



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: SEPTEMBER 30, 2019**

Investment Performance Review for

**Sacramento County Employees' Retirement System**

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# 3<sup>rd</sup> quarter summary

## THE ECONOMIC CLIMATE

- Real GDP grew at a 2.3% rate year-over-year in the second quarter (2.0% quarterly annualized rate). U.S. Q2 consumer spending came in stronger than any time since 2014, while weak business inventory investment acted as a slight drag.
- Trade policies and conflict likely weighed on economic progress. Uncertainty regarding the future of U.S.-China trade relations and supply chain disruptions caused by new tariff impositions are expected to hinder growth in the future.

## PORTFOLIO IMPACTS

- U.S. equities outperformed international in Q3 (S&P 500 +1.7%, MSCI EAFE -1.1%) as domestic markets continued to lead. Some convergence of U.S. interest rates with the ultra-low rates of international markets likely supported equity prices over the quarter.
- Core inflation has crept up to cycle-highs in 2019, increasing to 2.4% YoY in September. Headline inflation rose 1.7% YoY, dragged down by falling energy prices. Neither the media nor investors appear to be concerned about rising inflation, as of yet. Investors remain focused on deflationary forces in the global economy.

## THE INVESTMENT CLIMATE

- The Federal Open Market Committee cut the range for its benchmark interest rate by 0.25% in both its July and September meetings, bringing the new range for federal funds to 1.75-2.00%.
- Global sovereign bonds rallied, encouraged by muted inflation expectations and dovish guidance from global central banks. Central bankers appealed for fiscal action, citing the limited capacity of monetary policy to sustain further economic expansion.

## ASSET ALLOCATION ISSUES

- Risk assets were flat over the quarter. Global equities gained 0.0% and U.S. Treasuries gained 2.4% as domestic interest rates fell. Longer duration exposures continued to outperform.
- The U.S. dollar appreciated 2.6% in Q3 relative to a trade-weighted basket of currencies. Dollar volatility has been suppressed so far in 2019, following large swings experienced during years 2014-2018. Emerging market currencies fell -4.0% in Q3 on the back of U.S. dollar strength. These currencies remain depressed relative to history.

A neutral risk stance may be appropriate in today's environment

# U.S. economics summary

- Real GDP grew at a 2.3% rate year-over-year in the second quarter (2.0% quarterly annualized rate). U.S. Q2 consumer spending came in stronger than any time since 2014, while weak business inventory investment acted as a slight drag.
- U.S-China trade remained a major story in Q3. The U.S. scheduled tariff rate hikes on \$250B in already-tariffed Chinese imports, as well as tariff impositions of up to 15% on the remaining \$300B in Chinese imports not currently exposed to duties. The Chinese retaliated with commensurate tariff adjustments. The two sides agreed to continued trade talks in Washington D.C. at the beginning of October.
- Trade conflict has likely weighed on economic progress. Uncertainty regarding the future of U.S.-China trade relations and supply chain disruptions caused by new tariff impositions are expected to act as a drag on growth in the future.
- Core inflation has crept up to cycle-highs, rising 2.4% YoY in September. Headline inflation increased 1.7% YoY, dragged down by falling energy prices.
- The U.S. unemployment rate reached a 50-year low of 3.5% in September. Historically, the rate of unemployment has risen prior to the beginning of each U.S. recession, which suggests the U.S. expansion may still have room to run.
- Despite record unemployment, wage growth remains lukewarm, decelerating from a cycle high of 3.4% achieved in February, to 2.9% in September.
- In October, the IMF cut its 2019 global economic growth forecast from 3.2% to 3.0%, referencing global trade friction as a primary driver.

	Most Recent	12 Months Prior
GDP (YoY)	2.3% <i>6/30/19</i>	3.2% <i>6/30/18</i>
Inflation (CPI YoY, Core)	2.4% <i>9/30/19</i>	2.3% <i>9/30/18</i>
Expected Inflation (5yr-5yr forward)	1.7% <i>9/30/19</i>	2.2% <i>9/30/18</i>
Fed Funds Target Range	1.75 – 2.00% <i>9/30/19</i>	2.00 – 2.25% <i>9/30/18</i>
10 Year Rate	1.7% <i>9/30/19</i>	3.1% <i>9/30/18</i>
U-3 Unemployment	3.5% <i>9/30/19</i>	3.7% <i>9/30/18</i>
U-6 Unemployment	6.9% <i>9/30/19</i>	7.5% <i>9/30/18</i>

# International economics summary

— The Organization for Economic Development cut its 2019 calendar year forecast for global growth from 3.2% to 2.9% and its 2020 calendar year forecast from 3.4% to 3.0%. Driving the downward revisions were trade tensions, which the OECD estimated would reduce 2019 global growth by 0.6%,

— A major theme in the third quarter was the global manufacturing slowdown, which was illuminated by gloomy European manufacturing PMI data. The Markit Eurozone Manufacturing PMI fell to 45.7, further into contractionary territory indicated by a reading below 50. The German reading fell to 41.7. It has yet to be seen whether manufacturing weakness will spill into the larger services sector, where PMIs still indicate business expansion.

— Inflation has remained subdued across international developed markets, and many pundits have viewed the mild inflation data as a

cue for central banks to step in and attempt to bolster economic growth through more accommodative policy.

— Unemployment rates continued to tick lower around the globe. In the U.S., unemployment hit a 50-year low at 3.5%.

— U.S-China negotiations will likely continue to impact trade around the world. The U.S. scheduled tariff rate hikes on \$250B in already-tariffed Chinese imports, as well as tariff impositions of up to 15% on the remaining \$300B in Chinese imports not currently exposed to duties. The Chinese retaliated with commensurate tariff adjustments. The two sides agreed to continued trade talks in Washington D.C. at the beginning of October.

— Dormant trade tensions between the U.S. and the E.U. saw a resurgence over the quarter – the U.S. applied tariffs between 10-25% on \$7.5B of imports from the E.U.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.3% <i>6/30/19</i>	1.7% <i>9/30/19</i>	3.5% <i>9/30/19</i>
Eurozone	1.2% <i>6/30/19</i>	0.8% <i>9/30/19</i>	7.4% <i>8/31/19</i>
Japan	1.0% <i>6/30/19</i>	0.4% <i>9/30/19</i>	2.3% <i>5/31/19</i>
BRICS Nations	5.0% <i>6/30/19</i>	3.1% <i>9/30/19</i>	5.1% <i>6/30/19</i>
Brazil	1.0% <i>6/30/19</i>	2.9% <i>9/30/19</i>	11.8% <i>8/31/19</i>
Russia	0.9% <i>6/30/19</i>	4.0% <i>9/30/19</i>	4.3% <i>8/31/19</i>
India	5.8% <i>3/31/19</i>	4.0% <i>9/30/19</i>	8.5% <i>12/31/17</i>
China	6.2% <i>6/30/19</i>	3.0% <i>9/30/19</i>	3.6% <i>6/30/19</i>

# Equity environment

- U.S. equities outperformed international in Q3 (S&P 500 +1.7%, MSCI EAFE -1.1%) as domestic markets continued to lead. Some convergence of U.S. interest rates with the ultra-low rates of international markets likely supported equity prices over the quarter. We expect further declines in U.S. yields to be supportive of stocks, as low rates bolster earnings and reduce the attractiveness of fixed income.
- The S&P 500 has delivered moderate returns of 4.3% over the past year. Returns have likely been limited by flat earnings growth of 1.7%, and relatively high valuations. In the third quarter, S&P 500 YoY earnings growth is expected to be -4.1%, which would put U.S. equities on track for three consecutive quarters of earnings loss.
- The U.S. dollar appreciated 2.6% in Q3 relative to a trade-weighted

basket of currencies, which created volatility and currency losses for unhedged investors.

- A large rotation from momentum stocks into value stocks occurred in Q3. The selloff was a multi-standard deviation event, with performance of the prior five months largely reversed in several days. The fall was likely due to a combination of better than expected economic news, monetary/fiscal stimulus expectations, and extreme positioning in these factors.
- Value stock performance was on par with growth stocks during the third quarter (Russell 1000 Value +1.4%, Russell 1000 Growth +1.5%) while small cap stocks underperformed large stocks (Russell 2000 -2.4%, Russell 1000 +1.4%). Year-to-date, the size factor and value factor have continued their run of underperformance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	1.7%		4.3%	
US Small Cap (Russell 2000)	(2.4%)		(8.9%)	
US Large Value (Russell 1000 Value)	1.4%		4.0%	
US Large Growth (Russell 1000 Growth)	1.5%		3.7%	
International Large (MSCI EAFE)	(1.1%)	2.3%	(1.3%)	4.2%
Eurozone (Euro Stoxx 50)	(1.4%)	3.8%	1.3%	11.5%
U.K. (FTSE 100)	(2.2%)	1.4%	(2.7%)	5.4%
Japan (NIKKEI 225)	2.9%	3.6%	(8.2%)	(5.9%)
Emerging Markets (MSCI Emerging Markets)	(4.2%)	(2.2%)	(2.0%)	(0.4%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/19

# Domestic equity

U.S. equities outpaced international in the third quarter (S&P 500 +1.7%, MSCI EAFE -1.1%) as domestic markets continued to lead. Some convergence of U.S. interest rates with the ultra-low rates of international markets likely supported equity prices over the quarter. We expect further declines in U.S. yields to be supportive of stocks, as low rates bolster earnings and reduce the attractiveness of fixed income.

The S&P 500 has delivered moderate returns of 4.3% over the past year. Returns have likely been limited by slow earnings growth of 1.7%, and relatively high valuations. In the third quarter, S&P 500 YoY earnings growth is expected to be -4.1%, which would put U.S.

equities on track for three consecutive quarters of earnings loss. Revenue growth in Q3 is expected to be 2.8% YoY. Investors may point to seemingly lofty earnings growth expectations for 2020 as reason for optimism, though in reality this is a fairly average forecast. Growth expectations are typically high initially, and then fall to a more realistic level as time passes.

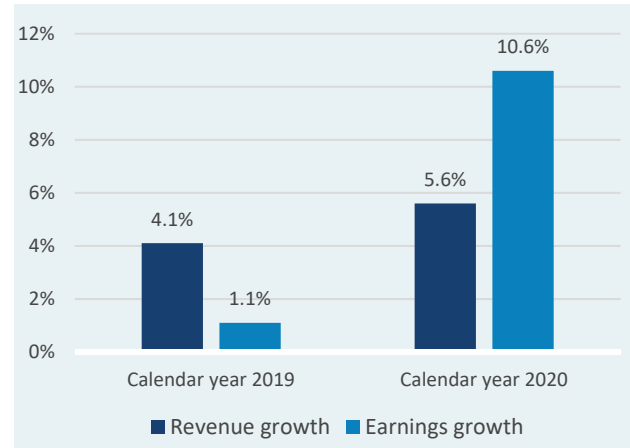
U.S. equities offer lower yields and less attractive valuations relative to other markets around the world, which suggests domestic equities might underperform over the long-term. However, U.S. may continue to outperform over the shorter-term due to relative economic and market strength.

## U.S. EQUITIES



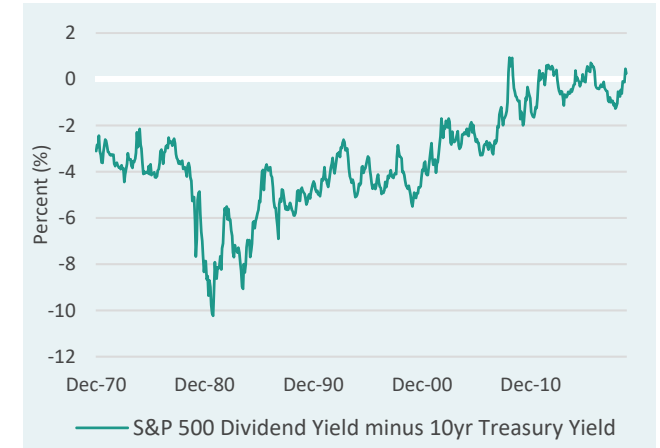
Source: Standard & Poor's, as of 9/30/19

## Q3 2019 EARNINGS EXPECTATIONS



Source: FactSet, as of 10/11/19

## RELATIVE YIELDS



Source: Standard & Poor's, as of 9/30/19

# Domestic equity size & style

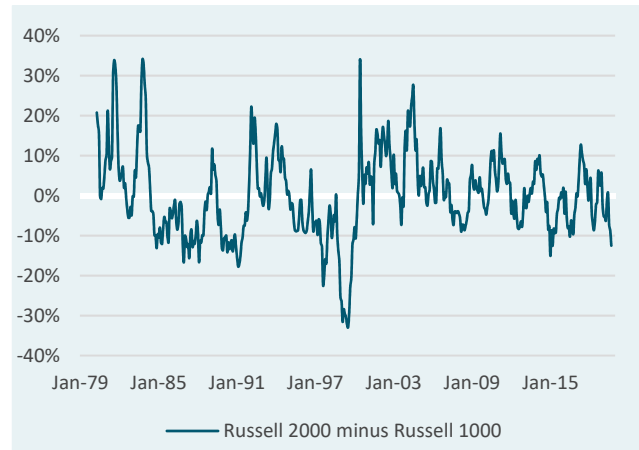
Value stock performance was on par with growth stocks during the third quarter (Russell 1000 Value +1.4%, Russell 1000 Growth +1.5%) while small cap stocks underperformed large stocks (Russell 2000 -2.4%, Russell 1000 +1.4%). Year-to-date, the size factor and value factor have extended their run of weakness.

The impact of sector performance on the value premium was mixed in the third quarter. Financials (+2.0%) and Utilities (+9.3%) outperformed the overall index (S&P 500 +1.7%) which boosted value, but poor Energy (-6.3%) performance counteracted these effects. Information Technology beat the

overall index (+3.3%) which acted as a headwind for value stocks.

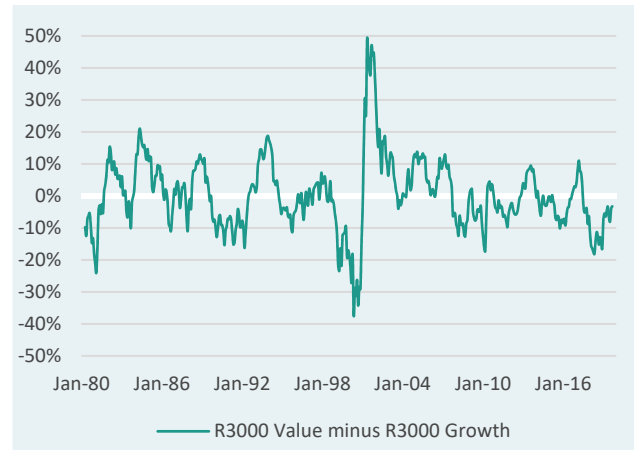
Value stocks have exhibited a long run of underperformance over the past decade. Our view has been that value stocks did not appear attractive, despite persistent performance pain. This was because value stocks had underperformed due to fundamental reasons rather than due to prices becoming stretched. Now, for the first time in this cycle it appears value prices are becoming unusually cheap, as indicated by a large disparity between Russell 1000 Value and Russell 1000 Growth P/E multiples.

**SMALL CAP VS LARGE CAP (YOY)**



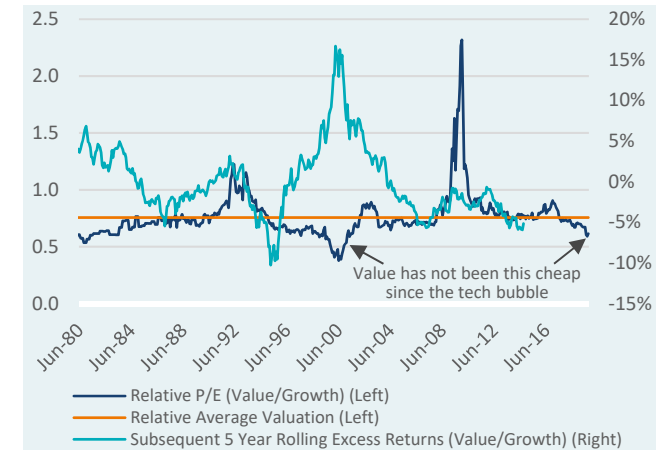
Source: FTSE, as of 9/30/19

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 9/30/19

**VALUE STARTING TO LOOK CHEAP**



Source: Russell, Bloomberg, as of 9/30/19



# International developed equity

International equity performance was impacted heavily by currency movements in the third quarter. In local terms, the MSCI EAFE Index delivered a total return of 1.8%, bringing year-to-date performance to 15.7%. For unhedged U.S. investors however, the MSCI EAFE Index generated a quarterly return of -1.1%, dragging the year-to-date figure to 12.8%. Dollar strength reemerged as a powerful force driving returns due in part to widening interest rate differentials between the U.S. and the rest of the world.

Japanese equities outperformed over the period, delivering a

Q3 return of 3.5% in local terms. Unhedged U.S. investors in the MSCI Japan Index received only 3.1%, as the yen depreciated slightly vs. the U.S. dollar over the period.

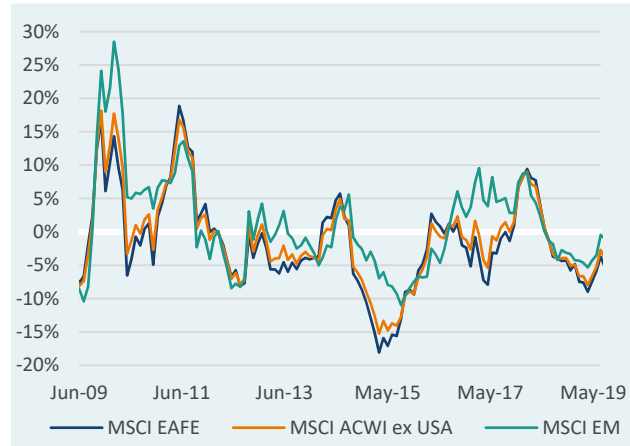
The British pound weakened in July as the new Prime Minister Boris Johnson signaled a much harder line on Brexit than his predecessor's. Toward the end of the quarter, the pound strengthened as markets began pricing a lower likelihood of a "no-deal" Brexit, which many market participants viewed as unfriendly to markets.

**INTERNATIONAL DEVELOPED EQUITIES**



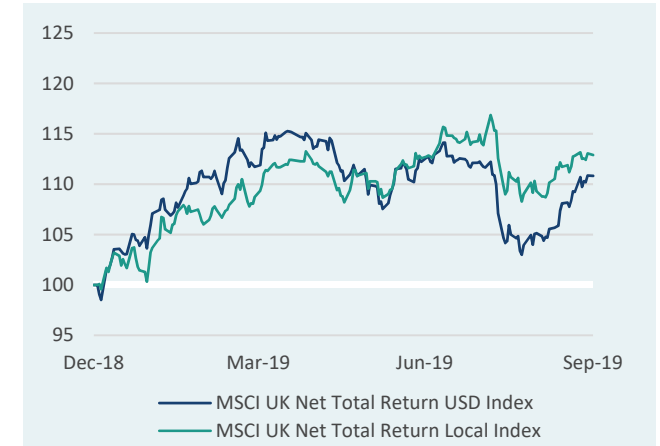
Source: MSCI, as of 9/30/19

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



Source: MSCI, as of 9/30/19

**U.K. EQUITY PERFORMANCE (YTD)**



Source: Bloomberg, as of 9/30/19

# Emerging market equity

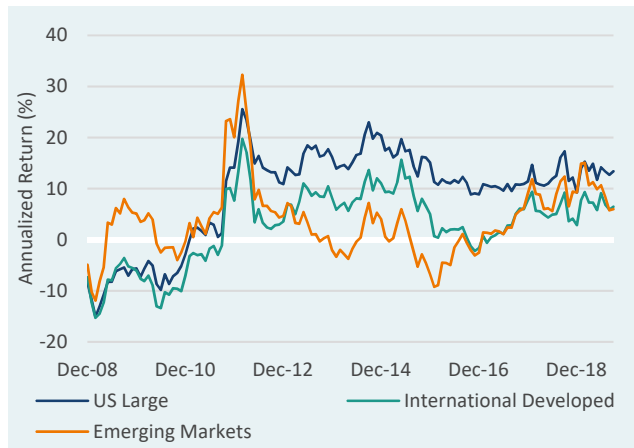
Emerging market equities (MSCI Emerging Markets -4.2%) lagged developed markets (MSCI EAFE -1.1%) over the quarter, while U.S. equities outperformed (S&P 500 +1.7%).

Equity multiples have expanded year-to-date, recovering to the levels of September 2018. Developed and emerging markets continue to appear cheap relative to domestic equity valuations.

We see two opposing forces impacting emerging markets in

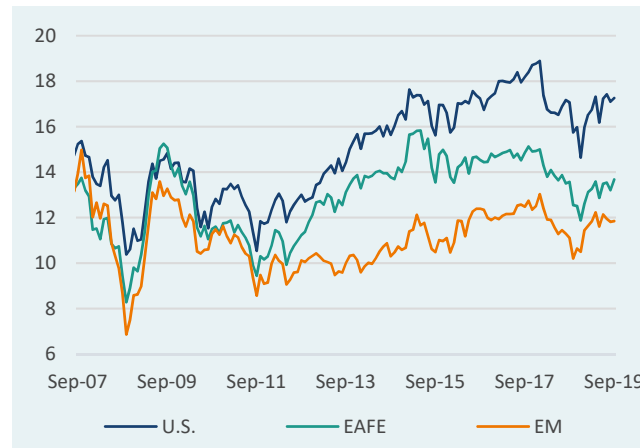
the current environment. The first force is decelerating global growth and a rising probability of recession, which likely bodes poorly for emerging market performance. However, the second force of widespread central bank dovishness may boost emerging market performance in the near term. Specifically, if global growth levels out while central banks unleash another round of easing, there may be material upside to emerging market equities. On balance, we remain moderately bullish on emerging markets, though we are watching developments closely.

**EQUITY PERFORMANCE (3-YR ROLLING)**



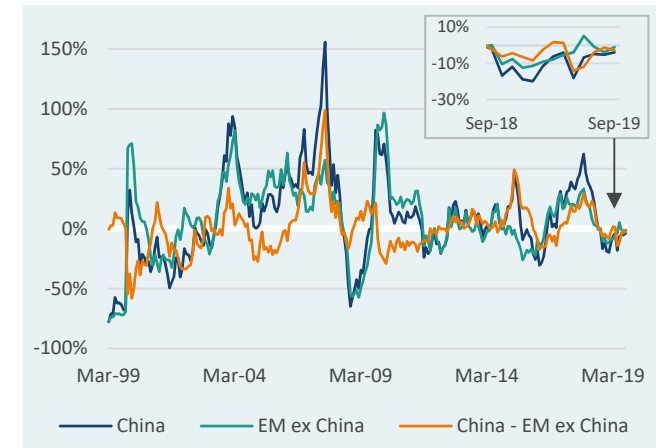
Source: Standard & Poor's, MSCI, as of 9/30/19

**FORWARD P/E**



Source: MSCI, as of 9/30/19

**CHINA & EM: ROLLING 1-YEAR PERFORMANCE (USD)**



Source: MSCI, as of 9/30/19

# Interest rate environment

- Global sovereign bonds rallied, encouraged by muted inflation expectations and dovish guidance from global central banks. Central bankers appealed for fiscal action, citing the limited capacity of monetary policy to sustain further economic expansion.
- The Federal Open Market Committee cut the range for its benchmark interest rate by 0.25% in both its July and September meetings, bringing the new range for federal funds to 1.75-2.00%.
- FOMC members appear divided on the likely future path of interest rates. Per the September dot plot, 8 of 17 members expect one further 0.25% cut by the end of 2020, 2 expect no change, and 7 expect either one or two 0.25% rate hikes.
- The European Central Bank delivered a fresh stimulus package in September, in line with expectations. The ECB cut its main deposit rate from -0.40% to -0.50%

and announced it would restart asset purchases of €20 billion per month, beginning November 1<sup>st</sup>.

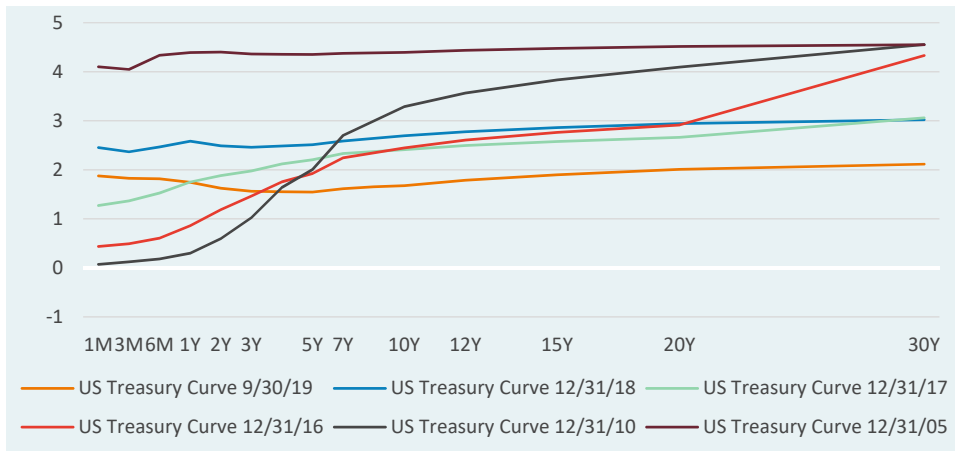
- Global sovereign yields continued to plummet. In Germany, 10-year bond yields touched fresh all-time lows, and the entire German sovereign curve moved below 0%. In Italy, 10-year bond yields fell 1.28% to 0.82%, boosted by the formation of a new coalition government between the Democratic Party and the Five-Star Movement.
- Repo rates, which represent the overnight rate paid by short-term borrowers of cash, surged as overnight liquidity was constrained. The New York Fed intervened, injecting over \$300 billion into money markets over the course of a few weeks. Fed officials viewed the brief spike in repo rates as a financial “plumbing” issue, which could justify an “organic resumption of balance sheet growth”, not to be confused with crisis-era QE policy.

Area	Short Term (3M)	10-Year
United States	1.81%	1.66%
Germany	(0.57%)	(0.57%)
France	(0.59%)	(0.27%)
Spain	(0.54%)	0.15%
Italy	(0.28%)	0.82%
Greece	0.65%	1.35%
U.K.	0.78%	0.49%
Japan	(0.32%)	(0.21%)
Australia	1.06%	1.02%
China	2.33%	3.14%
Brazil	5.04%	7.05%
Russia	6.58%	7.01%

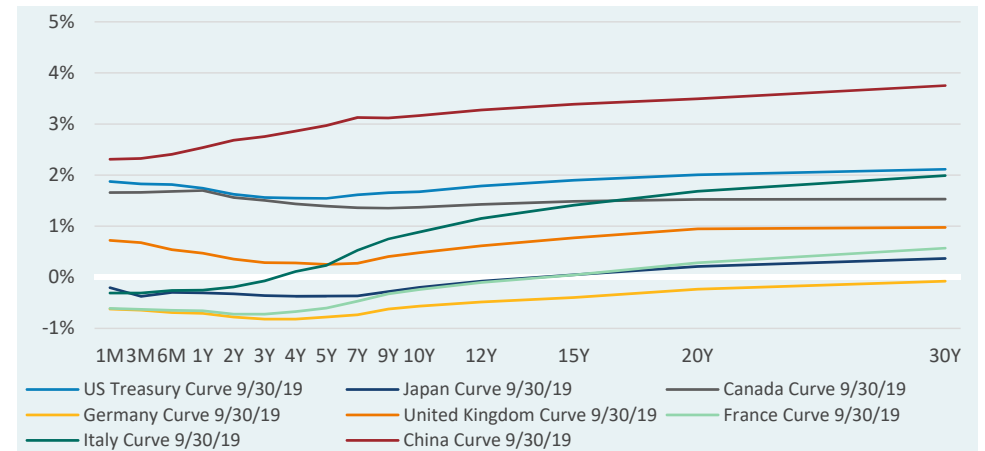
Source: Bloomberg, as of 9/30/19

# Yield environment

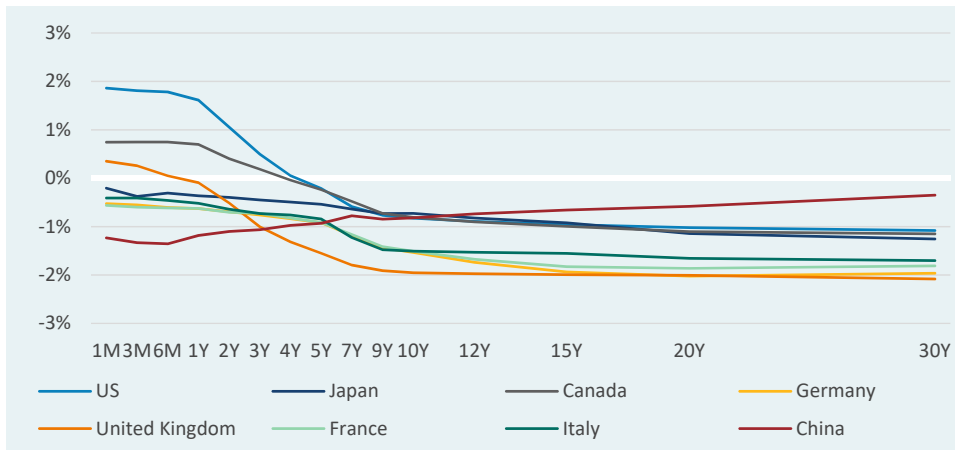
**U.S. YIELD CURVE**



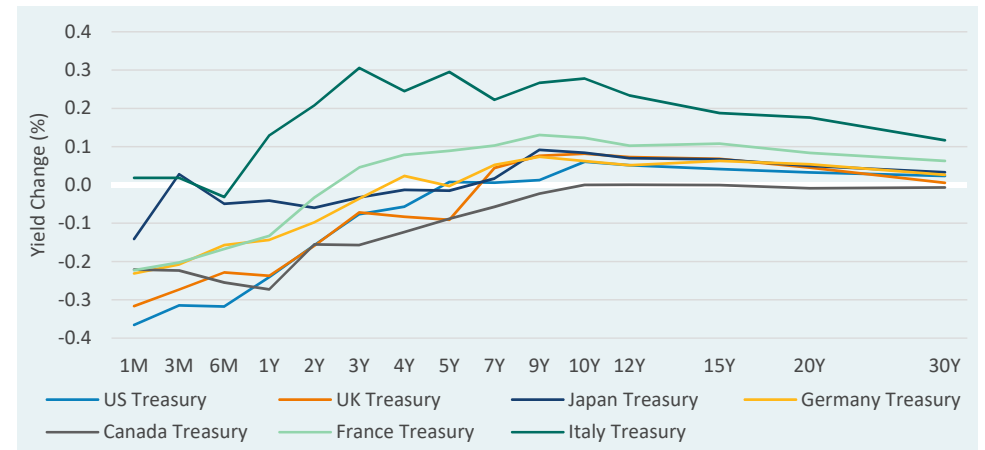
**GLOBAL GOVERNMENT YIELD CURVES**



**YIELD CURVE CHANGES OVER LAST FIVE YEARS**



**IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 9/30/19

# Currency

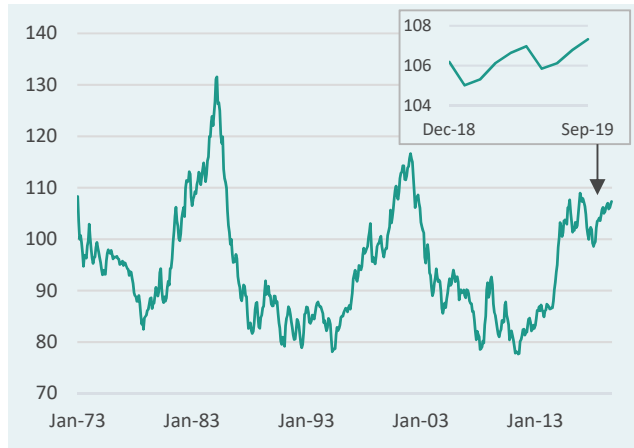
The U.S. dollar appreciated 2.6% in Q3 relative to a trade-weighted basket of currencies. Dollar volatility has been suppressed so far in 2019, following large swings experienced during years 2014-2018. Investors are pricing in a 78% chance of one more 0.25% rate cut by the end of 2019, and a 25% chance of 0.50% in rate cuts. The market continues to price in more aggressive easing than what the Federal Reserve has indicated, which may contribute to volatility if actual easing measures underwhelm the market.

weakness in the short-term, including: aggressive easing by the Federal Reserve which leads to a convergence of U.S. and international interest rates levels, further upside surprise to U.S. inflation, and/or weakening U.S. economic conditions which brings the U.S. more in line with other developed economies.

Emerging market currencies fell -4% quarter, on the back of U.S. dollar strength. These currencies remain very depressed relative to history.

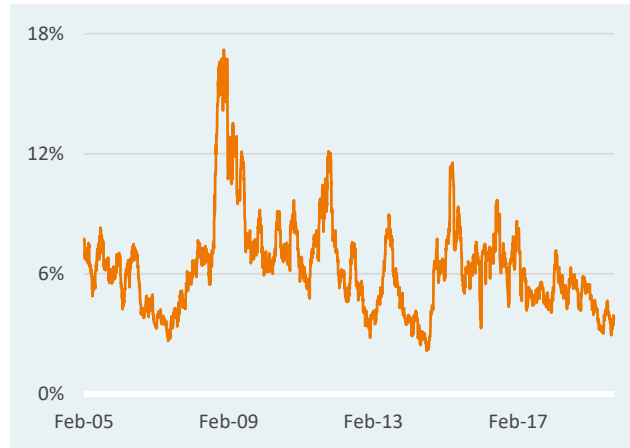
A variety of market scenarios may lead to U.S. dollar

**U.S. DOLLAR TRADE WEIGHTED INDEX**



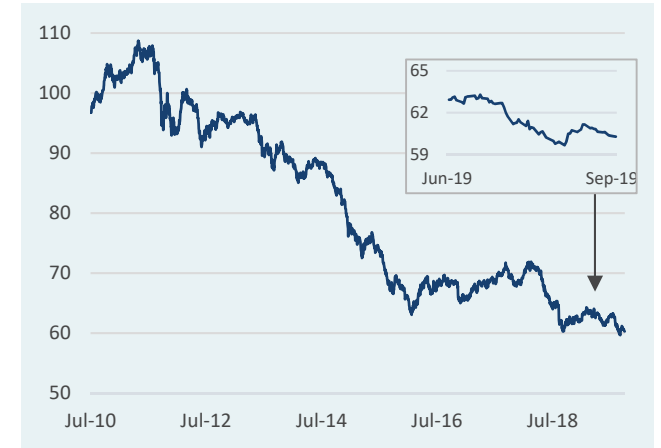
Source: Federal Reserve, Verus, as of 9/30/19

**BLOOMBERG DOLLAR SPOT INDEX REALIZED 30-DAY VOLATILITY**



Source: Bloomberg, as of 9/30/19

**JPM EMERGING MARKET CURRENCY INDEX**

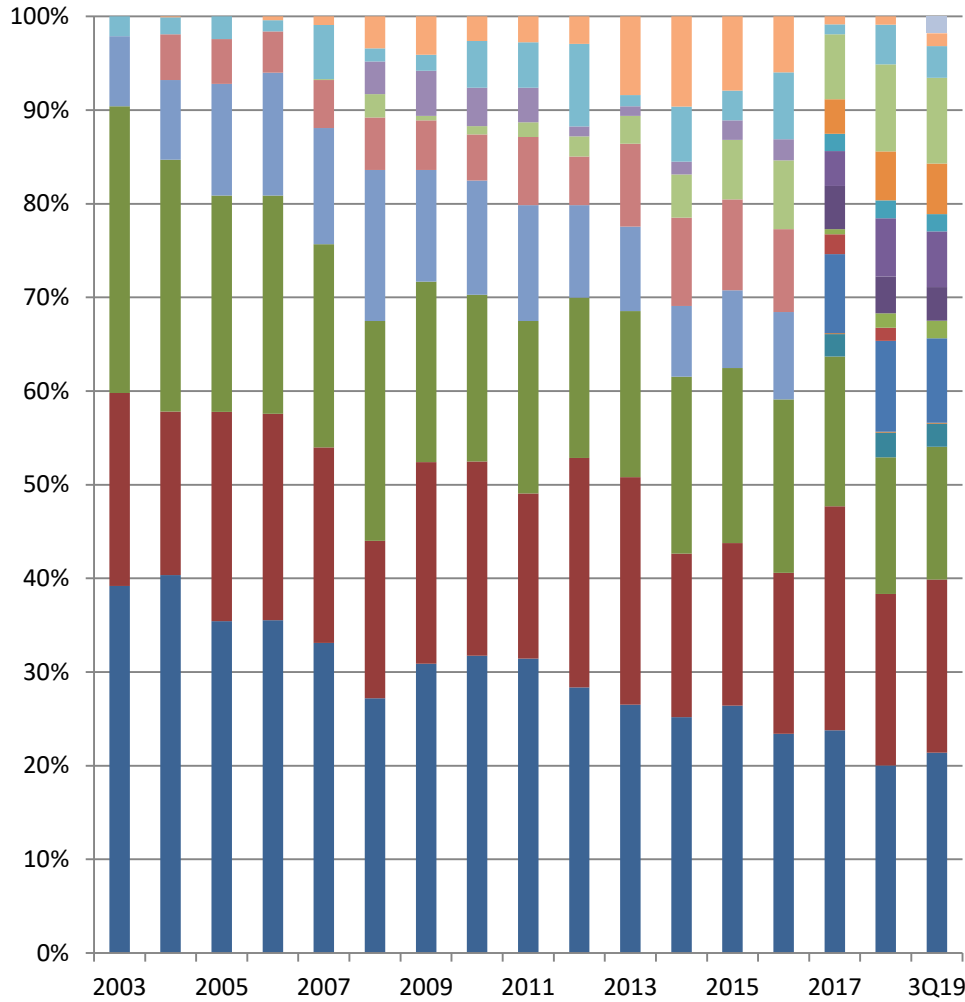


Source: Bloomberg, JPMorgan, as of 9/30/19

# Total Fund

## Actual Yearly and Quarterly Asset Allocation

Period Ending: September 30, 2019



- US Equity
- Global Fixed Income
- Real Assets
- Diversifying Hedge Funds
- RE / RA
- Opportunistic / Commodities
- Liquid Real Return
- Int'l Equities
- Opportunistic
- Direct Lending
- Public Credit
- Absolute Return
- Cash
- US Fixed Income
- Real Estate
- Growth Hedge Funds
- Private Real Assets
- Private Equity
- Other \*

	2003	2004	2005	2006	2007	2008
US Equity	39.2	40.4	35.4	35.5	33.1	27.2
International Equity	20.6	17.5	22.3	22.0	20.9	16.8
US Fixed Income	30.6	26.9	23.1	23.3	21.7	23.5
Real Estate / Real Assets	7.5	8.5	11.9	13.1	12.4	16.1
Absolute Return	-	4.9	4.8	4.4	5.1	5.6
Private Equity	-	-	-	-	0.1	2.5
Opportunistic / Commodities	-	-	-	-	-	3.5
Cash	2.1	1.8	2.4	1.2	5.8	1.4
Other *	-	0.1	-	0.4	0.9	3.4

	2009	2010	2011	2012	2013	2014
US Equity	30.9	31.7	31.4	28.4	26.5	25.2
International Equity	21.5	20.7	17.6	24.5	24.3	17.5
US Fixed Income	19.3	17.8	18.4	17.1	17.7	18.9
Real Estate / Real Assets	11.9	12.2	12.4	9.9	9.0	7.6
Absolute Return	5.3	4.9	7.3	5.2	8.8	9.4
Private Equity	0.5	0.9	1.6	2.2	3.0	4.6
Opportunistic / Commodities	4.8	4.1	3.7	1.1	1.0	1.4
Cash	1.7	5.0	4.9	8.8	1.2	5.9
Other *	4.1	2.6	2.7	2.9	8.4	9.6

	2015	2016	2017	2018	2019 3Q+
US Equity	26.4	23.4	23.8	20.0	21.4
International Equity	17.3	17.2	23.9	18.3	18.5
US Fixed Income	18.7	18.5	16.0	14.6	14.2
Global Fixed Income	-	-	2.4	2.6	2.5
Public Credit	-	-	1.8	1.9	1.8
Real Estate / Real Assets	8.3	9.3	-	-	-
Real Estate	-	-	8.4	9.7	9.0
Real Assets	-	-	2.1	1.4	-
Private Real Assets	-	-	3.7	5.2	5.4
Liquid Real Return	-	-	-	-	1.8
Absolute Return	9.7	8.8	-	-	-
Growth Hedge Funds	-	-	4.6	3.9	3.6
Diversifying Hedge Funds	-	-	3.8	6.2	6.0
Private Equity	6.3	7.4	6.9	9.3	9.2
Direct Lending	-	-	0.5	1.5	1.9
Opportunistic / Commodities	2.1	2.2	-	-	-
Opportunistic	-	-	0.1	0.1	0.1
Cash	3.2	7.1	1.1	4.3	3.4
Other *	7.9	6.0	0.8	0.9	1.4

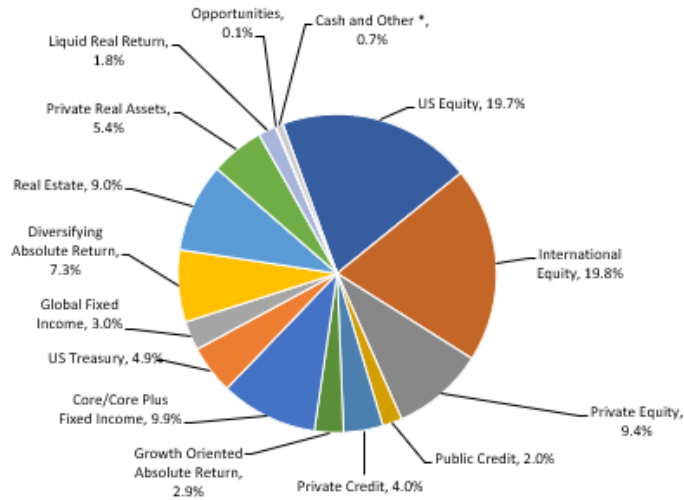
\* Allocations without overlay.

\* Other includes SSgA Overlay and closing accounts. Prior to Q2 2017 SSgA Real Assets is also included

# Total Fund Asset Allocation Analysis

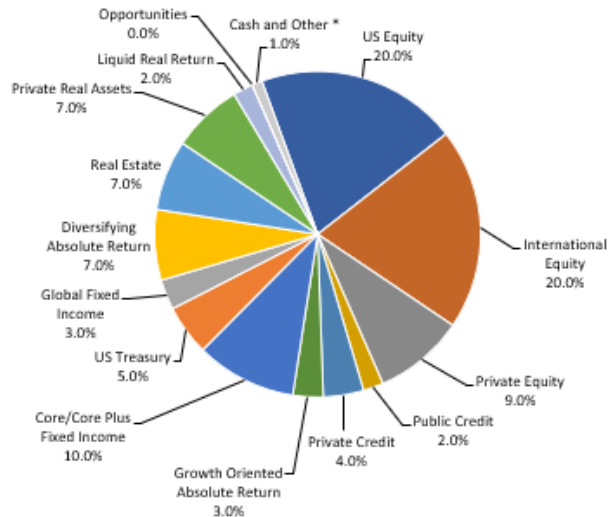
Period Ending: September 30, 2019

Current w/Overlay



ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	1,964,668,662	19.7%	21.9%
International Equity	1,978,679,490	19.8%	19.3%
Private Equity	937,126,120	9.4%	9.4%
Public Credit	198,535,445	2.0%	1.9%
Private Credit	399,038,283	4.0%	1.8%
Growth Oriented Absolute Return	292,923,873	2.9%	3.1%
Core/Core Plus Fixed Income	984,678,893	9.9%	9.5%
US Treasury	492,489,083	4.9%	4.7%
Global Fixed Income	296,047,167	3.0%	2.6%
Diversifying Absolute Return	729,693,336	7.3%	6.4%
Real Estate	901,278,219	9.0%	9.0%
Private Real Assets	541,864,772	5.4%	5.2%
Liquid Real Return	179,861,903	1.8%	0.3%
Opportunities	7,087,829	0.1%	0.1%
Cash and Other *	71,994,183	0.7%	4.8%
<b>TOTAL</b>	<b>9,975,967,256</b>	<b>100.0%</b>	<b>100.0%</b>

Target



ASSET ALLOCATION	ACTUAL	TARGET	DIFF
US Equity	19.7%	20.0%	-0.3%
International Equity	19.8%	20.0%	-0.2%
Private Equity	9.4%	9.0%	0.4%
Public Credit	2.0%	2.0%	0.0%
Private Credit	4.0%	4.0%	0.0%
Growth Oriented Absolute Return	2.9%	3.0%	-0.1%
Core/Core Plus Fixed Income	9.9%	10.0%	-0.1%
US Treasury	4.9%	5.0%	-0.1%
Global Fixed Income	3.0%	3.0%	0.0%
Diversifying Absolute Return	7.3%	7.0%	0.3%
Real Estate	9.0%	7.0%	2.0%
Private Real Assets	5.4%	7.0%	-1.6%
Liquid Real Return	1.8%	2.0%	-0.2%
Opportunities	0.1%	0.0%	0.1%
Cash and Other *	0.7%	1.0%	-0.3%

- The Total Plan returned +1.0% net in the third quarter of 2019 and ranked in the second quartile among other public funds greater than \$1 billion (+0.6% median). The Fund beat its policy index (+0.8%) during this time period. The Total Plan w/o Overlay returned +1.0% for the quarter, net of fees. Longer term, the three-year return of +9.1% beat the median large public plan peer group (+8.0%) and ranked in the top quartile. The five-year returns of +6.8% ranked in the second quartile of the large public plan peer group.
- Third quarter results (net) were enhanced by the following factors:
  1. The Private Equity composite gained +6.2% outperforming the Thomson Reuters CA All PE 1 Qtr lag (+3.7%). The outperformance in this asset class was a significant contribution to the Plan quarterly outperformance.
  2. The Plan's treasury allocation and core fixed income rose +2.5%, respectively, contributing to the Plan's relative quarterly outperformance.
- Third quarter results (net) were hindered by the following factors:
  1. Eagle Capital lost -1.5% trailing the Russell 1000 (+1.4%) and ranked in the bottom of its peers. Eagle trailed due to security selection, primarily in the consumer discretionary and healthcare sectors.
  2. Brandywine trailed its custom index (-1.7% vs +0.5%). The strategies weak performance during the third quarter was due almost entirely to currency allocations. Performance suffered because of a strong US dollar during the third quarter.
  3. Weatherbie lost -6.4% trailing the Russell 2000 Growth by +2.2%. The largest detractors from relative performance were the information technology and consumer discretionary sectors.
  4. Brigade lagged its custom benchmark -0.3% vs +1.1%, the main detractors from relative performance were distressed positions (-0.6%.)



# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date <sup>+</sup>
<b>Total Fund- Gross*</b>	9,975,967,256	100.0	1.0	20	11.8	42	5.9	10	9.3	7	7.1	22	8.3	Jun-86
<b>Total Fund- Net</b>			1.0	27	11.5	46	5.6	13	9.1	11	6.8	31	8.1	
<i>Policy Index<sup>1</sup></i>			0.8	40	10.3	79	4.5	34	7.8	60	6.4	58	8.5	Jun-86
<i>InvMetrics Public DB &gt; \$1B Gross Median</i>			0.6		11.5		3.9		8.0		6.5		8.1	Jun-86
<b>Total Fund ex Overlay- Gross**</b>	9,841,339,396	98.7	1.0	19	11.2	53	5.6	12	9.3	7	7.1	23	8.3	Jun-86
<b>Total Fund ex Overlay- Net</b>			1.0	27	11.0	59	5.3	14	9.1	12	6.8	31	8.0	
<i>Policy Index</i>			0.8	40	10.3	79	4.5	34	7.8	60	6.4	58	8.5	Jun-86
<i>Allocation ex Overlay Index</i>			0.8	43	9.8	89	4.3	40	--	--	--	--	--	Jun-86
<b>Growth Asset Category- Gross</b>	5,561,685,278	55.8	0.7	--	15.1	--	4.4	--	--	--	--	--	10.6	Mar-17
<b>Growth Asset Category- Net</b>			0.7	--	14.8	--	4.0	--	--	--	--	--	10.3	
<i>Growth Custom<sup>1</sup></i>			0.5	--	13.5	--	3.3	--	10.2	--	--	--	8.9	Mar-17
<b>Public Equities- Gross</b>	3,976,587,914	39.9	-0.4	--	16.6	--	1.3	--	10.8	--	7.9	--	8.7	Jun-11
<b>Public Equities- Net</b>			-0.4	--	16.2	--	0.8	--	10.4	--	7.5	--	8.3	
<i>MSCI ACWI</i>			0.0	--	16.2	--	1.4	--	9.7	--	6.7	--	7.4	Jun-11
<b>US Equity- Gross</b>	2,134,513,782	21.4	0.7	63	20.0	44	2.2	49	12.8	36	10.4	38	10.1	Jun-86
<b>US Equity- Net</b>			0.6	66	19.8	54	2.0	54	12.6	48	10.1	53	9.9	
<i>Russell 3000<sup>1</sup></i>			1.2	36	20.1	42	2.9	37	12.8	36	10.4	34	10.2	Jun-86
<i>InvMetrics All DB US Eq Gross Median</i>			0.9		19.9		2.1		12.5		10.1		9.9	Jun-86
<b>Large Cap- Gross</b>	1,941,471,414	19.5	1.0	--	19.9	--	3.0	--	13.4	--	10.5	--	6.4	Mar-98
<b>Large Cap- Net</b>			1.0	--	19.6	--	2.8	--	13.2	--	10.2	--	6.2	
<i>Russell 1000</i>			1.4	--	20.5	--	3.9	--	13.2	--	10.6	--	6.9	Mar-98

\*Total Fund and asset class composites are ranked against InvestorForce universes. Managers are ranked against eVest manager universes. Net Returns are ranked against gross universe. Ranking of 1 is a top ranking and ranking of 100 is a bottom rating.

\*\*Total Fund ex Overlay returns from 2/1/2006-12/31/2010 were calculated using the overlay impact provided by SSgA.

+ Since inception date denotes last day of the month.

1. See Policy Index and Benchmark History

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap - Index- Gross	1,171,514,961	11.7	1.4	--	20.5	--	3.9	--	13.2	--	10.6	--	11.3	Sep-08
Large Cap - Index- Net			1.4	--	20.5	--	3.9	--	13.2	--	10.6	--	11.3	
<i>Russell 1000</i>			1.4	--	20.5	--	3.9	--	13.2	--	10.6	--	11.3	Sep-08
AB- Gross	1,171,514,961	11.7	1.4	77	20.5	63	3.9	60	13.2	66	10.6	70	10.0	Apr-89
AB- Net			1.4	79	20.5	66	3.9	61	13.2	68	10.6	70	10.0	
<i>Russell 1000</i>			1.4	80	20.5	55	3.9	68	13.2	64	10.6	67	--	Apr-89
<i>eV US Passive Large Cap Equity Gross Median</i>			1.7		20.5		4.1		13.4		10.8		10.1	Apr-89
Large Cap - Enhanced- Gross	247,624,794	2.5	1.5	--	18.5	--	0.7	--	--	--	--	--	4.0	Jul-18
Large Cap - Enhanced- Net			1.5	--	18.3	--	0.5	--	--	--	--	--	3.7	
<i>Russell 1000</i>			1.4	--	20.5	--	3.9	--	13.2	--	10.6	--	6.7	Jul-18
AQR US Enhanced Equity- Gross	247,624,794	2.5	1.5	35	18.5	60	0.7	68	--	--	--	--	4.0	Jul-18
AQR US Enhanced Equity- Net			1.5	39	18.3	64	0.5	69	--	--	--	--	3.7	
<i>Russell 1000</i>			1.4	41	20.5	27	3.9	25	13.2	35	10.6	43	6.7	Jul-18
<i>eV US Enh Equity Gross Median</i>			1.3		19.1		2.6		12.7		10.4		5.7	Jul-18
Large Cap (130/30)- Gross	263,232,211	2.6	1.2	--	18.2	--	-0.4	--	12.9	--	10.1	--	11.7	Sep-08
Large Cap (130/30)- Net			1.1	--	17.7	--	-0.9	--	12.2	--	9.4	--	11.1	
<i>Russell 1000</i>			1.4	--	20.5	--	3.9	--	13.2	--	10.6	--	11.3	Sep-08
JP Morgan 130/30- Gross	134,255,889	1.3	1.0	71	19.3	26	0.5	45	13.2	27	10.3	35	11.6	Jul-08
JP Morgan 130/30- Net			0.8	78	18.5	30	-0.2	51	12.5	41	9.5	65	10.8	
<i>Russell 1000</i>			1.4	55	20.5	16	3.9	13	13.2	27	10.6	31	10.3	Jul-08
<i>eV Extended US 130/30 Equity Gross Median</i>			1.5		16.4		-0.2		11.9		10.2		10.7	Jul-08
DE Shaw Broad Mkt Core Alpha Ext- Gross	128,976,322	1.3	1.5	51	--	--	--	--	--	--	--	--	9.4	Jan-19
DE Shaw Broad Mkt Core Alpha Ext- Net			1.4	53	--	--	--	--	--	--	--	--	9.1	
<i>Russell 1000</i>			1.4	54	20.5	16	3.9	14	13.2	22	10.6	25	11.2	Jan-19
<i>eV Extended US Equity Gross Median</i>			1.5		16.4		-0.2		11.4		9.9		8.3	Jan-19

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Large Cap Active- Gross</b>	<b>259,099,447</b>	<b>2.6</b>	<b>-1.3</b>	<b>--</b>	<b>19.7</b>	<b>--</b>	<b>3.2</b>	<b>--</b>	<b>13.8</b>	<b>--</b>	<b>9.7</b>	<b>--</b>	<b>10.7</b>	<b>Sep-08</b>
<b>Large Cap Active- Net</b>			<b>-1.5</b>	<b>--</b>	<b>18.8</b>	<b>--</b>	<b>2.4</b>	<b>--</b>	<b>12.9</b>	<b>--</b>	<b>8.9</b>	<b>--</b>	<b>10.1</b>	
<i>Russell 1000<sup>1</sup></i>			1.4	--	19.9	--	5.8	--	10.1	--	8.2	--	9.4	Sep-08
Eagle Capital- Gross	259,074,173	2.6	-1.3	98	19.8	52	3.2	53	15.3	13	11.1	30	14.1	Feb-12
Eagle Capital- Net			-1.5	98	18.9	60	2.4	58	14.4	23	10.3	51	13.3	
<i>Russell 1000</i>			1.4	60	19.9	51	5.8	33	10.1	91	8.2	90	11.7	Feb-12
<i>eV US Large Cap Core Equity Gross Median</i>			1.7		19.9		3.6		12.8		10.3		12.8	Feb-12
<b>Small Cap- Gross</b>	<b>193,042,368</b>	<b>1.9</b>	<b>-2.9</b>	<b>--</b>	<b>21.7</b>	<b>--</b>	<b>-5.1</b>	<b>--</b>	<b>12.6</b>	<b>--</b>	<b>10.3</b>	<b>--</b>	<b>11.8</b>	<b>Dec-90</b>
<b>Small Cap- Net</b>			<b>-2.9</b>	<b>--</b>	<b>21.2</b>	<b>--</b>	<b>-5.7</b>	<b>--</b>	<b>12.0</b>	<b>--</b>	<b>9.7</b>	<b>--</b>	<b>11.1</b>	
<i>Russell 2000</i>			-2.4	--	14.2	--	-8.9	--	8.2	--	8.2	--	10.4	Dec-90
<b>Small Cap - Growth- Gross</b>	<b>100,292,180</b>	<b>1.0</b>	<b>-6.3</b>	<b>--</b>	<b>27.8</b>	<b>--</b>	<b>-3.4</b>	<b>--</b>	<b>19.7</b>	<b>--</b>	<b>13.4</b>	<b>--</b>	<b>12.2</b>	<b>Sep-08</b>
<b>Small Cap - Growth- Net</b>			<b>-6.4</b>	<b>--</b>	<b>27.1</b>	<b>--</b>	<b>-4.0</b>	<b>--</b>	<b>19.2</b>	<b>--</b>	<b>12.9</b>	<b>--</b>	<b>11.6</b>	
<i>Russell 2000 Growth</i>			-4.2	--	15.3	--	-9.6	--	9.8	--	9.1	--	10.4	Sep-08
Weatherbie- Gross	100,292,180	1.0	-6.3	75	27.8	8	-3.4	32	22.3	3	16.6	9	13.2	Dec-02
Weatherbie- Net			-6.4	75	27.1	8	-4.0	38	21.8	4	15.9	10	12.3	
<i>Russell 2000 Growth</i>			-4.2	46	15.3	66	-9.6	72	9.8	83	9.1	79	10.6	Dec-02
<i>eV US Small Cap Growth Equity Gross Median</i>			-4.4		18.0		-6.7		13.4		11.4		12.3	Dec-02
<b>Small Cap - Value- Gross</b>	<b>92,750,188</b>	<b>0.9</b>	<b>1.2</b>	<b>--</b>	<b>15.9</b>	<b>--</b>	<b>-6.9</b>	<b>--</b>	<b>5.7</b>	<b>--</b>	<b>7.0</b>	<b>--</b>	<b>8.9</b>	<b>Sep-08</b>
<b>Small Cap - Value- Net</b>			<b>1.0</b>	<b>--</b>	<b>15.5</b>	<b>--</b>	<b>-7.4</b>	<b>--</b>	<b>5.0</b>	<b>--</b>	<b>6.2</b>	<b>--</b>	<b>8.0</b>	
<i>Russell 2000 Value</i>			-0.6	--	12.8	--	-8.2	--	6.5	--	7.2	--	7.8	Sep-08
Dalton, Greiner- Gross	92,748,965	0.9	1.2	25	15.9	45	-6.9	55	5.9	75	6.8	64	9.8	Dec-00
Dalton, Greiner- Net			1.0	26	15.5	48	-7.5	57	5.4	82	6.2	73	9.0	
<i>Russell 2000 Value</i>			-0.6	59	12.8	73	-8.2	63	6.5	65	7.2	57	8.4	Dec-00
<i>eV US Small Cap Value Equity Gross Median</i>			-0.2		15.3		-6.3		7.1		7.5		10.7	Dec-00

1. See Policy Index and Benchmark History.

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>International Equity- Gross</b>	<b>1,842,074,132</b>	<b>18.5</b>	<b>-1.6</b>	<b>43</b>	<b>12.9</b>	<b>38</b>	<b>0.3</b>	<b>23</b>	<b>7.9</b>	<b>13</b>	<b>4.6</b>	<b>23</b>	<b>6.3</b>	<b>Dec-87</b>
<b>International Equity- Net</b>			<b>-1.7</b>	<b>51</b>	<b>12.3</b>	<b>48</b>	<b>-0.6</b>	<b>35</b>	<b>7.4</b>	<b>20</b>	<b>4.1</b>	<b>32</b>	<b>6.0</b>	
<i>MSCI ACWI ex US<sup>1</sup></i>			-1.7	54	12.1	52	-0.7	38	6.8	34	3.4	56	6.1	Dec-87
<i>InvMetrics All DB ex-US Eq Gross Median</i>			-1.7		12.2		-1.4		6.3		3.5		7.1	Dec-87
<b>International - Developed- Gross</b>	<b>1,490,548,538</b>	<b>14.9</b>	<b>-1.0</b>	<b>29</b>	<b>13.7</b>	<b>43</b>	<b>-0.1</b>	<b>38</b>	<b>8.5</b>	<b>24</b>	<b>5.2</b>	<b>33</b>	<b>4.6</b>	<b>Mar-98</b>
<b>International - Developed- Net</b>			<b>-1.1</b>	<b>35</b>	<b>13.1</b>	<b>52</b>	<b>-1.1</b>	<b>45</b>	<b>7.9</b>	<b>31</b>	<b>4.6</b>	<b>42</b>	<b>4.1</b>	
<i>MSCI World ex US Gross</i>			-0.8	26	14.1	38	-0.4	41	7.0	50	3.6	70	4.7	Mar-98
<i>InvMetrics All DB Dev Mkt ex-US Eq Gross Median</i>			-1.5		13.2		-1.6		7.0		4.3		5.0	Mar-98
Lazard- Gross	373,551,085	3.7	-1.9	56	12.2	62	0.6	30	7.4	43	5.0	41	8.6	Jun-12
Lazard- Net			-1.9	58	11.9	64	0.1	34	7.0	48	4.7	49	8.3	
<i>MSCI ACWI ex USA Gross</i>			-1.7	48	12.1	63	-0.7	42	6.8	50	3.4	69	6.4	Jun-12
<i>eV All ACWI ex-US Equity Gross Median</i>			-1.8		13.1		-1.7		6.8		4.6		7.8	Jun-12
Walter Scott & Partners Limited- Gross	524,549,805	5.3	-0.8	33	16.9	58	4.8	20	--	--	--	--	11.8	Mar-17
Walter Scott & Partners Limited- Net			-0.9	34	15.8	88	2.8	40	--	--	--	--	10.8	
<i>MSCI World ex USA Growth GR USD</i>			-0.4	17	18.8	34	2.8	40	8.0	62	5.5	37	8.6	Mar-17
<i>eV EAFE Large Cap Growth Gross Median</i>			-1.5		17.4		1.3		8.3		5.3		8.4	Mar-17
LSV- Gross	413,200,986	4.1	-0.1	19	10.8	51	-4.6	53	6.4	32	3.6	35	4.4	Dec-04
LSV- Net			-0.2	22	10.4	53	-5.0	56	5.9	45	3.2	42	3.9	
<i>MSCI World ex US Value Gross</i>			-1.3	82	9.5	71	-3.7	39	6.0	43	1.6	89	4.2	Dec-04
<i>eV EAFE Large Cap Value Gross Median</i>			-0.8		10.8		-4.5		5.7		3.0		4.5	Dec-04
Mondrian Dev Small Cap- Gross	93,574,443	0.9	-1.8	32	13.0	50	-3.9	39	6.6	51	6.1	51	8.6	Aug-10
Mondrian Dev Small Cap- Net			-2.0	39	12.4	54	-4.6	43	5.9	64	5.4	57	8.0	
<i>MSCI World ex US Small Cap GD</i>			-0.2	6	13.0	49	-5.2	47	6.0	63	5.5	56	8.1	Aug-10
<i>eV ACWI ex-US Small Cap Equity Gross Median</i>			-2.3		13.0		-6.1		6.7		6.2		9.3	Aug-10
William Blair Dev Small Cap- Gross	85,672,218	0.9	-1.4	22	17.8	17	-4.3	43	4.6	77	5.5	56	8.8	Sep-08
William Blair Dev Small Cap- Net			-1.6	27	17.0	23	-5.2	47	3.6	84	4.6	75	7.8	
<i>MSCI World ex US Small Cap GD</i>			-0.2	6	13.0	49	-5.2	47	6.0	63	5.5	56	8.0	Sep-08
<i>eV ACWI ex-US Small Cap Equity Gross Median</i>			-2.3		13.0		-6.1		6.7		6.2		9.6	Sep-08

1. See Policy Index and Benchmark History.

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
International - Emerging- Gross	351,504,718	3.5	-4.0	58	9.5	25	2.1	32	7.1	24	2.6	37	6.1	Jan-00
International - Emerging- Net			-4.1	58	9.3	26	1.8	32	6.7	25	2.3	46	5.7	
<i>MSCI Emerging Markets Gross</i>			-4.1	58	6.2	61	-1.6	69	6.4	28	2.7	35	6.5	Jan-00
<i>InvMetrics All DB Emg Mkt Eq Gross Median</i>			-3.8		6.8		-0.4		5.6		2.2		6.9	Jan-00
Baillie Gifford Emg All Cap- Gross	189,663,151	1.9	-3.4	42	13.4	13	4.0	22	11.1	4	--	--	13.3	Mar-16
Baillie Gifford Emg All Cap- Net			-3.4	42	13.4	13	4.0	22	11.1	4	--	--	13.3	
<i>MSCI Emerging Markets Gross</i>			-4.1	59	6.2	63	-1.6	64	6.4	50	2.7	63	8.4	Mar-16
<i>eV Emg Mkts Equity Gross Median</i>			-3.8		7.9		0.0		6.3		3.4		8.6	Mar-16
Mondrian Emg All Cap- Gross	161,841,567	1.6	-4.8	78	5.3	72	0.0	51	4.1	85	--	--	5.3	Mar-16
Mondrian Emg All Cap- Net			-4.9	80	4.8	77	-0.6	54	3.5	92	--	--	4.6	
<i>MSCI Emerging Markets Gross</i>			-4.1	59	6.2	63	-1.6	64	6.4	50	2.7	63	8.4	Mar-16
<i>eV Emg Mkts Equity Gross Median</i>			-3.8		7.9		0.0		6.3		3.4		8.6	Mar-16

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Private Equity- Gross<sup>+++</sup></b>	<b>921,333,924</b>	<b>9.2</b>	<b>6.2</b>	<b>5</b>	<b>15.3</b>	<b>6</b>	<b>23.6</b>	<b>3</b>	<b>21.5</b>	<b>6</b>	<b>15.4</b>	<b>12</b>	<b>3.8</b>	<b>Feb-08</b>
<b>Private Equity- Net</b>			<b>6.2</b>	<b>5</b>	<b>15.3</b>	<b>6</b>	<b>23.6</b>	<b>3</b>	<b>21.5</b>	<b>6</b>	<b>15.4</b>	<b>12</b>	<b>4.0</b>	
<i>Thomson Reuters CJA All PE 1 Qtr Lag<sup>1+++</sup></i>			3.7	21	7.0	39	11.1	37	14.9	30	12.0	35	10.4	Feb-08
<i>Russell 3000 +3% 1Q Lag</i>			4.1	17	3.5	73	12.0	33	17.0	20	13.2	25	11.4	Feb-08
<i>InvMetrics All DB Private Eq Net Median</i>			1.7		6.1		8.3		12.2		10.2		7.9	Feb-08
Abbott VI- Gross	48,418,604	0.5	6.1	--	12.7	--	16.8	--	18.5	--	16.2	--	5.3	Jul-08
Abbott VI- Net			6.1	--	12.7	--	16.8	--	18.5	--	16.2	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	11.3	Jul-08
Accel-KKR IV- Gross	13,800,842	0.1	26.1	--	37.7	--	125.7	--	66.4	--	40.8	--	13.5	Jun-13
Accel-KKR IV- Net			26.1	--	37.7	--	125.7	--	66.4	--	40.8	--	13.5	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.5	Jun-13
Accel-KKR V- Gross	10,431,714	0.1	35.9	--	37.8	--	40.3	--	--	--	--	--	21.8	Jan-17
Accel-KKR V- Net			35.9	--	37.8	--	40.3	--	--	--	--	--	21.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.5	Jan-17
Accel-KKR Growth Partners II- Gross	9,701,227	0.1	22.7	--	35.4	--	39.2	--	22.1	--	--	--	4.4	Feb-15
Accel-KKR Growth Partners II- Net			22.7	--	35.4	--	39.2	--	22.1	--	--	--	4.4	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	11.6	Feb-15
Accel-KKR Growth Partners III- Gross <sup>†</sup>	2,012,456	0.0	--	--	--	--	--	--	--	--	--	--	0.0	Jul-19
Accel-KKR Growth Partners III- Net			--	--	--	--	--	--	--	--	--	--	0.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	3.7	Jul-19
Atalaya Special Opp VI- Gross	19,014,240	0.2	1.2	--	7.2	--	11.0	--	13.4	--	--	--	8.2	Apr-16
Atalaya Special Opp VI- Net			1.2	--	7.2	--	11.0	--	13.4	--	--	--	8.2	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	16.3	Apr-16

1. See Policy Index and Benchmark History.

+++ Q3 2019 Performance for Thomson Reuters CJA All PE 1 Qtr Lag is preliminary.

\*\* Private Equity Composite includes the historical returns of Summit Credit and Athyrum Opportunities up to 4/1/17.

++ Returns are one-quarter lag.

+ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns..

\* Funded July 2019

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Davidson Kempner LT Dist Opp- Gross	25,437,862	0.3	0.3	--	4.7	--	8.4	--	--	--	--	--	11.8	Mar-18
Davidson Kempner LT Dist Opp- Net			0.3	--	4.7	--	8.4	--	--	--	--	--	11.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	13.0	Mar-18
Dyal Capital Partners II- Gross	17,307,147	0.2	2.4	--	-13.9	--	-17.9	--	-7.1	--	--	--	-9.1	Dec-14
Dyal Capital Partners II- Net			2.4	--	-13.9	--	-17.9	--	-7.1	--	--	--	-9.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.3	Dec-14
Dyal Capital Partners III- Gross	18,910,642	0.2	2.2	--	3.0	--	4.8	--	--	--	--	--	19.0	Dec-16
Dyal Capital Partners III- Net			2.2	--	3.0	--	4.8	--	--	--	--	--	19.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.3	Dec-16
Garrison Investment Group- Gross	13,656,852	0.1	0.7	--	0.8	--	0.1	--	1.4	--	-2.9	--	1.1	May-12
Garrison Investment Group- Net			0.7	--	0.8	--	0.1	--	1.4	--	-2.9	--	1.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.3	May-12
Harbourvest VIII- Gross	15,081,926	0.2	2.7	--	4.8	--	8.2	--	15.0	--	13.9	--	10.0	Dec-07
Harbourvest VIII- Net			2.7	--	4.8	--	8.2	--	15.0	--	13.9	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	10.0	Dec-07
Harbourvest Intl VI- Gross	34,399,165	0.3	2.6	--	5.2	--	9.6	--	15.5	--	12.6	--	-6.5	Mar-09
Harbourvest Intl VI- Net			2.6	--	5.2	--	9.6	--	15.5	--	12.6	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	16.3	Mar-09
H.I.G. Bayside Loan III- Gross	12,806,603	0.1	3.7	--	7.4	--	9.9	--	11.7	--	11.9	--	7.3	Jan-13
H.I.G. Bayside Loan III- Net			3.7	--	7.4	--	9.9	--	11.7	--	11.9	--	7.3	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.8	Jan-13
H.I.G. Capital V- Gross	12,740,564	0.1	0.3	--	-0.3	--	10.5	--	33.9	--	12.6	--	9.0	Jul-13
H.I.G. Capital V- Net			0.3	--	-0.3	--	10.5	--	33.9	--	12.6	--	9.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.4	Jul-13
H.I.G. Europe Capital II- Gross*	9,605,902	0.1	11.7	--	10.7	--	12.5	--	-28.6	--	--	--	--	Jan-14
H.I.G. Europe Capital II- Net			11.7	--	10.7	--	12.5	--	-28.6	--	--	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	13.3	Jan-14

\* Unable to calculate a since inception return due to system limitations when HIG Europe Capital II experienced 2 quarters of negative fund values in 2016.

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Khosla IV- Gross	16,953,928	0.2	6.3	--	27.6	--	31.3	--	29.6	--	24.2	--	19.1	Jul-11
Khosla IV- Net			6.3	--	27.6	--	31.3	--	29.6	--	24.2	--	19.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.2	Jul-11
Khosla V- Gross	23,319,368	0.2	2.3	--	8.7	--	12.7	--	13.5	--	--	--	9.0	Nov-14
Khosla V- Net			2.3	--	8.7	--	12.7	--	13.5	--	--	--	9.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	11.8	Nov-14
Khosla VI- Gross	11,348,334	0.1	1.5	--	-0.2	--	-5.4	--	--	--	--	--	-5.0	Aug-18
Khosla VI- Net			1.5	--	-0.2	--	-5.4	--	--	--	--	--	-5.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.5	Aug-18
Linden Capital- Gross	41,462,123	0.4	22.6	--	51.3	--	68.1	--	34.9	--	--	--	24.3	Jun-16
Linden Capital- Net			22.6	--	51.3	--	68.1	--	34.9	--	--	--	24.3	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.7	Jun-16
Linden Capital Partners IV- Gross	10,699,815	0.1	4.7	--	17.0	--	20.3	--	--	--	--	--	20.3	Sep-18
Linden Capital Partners IV- Net			4.7	--	17.0	--	20.3	--	--	--	--	--	20.3	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	11.1	Sep-18
Marlin Equity IV- Gross	14,347,279	0.1	-0.5	--	9.8	--	18.4	--	10.0	--	7.4	--	4.1	Nov-13
Marlin Equity IV- Net			-0.5	--	9.8	--	18.4	--	10.0	--	7.4	--	4.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.5	Nov-13
Marlin Equity V- Gross	8,770,620	0.1	0.8	--	20.6	--	18.9	--	--	--	--	--	6.1	Feb-18
Marlin Equity V- Net			0.8	--	20.6	--	18.9	--	--	--	--	--	6.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.3	Feb-18
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.3	Feb-18
Marlin Heritage- Gross	11,774,401	0.1	7.7	--	41.4	--	44.7	--	43.7	--	26.0	--	25.1	Jul-14
Marlin Heritage- Net			7.7	--	41.4	--	44.7	--	43.7	--	26.0	--	25.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.6	Jul-14
Marlin Heritage II- Gross	5,193,766	0.1	7.2	--	6.6	--	5.5	--	--	--	--	--	-6.3	Oct-17
Marlin Heritage II- Net			7.2	--	6.6	--	5.5	--	--	--	--	--	-6.3	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.5	Oct-17



Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Marlin Heritage Europe- Gross	8,509,509	0.1	5.9	--	27.3	--	34.9	--	--	--	--	--	12.4	Aug-17
Marlin Heritage Europe- Net			5.9	--	27.3	--	34.9	--	--	--	--	--	12.4	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.0	Aug-17
New Enterprise 14- Gross	29,112,077	0.3	9.2	--	11.0	--	21.5	--	19.2	--	18.6	--	14.8	May-12
New Enterprise 14- Net			9.2	--	11.0	--	21.5	--	19.2	--	18.6	--	14.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.3	May-12
New Enterprise 15- Gross	46,689,027	0.5	6.8	--	18.9	--	23.8	--	26.3	--	--	--	17.6	Apr-15
New Enterprise 15- Net			6.8	--	18.9	--	23.8	--	26.3	--	--	--	17.6	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.7	Apr-15
New Enterprise 16- Gross	20,730,041	0.2	0.9	--	5.0	--	21.0	--	--	--	--	--	4.6	May-17
New Enterprise 16- Net			0.9	--	5.0	--	21.0	--	--	--	--	--	4.6	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.9	May-17
New Enterprise 17- Gross*	1,700,000	0.0	--	--	--	--	--	--	--	--	--	--	0.0	Jul-19
New Enterprise 17- Net			--	--	--	--	--	--	--	--	--	--	0.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	3.7	Jul-19
Private Equity X- Gross	23,706,366	0.2	2.5	--	0.8	--	5.9	--	17.2	--	7.6	--	-0.9	Jun-08
Private Equity X- Net			2.5	--	0.8	--	5.9	--	17.2	--	7.6	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	11.7	Jun-08
RCP Multi-Fund Feeder- Gross	9,760,482	0.1	-2.4	--	-12.7	--	--	--	--	--	--	--	-12.7	Nov-18
RCP Multi-Fund Feeder- Net			-2.4	--	-12.7	--	--	--	--	--	--	--	-12.7	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	11.1	Nov-18
RRJ Capital Master Fund II- Gross	19,387,412	0.2	1.4	--	10.7	--	18.7	--	13.1	--	11.9	--	13.9	May-13
RRJ Capital Master Fund II- Net			1.4	--	10.7	--	18.7	--	13.1	--	11.9	--	13.9	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.1	May-13
RRJ Capital Master Fund III- Gross	20,330,392	0.2	4.6	--	19.6	--	22.3	--	15.9	--	--	--	-8.8	Dec-15
RRJ Capital Master Fund III- Net			4.6	--	19.6	--	22.3	--	15.9	--	--	--	-8.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.3	Dec-15

\* Funded July 2019.

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Spectrum Equity- Gross	32,657,415	0.3	46.9	--	61.5	--	101.9	--	62.3	--	--	--	20.8	Dec-14
Spectrum Equity- Net			46.9	--	61.5	--	101.9	--	62.3	--	--	--	20.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.3	<i>Dec-14</i>
Spectrum Equity Fund VIII- Gross	10,555,049	0.1	-2.1	--	-10.7	--	-61.4	--	--	--	--	--	-75.4	Jun-18
Spectrum Equity Fund VIII- Net			-2.1	--	-10.7	--	-61.4	--	--	--	--	--	-75.4	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	13.3	<i>Jun-18</i>
Summit EUR Growth Equity II- Gross	12,792,527	0.1	0.5	--	-3.5	--	21.9	--	--	--	--	--	120.0	Jan-18
Summit EUR Growth Equity II- Net			0.5	--	-3.5	--	21.9	--	--	--	--	--	120.0	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.5	<i>Jan-18</i>
Summit Ventures III- Gross	15,013,357	0.2	3.5	--	8.7	--	10.8	--	20.4	--	19.6	--	12.3	Jun-12
Summit Ventures III- Net			3.5	--	8.7	--	10.8	--	20.4	--	19.6	--	12.3	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.9	<i>Jun-12</i>
Summit Ventures IV- Gross	15,903,467	0.2	8.4	--	32.4	--	57.1	--	35.5	--	--	--	38.8	May-16
Summit Ventures IV- Net			8.4	--	32.4	--	57.1	--	35.5	--	--	--	38.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	16.7	<i>May-16</i>
Thoma Bravo XI- Gross	41,022,544	0.4	4.5	--	14.4	--	26.1	--	33.8	--	21.8	--	20.2	Jun-14
Thoma Bravo XI- Net			4.5	--	14.4	--	26.1	--	33.8	--	21.8	--	20.2	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.6	<i>Jun-14</i>
Thoma Bravo XII- Gross	34,909,240	0.3	3.0	--	16.0	--	17.7	--	9.8	--	--	--	4.8	May-16
Thoma Bravo XII- Net			3.0	--	16.0	--	17.7	--	9.8	--	--	--	4.8	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	16.7	<i>May-16</i>
Thoma Bravo XIII- Gross	16,059,900	0.2	-0.5	--	--	--	--	--	--	--	--	--	-2.1	Feb-19
Thoma Bravo XIII- Net			-0.5	--	--	--	--	--	--	--	--	--	-2.1	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	7.0	<i>Feb-19</i>
TPG Opp Partners III- Gross	21,126,445	0.2	-0.2	--	-0.7	--	3.0	--	11.2	--	7.8	--	-14.9	Mar-14
TPG Opp Partners III- Net			-0.2	--	-0.7	--	3.0	--	11.2	--	7.8	--	-14.9	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.5	<i>Mar-14</i>

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Trinity Ventures XI- Gross	40,142,586	0.4	7.8	--	31.1	--	42.1	--	25.7	--	21.0	--	9.4	Apr-13
Trinity Ventures XI- Net			7.8	--	31.1	--	42.1	--	25.7	--	21.0	--	9.4	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.1	Apr-13
Trinity Ventures XII- Gross	35,339,519	0.4	-0.9	--	50.9	--	57.8	--	27.8	--	--	--	20.9	Apr-16
Trinity Ventures XII- Net			-0.9	--	50.9	--	57.8	--	27.8	--	--	--	20.9	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	16.3	Apr-16
TSG7 A LP- Gross*	13,739,174	0.1	4.3	--	7.6	--	10.4	--	6.5	--	--	--	--	Mar-16
TSG7 A LP- Net			4.3	--	7.6	--	10.4	--	6.5	--	--	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.2	Mar-16
TSG7 B LP- Gross	2,115,343	0.0	-1.3	--	-0.2	--	-6.4	--	-20.5	--	--	--	-20.9	Jan-16
TSG7 B LP- Net			-1.3	--	-0.2	--	-6.4	--	-20.5	--	--	--	-20.9	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	13.2	Jan-16
TSG8 LP- Gross*	193,155	0.0	--	--	--	--	--	--	--	--	--	--	--	Jan-19
TSG8 LP- Net			--	--	--	--	--	--	--	--	--	--	--	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	7.0	Jan-19
TSSP Opportunities Partners IV- Gross	5,812,920	0.1	1.5	--	--	--	--	--	--	--	--	--	6.6	Jan-19
TSSP Opportunities Partners IV- Net			1.5	--	--	--	--	--	--	--	--	--	6.6	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	5.2	Jan-19
Waterland V- Gross	11,413,817	0.1	0.7	--	8.8	--	38.9	--	45.5	--	43.7	--	23.7	Aug-11
Waterland V- Net			0.7	--	8.8	--	38.9	--	45.5	--	43.7	--	23.7	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.5	Aug-11
Waterland VI- Gross	20,131,572	0.2	3.2	--	2.6	--	33.1	--	23.7	--	--	--	-5.5	Jul-15
Waterland VI- Net			3.2	--	2.6	--	33.1	--	23.7	--	--	--	-5.5	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	12.0	Jul-15
Wayzata Opportunities III- Gross	5,285,208	0.1	-8.4	--	-7.6	--	-8.1	--	-1.9	--	-2.6	--	-6.2	Feb-13
Wayzata Opportunities III- Net			-8.4	--	-7.6	--	-8.1	--	-1.9	--	-2.6	--	-6.2	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	15.9	Feb-13

+ Unable to calculate a since inception return due to system limitations when account experienced 1 quarter of negative fund value in 2016.

\* Contributions to date have been used to cover management fees and operating expenses.

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Public Credit- Gross</b>	<b>181,776,833</b>	<b>1.8</b>	<b>-0.3</b>	<b>--</b>	<b>5.6</b>	<b>--</b>	<b>-0.2</b>	<b>--</b>	<b>4.6</b>	<b>--</b>	<b>3.8</b>	<b>--</b>	<b>4.0</b>	<b>Nov-13</b>
<b>Public Credit- Net</b>			<b>-0.3</b>	<b>--</b>	<b>5.6</b>	<b>--</b>	<b>-0.2</b>	<b>--</b>	<b>4.6</b>	<b>--</b>	<b>3.8</b>	<b>--</b>	<b>4.0</b>	
<i>Brigade Custom<sup>1</sup></i>			1.1	--	9.0	--	4.7	--	5.4	--	4.8	--	4.7	Nov-13
Brigade Capital- Gross	181,776,833	1.8	-0.3	98	5.6	98	-0.2	99	4.6	94	3.8	97	4.0	Nov-13
Brigade Capital- Net			-0.3	98	5.6	98	-0.2	99	4.6	94	3.8	97	4.0	
<i>Brigade Custom</i>			1.1	80	9.0	79	4.7	85	5.4	83	4.8	74	4.7	Nov-13
<i>eV US High Yield Fixed Inc Gross Median</i>			1.5		11.5		6.6		6.1		5.4		5.3	Nov-13
<b>Private Credit- Gross<sup>++</sup></b>	<b>181,176,329</b>	<b>1.8</b>	<b>1.4</b>	<b>--</b>	<b>3.4</b>	<b>--</b>	<b>5.7</b>	<b>--</b>	<b>8.1</b>	<b>--</b>	<b>8.8</b>	<b>--</b>	<b>6.9</b>	<b>Oct-11</b>
<b>Private Credit- Net</b>			<b>1.4</b>	<b>--</b>	<b>3.4</b>	<b>--</b>	<b>5.7</b>	<b>--</b>	<b>8.1</b>	<b>--</b>	<b>8.8</b>	<b>--</b>	<b>6.9</b>	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	6.9	Oct-11
Athyrium Opp II- Gross	13,156,241	0.1	1.4	--	3.9	--	9.7	--	9.4	--	--	--	6.3	Jun-15
Athyrium Opp II- Net			1.4	--	3.9	--	9.7	--	9.4	--	--	--	6.3	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	6.3	Jun-15
Athyrium Opp III- Gross	13,564,616	0.1	-0.7	--	1.3	--	1.9	--	--	--	--	--	-3.2	May-17
Athyrium Opp III- Net			-0.7	--	1.3	--	1.9	--	--	--	--	--	-3.2	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	6.2	May-17
Benefit St Pr Sr Secure Opp- Gross	45,793,523	0.5	1.7	--	3.0	--	5.1	--	--	--	--	--	5.3	Jan-18
Benefit St Pr Sr Secure Opp- Net			1.7	--	3.0	--	5.1	--	--	--	--	--	5.3	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	5.8	Jan-18
OrbiMed Royalty & Credit Opp III- Gross <sup>+</sup>	1,750,000	0.0	--	--	--	--	--	--	--	--	--	--	--	Sep-19
OrbiMed Royalty & Credit Opp III- Net			--	--	--	--	--	--	--	--	--	--	--	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	--	Sep-19
Summit Credit- Gross	2,169,110	0.0	3.1	--	-8.4	--	-5.2	--	5.4	--	8.4	--	6.6	Oct-11
Summit Credit- Net			3.1	--	-8.4	--	-5.2	--	5.4	--	8.4	--	6.6	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	6.9	Oct-11

1. See Policy Index and Benchmark History.

++ Returns are one-quarter lag.

\* Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

+ Funded September 2019.

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Summit Credit II- Gross	28,608,480	0.3	2.2	--	4.3	--	6.2	--	9.8	--	--	--	6.7	Nov-14
Summit Credit II- Net			2.2	--	4.3	--	6.2	--	9.8	--	--	--	6.7	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	6.1	Nov-14
Summit Credit III- Gross*	17,185,260	0.2	0.0	--	4.5	--	--	--	--	--	--	--	4.5	Oct-18
Summit Credit III- Net			0.0	--	4.5	--	--	--	--	--	--	--	4.5	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	4.9	Oct-18
TCP Direct Lending VIII- Gross	58,949,099	0.6	1.5	--	4.6	--	6.5	--	--	--	--	--	4.2	Feb-18
TCP Direct Lending VIII- Net			1.5	--	4.6	--	6.5	--	--	--	--	--	4.2	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.5	--	7.8	--	5.1	--	6.7	--	6.1	--	5.9	Feb-18
<b>Growth Oriented Absolute Return- Gross****</b>	<b>300,810,279</b>	<b>3.0</b>	<b>-0.5</b>	<b>--</b>	<b>8.2</b>	<b>--</b>	<b>-1.1</b>	<b>--</b>	<b>5.1</b>	<b>--</b>	<b>3.1</b>	<b>--</b>	<b>4.6</b>	<b>Aug-04</b>
<b>Growth Oriented Absolute Return- Net</b>			<b>-0.5</b>	<b>--</b>	<b>8.2</b>	<b>--</b>	<b>-1.1</b>	<b>--</b>	<b>5.1</b>	<b>--</b>	<b>3.1</b>	<b>--</b>	<b>4.6</b>	
<i>HFRI FoF Composite Index + 1%</i>			-0.6	--	6.1	--	1.1	--	4.0	--	4.4	--	5.9	Aug-04
Grosvenor SCARF Growth- Gross	152,856,321	1.5	-1.0	59	4.3	75	-1.9	76	5.2	35	2.7	55	5.4	Nov-11
Grosvenor SCARF Growth- Net			-1.0	59	4.3	75	-1.9	76	5.2	35	2.7	55	5.4	
<i>HFRI FoF Composite Index + 1%</i>			-0.6	50	6.1	51	1.1	49	4.0	60	4.4	25	4.7	Nov-11
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>			-0.6		6.1		1.0		4.4		2.9		4.8	Nov-11
JANA Partners- Gross	1,957,574	0.0	-1.1	78	-1.3	91	-16.9	97	0.2	92	-1.0	96	0.8	Jul-13
JANA Partners- Net			-1.1	78	-1.3	91	-16.9	97	0.2	92	-1.0	96	0.8	
<i>HFRI FoF Composite Index + 1%</i>			-0.6	71	6.1	37	1.1	59	4.0	62	4.4	48	4.5	Jul-13
<i>eV Alt All Event Driven Median</i>			0.8		4.4		2.5		5.5		4.1		4.6	Jul-13
Lakewood- Gross	46,161,861	0.5	3.1	19	18.4	16	6.6	22	5.3	55	5.3	48	5.9	Jun-13
Lakewood- Net			3.1	19	18.4	16	6.6	22	5.3	55	5.3	48	5.9	
<i>HFRI FoF Composite Index + 1%</i>			-0.6	53	6.1	63	1.1	42	4.0	64	4.4	56	4.6	Jun-13
<i>eV Alt Fundamental - Long/Short Equity Median</i>			-0.3		8.2		-0.4		5.9		5.1		5.6	Jun-13

++ Absolute Return managers are ranked in the eVest net of fee universe.

\*\* Composite reflects net returns from Cliffwater up to March 2017.

+ Preliminary quarterly returns as of 9/30/2019 (Returns are not available at reporting period.)

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Sculptor Domestic II- Gross*	50,070,257	0.5	-2.6	88	9.6	30	3.8	42	7.2	30	4.8	45	6.9	Dec-11
Sculptor Domestic II- Net			-2.6	88	9.6	30	3.8	42	7.2	30	4.8	45	6.8	
<i>HFRI FoF Composite Index + 1%</i>			-0.6	73	6.1	52	1.1	62	4.0	54	4.4	49	4.7	Dec-11
<i>eV Alt All Multi-Strategy Median</i>			0.8		6.3		2.5		4.5		4.3		5.8	Dec-11
Third Point Offshore Fund- Gross	49,764,266	0.5	0.0	66	13.3	13	0.0	67	5.6	50	4.7	44	8.9	Apr-12
Third Point Offshore Fund- Net			0.0	66	13.3	13	0.0	67	5.6	50	4.7	44	8.9	
<i>HFRI FoF Composite Index + 1%</i>			-0.6	71	6.1	37	1.1	59	4.0	62	4.4	48	4.6	Apr-12
<i>eV Alt All Event Driven Median</i>			0.8		4.4		2.5		5.5		4.1		5.5	Apr-12
<b>Diversifying Asset Category- Gross</b>	<b>2,312,531,385</b>	<b>23.2</b>	<b>1.6</b>	<b>--</b>	<b>7.1</b>	<b>--</b>	<b>7.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.8</b>	<b>Mar-17</b>
<b>Diversifying Asset Category- Net</b>			<b>1.5</b>	<b>--</b>	<b>7.0</b>	<b>--</b>	<b>7.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.7</b>	
<i>Diversifying Custom<sup>1</sup></i>			1.4	--	7.0	--	7.5	--	2.9	--	--	--	4.0	Mar-17
<b>Core/Core Plus Fixed Income- Gross</b>	<b>944,143,505</b>	<b>9.5</b>	<b>2.5</b>	<b>--</b>	<b>9.7</b>	<b>--</b>	<b>11.0</b>	<b>--</b>	<b>3.9</b>	<b>--</b>	<b>4.2</b>	<b>--</b>	<b>3.8</b>	<b>Jun-11</b>
<b>Core/Core Plus Fixed Income- Net</b>			<b>2.4</b>	<b>--</b>	<b>9.5</b>	<b>--</b>	<b>10.8</b>	<b>--</b>	<b>3.8</b>	<b>--</b>	<b>4.0</b>	<b>--</b>	<b>3.6</b>	
<i>BBgBarc US Aggregate TR</i>			2.3	--	8.5	--	10.3	--	2.9	--	3.4	--	3.4	Jun-11
Prudential- Gross	482,465,531	4.8	2.6	10	10.3	7	11.2	17	4.7	3	5.0	3	4.9	Jul-14
Prudential- Net			2.6	14	10.1	8	11.0	23	4.5	4	4.8	3	4.7	
<i>BBgBarc US Aggregate TR</i>			2.3	69	8.5	79	10.3	65	2.9	91	3.4	87	3.4	Jul-14
<i>eV US Core Fixed Inc Gross Median</i>			2.3		9.0		10.5		3.3		3.7		3.7	Jul-14
TCW MetWest Fixed- Gross	461,677,974	4.6	2.3	57	9.0	48	10.8	29	3.7	23	3.8	44	6.0	Dec-01
TCW MetWest Fixed- Net			2.3	57	8.9	55	10.7	38	3.5	32	3.6	68	5.8	
<i>BBgBarc US Aggregate TR</i>			2.3	69	8.5	79	10.3	65	2.9	91	3.4	87	4.5	Dec-01
<i>eV US Core Fixed Inc Gross Median</i>			2.3		9.0		10.5		3.3		3.7		5.0	Dec-01

1. See Policy Index and Benchmark History.

+ Name changed from Oz Domestic II.

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>U.S. Treasury- Gross</b>	<b>467,844,066</b>	<b>4.7</b>	<b>2.5</b>	<b>--</b>	<b>7.7</b>	<b>--</b>	<b>10.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.8</b>	<b>Feb-18</b>
<b>U.S. Treasury- Net</b>			<b>2.5</b>	<b>--</b>	<b>7.7</b>	<b>--</b>	<b>10.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.7</b>	
<i>BBgBarc US Treasury TR</i>			2.4	--	7.7	--	10.5	--	2.2	--	2.9	--	6.8	Feb-18
Neuberger Berman- Gross*	467,844,066	4.7	2.5	20	7.7	21	10.5	7	3.0	1	3.5	1	6.5	Jun-88
Neuberger Berman- Net			2.5	21	7.7	22	10.4	9	3.0	1	3.5	1	6.4	
<i>BBgBarc US Govt TR</i>			2.4	24	7.7	22	10.4	11	2.3	72	2.9	57	5.9	Jun-88
<i>eV US Government Fixed Inc Gross Median</i>			1.8		6.7		9.1		2.4		3.0		--	Jun-88
<b>Global Fixed Income- Gross</b>	<b>248,728,734</b>	<b>2.5</b>	<b>-1.6</b>	<b>--</b>	<b>5.3</b>	<b>--</b>	<b>4.1</b>	<b>--</b>	<b>2.2</b>	<b>--</b>	<b>2.0</b>	<b>--</b>	<b>2.3</b>	<b>May-13</b>
<b>Global Fixed Income- Net</b>			<b>-1.7</b>	<b>--</b>	<b>5.0</b>	<b>--</b>	<b>3.7</b>	<b>--</b>	<b>1.8</b>	<b>--</b>	<b>1.7</b>	<b>--</b>	<b>1.9</b>	
<i>Brandywine Custom<sup>1</sup></i>			0.5	--	6.6	--	8.6	--	1.6	--	1.6	--	1.4	May-13
Brandywine Global- Gross	248,728,734	2.5	-1.6	87	5.3	75	4.1	73	2.2	70	2.0	72	2.3	May-13
Brandywine Global- Net			-1.7	88	5.0	77	3.7	78	1.8	78	1.7	78	1.9	
<i>Brandywine Custom</i>			0.5	69	6.6	65	8.6	33	1.6	83	1.6	79	1.4	May-13
<i>eV All Global Fixed Inc Gross Median</i>			1.1		7.9		7.1		3.8		3.2		3.1	May-13
<b>Diversifying Absolute Return- Gross**</b>	<b>651,815,081</b>	<b>6.5</b>	<b>0.8</b>	<b>--</b>	<b>3.6</b>	<b>--</b>	<b>0.9</b>	<b>--</b>	<b>1.6</b>	<b>--</b>	<b>1.0</b>	<b>--</b>	<b>2.0</b>	<b>Nov-11</b>
<b>Diversifying Absolute Return- Net</b>			<b>0.8</b>	<b>--</b>	<b>3.6</b>	<b>--</b>	<b>0.9</b>	<b>--</b>	<b>1.6</b>	<b>--</b>	<b>1.0</b>	<b>--</b>	<b>2.0</b>	
<i>HFRI FoF Conservative Index</i>			-0.1	--	4.6	--	1.2	--	3.4	--	4.1	--	4.5	Nov-11
AQR DELTA II- Gross	44,274,499	0.4	-1.1	77	-6.9	94	-11.3	92	-5.6	93	-0.5	89	0.5	May-13
AQR DELTA II- Net			-1.1	77	-6.9	94	-11.3	92	-5.6	93	-0.5	89	0.5	
<i>HFRI FoF Conservative Index</i>			-0.1	67	4.6	61	1.2	61	3.4	59	4.1	52	4.3	May-13
<i>eV Alt All Multi-Strategy Median</i>			0.8		6.3		2.5		4.5		4.3		5.0	May-13

1. See Policy Index and Benchmark History.

+ Account converted to U.S. Treasury from Core Fixed Income in February 2018. Reflects linked historical returns up to February 2018.

\* Composite reflects net returns from Cliffwater up to March 2017.

\*\*Absolute Return managers are ranked in the eVest net of fees universe.

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Davidson Kempner Instl Partners LP- Gross	33,083,100	0.3	0.8	49	--	--	--	--	--	--	--	--	1.3	Apr-19
Davidson Kempner Instl Partners LP- Net			0.8	49	--	--	--	--	--	--	--	--	1.3	
<i>HFRI FoF Conservative Index</i>			-0.1	67	4.6	61	1.2	61	3.4	59	4.1	52	0.4	Apr-19
<i>eV Alt All Multi-Strategy Median</i>			0.8		6.3		2.5		4.5		4.3		1.3	Apr-19
Elliot Associates- Gross*	57,124,019	0.6	0.9	47	5.3	44	5.4	23	6.9	33	6.1	29	7.3	Apr-12
Elliot Associates- Net			0.9	47	5.3	44	5.4	23	6.9	33	6.1	29	7.3	
<i>HFRI FoF Conservative Index</i>			-0.1	67	4.6	50	1.2	59	3.4	72	4.1	50	4.4	Apr-12
<i>eV Alt All Event Driven Median</i>			0.8		4.4		2.5		5.5		4.1		5.5	Apr-12
Graham Global Inv II- Gross	36,052,046	0.4	7.0	10	18.7	16	4.7	46	--	--	--	--	1.6	Feb-17
Graham Global Inv II- Net			7.0	10	18.7	16	4.7	46	--	--	--	--	1.6	
<i>HFRI FoF Conservative Index</i>			-0.1	67	4.6	57	1.2	64	3.4	29	4.1	37	3.1	Feb-17
<i>eV Alt All Managed Futures Median</i>			1.7		5.4		4.0		1.5		2.3		1.5	Feb-17
Grosvenor SCARF Diversifying- Gross	118,863,448	1.2	0.7	26	4.2	75	1.6	42	0.8	95	-0.4	99	1.6	Nov-11
Grosvenor SCARF Diversifying- Net			0.7	26	4.2	75	1.6	42	0.8	95	-0.4	99	1.6	
<i>HFRI FoF Conservative Index</i>			-0.1	43	4.6	73	1.2	49	3.4	68	4.1	31	4.5	Nov-11
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>			-0.6		6.1		1.0		4.4		2.9		4.8	Nov-11
Grosvenor SCARF B Diversifying- Gross	149,057,413	1.5	0.3	36	4.4	75	1.9	39	-0.6	99	-1.2	99	0.6	Jan-13
Grosvenor SCARF B Diversifying- Net			0.3	36	4.4	75	1.9	39	-0.6	99	-1.2	99	0.6	
<i>HFRI FoF Conservative Index</i>			-0.1	43	4.6	73	1.2	49	3.4	68	4.1	31	4.3	Jan-13
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>			-0.6		6.1		1.0		4.4		2.9		4.2	Jan-13
KLS Diversified Fund- Gross	40,345,158	0.4	-1.0	87	0.9	75	--	--	--	--	--	--	0.9	Dec-18
KLS Diversified Fund- Net			-1.0	87	0.9	75	--	--	--	--	--	--	0.9	
<i>HFRI FoF Conservative Index</i>			-0.1	84	4.6	31	1.2	60	3.4	48	4.1	55	4.6	Dec-18
<i>eV Alt Relative Value - Multi-Market Arbitrage Median</i>			0.6		2.5		4.8		2.9		4.8		2.5	Dec-18

+ Preliminary quarterly returns as of 9/30/2019 (Market Values estimated based on preliminary performance numbers provided by the manager.)



Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Laurion Capital- Gross	47,527,840	0.5	-2.1	93	2.6	71	3.6	63	5.3	52	6.9	42	5.7	Mar-14
Laurion Capital- Net			-2.1	93	2.6	71	3.6	63	5.3	52	6.9	42	5.7	
<i>HFRI FoF Conservative Index</i>			-0.1	76	4.6	52	1.2	72	3.4	60	4.1	73	4.2	Mar-14
<i>eV Alt Relative Value - Equity Relative Value Median</i>			1.2		4.8		5.3		5.4		5.0		4.9	Mar-14
MW Global Opportunities Fund- Gross	41,155,247	0.4	0.4	40	2.9	74	--	--	--	--	--	--	2.9	Dec-18
MW Global Opportunities Fund- Net			0.4	40	2.9	74	--	--	--	--	--	--	2.9	
<i>HFRI FoF Conservative Index</i>			-0.1	48	4.6	69	1.2	42	3.4	68	4.1	58	4.6	Dec-18
<i>eV Alt Fundamental - Long/Short Equity Median</i>			-0.3		8.2		-0.4		5.9		5.1		8.2	Dec-18
Two Sigma Risk Premia Enhanced- Gross*	45,000,000	0.5	--	--	--	--	--	--	--	--	--	--	--	Sep-19
Two Sigma Risk Premia Enhanced- Net			--	--	--	--	--	--	--	--	--	--	--	
<i>HFRI FoF Conservative Index</i>			-0.1	67	4.6	61	1.2	61	3.4	59	4.1	52	--	Sep-19
<i>eV Alt All Multi-Strategy Median</i>			0.8		6.3		2.5		4.5		4.3		--	Sep-19
Winton Diversified Futures- Gross	39,332,311	0.4	5.4	22	6.6	41	3.9	51	--	--	--	--	4.3	Dec-16
Winton Diversified Futures- Net			5.4	22	6.6	41	3.9	51	--	--	--	--	4.3	
<i>HFRI FoF Conservative Index</i>			-0.1	67	4.6	57	1.2	64	3.4	29	4.1	37	3.3	Dec-16
<i>eV Alt All Managed Futures Median</i>			1.7		5.4		4.0		1.5		2.3		1.8	Dec-16

\* Funded September 2019.

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Real Return (with SSgA RA Overlay Proxy)- Gross	1,623,004,894	16.3	1.2	--	6.3	--	7.5	--	--	--	--	--	8.7	Mar-17
Real Return (with SSgA RA Overlay Proxy)- Net			1.1	--	6.0	--	7.2	--	--	--	--	--	8.5	
<i>Real Return Custom<sup>1</sup></i>			0.8	--	3.2	--	3.4	--	6.1	--	--	--	6.0	Mar-17
Real Return Asset Category- Gross	1,623,004,894	16.3	1.2	--	5.8	--	8.0	--	--	--	--	--	10.0	Mar-17
Real Return Asset Category- Net			1.1	--	5.6	--	7.8	--	--	--	--	--	9.7	
<i>Real Return Custom</i>			0.8	--	3.2	--	3.4	--	6.1	--	--	--	6.0	Mar-17
Real Estate- Gross	901,278,219	9.0	1.7	9	5.7	7	7.4	8	9.8	4	10.3	9	11.2	Jun-11
Real Estate- Net			1.5	27	5.4	9	6.9	9	9.4	4	9.5	23	10.4	
<i>Real Estate Custom<sup>1</sup></i>			1.3	40	4.7	19	5.9	27	7.2	37	8.8	42	9.8	Jun-11
<i>InvMetrics All DB Real Estate Priv Net Median</i>			1.1		3.6		5.3		6.7		8.6		9.4	Jun-11
Core RE -Separate- Gross	3,023,621	0.0	0.0	--	18.5	--	24.2	--	14.2	--	12.0	--	7.3	Sep-08
Core RE -Separate- Net			-29.5	--	-16.8	--	-14.6	--	0.3	--	3.0	--	2.9	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	5.6	Sep-08
BlackRock RE Leveraged- Gross <sup>++</sup>	3,023,621	0.0	0.0	--	19.1	--	26.9	--	14.1	--	13.8	--	10.4	Dec-98
BlackRock RE Leveraged- Net			-29.5	--	-16.4	--	-12.0	--	0.5	--	4.8	--	--	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	8.4	Dec-98
Core RE -Limited Partnership- Gross	699,318,920	7.0	1.6	--	5.7	--	7.7	--	10.1	--	11.0	--	5.2	Sep-08
Core RE -Limited Partnership- Net			1.5	--	5.4	--	7.4	--	9.8	--	10.6	--	4.6	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	5.6	Sep-08
Brookfield Premier RE Partners- Gross <sup>+</sup>	104,877,333	1.1	2.1	--	6.1	--	8.1	--	--	--	--	--	8.1	Sep-18
Brookfield Premier RE Partners- Net			2.1	--	6.1	--	8.1	--	--	--	--	--	8.1	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	5.6	Sep-18
Clarion Lion Properties- Gross	156,533,524	1.6	1.7	--	5.2	--	7.3	--	--	--	--	--	7.3	Sep-18
Clarion Lion Properties- Net			1.5	--	4.5	--	6.4	--	--	--	--	--	6.4	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	5.6	Sep-18

1. See Policy Index and Benchmark History.

+ Preliminary quarterly returns as of 9/30/2019 (Market Values estimated based on preliminary performance numbers provided by the manager.)

++ Preliminary quarterly returns as of 9/30/2109. (Returns are not available at reporting period. Net return reflects management and incentive fees paid during the quarter.)

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Jamestown Premier Property- Gross	18,501,799	0.2	0.6	--	2.5	--	3.7	--	7.9	--	10.0	--	10.1	Dec-13
Jamestown Premier Property- Net			0.6	--	2.5	--	3.7	--	7.9	--	10.0	--	10.1	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	9.7	<i>Dec-13</i>
Metlife Core Property- Gross	62,507,578	0.6	1.2	--	6.3	--	7.4	--	8.5	--	10.2	--	11.3	Dec-13
Metlife Core Property- Net			1.1	--	5.9	--	6.9	--	8.0	--	9.7	--	10.8	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	9.7	<i>Dec-13</i>
Prime Property- Gross	63,023,182	0.6	1.7	--	5.5	--	7.9	--	9.1	--	11.1	--	11.6	Sep-13
Prime Property- Net			1.4	--	4.6	--	6.6	--	7.9	--	9.9	--	10.4	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	9.8	<i>Sep-13</i>
Principal US Property- Gross	47,944,634	0.5	1.6	--	4.7	--	6.0	--	7.8	--	--	--	8.4	Oct-15
Principal US Property- Net			1.6	--	4.7	--	6.0	--	7.8	--	--	--	8.4	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	8.2	<i>Oct-15</i>
Prologis Targeted Euro Logistics- Gross	53,925,184	0.5	-0.2	--	4.4	--	7.0	--	12.8	--	--	--	11.4	Oct-15
Prologis Targeted Euro Logistics- Net			-0.2	--	4.4	--	7.0	--	12.8	--	--	--	11.4	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	8.2	<i>Oct-15</i>
Prologis Targeted US Logistics- Gross	76,413,441	0.8	4.7	--	12.4	--	15.8	--	17.9	--	--	--	16.9	Jul-15
Prologis Targeted US Logistics- Net			4.7	--	12.4	--	15.8	--	17.9	--	--	--	16.9	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	8.6	<i>Jul-15</i>
Townsend Real Estate- Gross <sup>+</sup>	115,592,246	1.2	0.0	--	3.4	--	5.0	--	8.4	--	--	--	8.8	Mar-16
Townsend Real Estate- Net			0.0	--	3.4	--	5.0	--	8.4	--	--	--	8.8	
<i>NFI-ODCE</i>			1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	7.5	<i>Mar-16</i>

<sup>+</sup> Preliminary quarterly returns as of 9/30/2019 (Returns are not available at reporting period.)

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Non-Core RE -Opportunistic- Gross<sup>++</sup></b>	<b>147,831,454</b>	<b>1.5</b>	<b>2.5</b>	<b>--</b>	<b>5.1</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>8.8</b>	<b>--</b>	<b>18.2</b>	<b>--</b>	<b>21.4</b>	<b>Feb-14</b>
<b>Non-Core RE -Opportunistic- Net</b>			<b>2.5</b>	<b>--</b>	<b>5.1</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>8.7</b>	<b>--</b>	<b>17.5</b>	<b>--</b>	<b>20.6</b>	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	10.4	Feb-14
Carlyle China Realty- Gross	7,423,508	0.1	1.1	--	7.4	--	2.1	--	--	--	--	--	18.6	Jun-17
Carlyle China Realty- Net			1.1	--	7.4	--	2.1	--	--	--	--	--	18.6	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	7.6	Jun-17
Carlyle China Rome Logistics- Gross	32,741,163	0.3	0.6	--	8.1	--	3.3	--	--	--	--	--	-5.8	Jun-17
Carlyle China Rome Logistics- Net			0.6	--	8.1	--	3.3	--	--	--	--	--	-5.8	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	7.6	Jun-17
CIM Opportunity VIII- Gross	40,426,992	0.4	0.7	--	6.8	--	7.0	--	7.0	--	--	--	7.1	Feb-15
CIM Opportunity VIII- Net			0.7	--	6.8	--	7.0	--	6.9	--	--	--	5.8	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	10.0	Feb-15
Kohlberg Kravis Roberts- Gross	7,064,235	0.1	1.6	--	3.0	--	8.1	--	-11.7	--	5.4	--	9.5	Feb-14
Kohlberg Kravis Roberts- Net			1.6	--	3.0	--	8.1	--	-11.7	--	5.3	--	9.3	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	10.4	Feb-14
NREP Nordic Strat FCP-FIS- Gross	7,328,944	0.1	4.6	--	-15.6	--	-18.3	--	14.2	--	--	--	17.2	Dec-14
NREP Nordic Strat FCP-FIS- Net			4.6	--	-15.6	--	-18.3	--	14.2	--	--	--	17.2	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	9.7	Dec-14
NREP Nordic Strat II- Gross	31,706,589	0.3	6.4	--	9.9	--	9.5	--	17.0	--	--	--	15.6	Jun-16
NREP Nordic Strat II- Net			6.4	--	9.9	--	9.5	--	17.0	--	--	--	15.6	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	7.8	Jun-16
NREP Nordic Strat III- Gross	7,509,164	0.1	2.1	--	-23.9	--	-17.0	--	--	--	--	--	-14.7	Jul-18
NREP Nordic Strat III- Net			2.1	--	-23.9	--	-17.0	--	--	--	--	--	-14.7	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	7.6	Jul-18
Sculptor Real Estate Fund III- Gross <sup>+</sup>	13,630,859	0.1	3.5	--	8.9	--	12.3	--	20.4	--	6.2	--	6.2	Sep-14
Sculptor Real Estate Fund III- Net			3.5	--	8.9	--	12.3	--	19.9	--	2.3	--	2.3	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	9.8	--	9.8	Sep-14

<sup>++</sup> Returns are one-quarter lag.

<sup>+</sup> Name changed from Oz Real Estate Fund III.

\* Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Non-Core RE -Value Added- Gross<sup>++</sup></b>	<b>51,104,223</b>	<b>0.5</b>	<b>1.0</b>	<b>--</b>	<b>1.2</b>	<b>--</b>	<b>2.7</b>	<b>--</b>	<b>7.1</b>	<b>--</b>	<b>8.1</b>	<b>--</b>	<b>-2.6</b>	<b>Sep-08</b>
<b>Non-Core RE -Value Added- Net</b>			<b>1.0</b>	<b>--</b>	<b>1.2</b>	<b>--</b>	<b>2.7</b>	<b>--</b>	<b>6.9</b>	<b>--</b>	<b>7.5</b>	<b>--</b>	<b>-3.8</b>	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	7.9	Sep-08
Asana Partners Fund II- Gross*	534,459	0.0	--	--	--	--	--	--	--	--	--	--	--	Apr-19
Asana Partners Fund II- Net			--	--	--	--	--	--	--	--	--	--	--	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	2.8	Apr-19
ECE Euro Prime Shopping II- Gross	23,528,714	0.2	2.3	--	-0.5	--	1.7	--	13.1	--	--	--	14.4	Jul-15
ECE Euro Prime Shopping II- Net			2.3	--	-0.5	--	1.7	--	12.6	--	--	--	13.2	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	9.4	Jul-15
European RE Debt II- Gross	8,609,246	0.1	1.3	--	3.9	--	4.9	--	16.2	--	9.2	--	5.6	Nov-13
European RE Debt II- Net			1.3	--	3.9	--	4.9	--	16.2	--	9.2	--	5.6	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	10.8	Nov-13
Hammes II- Gross	16,805,664	0.2	1.9	--	7.5	--	16.7	--	-2.3	--	--	--	4.7	Jul-15
Hammes II- Net			1.9	--	7.5	--	16.7	--	-2.6	--	--	--	2.3	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	9.4	Jul-15
Hammes III- Gross	1,453,762	0.0	-5.8	--	-49.1	--	--	--	--	--	--	--	-49.1	Oct-18
Hammes III- Net			-5.8	--	-49.1	--	--	--	--	--	--	--	-49.1	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	6.9	Oct-18
UBS RE- Gross	172,378	0.0	4.3	--	-0.2	--	-19.8	--	-5.4	--	1.3	--	-1.4	Sep-06
UBS RE- Net			4.3	--	-0.2	--	-19.8	--	-5.4	--	1.1	--	-2.7	
<i>NFI-ODCE net +1% 1Q Lag</i>			1.4	--	6.6	--	6.5	--	7.6	--	10.1	--	--	Sep-06

<sup>++</sup> Returns are one-quarter lag.

<sup>+</sup> Contributions to date have been used to cover management fees and operating expenses.

\* Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns

# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Real Assets- Gross <sup>++</sup>	541,864,772	5.4	0.9	--	6.4	--	10.9	--	15.6	--	13.4	--	5.7	Jan-13
Private Real Assets- Net			0.9	--	6.4	--	10.9	--	15.6	--	13.4	--	5.7	
<i>Private Real Assets Custom<sup>1</sup></i>			0.3	--	1.1	--	3.1	--	6.8	--	6.1	--	6.3	Jan-13
<i>CPI-U Headline +5%</i>			1.4	--	5.1	--	6.7	--	7.1	--	6.3	--	6.5	Jan-13
ACM II- Gross	16,648,371	0.2	-3.9	--	-2.9	--	-4.1	--	-5.9	--	--	--	-5.9	Sep-16
ACM II- Net			-3.9	--	-2.9	--	-4.1	--	-5.9	--	--	--	-5.9	
<i>NCREIF Farmland 1 Qtr Lag</i>			0.7	--	4.3	--	5.7	--	6.3	--	8.0	--	6.3	Sep-16
ArcLight Energy VI- Gross	37,660,611	0.4	-1.8	--	-0.6	--	9.8	--	13.1	--	--	--	8.8	Aug-15
ArcLight Energy VI- Net			-1.8	--	-0.6	--	9.8	--	13.1	--	--	--	8.8	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	12.9	Aug-15
Atalaya SMA- Gross	17,143,921	0.2	1.5	--	9.5	--	12.3	--	10.3	--	--	--	9.4	May-15
Atalaya SMA- Net			1.5	--	9.5	--	12.3	--	10.3	--	--	--	9.4	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	11.6	May-15
Brookfield Infra III- Gross	30,567,524	0.3	4.3	--	10.8	--	9.4	--	8.7	--	--	--	12.2	May-16
Brookfield Infra III- Net			4.3	--	10.8	--	9.4	--	8.7	--	--	--	12.2	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	12.6	May-16
Brookfield Infra IV- Gross <sup>+</sup>	4,888,333	0.0	--	--	--	--	--	--	--	--	--	--	--	Sep-19
Brookfield Infra IV- Net			--	--	--	--	--	--	--	--	--	--	--	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	--	Sep-19
Carlyle Power II- Gross	19,589,630	0.2	1.7	--	6.3	--	10.3	--	12.2	--	--	--	0.3	Oct-15
Carlyle Power II- Net			1.7	--	6.3	--	10.3	--	12.2	--	--	--	0.3	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	11.9	Oct-15
EnCap Energy IX- Gross	20,858,696	0.2	-4.2	--	-9.1	--	-0.8	--	9.1	--	4.3	--	-0.4	Jan-13
EnCap Energy IX- Net			-4.2	--	-9.1	--	-0.8	--	9.1	--	4.3	--	-0.4	
<i>Cambridge Associates Private Energy 1 Qtr Lag</i>			-2.6	--	-7.6	--	-5.6	--	6.0	--	-3.0	--	1.1	Jan-13

1. See Policy and Benchmark History.

<sup>++</sup> Returns are one-quarter lag.

\* Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

+ Funded September 2019.

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
EnCap Energy X- Gross	35,588,118	0.4	-1.1	--	7.7	--	9.0	--	15.3	--	--	--	-0.4	Apr-15
EnCap Energy X- Net			-1.1	--	7.7	--	9.0	--	15.3	--	--	--	-0.4	
<i>Cambridge Associates Private Energy 1 Qtr Lag</i>			-2.6	--	-7.6	--	-5.6	--	6.0	--	-3.0	--	-0.1	Apr-15
EnCap Flatrock Midstream III- Gross	16,705,977	0.2	-0.6	--	6.4	--	6.5	--	13.8	--	8.5	--	8.2	Jul-14
EnCap Flatrock Midstream III- Net			-0.6	--	6.4	--	6.5	--	13.8	--	8.5	--	8.2	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	10.5	Jul-14
EnCap Flatrock Midstream IV- Gross	6,813,442	0.1	0.1	--	13.0	--	11.8	--	--	--	--	--	-4.9	Feb-18
EnCap Flatrock Midstream IV- Net			0.1	--	13.0	--	11.8	--	--	--	--	--	-4.9	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	10.9	Feb-18
EQT Infrastructure Fund IV- Gross	3,831,922	0.0	-20.3	--	--	--	--	--	--	--	--	--	-20.3	Jun-19
EQT Infrastructure Fund IV- Net			-20.3	--	--	--	--	--	--	--	--	--	-20.3	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	2.3	Jun-19
First Reserve- Gross	27,414,872	0.3	2.4	--	6.3	--	10.5	--	31.8	--	--	--	-0.9	Dec-14
First Reserve- Net			2.4	--	6.3	--	10.5	--	31.8	--	--	--	-0.9	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	10.9	Dec-14
IFM Global Infrastructure US LP- Gross	103,610,459	1.0	3.8	--	9.7	--	16.4	--	--	--	--	--	14.1	Apr-17
IFM Global Infrastructure US LP- Net			3.8	--	9.7	--	16.4	--	--	--	--	--	14.1	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	13.4	Apr-17
ISQ Global Infrastructure Fund II- Gross	17,776,755	0.2	1.9	--	8.9	--	--	--	--	--	--	--	8.9	Oct-18
ISQ Global Infrastructure Fund II- Net			1.9	--	8.9	--	--	--	--	--	--	--	8.9	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	9.6	Oct-18
Meridiam Infra N America III- Gross	677,859	0.0	-19.6	--	-73.7	--	-88.7	--	--	--	--	--	-91.0	Sep-17
Meridiam Infra N America III- Net			-19.6	--	-73.7	--	-88.7	--	--	--	--	--	-91.0	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	11.0	Sep-17
Pantheon Ventures- Gross	90,479,231	0.9	1.9	--	8.5	--	11.4	--	16.5	--	27.1	--	26.1	Jul-14
Pantheon Ventures- Net			1.9	--	8.5	--	11.4	--	16.5	--	27.1	--	26.1	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	10.5	Jul-14

Total Fund  
Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Quantum Energy VI- Gross	31,756,854	0.3	-0.2	--	6.6	--	25.3	--	38.3	--	--	--	23.9	Nov-14
Quantum Energy VI- Net			-0.2	--	6.6	--	25.3	--	38.3	--	--	--	23.9	
<i>Cambridge Associates Private Energy 1 Qtr Lag</i>			-2.6	--	-7.6	--	-5.6	--	6.0	--	-3.0	--	-3.1	Nov-14
Quantum Energy VII- Gross	18,554,484	0.2	-1.1	--	4.6	--	5.1	--	--	--	--	--	-1.2	Aug-17
Quantum Energy VII- Net			-1.1	--	4.6	--	5.1	--	--	--	--	--	-1.2	
<i>Cambridge Associates Private Energy 1 Qtr Lag</i>			-2.6	--	-7.6	--	-5.6	--	6.0	--	-3.0	--	1.7	Aug-17
Tailwater Energy Fund III- Gross	23,204,835	0.2	-0.5	--	11.0	--	1.2	--	--	--	--	--	1.2	Sep-18
Tailwater Energy Fund III- Net			-0.5	--	11.0	--	1.2	--	--	--	--	--	1.2	
<i>Cambridge Associates Private Energy 1 Qtr Lag</i>			-2.6	--	-7.6	--	-5.6	--	6.0	--	-3.0	--	-5.6	Sep-18
Wastewater Opportunity- Gross	18,092,878	0.2	-0.8	--	11.2	--	9.9	--	-5.3	--	--	--	-23.9	Dec-15
Wastewater Opportunity- Net			-0.8	--	11.2	--	9.9	--	-5.3	--	--	--	-23.9	
<i>Cambridge Associates Private Infrastructure 1 Qtr Lag</i>			2.3	--	7.3	--	9.6	--	11.5	--	10.0	--	12.0	Dec-15
<b>Liquid Real Return- Gross</b>	<b>179,861,903</b>	<b>1.8</b>	<b>0.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.3</b>	<b>Jun-19</b>
<b>Liquid Real Return- Net</b>			<b>0.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.2</b>	
<i>SSgA Real Asset<sup>1</sup></i>			<i>0.2</i>	<i>--</i>	<i>10.9</i>	<i>--</i>	<i>6.0</i>	<i>--</i>	<i>3.9</i>	<i>--</i>	<i>1.5</i>	<i>--</i>	<i>0.2</i>	<i>Jun-19</i>
SSgA Passive Real Return Proxy- Gross*	179,861,903	1.8	0.3	--	11.0	--	6.2	--	4.0	--	1.7	--	1.6	Jan-08
SSgA Passive Real Return Proxy- Net			0.2	--	10.6	--	5.8	--	3.8	--	1.5	--	1.4	
<i>SSgA Real Asset</i>			<i>0.2</i>	<i>--</i>	<i>10.9</i>	<i>--</i>	<i>6.0</i>	<i>--</i>	<i>3.9</i>	<i>--</i>	<i>1.5</i>	<i>--</i>	<i>--</i>	<i>Jan-08</i>

1. See Policy and Benchmark History

\* Name changed from SSgA Real Asset Overlay Proxy.



# Total Fund Performance Summary

Period Ending: September 30, 2019

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Opportunities Asset Category- Gross**</b>	7,087,829	0.1	5.0	--	6.3	--	8.5	--	5.5	--	7.0	--	15.2	Oct-07
<b>Opportunities Asset Category- Net</b>			5.0	--	6.3	--	8.5	--	5.5	--	7.0	--	15.2	
<i>Policy Index</i>			0.8	--	10.3	--	4.5	--	7.8	--	6.4	--	7.7	Oct-07
Atalaya Special Opportunities V- Gross	7,087,829	0.1	5.0	--	6.3	--	8.5	--	5.2	--	7.1	--	5.5	Jul-13
Atalaya Special Opportunities V- Net			5.0	--	6.3	--	8.5	--	5.2	--	7.1	--	5.5	
<i>Thomson Reuters CJA All PE 1 Qtr Lag</i>			3.7	--	7.0	--	11.1	--	14.9	--	12.0	--	14.4	Jul-13
<b>Cash - Gross</b>	337,021,068	3.4	0.5	--	2.0	--	2.7	--	2.2	--	1.9	--	3.2	Jun-92
<b>Cash - Net</b>			0.5	--	2.0	--	2.7	--	2.2	--	1.9	--	--	
<i>91 Day T-Bills</i>			0.5	--	1.7	--	2.3	--	1.5	--	1.0	--	2.4	Jun-92
Cash Account- Gross	241,841,484	2.4	0.6	--	2.2	--	2.8	--	2.2	--	1.9	--	3.2	Jun-92
Cash Account- Net			0.6	--	2.2	--	2.8	--	2.2	--	1.9	--	--	
<i>91 Day T-Bills</i>			0.5	--	1.7	--	2.3	--	1.5	--	1.0	--	2.4	Jun-92
Dedicated Cash Allocation- Gross*	95,179,584	1.0	0.2	--	--	--	--	--	--	--	--	--	0.2	Jun-19
Dedicated Cash Allocation- Net			0.2	--	--	--	--	--	--	--	--	--	0.2	
<i>ICE LIBOR Spot/Next Overnight USD</i>			0.4	--	1.2	--	1.5	--	1.1	--	0.7	--	0.4	Jun-19

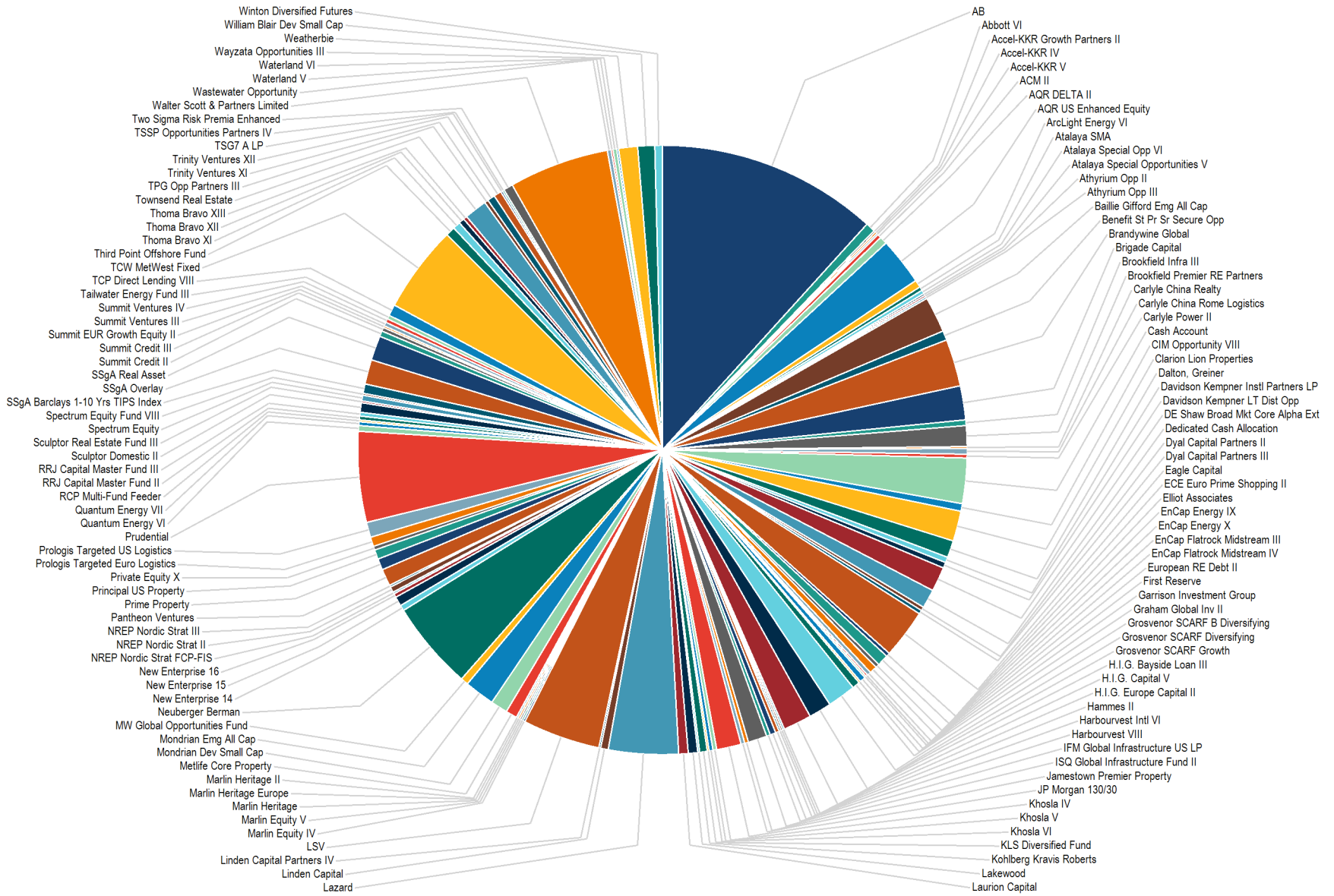
\* Composite reflects net returns from Cliffwater up to March 2017.

\*\* Returns are one-quarter lag.

+ Funded July 2019.

# Total Fund Manager Allocation Analysis

Period Ending: September 30, 2019



Total Fund  
 Manager Allocation Analysis

Period Ending: September 30, 2019

	Current	%
AB	\$1,171,514,961	11.7%
AQR US Enhanced Equity	\$247,624,794	2.5%
JP Morgan 130/30	\$134,255,889	1.3%
DE Shaw Broad Mkt Core Alpha Ext	\$128,976,322	1.3%
Brown Advisory	\$0	0.0%
Eagle Capital	\$259,074,173	2.6%
Huber Capital	\$25,274	0.0%
UBS	\$0	0.0%
Weatherbie	\$100,292,180	1.0%
Dalton, Greiner	\$92,748,965	0.9%
WEDGE Capital	\$1,223	0.0%
CenterSquare	\$0	0.0%
Lazard	\$373,551,085	3.7%
Walter Scott & Partners Limited	\$524,549,805	5.3%
LSV	\$413,200,986	4.1%
Mondrian Dev Small Cap	\$93,574,443	0.9%
William Blair Dev Small Cap	\$85,672,218	0.9%
Baillie Gifford Emg All Cap	\$189,663,151	1.9%
Mondrian Emg All Cap	\$161,841,567	1.6%
CBRE Clarion	\$20,876	0.0%
Abbott VI	\$48,418,604	0.5%
Accel-KKR IV	\$13,800,842	0.1%
Accel-KKR V	\$10,431,714	0.1%
Accel-KKR Growth Partners II	\$9,701,227	0.1%
Accel-KKR Growth Partners III	\$2,012,456	0.0%
Atalaya Special Opp VI	\$19,014,240	0.2%
Davidson Kempner LT Dist Opp	\$25,437,862	0.3%
Dyal Capital Partners II	\$17,307,147	0.2%

Total Fund  
 Manager Allocation Analysis

Period Ending: September 30, 2019

	Current	%
Dyal Capital Partners III	\$18,910,642	0.2%
Garrison Investment Group	\$13,656,852	0.1%
Harbourvest VIII	\$15,081,926	0.2%
Harbourvest Intl VI	\$34,399,165	0.3%
H.I.G. Bayside Loan III	\$12,806,603	0.1%
H.I.G. Capital V	\$12,740,564	0.1%
H.I.G. Europe Capital II	\$9,605,902	0.1%
Khosla IV	\$16,953,928	0.2%
Khosla V	\$23,319,368	0.2%
Khosla VI	\$11,348,334	0.1%
Linden Capital	\$41,462,123	0.4%
Linden Capital Partners IV	\$10,699,815	0.1%
Marlin Equity IV	\$14,347,279	0.1%
Marlin Equity V	\$8,770,620	0.1%
Marlin Heritage	\$11,774,401	0.1%
Marlin Heritage II	\$5,193,766	0.1%
Marlin Heritage Europe	\$8,509,509	0.1%
New Enterprise 14	\$29,112,077	0.3%
New Enterprise 15	\$46,689,027	0.5%
New Enterprise 16	\$20,730,041	0.2%
New Enterprise 17	\$1,700,000	0.0%
Private Equity X	\$23,706,366	0.2%
RCP Multi-Fund Feeder	\$9,760,482	0.1%
RRJ Capital Master Fund II	\$19,387,412	0.2%
RRJ Capital Master Fund III	\$20,330,392	0.2%
Spectrum Equity	\$32,657,415	0.3%
Spectrum Equity Fund VIII	\$10,555,049	0.1%
Summit EUR Growth Equity II	\$12,792,527	0.1%

Total Fund  
 Manager Allocation Analysis

Period Ending: September 30, 2019

	Current	%
Summit Ventures III	\$15,013,357	0.2%
Summit Ventures IV	\$15,903,467	0.2%
Thoma Bravo XI	\$41,022,544	0.4%
Thoma Bravo XII	\$34,909,240	0.3%
Thoma Bravo XIII	\$16,059,900	0.2%
TPG Opp Partners III	\$21,126,445	0.2%
Trinity Ventures XI	\$40,142,586	0.4%
Trinity Ventures XII	\$35,339,519	0.4%
TSG7 A LP	\$13,739,174	0.1%
TSG7 B LP	\$2,115,343	0.0%
TSG8 LP	\$193,155	0.0%
TSSP Opportunities Partners IV	\$5,812,920	0.1%
Waterland V	\$11,413,817	0.1%
Waterland VI	\$20,131,572	0.2%
Wayzata Opportunities III	\$5,285,208	0.1%
Brigade Capital	\$181,776,833	1.8%
Athyrium Opp II	\$13,156,241	0.1%
Athyrium Opp III	\$13,564,616	0.1%
Benefit St Pr Sr Secure Opp	\$45,793,523	0.5%
OrbiMed Royalty & Credit Opp III	\$1,750,000	0.0%
Summit Credit	\$2,169,110	0.0%
Summit Credit II	\$28,608,480	0.3%
Summit Credit III	\$17,185,260	0.2%
TCP Direct Lending VIII	\$58,949,099	0.6%
Grosvenor SCARF Growth	\$152,856,321	1.5%
JANA Partners	\$1,957,574	0.0%
Lakewood	\$46,161,861	0.5%
Sculptor Domestic II	\$50,070,257	0.5%

Total Fund  
 Manager Allocation Analysis

Period Ending: September 30, 2019

	Current	%
Third Point Offshore Fund	\$49,764,266	0.5%
Prudential	\$482,465,531	4.8%
TCW MetWest Fixed	\$461,677,974	4.6%
Neuberger Berman	\$467,844,066	4.7%
Brandywine Global	\$248,728,734	2.5%
AQR DELTA II	\$44,274,499	0.4%
Davidson Kempner Instl Partners LP	\$33,083,100	0.3%
Elliot Associates	\$57,124,019	0.6%
Graham Global Inv II	\$36,052,046	0.4%
Grosvenor SCARF Diversifying	\$118,863,448	1.2%
Grosvenor SCARF B Diversifying	\$149,057,413	1.5%
KLS Diversified Fund	\$40,345,158	0.4%
Laurion Capital	\$47,527,840	0.5%
MW Global Opportunities Fund	\$41,155,247	0.4%
Two Sigma Risk Premia Enhanced	\$45,000,000	0.5%
Winton Diversified Futures	\$39,332,311	0.4%
BlackRock RE Leveraged	\$3,023,621	0.0%
Brookfield Premier RE Partners	\$104,877,333	1.1%
Clarion Lion Properties	\$156,533,524	1.6%
Jamestown Premier Property	\$18,501,799	0.2%
Metlife Core Property	\$62,507,578	0.6%
Prime Property	\$63,023,182	0.6%
Principal US Property	\$47,944,634	0.5%
Prologis Targeted Euro Logistics	\$53,925,184	0.5%
Prologis Targeted US Logistics	\$76,413,441	0.8%
Townsend Real Estate	\$115,592,246	1.2%
Carlyle China Realty	\$7,423,508	0.1%
Carlyle China Rome Logistics	\$32,741,163	0.3%

Total Fund  
 Manager Allocation Analysis

Period Ending: September 30, 2019

	Current	%
CIM Opportunity VIII	\$40,426,992	0.4%
Kohlberg Kravis Roberts	\$7,064,235	0.1%
NREP Nordic Strat FCP-FIS	\$7,328,944	0.1%
NREP Nordic Strat II	\$31,706,589	0.3%
NREP Nordic Strat III	\$7,509,164	0.1%
Sculptor Real Estate Fund III	\$13,630,859	0.1%
Asana Partners Fund II	\$534,459	0.0%
ECE Euro Prime Shopping II	\$23,528,714	0.2%
European RE Debt II	\$8,609,246	0.1%
Hammes II	\$16,805,664	0.2%
Hammes III	\$1,453,762	0.0%
UBS RE	\$172,378	0.0%
ACM II	\$16,648,371	0.2%
ArcLight Energy VI	\$37,660,611	0.4%
Atalaya SMA	\$17,143,921	0.2%
Brookfield Infra III	\$30,567,524	0.3%
Brookfield Infra IV	\$4,888,333	0.0%
Carlyle Power II	\$19,589,630	0.2%
EnCap Energy IX	\$20,858,696	0.2%
EnCap Energy X	\$35,588,118	0.4%
EnCap Flatrock Midstream III	\$16,705,977	0.2%
EnCap Flatrock Midstream IV	\$6,813,442	0.1%
EQT Infrastructure Fund IV	\$3,831,922	0.0%
First Reserve	\$27,414,872	0.3%
IFM Global Infrastructure US LP	\$103,610,459	1.0%
ISQ Global Infrastructure Fund II	\$17,776,755	0.2%

Total Fund  
 Manager Allocation Analysis

Period Ending: September 30, 2019

	Current	%
Meridiam Infra N America III	\$677,859	0.0%
Pantheon Ventures	\$90,479,231	0.9%
Quantum Energy VI	\$31,756,854	0.3%
Quantum Energy VII	\$18,554,484	0.2%
Tailwater Energy Fund III	\$23,204,835	0.2%
Wastewater Opportunity	\$18,092,878	0.2%
SSgA Barclays 1-10 Yrs TIPS Index	\$53,916,268	0.5%
SSgA Real Asset	\$125,945,635	1.3%
Atalaya Special Opportunities V	\$7,087,829	0.1%
Cash Account	\$241,841,484	2.4%
Dedicated Cash Allocation	\$95,179,584	1.0%
Transition Account	\$552	0.0%
Heitman Adv JMB V	\$8,390	0.0%
SSgA Overlay	\$134,627,860	1.3%
<b>Total</b>	<b>\$9,975,967,256</b>	<b>100.0%</b>



**Statistics Summary**

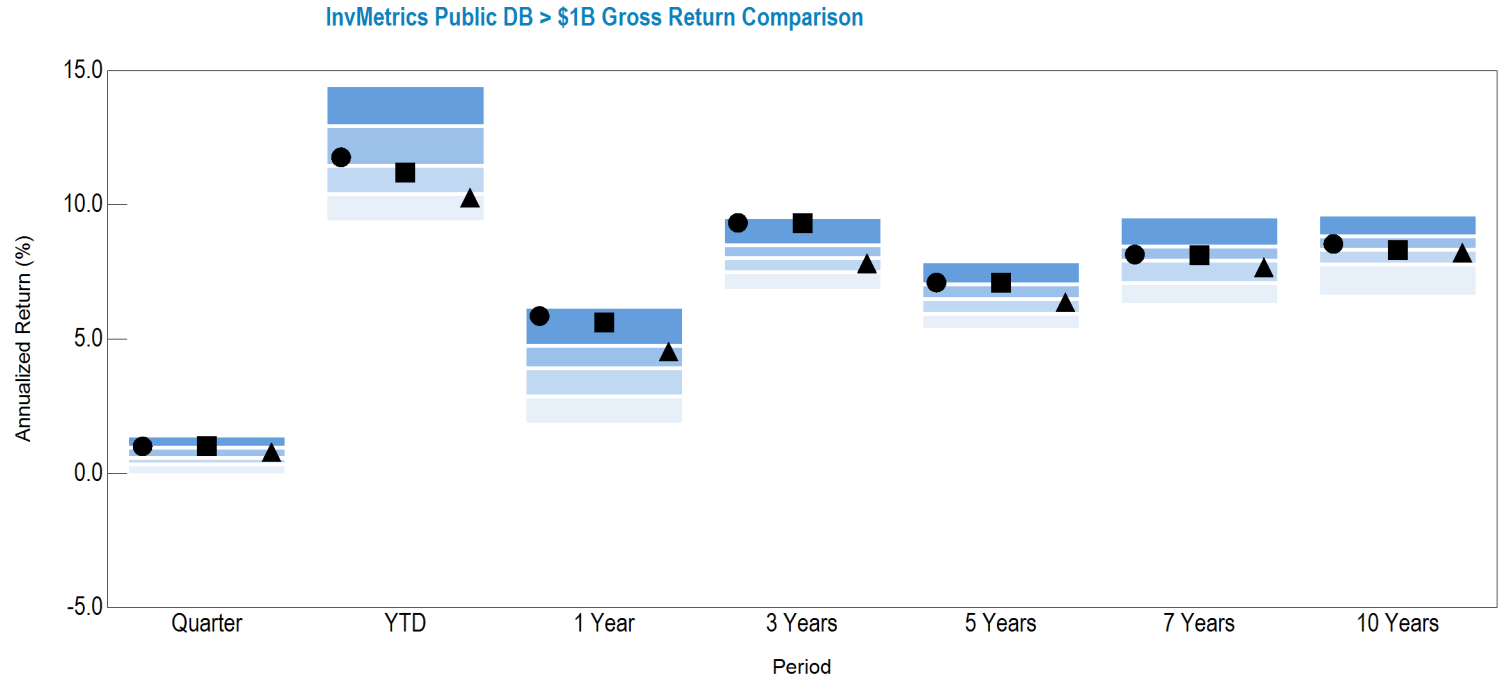
**3 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	9.3%	7	5.6%	28	1.4	9	1.0	13	1.6%	78
Policy Index	7.8%	60	5.1%	14	1.2	20	--	--	0.0%	1
Total Fund ex Overlay	9.3%	7	5.5%	25	1.4	8	0.9	13	1.6%	79
Policy Index	7.8%	60	5.1%	14	1.2	20	--	--	0.0%	1

**Statistics Summary**

**5 Years**

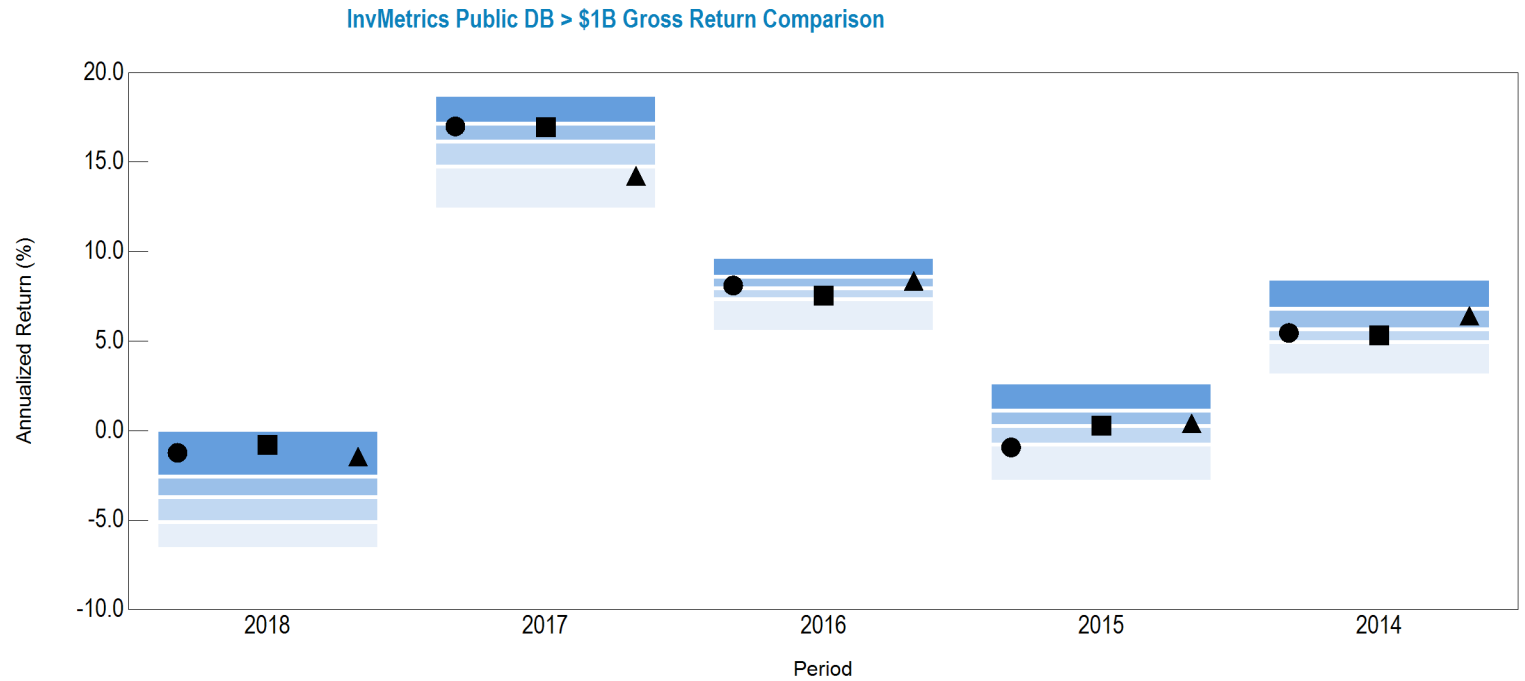
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	7.1%	22	6.0%	40	1.0	21	0.4	27	1.8%	82
Policy Index	6.4%	58	5.4%	10	1.0	22	--	--	0.0%	1
Total Fund ex Overlay	7.1%	23	5.7%	27	1.1	15	0.5	25	1.6%	78
Policy Index	6.4%	58	5.4%	10	1.0	22	--	--	0.0%	1



	Quarter		YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>5th Percentile</b>	1.4	(20)	14.4	(42)	6.2	(10)	9.5	(7)	7.9	(22)	9.6	(42)	9.6	(44)
<b>25th Percentile</b>	1.0	(19)	12.9	(53)	4.8	(12)	8.5	(7)	7.1	(23)	8.5	(43)	8.8	(52)
<b>Median</b>	0.6	(40)	11.5	(79)	3.9	(34)	8.0	(60)	6.5	(58)	7.9	(64)	8.3	(57)
<b>75th Percentile</b>	0.4		10.4		2.9		7.5		6.0		7.1		7.8	
<b>95th Percentile</b>	-0.1		9.4		1.8		6.8		5.4		6.3		6.6	
<b># of Portfolios</b>	81		81		81		81		80		79		74	
<b>● Total Fund</b>	1.0	(20)	11.8	(42)	5.9	(10)	9.3	(7)	7.1	(22)	8.1	(42)	8.5	(44)
<b>■ Total Fund ex Overlay</b>	1.0	(19)	11.2	(53)	5.6	(12)	9.3	(7)	7.1	(23)	8.1	(43)	8.3	(52)
<b>▲ Policy Index</b>	0.8	(40)	10.3	(79)	4.5	(34)	7.8	(60)	6.4	(58)	7.7	(64)	8.2	(57)

Total Fund  
Peer Universe Comparison (Calendar Years)

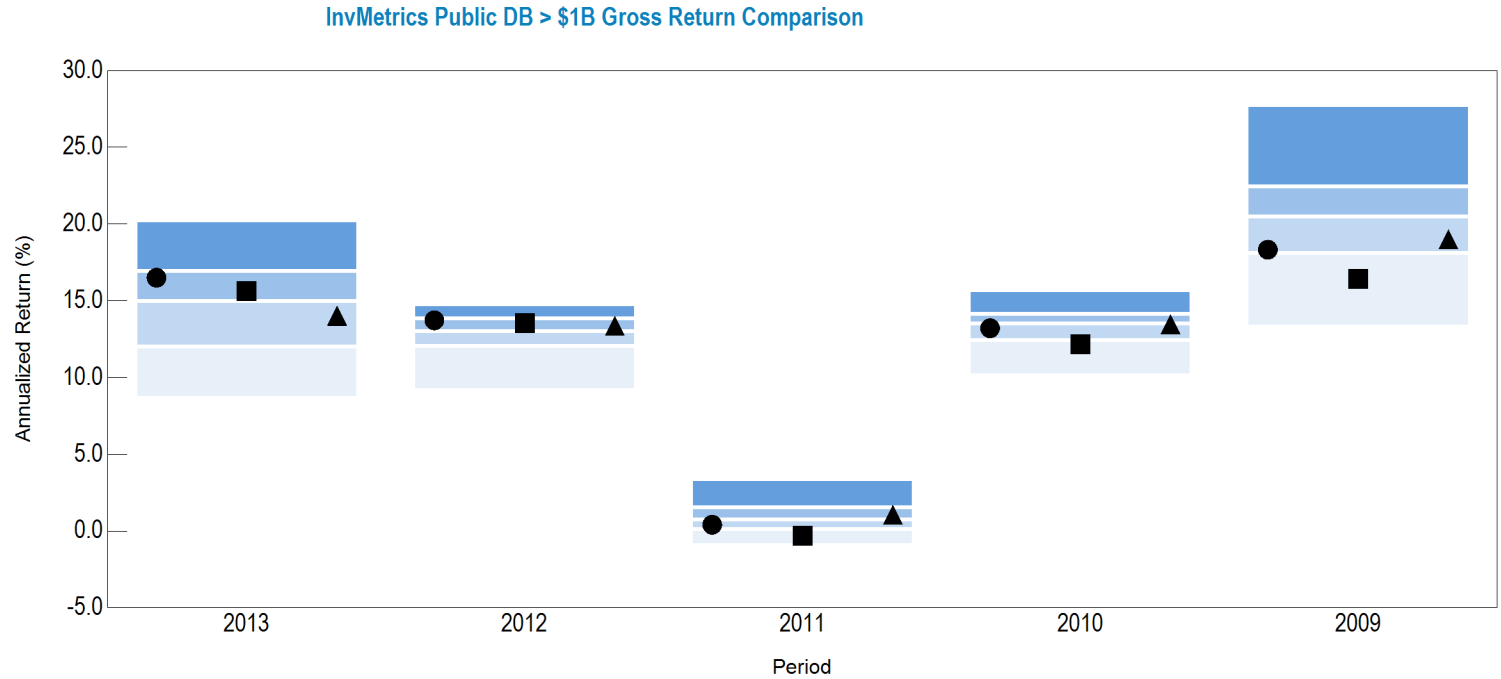
Period Ending: September 30, 2019



	2018		2017		2016		2015		2014	
<b>Return (Rank)</b>										
5th Percentile	0.0		18.8		9.7		2.7		8.5	
25th Percentile	-2.6		17.2		8.6		1.1		6.8	
Median	-3.7		16.2		8.0		0.3		5.7	
75th Percentile	-5.1		14.8		7.4		-0.7		4.9	
95th Percentile	-6.6		12.4		5.5		-2.8		3.1	
# of Portfolios	71		98		92		98		79	
● Total Fund	-1.2	(10)	17.0	(31)	8.1	(43)	-0.9	(83)	5.5	(61)
■ Total Fund ex Overlay	-0.8	(7)	17.0	(31)	7.5	(69)	0.3	(51)	5.3	(65)
▲ Policy Index	-1.4	(10)	14.2	(82)	8.4	(34)	0.4	(46)	6.4	(34)

Total Fund  
Peer Universe Comparison (Calendar Years)

Period Ending: September 30, 2019



	2013		2012		2011		2010		2009	
<b>Return (Rank)</b>										
5th Percentile	20.2		14.7		3.3		15.7		27.7	
25th Percentile	17.0		13.9		1.6		14.2		22.5	
Median	15.0		13.0		0.8		13.5		20.5	
75th Percentile	12.0		12.1		0.1		12.5		18.1	
95th Percentile	8.7		9.2		-0.9		10.2		13.4	
# of Portfolios	67		74		68		66		66	
● Total Fund	16.5	(31)	13.7	(36)	0.4	(60)	13.2	(62)	18.3	(73)
■ Total Fund ex Overlay	15.6	(43)	13.6	(41)	-0.3	(86)	12.2	(81)	16.4	(86)
▲ Policy Index	14.0	(64)	13.4	(42)	1.0	(38)	13.5	(53)	19.0	(62)

Total Plan Policy Index	As of:									
	7/1/19	7/1/17	4/1/17	1/1/14	1/1/12	1/1/08	2/1/06	9/1/04	1/1/00	7/1/86
91-day UST Bill +5% (AR)			10.0%	10.0%	10.0%	5.0%	5.0%	5.0%		
BBgBarc Aggregate	10.0%	10.0%	10.0%	15.0%	20.0%	20.0%	25.0%	25.0%	30.0%	
BBgBarc US Treasury	5.0%	5.0%	5.0%							
ICE BofA ML High Yield II	1.0%	1.0%	1.0%	1.0%						
Bloomberg Commodity		2.0%	2.0%			5.0%				
Cambridge Associates Private Energy 1 Qtr Lag	2.5%	2.5%								
Cambridge Associates Private Infrastructure 1 Qtr Lag	3.2%	3.2%								
FTSE BIG										23.0%
FTSE WGBI ex US Unhedged	2.4%	2.4%	2.4%	2.4%						
CPI-U +5% (PRA)			7.0%	15.0%	15.0%					
Credit Suisse Leveraged Loans	1.0%	1.0%	1.0%	1.0%						
Credit Suisse Leveraged Loans +2%	4.0%	4.0%	4.0%							
JPM GBI EM Diversified	0.6%	0.6%	0.6%	0.6%						
HFRI FoF Composite Index + 1%	3.0%	3.0%								
HFRI FoF Conservative Index	7.0%	7.0%								
MSCI ACWI ex US	20.0%	20.0%	20.0%	22.5%	22.5%	20.0%				
MSCI EAFE							15.0%	15.0%	15.0%	15.0%
MSCI Emerging Markets							5.0%	5.0%	5.0%	
NAREIT						3.0%	3.0%			
NFI-ODCE	4.6%	4.6%								
NFI-ODCE net +1% 1Q Lag	2.5%	2.5%								
NCREIF			7.0%			12.0%	12.0%	15.0%	10.0%	15.0%
NCREIF Farmland 1 Qtr Lag	0.7%	0.7%								
NCREIF Timberland Index Lagged	0.7%	0.7%								
Russell 1000							30.0%	30.0%	35.0%	
Russell 1000 +3% 1QL (PE)				10.0%	10.0%					
Russell 2000							5.0%	5.0%	5.0%	
Russell 3000	20.0%	21.0%	21.0%	22.5%	22.5%	30.0%				47.0%
S&P 500 +2% 1QL (PE)						5.0%				
Thomson Reuters CJA All PE 1 Qtr Lag	9.0%	9.0%	9.0%							
Bloomberg Roll Select Commodity Total Return	0.2%									
Bloomberg Barclays U.S. Floating Rate Note < 5 Yr	0.2%									
S&P Global LargeMidCap Commodity and Resources	0.2%									
S&P Global Infrastructure Index - Net of Tax on Dividend	0.5%									
Bloomberg Barclays U.S. Government Inflation-Linked 1-10 Yrs	0.6%									
FTSE EPRA Nareit Developed Liquid Index	0.3%									
ICE LIBOR Spot/Next Overnight USD	1.0%									
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Growth Benchmark				
	As of:			
	7/1/19	7/1/17	4/1/17	
91 Day T-Bill +5%			5.08%	
ICE BofA ML High Yield II	1.73%	1.70%	1.70%	
Credit Suisse Leveraged Loans	1.73%	1.70%	1.70%	
Credit Suisse Leveraged Loan + 2%	6.90%	6.78%	6.78%	
HFRI FoF Composite Index + 1%	5.17%	5.08%		
MSCI ACWI ex US	34.48%	33.90%	33.90%	
Russell 3000	34.48%	35.59%	35.59%	
Thomson Reuters CJA All PE 1 Qtr Lag	15.52%	15.25%	15.25%	
	100.0%	100.0%	100.0%	

US Equity Benchmark				
	As of:			
	1/1/08	9/1/04	1/1/00	7/1/86
Russell 1000		85.71%	87.5%	
Russell 2000		14.29%	12.5%	
Russell 3000	100.0%			100.0%
	100.0%	100.0%	100.0%	100.0%

Large Cap Active Benchmark		
	As of:	
	2/1/19	9/1/08
Russell 1000 Value		100.0%
Russell 1000	100.0%	
	100.0%	100.0%

International Equity Benchmark			
	As of:		
	1/1/08	1/1/00	7/1/86
MSCI ACWI ex US	100.0%		
MSCI EAFE		75.0%	100.0%
MSCI Emerging Markets		25.0%	
	100.0%	100.0%	100.0%

Private Equity Benchmark			
	As of:		
	4/1/17	1/1/12	1/1/08
Russell 1000 +3% 1QL		100.0%	
S&P 500 +2% 1QL			100.0%
Thomson Reuters CJA All PE 1 Qtr Lag	100.0%		
	100.0%	100.0%	100.0%

Public Credit Benchmark		
	As of:	
	4/1/17	
ICE BofA ML High Yield II	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	100.0%	

Private Credit Benchmark		
	As of:	
	4/1/17	
Credit Suisse Leveraged Loan + 2%	100.0%	
	100.0%	

Growth Oriented Absolute Return Benchmark		
	As of:	
	7/1/17	4/1/17
91-day UST Bill +5%		100.0%
HFRI FoF Composite Index + 1%	100.0%	
	100.0%	100.0%

Diversifying Benchmark		
	As of:	
	7/1/17	4/1/17
91 Day T-Bill +5%		28.0%
BBgBarc US Aggregate	40.0%	40.0%
BBgBarc US Treasury	20.0%	20.0%
FTSE WGBI ex US Unhedged	9.6%	9.6%
HFRI FoF Conservative Index	28.0%	
JPM GBI EM Diversified	2.4%	2.4%
	100.0%	100.0%

Global Fixed Income Benchmark		
	As of:	
	6/1/13	
FTSE WGBI ex US Unhedged	80.0%	
JPM GBI EM Diversified	20.0%	
	100.0%	

Diversifying Absolute Return Benchmark		
	As of:	
	7/1/17	4/1/17
91-day UST Bill +5%		100.0%
HFRI FoF Conservative Index	100.0%	
	100.0%	100.0%

Real Return Benchmark		
	As of:	
	4/1/19	4/1/17
Real Estate Benchmark	43.75%	43.75%
Private Real Assets Benchmark	43.75%	43.75%
Bloomberg Commodity		12.50%
Liquid Real Return Custom Benchmark	12.50%	
	100.0%	100.0%

Real Estate Benchmark		
	As of:	
	7/1/17	7/1/2011
NCREIF		100.0%
NFI-ODCE	65.0%	
NFI-ODCE net +1% 1Q Lag	35.0%	
	100.0%	100.0%

RE-Value Added Benchmark		
	As of:	
	7/1/16	10/1/08
NCREIF +2% 1Q Lag		100.0%
NFI-ODCE net +1% 1Q Lag	100.0%	
	100.0%	100.0%

Private Real Assets Benchmark		
	As of:	
	7/1/17	4/1/17
CPI-U Headline +5%		100.0%
Cambridge Associates Private Energy 1 Qtr Lag	35.0%	
Cambridge Associates Private Infrastructure 1 Qtr Lag	45.0%	
NCREIF Farmland 1 Qtr Lag	10.0%	
NCREIF Timberland Index Lagged	10.0%	
	100.0%	100.0%

Liquid Real Return Custom Benchmark	
	As of:
	7/1/19
Bloomberg Roll Select Commodity Total Return	10.0%
Bloomberg Barclays U.S. Floating Rate Note < 5 Yr	10.0%
S&P Global LargeMidCap Commodity and Resources	10.0%
S&P Global Infrastructure Index - Net of Tax on Dividend	25.0%
Bloomberg Barclays U.S. Government Inflation-Linked 1-10 Yrs	30.0%
FTSE EPRA Nareit Developed Liquid Index	15.0%
	100.0%

AllianceBernstein Benchmark	As of:		
	1/1/01	1/1/98	5/1/89
Russell 1000	100.0%		
Russell 3000		100.0%	
Wilshire 2500			100.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Eagle Capital Benchmark	As of:	
	2/1/19	9/1/08
Russell 1000 Value		100.0%
Russell 1000	100.0%	
	<b>100.0%</b>	<b>100.0%</b>

Brandywine Benchmark	As of:
	6/1/13
FTSE WGBI ex US Unhedged	80.0%
JPM GBI EM Diversified	20.0%
	<b>100.0%</b>

Brigade Benchmark	As of:
	12/1/13
ICE BofA ML High Yield II	50.0%
Credit Suisse Leveraged Loans	50.0%
	<b>100.0%</b>

SSgA Real Asset Benchmark	As of:		
	3/2/2018	10/1/15	2/1/08
BBgBarc US Govt Inflation-Linked 1-10 Yrs		10.0%	
BBgBarc US TIPS		10.0%	20.0%
BBgBarc 1-10 Yr US TIPS	30.0%		
BBgBarc Roll Select Commodity TR	10.0%	20.0%	
BBgBarc USD Floating Rate Note <5yr	10.0%		
DJ US Select REIT			30.0%
FTSE EPRA/NAREIT Developed Liquid	15.0%	10.0%	
MSCI World Natural Resources		20.0%	25.0%
S&P Global Large Mid Cap Commodity Resources	10.0%		
S&P Global Infrastructure	25.0%	20.0%	
S&P GS Commodities			25.0%
S&P MLP		10.0%	
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$ .

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.



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