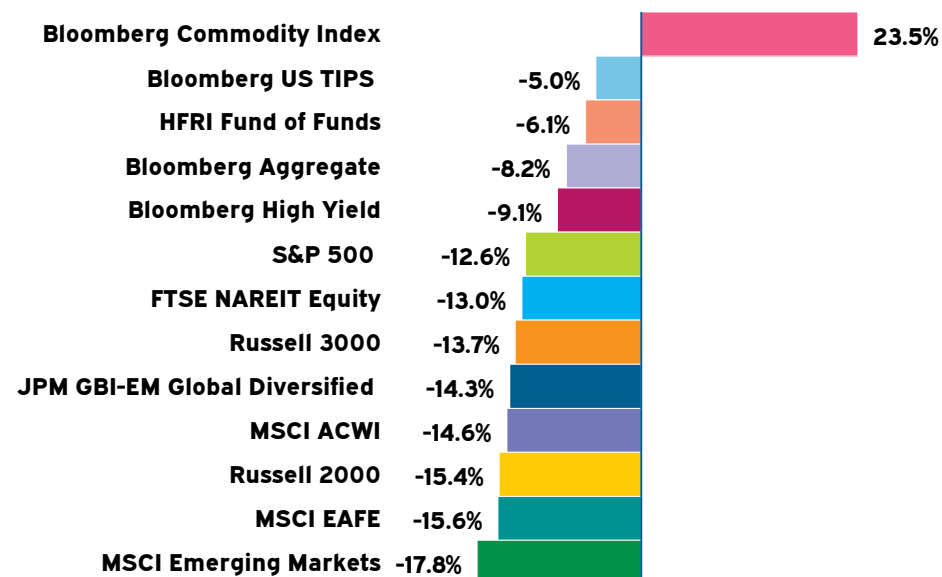
- Global markets posted strong results in July on expectations that policy tightening in the US could end early next year due to slowing growth.
- As expected, the Federal Reserve increased interest rates by another 75 basis points. Notably, much focus was placed on chair Jerome Powell's comments that the pace of policy tightening could slow.
  - Developed market equity indices increased for the month, led by US equities where earnings reports were not as weak as feared. Emerging markets fell for the month driven by China instituting renewed COVID-19 lockdowns and lingering property market issues.
  - Growth stocks again outperformed value stocks in July, but trail significantly year to date.
  - Rates declined for the month as growth slowed and expectations for the pace of policy tightening moderated.
- Persistently high inflation and the expected policy response, the war in Ukraine, lingering COVID-19 issues, and lockdowns in China will all have considerable economic and financial consequences for the global economy.

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

#### 2021



#### 2022 Through July



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

→ While year-to-date returns remain negative, in July most asset classes posted positive returns reflecting an improvement in sentiment related to cooling inflationary pressures and the expected path of policy.

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

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

Domestic Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	9.2	-16.1	-12.6	-4.6	13.4	12.8	13.8
Russell 3000	9.4	-16.7	-13.7	-7.4	12.6	12.2	13.5
Russell 1000	9.3	-16.7	-13.6	-6.9	12.9	12.5	13.7
Russell 1000 Growth	12.0	-20.9	-19.4	-11.9	16.1	16.3	16.0
Russell 1000 Value	6.6	-12.2	-7.1	-1.4	8.9	8.3	11.1
Russell MidCap	9.9	-16.8	-13.8	-9.8	9.5	9.7	12.3
Russell MidCap Growth	12.2	-21.1	-22.6	-21.8	7.5	11.0	12.8
Russell MidCap Value	8.6	-14.7	-9.0	-2.9	9.4	7.7	11.5
Russell 2000	10.4	-17.2	-15.4	-14.3	7.5	7.1	10.6
Russell 2000 Growth	11.2	-19.3	-21.6	-23.2	4.7	6.9	10.7
Russell 2000 Value	9.7	-15.3	-9.3	-4.8	9.5	6.7	10.2

**US Equities: Russell 3000 Index rose 9.4%, and growth indices continued to outperform value in July.**

- US stocks rose sharply during the month, led by the technology and consumer discretionary sectors.
- Growth indices outperformed their value counterparts for the month but remain well behind for the year-to-date period.
- Small company stocks outperformed large company stocks in July by over 100 basis points but remain behind year-to-date.

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

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

Foreign Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	3.4	-13.7	-15.6	-15.3	2.9	2.4	5.0
MSCI EAFE	5.0	-14.5	-15.6	-14.3	3.2	2.6	5.8
MSCI EAFE (Local Currency)	5.2	-7.8	-6.7	-2.1	5.9	5.2	8.7
MSCI EAFE Small Cap	6.6	-17.7	-19.7	-20.3	3.6	2.3	7.8
MSCI Emerging Markets	-0.2	-11.5	-17.8	-20.1	0.9	1.0	2.8
MSCI Emerging Markets (Local Currency)	0.1	-8.1	-13.6	-14.9	3.6	3.4	5.8
MSCI China	-9.5	3.4	-19.7	-28.3	-3.6	-1.6	4.3

**International equities (MSCI EAFE) gained 5.0%, while emerging markets (MSCI EM) fell 0.2% in July.**

- Non-US developed market stocks trailed the US for the month, and emerging markets stocks posted negative returns due to China's drawdown of 9.5%. Both remain notably negative for the year-to-date period (EAFE -15.6%, EM -17.8%), lagging US equities.
- The war in Ukraine, high inflation and the likely monetary policy response, and slowing growth continue to weigh on sentiment.
- Growth stocks had a strong month in July, outperforming value stocks across developed and emerging markets, similar to the US.

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

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

Fixed Income	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	2.5	-5.1	-8.7	-9.6	-0.2	1.3	1.9	3.9	6.4
Bloomberg Aggregate	2.4	-4.7	-8.2	-9.1	-0.2	1.3	1.6	3.4	6.6
Bloomberg US TIPS	4.4	-6.1	-5.0	-3.6	4.4	4.0	2.0	3.0	7.4
Bloomberg High Yield	5.9	-9.8	-9.1	-8.0	2.0	3.1	4.9	7.7	4.7
JPM GBI-EM Global Diversified (USD)	0.3	-8.6	-14.3	-18.7	-6.0	-2.7	-1.7	7.3	5.0

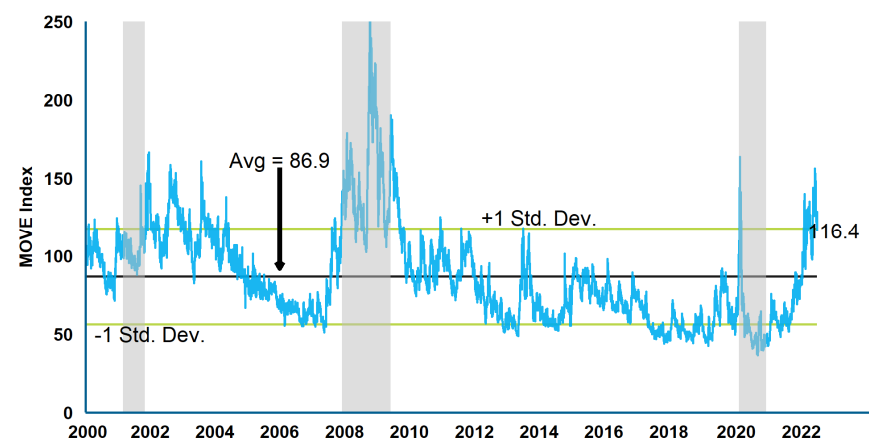
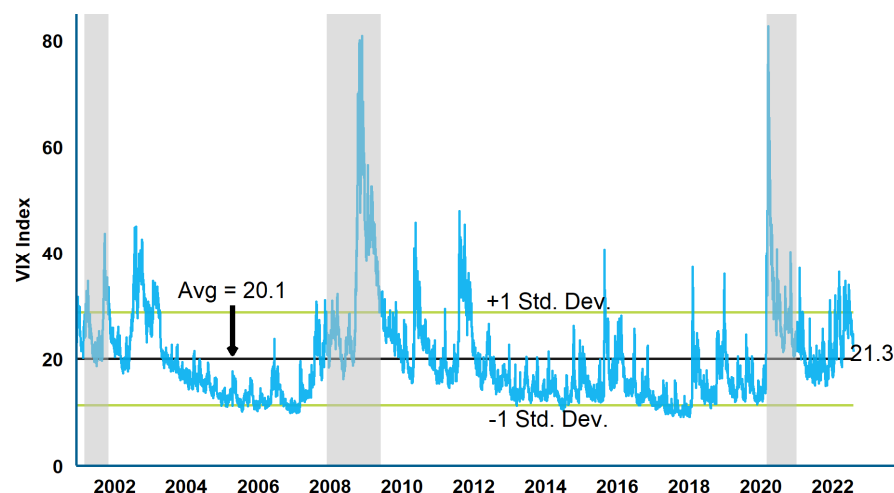
### Fixed Income: The Bloomberg Universal gained 2.5% in July.

- Fixed income indices broadly benefited from yields declining across the curve. During July, the US 10-year Treasury note yield fell 36 basis points, from 3.01% on June 30th to 2.65% on July 31.
- The high yield index was one of the best performers in July as yields declined along with tightening spreads supported by a historic drop in high yield issuance to the lowest July issuance since 2006.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of July 31, 2022.



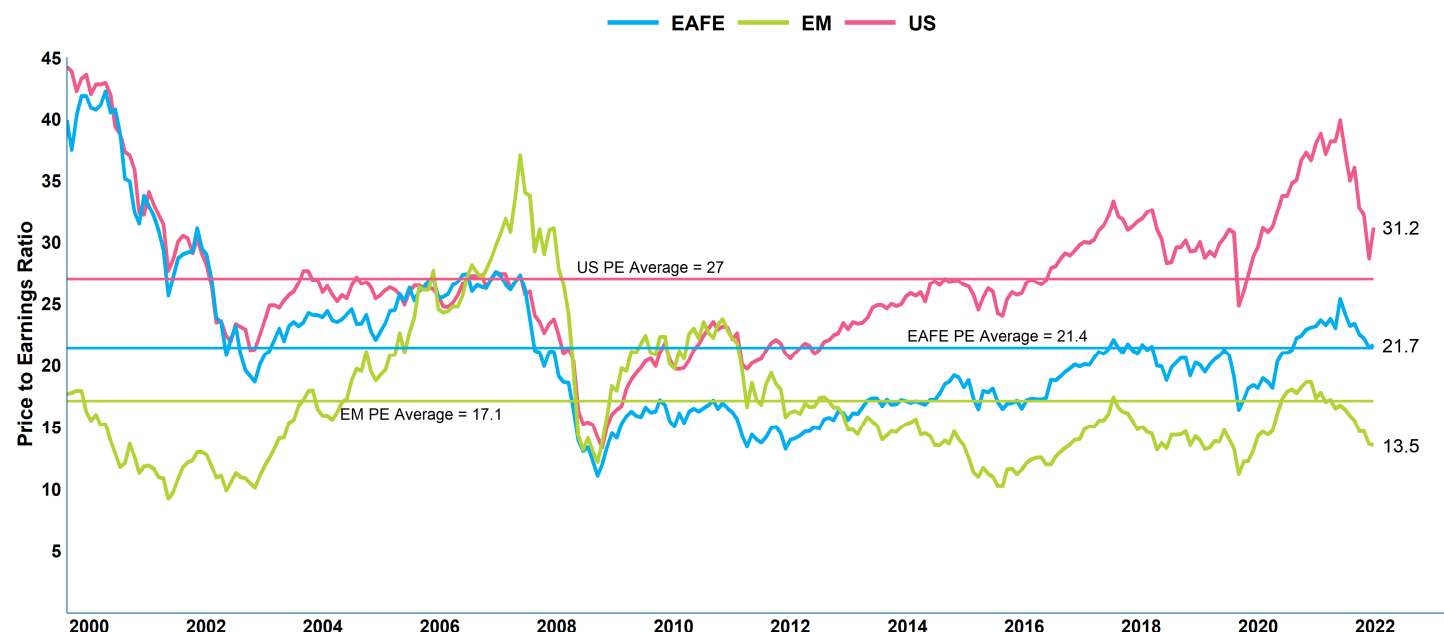
### Equity and Fixed Income Volatility<sup>1</sup>



- Volatility in equities (VIX) and fixed income (MOVE) declined in July based on potentially peaking monetary policy and possible rate cuts in 2023.
- Despite the July decline, fixed income volatility remains high due to the uncertain path of short-term interest rates.

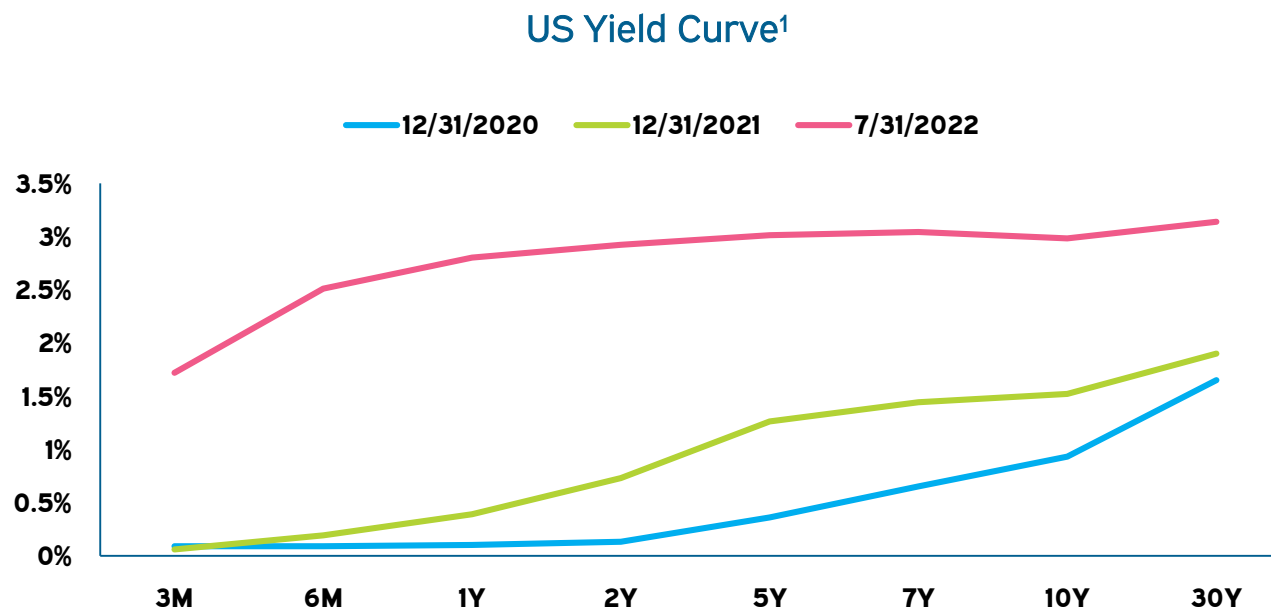
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of July 2022. The average line indicated is the average of the VIX and MOVE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

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



- Strong positive results in July for US equities reversed the recent trend of valuation declines, but they remain well off the peak.
- International developed market valuations remain below the US and are slightly above their own long-term average, with those for emerging markets the lowest and under the long-term average.

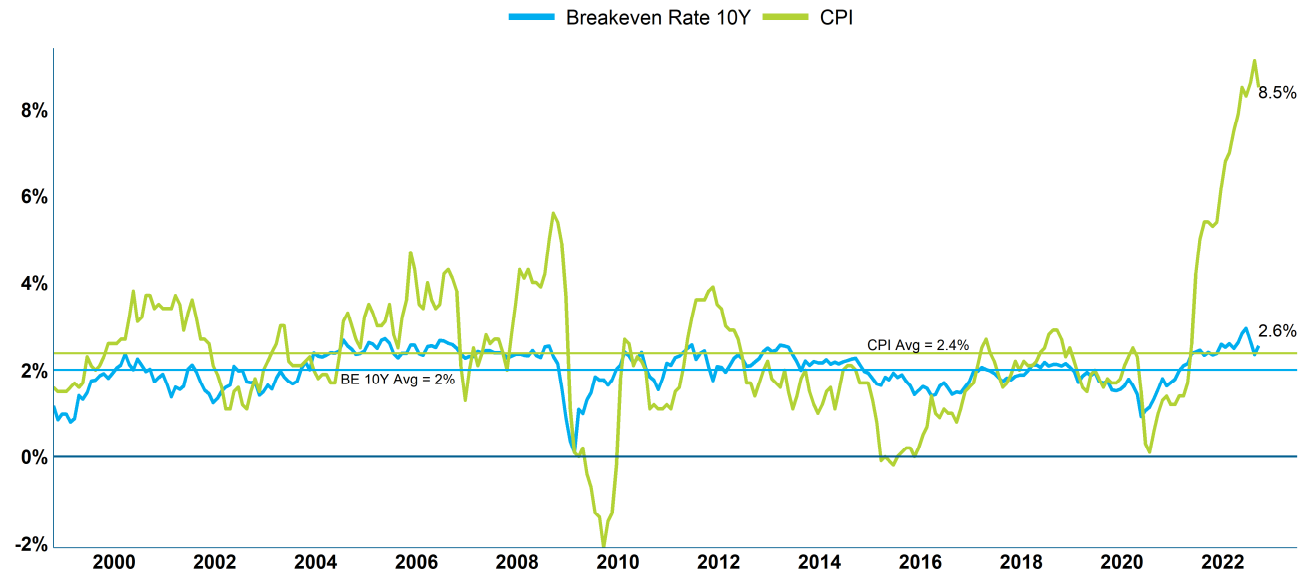
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of July 31, 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 much higher than at the start of the year.
- In July, longer-dated yields declined as investors reconsidered economic growth prospects and the likelihood that yields have reached their peak for this economic cycle. Shorted dated yields rose on near-term policy actions and messaging that policy officials intend to remain aggressive in fighting inflation pressures into early 2023.
- The yield spread between two-year and ten-year Treasuries became negative, finishing July at -0.23%. Inversions in the yield curve have historically often signaled building recessionary pressures.

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

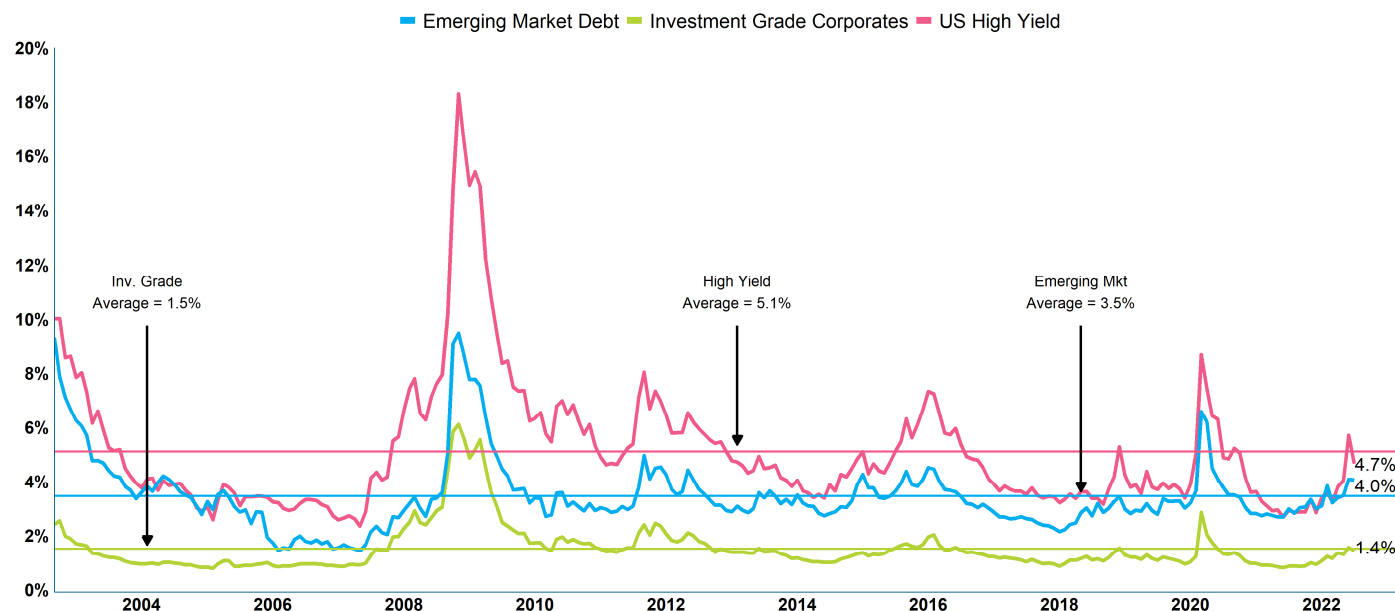
### Ten-Year Breakeven Inflation and CPI<sup>1</sup>



- In July, inflation expectations (breakevens) rose on the prospects of easing monetary policy next year.
- Trailing twelve-month CPI declined in July (8.5% versus 9.1%) and came in below expectations. Inflation levels in the US remain well above the long-term average of 2.4%.
- Rising prices for energy (particularly oil), food, housing, and for new and used cars, remain key drivers of higher inflation.

<sup>1</sup> Source: Bloomberg. Data is as of July 31, 2022. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end respectively. Breakeven values represent month-end values for comparative purposes.

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



- Credit spreads (the spread above a comparable maturity Treasury) declined in July, particularly for high yield, as risk appetite returned.
- In the US, spreads for high yield reversed course, declining from 5.7% to 4.7%, while investment grade (1.6% to 1.4%) and emerging market (4.1% to 4.0%) spreads experienced more modest declines.

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

### Global Economic Outlook

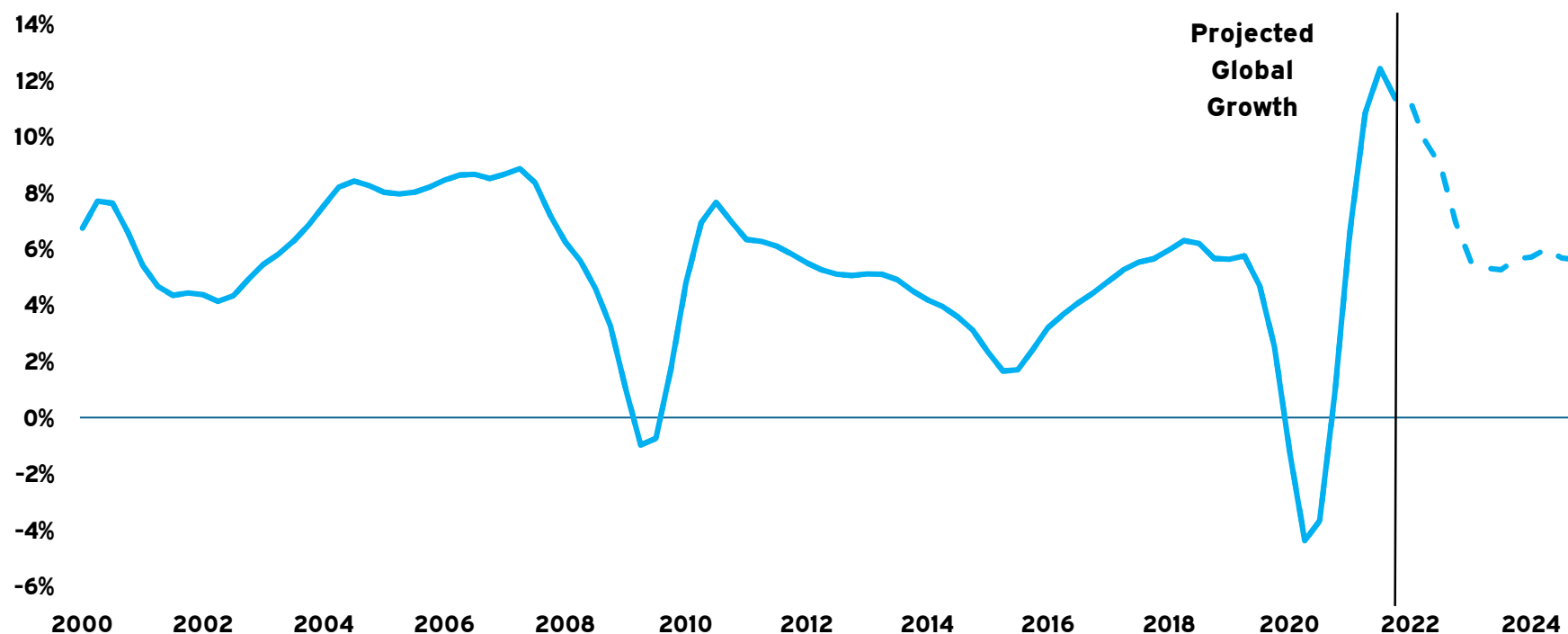
The IMF significantly lowered global growth forecasts again in their latest projections, driven by the economic impacts of persistent inflation in energy and food prices.

- The IMF forecasts global GDP growth to come in at 3.2% in 2022 (0.4% below the prior estimate) and 2.9% in 2023 (0.7% below the prior estimate).
- In advanced economies, GDP is projected to increase 2.5% in 2022 and 1.4% in 2023. The US saw another downgrade in the 2022 (2.3% versus 3.7%) and 2023 (1.0% versus 2.3%) growth forecasts largely due to policy tightening happening faster than previously expected given persistently high inflation. The euro area saw a downgrade too in expected growth (2.6% versus 2.8%) in 2022 and in 2023 (1.2% versus 2.3%) as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 1.7% this year and next.
- Growth projections for emerging markets are higher than developed markets, at 3.6% in 2022 and 3.9% in 2023. China's growth was downgraded for 2022 (3.3% versus 4.4%) and 2023 (4.9% versus 5.1%) given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%).

	Real GDP (%) <sup>1</sup>			Inflation (%) <sup>1</sup>		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.2	2.9	3.0	7.4	4.8	3.5
Advanced Economies	2.5	1.4	1.6	5.7	2.5	1.5
US	2.3	1.0	2.1	7.7	2.9	1.9
Euro Area	2.6	1.2	0.9	5.3	2.3	1.2
Japan	1.7	1.7	0.5	1.0	0.8	0.5
Emerging Economies	3.6	3.9	4.2	8.7	6.5	5.1
China	3.3	4.9	6.7	2.1	1.8	2.1

<sup>1</sup> Source: IMF World Economic Outlook. Real GDP forecasts from July 2022 Update. Inflation forecasts are as of the April 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

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

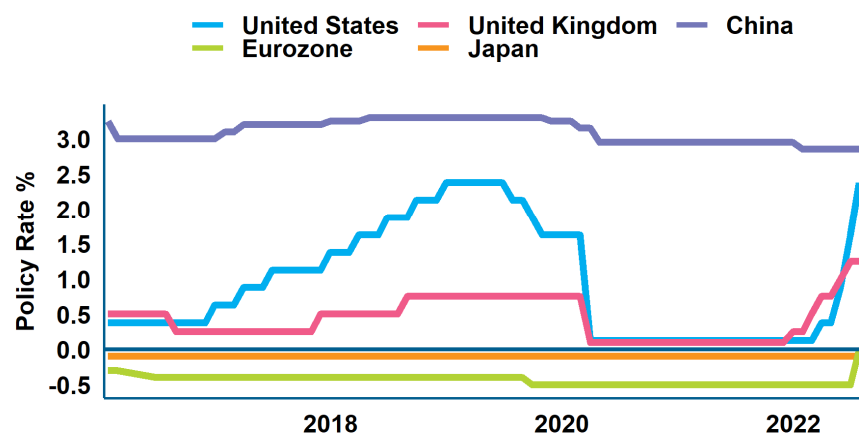


- Global economies are expected to slow in 2022 compared to 2021 with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- Looking forward, the delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

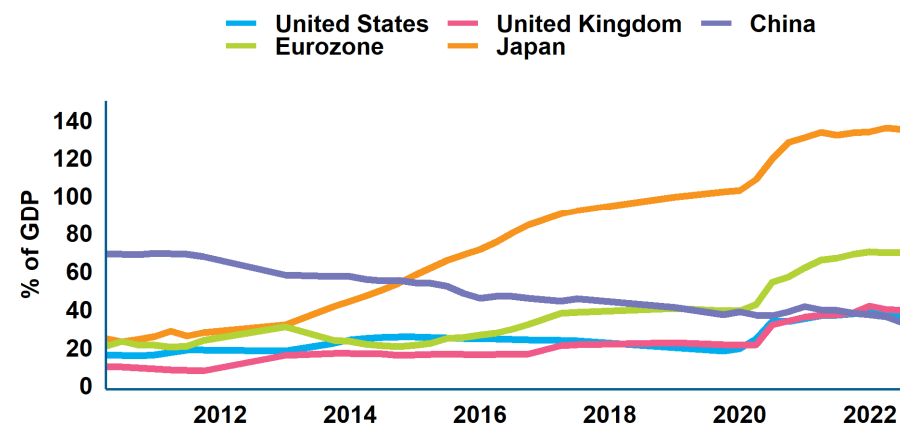
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated July 2022.

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

**Policy Rates**



**Balance Sheet as % of GDP**

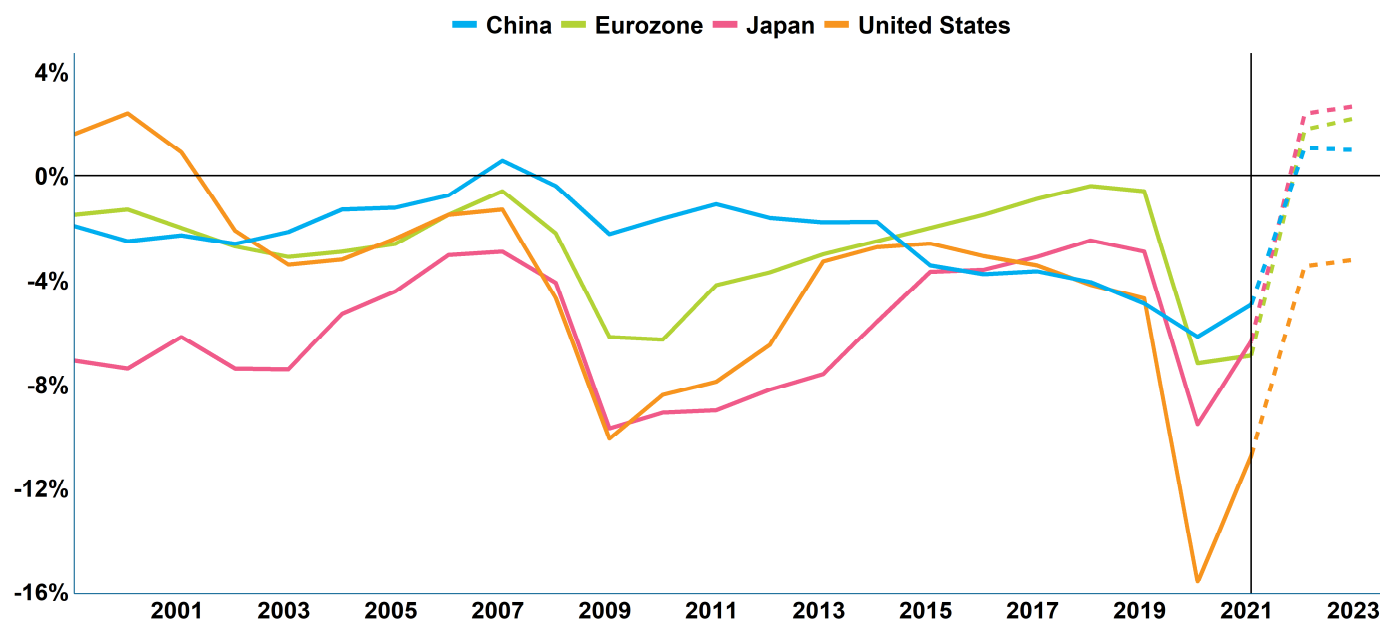


- After global central banks took extraordinary action to support economies during the pandemic, including policy rate cuts and emergency stimulus through quantitative easing (QE), many are now aggressively reducing support in the face of high inflation.
- The pace of withdrawing support varies across central banks with the US taking a more aggressive approach. The 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.
- The one notable central bank outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of July 31, 2022. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of June 30, 2022.



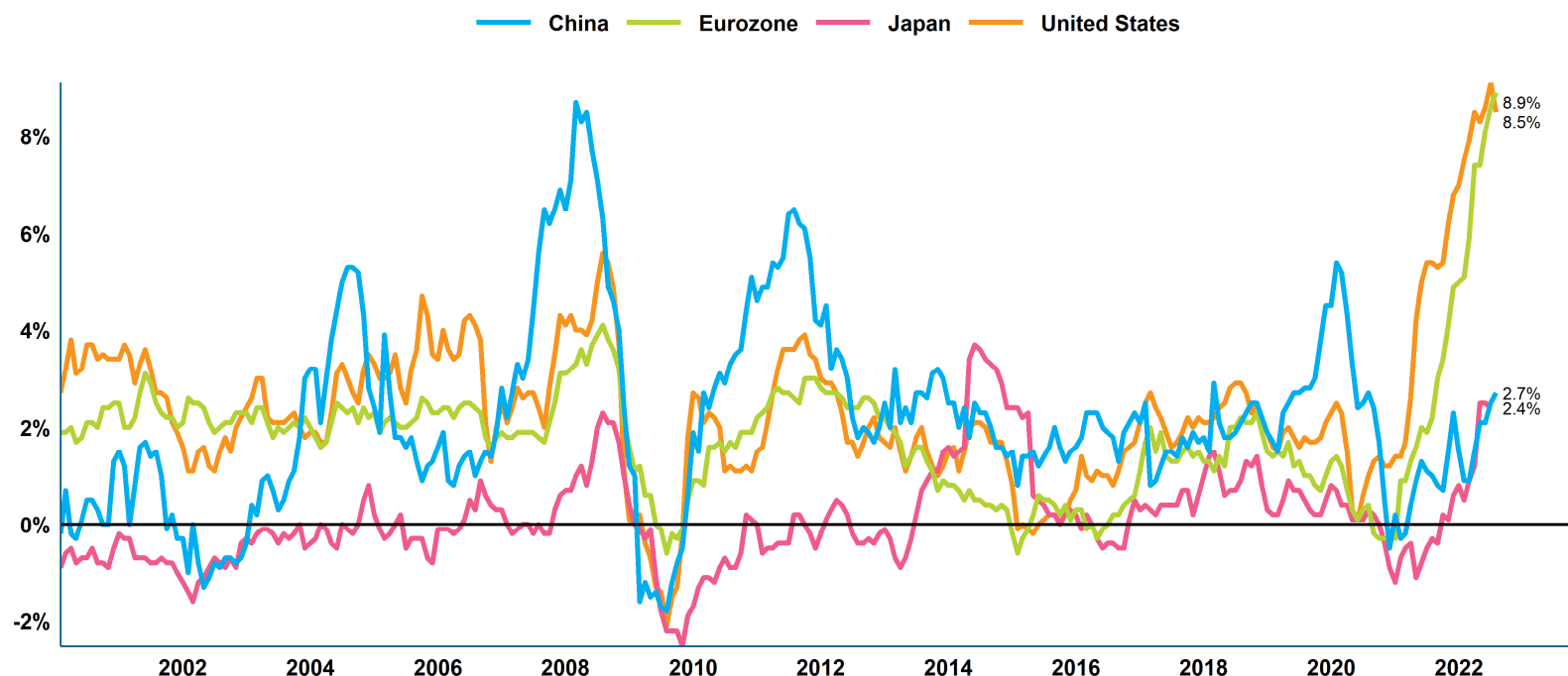
### Budget Surplus / Deficit as a Percentage of GDP<sup>1</sup>



- 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 in the coming years.

<sup>1</sup> Source: Bloomberg. Data is as of July 31, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

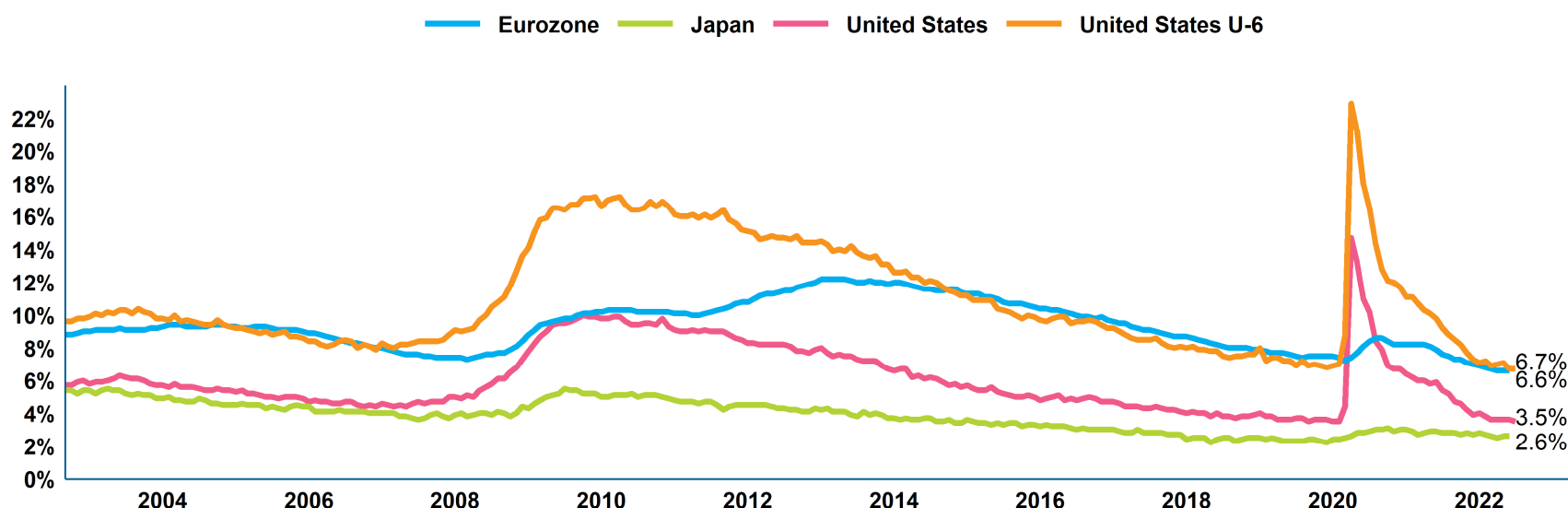
### Inflation (CPI Trailing Twelve Months)<sup>1</sup>



- Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it has reached levels not seen in many decades.
- 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.

<sup>1</sup> Source: Bloomberg. Data is as of July 2022. The most recent data for Japan is as of June 30, 2022.

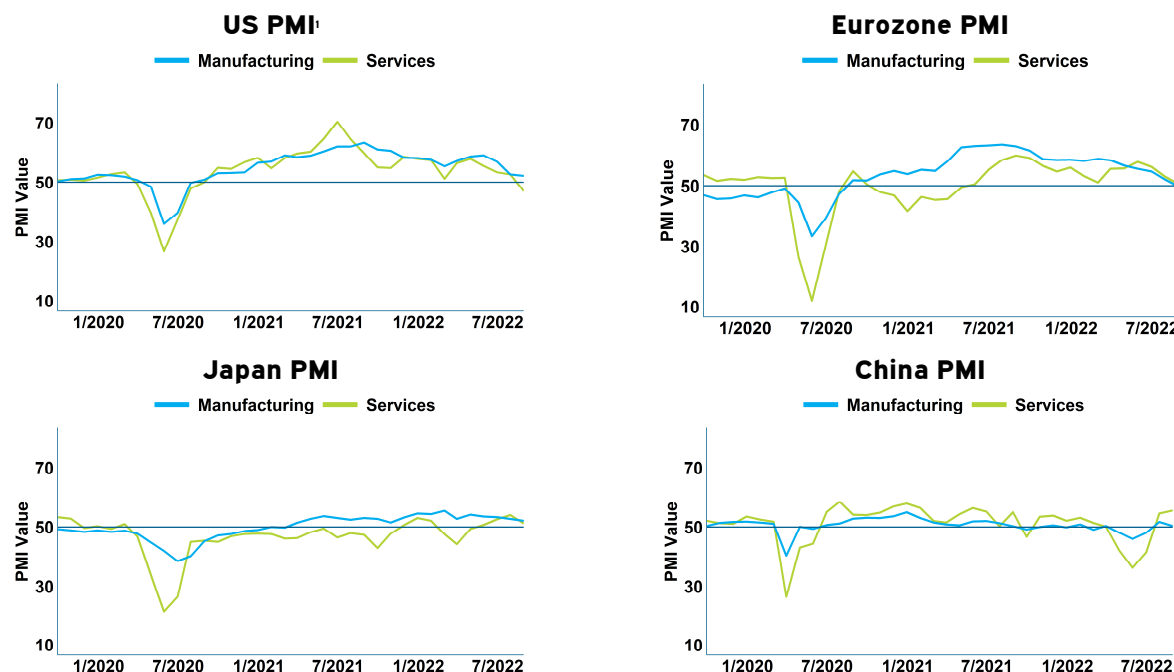
### Unemployment<sup>1</sup>



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 6.7%.

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

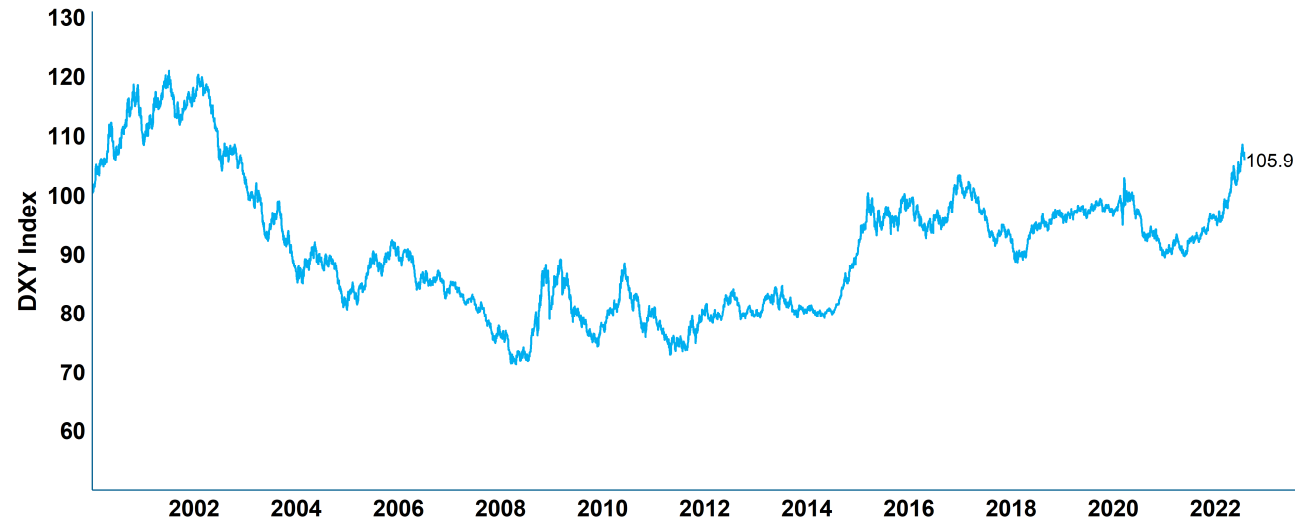
### Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have largely experienced some pressures recently.
- Service sector PMIs in the US and Europe have recently declined, with the US slipping into contraction territory, while Japan experienced a decline for the month on rising COVID-19 cases in parts of the country. In China the services PMI remained in positive territory.
- Manufacturing PMIs dropped recently across China and developed markets given declines in demand and inflationary pressures.

<sup>1</sup> 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 July 2022. Readings below 50 represent economic contractions.

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



- In July, the US dollar overall continued its path higher but finished the month off its peak as expectations on the pace of policy tightening by the Fed fell and safe-haven flows declined.
- The euro, yen, and yuan have all experienced significant declines versus the dollar this year, adding to inflation and slowing growth concerns.

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

## Summary

### Key Trends in 2022:

- The impacts of record high inflation will remain key going forward, with volatility likely to remain high.
- The war in Ukraine has created significant uncertainty, with a wide range of potential outcomes.
- Expect growth to slow globally in 2022 to the long-term trend or below. Inflation, monetary policy, and the war will all be key.
- 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.
- Monetary policy will likely tighten globally but will remain relatively accommodative. The risk of overtightening policy remains.
- Valuations have significantly declined in the US, approaching long-term averages.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but 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 June 30, 2022**

The value of the San Jose Federated City Employees' Retirement System assets was \$2.7 billion on June 30, 2022, compared to \$2.9 billion as of the end of the prior quarter. The System had net cash outflows of \$52 million and \$195 million of investment losses during the quarter.

- The System's net of fees performance for the quarter was -6.7%, outperforming the Policy Benchmark (-7.3%), the Investable Benchmark Portfolio (-7.5%), and a 60/40 global portfolio (-12.8%). The peer median return was -8.6%. The Plan ranked in the top quintile of the peer group for the quarter.
- The Retirement System returned -4.4% over the trailing one-year period, outperforming the Policy Benchmark (-5.0%), the Investable Benchmark (-5.6%), and a 60/40 global portfolio (-15.9%). The Retirement Plan's standard deviation of returns was 8.3% over the trailing one-year period, exhibiting lower volatility vs. the peer median (8.5%).
  - Growth returned -8.9% for the quarter and -6.7% over the trailing one-year period, compared to the -9.4% and -8.8% returns for the Growth Benchmark over the same periods, respectively.
  - Low Beta returned +3.4% for the quarter and +7.3% over the trailing one-year period, compared to 0.0% and -1.1% returns for the Low Beta Benchmark over the same periods, respectively.
  - Other assets returned -1.0% for the quarter and +1.0% over the trailing one-year period, compared to the -1.2% and +1.0% returns for the Other Benchmark over the same periods, respectively.

During the quarter, the Plan added five new investments: Aether Seed Partners I (Private Real Assets), AIGGRE Fund IV (Growth Real Estate), Fin VC Horizons II (Venture Capital), First Eagle Int'l Equity (Int'l Equity), and Praedium X MidInc (Growth Real Estate). Additionally, the Plan liquidated one investment: Northern Trust Russell 3000 (Private Markets).



**DFA**

→ Dimensional Emerging Markets Value returned -10.7% for the quarter, outperforming the MSCI EM Value NR USD benchmark by 10 basis points. Slight outperformance for the quarter was driven by a valuation timing difference between the portfolio and index. Compared to peers, Dimensional ranks well above the median of its peer group for the 1-year period, and in the 42nd percentile since inception (1st is best and 100th is worst). Also, beginning in February 2022, the strategy lowered its fee by 3 basis points.

**Wellington**

→ Wellington Iguazu Partners LP Fund returned +6.1% for the quarter, outperforming the 50% JPM EMBI GD/50% JPM GBI-EM benchmark by 1,610 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.

**BlackRock**

→ BlackRock Core Property Fund returned +7.7% for the quarter, outperforming the Core Real Estate benchmark by 60 basis points. Since inception, BlackRock has returned +11.0%, outperforming the benchmark by 180 basis points.

Investment Manager	Asset Class	Changes/ Announcements	Meketa Recommendation <sup>1</sup>	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	---	---	---
Redwheel 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	---	---	---
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	---	---	---
Invesco Core Bonds	Investment Grade Bonds	---	---	---

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

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

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

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

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

### **Artisan Global Opportunities**

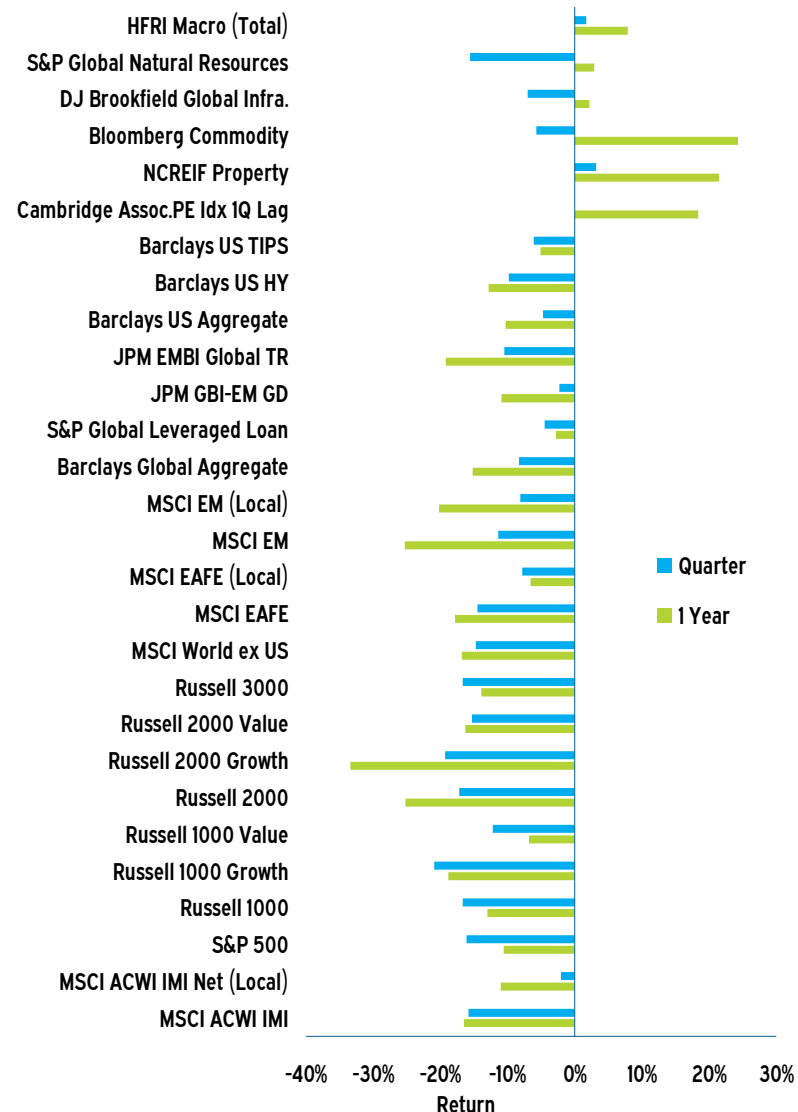
→ Over the three-year period, Artisan (+6.9%) has underperformed the MSCI ACWI Growth by 70 basis points. Since inception in July 2017, Artisan has underperformed the benchmark by 50 basis points per year, on average, and ranked in the 25th percentile compared to peers.

### **Cove Street**

→ Over the three-year period, Cove Street (+2.5%) has underperformed the Russell 2000 Value by 370 basis points. Since inception in May 2014, Cove Street has underperformed the benchmark by 130 basis points per year, on average, and ranked in the 83rd percentile compared to peers.

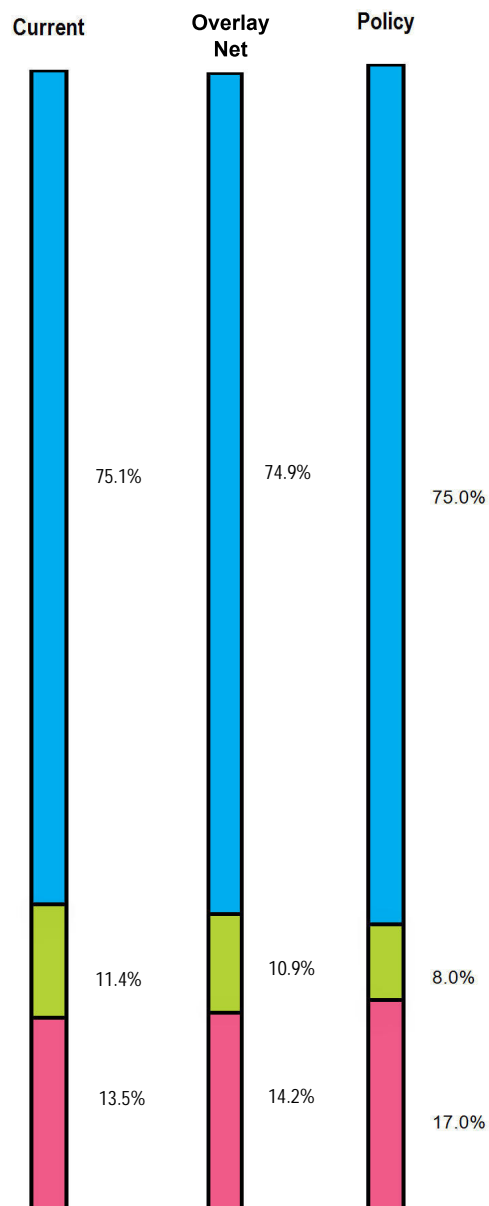
### Market Environment – 2Q22 Overview

Benchmark	Scope	2Q22 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Global Equity</b>						
MSCI ACWI IMI	World	-15.8	-16.5	6.0	6.7	8.7
MSCI ACWI IMI Net (Local)	World (Local Currency)	-2.0	-11.0	8.3	7.6	9.3
<b>Domestic Equity</b>						
S&P 500	Large Core	-16.1	-10.6	10.6	11.3	13.0
Russell 1000	Large Core	-16.7	-13.0	10.2	11.0	12.8
Russell 1000 Growth	Large Growth	-20.9	-18.8	12.6	14.3	14.8
Russell 1000 Value	Large Value	-12.2	-6.8	6.9	7.2	10.5
Russell 2000	Small Core	-17.2	-25.2	4.2	5.2	9.4
Russell 2000 Growth	Small Growth	-19.3	-33.4	1.4	4.8	9.3
Russell 2000 Value	Small Value	-15.3	-16.3	6.2	4.9	9.1
Russell 3000	All Cap Core	-16.7	-13.9	9.8	10.6	12.6
<b>International Equity</b>						
MSCI World ex US	World ex-US	-14.7	-16.8	1.7	2.7	5.4
MSCI EAFE	International Developed	-14.5	-17.8	1.1	2.2	5.4
MSCI EAFE (Local)	International Developed (Local Currency)	-7.8	-6.6	4.4	4.3	8.3
MSCI EM	Emerging Markets	-11.4	-25.3	0.6	2.2	3.1
MSCI EM (Local)	Emerging Markets (Local Currency)	-8.1	-20.2	3.3	4.4	6.0
<b>Global Fixed Income</b>						
Barclays Global Aggregate	Global Core Bonds	-8.3	-15.2	-3.2	-0.6	0.1
S&P Global Leveraged Loan	Bank Loans	-4.5	-2.8	1.9	2.6	3.4
JPM GBI-EM GD	Emerging Markets Bonds (Local Currency)	-2.3	-10.9	-0.1	2.6	4.6
JPM EMBI Global TR	Emerging Market Bonds	-10.5	-19.2	-4.3	-1.0	2.1
<b>Domestic Fixed Income</b>						
Barclays US Aggregate	Core Bonds	-4.7	-10.3	-0.9	0.9	1.5
Barclays US HY	High Yield	-9.8	-12.8	0.2	2.1	4.5
Barclays US TIPS	Inflation	-6.1	-5.1	3.0	3.2	1.7
<b>Other</b>						
Cambridge AssociatesPE Index 1Qtr Lag	Private Equity	0.0	18.4	27.0	23.3	18.0
NCREIF Property	Real Estate	3.2	21.5	10.2	8.9	9.7
Bloomberg Commodity	Commodities	-5.7	24.3	14.3	8.4	-0.8
DJ Brookfield Global Infrastructure	Infrastructure	-7.0	2.2	4.5	5.7	7.6
S&P Global Natural Resources	Natural Resources	-15.6	2.9	8.6	8.9	4.6
HFRI Macro	Hedge Funds	1.7	7.9	7.7	5.3	3.1



## **2Q22 Review**

Total Fund | As of June 30, 2022



Allocation vs. Targets and Policy				
	Current Balance	Current Allocation	Russell Overlay Net Position	Policy
<b>Growth</b>	<b>\$2,157,196,859</b>	<b>75.1%</b>	<b>74.9%</b>	<b>75.0%</b>
Public Equity	\$1,402,049,926	48.8%	48.6%	49.0%
Private Markets	\$615,290,605	21.4%	21.4%	21.0%
Emerging Markets Debt	\$86,094,881	3.0%	3.0%	3.0%
High Yield Bonds	\$53,761,447	1.9%	1.9%	2.0%
<b>Low Beta</b>	<b>\$327,682,286</b>	<b>11.4%</b>	<b>10.9%</b>	<b>8.0%</b>
Market Neutral Strategies	\$83,736,012	2.9%	2.9%	3.0%
Immunized Cash Flows	\$229,760,384	8.0%	8.0%	5.0%
Cash	\$14,185,890	0.5%	0.0%	0.0%
<b>Other</b>	<b>\$387,252,776</b>	<b>13.5%</b>	<b>14.2%</b>	<b>17.0%</b>
Core Real Estate	\$153,753,280	5.4%	5.4%	5.0%
TIPS	\$57,064,796	2.0%	2.0%	2.0%
Investment Grade Bonds	\$126,532,371	4.4%	4.8%	8.0%
Long Term Govt Bonds	\$49,902,329	1.7%	2.0%	2.0%
<b>Total</b>	<b>\$2,872,131,921</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

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

All data on this page is from Russell Investments. Data on subsequent pages is from the custodian.

### Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund Aggregate</b>	<b>2,694,268,662</b>	<b>100.0</b>	<b>-6.7</b>	<b>-9.5</b>	<b>-4.4</b>	<b>8.6</b>	<b>7.2</b>	<b>6.3</b>	<b>6.8</b>	<b>Jan-94</b>
<i>Policy Benchmark</i>			-7.3	-10.1	-5.0	8.1	7.1	6.6	7.0	Jan-94
<i>Investable Benchmark Portfolio</i>			-7.5	-10.5	-5.6	7.6	6.6	6.0	--	Jan-94
<i>Low-Cost Passive Portfolio</i>			-12.5	-14.4	-12.0	4.0	--	--	--	Jan-94
<i>60/40 MSCI ACWI IMI/BBgBarc Global Aggregate</i>			-12.8	-17.8	-15.9	2.5	4.0	5.4	--	Jan-94
<i>Liability Benchmark Portfolio</i>			-11.9	-21.3	-18.5	-2.9	--	--	--	Jan-94
<i>InvMetrics Public DB &gt; \$1B Net Median</i>			-8.6	-11.9	-7.4	6.3	6.6	7.6	7.3	Jan-94
<i>InvMetrics Public DB &gt; \$1B Net Rank</i>			19	28	24	7	26	95	84	Jan-94
<b>Growth</b>	<b>1,996,649,553</b>	<b>74.1</b>	<b>-8.9</b>	<b>-12.6</b>	<b>-6.7</b>	<b>9.6</b>	<b>8.5</b>	<b>--</b>	<b>7.6</b>	<b>Jul-15</b>
<i>Growth Benchmark</i>			-9.4	-12.8	-8.8	8.5	8.4	--	8.0	Jul-15
<b>Public Equity</b>	<b>1,241,998,487</b>	<b>46.1</b>	<b>-15.5</b>	<b>-21.2</b>	<b>-18.9</b>	<b>4.9</b>	<b>5.6</b>	<b>8.0</b>	<b>7.2</b>	<b>May-10</b>
<i>Public Equity Benchmark</i>			-15.3	-20.0	-17.5	5.5	6.5	8.6	7.6	May-10
<b>Global Equity</b>	<b>228,992,553</b>	<b>8.5</b>	<b>-16.7</b>	<b>-22.8</b>	<b>-20.1</b>	<b>5.7</b>	<b>6.7</b>	<b>--</b>	<b>7.5</b>	<b>Jul-15</b>
<i>eV All Global Equity Net Median</i>			-15.6	-21.0	-16.2	5.7	6.7	8.8	6.7	Jul-15
<i>eV All Global Equity Net Rank</i>			65	64	69	52	51	--	36	Jul-15
<b>US Equity</b>	<b>496,016,915</b>	<b>18.4</b>	<b>-16.7</b>	<b>-20.8</b>	<b>-13.9</b>	<b>8.5</b>	<b>9.1</b>	<b>--</b>	<b>9.1</b>	<b>Jul-15</b>
<i>MSCI USA IMI NR USD</i>			-16.9	-21.3	-14.1	9.4	10.2	--	9.9	Jul-15
<i>eV All US Equity Net Median</i>			-15.3	-19.9	-13.7	7.7	8.5	11.1	8.3	Jul-15
<i>eV All US Equity Net Rank</i>			65	56	51	41	43	--	38	Jul-15

Fiscal Year begins July 1.

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

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



Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>International Equity</b>	<b>242,660,789</b>	<b>9.0</b>	<b>-16.2</b>	<b>-24.4</b>	<b>-23.3</b>	<b>1.3</b>	<b>2.2</b>	<b>--</b>	<b>2.9</b>	<b>Jul-15</b>
MSCI World ex USA IMI NR USD			-15.2	-19.5	-17.7	1.7	2.6	--	3.1	Jul-15
eV ACWI ex-US All Cap Equity Net Median			-15.4	-23.3	-23.0	2.2	3.3	6.3	3.6	Jul-15
eV ACWI ex-US All Cap Equity Net Rank			62	56	54	66	72	--	74	Jul-15
<b>Emerging Markets Equity</b>	<b>274,328,230</b>	<b>10.2</b>	<b>-11.7</b>	<b>-17.3</b>	<b>-22.7</b>	<b>2.1</b>	<b>1.8</b>	<b>--</b>	<b>2.1</b>	<b>Jul-15</b>
MSCI Emerging Markets IMI Net			-12.1	-17.9	-24.8	1.1	2.3	--	2.8	Jul-15
eV Emg Mkts Equity Net Median			-12.8	-19.2	-25.7	0.9	2.1	3.4	3.0	Jul-15
eV Emg Mkts Equity Net Rank			37	33	32	37	58	--	74	Jul-15
<b>Private Markets</b>	<b>617,223,120</b>	<b>22.9</b>	<b>5.4</b>	<b>7.0</b>	<b>25.6</b>	<b>19.6</b>	<b>14.8</b>	<b>--</b>	<b>11.9</b>	<b>Jul-15</b>
Private Markets Benchmark			5.4	7.0	25.6	19.6	16.1	--	13.5	Jul-15
MSCI ACWI IMI + 100bps			-15.6	-20.0	-15.7	7.0	7.8	--	7.8	Jul-15
<b>Private Markets ex Russell 3000</b>	<b>617,223,120</b>	<b>22.9</b>	<b>5.9</b>	<b>8.9</b>	<b>31.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Jul-15</b>
<b>Private Equity</b>	<b>343,557,198</b>	<b>12.8</b>	<b>6.6</b>	<b>8.2</b>	<b>36.4</b>	<b>27.7</b>	<b>21.2</b>	<b>15.9</b>	<b>10.9</b>	<b>Jan-06</b>
San Jose Custom Private Equity Benchmark			-0.4	5.3	26.7	23.6	19.8	15.8	13.2	Jan-06
<b>Venture Capital</b>	<b>13,948,112</b>	<b>0.5</b>	<b>0.7</b>	<b>0.4</b>	<b>-1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-1.4</b>	<b>Jun-21</b>
<b>Private Debt</b>	<b>108,155,440</b>	<b>4.0</b>	<b>5.4</b>	<b>10.9</b>	<b>25.1</b>	<b>12.6</b>	<b>5.2</b>	<b>5.8</b>	<b>5.5</b>	<b>Dec-10</b>
S&P Global Leveraged Loan Index +2%			-3.9	-3.5	-0.8	4.1	4.7	5.5	5.7	Dec-10
<b>Growth Real Estate</b>	<b>102,028,604</b>	<b>3.8</b>	<b>3.5</b>	<b>8.2</b>	<b>26.3</b>	<b>14.0</b>	<b>15.5</b>	<b>--</b>	<b>16.3</b>	<b>Jul-15</b>
NCREIF Property Index			3.2	8.7	21.5	10.2	8.9	--	8.8	Jul-15
<b>Private Real Assets</b>	<b>49,533,766</b>	<b>1.8</b>	<b>8.3</b>	<b>14.5</b>	<b>30.4</b>	<b>12.1</b>	<b>12.1</b>	<b>--</b>	<b>9.4</b>	<b>Jul-15</b>

Returns for the Fixed income, Private Debt, and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

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

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

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets Debt</b>	<b>83,707,159</b>	<b>3.1</b>	<b>1.2</b>	<b>2.3</b>	<b>3.0</b>	<b>5.4</b>	<b>4.2</b>	--	<b>4.1</b>	<b>Jul-15</b>
50% JPM EMBI GD / 50% JPM GBI-EM			-10.0	-17.5	-20.2	-5.5	-1.7	--	0.5	Jul-15
eV All Emg Mkts Fixed Inc Net Median			-9.0	-16.0	-18.9	-4.4	-1.1	1.4	1.1	Jul-15
eV All Emg Mkts Fixed Inc Net Rank			1	1	1	1	1	--	2	Jul-15
<b>High Yield Bonds</b>	<b>53,720,787</b>	<b>2.0</b>	<b>-9.6</b>	<b>-13.4</b>	<b>-11.9</b>	<b>0.5</b>	<b>1.2</b>	--	<b>0.3</b>	<b>Jun-14</b>
Bloomberg US Corporate High Yield TR			-9.8	-14.2	-12.8	0.2	2.1	--	3.1	Jun-14
<b>Low Beta</b>	<b>174,224,428</b>	<b>6.5</b>	<b>3.4</b>	<b>6.4</b>	<b>7.3</b>	<b>4.7</b>	<b>4.3</b>	--	<b>3.2</b>	<b>Jul-15</b>
Low Beta Benchmark			0.0	-0.9	-1.1	0.6	1.0	--	0.6	Jul-15
<b>Immunized Cash Flows</b>	<b>69,237,748</b>	<b>2.6</b>	<b>-0.3</b>	<b>-1.8</b>	<b>-2.1</b>	<b>0.6</b>	--	--	<b>1.4</b>	<b>Oct-18</b>
Bloomberg US Govt/Credit 1-3 Yr. TR			-0.6	-3.1	-3.6	0.3	--	--	1.3	Oct-18
<b>Market Neutral Strategies</b>	<b>85,779,535</b>	<b>3.2</b>	<b>8.2</b>	<b>18.5</b>	<b>21.5</b>	<b>11.9</b>	<b>9.6</b>	--	<b>6.4</b>	<b>Nov-12</b>
Market Neutral Strategies Benchmark			0.5	0.7	0.8	0.9	1.1	--	1.1	Nov-12
<b>Relative Value</b>	<b>85,779,535</b>	<b>3.2</b>	<b>8.2</b>	<b>18.5</b>	<b>21.5</b>	<b>10.0</b>	<b>8.7</b>	--	<b>6.7</b>	<b>Oct-14</b>
HFRI Relative Value (Total) Index			-2.8	-2.1	-1.2	3.5	3.6	--	3.5	Oct-14
<b>Cash</b>	<b>19,207,146</b>	<b>0.7</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.7</b>	<b>1.1</b>	--	--	<b>Jan-06</b>
ICE BofA 91 Days T-Bills TR			0.1	0.1	0.2	0.6	1.1	--	--	Jan-06
<b>Other</b>	<b>507,665,120</b>	<b>18.8</b>	<b>-1.0</b>	<b>-2.0</b>	<b>1.0</b>	<b>1.5</b>	<b>2.3</b>	<b>1.9</b>	<b>2.0</b>	<b>Jul-04</b>
Other Benchmark			-1.2	-2.6	1.0	-1.0	0.2	--	--	Jul-04
<b>Investment Grade Bonds</b>	<b>235,501,838</b>	<b>8.7</b>	<b>-3.4</b>	<b>-7.9</b>	<b>-7.8</b>	--	--	--	<b>-0.2</b>	<b>Dec-19</b>
Custom IG Bonds Benchmark			-3.5	-8.3	-8.4	--	--	--	-1.5	Dec-19
<b>TIPS</b>	<b>57,065,479</b>	<b>2.1</b>	<b>-1.3</b>	<b>-1.2</b>	<b>1.2</b>	<b>3.2</b>	<b>2.9</b>	--	<b>1.8</b>	<b>Jul-14</b>
BBg U.S. TIPS 0-5 Years			-1.1	-1.4	1.1	3.5	3.0	--	1.9	Jul-14

Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.  
Please see the Appendix for composition of the Low Beta Benchmark, Immunized Cash Flows Benchmark, Market Neutral Strategies Benchmark, and Other Benchmark.

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Private Real Estate</b>	<b>165,193,591</b>	<b>6.1</b>	<b>7.4</b>	<b>17.7</b>	<b>28.5</b>	<b>11.5</b>	<b>9.8</b>	<b>10.5</b>	<b>9.9</b>	<b>Jul-15</b>
<i>Core Real Estate Benchmark</i>			<i>7.1</i>	<i>15.3</i>	<i>27.3</i>	<i>10.0</i>	<i>8.6</i>	<i>--</i>	<i>8.7</i>	<i>Jul-15</i>
<b>Long-Term Government Bonds</b>	<b>49,904,212</b>	<b>1.9</b>	<b>-11.9</b>	<b>-21.0</b>	<b>-18.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-13.3</b>	<b>May-20</b>
<i>Bloomberg US Treasury Long TR</i>			<i>-11.9</i>	<i>-21.3</i>	<i>-18.5</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-14.3</i>	<i>May-20</i>
<b>Overlay</b>	<b>15,729,561</b>	<b>0.6</b>								

Core Private Real Estate values are one quarter lagged.

	Trailing Net Performance									
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund Aggregate</b>	<b>2,694,268,662</b>	<b>100.0</b>	<b>-6.7</b>	<b>-9.5</b>	<b>-4.4</b>	<b>8.6</b>	<b>7.2</b>	<b>6.3</b>	<b>6.8</b>	<b>Jan-94</b>
Policy Benchmark			-7.3	-10.1	-5.0	8.1	7.1	6.6	7.0	Jan-94
Investable Benchmark Portfolio			-7.5	-10.5	-5.6	7.6	6.6	6.0	--	Jan-94
Low-Cost Passive Portfolio			-12.5	-14.4	-12.0	4.0	--	--	--	Jan-94
60/40 MSCI ACWI IMI/BBgBarc Global Aggregate			-12.8	-17.8	-15.9	2.5	4.0	5.4	--	Jan-94
Liability Benchmark Portfolio			-11.9	-21.3	-18.5	-2.9	--	--	--	Jan-94
InvMetrics Public DB > \$1B Net Median			-8.6	-11.9	-7.4	6.3	6.6	7.6	7.3	Jan-94
InvMetrics Public DB > \$1B Net Rank			19	28	24	7	26	95	84	Jan-94
<b>Growth</b>	<b>1,996,649,553</b>	<b>74.1</b>	<b>-8.9</b>	<b>-12.6</b>	<b>-6.7</b>	<b>9.6</b>	<b>8.5</b>	<b>--</b>	<b>7.6</b>	<b>Jul-15</b>
Growth Benchmark			-9.4	-12.8	-8.8	8.5	8.4	--	8.0	Jul-15
<b>Public Equity</b>	<b>1,241,998,487</b>	<b>46.1</b>	<b>-15.5</b>	<b>-21.2</b>	<b>-18.9</b>	<b>4.9</b>	<b>5.6</b>	<b>8.0</b>	<b>7.2</b>	<b>May-10</b>
Public Equity Benchmark			-15.3	-20.0	-17.5	5.5	6.5	8.6	7.6	May-10
<b>Global Equity</b>	<b>228,992,553</b>	<b>8.5</b>	<b>-16.7</b>	<b>-22.8</b>	<b>-20.1</b>	<b>5.7</b>	<b>6.7</b>	<b>--</b>	<b>7.5</b>	<b>Jul-15</b>
eV All Global Equity Net Median			-15.6	-21.0	-16.2	5.7	6.7	8.8	6.7	Jul-15
eV All Global Equity Net Rank			65	64	69	52	51	--	36	Jul-15
Artisan Global Value	130,746,456	4.9	-13.5	-14.9	-13.9	5.7	6.0	10.0	9.3	Mar-11
MSCI ACWI Value NR USD			-11.5	-12.3	-8.1	3.9	4.3	6.9	5.2	Mar-11
eV All Global Equity Net Median			-15.6	-21.0	-16.2	5.7	6.7	8.8	7.2	Mar-11
eV All Global Equity Net Rank			29	22	38	51	61	27	17	Mar-11

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

Please see final page of the performance report for composition of the Policy Benchmark.

Throughout the report performance will be shown for funds after one full month of investment.

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Artisan Global Opportunities	98,246,097	3.6	-20.7	-31.2	-26.6	6.9	8.7	--	8.7	Jul-17
MSCI ACWI Growth NR USD			-20.2	-27.9	-23.5	7.6	9.2	--	9.2	Jul-17
eV All Global Equity Net Median			-15.6	-21.0	-16.2	5.7	6.7	8.8	6.7	Jul-17
eV All Global Equity Net Rank			88	88	84	35	25	--	25	Jul-17
<b>US Equity</b>	<b>496,016,915</b>	<b>18.4</b>	<b>-16.7</b>	<b>-20.8</b>	<b>-13.9</b>	<b>8.5</b>	<b>9.1</b>	<b>--</b>	<b>9.1</b>	<b>Jul-15</b>
MSCI USA IMI NR USD			-16.9	-21.3	-14.1	9.4	10.2	--	9.9	Jul-15
eV All US Equity Net Median			-15.3	-19.9	-13.7	7.7	8.5	11.1	8.3	Jul-15
eV All US Equity Net Rank			65	56	51	41	43	--	38	Jul-15
Northern Trust Russell 3000	475,650,079	17.7	-16.7	-21.1	-13.8	--	--	--	19.6	Mar-20
Russell 3000			-16.7	-21.1	-13.9	--	--	--	12.2	Mar-20
Cove Street Small Cap Value	20,366,836	0.8	-17.3	-15.2	-14.6	2.5	3.9	--	4.9	May-14
Russell 2000 Value			-15.3	-17.3	-16.3	6.2	4.9	--	6.2	May-14
eV US Small Cap Value Equity Net Median			-13.5	-16.0	-11.8	6.8	5.5	9.6	6.2	May-14
eV US Small Cap Value Equity Net Rank			90	42	72	95	82	--	83	May-14
<b>International Equity</b>	<b>242,660,789</b>	<b>9.0</b>	<b>-16.2</b>	<b>-24.4</b>	<b>-23.3</b>	<b>1.3</b>	<b>2.2</b>	<b>--</b>	<b>2.9</b>	<b>Jul-15</b>
MSCI World ex USA IMI NR USD			-15.2	-19.5	-17.7	1.7	2.6	--	3.1	Jul-15
eV ACWI ex-US All Cap Equity Net Median			-15.4	-23.3	-23.0	2.2	3.3	6.3	3.6	Jul-15
eV ACWI ex-US All Cap Equity Net Rank			62	56	54	66	72	--	74	Jul-15
Northern Trust MSCI World ex US	134,672,176	5.0	-13.5	-18.3	-16.2	2.4	3.2	--	5.4	Nov-16
MSCI World ex USA			-14.7	-18.8	-16.8	1.7	2.7	--	4.8	Nov-16

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Oberweis Intl Opportunities	36,053,699	1.3	-23.4	-36.2	-38.5	4.1	4.3	--	6.1	Nov-15
<i>MSCI World ex USA Small Cap Growth NR USD</i>			-20.4	-29.6	-28.6	1.4	2.6	--	4.8	Nov-15
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-15.4	-23.3	-23.0	2.2	3.3	6.3	4.4	Nov-15
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			97	94	96	23	30	--	24	Nov-15
Morgan Stanley Intl Equity	29,692,733	1.1	-20.7	-36.6	-34.6	--	--	--	-26.1	Apr-21
<i>MSCI ACWI ex USA</i>			-13.7	-18.4	-19.4	--	--	--	-12.2	Apr-21
<i>eV ACWI ex-US All Cap Equity Net Median</i>			-15.4	-23.3	-23.0	2.2	3.3	6.3	-15.3	Apr-21
<i>eV ACWI ex-US All Cap Equity Net Rank</i>			94	95	93	--	--	--	94	Apr-21
First Eagle International Equity	44,963,940	1.7	--	--	--	--	--	--	-0.1	Jun-22
<i>MSCI World ex USA</i>			--	--	--	--	--	--	-9.4	Jun-22
<b>Emerging Markets Equity</b>	<b>274,328,230</b>	<b>10.2</b>	<b>-11.7</b>	<b>-17.3</b>	<b>-22.7</b>	<b>2.1</b>	<b>1.8</b>	<b>--</b>	<b>2.1</b>	<b>Jul-15</b>
<i>MSCI Emerging Markets IMI Net</i>			-12.1	-17.9	-24.8	1.1	2.3	--	2.8	Jul-15
<i>eV Emg Mkts Equity Net Median</i>			-12.8	-19.2	-25.7	0.9	2.1	3.4	3.0	Jul-15
<i>eV Emg Mkts Equity Net Rank</i>			37	33	32	37	58	--	74	Jul-15
Northern Trust MSCI EM IMI	92,418,478	3.4	-11.5	-17.8	-24.8	1.0	--	--	1.3	Oct-18
<i>MSCI Emerging Markets IMI Net</i>			-12.1	-17.9	-24.8	1.1	--	--	1.4	Oct-18
Dimensional Fund Adv EM Value	42,430,079	1.6	-10.7	-10.2	-12.9	1.9	2.6	--	4.7	Nov-16
<i>MSCI Emerging Markets Value NR USD</i>			-10.8	-13.9	-18.6	-1.0	1.2	--	2.9	Nov-16
<i>eV Emg Mkts Equity Net Median</i>			-12.8	-19.2	-25.7	0.9	2.1	3.4	4.2	Nov-16
<i>eV Emg Mkts Equity Net Rank</i>			20	5	4	39	42	--	42	Nov-16

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GQG Global Emerging Markets	63,720,827	2.4	-11.2	-18.2	-22.7	3.0	5.5	--	5.5	Jul-17
<i>MSCI Emerging Markets</i>			-11.4	-17.6	-25.3	0.6	2.2	--	2.2	Jul-17
<i>eV Emg Mkts Equity Net Median</i>			-12.8	-19.2	-25.7	0.9	2.1	3.4	2.1	Jul-17
<i>eV Emg Mkts Equity Net Rank</i>			27	43	32	29	11	--	11	Jul-17
Redwheel Emerging Markets Equity	28,879,192	1.1	-12.3	-21.8	-30.0	--	--	--	5.2	Sep-19
<i>MSCI Emerging Markets</i>			-11.4	-17.6	-25.3	--	--	--	2.8	Sep-19
<i>eV Emg Mkts Equity Net Median</i>			-12.8	-19.2	-25.7	0.9	2.1	3.4	3.1	Sep-19
<i>eV Emg Mkts Equity Net Rank</i>			45	68	73	--	--	--	26	Sep-19
Wellington Emerging Markets Systematic Equity	38,015,952	1.4	-12.4	-18.3	-24.2	--	--	--	4.3	Sep-19
<i>MSCI Emerging Markets</i>			-11.4	-17.6	-25.3	--	--	--	2.8	Sep-19
<i>eV Emg Mkts Equity Net Median</i>			-12.8	-19.2	-25.7	0.9	2.1	3.4	3.1	Sep-19
<i>eV Emg Mkts Equity Net Rank</i>			46	44	41	--	--	--	36	Sep-19
Kotak India Midcap	8,863,703	0.3	-15.5	-18.2	-11.4	--	--	--	-11.4	Jun-21
<i>MSCI India Midcap</i>			-16.3	-19.3	-13.4	--	--	--	-13.4	Jun-21
<b>Private Markets</b>	<b>617,223,120</b>	<b>22.9</b>	<b>5.4</b>	<b>7.0</b>	<b>25.6</b>	<b>19.6</b>	<b>14.8</b>	<b>--</b>	<b>11.9</b>	<b>Jul-15</b>
<i>Private Markets Benchmark</i>			5.4	7.0	25.6	19.6	16.1	--	13.5	Jul-15
<i>MSCI ACWI IMI + 100bps</i>			-15.6	-20.0	-15.7	7.0	7.8	--	7.8	Jul-15
<b>Private Markets ex Russell 3000</b>	<b>617,223,120</b>	<b>22.9</b>	<b>5.9</b>	<b>8.9</b>	<b>31.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Jul-15</b>
<b>Private Equity</b>	<b>343,557,198</b>	<b>12.8</b>	<b>6.6</b>	<b>8.2</b>	<b>36.4</b>	<b>27.7</b>	<b>21.2</b>	<b>15.9</b>	<b>10.9</b>	<b>Jan-06</b>
<i>San Jose Custom Private Equity Benchmark</i>			-0.4	5.3	26.7	23.6	19.8	15.8	13.2	Jan-06
PE Strategic Partnership, LP	303,363,027	11.3	7.6	7.6	38.0	30.2	--	--	20.2	Aug-17
Pathway Private Eq Fund VIII	635,817	0.0	-4.8	-10.1	-7.8	-4.2	-3.9	2.2	5.5	Jul-09

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Pantheon USA Fund VII, LP	7,718,715	0.3	4.9	5.6	20.7	19.4	--	--	16.7	Jun-18
Pantheon Global Secondary III	453,745	0.0	-2.1	-2.1	-20.1	-11.1	-2.8	-0.5	1.4	Jul-09
Great Hill Equity Partners IV	3,611,928	0.1	-0.6	-2.9	0.7	22.0	40.4	34.1	30.1	Jul-09
Partners Group Secondary 2008	688,778	0.0	-8.0	-4.8	3.8	10.1	7.5	7.2	9.0	Jul-09
Partners Group Secondary 2011	4,568,401	0.2	0.0	2.5	22.7	15.7	13.5	--	18.4	Nov-12
Innovation Endeavors III	13,819,505	0.5	-3.1	42.0	92.8	62.1	--	--	32.1	Jun-18
Crestline Portfolio Financing	8,697,282	0.3	0.8	1.9	4.0	9.6	--	--	9.1	Jun-18
<b>Venture Capital</b>	<b>13,948,112</b>	<b>0.5</b>	<b>0.7</b>	<b>0.4</b>	<b>-1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-1.4</b>	<b>Jun-21</b>
Innovation Endeavors IV	1,182,457	0.0	4.5	2.3	-6.9	--	--	--	-6.4	Jun-21
TI Platform SJFED LP	8,117,372	0.3	0.8	0.8	--	--	--	--	0.8	Jul-21
Soma Capital Fund III LP	1,560,283	0.1	4.0	4.0	--	--	--	--	4.0	Dec-21
Fin VC Horizons II	3,088,000	0.1	-2.7	--	--	--	--	--	--	Jan-22
<b>Private Debt</b>	<b>108,155,440</b>	<b>4.0</b>	<b>5.4</b>	<b>10.9</b>	<b>25.1</b>	<b>12.6</b>	<b>5.2</b>	<b>5.8</b>	<b>5.5</b>	<b>Dec-10</b>
<i>S&amp;P Global Leveraged Loan Index +2%</i>			-3.9	-3.5	-0.8	4.1	4.7	5.5	5.7	Dec-10
White Oak Direct Lending	36,701,733	1.4	12.4	28.6	77.2	52.3	20.5	12.7	10.6	Feb-11
Blackstone/GSO Cap Partners	3,799,965	0.1	1.1	2.8	-4.3	-26.1	-14.7	-5.5	-2.6	Mar-11
Medley Opportunity Fund II LP	4,378,782	0.2	-9.8	-9.8	-13.3	-11.8	-10.6	-1.9	-1.3	Jun-11
Cross Ocean USD ESS Fund II LP	3,206,438	0.1	-0.7	0.3	6.6	8.6	7.4	--	9.5	Aug-16



Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Crestline Co-Investment	1,201,242	0.0	8.2	8.2	14.3	12.7	--	--	11.4	Mar-19
Cross Ocean USD ESS Fund III, L.P.	22,287,333	0.8	3.7	3.5	10.6	13.6	--	--	13.2	Jun-19
Arbour Lane Credit Opportunity Fund II, L.P.	10,765,762	0.4	3.2	3.2	15.8	--	--	--	23.2	Apr-20
Eagle Point Defensive Income Fund	7,393,242	0.3	2.2	3.5	-5.6	--	--	--	7.0	Jun-20
HPS Special Situations Opportunity Fund	5,358,242	0.2	3.8	6.1	12.9	--	--	--	24.0	Jan-21
Crestline Portfolio Financing Fund II	2,686,152	0.1	2.1	4.5	11.6	--	--	--	7.9	Jan-21
SVP Special Situations V	2,669,162	0.1	2.4	11.2	8.8	--	--	--	8.8	Jun-21
Arbour Lane COF III	2,521,219	0.1	-0.6	-0.6	--	--	--	--	-0.5	Nov-21
Octagon CLO Opp Fund I	3,150,885	0.1	0.1	--	--	--	--	--	0.1	Mar-22
Angelo Gordon CS II	2,035,284	0.1	1.2	--	--	--	--	--	1.2	Feb-22
<b>Growth Real Estate</b>	<b>102,028,604</b>	<b>3.8</b>	<b>3.5</b>	<b>8.2</b>	<b>26.3</b>	<b>14.0</b>	<b>15.5</b>	<b>--</b>	<b>16.3</b>	<b>Jul-15</b>
<i>NCREIF Property Index</i>			3.2	8.7	21.5	10.2	8.9	--	8.8	Jul-15
DRA Growth & Income Fund VII	1,203,453	0.0	17.7	20.6	53.6	74.7	58.1	37.4	36.6	Apr-12
DRA Growth & Income Fund VIII	5,151,983	0.2	1.0	3.2	21.2	5.0	7.6	--	8.8	Jan-15
Tristan - EPISO IV	12,547,589	0.5	-3.6	-1.5	0.8	7.0	8.2	--	8.1	Jan-16
DRA Growth & Income Fund IX	14,920,256	0.6	6.1	10.8	49.6	23.0	19.7	--	18.9	Feb-17
GEM Realty Fund VI	4,858,515	0.2	6.2	14.7	38.4	15.8	--	--	10.6	Dec-17

Returns for the Private Debt and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Torchlight Debt Opportunity VI	25,755,563	1.0	3.4	8.8	19.3	9.0	--	--	6.0	Apr-18
Tristan - EPISO V	10,317,431	0.4	-5.1	-7.1	11.0	-39.5	--	--	-37.6	Apr-19
DRA Growth & Income Fund X	5,914,050	0.2	13.7	15.2	51.8	--	--	--	28.8	Mar-20
Rockpoint Real Estate Fund VI, L.P.	5,242,918	0.2	8.7	14.7	44.2	--	--	--	20.5	May-20
Exeter Industrial Value Fund V	6,381,732	0.2	5.6	31.5	73.2	--	--	--	48.8	Oct-20
Torchlight Debt Fund VII	1,839,501	0.1	1.3	1.5	1.8	--	--	--	1.7	Feb-21
H.I.G. Realty Partners IV, L.P.	1,346,036	0.0	79.1	--	--	--	--	--	--	Dec-21
Praedium X MidInc	2,188,948	0.1	0.0	--	--	--	--	--	0.0	Apr-22
AIGGRE Fund IV	4,360,629	0.2	--	--	--	--	--	--	-4.8	Jun-22
<b>Private Real Assets</b>	<b>49,533,766</b>	<b>1.8</b>	<b>8.3</b>	<b>14.5</b>	<b>30.4</b>	<b>12.1</b>	<b>12.1</b>	<b>--</b>	<b>9.4</b>	<b>Jul-15</b>
Global Infra Part III-A/B, LP	27,703,778	1.0	4.8	18.4	24.7	12.3	7.8	--	6.6	Sep-16
Lime Rock Partners VIII	3,594,452	0.1	21.7	29.6	48.8	12.3	--	--	10.8	Dec-18
Kimmeridge Energy Fund V, L.P.	4,336,763	0.2	17.1	17.1	50.3	--	--	--	15.8	Aug-19
Global Infra Partners IV	1,705,687	0.1	3.9	9.0	4.0	--	--	--	--	Sep-19
Lime Rock New Energy, L.P.	1,094,102	0.0	-19.8	-56.2	--	--	--	--	--	Aug-20
Orion Mine Finance III	3,587,792	0.1	2.1	7.3	7.9	--	--	--	10.5	Aug-20
Real Assets Coinvest I	1,199,996	0.0	0.0	0.0	0.0	--	--	--	0.0	Sep-20

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Crestline Co-Investment II	3,404,426	0.1	43.4	49.9	67.4	--	--	--	47.5	Jan-21
Tembo Cap Mining III	1,518,206	0.1	2.3	6.3	--	--	--	--	--	
Mountain Capital II	1,233,517	0.0	19.6	19.6	--	--	--	--	19.6	Jan-22
Aether Seed Partners I	155,047	0.0	--	--	--	--	--	--	0.0	May-22
<b>Emerging Markets Debt</b>	<b>83,707,159</b>	<b>3.1</b>	<b>1.2</b>	<b>2.3</b>	<b>3.0</b>	<b>5.4</b>	<b>4.2</b>	<b>--</b>	<b>4.1</b>	<b>Jul-15</b>
50% JPM EMBI GD / 50% JPM GBI-EM			-10.0	-17.5	-20.2	-5.5	-1.7	--	0.5	Jul-15
eV All Emg Mkts Fixed Inc Net Median			-9.0	-16.0	-18.9	-4.4	-1.1	1.4	1.1	Jul-15
eV All Emg Mkts Fixed Inc Net Rank			1	1	1	1	1	--	2	Jul-15
Wellington Iguazu Partners LP Fund	70,530,119	2.6	6.1	13.6	17.6	12.4	--	--	12.6	May-19
50% JPM EMBI GD / 50% JPM GBI-EM			-10.0	-17.5	-20.2	-5.5	--	--	-3.8	May-19
eV All Emg Mkts Fixed Inc Net Median			-9.0	-16.0	-18.9	-4.4	-1.1	1.4	-2.7	May-19
eV All Emg Mkts Fixed Inc Net Rank			1	1	1	1	--	--	1	May-19
Payden EMD Blended Currency	13,177,039	0.5	-11.7	-18.8	-21.4	--	--	--	-15.9	Dec-20
50% JPM EMBI GD / 50% JPM GBI-EM			-10.0	-17.5	-20.2	--	--	--	-15.1	Dec-20
eV All Emg Mkts Fixed Inc Net Median			-9.0	-16.0	-18.9	-4.4	-1.1	1.4	-14.0	Dec-20
eV All Emg Mkts Fixed Inc Net Rank			76	73	78	--	--	--	85	Dec-20
<b>High Yield Bonds</b>	<b>53,720,787</b>	<b>2.0</b>	<b>-9.6</b>	<b>-13.4</b>	<b>-11.9</b>	<b>0.5</b>	<b>1.2</b>	<b>--</b>	<b>0.3</b>	<b>Jun-14</b>
Bloomberg US Corporate High Yield TR			-9.8	-14.2	-12.8	0.2	2.1	--	3.1	Jun-14
Mellon High Yield Beta	4,872,856	0.2	-9.9	-14.2	-12.9	--	--	--	0.5	Jun-20
Bloomberg US Corporate High Yield TR			-9.8	-14.2	-12.8	--	--	--	0.8	Jun-20
eV US High Yield Fixed Inc Net Median			-9.4	-13.1	-11.9	0.4	2.0	4.2	1.0	Jun-20
eV US High Yield Fixed Inc Net Rank			71	78	76	--	--	--	64	Jun-20

Returns for the Private Debt and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Columbia High Yield	48,847,930	1.8	-9.6	-13.3	-11.7	--	--	--	-6.0	Dec-20
Bloomberg US Corporate High Yield TR			-9.8	-14.2	-12.8	--	--	--	-6.5	Dec-20
eV US High Yield Fixed Inc Net Median			-9.4	-13.1	-11.9	0.4	2.0	4.2	-5.8	Dec-20
eV US High Yield Fixed Inc Net Rank			55	57	49	--	--	--	56	Dec-20
<b>Low Beta</b>	<b>174,224,428</b>	<b>6.5</b>	<b>3.4</b>	<b>6.4</b>	<b>7.3</b>	<b>4.7</b>	<b>4.3</b>	<b>--</b>	<b>3.2</b>	<b>Jul-15</b>
Low Beta Benchmark			0.0	-0.9	-1.1	0.6	1.0	--	0.6	Jul-15
<b>Immunized Cash Flows</b>	<b>69,237,748</b>	<b>2.6</b>	<b>-0.3</b>	<b>-1.8</b>	<b>-2.1</b>	<b>0.6</b>	<b>--</b>	<b>--</b>	<b>1.4</b>	<b>Oct-18</b>
Bloomberg US Govt/Credit 1-3 Yr. TR			-0.6	-3.1	-3.6	0.3	--	--	1.3	Oct-18
Insight Immunized Cash Flow	69,237,748	2.6	-0.3	-1.8	-2.1	0.6	--	--	--	Jun-19
Bloomberg US Govt/Credit 1-3 Yr. TR			-0.6	-3.1	-3.6	0.3	--	--	--	Jun-19
<b>Market Neutral Strategies</b>	<b>85,779,535</b>	<b>3.2</b>	<b>8.2</b>	<b>18.5</b>	<b>21.5</b>	<b>11.9</b>	<b>9.6</b>	<b>--</b>	<b>6.4</b>	<b>Nov-12</b>
Market Neutral Strategies Benchmark			0.5	0.7	0.8	0.9	1.1	--	1.1	Nov-12
<b>Relative Value</b>	<b>85,779,535</b>	<b>3.2</b>	<b>8.2</b>	<b>18.5</b>	<b>21.5</b>	<b>10.0</b>	<b>8.7</b>	<b>--</b>	<b>6.7</b>	<b>Oct-14</b>
HFRI Relative Value (Total) Index			-2.8	-2.1	-1.2	3.5	3.6	--	3.5	Oct-14
Pine River Fund, Ltd	286,847	0.0	-12.6	-12.6	-10.6	2.7	4.8	--	3.7	Jan-13
HFRI Relative Value (Total) Index			-2.8	-2.1	-1.2	3.5	3.6	--	4.1	Jan-13
DE Shaw Composite Fund, LLC	41,066,134	1.5	8.4	14.8	25.6	20.5	16.6	--	14.1	Apr-13
HFRI Fund Weighted Composite Index			-4.7	-5.6	-5.6	6.2	5.1	--	4.5	Apr-13
Hudson Bay	9,350,406	0.3	1.7	3.2	6.9	12.0	--	--	9.7	Aug-17
HFRI Relative Value (Total) Index			-2.8	-2.1	-1.2	3.5	--	--	3.5	Aug-17

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Crabel Advanced Trend	35,076,147	1.3	9.8	26.4	20.9	--	--	--	20.9	Jun-21
Barclay CTA Index			3.0	-1.8	9.7	--	--	--	9.7	Jun-21
<b>Cash</b>	<b>19,207,146</b>	<b>0.7</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.7</b>	<b>1.1</b>	<b>--</b>	<b>--</b>	<b>Jan-06</b>
ICE BofA 91 Days T-Bills TR			0.1	0.1	0.2	0.6	1.1	--	--	Jan-06
<b>Other</b>	<b>507,665,120</b>	<b>18.8</b>	<b>-1.0</b>	<b>-2.0</b>	<b>1.0</b>	<b>1.5</b>	<b>2.3</b>	<b>1.9</b>	<b>2.0</b>	<b>Jul-04</b>
Other Benchmark			-1.2	-2.6	1.0	-1.0	0.2	--	--	Jul-04
<b>Investment Grade Bonds</b>	<b>235,501,838</b>	<b>8.7</b>	<b>-3.4</b>	<b>-7.9</b>	<b>-7.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-0.2</b>	<b>Dec-19</b>
Custom IG Bonds Benchmark			-3.5	-8.3	-8.4	--	--	--	-1.5	Dec-19
Northern Trust Aggregate Bond Index	39,034,574	1.4	-4.7	-10.3	-10.3	--	--	--	-2.1	Dec-19
Bloomberg US Aggregate TR			-4.7	-10.3	-10.3	--	--	--	-2.0	Dec-19
Voya Securitized Credit	41,293,197	1.5	-5.1	-9.3	-8.1	--	--	--	0.1	May-20
Bloomberg US Securitized MBS ABS CMBS TR			-3.9	-8.7	-9.0	--	--	--	-4.2	May-20
BlackRock 1-3 Year Gov/Credit	70,844,243	2.6	-0.6	-3.1	-3.5	--	--	--	-1.7	Aug-20
Bloomberg US Govt/Credit 1-3 Yr. TR			-0.6	-3.1	-3.6	--	--	--	-1.7	Aug-20
Invesco Core Bonds	84,329,824	3.1	-4.9	-10.9	-11.0	--	--	--	-7.7	Feb-21
Bloomberg US Aggregate TR			-4.7	-10.3	-10.3	--	--	--	-7.4	Feb-21
<b>TIPS</b>	<b>57,065,479</b>	<b>2.1</b>	<b>-1.3</b>	<b>-1.2</b>	<b>1.2</b>	<b>3.2</b>	<b>2.9</b>	<b>--</b>	<b>1.8</b>	<b>Jul-14</b>
BBg U.S. TIPS 0-5 Years			-1.1	-1.4	1.1	3.5	3.0	--	1.9	Jul-14
Northern Trust 0-5 Year TIPS	57,065,479	2.1	-1.3	-1.2	1.2	3.7	3.2	--	2.0	Jul-14
Bloomberg US Treasury TIPS 0-5 Yr TR			-1.1	-1.4	1.1	3.5	3.0	--	1.9	Jul-14

Cash composite includes the cash account, cash collateral in the Russell Investments Overlay program, and residuals from terminated manager assets.

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Private Real Estate</b>	<b>165,193,591</b>	<b>6.1</b>	<b>7.4</b>	<b>17.7</b>	<b>28.5</b>	<b>11.5</b>	<b>9.8</b>	<b>10.5</b>	<b>9.9</b>	<b>Jul-15</b>
Core Real Estate Benchmark			7.1	15.3	27.3	10.0	8.6	--	8.7	Jul-15
BlackRock Core Property Fund	65,283,115	2.4	7.7	19.9	29.0	11.7	--	--	11.0	Feb-19
Core Real Estate Benchmark 2			7.1	15.3	27.3	10.0	--	--	9.2	Feb-19
Clarion Lion Properties Fund	62,336,116	2.3	6.9	15.1	28.4	11.0	--	--	10.9	Apr-19
Core Real Estate Benchmark 2			7.1	15.3	27.3	10.0	--	--	9.7	Apr-19
Clarion Lion Industrial Trust	13,490,286	0.5	10.3	22.6	--	--	--	--	22.6	Oct-21
Core Real Estate Benchmark 3			7.1	15.3	--	--	--	--	15.3	Oct-21
TA Realty Core Property Fund	24,084,074	0.9	8.3	17.7	--	--	--	--	17.7	Oct-21
Core Real Estate Benchmark 3			7.1	15.3	--	--	--	--	15.3	Oct-21
<b>Long-Term Government Bonds</b>	<b>49,904,212</b>	<b>1.9</b>	<b>-11.9</b>	<b>-21.0</b>	<b>-18.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-13.3</b>	<b>May-20</b>
Bloomberg US Treasury Long TR			-11.9	-21.3	-18.5	--	--	--	-14.3	May-20
BlackRock Long-Term Gov Bonds	49,904,212	1.9	-11.9	-21.0	-18.5	--	--	--	-13.3	May-20
Bloomberg US Treasury Long TR			-11.9	-21.3	-18.5	--	--	--	-14.3	May-20
<b>Overlay</b>	<b>15,729,561</b>	<b>0.6</b>								
Russell Investments Overlay	15,722,644	0.6								

Cash Flow Summary						
Quarter Ending June 30, 2022						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Aether Seed Partners I	--	\$155,047	\$0	\$155,047	\$0	\$155,047
AIGGRE Fund IV	--	\$4,578,663	\$0	\$4,578,663	-\$218,035	\$4,360,629
Angelo Gordon CS II	\$900,000	\$1,121,250	\$0	\$1,121,250	\$14,034	\$2,035,284
Arbour Lane COF III	\$2,281,203	\$256,999	\$0	\$256,999	-\$16,983	\$2,521,219
Arbour Lane Credit Opportunity Fund II, L.P.	\$10,431,370	\$0	\$0	\$0	\$334,392	\$10,765,762
Artisan Global Opportunities	\$123,819,772	\$0	\$0	\$0	-\$25,573,675	\$98,246,097
Artisan Global Value	\$151,155,123	\$0	\$0	\$0	-\$20,408,666	\$130,746,456
BlackRock 1-3 Year Gov/Credit	\$101,577,124	\$0	-\$30,000,000	-\$30,000,000	-\$732,881	\$70,844,243
BlackRock Core Property Fund	\$60,587,775	\$0	\$0	\$0	\$4,695,340	\$65,283,115
BlackRock Long-Term Gov Bonds	\$56,659,694	\$0	\$0	\$0	-\$6,755,482	\$49,904,212
Blackstone/GSO Cap Partners	\$3,757,832	\$0	\$0	\$0	\$42,133	\$3,799,965
Cash Account	\$48,903,925	\$170,180,426	-\$199,947,429	-\$29,767,002	\$70,224	\$19,207,146
Clarion Lion Industrial Trust	\$12,233,232	\$0	\$0	\$0	\$1,257,054	\$13,490,286
Clarion Lion Properties Fund	\$58,713,145	\$0	-\$385,117	-\$385,117	\$4,008,088	\$62,336,116
Columbia High Yield	\$54,009,026	\$5,274	-\$5,274	\$0	-\$5,161,095	\$48,847,930
Cove Street Small Cap Value	\$24,614,264	\$0	\$0	\$0	-\$4,247,428	\$20,366,836
Crabel Advanced Trend	\$45,115,870	\$0	-\$14,000,000	-\$14,000,000	\$3,960,278	\$35,076,147
Crestline Co-Investment	\$1,110,058	\$0	\$0	\$0	\$91,185	\$1,201,242
Crestline Co-Investment II	\$2,374,495	\$0	\$0	\$0	\$1,029,931	\$3,404,426
Crestline Portfolio Financing	\$8,676,378	\$0	-\$44,724	-\$44,724	\$65,628	\$8,697,282
Crestline Portfolio Financing Fund II	\$2,653,404	\$0	-\$23,372	-\$23,372	\$56,120	\$2,686,152
Cross Ocean USD ESS Fund II LP	\$3,701,484	\$0	-\$471,254	-\$471,254	-\$23,792	\$3,206,438

Total Fund | As of June 30, 2022

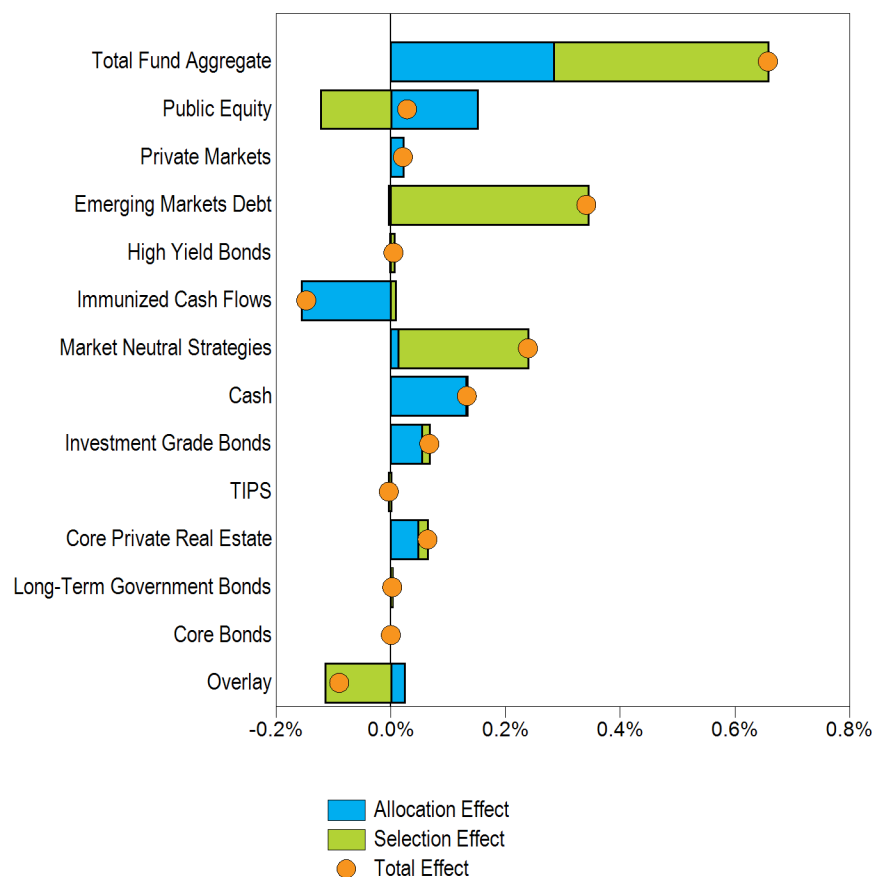
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Cross Ocean USD ESS Fund III, L.P.	\$20,613,557	\$885,426	\$0	\$885,426	\$788,350	\$22,287,333
DE Shaw Composite Fund, LLC	\$37,884,917	\$0	\$0	\$0	\$3,181,217	\$41,066,134
Dimensional Fund Adv EM Value	\$47,525,702	\$0	\$0	\$0	-\$5,095,624	\$42,430,079
DRA Growth & Income Fund IX	\$15,291,307	\$0	-\$1,244,537	-\$1,244,537	\$873,486	\$14,920,256
DRA Growth & Income Fund VII	\$1,022,548	\$0	\$0	\$0	\$180,905	\$1,203,453
DRA Growth & Income Fund VIII	\$5,294,038	\$0	-\$192,436	-\$192,436	\$50,381	\$5,151,983
DRA Growth & Income Fund X	\$4,742,686	\$1,000,000	-\$424,897	\$575,103	\$596,261	\$5,914,050
Eagle Point Defensive Income Fund	\$5,367,524	\$1,981,600	-\$74,069	\$1,907,531	\$118,187	\$7,393,242
Exeter Industrial Value Fund V	\$6,044,694	\$0	\$0	\$0	\$337,038	\$6,381,732
Fin VC Horizons II	\$0	\$3,174,650	\$0	\$3,174,650	-\$86,650	\$3,088,000
First Eagle International Equity	--	\$45,000,000	\$0	\$45,000,000	-\$36,060	\$44,963,940
GEM Realty Fund VI	\$5,370,347	\$500,000	-\$1,377,500	-\$877,500	\$365,668	\$4,858,515
Global Infra Part III-A/B, LP	\$27,372,873	\$0	-\$993,349	-\$993,349	\$1,324,254	\$27,703,778
Global Infra Partners IV	\$1,769,584	\$0	-\$131,672	-\$131,672	\$67,775	\$1,705,687
GQG Global Emerging Markets	\$71,783,226	\$0	\$0	\$0	-\$8,062,399	\$63,720,827
Great Hill Equity Partners IV	\$3,632,946	\$0	\$0	\$0	-\$21,018	\$3,611,928
H.I.G. Realty Partners IV, L.P.	\$999,528	\$0	-\$426,019	-\$426,019	\$772,527	\$1,346,036
HPS Special Situations Opportunity Fund	\$5,163,341	\$0	\$0	\$0	\$194,901	\$5,358,242
Hudson Bay	\$9,197,291	\$0	\$0	\$0	\$153,115	\$9,350,406
Innovation Endeavors III	\$14,264,593	\$0	\$0	\$0	-\$445,088	\$13,819,505
Innovation Endeavors IV	\$1,131,714	\$0	\$0	\$0	\$50,743	\$1,182,457



	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
Insight Immunized Cash Flow	\$77,026,169	\$0	-\$7,567,908	-\$7,567,908	-\$220,513	\$69,237,748
Invesco Core Bonds	\$88,703,186	\$2,467	-\$2,467	\$0	-\$4,373,362	\$84,329,824
Kimmeridge Energy Fund V, L.P.	\$5,126,680	\$0	-\$1,667,143	-\$1,667,143	\$877,226	\$4,336,763
Kotak India Midcap	\$10,486,000	\$0	\$0	\$0	-\$1,622,297	\$8,863,703
Lime Rock New Energy, L.P.	\$1,335,568	\$22,333	\$0	\$22,333	-\$263,799	\$1,094,102
Lime Rock Partners VIII	\$2,879,708	\$88,562	\$0	\$88,562	\$626,182	\$3,594,452
Medley Opportunity Fund II LP	\$4,852,337	\$0	\$0	\$0	-\$473,555	\$4,378,782
Mellon High Yield Beta	\$5,409,256	\$0	\$0	\$0	-\$536,400	\$4,872,856
Morgan Stanley Intl Equity	\$34,024,309	\$0	\$0	\$0	-\$7,053,335	\$26,970,974
Mountain Capital II	\$1,191,149	\$22,640	-\$185,515	-\$162,874	\$205,242	\$1,233,517
Northern Trust 0-5 Year TIPS	\$57,816,672	\$0	\$0	\$0	-\$751,194	\$57,065,479
Northern Trust Aggregate Bond Index	\$40,940,343	\$0	\$0	\$0	-\$1,905,769	\$39,034,574
Northern Trust MSCI EM IMI	\$90,887,919	\$12,000,000	\$0	\$12,000,000	-\$10,469,442	\$92,418,478
Northern Trust MSCI World ex US	\$194,086,117	\$12,000,000	-\$45,000,000	-\$33,000,000	-\$26,413,941	\$134,672,176
Northern Trust Russell 3000	\$31,482,872	\$0	-\$29,827,988	-\$29,827,988	-\$1,654,884	\$0
Northern Trust Russell 3000	\$543,518,095	\$23,000,000	\$0	\$23,000,000	-\$90,868,017	\$475,650,079
Oberweis Intl Opportunities	\$47,092,073	\$0	\$0	\$0	-\$11,038,374	\$36,053,699
Octagon CLO Opp Fund I	\$1,350,000	\$1,800,000	\$0	\$1,800,000	\$885	\$3,150,885
Orion Mine Finance III	\$3,075,315	\$441,702	\$0	\$441,702	\$70,775	\$3,587,792
Pantheon Global Secondary III	\$869,965	\$0	-\$400,000	-\$400,000	-\$16,220	\$453,745
Pantheon USA Fund VII, LP	\$7,861,946	\$0	-\$520,000	-\$520,000	\$376,769	\$7,718,715
Partners Group Secondary 2008	\$783,945	\$0	-\$35,149	-\$35,149	-\$60,018	\$688,778
Partners Group Secondary 2011	\$4,567,319	\$0	\$0	\$0	\$1,082	\$4,568,401
Pathway Private Eq Fund VIII	\$923,586	\$0	-\$253,175	-\$253,175	-\$34,594	\$635,817
Payden EMD Blended Currency	\$29,394,583	\$0	-\$13,300,000	-\$13,300,000	-\$2,917,543	\$13,177,039

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
PE Strategic Partnership, LP	\$281,020,596	\$4,837,500	-\$3,969,994	\$867,506	\$21,474,925	\$303,363,027
Pine River Fund, Ltd	\$376,718	\$0	-\$47,111	-\$47,111	-\$42,760	\$286,847
Praedium X MidInc	\$0	\$2,230,152	-\$41,204	\$2,188,948	\$0	\$2,188,948
Real Assets Coinvest I	\$1,199,996	\$0	\$0	\$0	\$0	\$1,199,996
Redwheel Emerging Markets Equity	\$32,926,764	\$0	\$0	\$0	-\$4,047,572	\$28,879,192
Rockpoint Real Estate Fund VI, L.P.	\$4,801,679	\$632,731	-\$628,140	\$4,591	\$436,648	\$5,242,918
Russell Investments Overlay	\$10,413,665	\$10,000,000	\$0	\$10,000,000	-\$4,691,021	\$15,722,644
Soma Capital Fund III LP	\$1,500,000	\$0	\$0	\$0	\$60,283	\$1,560,283
State Street Terminated Managers	\$7,362	\$0	-\$150	-\$150	-\$295	\$6,917
SVP Special Situations V	\$2,613,836	\$0	-\$7,047	-\$7,047	\$62,373	\$2,669,162
TA Realty Core Property Fund	\$18,056,003	\$4,800,004	-\$251,758	\$4,548,245	\$1,479,826	\$24,084,074
Tembo Cap Mining III	\$1,377,342	\$108,142	\$0	\$108,142	\$32,722	\$1,518,206
TI Platform SJFED LP	\$8,050,000	\$0	\$0	\$0	\$67,372	\$8,117,372
Torchlight Debt Fund VII	\$1,815,053	\$0	\$0	\$0	\$24,448	\$1,839,501
Torchlight Debt Opportunity VI	\$31,024,984	\$0	-\$6,301,088	-\$6,301,088	\$1,031,667	\$25,755,563
Tristan - EPISO IV	\$13,109,341	\$19	-\$91,218	-\$91,199	-\$470,553	\$12,547,589
Tristan - EPISO V	\$9,723,938	\$1,101,628	\$0	\$1,101,628	-\$508,135	\$10,317,431
Voya Securitized Credit	\$43,504,004	\$0	\$0	\$0	-\$2,210,807	\$41,293,197
Wellington Emerging Markets Systematic Equity	\$43,413,869	\$0	\$0	\$0	-\$5,397,917	\$38,015,952
Wellington Iguazu Partners LP Fund	\$60,566,862	\$6,000,000	\$0	\$6,000,000	\$3,963,257	\$70,530,119
White Oak Direct Lending	\$32,644,001	\$0	\$0	\$0	\$4,057,732	\$36,701,733
<b>Total</b>	<b>\$2,941,578,711</b>	<b>\$307,927,215</b>	<b>-\$359,838,704</b>	<b>-\$51,911,489</b>	<b>-\$195,398,560</b>	<b>\$2,694,268,662</b>

#### Attribution Effects 3 Months Ending June 30, 2022



#### Attribution Summary 3 Months Ending June 30, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	-15.5%	-15.3%	-0.3%	-0.1%	0.2%	0.0%
Private Markets	5.4%	5.4%	0.0%	0.0%	0.0%	0.0%
Emerging Markets Debt	1.2%	-10.0%	11.2%	0.3%	0.0%	0.3%
High Yield Bonds	-9.6%	-9.8%	0.2%	0.0%	0.0%	0.0%
Immunized Cash Flows	-0.3%	-0.6%	0.3%	0.0%	-0.2%	-0.1%
Market Neutral Strategies	8.2%	0.5%	7.6%	0.2%	0.0%	0.2%
Cash	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%
Investment Grade Bonds	-3.4%	-3.5%	0.2%	0.0%	0.1%	0.1%
TIPS	-1.3%	-1.1%	-0.2%	0.0%	0.0%	0.0%
Core Private Real Estate	7.4%	7.1%	0.3%	0.0%	0.0%	0.1%
Long-Term Government Bonds	-11.9%	-11.9%	0.0%	0.0%	0.0%	0.0%
Core Bonds	--	--	--	--	0.0%	--
Overlay	-32.9%	0.1%	-33.0%	-0.1%	0.0%	-0.1%
<b>Total</b>	<b>-6.6%</b>	<b>-7.3%</b>	<b>0.7%</b>	<b>0.4%</b>	<b>0.3%</b>	<b>0.7%</b>

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

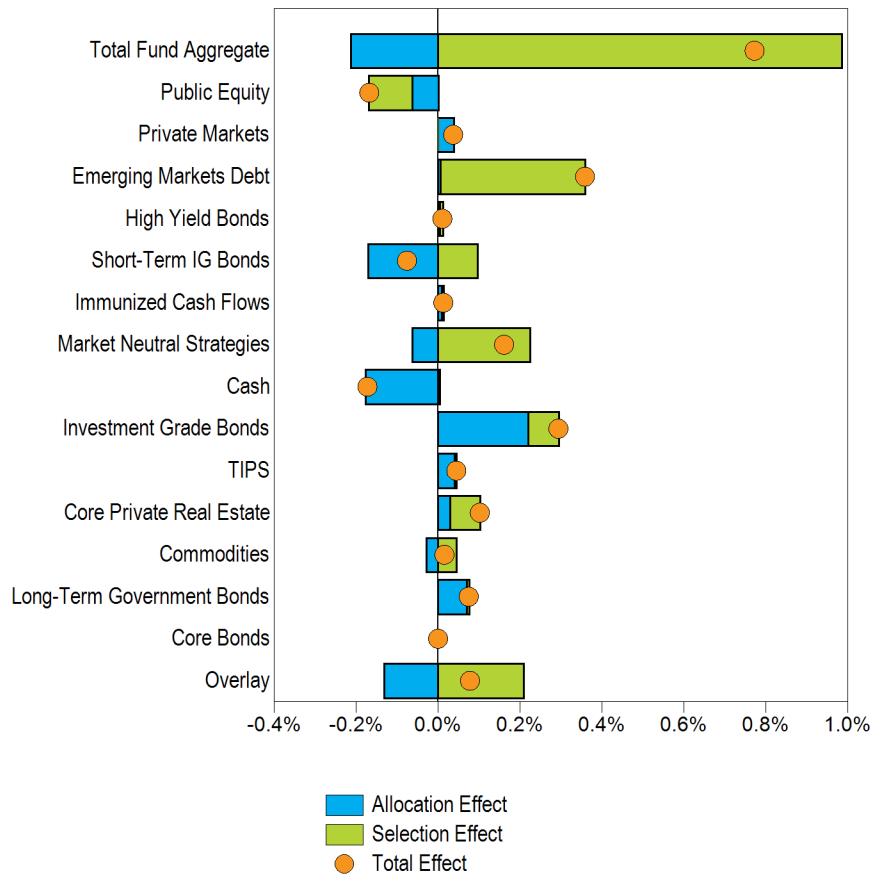
#### Attribution Effects 1 Year Ending June 30, 2022



#### Attribution Summary 1 Year Ending June 30, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	-18.9%	-17.5%	-1.3%	-0.7%	0.1%	-0.6%
Private Markets	25.6%	25.6%	0.0%	0.0%	0.1%	0.1%
Emerging Markets Debt	3.0%	-20.2%	23.2%	0.7%	0.0%	0.7%
High Yield Bonds	-11.9%	-12.8%	1.0%	0.0%	0.0%	0.0%
Immunized Cash Flows	-2.1%	-3.6%	1.4%	0.0%	-0.1%	0.0%
Market Neutral Strategies	21.5%	0.8%	20.7%	0.6%	0.0%	0.6%
Cash	0.2%	0.2%	0.0%	0.0%	0.1%	0.1%
Investment Grade Bonds	-7.8%	-8.4%	0.6%	0.0%	0.0%	0.1%
TIPS	1.2%	1.1%	0.1%	0.0%	0.0%	0.0%
Core Private Real Estate	28.5%	27.3%	1.2%	0.1%	0.0%	0.0%
Long-Term Government Bonds	-18.5%	-18.5%	-0.1%	0.0%	0.0%	0.0%
Core Bonds	--	--	--	--	0.0%	--
Overlay	-41.8%	0.2%	-41.9%	-0.2%	0.0%	-0.2%
<b>Total</b>	<b>-4.3%</b>	<b>-5.1%</b>	<b>0.8%</b>	<b>0.6%</b>	<b>0.2%</b>	<b>0.8%</b>

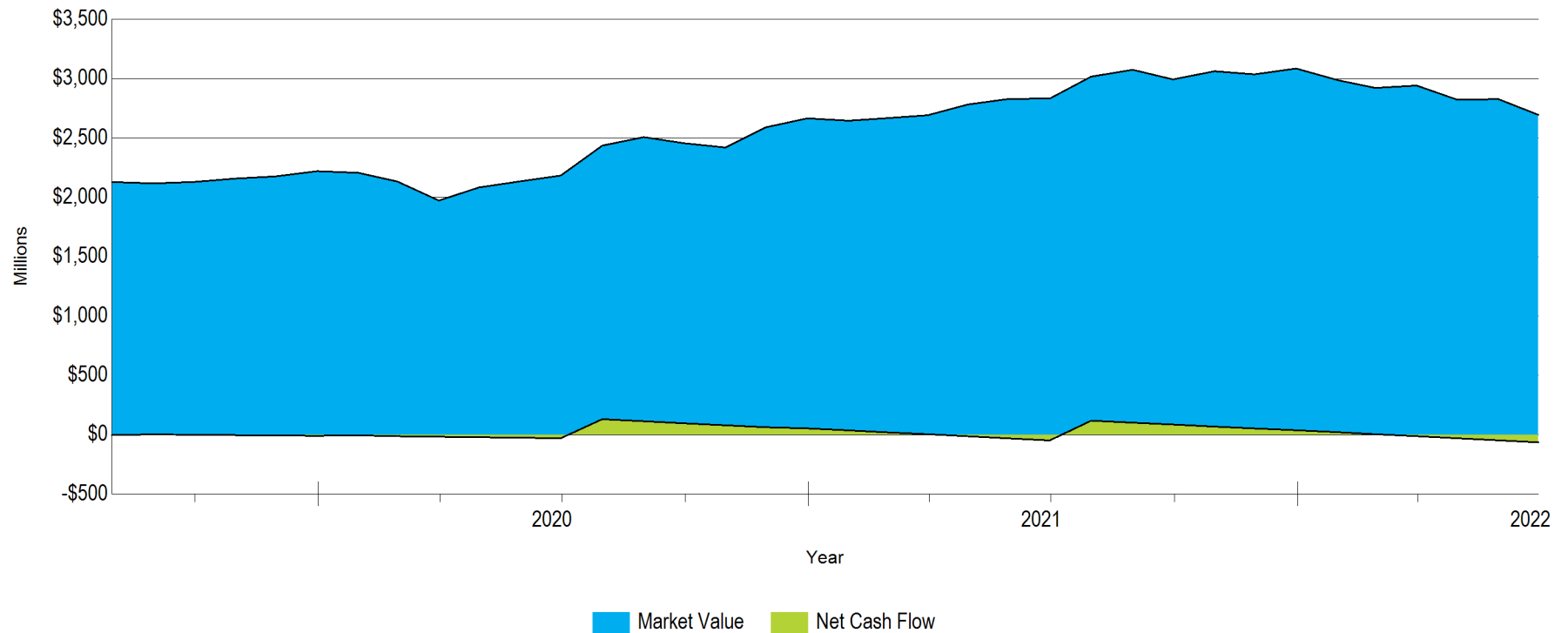
#### Attribution Effects 3 Years Ending June 30, 2022



#### Attribution Summary 3 Years Ending June 30, 2022

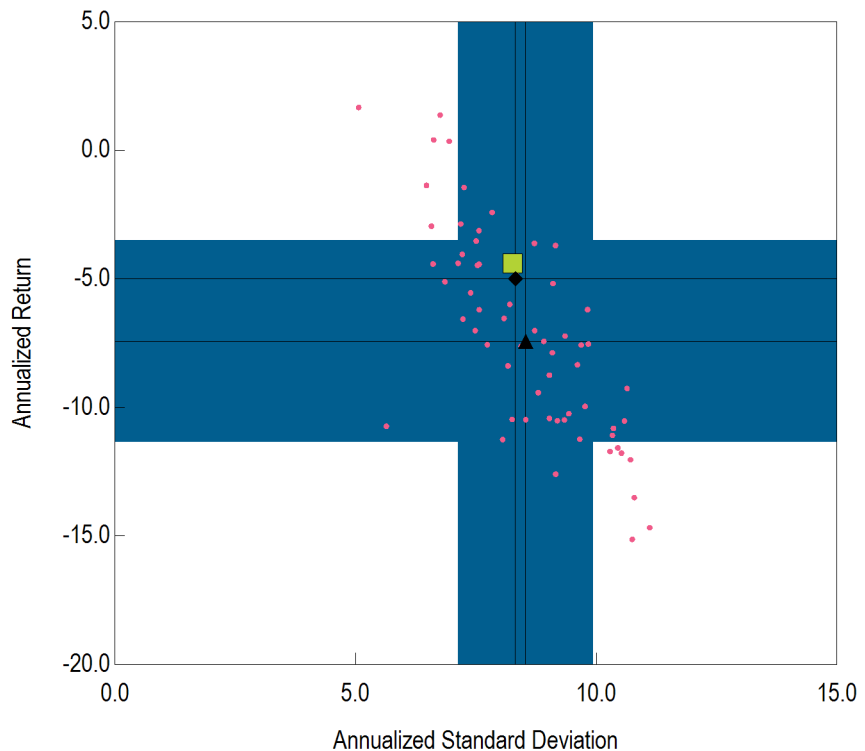
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Public Equity	4.9%	5.5%	-0.5%	-0.1%	-0.1%	-0.2%
Private Markets	19.6%	19.6%	0.0%	0.0%	0.0%	0.0%
Emerging Markets Debt	5.4%	-5.5%	10.9%	0.4%	0.0%	0.4%
High Yield Bonds	0.5%	0.2%	0.3%	0.0%	0.0%	0.0%
Short-Term IG Bonds	1.2%	0.5%	0.8%	0.1%	-0.2%	-0.1%
Immunized Cash Flows	0.6%	0.3%	0.3%	0.0%	0.0%	0.0%
Market Neutral Strategies	11.9%	0.9%	11.0%	0.2%	-0.1%	0.2%
Cash	0.7%	0.6%	0.1%	0.0%	-0.2%	-0.2%
Investment Grade Bonds	-0.2%	-1.3%	1.1%	0.1%	0.2%	0.3%
TIPS	3.2%	3.5%	-0.2%	0.0%	0.0%	0.0%
Core Private Real Estate	11.5%	10.0%	1.5%	0.1%	0.0%	0.1%
Commodities	-6.5%	8.6%	-15.1%	0.0%	0.0%	0.0%
Long-Term Government Bonds	-9.8%	-2.9%	-6.9%	0.0%	0.1%	0.1%
Core Bonds	0.0%	0.2%	-0.2%	0.0%	0.0%	0.0%
Overlay	-8.8%	0.5%	-9.3%	0.2%	-0.1%	0.1%
<b>Total</b>	<b>8.7%</b>	<b>7.9%</b>	<b>0.8%</b>	<b>1.0%</b>	<b>-0.2%</b>	<b>0.8%</b>

Market Value History  
3 Years Ending June 30, 2022



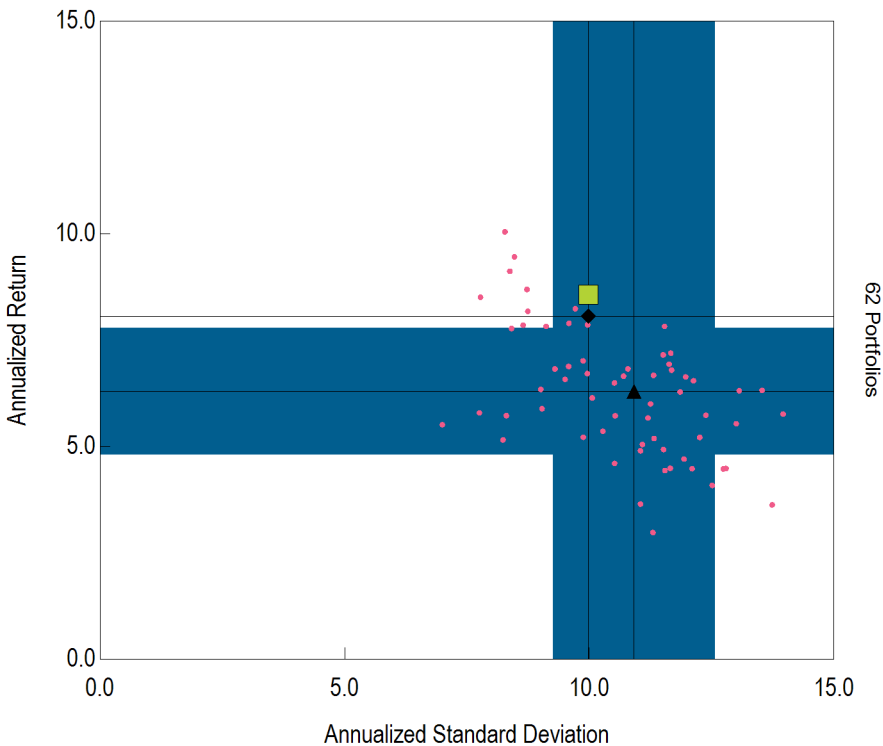
	Second Quarter	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$2,941,578,711	\$2,831,825,809	\$2,831,825,809	\$2,127,219,653
Net Cash Flow	-\$51,911,489	-\$16,119,310	-\$16,119,310	-\$65,314,482
Net Investment Change	-\$195,398,560	-\$121,437,837	-\$121,437,837	\$632,363,491
Ending Market Value	\$2,694,268,662	\$2,694,268,662	\$2,694,268,662	\$2,694,268,662

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



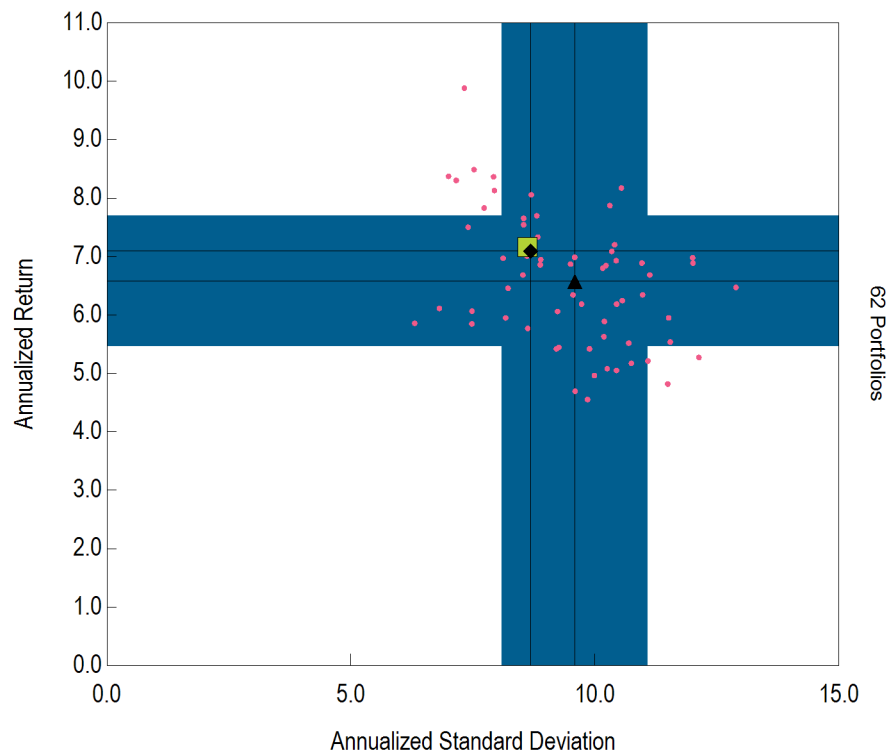
- Total Fund Aggregate
- Policy Benchmark
- Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net

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



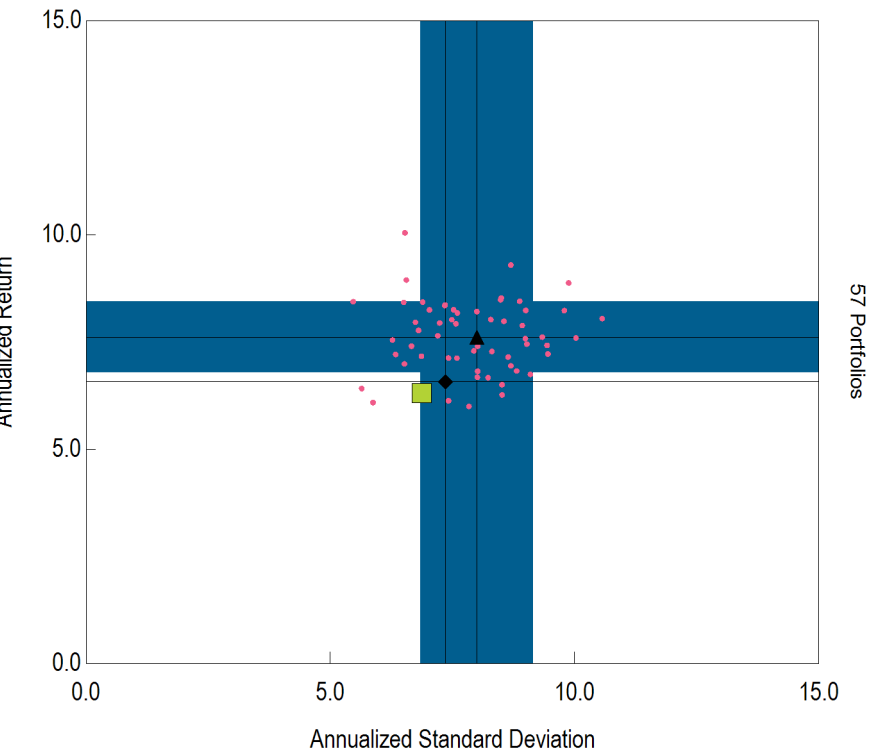
- Total Fund Aggregate
- Policy Benchmark
- Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net

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



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

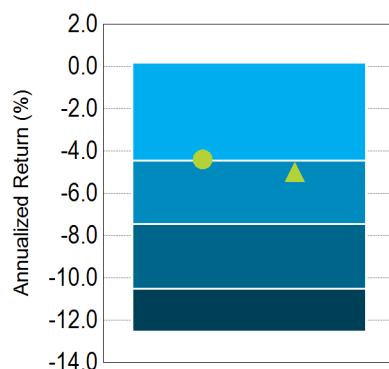
Annualized Return vs. Annualized Standard Deviation  
10 Years Ending June 30, 2022



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



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



● Total Fund Aggregate

Value -4.4

Rank 24

▲ Policy Benchmark

Value -5.0

Rank 31

Universe

5th %tile 0.2

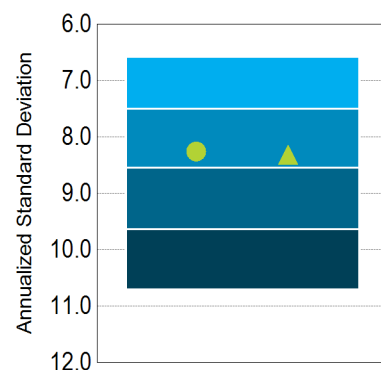
25th %tile -4.4

Median -7.4

75th %tile -10.5

95th %tile -12.5

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



● Total Fund Aggregate

Value 8.3

Rank 44

▲ Policy Benchmark

Value 8.3

Rank 45

Universe

5th %tile 6.6

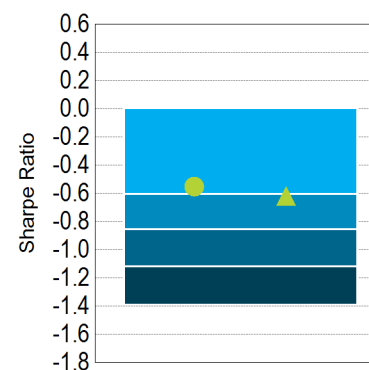
25th %tile 7.5

Median 8.5

75th %tile 9.6

95th %tile 10.7

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



● Total Fund Aggregate

Value -0.6

Rank 21

▲ Policy Benchmark

Value -0.6

Rank 29

Universe

5th %tile 0.0

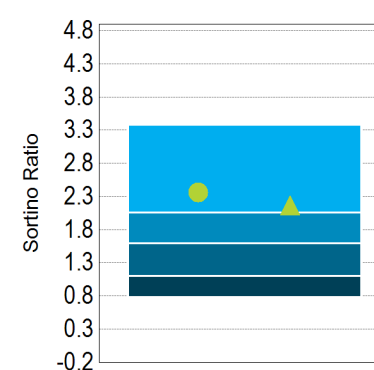
25th %tile -0.6

Median -0.9

75th %tile -1.1

95th %tile -1.4

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



● Total Fund Aggregate

Value 2.4

Rank 17

▲ Policy Benchmark

Value 2.2

Rank 20

Universe

5th %tile 3.4

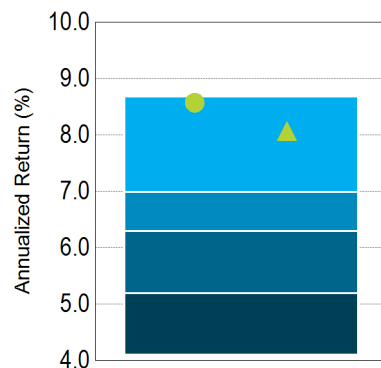
25th %tile 2.1

Median 1.6

75th %tile 1.1

95th %tile 0.8

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



● Total Fund Aggregate

Value 8.6  
Rank 7

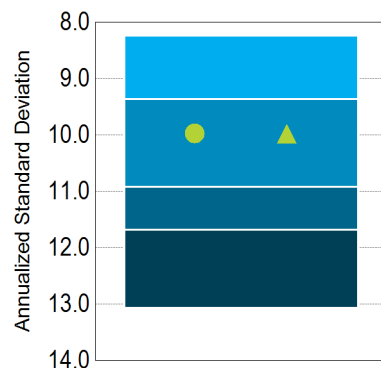
▲ Policy Benchmark

Value 8.1  
Rank 11

Universe

5th %tile 8.7  
25th %tile 7.0  
Median 6.3  
75th %tile 5.2  
95th %tile 4.1

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



● Total Fund Aggregate

Value 10.0  
Rank 38

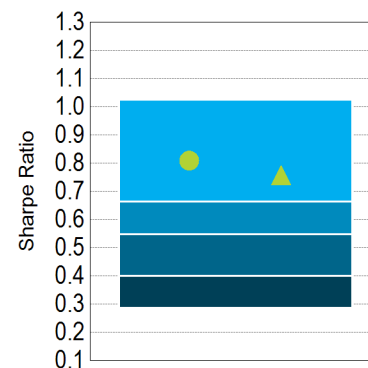
▲ Policy Benchmark

Value 10.0  
Rank 39

Universe

5th %tile 8.2  
25th %tile 9.3  
Median 10.9  
75th %tile 11.7  
95th %tile 13.1

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



● Total Fund Aggregate

Value 0.8  
Rank 13

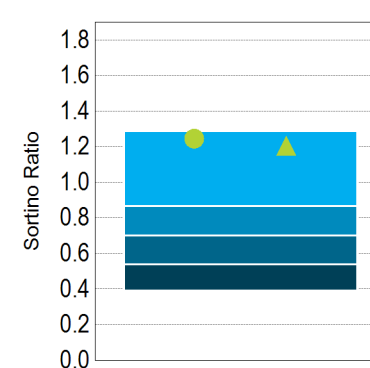
▲ Policy Benchmark

Value 0.8  
Rank 18

Universe

5th %tile 1.0  
25th %tile 0.7  
Median 0.5  
75th %tile 0.4  
95th %tile 0.3

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



● Total Fund Aggregate

Value 1.2  
Rank 7

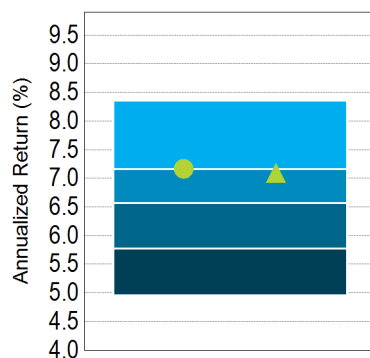
▲ Policy Benchmark

Value 1.2  
Rank 8

Universe

5th %tile 1.3  
25th %tile 0.9  
Median 0.7  
75th %tile 0.5  
95th %tile 0.4

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



#### ● Total Fund Aggregate

Value	7.2
Rank	26

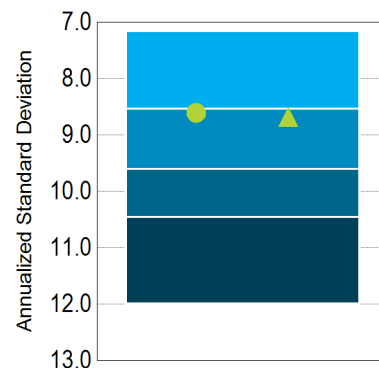
#### ▲ Policy Benchmark

Value	7.1
Rank	27

#### Universe

5th %tile	8.4
25th %tile	7.2
Median	6.6
75th %tile	5.8
95th %tile	5.0

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



#### ● Total Fund Aggregate

Value	8.6
Rank	31

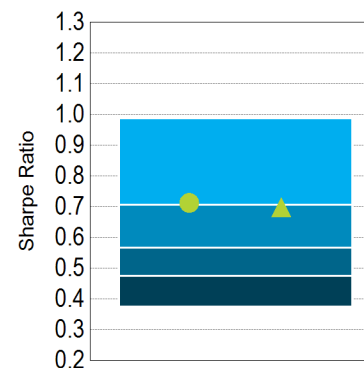
#### ▲ Policy Benchmark

Value	8.7
Rank	33

#### Universe

5th %tile	7.2
25th %tile	8.5
Median	9.6
75th %tile	10.4
95th %tile	12.0

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



#### ● Total Fund Aggregate

Value	0.7
Rank	25

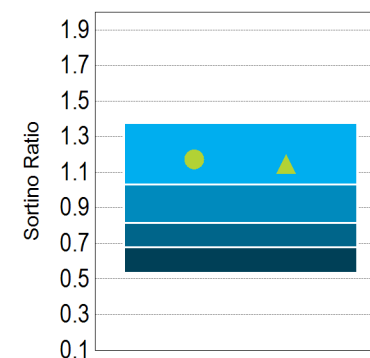
#### ▲ Policy Benchmark

Value	0.7
Rank	26

#### Universe

5th %tile	1.0
25th %tile	0.7
Median	0.6
75th %tile	0.5
95th %tile	0.4

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



#### ● Total Fund Aggregate

Value	1.2
Rank	13

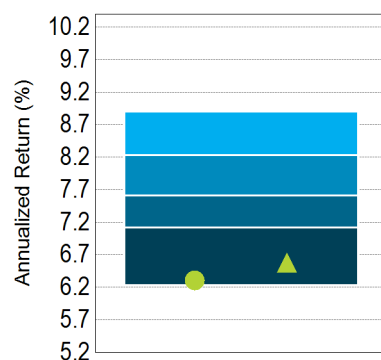
#### ▲ Policy Benchmark

Value	1.1
Rank	16

#### Universe

5th %tile	1.4
25th %tile	1.0
Median	0.8
75th %tile	0.7
95th %tile	0.5

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



#### ● Total Fund Aggregate

Value 6.3  
Rank 95

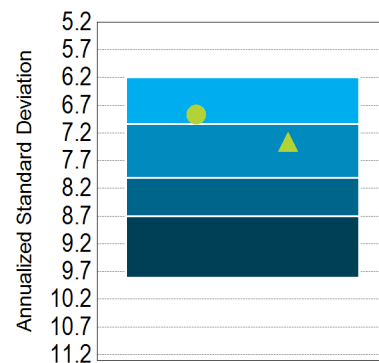
#### ▲ Policy Benchmark

Value 6.6  
Rank 91

#### Universe

5th %tile 8.9  
25th %tile 8.2  
Median 7.6  
75th %tile 7.1  
95th %tile 6.2

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



#### ● Total Fund Aggregate

Value 6.9  
Rank 22

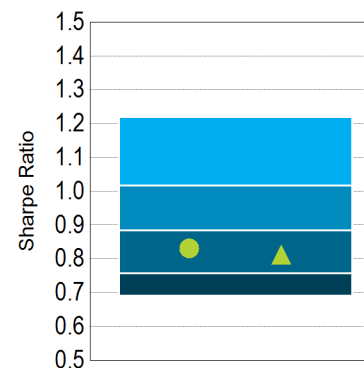
#### ▲ Policy Benchmark

Value 7.4  
Rank 33

#### Universe

5th %tile 6.2  
25th %tile 7.0  
Median 8.0  
75th %tile 8.7  
95th %tile 9.8

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



#### ● Total Fund Aggregate

Value 0.8  
Rank 64

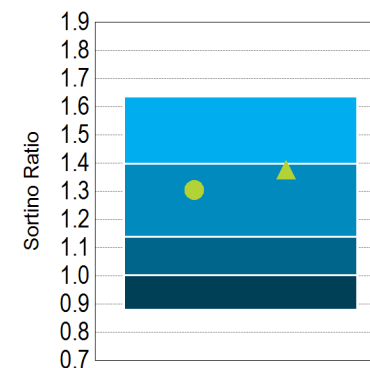
#### ▲ Policy Benchmark

Value 0.8  
Rank 65

#### Universe

5th %tile 1.2  
25th %tile 1.0  
Median 0.9  
75th %tile 0.8  
95th %tile 0.7

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



#### ● Total Fund Aggregate

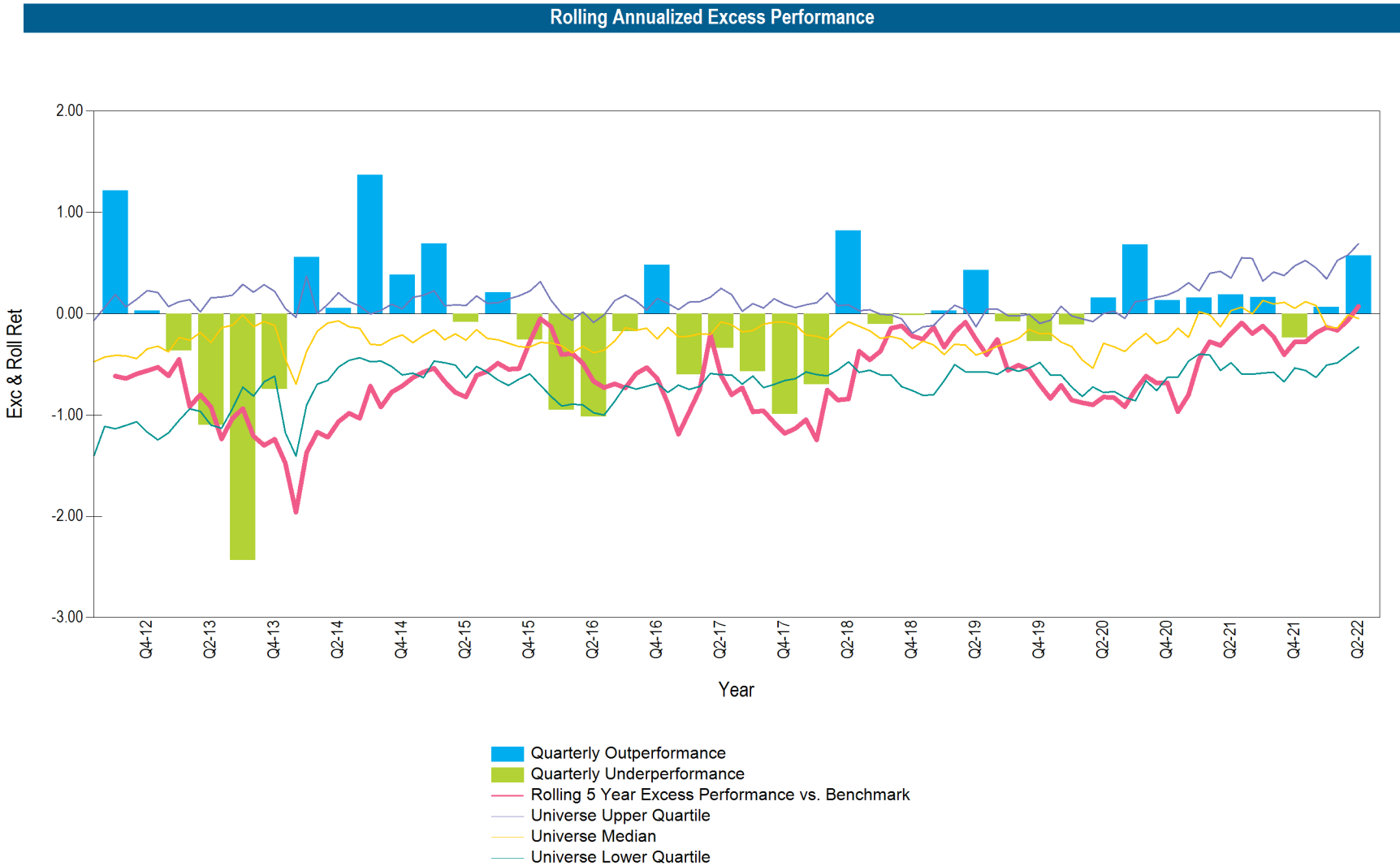
Value 1.3  
Rank 38

#### ▲ Policy Benchmark

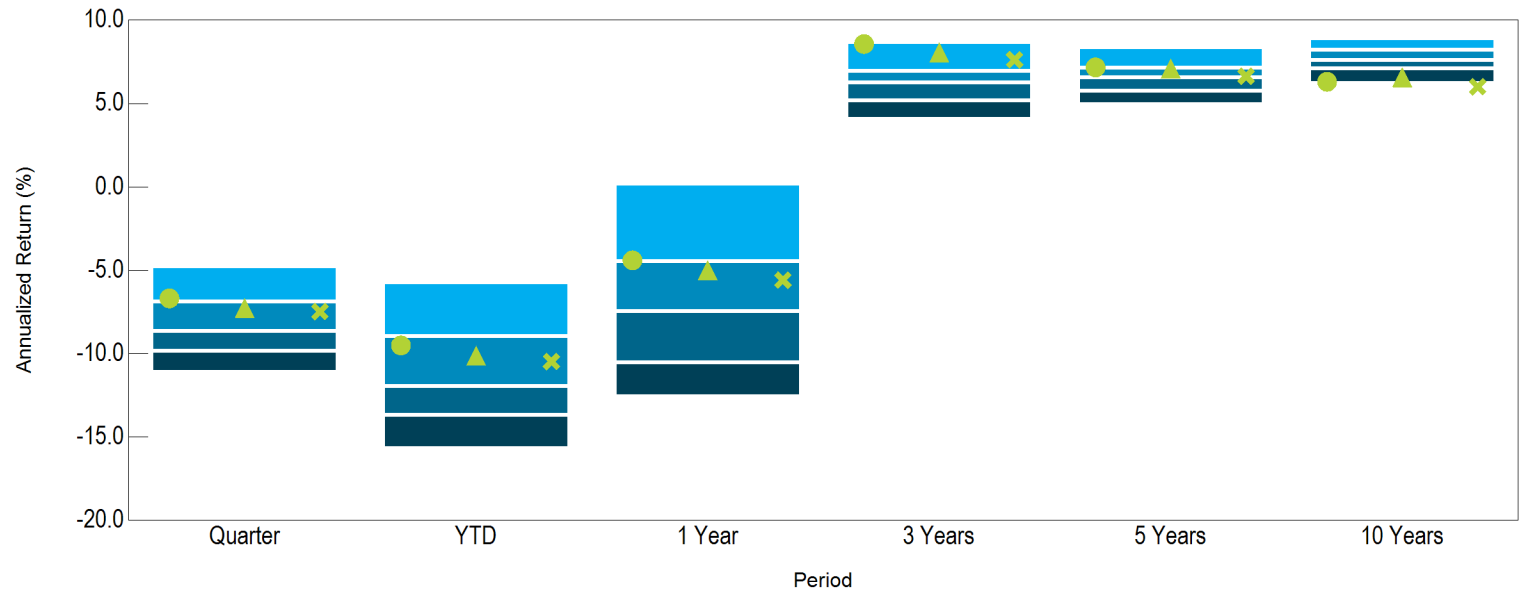
Value 1.4  
Rank 27

#### Universe

5th %tile 1.6  
25th %tile 1.4  
Median 1.1  
75th %tile 1.0  
95th %tile 0.9

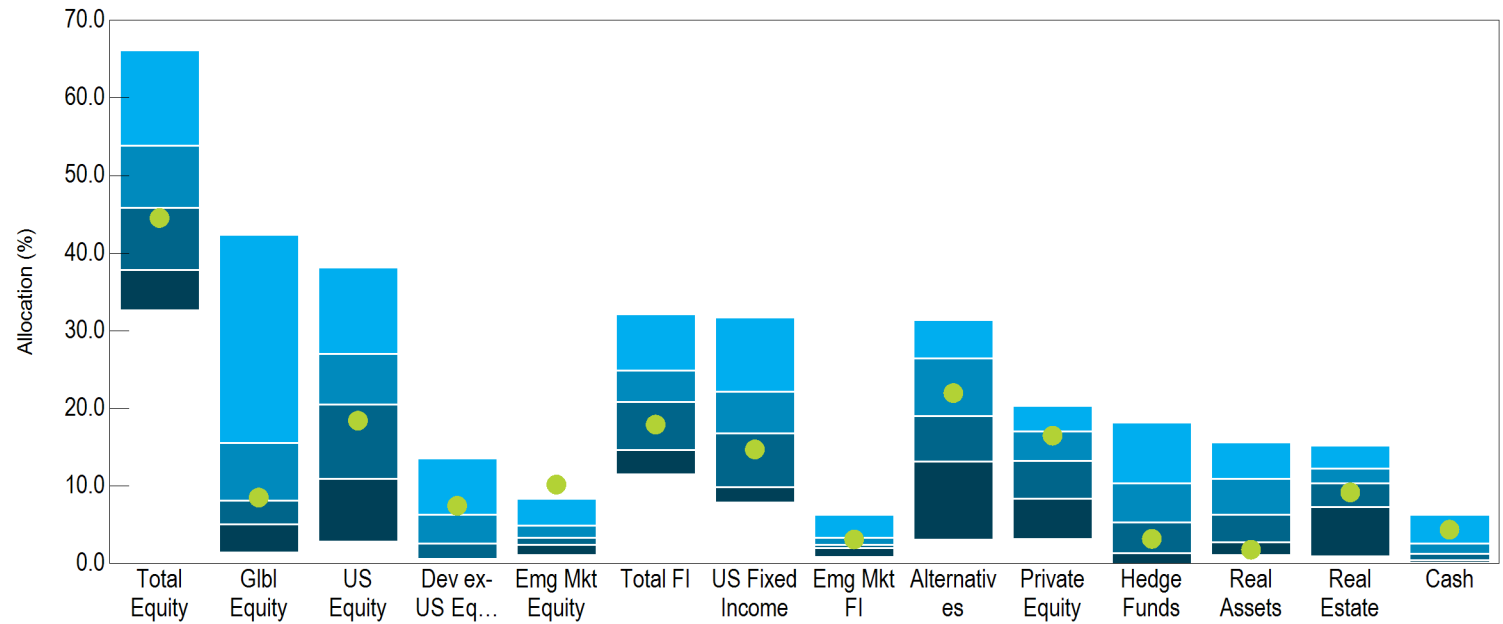


InvMetrics Public DB > \$1B Net Return Comparison  
Ending June 30, 2022



	Return (Rank)									
5th Percentile	-4.8	(19)	-5.7	(28)	0.2	(24)	8.7	(7)	8.4	(26)
25th Percentile	-6.9	(30)	-8.9	(36)	-4.4	(31)	7.0	(11)	7.2	(27)
Median	-8.6	(34)	-11.9	(41)	-7.4	(36)	6.3	(21)	6.6	(50)
75th Percentile	-9.8		-13.6		-10.5		5.2		5.8	
95th Percentile	-11.1		-15.6		-12.5		4.1		5.0	
# of Portfolios	64		64		63		62		62	
● Total Fund Aggregate	-6.7	(19)	-9.5	(28)	-4.4	(24)	8.6	(7)	7.2	(26)
▲ Policy Benchmark	-7.3	(30)	-10.1	(36)	-5.0	(31)	8.1	(11)	7.1	(27)
✕ Investable Benchmark Portfolio	-7.5	(34)	-10.5	(41)	-5.6	(36)	7.6	(21)	6.6	(50)

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



	Allocation														
5th Percentile	66.2	42.4	38.1	13.5	8.4	32.1	31.7	6.3	31.4	20.3	18.2	15.7	15.2	6.3	--
25th Percentile	54.0	15.6	27.1	6.4	5.0	25.0	22.2	3.4	26.5	17.1	10.4	11.0	12.3	2.7	--
Median	45.9	8.2	20.6	2.7	3.4	20.9	16.9	2.5	19.1	13.3	5.4	6.4	10.4	1.4	--
75th Percentile	37.9	5.1	11.0	0.7	2.5	14.7	9.9	2.1	13.2	8.5	1.4	2.8	7.4	0.6	--
95th Percentile	32.7	1.5	2.9	0.4	1.2	11.5	8.0	0.9	3.1	3.2	0.0	1.2	1.0	0.2	--
# of Portfolios	39	16	31	17	29	39	29	10	36	30	21	23	35	38	--
● Total Fund Aggregate Rank	44.5	8.5	18.4	7.4	10.2	17.9	14.7	3.1	22.0	16.5	3.2	1.8	9.2	4.4	--
	53	47	56	17	1	63	58	34	37	29	73	89	60	18	

Alternatives group includes Private Equity, Hedge Funds, and Real Assets. Private Equity group includes Private Debt and Venture Capital.

Name	Major Benchmark Returns				
	Periods Ending June 30, 2022				
	Q2-22	1 Yr	3 Yrs	5 Yrs	10 Yrs
US Equity					
Russell 3000	-16.7	-13.9	9.8	10.6	12.6
S&P 500	-16.1	-10.6	10.6	11.3	13.0
Russell 1000	-16.7	-13.0	10.2	11.0	12.8
Russell 1000 Growth	-20.9	-18.8	12.6	14.3	14.8
Russell 1000 Value	-12.2	-6.8	6.9	7.2	10.5
Russell MidCap	-16.8	-17.3	6.6	8.0	11.3
Russell 2000	-17.2	-25.2	4.2	5.2	9.4
Russell 2000 Growth	-19.3	-33.4	1.4	4.8	9.3
Russell 2000 Value	-15.3	-16.3	6.2	4.9	9.1
International Equity					
MSCI ACWI	-15.7	-15.8	6.2	7.0	8.8
MSCI World ex USA	-14.7	-16.8	1.7	2.7	5.4
MSCI EAFE	-14.5	-17.8	1.1	2.2	5.4
MSCI Emerging Markets	-11.4	-25.3	0.6	2.2	3.1
Fixed Income					
91 Day T-Bills	0.1	0.2	0.5	1.0	0.6
Bloomberg US Aggregate TR	-4.7	-10.3	-0.9	0.9	1.5
Bloomberg US Govt/Credit TR	-5.0	-10.9	-0.8	1.0	1.7
Bloomberg US Municipal TR	-2.9	-8.6	-0.2	1.5	2.4
Bloomberg US High Yield TR	-9.8	-12.8	0.2	2.1	4.5
FTSE WGBI TR	-8.9	-16.8	-4.3	-1.2	-0.7
FTSE WGBI ex US TR	-12.5	-21.9	-6.7	-2.6	-1.7
Real Estate					
FTSE NAREIT All REIT	-14.8	-6.9	4.6	6.2	8.1
NCREIF Property Index	3.2	21.5	10.2	8.9	9.7
Alternatives					
HFRI Fund of Funds Composite Index	-3.9	-5.4	4.0	3.6	3.8
Inflation					
Consumer Price Index	3.1	9.1	5.0	3.9	2.6



Statistics Summary												
3 Years Ending June 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 Aggregate	100.00%	8.57%	7	9.98%	38	0.53%	42	0.75%	0.68	6	1.00	0.81
Policy Benchmark	--	8.06%	11	9.98%	39	0.00%	61	0.00%	--	--	1.00	0.76
Growth	74.11%	9.63%	--	13.81%	--	1.47%	--	1.81%	0.65	--	0.96	0.66
Growth Benchmark	--	8.46%	--	14.24%	--	0.00%	--	0.00%	--	--	1.00	0.56
Public Equity	46.10%	4.93%	76	18.66%	86	-0.62%	78	1.41%	-0.38	79	1.02	0.24
Public Equity Benchmark	--	5.47%	73	18.31%	85	0.00%	66	0.00%	--	--	1.00	0.27
Global Equity	8.50%	5.65%	52	19.17%	55	--	--	--	--	--	--	0.27
MSCI ACWI IMI Index	--	--	--	--	--	--	--	--	--	--	--	--
US Equity	18.41%	8.54%	41	19.93%	37	-1.13%	44	1.41%	-0.64	91	1.03	0.40
MSCI USA IMI NR USD	--	9.44%	31	19.39%	31	0.00%	32	0.00%	--	--	1.00	0.46
International Equity	9.01%	1.30%	66	19.12%	54	-0.44%	66	3.04%	-0.14	72	1.02	0.04
MSCI World ex USA IMI NR USD	--	1.72%	60	18.60%	42	0.00%	62	0.00%	--	--	1.00	0.07
Emerging Markets Equity	10.18%	2.07%	37	18.99%	34	0.91%	36	2.40%	0.38	20	1.02	0.08
MSCI Emerging Markets IMI Net	--	1.15%	48	18.53%	25	0.00%	48	0.00%	--	--	1.00	0.03
Marketable Alternative Equity	--	--	--	--	--	--	--	--	--	--	--	--
HFRI Equity Hedge (Total) Index	--	6.55%	--	12.00%	--	0.00%	--	0.00%	--	--	1.00	0.50
Private Markets	22.91%	19.62%	--	9.22%	--	0.00%	--	0.00%	-0.68	--	1.00	2.07
Private Markets Benchmark	--	19.62%	--	9.22%	--	0.00%	--	0.00%	--	--	1.00	2.07
Private Equity	12.75%	27.75%	--	14.25%	--	29.36%	--	22.53%	0.18	--	-0.09	1.91
San Jose Custom Private Equity Benchmark	--	23.59%	--	16.04%	--	0.00%	--	0.00%	--	--	1.00	1.44
Private Debt	4.01%	12.57%	1	10.94%	99	10.34%	1	11.04%	0.77	13	0.49	1.10
S&P Global Leveraged Loan Index +2%	--	4.06%	1	8.43%	99	0.00%	85	0.00%	--	--	1.00	0.42

	% 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
Growth Real Estate	3.79%	14.01%	1	7.29%	53	16.12%	1	10.36%	0.37	9	-0.27	1.85
NCREIF Property Index	--	10.22%	90	5.94%	23	0.00%	69	0.00%	--	--	1.00	1.64
Northern Trust Russell 3000	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	9.77%	--	19.37%	--	0.00%	--	0.00%	--	--	1.00	0.48
Emerging Markets Debt	3.11%	5.43%	1	7.12%	2	8.06%	1	6.63%	1.64	1	0.52	0.69
50% JPM EMBI GD / 50% JPM GBI-EM	--	-5.47%	73	11.64%	31	0.00%	84	0.00%	--	--	1.00	-0.51
High Yield Bonds	1.99%	0.47%	48	6.51%	11	0.09%	52	7.85%	0.03	55	0.41	-0.01
Bloomberg US Corporate High Yield TR	--	0.21%	57	10.11%	67	0.00%	56	0.00%	--	--	1.00	-0.03
Low Beta	6.47%	4.66%	--	2.33%	--	4.28%	--	2.69%	1.51	--	-1.29	1.78
Low Beta Benchmark	--	0.60%	--	0.71%	--	0.00%	--	0.00%	--	--	1.00	0.14
Immunized Cash Flows	2.57%	0.58%	39	1.25%	94	0.21%	16	0.78%	0.35	10	0.72	0.06
Bloomberg US Govt/Credit 1-3 Yr. TR	--	0.31%	99	1.48%	94	0.00%	61	0.00%	--	--	1.00	-0.13
Market Neutral Strategies	3.18%	11.87%	--	7.56%	--	11.91%	--	7.58%	1.45	--	-1.53	1.50
Market Neutral Strategies Benchmark	--	0.86%	--	0.25%	--	0.00%	--	0.00%	--	--	1.00	1.42
Relative Value	3.18%	9.98%	--	11.40%	--	5.49%	--	7.18%	0.90	--	1.32	0.83
HFRI Relative Value (Total) Index	--	3.52%	--	6.91%	--	0.00%	--	0.00%	--	--	1.00	0.44
Cash	0.71%	0.73%	--	0.35%	--	0.11%	--	0.22%	0.48	--	1.01	0.65
ICE BofA 91 Days T-Bills TR	--	0.63%	--	0.27%	--	0.00%	--	0.00%	--	--	1.00	0.45
Other	18.84%	1.52%	--	2.95%	--	1.90%	--	2.50%	1.03	--	0.57	0.34
Other Benchmark	--	-1.05%	--	4.20%	--	0.00%	--	0.00%	--	--	1.00	-0.37
TIPS	2.12%	3.21%	--	2.19%	--	0.02%	--	0.75%	-0.33	--	0.91	1.23
BBg U.S. TIPS 0-5 Years	--	3.46%	--	2.28%	--	0.00%	--	0.00%	--	--	1.00	1.29

	% of Total MV	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Anlzd Alpha J	Anlzd Alpha J Rank	Tracking Error	Information Ratio	Information Ratio Rank	Beta	Sharpe Ratio
Core Private Real Estate	6.13%	11.53%	--	7.67%	--	1.28%	--	2.11%	0.72	--	1.02	1.44
Core Real Estate Benchmark	--	10.02%	--	7.20%	--	0.00%	--	0.00%	--	--	1.00	1.32
Core Bonds	--	--	--	--	--	--	--	--	--	--	--	--
Bloomberg Global Aggregate TR	--	-3.22%	--	5.94%	--	0.00%	--	0.00%	--	--	1.00	-0.63
Overlay	0.58%	-8.83%	--	23.43%	--	-9.34%	--	23.40%	-0.40	--	12.06	-0.40

### Benchmark History

As of June 30, 2022

#### Total Fund Aggregate

3/1/2022	Present	25% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Markets IMI NR USD / 21% Private Markets Benchmark / 5% NCREIF-ODCE NR USD / 3% 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 US Treasury TIPS 0-5 Yr TR / 8% Custom IG Bonds Benchmark / 2% 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 / 12% MSCI Emerging Markets IMI NR USD / 21% Private Markets Benchmark / 5% NCREIF-ODCE NR USD / 3% 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 US Treasury TIPS 0-5 Yr TR / 8% Custom IG Bonds Benchmark / 2% Bloomberg US Treasury Long TR
4/1/2020	5/31/2021	25% MSCI USA IMI NR USD / 12% 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 Flows Benchmark / 3% Market Neutral Strategies Benchmark / 5% NCREIF-ODCE / 2% Bloomberg US Govt Long TR / 2% Bloomberg US Treasury TIPS 0-5 Yr TR / 8% Custom IG Bonds Benchmark
12/1/2019	3/31/2020	13% MSCI USA IMI NR USD / 10% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 23% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 15% ICE BofA 91 Days T-Bills TR / 5% Immunized Cash Flows Benchmark / 7% Market Neutral Strategies Benchmark / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 2% Bloomberg US Treasury TIPS 0-5 Yr TR / 3% BBgBarc Global Aggregate TR
11/1/2019	11/30/2019	13% MSCI USA IMI NR USD / 10% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 23% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 18% ICE BofA 91 Days T-Bills TR / 5% Immunized Cash Flows Benchmark / 7% Market Neutral Strategies Benchmark / 5% NCREIF-ODCE / 2% Bloomberg Commodity Index TR USD / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
10/1/2019	10/31/2019	13% MSCI USA IMI NR USD / 7% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 25% Private Markets Benchmark / 5% 50% JPM EMBI GD / 50% JPM GBI-EM / 18% ICE BofA 91 Days T-Bills TR / 5% Immunized Cash Flows Benchmark / 7% Market Neutral Strategies Benchmark / 5% NCREIF-ODCE / 3% Bloomberg Commodity Index TR USD / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
10/1/2018	9/30/2019	13% MSCI USA IMI NR USD / 7% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 25% Private Markets Benchmark / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 20% ICE BofA 91 Days T-Bills TR / 5% Immunized Cash Flows Benchmark / 7% Market Neutral Strategies Benchmark / 5% NCREIF-ODCE / 3% Bloomberg Commodity Index TR USD / 2% Bloomberg US Treasury TIPS 0-5 Yr TR
11/1/2017	9/30/2018	28% MSCI ACWI IMI Net USD / 9% Cambridge PE Composite BM / 33% Fixed Income Custom Benchmark / 6% S&P Global Leveraged Loan Index +2% / 8% NCREIF Property Index / 4% Bloomberg Commodity Index TR USD / 1% DJ Brookfield Global Infrastructure Net TR USD / 11% HFRI Macro (Total) Index
7/1/2015	10/31/2017	28% MSCI ACWI IMI Net USD / 9% Cambridge Associates Private Equity Composite / 19% Fixed Income Custom Benchmark / 5% S&P Global Leveraged Loan Index +2% / 7% NCREIF Property Index / 6% Bloomberg Commodity Index TR USD / 5% DJ Brookfield Global Infrastructure Net TR USD / 5% S&P Global LargeMidCap Commodity and Resources GR USD / 11% HFRI Macro (Total) Index / 5% 60/40 MSCI ACWI IMI/BC Global

### Low Cost Passive Benchmark

6/1/2021	Present	25% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Markets IMI NR USD / 12% Russell 3000 / 3% BBgBarc US Aggregate TR / 3% S&P Global Natural Resources / 3% 50% JPM EMBI GD / 50% JPM GBI-EM / 2% BBgBarc US Corporate High Yield TR / 8% FTSE EPRA/NAREIT Global NR USD / 2% 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 / 8% Custom IG Bonds Benchmark
4/1/2020	5/31/2021	25% MSCI USA IMI NR USD / 12% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 10% Russell 3000 / 11% 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 / 3% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR
12/1/2019	3/31/2020	13% MSCI USA IMI NR USD / 10% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 13% Russell 3000 / 7% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 5% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% 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 / 15% BBgBarc US Govt/Credit 1-3 Yr. TR
11/1/2019	11/30/2019	13% MSCI USA IMI NR USD / 10% MSCI World ex USA IMI NR USD / 12% MSCI Emerging Market IMI Net / 13% Russell 3000 / 7% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 5% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% 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 / 18% BBgBarc US Govt/Credit 1-3 Yr. TR
10/1/2019	10/31/2019	13% MSCI USA IMI NR USD / 7% MSCI World ex USA IMI NR USD / 10% MSCI Emerging Market IMI Net / 15% Russell 3000 / 4% BBgBarc US Aggregate TR / 8% FTSE EPRA/NAREIT Global NR USD / 3% S&P Global Natural Resources Net USD / 5% 50% JPM EMBI GD / 50% JPM GBI-EM / 5% ICE BofAML 91 Days T-Bills TR / 7% 3-Month Libor +1% / 2% BBgBarc US Treasury TIPS 0-5 Yr TR / 3% Bloomberg Commodity Index TR USD / 18% BBgBarc US Govt/Credit 1-3 Yr. TR
10/1/2018	9/30/2019	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

Growth		
6/1/2021	Present	65.33% Public Equity Benchmark / 28.0% Private Markets Benchmark / 4.0% 50% JPM EMBI GD / 50% JPM GBI-EM / 2.67% BBgBarc US Corporate High Yield TR
4/1/2020	5/31/2021	65.33% Public Equity Benchmark / 28% Private Markets Benchmark / 6.67% 50% JPM EMBI GD / 50% JPM GBI-EM / 4.08% BBgBarc US Corporate High Yield TR
11/1/2019	3/31/2020	57.38% Public Equity Benchmark / 37.7% Private Markets Benchmark / 4.92% 50% JPM EMBI GD / 50% JPM GBI-EM
10/1/2019	10/31/2019	50% Public Equity Benchmark / 41.67% Private Markets Benchmark / 8.33% 50% JPM EMBI GD / 50% JPM GBI-EM
10/1/2018	9/30/2019	51.73% Public Equity Benchmark / 43.1% Private Markets Benchmark / 5.17% 50% JPM EMBI GD / 50% JPM GBI-EM
11/1/2017	9/30/2018	51.29% MSCI ACWI IMI Net USD / 16.48% Cambridge PE Composite BM / 10.99% S&P Global Leveraged Loan Index +2% / 7.33% NCREIF Property Index / 60.4% 50% JPM EMBI GD (US) / 50% JPM GBIEM GD (Lcl) / 60.4% 50% BAML Global HY / 50% S&P Global Leveraged Loan / 1.83% DJ Brookfield Global Infrastructure Net TR USD
7/1/2015	10/31/2017	47.23% MSCI ACWI IMI Net USD / 15.18% Cambridge PE Composite BM / 8.43% S&P Global Leveraged Loan Index +2% / 8.43% DJ Brookfield Global Infrastructure Net TR USD / 8.43% S&P Global Natural Resources Index TR USD / 5.9% NCREIF Property Index / 3.2% 50% JPM EMBI GD (US) / 50% JPM GBIEM GD (Lcl) / 3.2% 50% BAML Global HY / 50% S&P Global Leveraged Loan
Public Equity		
6/1/2021	Present	51.02% MSCI USA IMI NR USD / 24.49% MSCI World ex USA IMI NR USD / 24.49% MSCI Emerging Market IMI NR USD
4/1/2020	5/31/2021	51.02% MSCI USA IMI NR USD / 24.49% MSCI World ex USA IMI NR USD / 24.49% MSCI Emerging Market IMI Net
11/1/2019	3/31/2020	37.14% MSCI USA IMI NR USD / 28.57% MSCI World ex USA IMI NR USD / 34.29% MSCI Emerging Market IMI Net
10/1/2018	10/31/2019	43.33% MSCI USA IMI NR USD / 23.33% MSCI World ex USA IMI NR USD / 33.33% MSCI Emerging Market IMI Net
5/1/2010	9/30/2018	MSCI ACWI IMI Net USD
Global Equity		
7/1/2015	Present	MSCI ACWI IMI NR USD
US Equity		
7/1/2015	Present	MSCI USA IMI NR USD
International Equity		
7/1/2015	Present	MSCI World ex USA IMI NR USD
Emerging Markets Equity		
7/1/2015	Present	MSCI Emerging Markets IMI NR USD

Marketable Alternative Equity		
10/1/2014	Present	HFRI Equity Hedge (Total) Index
Private Markets		
7/1/2015	Present	Private Markets
Private Markets ex Russell 3000		
No Benchmark Selected		
Private Equity		
1/1/2006	Present	Custom Private Equity BM (100% Cambridge US PE)
Private Equity ex Russell 3000		
7/1/2018	9/30/2021	Cambridge Associates Global Private Equity Index
Northern Trust Russell 3000		
6/1/2018	Present	Russell 3000
Private Debt		
12/1/2010	Present	S&P Global Leveraged Loan Index +2%
Growth Real Estate		
7/1/2015	Present	NCREIF Property Index
Private Real Assets		
No Benchmark Selected		
Emerging Markets Debt		
7/1/2015	Present	50% JP Morgan GBI EM Global Diversified TR USD / 50% JP Morgan EMBI Global Diversified
High Yield Bonds		
6/1/2020	Present	BBgBarc US Corporate High Yield TR
Low Beta		
4/1/2020	Present	62.5% Immunized Cash Flows Benchmark / 37.5% Market Neutral Strategies Benchmark
12/1/2019	3/31/2020	55.56% ICE BofA 91 Days T-Bills TR / 25.93% Immunized Cash Flows Benchmark / 18.52% Market Neutral Strategies Benchmark
10/1/2019	11/30/2019	60% ICE BofA 91 Days T-Bills TR / 23.33% Immunized Cash Flows Benchmark / 6.67% Market Neutral Strategies Benchmark
10/1/2018	9/30/2019	62.5% ICE BofA 91 Days T-Bills TR / 15.62% Immunized Cash Flows Benchmark / 21.88% Market Neutral Strategies Benchmark
7/1/2015	9/30/2018	HFRI Macro (Total) Index

Short-Term IG Bonds		
10/1/2018	Present	91 Day T-Bills
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	3-Month Libor Total Return USD
11/1/2012	9/30/2018	HFRI Macro (Total) Index
Macro		
10/1/2014	Present	HFRI Macro (Total) Index
Relative Value		
10/1/2014	Present	HFRI Relative Value (Total) Index
Cash		
1/1/2006	Present	ICE BofA 91 Days T-Bills TR
Other		
6/1/2021	Present	29.41% NCREIF ODCE Value Weighted (Net) (1 Qtr Lag) / 47.06% Custom IG Bonds Benchmark / 11.76% BBgBarc US Treasury Long TR / 11.76% BBgBarc US Treasury TIPS 0-5 Yr TR
4/1/2020	5/31/2021	29.41% NCREIF ODCE Equal Weighted / 47.06% Custom IG Bonds Benchmark / 11.76% BBgBarc US Govt Long TR / 11.76% BBgBarc US Treasury TIPS 0-5 Yr TR
12/1/2019	3/31/2020	41.67% NCREIF-ODCE / 16.67% Bloomberg Commodity Index TR USD / 16.67% BBgBarc U.S. TIPS 0-5 Years / 25% BBgBarc Global Aggregate TR
11/1/2019	11/30/2019	55.55% NCREIF-ODCE / 22.22% Bloomberg Commodity Index TR USD / 22.22% BBgBarc U.S. TIPS 0-5 Years
10/1/2018	10/31/2019	50% NCREIF-ODCE / 30% Bloomberg Commodity Index TR USD / 20% BBgBarc U.S. TIPS 0-5 Years
11/1/2017	9/30/2018	76.74% BBgBarc Global Aggregate TR / 11.63% NCREIF Property Index / 11.63% Bloomberg Commodity Index TR USD
7/1/2015	10/31/2017	51.18% BBgBarc Global Aggregate TR / 11.78% NCREIF Property Index / 20.2% Bloomberg Commodity Index TR USD / 16.84% 60/40 MSCI ACWI/BBgBarc Global Aggregate
Investment Grade Bonds		
12/1/2019	Present	Custom IG Bonds Benchmark (25% BBgBarc 1-3 Year Government/Credit, 56% US Aggregate, 19% US Securitized MBS/ABS/CMBS)
TIPS		
3/1/2017	Present	100% BBgBarc US Treasury TIPS 0-5 Yr TR



Core Private Real Estate		
6/1/2021	Present	NCREIF ODCE Value Weighted (Net) (1 Qtr Lag)
7/1/2004	5/31/2021	NCREIF ODCE Equal Weighted (Net)
Commodities		
5/1/2010	Present	Bloomberg Commodity Index TR USD
Long Term Government Bonds		
5/1/2020	Present	BBgBarc US Govt Long TR
Core Bonds		
7/1/2015	Present	BBgBarc Global Aggregate TR
Overlay		
11/1/2011	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.