



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 18

MEETING DATE: August 15, 2018

SUBJECT: Total Fund Investment Performance Report
Second Quarter 2018

SUBMITTED FOR: Consent Deliberation and Action Receive and File

RECOMMENDATION

Staff and Verus recommend the Board receive and file the SCERS Total Fund Investment Performance Review report, prepared by Verus, for the quarter ending June 30, 2018.

PURPOSE

This agenda item does not specifically support the 2018-19 Strategic Management Plan, but complies with SCERS' investment policy statement reporting requirements and provides a summary of SCERS' Total Fund investment returns and market environment discussion as of the quarter ending June 30, 2018. This item contributes to the effective management and oversight of investment activities.

SCERS TOTAL FUND RETURNS

This item summarizes SCERS' Total Fund investment returns as presented in Verus' Investment Performance Review for the period ending June 30, 2018. Please note that returns for SCERS' private equity, private credit, non-core real estate, and real assets portfolios are lagged one-quarter.

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SCERS TOTAL FUND PERFORMANCE SUMMARY
Quarter Reporting Periods Ending June 30, 2018

SCERS ASSET CLASS	Quarter	Year-to-Date	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS TOTAL FUND Return w/Overlay	1.1%	1.8%	10.1%	7.6%	8.3%	8.4%	Jun-86
Policy Index	0.9%	1.4%	8.2%	7.1%	7.9%	8.6%	
InvestorForce Public DB > \$1B	0.9%	0.9%	8.4%	7.0%	8.2%	8.2%	
SCERS TOTAL FUND Return w/o Overlay	1.1%	1.9%	10.2%	7.8%	8.3%	8.3%	Jun-86
Policy Index	0.9%	1.4%	8.2%	7.1%	7.9%	8.6%	
GROWTH ASSET CATEGORY	1.6%	2.1%	12.9%			14.3%	Mar-17
Custom Benchmark	1.1%	1.4%	11.1%			12.1%	
DIVERSIFYING ASSET CATEGORY	-0.8%	-1.2%	0.8%			1.9%	Mar-17
Custom Benchmark	-0.3%	-0.7%	1.0%			2.1%	
REAL RETURN ASSET CATEGORY	2.3%	5.3%	12.6%			11.9%	Mar-17
Custom Benchmark	1.7%	4.5%	9.1%			8.1%	
OPPORTUNITIES PORTFOLIO	-0.9%	-2.9%	-2.7%	5.7%	4.4%	16.0%	Oct-07
Custom Benchmark	0.9%	1.4%	8.2%	7.1%	7.9%	8.0%	

Verus' report has been reformatted to reflect SCERS' strategic asset allocation, including the Growth, Diversifying, and Real Return asset categories. Please note that new composites were added for the asset categories and several segments of the portfolio, so the performance of these segments includes the current quarter, YTD, 1-Year, and since inception (Mar-17) performance for this report, without a historical track record (3-Year and 5-Year). Verus will continue to fill in historical performance for some segments in future reports, as is feasible.

SCERS' policy index benchmark includes a blended weighted average of the individual asset class benchmarks, as defined within SCERS' Master IPS, and as shown below.

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SCERS BENCHMARK SUMMARY As of June 30, 2018	
Asset Class	Policy Index Benchmark
SCERS Total Fund	10% (91-Day T-Bill + 5%) + 10% (Barclays Agg.) + 5% (Barclays U.S. TIPS) + 1% (BofA High Yield) + 2% (Bloomberg Commodity) + 2.4% (Citi WGBI) + 7% (CPI-U Headline + 5%) + 1% (CS Leverage Loan) + 4% (CS Leveraged Loan + 2%) + 0.6% (JPM GBI EM) + 21% (Russell 3000) + 20% (MSCI ACWI ex.-U.S.) + 7% (NCREIF) + 9% (Cambridge All PE)
Growth Asset Category	5.08% (91 Day T-Bill + 5%) + 1.7% (BofA High Yield) + 1.7% (CS Leveraged Loan) + 6.78% (CS Leveraged Loan + 2%) + 35.59% (Russell 3000) + 33.9% (MSCI ACWI ex.-U.S.) + 15.25% (Cambridge All PE)
Public Equities	MSCI ACWI
US Equities	Russell 3000
International Equities	MSCI ACWI ex.-U.S. IMI
Private Equity	Cambridge All PE
Public Credit	50% (BofA High Yield) + 50% (CS High Yield)
Private Credit	CS Leveraged Loan + 2%
Growth Absolute Return	HFRI FoF Composite Index +1%
Diversifying Asset Category	28% (91 Day T-Bill + 5%) + 40% (Barclays U.S. Agg.) + 20% (Barclays U.S. TIPS) + 9.6% (Citi WGBI ex.-U.S.) + 2.4% (JPM GBI EM Diversified)
Core/Core Plus Fixed Income	Barclays U.S. Aggregate
U.S. Treasury	Barclays U.S. Aggregate
Global Fixed Income	80% Citi WGBI + 20% JPMorgan GBI EM
Diversifying Absolute Return	HFRI FoF Conservative Index
Real Return Asset Category	43.75% (NCREIF) + 43.75% (CPI-U Headline + 5%) + 12.5% (Bloomberg Commodity)
Real Estate	65% (NFI-ODCE) + 35% (NFI-ODCE +1%)
Core Real Estate	NFI-ODCE
Non-Core Real Estate	NFI-ODCE + 1%
Real Assets	45% (Cambridge Infrastructure) + 35% (Cambridge Energy) + 10% (NCREIF Agriculture) + 10% (NCREIF Timber)
Commodities	Bloomberg Commodity Index
SSgA Real Assets Proxy	20% (Barclays U.S. TIPS) + 30% (Dow Jones U.S. Select REIT) + 25% (MSCI World Natural Resources) + 25% (S&P Goldman Sachs Commodities)
Opportunities Portfolio	SCERS Total Fund

SCERS GROWTH ASSET CATEGORY RETURNS

SCERS GROWTH Performance Summary for the periods ending 6/30/18	Quarter	Year-to- Date	1-Year	Since Inception	Since Inception Date
SCERS GROWTH ASSET CATEGORY	1.6%	2.1%	12.9%	14.3%	Mar-17
Custom Benchmark	1.1%	1.4%	11.1%	12.1%	
Public Equity	1.0%	0.7%	12.6%	9.4%	Jun-11
MSCI ACWI	0.5%	-0.4%	10.7%	8.0%	
Private Equity (lagged 1 quarter)	4.9%	10.1%	21.3%	1.5%	Feb-08
Cambridge All PE	2.7%	7.2%	14.4%	10.1%	
Public Credit	1.4%	2.9%	4.1%	4.6%	Nov-13
Custom Benchmark	0.9%	1.2%	3.6%	4.5%	
Private Credit (lagged 1 quarter)	1.9%	3.5%	6.3%	7.2%	Mar-17
Credit Suisse Leveraged Loan + 2%	1.1%	3.2%	6.7%	7.1%	
Growth Absolute Return	2.1%	2.1%	6.5%	5.1%	Aug-04
HFRI FoF Composite +1%	0.6%	1.2%	6.2%	6.3%	

Public Equity Portfolio Returns

The SCERS Public Equity portfolio is comprised of a combination of U.S. and International exposures across large and small cap strategies. Over half of the U.S. Large Cap portfolio is passively managed and the remaining balance is actively managed, while the entire U.S. Small Cap portfolio is actively managed. The SCERS International Equity portfolio is a combination of developed and emerging markets exposure, with the entire portfolio actively managed across large and small cap strategies.

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SCERS PUBLIC EQUITY Performance Summary for the periods ending 6/30/18	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS PUBLIC EQUITY PORTFOLIO	1.0%	0.7%	12.6%	9.4%	Jun-11
MSCI ACWI	0.5%	-0.4%	10.7%	8.0%	
SCERS U.S. Equity	4.4%	3.6%	15.2%	10.2%	Jun-86
Russell 3000	3.9%	3.2%	14.8%	10.3%	
U.S. Large Cap	3.5%	3.2%	15.3%	6.3%	Mar-98
Russell 1000	3.6%	2.9%	14.5%	6.8%	
U.S. Small Cap	8.7%	9.2%	20.7%	12.3%	Dec-90
Russell 2000	7.8%	7.7%	17.6%	11.1%	
SCERS International Equity	-2.9%	-2.6%	9.4%	6.6%	Dec-87
MSCI ACWI ex-U.S.	-2.4%	-3.4%	7.8%	6.4%	
International Developed	-1.3%	-1.0%	10.6%	4.8%	Mar-98
MSCI World ex-U.S.	-0.5%	-2.4%	7.6%	4.9%	
Emerging Markets	-9.2%	-8.8%	5.3%	6.4%	Jan-00
MSCI Emerging Markets	-7.9%	-6.5%	8.6%	7.1%	

Second Quarter 2018:

- SCERS Public Equity portfolio returned +1.0% versus the benchmark return of +0.5%.
- SCERS U.S. Equity portfolio returned +4.4% versus the benchmark return of +3.9%.
 - SCERS U.S. Large Cap portfolio returned +3.5% versus the benchmark return of +3.6%. Manager returns compared to their respective benchmark:
 - JP Morgan (130/30): +3.8% versus +3.6%
 - Brown Advisory (growth): +6.5% versus +5.8%
 - Eagle Capital (core): +3.2% versus +3.6%
 - Huber Capital (value): +0.0% versus +1.2%
 - SCERS eliminated the allocation to large cap managers Brown Advisory and Huber Capital during the second quarter; with trading completed in July 2018.
 - SCERS U.S. Small Cap portfolio returned +8.7% versus the benchmark return of +7.8%. Manager returns compared to their respective benchmark:
 - UBS Global (growth): +10.5% versus +7.2%
 - Weatherbie (growth): +12.9% versus +7.2%
 - DGHM (value): +4.3% versus +8.3%
 - Wedge Capital (value): +5.5% versus +8.3%
 - SCERS reduced the allocation to U.S. Small Cap and eliminated the allocation to small cap managers UBS and Wedge Capital during the second quarter, with trading completed in July 2018.

- SCERS International Equity portfolio returned -2.9% versus the benchmark return of -2.4%.
 - SCERS International Developed portfolio returned -1.3% versus the benchmark return of -0.5%. Manager returns compared to their respective benchmark:
 - Lazard (ACWI ex US): -3.5% versus -2.4%
 - Walter Scott (large cap growth): +1.7% versus +1.0%
 - LSV (large cap value): -3.0% versus -1.8%
 - Mondrian (small cap value): +2.2% versus -0.8%
 - William Blair (small cap growth): -2.7% versus -0.8%
 - SCERS Emerging Markets portfolio returned -9.2% versus the benchmark return of -7.9%. Manager returns compared to their respective benchmark:
 - Baillie Gifford (all cap): -9.1% versus -7.9%
 - Mondrian (all cap): -9.4% versus -7.9%

One-Year:

- SCERS Public Equity portfolio returned +12.6% versus the benchmark return of +10.7% for the one-year ended June 30, 2018.
- SCERS U.S. Equity portfolio returned +15.2% versus the benchmark return of +14.8%.
 - SCERS U.S. Large Cap portfolio returned +15.3% versus the benchmark return of +14.5%. Manager returns compared to their respective benchmark:
 - JP Morgan (130/30): +14.6% versus +14.5%
 - Brown Advisory (growth): +29.3% versus +22.5%
 - Eagle Capital (core): +15.9% versus +14.5%
 - Huber Capital (value): +8.3% versus +6.8%
 - SCERS U.S. Small Cap portfolio returned +20.7% versus the benchmark return of +17.6%. Manager returns compared to their respective benchmark:
 - UBS Global (growth): +27.1% versus +21.9%
 - Weatherbie (growth): +36.6% versus +21.9%
 - DGHM (value): +9.3% versus +13.1%
 - Wedge Capital (value): +8.0% versus +13.1%
- SCERS International Equity portfolio returned +9.4% versus the benchmark return of +7.8%.
 - SCERS International Developed portfolio returned +10.6% versus the benchmark return of +7.6%. Manager returns compared to their respective benchmark:
 - Lazard (ACWI ex US): +11.0% versus +7.8%

- Walter Scott (large cap growth): +13.0% versus +9.9%
 - LSV (large cap value): +6.6% versus +5.5%
 - Mondrian (small cap value): +13.4% versus +12.3%
 - William Blair (small cap growth): +11.1% versus +12.3%
- SCERS Emerging Markets portfolio returned +5.3% versus the benchmark return of +8.6%. Manager returns compared to their respective benchmark:
- Baillie Gifford (all cap): +11.0% versus +8.6%
 - Mondrian (all cap): +0.3% versus +8.6%

Private Equity Portfolio Returns

The SCERS Private Equity portfolio remains earlier in its investments cycle (the J-curve effect) and less seasoned, so returns over the longer reporting periods are lower than the benchmark period returns. In order to calculate SCERS' Total Fund return, SCERS' private equity returns are time-weighted (TWR) rather than on a typical internal rate of return (IRR) basis. However, Cliffwater's Alternative Asset (private equity and real assets) quarterly performance report uses an IRR calculation, which accounts for the timing of investment cash flows. The Private Equity performance will be covered in greater detail in the Cliffwater private equity report, which will be presented at the September Board meeting.

Please note that returns for SCERS' private equity portfolio are lagged one-quarter.

SCERS PRIVATE EQUITY Performance Summary for the periods ending 3/31/18	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS Private Equity	4.9%	10.1%	21.3%	1.5%	Feb-08
Cambridge All PE	2.7%	7.2%	14.4%	10.1%	

Current Quarter:

- SCERS Private Equity portfolio returned +4.9% versus the benchmark return of +2.7%. Notable outperformers include:
 - Trinity Ventures XII (venture capital): +21.6%
 - New Enterprise Associates 15 (venture capital): +19.7%
 - H.I.G. Europe Capital II (buyout): +16.9%
 - Dyal Capital Partners III (multi-strategy): +13.4%
 - H.I.G. Capital V (buyout): +12.4%
 - New Enterprise Associates 14 (venture capital): +11.9%
- SCERS made a \$35 million commitment to Khosla Ventures VI (venture capital) in the second quarter of 2018.

One Year:

- SCERS Private Equity portfolio returned +21.3% versus the benchmark return of +14.4%. Notable outperformers include:
 - Marlin Heritage (buyout): +53.4%
 - Spectrum Equity VII (buyout): +51.5%
 - H.I.G Capital V (buyout): +48.0%
 - Summit Ventures IV (venture capital): +45.9%
 - Thamo Bravo XI (buyout): +44.3%
 - Waterland V (buyout): +42.7%
 - Accel-KKR IV (venture capital): +38.1%
 - H.I.G Europe Capital II (buyout): +38.0%

Public/Private Credit Portfolio Returns

SCERS PUBLIC / PRIVATE CREDIT Performance Summary for the periods ending 6/30/18	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS Public Credit (current quarter)	1.4%	2.9%	4.1%	4.6%	Nov-13
Custom Benchmark	0.9%	1.2%	3.6%	4.5%	
SCERS Private Credit (lagged 1 quarter)	1.9%	3.5%	6.3%	7.2%	Oct-11
Credit Suisse Leverage Loan + 2%	1.1%	3.2%	6.7%	7.1%	

Current Quarter:

- SCERS Public Credit portfolio returned +1.4% versus the benchmark return of +0.9%.
- SCERS Private Credit portfolio returned +1.9% versus the benchmark return of +1.1% lagged one quarter. Notable outperformers include:
 - Athyrium Opportunities II: +3.1%
 - Benefit Street Partners: +2.9%
- SCERS did not make any Private Credit commitments or investments during the second quarter 2018.

One Year:

- SCERS Public Credit portfolio returned +4.1% versus the benchmark return of +3.6%.
- SCERS Private Credit portfolio returned +6.3% versus the benchmark return of +6.7%. Notable outperformers include:
 - Summit Partners Credit II: +9.2%
 - Athyrium Opportunities II: +7.6%

Growth Absolute Return Portfolio Returns

SCERS GROWTH ABSOLUTE RETURN Performance Summary for the periods ending 6/30/18	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS Growth Absolute Return	2.1%	2.1%	6.5%	5.1%	Aug-07
HFRI FoF Index +1%	0.6%	1.2%	6.2%	6.3%	

Second Quarter 2018:

- SCERS Growth Absolute Return portfolio returned +2.1% versus the benchmark return of +0.6%. Notable outperformers within the direct portfolio include:
 - Jana Partners (event driven): +7.0%
- Grosvenor separate account returns:
 - SCARF: +2.1%
 - Interim SCARF B: +1.8%
- SCERS did not make any Growth Absolute Return commitments or investments during the second quarter 2018.

One Year:

- SCERS Growth Absolute Return portfolio returned +6.5% versus the benchmark return of +6.2%. Notable outperformers include:
 - OZ Domestic Partners II (multi-strategy): +8.0%
 - Third Point (event driven): +7.4%
- Grosvenor separate account returns:
 - SCARF: +8.6%
 - Interim SCARF B: +6.6%

SCERS DIVERSIFYING ASSET CATEGORY RETURNS

SCERS DIVERSIFYING Performance Summary for the periods ending 6/30/18	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS DIVERSIFYING ASSET CATEGORY	-0.8%	-1.2%	0.8%	1.9%	Mar-17
Custom Benchmark	-0.3%	-0.7%	1.0%	2.1%	
Core/Core Plus Fixed Income	0.0%	-1.3%	0.4%	2.9%	Jun-11
Barclays US Aggregate TR	-0.2%	-1.6%	-0.4%	2.6%	
U.S. Treasury	0.1%	N/A	N/A	1.0%	Feb-18
Barclays US Treasury TR	0.1%	-1.1%	-0.7%	1.0%	
Global Fixed Income	-6.6%	-2.9%	0.0%	2.2%	May-13
Custom Benchmark	-4.8%	-2.0%	1.1%	0.4%	
Diversifying Absolute Return	-0.4%	-1.0%	1.8%	2.3%	Nov-11
HFRI FoF Conservative Index	1.0%	1.6%	4.1%	5.0%	

Fixed Income Portfolio Returns

SCERS FIXED INCOME Performance Summary for the periods ending 6/30/18	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS Core/Core Plus Fixed Income Barclays U.S. Aggregate	0.0% -0.2%	-1.3% -1.6%	0.4% -0.4%	2.9% 2.6%	Jun-11
SCERS U.S. Treasury Barclays US Treasury TR	0.1% 0.1%	N/A -1.1%	N/A -0.7%	1.0% 1.0%	Feb-18
SCERS Global Fixed Income Custom Benchmark	-6.6% -4.8%	-2.9% -2.0%	0.0% 1.1%	2.2% 0.4%	May-13

Second Quarter 2018:

- SCERS Core/Core Plus Fixed Income portfolio was flat during the quarter versus the benchmark return of -0.2%.
 - Prudential (core plus): -0.1%
 - TCW MetWest (core plus): +0.1%
- SCERS U.S. Treasury portfolio returned +0.1%, in-line with the benchmark return of 0.1% for the quarter.
 - Neuberger Berman: +0.1%
- SCERS Global Fixed Income portfolio returned -6.6% versus benchmark return of -4.8%.
 - Brandywine Global (global opportunistic): -6.6%

One Year:

- SCERS Core/Core Plus Fixed Income portfolio returned +0.4% versus the benchmark return of -0.4%.
 - Prudential (core plus): +0.8%
 - TCW MetWest (core plus): +0.5%
- SCERS U.S. Treasury return for the one year ending June 30, 2018 was not available versus the benchmark return of -0.7%. The performance for Neuberger Berman for the one year is a blend of Core/Core Plus Fixed income and U.S. Treasury, as the mandate was converted effective February 2018.
 - Neuberger Berman: +0.1%
- SCERS Global Fixed Income portfolio was flat versus the benchmark return of +1.1%.
 - Brandywine Global (global opportunistic): +0.0%

Diversifying Absolute Return Portfolio Returns

SCERS DIVERSIFYING ABSOLUTE RETURN Performance Summary for the periods ending 6/30/18	Quarter	Year-to- Date	1-Year	Since Inception	Since Inception Date
SCERS Diversifying Absolute Return	-0.4%	-1.0%	1.8%	2.3%	Nov-11
HFRI FoF Conservative Index	1.0%	1.6%	4.1%	5.0%	

Second Quarter 2018:

- SCERS Diversifying Absolute Return portfolio returned -0.4% versus the benchmark return of +0.6%. Notable outperformers within the direct portfolio include:
 - Brevan Howard (discretionary macro): +8.0%
 - Winton Diversified Futures (systematic macro): +3.0%
- Notable underperformers include:
 - AQR Delta II (multi-strategy): -6.0%
 - Graham Global (systematic global macro): -2.2%
- Grosvenor separate account returns:
 - SCARF: -0.1%
 - SCARF B: -1.1%
- SCERS did not make any Diversifying Absolute Return commitments or investments during the second quarter of 2018.

One Year:

- SCERS Diversifying Absolute Return portfolio returned +1.8% versus the benchmark return of +4.1% Notable outperformers within the direct portfolio include:
 - Laurion Capital (market neutral): +10.8%
 - Winton Diversified Futures (systematic macro): +8.6%
 - Brevan Howard (discretionary macro): +8.0%
 - Elliott Associates (event driven): +6.6%
- Notable underperformers include:
 - AQR Delta II (multi-strategy): -5.6%
- Grosvenor separate account returns:
 - SCARF: -1.0%
 - SCARF B: -1.8%

SCERS REAL RETURN ASSET CATEGORY RETURNS

The SCERS Real Return portfolio includes the SSgA Real Assets overlay proxy, which is used to fill the gap between SCERS' actual and target allocations within the asset category. Most of the gap between actual and target allocation is within the Real Assets asset class. As of June 30, 2018, the SSgA proxy equals \$235.2 million. The SSgA proxy is a mix of publicly traded securities, including global infrastructure stocks, global natural resource stocks, global REITs, Treasury Inflation Protected Securities (TIPS), and U.S. dollar floating rate notes. This proxy was restructured in January 2018, as part of the Overlay program restructure. As additional commitments are made over time, the gap will continue to decrease.

Similar to the Private Equity portfolio, the SCERS Real Assets portfolio, which includes mostly private market investments, remains early in its investments cycle (the J-curve effect) and less seasoned, so returns over the reporting periods are lower than the benchmark period returns. In addition, the Verus real estate and private real asset returns are measured on a time-weighted (TWR) basis rather than on an internal rate of return (IRR) basis. Please note that returns for SCERS' non-core real estate and real assets portfolio are lagged one quarter. The Real Assets performance will be covered in greater detail in the Cliffwater real assets report at the September Board meeting. Real Estate performance will be covered by Townsend, which will also be presented at the September Board meeting.

SCERS REAL RETURN Performance Summary	Quarter	Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS REAL RETURN ASSET CATEGORY					
SCERS Real Return w/ SSgA Proxy	2.3%	5.3%	12.6%	11.9%	Mar-17
SCERS Real Return w/o SSgA Proxy	2.2%	6.7%	14.2%	13.9%	Mar-17
Custom Benchmark	1.7%	4.5%	9.1%	8.1%	Mar-17
SCERS Real Estate	3.3%	7.1%	14.9%	12.5%	Jun-11
Custom Benchmark	2.1%	5.0%	8.3%	10.4%	
Core Real Estate (as of 6/30/18)					
Separate Account	5.8%	7.8%	16.1%	6.5%	Sep-08
Commingled Funds	1.6%	4.7%	13.1%	4.8%	Sep-08
NFI-ODCE	2.1%	4.3%	8.4%	5.5%	
Non-Core Real Estate (as of 3/31/18)					
Opportunistic	4.3%	13.1%	25.0%	31.9%	Feb-14
Value Add	1.4%	6.5%	3.0%	-3.2%	Sep-08
NFI-ODCE net +1%	2.2%	6.2%	8.1%	11.4%	Feb-14
				8.0%	Sep-08
SCERS Real Assets (as of 3/31/18)	1.4%	7.8%	15.7%	4.6%	Jan-13
Custom Benchmark	1.6%	5.2%	10.2%	6.9%	
SCERS Commodities (as of 6/30/18)					
Bloomberg Commodity Index	0.4%	0.0%	7.3%	-8.2%	
SSgA Real Assets Proxy (as of 6/30/18)	2.2%	-1.4%	5.2%	1.3%	Jan-08
SSgA Real Assets	2.2%	-1.3%	5.2%	N/A	

Current Quarter:

- SCERS Real Return portfolio returned +2.3% with the SSgA Proxy overlay and +2.2% without the overlay, versus the benchmark return of +1.7%.
- SCERS Real Estate portfolio returned +3.3% versus the benchmark return of +2.1%.
 - SCERS Core Real Estate separate account portfolio returned +5.8% versus the benchmark return of +2.1%
 - BlackRock: +5.2%
 - Barings/Cornerstone: +7.3%
 - SCERS Core Real Estate commingled fund portfolio returned +1.6% versus the benchmark return of +2.1%. Notable outperformers include:
 - Prologis Targeted US Logistics: +3.4%
 - Metlife Core Property: +2.8%
 - SCERS Non-Core Real Estate portfolio returned as follows versus the benchmark return of +2.2%:
 - Opportunistic portfolio: +4.3%
 - Value Add portfolio: +1.4%
 - Notable outperformers include:
 - ✓ Carlyle China Realty: +8.3%
 - ✓ Carlyle China Rome Logistics: +8.0%
 - ✓ Och-Ziff Real Estate III: +5.4%
- SCERS Real Assets portfolio returned +1.4% versus the benchmark return of +1.6%. Notable outperformers include:
 - IFM Global Infrastructure: +7.1%
 - Atalaya SMA: +6.1%
- SCERS Commodities portfolio returned +2.2% versus the benchmark return of +0.4%.
 - Gresham Strategic Commodities: +2.0%
- The SSgA Real Assets overlay proxy returned +2.2%
- SCERS did not make any Real Return commitments during the second quarter of 2018.

One Year:

- SCERS Real Return portfolio returned +12.6% with the SSgA Proxy overlay and +14.2% without the overlay, versus the benchmark return of +9.1%.
- SCERS Real Estate portfolio return was +14.9% versus the benchmark return of +8.3%.
 - SCERS Core Real Estate separate account portfolio returned +16.1% versus the benchmark return of +8.4%.

- BlackRock: +13.1%
- Barings/Cornerstone: +23.5%
- SCERS Core Real Estate commingled fund portfolio returned +13.1% versus the benchmark return of +8.4%. Notable outperformers include:
 - Prologis Targeted Euro Logistics: +31.7%
 - Prologis Targeted US Logistics: +20.9%
 - Jamestown Premier Property: +15.2%
- SCERS Non-Core Real Estate portfolio returned as follows versus the benchmark return of +8.1%:
 - Opportunistic portfolio: +25.0%
 - Value Add portfolio: +3.0%
 - Notable outperformers include:
 - ✓ NREP Nordic Strategies I: +63.5%
 - ✓ NREP Nordic Strategies II: +55.7%
 - ✓ Och-Ziff Real Estate III: +32.2%
 - ✓ European RE Debt II: +28.7%
 - ✓ ECE Euro Prime Shopping II: +22.5%
 - ✓ KKR Real Estate Partners Americas: +22.2%
- SCERS Real Assets portfolio returned +15.7% versus the benchmark return of +10.2%. Notable outperformers include:
 - Quantum Energy Partners VI: +38.0%
 - Pantheon Ventures: +33.7%
 - EnCap Flatrock Midstream III: +29.7%
 - IFM Global Infrastructure: +16.9%
- SCERS Commodities portfolio returned +3.7% versus the benchmark return of +7.3%.
 - Gresham Strategic Commodities: +13.1%
- The SSgA Real Assets overlay proxy returned +5.2%.

SCERS OPPORTUNITIES PORTFOLIO RETURNS

SCERS OPPORTUNITIES Performance Summary for the periods ending 6/30/18	Quarter	Fiscal Year-to-Date	1-Year	Since Inception	Since Inception Date
SCERS Opportunities Policy Index	-0.9% 0.9%	-2.9% 1.4%	-2.7% 8.2%	16.0% 8.0%	Oct-07

Second Quarter 2018:

- SCERS Opportunities portfolio returned -0.9% versus the benchmark return of +0.9%.
- SCERS did not make any Opportunities commitments or investments during the second quarter of 2018.

One Year:

- SCERS Opportunities portfolio returned -2.7% versus the benchmark return of +8.2%.

MARKET RECAP

The second quarter of 2018 experienced continued volatility and mixed results across the global financial markets. Concerns over a potential trade war, increased tariffs, and a stronger U.S. dollar led to international markets underperforming, especially emerging market equities. Despite increased volatility, compared to calendar year 2017, and heightened trade concerns, the Federal Reserve continued on its path of increasing interest rates, raising the benchmark rate by +0.25% in the quarter and reaffirming expectations for two additional rate hikes this year.

The U.S. economy continued to post strong growth in the second quarter, with GDP accelerating to +4.1% year-over-year (YoY) growth in the second quarter. GDP growth was supported by significant fiscal stimulus in the form of tax cuts, which resulted in consumption up +4.0% in the second quarter, compared to +0.5% growth in the prior quarter. Business investment was also strong at +7.3%, but slightly lower than the +11.5% gain in the first quarter. Unemployment levels remained low during the quarter, with the unemployment rate ending the quarter at 3.9%. Inflation continued to inch higher in the U.S., with the core CPI up +2.3% YoY in the second quarter.

Equity Market Performance, as of June 30, 2018

	Total Return (%)				
	Month	QTD	CYTD	FYTD	1 Year
S&P 500 Index	0.62	3.43	2.65	14.37	14.37
Russell 2000 Index	0.72	7.75	7.66	17.57	17.57
Russell 3000 Index	0.65	3.89	3.22	14.78	14.78
MSCI AC World Index	-0.54	0.53	-0.43	10.73	10.73
MSCI AC Asia Pacific Index	-3.29	-3.31	-3.35	9.93	9.93
MSCI AC Europe Index	-0.67	-1.61	-3.42	5.32	5.32
MSCI Emerging Markets Index	-4.15	-7.96	-6.66	8.20	8.20

Global equity markets posted modest declines during the second quarter of 2018, with the MSCI AC World Index declining -0.5%. Among developed markets, Asia led global markets lower, with the MSCI Asia Pacific index down -3.3%, compared to MSCI Europe declining -1.6%. Emerging Markets declined the most during the quarter, falling -8%, with the stronger U.S. dollar significantly impacting returns.

Within the U.S. equity markets, small caps outperformed large caps, with the Russell 2000 up +7.8%, compared to the Russell 1000 up +3.6%. Growth stocks continued the recent trend of outperforming Value stocks, particularly across large cap stocks. The Russell 1000 Growth advanced +5.8% versus the Russell 1000 Value up a modest +1.2%.

ATTACHMENT

Verus' Investment Performance Review for SCERS for the period ending June 30, 2018.

Prepared by:

/S/

Brian Miller
Investment Officer

Reviewed by:

/S/

/S/

Steve Davis
Chief Investment Officer

Eric Stern
Chief Executive Officer



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: JUNE 30, 2018

Investment Performance Review for

Sacramento County Employees' Retirement System

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Market Environment

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TAB II

Policy Index and
Benchmark History

TAB III

2nd quarter summary

THE ECONOMIC CLIMATE

- U.S. economic data generally surprised to the upside in Q2, leading to a strong quarterly GDP growth estimate of 3.4%. Economic growth in the second and third quarters will likely see the biggest boost from fiscal stimulus. The U.S. is currently outshining other developed economies.
- The synchronized global growth story of the past year has shifted somewhat as economies have displayed more disparate performance. The change has not been too dramatic – g r o w t h continues to be positive, but at a more moderate pace.

PORTRFOIO IMPACTS

- Emerging market equity and local debt delivered losses of 8.0% and 10.4% in Q2 (MSCI Emerging Markets Index, JPM GBI-EM Global Diversified). Much of the losses were due to currency movement. We believe emerging market assets offer attractive value – recent movements appear to have been driven by a shift in short-term sentiment and currency depreciation.
- The U.S. implemented a first round of tariffs on Chinese imports on July 6th, which impacted \$34 billion worth of goods. So far, only a small portion of the discussed tariffs have been enacted.

THE INVESTMENT CLIMATE

- Strong corporate earnings growth is expected again in the second quarter. According to FactSet, the bottom-up analyst forecast for the S&P 500 is 20.0% YoY.
- Short-term U.S. Treasury yields rose, resulting in a flatter yield curve. The spread between the 10- and 2-year yield was 27 bps, a new cycle low.
- Fears were raised over Italy's role in the European Union after a coalition of the anti-establishment Five Star Movement and League Party formed a new government. Italian sovereign bond yields spiked severely during the move, but have since moderated somewhat.

ASSET ALLOCATION ISSUES

- Following the February selloff equity markets have been range bound. As corporate earnings rise further equity valuations have been pushed down to more attractive levels closer to the long-term historical average.
- While we believe trade negotiations and geopolitical uncertainty are potential causes for concern, the backdrop of positive global growth and strong corporate earnings may allow for healthy risk-asset performance.

A neutral to mild risk overweight may be warranted in today's environment

U.S. economics summary

- GDP growth was 2.8% year-over-year in the first quarter (2.0% quarterly annualized rate). The slightly slower pace of expansion was influenced by more conservative consumer spending than in previous quarters.
- The rate of inflation picked up moderately throughout the quarter. Core CPI rose 2.3% over the past year, reaching the upper end of its range during the current cycle. The year-over-year rate was impacted by a low base effect – the 3-month annualized core inflation rate was only 1.7%.
- Job gains during the quarter were strong, despite traditional employment measures indicating a tight labor market. Additions to nonfarm payrolls averaged 211,000 per month and the U-3 unemployment rate fell slightly from 4.1% to 4.0%.
- The broadest measure of labor market health, the ratio of employed individuals to the total population, indicates there may still be room for further improvement. More narrow indicators, such as the U-3 unemployment rate, may be overstating labor market tightness.
- The back and forth on trade between the U.S. and much of the rest of the world intensified. The White House has threatened to enact tariffs on up to \$550 billion of Chinese goods over unfair trade practices and intellectual property theft. To this point, tariffs have only been implemented on around \$40 billion of Chinese goods.
- The Fed raised interest rates for a second time this year in June to a target rate of 1.8% to 2.0%. Two more rate hikes are expected by the end of the year based on the Fed dot plot.

	Most Recent	12 Months Prior
GDP (YoY)	2.8% 3/31/18	2.0% 3/31/17
Inflation (CPI YoY, Core)	2.3% 6/30/18	1.7% 6/30/17
Expected Inflation (5yr-5yr forward)	2.2% 6/30/18	1.8% 6/30/17
Fed Funds Target Range	1.75 – 2.00% 6/30/18	1.00 – 1.25% 6/30/17
10 Year Rate	2.9% 6/30/18	2.3% 6/30/17
U-3 Unemployment	4.0% 6/30/18	4.3% 6/30/17
U-6 Unemployment	7.8% 6/30/18	8.5% 6/30/17

International economics summary

- The synchronized global growth story of the past year has shifted somewhat as greater performance disparity is visible across global economies. Growth continues to be positive but is more moderate in places.
- Developed market economies are expected to grow less quickly in the coming years while emerging economy growth rates are expected to rise.
- The U.S. implemented a first round of tariffs on Chinese imports on July 6th, which impacted \$34 billion of goods. So far, only a small portion of the discussed tariffs have been enacted.
- In June, Mario Draghi officially announced the end of Europe's bond buying program. Asset purchases are scheduled to end in December, and it was promised that interest rates will remain unchanged through the summer of 2019. This message was seen by markets as more dovish than expected.
- Fears were raised over Italy's uncertain role in the EU, following a new coalition of the anti-establishment Five Star Movement and League Party taking over the government. Italian bond yields spiked severely during the move, but have since moderated.
- The Eurozone Composite PMI rose for the first time in five months to 54.8 in June. PMIs in most developed and emerging markets remain above 50, indicating expansion.
- The U.S. dollar appreciated 5% during the quarter. Certain emerging market currencies have devalued sharply, such as the Argentine peso, which is down more than 35% against the USD on the year.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.8% 3/31/18	2.8% 5/31/18	4.0% 6/30/18
Eurozone	2.5% 3/31/18	2.0% 6/30/18	8.6% 3/31/18
Japan	1.1% 3/31/18	0.7% 5/31/18	2.2% 5/31/18
BRICS Nations	5.8% 3/31/18	2.5% 6/30/18	5.6% 3/31/18
Brazil	1.2% 3/31/18	4.4% 6/30/18	12.8% 6/30/18
Russia	1.3% 3/31/18	2.3% 6/30/18	4.7% 5/31/18
India	7.7% 3/31/18	5.0% 6/30/18	8.8% 12/31/17
China	6.8% 3/31/18	1.9% 6/30/18	3.9% 3/31/18

Equity environment

- We maintain an overweight position to equities through a positive tilt to emerging markets. We do not believe recent price swings reflect any major fundamental change to the trajectory of emerging markets. Equity bull runs in these markets have typically incurred a 10% or larger drawdown sometime during the rally.
- Outside of emerging markets, equities have remained fairly range bound following the February selloff. As corporate earnings rise and prices stay flat, equity valuations have been pushed down to more attractive levels closer in line with the historical average.
- Concerns over global trade contributed to a choppy month for equities, although no major breakthroughs or setbacks occurred. Global equities were up +2.9% on a hedged basis but currency depreciation acted as a drag (+0.5% unhedged).

- The value premium has delivered anomalously poor performance – the worst 10-year return on record (since 1926). However, because performance differences were due to earnings growth disparity rather than moves in valuation, the price difference between value and growth stocks has remained fairly normal. A tactical opportunity to overweight value is not yet apparent - we believe investors should stay the course.
- Equity volatility moved to below-average levels once again, following February's spike. The VIX averaged 15.3 during Q2.
- Currency volatility has frequently been greater than equity market volatility in recent years, causing return disparity for investors with unhedged international assets. A hedging program could allow investors to significantly reduce or eliminate this uncompensated risk.

	QTD TOTAL RETURN (unhedged)	YTD TOTAL RETURN (hedged)	1 YEAR TOTAL RETURN			
			(unhedged)	(hedged)		
US Large Cap (Russell 1000)	3.6%	2.9%	14.5%			
US Small Cap (Russell 2000)	7.8%	7.7%	17.6%			
US Large Value (Russell 1000 Value)	1.0%	-2.0%	6.0%			
US Large Growth (Russell 1000 Growth)	5.8%	7.3%	22.5%			
International Large (MSCI EAFE)	(1.2%)	3.9%	(2.7%)	0.0%	6.8%	7.9%
Eurozone (Euro Stoxx 50)	(2.3%)	3.6%	(3.7%)	0.5%	3.7%	3.7%
U.K. (FTSE 100)	(3.1%)	9.8%	(0.9%)	2.2%	10.2%	9.9%
Japan (NIKKEI 225)	0.2%	4.4%	0.5%	(1.1%)	15.1%	13.2%
Emerging Markets (MSCI Emerging Markets)	(8.0%)	(3.6%)	(6.7%)	(3.0%)	8.2%	9.5%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/18

Domestic equity

U.S. equities were range bound over the quarter – the S&P 500 Index posted a positive return of 3.4% and traded within a tight range between 2600 and 2800. The ups and downs of trade negotiations, particularly those between the U.S. and China, impacted equity markets during the quarter. However, considerable uncertainty surrounding the outcome of these negotiations likely helped keep equities from breaking out of their range in either direction.

Strong year-over-year earnings growth is expected to continue for the second quarter. According to FactSet, the bottom-up analyst earnings growth forecast for the S&P 500 is 19.9%. Forward 12-month earnings growth expectations were revised higher throughout the quarter while equity prices leveled out. Given that prices tend to follow earnings, there may be potential upside to prices if the expected high growth is realized. Alternatively, higher discount rates from Fed tightening may offset the impact of strong earnings growth.

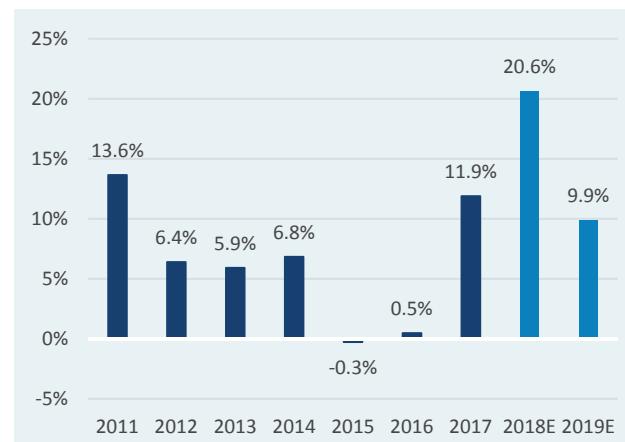
Fundamentals appear unchanged despite falling prices

U.S. EQUITIES



Source: Russell Investments, as of 6/30/18

CALENDAR YEAR EARNINGS GROWTH



Source: FactSet, as of 7/6/18

S&P 500 PRICE & EARNINGS



Source: Bloomberg, as of 6/30/18

Domestic equity size & style

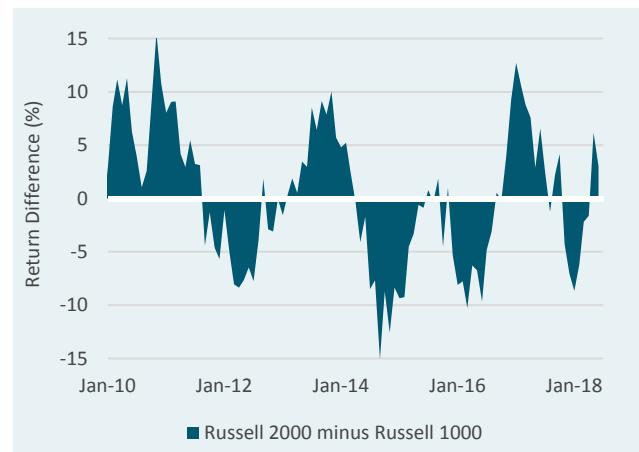
Large cap equities (Russell 1000 3.6%) underperformed small cap (Russell 2000 7.8%) during the quarter. Value stocks continued to lag growth (Russell 1000 Value 1.2% vs. Russell 1000 Growth 5.8%).

Value has delivered anomalously negative returns – the worst 10-year run on record (since 1926). Because performance differences were due to earnings growth disparity rather than moves in valuation, the price difference between value and growth stocks has remained normal. Earnings trends can be somewhat attributed to the global financial crisis where financials lagged considerably, followed by a bull market for

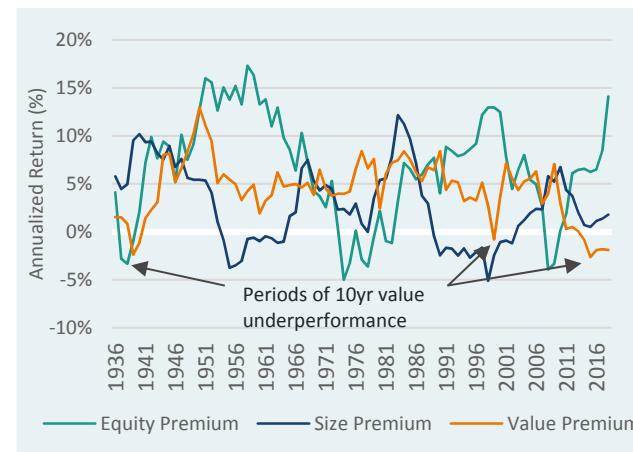
technology stocks (value is concentrated in financials while growth is concentrated in tech). In other words, much of value's underperformance was macroeconomic in nature.

We do not yet see a catalyst for a value comeback, and it is possible that when value bounces back there will not be obvious signals beforehand. Poor recent performance is not always a solid standalone indicator of future reversal. Relative valuations are fairly in line with history, and the economic environment is positive (growth often performs well during later stages of economic cycles). We recommend that value investors stay the course.

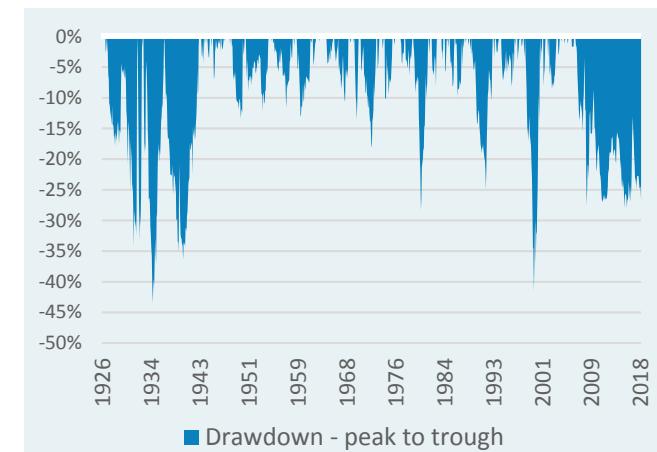
SMALL CAP VS LARGE CAP (YOY)



FACTOR PERFORMANCE (10YR ROLLING)



VALUE - PEAK TO TROUGH



Source: FTSE, as of 6/30/18

Source: Kenneth French Library, as of 5/30/18

Source: Kenneth French Library, as of 5/30/18

International developed equity

Unhedged international equities underperformed U.S. equities during Q1 (MSCI EAFE -1.2% vs. S&P 500 +3.4%). On a hedged basis, international equities delivered returns of 3.9%, outpacing the U.S. market. Currency volatility has frequently been greater than equity market volatility in recent years, causing considerable return disparity for investors with unhedged investments in international assets. Equity returns in most markets have been positive year-to-date on an ex-currency basis.

Earnings growth remains strong and will likely be supportive of equity prices going forward. The U.S. has taken back the lead in year-over-year earnings growth, alongside a large boost from U.S. tax reform and a relatively strong economy.

P/E multiples have moved lower as equity prices remain range bound and earnings grow at a brisk pace. Equity valuations are now closer to the longer-term average – a notable change from recent years.

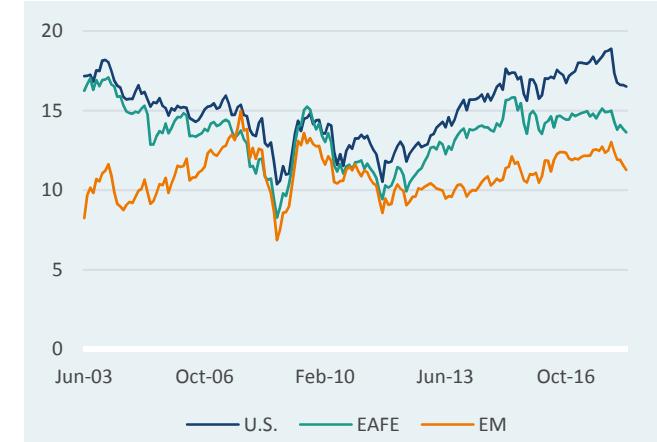
EFFECT OF CURRENCY (1-YEAR ROLLING)



EARNINGS GROWTH (YOY)



FORWARD P/E



Source: MSCI, as of 6/30/18

Source: MSCI, as of 6/30/18 – YoY growth in forward earnings

Source: MSCI, as of 6/30/18

Emerging market equity

Emerging market equities delivered losses of -8.0% in Q2, but remain up +8.2% on a year-over-year basis. Currency movement caused -4.4% of losses during the quarter.

We maintain an overweight position to equities through a positive tilt to emerging markets. Equity bull runs in these markets through history typically incur at least a 10% drawdown sometime during the rally (see next page). Recent price swings were driven by valuation changes rather than by a fundamental change in earnings.

Developed markets are expected to grow less quickly in the coming years while emerging economic growth is expected to rise. A positive growth premium of emerging economies relative to developed economies has historically acted as a tailwind for EM outperformance.

Conditions remain positive for EM equity

EQUITY PERFORMANCE (3YR ROLLING)



EM GROWTH PREMIUM



EARNINGS GROWTH (YOY)



Source: Standard & Poor's, MSCI, as of 6/30/18

Source: IMF

Source: MSCI, as of 6/30/18

Interest rate environment

- The Fed raised interest rates in June for the second time this year to a target range of 1.8-2.0%. The balance sheet unwind continued as planned with approximately \$18 billion in Treasuries and \$12 billion in MBS coming off each month during the quarter.
- According to the Fed dot plot, officials are expecting two additional rate hikes this year, while market pricing suggests only one more hike. Quicker than expected Fed tightening would represent a key risk to the economy and asset prices.
- The 10-year U.S. Treasury yield ticked up modestly during the quarter to 2.9% while the short-end of the curve rose further. The spread between the 2- and 10-year yields fell to a cycle low of 33 bps at quarter end. By another measure of curve shape, the 10-year yield minus 3-month yield, the curve remains at a level of steepness closer to the longer-term average (92 bps vs. 184 bps average).
- Historically, an inverted yield curve has preceded recessions, but the timing between inversion and recession has been anywhere from one to three years.
- In June, Mario Draghi officially announced the end of the Eurozone's bond buying program. The ECB stated that purchases will end in December, and interest rates will remain unchanged through summer of 2019. The markets interpreted this as dovish and yields fell on the news.
- Italian sovereign yields spiked after it appeared the country was headed for new elections later in the year. The 2-year yield jumped 186 bps in one day to 2.8% as risk premiums rose. In the end, a coalition government was formed between the Five Star and League parties and the country avoided going back to the polls.
- Emerging market local and hard yields moved higher, influenced by a general risk-off sentiment towards EM as well as idiosyncratic risks in several vulnerable countries, such as Turkey and Argentina.

Area	Short Term (3M)	10 Year
United States	1.91%	2.86%
Germany	(0.59%)	0.30%
France	(0.63%)	0.67%
Spain	(0.42%)	1.32%
Italy	(0.12%)	2.68%
Greece	1.04%	3.96%
U.K.	0.61%	1.28%
Japan	(0.14%)	0.04%
Australia	1.92%	2.63%
China	3.01%	3.48%
Brazil	6.45%	11.68%
Russia	6.62%	7.81%

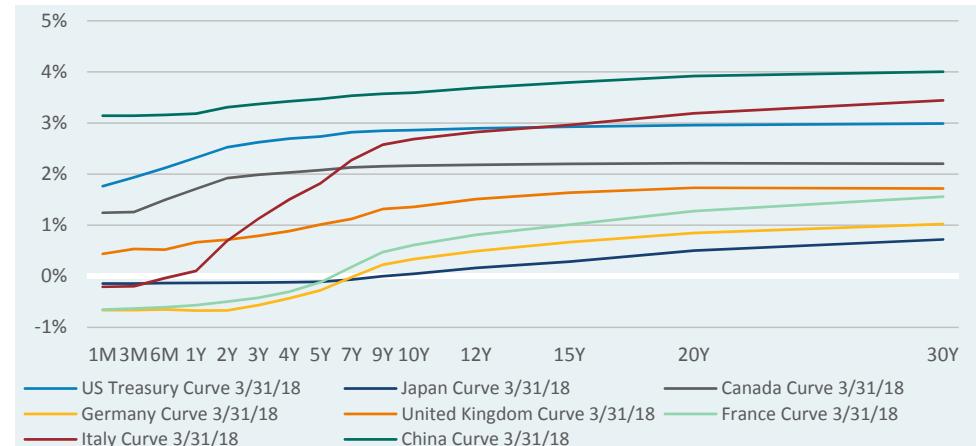
Source: Bloomberg, as of 6/30/18

Yield environment

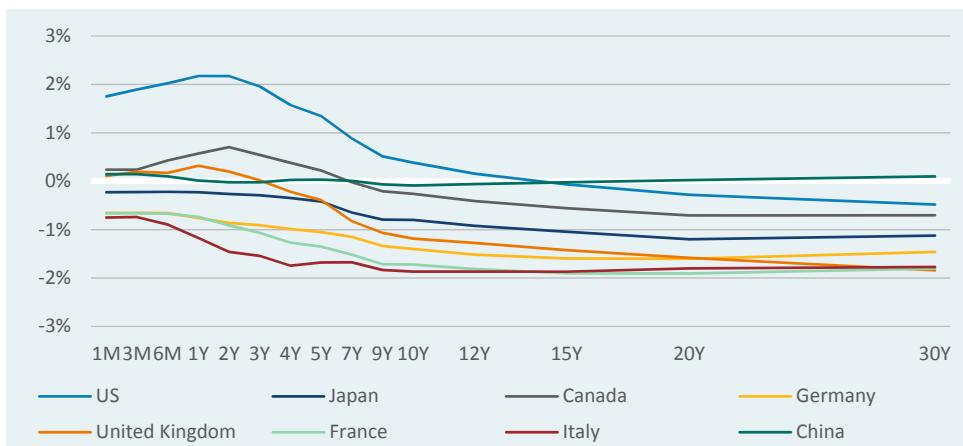
U.S. YIELD CURVE



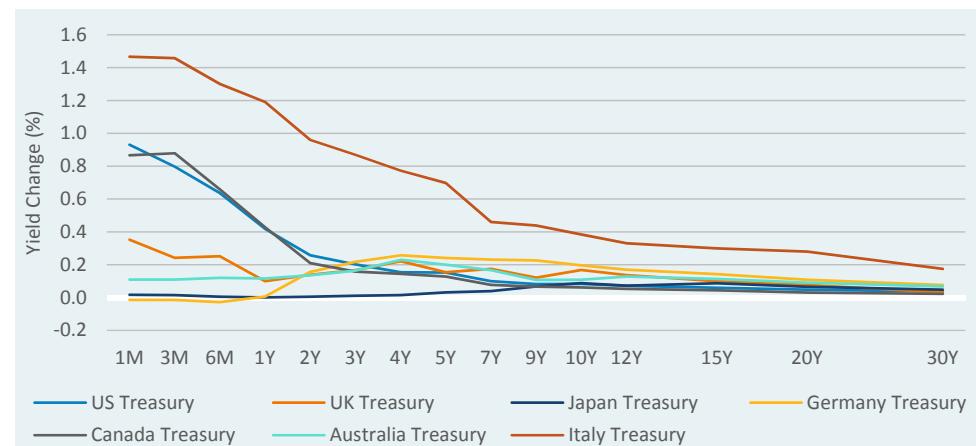
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/18

Currency

The U.S. dollar appreciated 5% during the quarter, which erased the positive equity returns of many international markets. Relative strength of the U.S. economy, paired with Federal Reserve tightening, likely helped lead the U.S. dollar higher.

Interest rate differentials between the U.S. and the rest of the developed world have been steadily widening over the past 10 months. The spread between the U.S. 10-year Treasury yield and the yield on a basket of developed sovereign debt rose approximately 80 bps to 2.3% during this

time. Higher relative interest rates has historically been a short-term driver of currencies.

Emerging market currencies fell 9.1% in Q2, based on the JPM EM Currency Index. The performance of most currencies were in line with expectations based on U.S. dollar appreciation against developed market currencies. Several countries with large current account deficits that are heavily reliant on dollar funding, such as Argentina and Turkey, saw their currencies fall sharply. As a whole, emerging market currencies are significantly undervalued based on purchasing power parity.

The U.S. dollar materially appreciated, reversing a multi-year downtrend

U.S. DOLLAR TRADE WEIGHTED INDEX



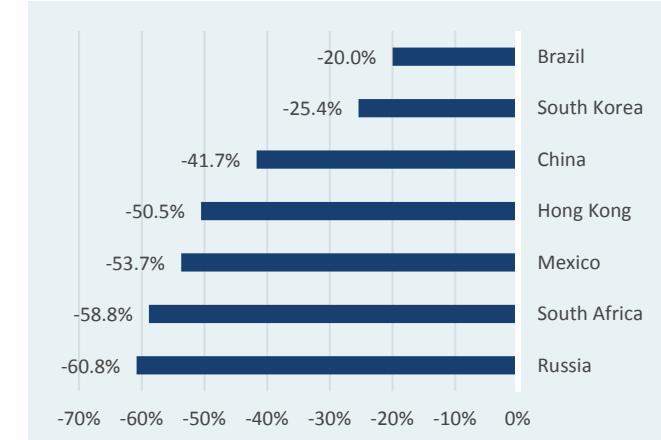
Source: Federal Reserve, as of 6/30/18

U.S. VS. DEVELOPED INTEREST RATE SPREAD



Source: Verus, Bloomberg, as of 6/30/18

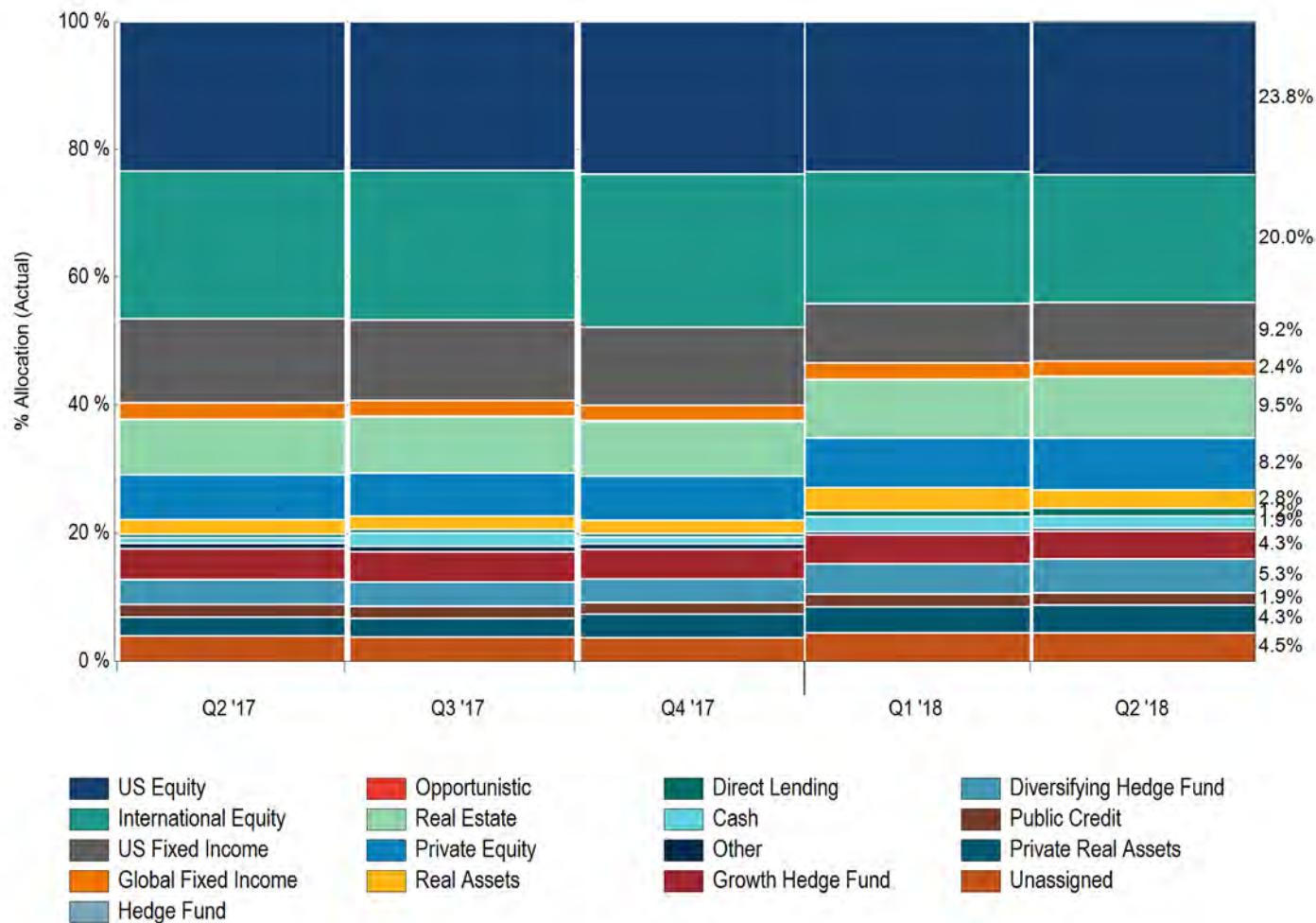
PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (BIG MAC INDEX)



Source: Bloomberg, as of 6/30/18

Total Fund
Quarterly Asset Allocation

Period Ending: June 30, 2018

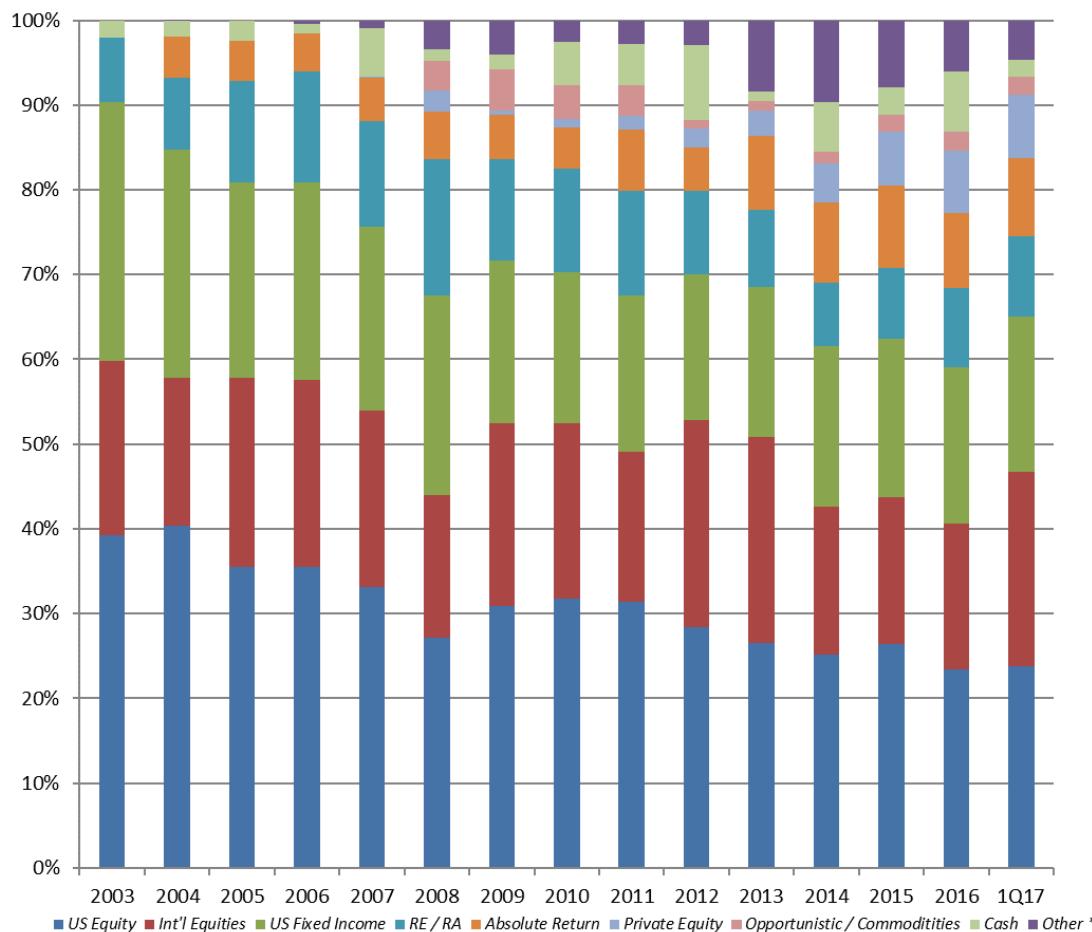


* Other includes SSgA Overlay and closing accounts.

Total Fund

Actual Yearly and Quarterly Asset Allocation

Period Ending: June 30, 2018



US Equity
International Equity
US Fixed Income
Real Estate
Absolute Return
Private Equity
Opportunistic / Commodities
Cash
Other *

2003	2004	2005	2006	2007	2008
39.2	40.4	35.4	35.5	33.1	27.2
20.6	17.5	22.3	22.0	20.9	16.8
30.6	26.9	23.1	23.3	21.7	23.5
7.5	8.5	11.9	13.1	12.4	16.1
-	4.9	4.8	4.4	5.1	5.6
-	-	-	-	0.1	2.5
-	-	-	-	-	3.5
2.1	1.8	2.4	1.2	5.8	1.4
-	0.1	-	0.4	0.9	3.4

US Equity
International Equity
US Fixed Income
Real Assets
Absolute Return
Private Equity
Opportunistic / Commodities
Cash
Other *

2009	2010	2011	2012	2013	2014
30.9	31.7	31.4	28.4	26.5	25.2
21.5	20.7	17.6	24.5	24.3	17.5
19.3	17.8	18.4	17.1	17.7	18.9
11.9	12.2	12.4	9.9	9.0	7.6
5.3	4.9	7.3	5.2	8.8	9.4
0.5	0.9	1.6	2.2	3.0	4.6
4.8	4.1	3.7	1.1	1.0	1.4
1.7	5.0	4.9	8.8	1.2	5.9
4.1	2.6	2.7	2.9	8.4	9.6

US Equity
International Equity
US Fixed Income
Real Assets
Absolute Return
Private Equity
Opportunistic / Commodities
Cash
Other *

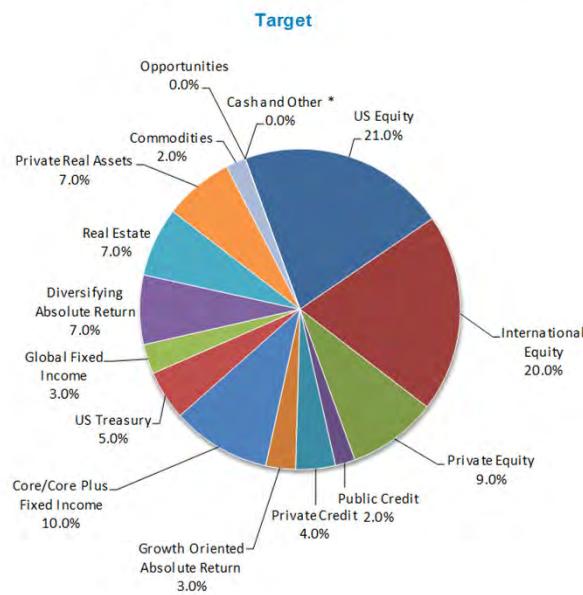
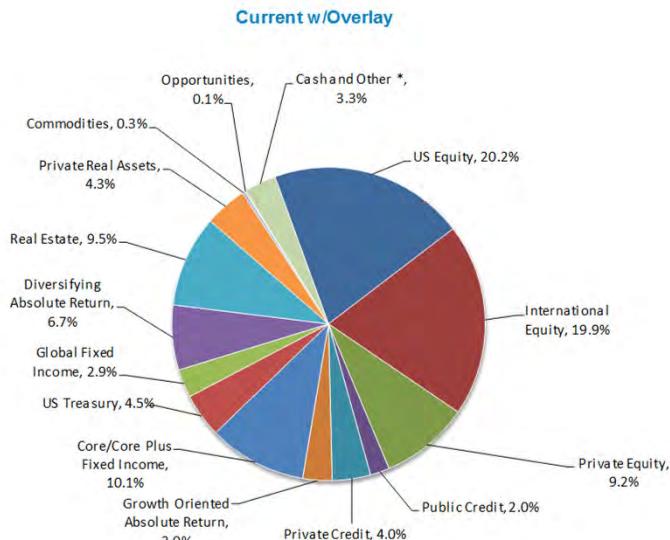
2015	2016	2017 1Q+
26.4	23.4	23.8
17.3	17.2	22.9
18.7	18.5	18.2
8.3	9.3	9.5
9.7	8.8	9.2
6.3	7.4	7.5
2.1	2.2	2.1
3.2	7.1	2.0
7.9	6.0	4.7

* Allocations without overlay.

* Other includes SSGA Overlay, SSGA Real Assets and closing accounts.

Total Fund Asset Allocation Analysis

Period Ending: June 30, 2018



ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	1,863,384,906	20.2%	23.9%
International Equity	1,837,398,739	19.9%	20.0%
Private Equity	848,441,789	9.2%	8.2%
Public Credit	182,680,141	2.0%	1.9%
Private Credit	365,422,725	4.0%	1.2%
Growth Oriented Absolute Return	279,156,940	3.0%	3.8%
Core/Core Plus Fixed Income	936,467,285	10.1%	9.2%
US Treasury	418,966,768	4.5%	4.5%
Global Fixed Income	270,217,996	2.9%	2.4%
Diversifying Absolute Return	618,704,562	6.7%	5.9%
Real Estate	874,007,852	9.5%	9.4%
Private Real Assets	400,207,076	4.3%	4.3%
Commodities	27,714,211	0.3%	0.3%
Opportunities	9,297,812	0.1%	0.1%
Cash and Other *	304,717,028	3.3%	4.9%
TOTAL	9,236,785,830	100.0%	100.0%

ASSET ALLOCATION	ACTUAL	TARGET	DIFF
US Equity	20.2%	21.0%	-0.8%
International Equity	19.9%	20.0%	-0.1%
Private Equity	9.2%	9.0%	0.2%
Public Credit	2.0%	2.0%	0.0%
Private Credit	4.0%	4.0%	0.0%
Growth Oriented Absolute Return	3.0%	3.0%	0.0%
Core/Core Plus Fixed Income	10.1%	10.0%	0.1%
US Treasury	4.5%	5.0%	-0.5%
Global Fixed Income	2.9%	3.0%	-0.1%
Diversifying Absolute Return	6.7%	7.0%	-0.3%
Real Estate	9.5%	7.0%	2.5%
Private Real Assets	4.3%	7.0%	-2.7%
Commodities	0.3%	2.0%	-1.7%
Opportunities	0.1%	0.0%	0.1%
Cash and Other *	3.3%	0.0%	3.3%

* Other includes closing accounts (Heilman), Transition Account, SSgA Overlay of \$44 million and SSgA Real Asset of \$235 million, which serve as overlay proxy for Real Assets.

Total Fund Executive Summary

Period Ending: June 30, 2018

- The Total Plan returned 1.1% net in the second quarter of 2018 and ranked in the 35th percentile among other public funds greater than \$1 billion (0.9% median). The Fund beat its policy index (0.9%) during this time period. The Total Plan w/o Overlay returned 1.1% for the quarter, net of fees. Longer term, the three-year return of 7.3% beat the median large public plan peer group (7.1%) and five-year returns of 8.0% ranked slightly below the median large public plan peer group.
- Second quarter results (net) were enhanced by the following factors:
 1. Weatherbie gained 12.4%, beating the Russell 2000 growth (7.2%). Stock selection in consumer discretionary and information technology contributed to relative performance.
 2. Mondrian Developed Small Cap rose 2.0% outperforming the MSCI ACWI ex US Small Cap index (-0.8%) and ranked in the top decile of its peers. Stock selection in Japan, Hong Kong, Sweden, Australia, Switzerland and Norway contributed to performance. The strategy also benefited from positive currency effects.
- Second quarter results (net) were hindered by the following factors:
 1. Dalton, Greiner trailed the Russell 2000 Value (4.2% vs 8.3%). The second quarter was a challenge for DGHM as their valuation discipline did not help relative performance, and lower capitalization small stocks and low-quality factors outperformed.
 2. William Blair Developed Small Cap lost -3.0% trailing the MSCI World ex US Small Cap (-0.8%). An under allocation to materials coupled with weaker stock selection within industrials hampered relative performance.
 3. Brandywine lost -6.7%, lagging their custom index by -1.9% and ranked in the bottom quartile of its peers. The strengthening US dollar contributed to 80% of the quarters underperformance.
 4. Mondrian Emerging All Cap dropped -9.6% trailing the MSCI Emerging Markets index (-7.9%). Stock selection in China was negative overall. The Chinese market fell -5.2% due to the ongoing trade debate between the US and China.
 5. LSV trailed the MSCI World ex US value by 1.4% (-3.2% vs -1.8%). During the quarter, value stocks continued to underperform, which hurt the LSV strategy during the period.
 6. Baillie Gifford Emerging All Cap lost -9.1% trailing the MSCI Emerging markets index (-7.9%). Financial holdings in Brazil, Indonesia and Turkey were among the largest detractors from performance.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date ⁺
Total Fund- Gross*	9,236,785,830	100.0	1.2	33	1.9	15	10.1	8	7.6	26	8.3	49	8.4	Jun-86
Total Fund- Net			1.1	35	1.7	20	9.9	11	7.3	38	8.0	59	8.2	
<i>Policy Index¹</i>			0.9	51	1.4	29	8.2	62	7.1	50	7.9	63	8.6	Jun-86
<i>InvestorForce Public DB > \$1B Gross Median</i>			0.9		0.9		8.4		7.0		8.2		8.2	Jun-86
Total Fund ex Overlay- Gross**	8,957,788,087	97.0	1.1	35	1.9	10	10.3	7	7.8	14	8.4	39	8.3	Jun-86
Total Fund ex Overlay- Net			1.1	41	1.8	16	10.0	9	7.6	26	8.1	58	8.1	
<i>Policy Index¹</i>			0.9	51	1.4	29	8.2	62	7.1	50	7.9	63	8.6	Jun-86
<i>Allocation ex Overlay Index</i>			0.9	51	1.4	29	8.5	47	--	--	--	--	--	Jun-86
Growth Asset Category- Gross	5,441,448,675	58.9	1.6	--	2.1	--	12.9	--	--	--	--	--	14.3	Mar-17
Growth Asset Category- Net			1.5	--	1.9	--	12.6	--	--	--	--	--	14.0	
<i>Growth Custom¹</i>			1.1	--	1.4	--	11.1	--	--	--	--	--	12.1	Mar-17
Equities- Gross Public	4,047,473,170	43.8	1.0	--	0.7	--	12.6	--	9.8	--	10.5	--	9.4	Jun-11
Equities- Net			0.9	--	0.6	--	12.2	--	9.4	--	10.1	--	9.1	
<i>MSCI ACWI</i>			0.5	--	-0.4	--	10.7	--	8.2	--	9.4	--	8.0	Jun-11
US Equity- Gross	2,202,261,723	23.8	4.4	23	3.6	41	15.2	40	11.6	36	13.1	51	10.2	Jun-86
US Equity- Net			4.3	24	3.5	45	14.9	48	11.3	50	12.7	66	10.0	
<i>Russell 3000</i>			3.9	49	3.2	57	14.8	54	11.6	38	13.3	38	10.3	Jun-86
<i>InvestorForce All DB US Eq Gross Median</i>			3.9		3.3		14.9		11.3		13.1		10.2	Jun-86
Large Cap- Gross	1,845,949,001	20.0	3.5	--	3.2	--	15.3	--	11.6	--	13.3	--	6.3	Mar-98
Large Cap- Net			3.5	--	3.1	--	15.1	--	11.4	--	13.0	--	6.1	
<i>Russell 1000</i>			3.6	--	2.9	--	14.5	--	11.6	--	13.4	--	6.8	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: June 30, 2018

	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	1,197,518,166	13.0	3.5	--	2.8	--	14.4	--	11.6	--	13.3	--	11.6	Sep-08
Large Cap - Index- Net			3.5	--	2.8	--	14.4	--	11.6	--	13.3	--	11.5	
<i>Russell 1000</i>			3.6	--	2.9	--	14.5	--	11.6	--	13.4	--	11.6	Sep-08
AB- Gross	1,197,518,166	13.0	3.5	36	2.8	33	14.4	36	11.6	66	13.3	62	10.1	Apr-89
AB- Net			3.5	36	2.8	33	14.4	36	11.6	67	13.3	62	10.1	
<i>Russell 1000¹</i>			3.6	31	2.9	27	14.5	27	11.6	62	13.4	57	--	Apr-89
eV US Passive Large Cap Equity Gross Median					3.4	2.6	14.4		11.9		13.4		10.1	Apr-89
Equity Active (130/30)- Gross	123,683,893	1.3	3.8	--	2.2	--	14.6	--	11.1	--	14.3	--	12.4	Sep-08
Equity Active (130/30)- Net			3.7	--	1.9	--	13.6	--	10.3	--	13.4	--	11.7	
<i>Russell 1000</i>			3.6	--	2.9	--	14.5	--	11.6	--	13.4	--	11.6	Sep-08
JP Morgan 130/30- Gross	123,683,893	1.3	3.8	19	2.2	44	14.6	56	11.1	61	14.3	53	12.1	Jul-08
JP Morgan 130/30- Net			3.7	21	1.9	49	13.6	64	10.3	75	13.4	71	11.3	
<i>Russell 1000</i>			3.6	22	2.9	30	14.5	56	11.6	56	13.4	72	10.4	Jul-08
eV Extended US 130/30 Equity Gross Median					2.2	1.7	14.9		11.9		14.6		11.3	Jul-08
Large Cap Growth- Gross	145,335,486	1.6	6.5	--	14.2	--	29.3	--	14.4	--	14.6	--	11.9	Sep-08
Large Cap Growth- Net			6.4	--	14.1	--	29.2	--	14.2	--	14.4	--	11.6	
<i>Russell 1000 Growth</i>			5.8	--	7.3	--	22.5	--	15.0	--	16.4	--	13.7	Sep-08
Brown Advisory- Gross	145,335,486	1.6	6.5	28	14.2	6	29.3	9	14.4	39	14.6	73	13.7	Feb-12
Brown Advisory- Net			6.4	29	14.1	6	29.2	10	14.2	44	14.4	75	13.5	
<i>Russell 1000 Growth</i>			5.8	43	7.3	54	22.5	46	15.0	29	16.4	44	15.4	Feb-12
eV US Large Cap Growth Equity Gross Median					5.4	7.7	22.0		13.5		16.0		14.8	Feb-12
Large Cap Value- Gross	379,411,457	4.1	2.2	--	1.1	--	13.4	--	10.9	--	12.3	--	11.1	Sep-08
Large Cap Value- Net			2.1	--	0.8	--	12.8	--	10.1	--	11.5	--	10.5	
<i>Russell 1000 Value</i>			1.2	--	-1.7	--	6.8	--	8.3	--	10.3	--	9.4	Sep-08

1. See Policy Index and Benchmark History.

Total Fund
Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Eagle Capital- Gross	260,981,185	2.8	3.2	15	3.8	3	15.9	5	12.5	4	14.2	2	15.3	Feb-12
Eagle Capital- Net			3.2	15	3.7	3	15.3	7	11.7	10	13.4	8	14.6	
Russell 1000			3.6	11	2.9	6	14.5	9	11.6	10	13.4	8	13.8	Feb-12
Russell 1000 Value			1.2	65	-1.7	71	6.8	85	8.3	72	10.3	72	12.1	Feb-12
eV US Large Cap Value Equity Gross Median			1.7		-0.7		10.2		9.4		11.3		12.5	Feb-12
Huber Capital- Gross	118,430,272	1.3	0.0	89	-4.5	99	8.3	72	7.5	83	8.3	95	10.6	Feb-12
Huber Capital- Net			-0.2	91	-4.9	99	7.6	81	6.7	91	7.5	97	9.9	
Russell 1000 Value			1.2	65	-1.7	71	6.8	85	8.3	72	10.3	72	12.1	Feb-12
eV US Large Cap Value Equity Gross Median			1.7		-0.7		10.2		9.4		11.3		12.5	Feb-12
Small Cap- Gross	356,167,629	3.9	8.7	--	9.2	--	20.7	--	13.0	--	13.3	--	12.3	Dec-90
Small Cap- Net			8.4	--	8.8	--	20.0	--	12.3	--	12.5	--	11.6	
Russell 2000			7.8	--	7.7	--	17.6	--	11.0	--	12.5	--	11.1	Dec-90
Small Cap - Growth- Gross	179,624,630	1.9	12.0	--	16.6	--	32.8	--	16.7	--	15.0	--	13.1	Sep-08
Small Cap - Growth- Net			11.6	--	16.2	--	32.2	--	16.3	--	14.4	--	12.4	
Russell 2000 Growth			7.2	--	9.7	--	21.9	--	10.6	--	13.6	--	12.4	Sep-08
UBS- Gross	84,317,530	0.9	10.5	33	15.6	29	27.1	43	--	--	--	--	10.6	Jul-15
UBS- Net			10.4	33	15.5	29	26.9	44	--	--	--	--	10.4	
Russell 2000 Growth			7.2	75	9.7	72	21.9	70	10.6	73	13.6	69	10.8	Jul-15
eV US Small Cap Growth Equity Gross Median			8.8		12.4		24.9		12.3		14.7		12.5	Jul-15
Weatherbie- Gross	95,307,101	1.0	12.9	14	17.3	19	36.6	13	22.5	2	18.4	9	13.9	Dec-02
Weatherbie- Net			12.4	16	16.8	22	35.9	15	21.9	3	17.6	12	13.0	
Russell 2000 Growth			7.2	75	9.7	72	21.9	70	10.6	73	13.6	69	11.8	Dec-02
eV US Small Cap Growth Equity Gross Median			8.8		12.4		24.9		12.3		14.7		13.1	Dec-02
Small Cap - Value- Gross	176,542,998	1.9	4.9	--	1.3	--	8.6	--	9.1	--	11.5	--	10.5	Sep-08
Small Cap - Value- Net			4.7	--	0.9	--	7.8	--	8.1	--	10.6	--	9.6	
Russell 2000 Value			8.3	--	5.4	--	13.1	--	11.2	--	11.2	--	9.6	Sep-08

Total Fund
Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Dalton, Greiner- Gross	82,816,566	0.9	4.3	74	0.2	92	9.3	84	9.1	76	10.9	76	10.8	Dec-00
Dalton, Greiner- Net			4.2	76	-0.1	94	8.7	88	8.4	83	10.2	85	10.0	
<i>Russell 2000 Value</i>			8.3	19	5.4	29	13.1	48	11.2	41	11.2	70	9.5	Dec-00
<i>eV US Small Cap Value Equity Gross Median</i>			5.7		3.8		12.8		10.5		12.1		11.6	Dec-00
WEDGE Capital- Gross	93,726,433	1.0	5.5	56	2.4	70	8.0	90	9.0	77	12.1	50	10.3	Apr-08
WEDGE Capital- Net			5.2	59	1.9	77	7.0	93	7.9	85	11.0	73	9.3	
<i>Russell 2000 Value</i>			8.3	19	5.4	29	13.1	48	11.2	41	11.2	70	9.0	Apr-08
<i>eV US Small Cap Value Equity Gross Median</i>			5.7		3.8		12.8		10.5		12.1		10.7	Apr-08
International Equity- Gross	1,845,211,447	20.0	-2.9	47	-2.6	32	9.4	21	6.8	23	7.2	42	6.6	Dec-87
International Equity- Net			-2.9	49	-2.8	37	9.0	25	6.4	35	6.7	56	6.2	
<i>MSCI ACWI ex US¹</i>			-2.4	35	-3.4	53	7.8	44	5.6	55	6.5	66	6.4	Dec-87
<i>InvestorForce All DB ex-US Eq Gross Median</i>			-3.0		-3.4		7.4		5.8		6.9		7.2	Dec-87
International - Developed- Gross	1,503,169,738	16.3	-1.3	42	-1.0	32	10.6	28	7.7	27	8.1	41	4.8	Mar-98
International - Developed- Net			-1.4	46	-1.2	35	10.2	30	7.3	31	7.7	48	4.4	
<i>MSCI World ex US Gross</i>			-0.5	27	-2.4	51	7.6	52	5.4	62	6.7	69	4.9	Mar-98
<i>InvestorForce All DB Dev Mkt ex-US Eq Gross Median</i>			-1.6		-2.3		7.8		6.0		7.5		5.3	Mar-98
Lazard- Gross	370,038,968	4.0	-3.5	74	-1.4	34	11.0	36	5.9	63	8.4	44	10.2	Jun-12
Lazard- Net			-3.5	74	-1.5	35	10.7	37	5.6	68	8.1	52	9.9	
<i>MSCI ACWI ex USA Gross</i>			-2.4	50	-3.4	64	7.8	63	5.6	69	6.5	81	7.7	Jun-12
<i>eV All ACWI ex-US Equity Gross Median</i>			-2.4		-2.7		8.7		6.5		8.2		9.7	Jun-12
Walter Scott & Partners Limited- Gross	489,808,019	5.3	1.7	19	1.9	20	13.0	29	--	--	--	--	17.3	Mar-17
Walter Scott & Partners Limited- Net			1.7	19	1.8	21	12.8	29	--	--	--	--	17.2	
<i>MSCI World ex USA Growth GR USD</i>			1.0	29	-0.5	50	9.9	49	6.4	48	7.6	54	14.0	Mar-17
<i>eV EAFE Large Cap Growth Gross Median</i>			-0.2		-0.6		9.6		6.2		7.9		14.2	Mar-17

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
LSV- Gross	453,771,807	4.9	-3.0	65	-3.8	47	6.6	33	6.7	13	8.3	11	5.0	Dec-04
LSV- Net			-3.2	70	-4.0	51	6.2	36	6.3	20	7.8	18	4.5	
<i>MSCI World ex US Value Gross</i>			-1.8	37	-4.1	51	5.5	51	4.3	86	5.9	90	4.8	Dec-04
<i>eV EAFE Large Cap Value Gross Median</i>			-2.1		-4.0		5.5		5.1		7.2		5.5	Dec-04
Mondrian Dev Small Cap- Gross	97,069,844	1.1	2.2	9	0.8	41	13.4	47	9.4	58	9.4	62	10.6	Aug-10
Mondrian Dev Small Cap- Net			2.0	10	0.4	50	12.8	53	8.8	68	8.6	79	9.9	
<i>MSCI World ex US Small Cap GD</i>			-0.8	35	-1.2	58	12.3	60	9.9	56	10.7	52	10.3	Aug-10
<i>eV ACWI ex-US Small Cap Equity Gross Median</i>			-1.2		0.3		13.1		10.3		10.8		11.3	Aug-10
William Blair Dev Small Cap- Gross	92,481,101	1.0	-2.7	63	-3.1	70	11.1	63	9.6	57	9.6	60	10.7	Sep-08
William Blair Dev Small Cap- Net			-3.0	67	-3.9	87	9.9	78	8.7	68	8.7	78	9.7	
<i>MSCI World ex US Small Cap GD</i>			-0.8	35	-1.2	58	12.3	60	9.9	56	10.7	52	9.8	Sep-08
<i>eV ACWI ex-US Small Cap Equity Gross Median</i>			-1.2		0.3		13.1		10.3		10.8		11.4	Sep-08
International - Emerging- Gross	341,973,698	3.7	-9.2	70	-8.8	81	5.3	58	4.2	83	4.0	70	6.4	Jan-00
International - Emerging- Net			-9.3	71	-8.9	85	4.9	63	3.9	85	3.7	74	5.9	
<i>MSCI Emerging Markets Gross</i>			-7.9	17	-6.5	28	8.6	19	6.0	42	5.4	28	7.1	Jan-00
<i>InvestorForce All DB Emg Mkt Eq Gross Median</i>			-8.9		-7.0		5.8		5.6		4.9		6.7	Jan-00
Baillie Gifford Emg All Cap- Gross	181,000,837	2.0	-9.1	71	-7.9	72	11.0	25	--	--	--	--	18.9	Mar-16
Baillie Gifford Emg All Cap- Net			-9.1	71	-7.9	72	11.0	25	--	--	--	--	18.9	
<i>MSCI Emerging Markets Gross</i>			-7.9	41	-6.5	46	8.6	43	6.0	62	5.4	60	14.6	Mar-16
<i>eV Emg Mkts Equity Gross Median</i>			-8.3		-6.7		7.9		6.7		6.2		14.9	Mar-16
Mondrian Emg All Cap- Gross	160,972,861	1.7	-9.4	77	-9.1	88	0.3	94	--	--	--	--	8.0	Mar-16
Mondrian Emg All Cap- Net			-9.6	79	-9.4	90	-0.3	95	--	--	--	--	7.4	
<i>MSCI Emerging Markets Gross</i>			-7.9	41	-6.5	46	8.6	43	6.0	62	5.4	60	14.6	Mar-16
<i>eV Emg Mkts Equity Gross Median</i>			-8.3		-6.7		7.9		6.7		6.2		14.9	Mar-16

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Equity- Gross***	756,653,611	8.2	4.9	10	10.1	9	21.3	5	12.4	33	14.7	23	1.5	Feb-08
Private Equity- Net			4.9	10	10.1	9	21.3	5	12.4	33	14.7	23	1.7	
Thomson Reuters C A All PE 1 Qtr Lag ¹			2.7	39	7.2	34	14.4	45	11.4	43	14.8	23	10.1	Feb-08
Russell 3000 +3% 1Q Lag			0.2	75	7.3	33	16.8	23	13.2	21	16.0	13	11.3	Feb-08
InvestorForce All DB Private Eq Net Median			1.8		5.9		13.1		10.5		12.0		8.4	Feb-08
Abbott VI- Gross	56,848,769	0.6	3.8	--	9.2	--	20.4	--	16.4	--	15.8	--	3.7	Jul-08
Abbott VI- Net			3.8	--	9.2	--	20.4	--	16.4	--	15.8	--	--	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	11.1	Jul-08
Accel-KKR IV- Gross	12,528,794	0.1	4.6	--	8.5	--	38.1	--	29.6	--	-4.5	--	-4.5	Jun-13
Accel-KKR IV- Net			4.6	--	8.5	--	38.1	--	29.6	--	-4.5	--	-4.5	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.8	Jun-13
Accel-KKR V- Gross	6,465,447	0.1	2.2	--	6.0	--	5.9	--	--	--	--	--	11.3	Jan-17
Accel-KKR V- Net			2.2	--	6.0	--	5.9	--	--	--	--	--	11.3	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	17.6	Jan-17
Accel-KKR Growth Partners II- Gross	6,396,058	0.1	3.3	--	18.9	--	26.1	--	-5.0	--	--	--	-4.5	Feb-15
Accel-KKR Growth Partners II- Net			3.3	--	18.9	--	26.1	--	-5.0	--	--	--	-4.5	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	11.0	Feb-15
Atalaya Special Opp VI- Gross	20,668,773	0.2	2.9	--	5.6	--	9.3	--	--	--	--	--	6.1	Apr-16
Atalaya Special Opp VI- Net			2.9	--	5.6	--	9.3	--	--	--	--	--	6.1	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	18.1	Apr-16

1. See Policy Index and Benchmark History.

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

++ Returns are one-quarter lag.

Total Fund Performance Summary

Period Ending: June 30, 2018

	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*	3,512,785	0.0	0.7	--	--	--	--	--	--	--	--	--	0.7	Mar-18
Davidson Kempner LT Dist Opp- Net			0.7	--	--	--	--	--	--	--	--	--	0.7	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	2.7	Mar-18
Dyal Capital Partners II- Gross	14,252,729	0.2	-7.1	--	-5.9	--	-7.5	--	-8.3	--	--	--	-7.5	Dec-14
Dyal Capital Partners II- Net			-7.1	--	-5.9	--	-7.5	--	-8.3	--	--	--	-7.5	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	12.0	Dec-14
Dyal Capital Partners III- Gross	15,079,778	0.2	13.4	--	12.3	--	22.1	--	--	--	--	--	20.9	Dec-16
Dyal Capital Partners III- Net			13.4	--	12.3	--	22.1	--	--	--	--	--	20.9	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.2	Dec-16
Garrison Investment Group- Gross	13,605,252	0.1	2.8	--	3.5	--	2.3	--	-6.0	--	0.0	--	0.1	May-12
Garrison Investment Group- Net			2.8	--	3.5	--	2.3	--	-6.0	--	0.0	--	0.1	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.7	May-12
Harbourvest VIII- Gross	19,871,385	0.2	3.3	--	8.3	--	18.4	--	13.9	--	15.3	--	9.7	Dec-07
Harbourvest VIII- Net			3.3	--	8.3	--	18.4	--	13.9	--	15.3	--	--	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	9.7	Dec-07
Harbourvest Intl VI- Gross	36,235,785	0.4	2.7	--	10.8	--	23.5	--	15.0	--	15.7	--	-8.8	Mar-09
Harbourvest Intl VI- Net			2.7	--	10.8	--	23.5	--	15.0	--	15.7	--	--	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	16.7	Mar-09
H.I.G. Bayside Loan III- Gross	22,087,313	0.2	6.8	--	6.6	--	10.1	--	11.0	--	9.0	--	6.4	Jan-13
H.I.G. Bayside Loan III- Net			6.8	--	6.6	--	10.1	--	11.0	--	9.0	--	6.4	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	16.4	Jan-13
H.I.G. Capital V- Gross	9,658,256	0.1	12.4	--	20.9	--	48.0	--	19.8	--	--	--	7.0	Jul-13
H.I.G. Capital V- Net			12.4	--	20.9	--	48.0	--	19.8	--	--	--	7.0	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.6	Jul-13

* Funded in March 2018.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
H.I.G. Europe Capital II- Gross*	10,222,894	0.1	16.9	--	17.7	--	38.0	--	--	--	--	--	--	Jan-14
H.I.G. Europe Capital II- Net			16.9	--	17.7	--	38.0	--	--	--	--	--	--	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	13.3	Jan-14
Khosla IV- Gross	14,311,902	0.2	5.7	--	8.0	--	35.0	--	15.5	--	19.5	--	15.2	Jul-11
Khosla IV- Net			5.7	--	8.0	--	35.0	--	15.5	--	19.5	--	15.2	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.4	Jul-11
Khosla V- Gross	17,974,783	0.2	1.0	--	1.4	--	20.1	--	11.2	--	--	--	8.4	Nov-14
Khosla V- Net			1.0	--	1.4	--	20.1	--	11.2	--	--	--	8.4	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	11.3	Nov-14
Linden Capital- Gross	39,518,448	0.4	3.7	--	7.5	--	21.4	--	--	--	--	--	7.7	Jun-16
Linden Capital- Net			3.7	--	7.5	--	21.4	--	--	--	--	--	7.7	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.6	Jun-16
Marlin Equity IV- Gross	19,616,377	0.2	-0.3	--	-0.5	--	2.4	--	4.5	--	--	--	0.8	Nov-13
Marlin Equity IV- Net			-0.3	--	-0.5	--	2.4	--	4.5	--	--	--	0.8	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.8	Nov-13
Marlin Equity V- Gross**	4,570,183	0.0	-5.4	--	--	--	--	--	--	--	--	--	-5.4	Feb-18
Marlin Equity V- Net			-5.4	--	--	--	--	--	--	--	--	--	-5.4	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	7.2	Feb-18
Marlin Heritage- Gross	8,876,822	0.1	1.1	--	10.2	--	53.4	--	40.1	--	--	--	22.1	Jul-14
Marlin Heritage- Net			1.1	--	10.2	--	53.4	--	40.1	--	--	--	22.1	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	12.4	Jul-14
Marlin Heritage II- Gross	2,636,566	0.0	-3.3	--	-14.9	--	--	--	--	--	--	--	-14.9	Oct-17
Marlin Heritage II- Net			-3.3	--	-14.9	--	--	--	--	--	--	--	-14.9	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	11.0	Oct-17
Marlin Heritage Europe- Gross	4,744,745	0.1	5.3	--	-2.8	--	--	--	--	--	--	--	-2.8	Aug-17
Marlin Heritage Europe- Net			5.3	--	-2.8	--	--	--	--	--	--	--	-2.8	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.4	Aug-17

*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.

**Funded in February 2018.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
New Enterprise 14- Gross	39,234,897	0.4	11.9	--	15.4	--	17.8	--	18.2	--	19.2	--	14.0	May-12
New Enterprise 14- Net			11.9	--	15.4	--	17.8	--	18.2	--	19.2	--	14.0	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.7	May-12
New Enterprise 15- Gross	38,435,440	0.4	19.7	--	19.7	--	32.1	--	18.2	--	--	--	17.1	Apr-15
New Enterprise 15- Net			19.7	--	19.7	--	32.1	--	18.2	--	--	--	17.1	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	12.5	Apr-15
New Enterprise 16- Gross	9,217,725	0.1	2.1	--	2.8	--	-6.8	--	--	--	--	--	-6.3	May-17
New Enterprise 16- Net			2.1	--	2.8	--	-6.8	--	--	--	--	--	-6.3	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	16.8	May-17
Private Equity X- Gross	33,038,060	0.4	0.0	--	3.6	--	14.3	--	2.2	--	11.9	--	-2.9	Jun-08
Private Equity X- Net			0.0	--	3.6	--	14.3	--	2.2	--	11.9	--	--	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	11.5	Jun-08
RRJ Capital Master Fund II- Gross	19,297,856	0.2	1.6	--	9.8	--	17.4	--	4.7	--	13.4	--	13.1	May-13
RRJ Capital Master Fund II- Net			1.6	--	9.8	--	17.4	--	4.7	--	13.4	--	13.1	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.5	May-13
RRJ Capital Master Fund III- Gross	30,791,411	0.3	3.1	--	5.0	--	14.8	--	--	--	--	--	-20.2	Dec-15
RRJ Capital Master Fund III- Net			3.1	--	5.0	--	14.8	--	--	--	--	--	-20.2	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	16.3	Dec-15
Spectrum Equity- Gross	24,340,264	0.3	9.3	--	23.2	--	51.5	--	12.1	--	--	--	1.5	Dec-14
Spectrum Equity- Net			9.3	--	23.2	--	51.5	--	12.1	--	--	--	1.5	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	12.0	Dec-14
Spectrum Equity Fund VIII- Gross*	437,500	0.0	--	--	--	--	--	--	--	--	--	--	--	Jun-18
Spectrum Equity Fund VIII- Net			--	--	--	--	--	--	--	--	--	--	--	
Thomson Reuters CJA All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	--	Jun-18

* Funded in June 2018.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Summit EUR Growth Equity II- Gross*	1,125,598	0.0	-36.2	--	--	--	--	--	--	--	--	--	-36.2	Jan-18
Summit EUR Growth Equity II- Net			-36.2	--	--	--	--	--	--	--	--	--	-36.2	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	7.2	Jan-18
Summit Ventures III- Gross	16,128,960	0.2	3.6	--	11.4	--	31.8	--	25.9	--	16.8	--	12.8	Jun-12
Summit Ventures III- Net			3.6	--	11.4	--	31.8	--	25.9	--	16.8	--	12.8	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.3	Jun-12
Summit Ventures IV- Gross	16,329,489	0.2	3.1	--	3.6	--	45.9	--	--	--	--	--	31.0	May-16
Summit Ventures IV- Net			3.1	--	3.6	--	45.9	--	--	--	--	--	31.0	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	18.8	May-16
Thoma Bravo XI- Gross	37,383,880	0.4	4.4	--	33.0	--	44.3	--	20.9	--	--	--	14.4	Jun-14
Thoma Bravo XI- Net			4.4	--	33.0	--	44.3	--	20.9	--	--	--	14.4	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	12.3	Jun-14
Thoma Bravo XII- Gross	20,111,264	0.2	-0.9	--	8.5	--	13.8	--	--	--	--	--	-2.6	May-16
Thoma Bravo XII- Net			-0.9	--	8.5	--	13.8	--	--	--	--	--	-2.6	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	18.8	May-16
TPG Opp Partners III- Gross	22,791,483	0.2	4.8	--	9.9	--	14.4	--	11.8	--	--	--	-20.3	Mar-14
TPG Opp Partners III- Net			4.8	--	9.9	--	14.4	--	11.8	--	--	--	-20.3	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	12.3	Mar-14
Trinity Ventures XI- Gross	27,661,960	0.3	2.1	--	9.7	--	11.7	--	10.8	--	2.3	--	2.2	Apr-13
Trinity Ventures XI- Net			2.1	--	9.7	--	11.7	--	10.8	--	2.3	--	2.2	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	15.6	Apr-13
Trinity Ventures XII- Gross	16,931,969	0.2	21.6	--	18.7	--	17.0	--	--	--	--	--	9.2	Apr-16
Trinity Ventures XII- Net			21.6	--	18.7	--	17.0	--	--	--	--	--	9.2	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	18.1	Apr-16

* Funded in January 2018.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date	
TSG7 A LP- Gross*	7,573,970	0.1	2.6	--	10.0	--	13.2	--	--	--	--	--	--	--	Mar-16
TSG7 A LP- Net			2.6	--	10.0	--	13.2	--	--	--	--	--	--	--	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.7	14.7	Mar-16
TSG7 B LP- Gross	446,336	0.0	-5.8	--	-16.3	--	-32.1	--	--	--	--	--	--	-30.1	Jan-16
TSG7 B LP- Net			-5.8	--	-16.3	--	-32.1	--	--	--	--	--	--	-30.1	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	13.2	13.2	Jan-16
Waterland V- Gross	11,492,034	0.1	7.9	--	12.3	--	42.7	--	66.9	--	67.8	--	23.0	23.0	Aug-11
Waterland V- Net			7.9	--	12.3	--	42.7	--	66.9	--	67.8	--	23.0	23.0	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.7	14.7	Aug-11
Waterland VI- Gross	16,994,292	0.2	4.6	--	2.0	--	23.4	--	--	--	--	--	--	-15.6	Jul-15
Waterland VI- Net			4.6	--	2.0	--	23.4	--	--	--	--	--	--	-15.6	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	11.4	11.4	Jul-15
Waterland VI Over- Gross	1,098	0.0	-13.7	--	-31.6	--	-60.0	--	--	--	--	--	--	-74.6	Dec-15
Waterland VI Over- Net			-13.7	--	-31.6	--	-60.0	--	--	--	--	--	--	-74.6	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	16.3	16.3	Dec-15
Wayzata Opportunities III- Gross	7,204,281	0.1	1.5	--	-1.0	--	-0.9	--	2.1	--	-3.0	--	--	-4.9	Feb-13
Wayzata Opportunities III- Net			1.5	--	-1.0	--	-0.9	--	2.1	--	-3.0	--	--	-4.9	
Thomson Reuters C A All PE 1 Qtr Lag			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	16.5	16.5	Feb-13
Public Credit- Gross	178,136,172	1.9	1.4	--	2.9	--	4.1	--	5.9	--	--	--	4.6	4.6	Nov-13
Public Credit- Net			1.4	--	2.9	--	4.1	--	5.9	--	--	--	4.6	4.6	
Brigade Custom ¹			0.9	--	1.2	--	3.6	--	5.0	--	--	--	--	4.5	Nov-13
Brigade Capital- Gross	178,136,172	1.9	1.4	12	2.9	5	4.1	18	5.9	22	--	--	--	4.6	Nov-13
Brigade Capital- Net			1.4	12	2.9	5	4.1	18	5.9	22	--	--	--	4.6	
Brigade Custom ¹			0.9	39	1.2	18	3.6	25	5.0	54	--	--	--	4.5	Nov-13
eV US High Yield Fixed Inc Gross Median			0.8		0.2		2.8		5.1		5.4			4.7	Nov-13

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

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Credit- Gross⁺⁺	111,869,244	1.2	1.9	--	3.5	--	6.3	--	7.5	--	8.4	--	7.2	Oct-11
Private Credit- Net			1.9	--	3.5	--	6.3	--	7.5	--	8.4	--	7.2	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	7.1	Oct-11
Athyrium Opp II- Gross	15,817,657	0.2	3.1	--	5.1	--	7.6	--	5.4	--	--	--	5.4	Jun-15
Athyrium Opp II- Net			3.1	--	5.1	--	7.6	--	5.4	--	--	--	5.4	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	6.3	Jun-15
Athyrium Opp III- Gross	7,386,909	0.1	1.0	--	0.3	--	-10.0	--	--	--	--	--	-9.3	May-17
Athyrium Opp III- Net			1.0	--	0.3	--	-10.0	--	--	--	--	--	-9.3	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	6.2	May-17
Benefit St Pr Sr Secure Opp- Gross [*]	39,271,786	0.4	2.9	--	--	--	--	--	--	--	--	--	2.9	Jan-18
Benefit St Pr Sr Secure Opp- Net			2.9	--	--	--	--	--	--	--	--	--	2.9	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	2.0	Jan-18
Summit Credit- Gross	3,678,730	0.0	0.6	--	1.5	--	3.3	--	8.4	--	9.0	--	7.6	Oct-11
Summit Credit- Net			0.6	--	1.5	--	3.3	--	8.4	--	9.0	--	7.6	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	7.1	Oct-11
Summit Credit II- Gross	21,103,808	0.2	0.7	--	4.0	--	9.2	--	8.1	--	--	--	6.7	Nov-14
Summit Credit II- Net			0.7	--	4.0	--	9.2	--	8.1	--	--	--	6.7	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	6.1	Nov-14
TCP Direct Lending VIII- Gross ^{**}	24,610,354	0.3	-0.6	--	--	--	--	--	--	--	--	--	-0.6	Feb-18
TCP Direct Lending VIII- Net			-0.6	--	--	--	--	--	--	--	--	--	-0.6	
<i>Credit Suisse Leveraged Loan + 2%</i>			1.1	--	3.2	--	6.7	--	6.3	--	6.3	--	1.6	Feb-18

⁺⁺ Returns are lagged one quarter.

^{*} Funded in January 2018.

^{**} Funded in February 2018.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Growth Oriented Absolute Return- Gross ⁺⁺	347,316,478	3.8	2.1	--	2.1	--	6.5	--	4.3	--	5.5	--	5.1	Aug-04
Growth Oriented Absolute Return- Net			2.1	--	2.1	--	6.5	--	4.3	--	5.5	--	5.1	
HFRI FoF Composite Index + 1% ¹			0.6	--	1.2	--	6.2	--	5.6	--	5.4	--	6.3	Aug-04
Grosvenor- Gross	60,299	0.0	-37.4	99	-39.5	99	-71.6	99	-24.2	99	-15.1	99	-3.2	Aug-04
Grosvenor- Net			-37.4	99	-39.5	99	-71.6	99	-24.2	99	-15.1	99	-3.5	
HFRI FoF Composite Index + 1%			0.6	63	1.2	60	6.2	46	5.6	16	5.4	31	6.3	Aug-04
eV Alt Fund of Funds - Multi-Strategy Median			1.0		1.8		5.7		2.6		4.3		4.7	Aug-04
Grosvenor SCARF Growth- Gross	154,516,041	1.7	2.1	25	3.0	34	8.6	27	4.3	27	5.4	32	6.6	Nov-11
Grosvenor SCARF Growth- Net			2.1	25	3.0	34	8.6	27	4.3	27	5.4	32	6.6	
HFRI FoF Composite Index + 1%			0.6	63	1.2	60	6.2	46	5.6	16	5.4	31	5.3	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			1.0		1.8		5.7		2.6		4.3		5.1	Nov-11
Grosvenor SCARF B Growth- Gross	7,978,541	0.1	1.8	30	2.6	40	6.6	42	3.6	37	4.8	41	5.2	Jan-13
Grosvenor SCARF B Growth- Net			1.8	30	2.6	40	6.6	42	3.6	37	4.8	41	5.2	
HFRI FoF Composite Index + 1%			0.6	63	1.2	60	6.2	46	5.6	16	5.4	31	5.4	Jan-13
eV Alt Fund of Funds - Multi-Strategy Median			1.0		1.8		5.7		2.6		4.3		4.4	Jan-13
JANA Partners- Gross	42,834,582	0.5	7.0	9	4.5	20	4.4	51	2.1	79	--	--	4.0	Jul-13
JANA Partners- Net			7.0	9	4.5	20	4.4	51	2.1	79	--	--	4.0	
HFRI FoF Composite Index + 1%			0.6	70	1.2	59	6.2	43	5.6	45	5.4	48	5.4	Jul-13
eV Alt All Event Driven Median			1.5		1.7		4.6		5.1		5.2		4.7	Jul-13
Lakewood- Gross	43,401,189	0.5	-1.2	72	-4.6	82	-0.8	87	5.8	48	6.1	57	6.1	Jun-13
Lakewood- Net			-1.2	72	-4.6	82	-0.8	87	5.8	48	6.1	57	6.1	
HFRI FoF Composite Index + 1%			0.6	57	1.2	52	6.2	59	5.6	49	5.4	67	5.4	Jun-13
eV Alt Fundamental - Long/Short Equity Median			1.5		1.3		8.1		5.3		6.9		6.9	Jun-13

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

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

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
OZ Domestic II- Gross	48,742,680	0.5	1.9	27	4.2	19	8.0	26	4.8	42	6.2	41	7.8	Dec-11
OZ Domestic II- Net			1.9	27	4.2	19	8.0	26	4.8	42	6.2	41	7.8	
HFRI FoF Composite Index + 1%			0.6	42	1.2	40	6.2	37	5.6	35	5.4	47	5.3	Dec-11
eV Alt All Multi-Strategy Median			0.1		-0.1		4.2		3.5		5.1		5.4	Dec-11
Third Point Offshore Fund- Gross	49,783,146	0.5	1.4	52	1.0	64	7.4	37	6.2	42	8.2	21	10.8	Apr-12
Third Point Offshore Fund- Net			1.4	52	1.0	64	7.4	37	6.2	42	8.2	21	10.8	
HFRI FoF Composite Index + 1%			0.6	70	1.2	59	6.2	43	5.6	45	5.4	48	5.3	Apr-12
eV Alt All Event Driven Median			1.5		1.7		4.6		5.1		5.2		6.0	Apr-12
Diversifying Asset Category- Gross	2,028,843,096	22.0	-0.8	--	-1.2	--	0.8	--	--	--	--	--	1.9	Mar-17
Diversifying Asset Category- Net			-0.9	--	-1.3	--	0.7	--	--	--	--	--	1.8	
<i>Diversifying Custom¹</i>			-0.3	--	-0.6	--	1.0	--	--	--	--	--	2.1	Mar-17
Core/Core Plus Fixed Income- Gross	847,288,747	9.2	0.0	--	-1.3	--	0.4	--	2.6	--	2.7	--	2.9	Jun-11
Core/Core Plus Fixed Income- Net			0.0	--	-1.4	--	0.2	--	2.5	--	2.6	--	2.7	
<i>BBgBarc US Aggregate TR</i>			-0.2	--	-1.6	--	-0.4	--	1.7	--	2.3	--	2.6	Jun-11
Prudential- Gross	432,374,722	4.7	-0.1	35	-1.4	40	0.8	8	3.5	4	--	--	3.5	Jul-14
Prudential- Net			-0.1	60	-1.5	57	0.6	13	3.3	5	--	--	3.4	
<i>BBgBarc US Aggregate TR</i>			-0.2	62	-1.6	69	-0.4	82	1.7	88	2.3	89	1.9	Jul-14
eV US Core Fixed Inc Gross Median			-0.1		-1.5		-0.1		2.1		2.7		2.2	Jul-14
TCW MetWest Fixed- Gross	414,914,025	4.5	0.1	14	-1.0	14	0.5	18	2.2	41	2.8	35	5.8	Dec-01
TCW MetWest Fixed- Net			0.1	17	-1.1	17	0.3	24	2.0	59	2.6	59	5.6	
<i>BBgBarc US Aggregate TR</i>			-0.2	62	-1.6	69	-0.4	82	1.7	88	2.3	89	4.3	Dec-01
eV US Core Fixed Inc Gross Median			-0.1		-1.5		-0.1		2.1		2.7		4.8	Dec-01
U.S. Treasury- Gross	418,966,768	4.5	0.1	--	--	--	--	--	--	--	--	--	1.0	Feb-18
U.S. Treasury- Net			0.1	--	--	--	--	--	--	--	--	--	1.0	
<i>BBgBarc US Treasury TR</i>			0.1	--	-1.1	--	-0.7	--	1.0	--	1.5	--	1.0	Feb-18

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Neuberger Berman- Gross ⁺	418,966,768	4.5	0.1	87	-1.1	93	0.1	21	2.0	1	2.6	1	6.4	Jun-88
Neuberger Berman- Net			0.1	87	-1.1	94	0.1	29	2.0	1	2.5	1	6.4	
BBgBarc US Govt TR			0.1	85	-1.1	91	-0.6	90	1.0	74	1.5	76	5.8	Jun-88
eV US Government Fixed Inc Gross Median			0.2		-0.7		0.0		1.3		1.7		--	Jun-88
Global Fixed Income- Gross	221,138,221	2.4	-6.6	--	-2.9	--	0.0	--	3.5	--	2.7	--	2.2	May-13
Global Fixed Income- Net			-6.7	--	-3.1	--	-0.4	--	3.1	--	2.3	--	1.8	
Brandywine Custom ¹			-4.8	--	-2.0	--	1.1	--	2.7	--	0.7	--	0.4	May-13
Brandywine Global- Gross	221,138,221	2.4	-6.6	96	-2.9	80	0.0	87	3.5	45	2.7	59	2.2	May-13
Brandywine Global- Net			-6.7	96	-3.1	83	-0.4	90	3.1	56	2.3	64	1.8	
Brandywine Custom			-4.8	86	-2.0	68	1.1	64	2.7	68	0.7	92	0.4	May-13
eV All Global Fixed Inc Gross Median			-1.5		-1.4		1.5		3.3		3.0		2.5	May-13
Diversifying Absolute Return- Gross^{**}	541,449,360	5.9	-0.4	--	-1.0	--	1.8	--	1.0	--	1.8	--	2.3	Nov-11
Diversifying Absolute Return- Net			-0.4	--	-1.0	--	1.8	--	1.0	--	1.8	--	2.3	
HFRI FoF Conservative Index ¹			1.1	--	1.6	--	4.2	--	5.0	--	5.0	--	5.0	Nov-11
AQR DELTA II- Gross	65,536,034	0.7	-6.0	92	-9.6	94	-5.6	94	2.0	63	3.5	65	3.4	May-13
AQR DELTA II- Net			-6.0	92	-9.6	94	-5.6	94	2.0	63	3.5	65	3.4	
HFRI FoF Conservative Index			1.1	36	1.6	34	4.2	51	5.0	41	5.0	53	5.0	May-13
eV Alt All Multi-Strategy Median			0.1		-0.1		4.2		3.5		5.1		4.7	May-13
Brevan Howard US- Gross	27,544,875	0.3	8.0	6	8.2	7	8.0	30	0.7	56	--	--	1.1	Feb-14
Brevan Howard US- Net			8.0	6	8.2	7	8.0	30	0.7	56	--	--	1.1	
HFRI FoF Conservative Index			1.1	40	1.6	31	4.2	48	5.0	19	5.0	29	5.0	Feb-14
HFRI Fund of Funds Composite Index			0.4	50	0.7	37	5.1	44	1.9	42	3.5	42	2.5	Feb-14
eV Alt All Macro Median			0.4		-0.4		3.4		1.2		2.6		2.5	Feb-14

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

1. See Policy Index and Benchmark History.

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

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

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Claren Road Credit- Gross	47,422	0.0	0.8	57	2.2	46	-16.8	98	-3.5	99	-5.4	99	-2.9	Jan-12
Claren Road Credit- Net			0.8	57	2.2	46	-16.8	98	-3.5	99	-5.4	99	-2.9	
<i>HFRI FoF Conservative Index</i>			1.1	48	1.6	58	4.2	53	5.0	55	5.0	47	5.0	Jan-12
<i>eV Alt Fundamental - Long/Short Credit Median</i>			1.0		2.0		4.6		5.2		4.8		4.9	Jan-12
Elliot Associates- Gross*	53,795,907	0.6	0.0	78	1.7	50	6.6	39	7.5	26	7.3	29	7.8	Apr-12
Elliot Associates- Net			0.0	78	1.7	50	6.6	39	7.5	26	7.3	29	7.8	
<i>HFRI FoF Conservative Index</i>			1.1	59	1.6	53	4.2	52	5.0	52	5.0	52	5.0	Apr-12
<i>eV Alt All Event Driven Median</i>			1.5		1.7		4.6		5.1		5.2		6.0	Apr-12
Graham Global Inv II- Gross	32,586,818	0.4	-2.2	71	-7.7	76	-0.7	57	--	--	--	--	-4.4	Feb-17
Graham Global Inv II- Net			-2.2	71	-7.7	76	-0.7	57	--	--	--	--	-4.4	
<i>HFRI FoF Conservative Index</i>			1.1	42	1.6	27	4.2	37	5.0	17	5.0	32	4.6	Feb-17
<i>eV Alt All Managed Futures Median</i>			-0.2		-1.8		1.1		-1.1		2.7		-1.0	Feb-17
Grosvenor SCARF Diversifying- Gross	116,668,659	1.3	-0.1	77	-0.2	76	-1.0	96	-1.8	97	0.6	98	1.6	Nov-11
Grosvenor SCARF Diversifying- Net			-0.1	77	-0.2	76	-1.0	96	-1.8	97	0.6	98	1.6	
<i>HFRI FoF Conservative Index</i>			1.1	50	1.6	53	4.2	73	5.0	19	5.0	36	5.0	Nov-11
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>			1.0		1.8		5.7		2.6		4.3		5.1	Nov-11
Grosvenor SCARF B Diversifying- Gross	161,957,366	1.8	-1.1	91	-0.8	85	-1.8	97	-3.3	99	-0.1	99	0.4	Jan-13
Grosvenor SCARF B Diversifying- Net			-1.1	91	-0.8	85	-1.8	97	-3.3	99	-0.1	99	0.4	
<i>HFRI FoF Conservative Index</i>			1.1	50	1.6	53	4.2	73	5.0	19	5.0	36	5.0	Jan-13
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>			1.0		1.8		5.7		2.6		4.3		4.4	Jan-13
Laurion Capital- Gross	45,841,006	0.5	1.8	36	6.6	5	10.8	5	6.7	21	--	--	6.5	Mar-14
Laurion Capital- Net			1.8	36	6.6	5	10.8	5	6.7	21	--	--	6.5	
<i>HFRI FoF Conservative Index</i>			1.1	39	1.6	34	4.2	57	5.0	30	5.0	33	5.0	Mar-14
<i>eV Alt Relative Value - Equity Relative Value Median</i>			0.8		-0.4		6.4		2.5		4.5		3.8	Mar-14

+ Preliminary quarterly returns as of 06/30/2018 (Returns are not available at reporting period.)

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date		
Winton Diversified Futures- Gross	37,471,273	0.4	3.0	19	0.7	33	8.6	15	--	--	--	--	--	4.7	Dec-16	
Winton Diversified Futures- Net			3.0	19	0.7	33	8.6	15	--	--	--	--	--	4.7		
HFRI FoF Conservative Index			1.1	42	1.6	27	4.2	37	5.0	17	5.0	32		4.7	Dec-16	
eV Alt All Managed Futures Median			-0.2		-1.8		1.1		-1.1		2.7			-1.4	Dec-16	
Real Return (with SSgA RA Overlay Proxy)- Gross	1,522,418,681	16.5	2.3	--	5.3	--	12.6	--	--	--	--	--	11.9	Mar-17		
Real Return (with SSgA RA Overlay Proxy)- Net			2.2	--	5.2	--	12.4	--	--	--	--	--	11.7			
Real Return Custom ¹			1.7	--	4.5	--	9.1	--	--	--	--	--		8.1	Mar-17	
Real Return Asset Category- Gross	1,301,929,139	14.1	2.7	--	7.2	--	14.7	--	--	--	--	--	14.3	Mar-17		
Real Return Asset Category- Net			2.6	--	7.0	--	14.5	--	--	--	--	--		14.1		
Real Return Custom ¹			1.7	--	4.5	--	9.1	--	--	--	--	--		8.1	Mar-17	
Real Estate- Gross	874,007,852	9.5	3.3	4	7.1	1	14.9	1	11.5	1	12.4	1	12.5	Jun-11		
Real Estate- Net			3.2	4	6.9	1	14.6	1	10.9	1	11.4	7		11.6		
Real Estate Custom ¹			2.1	26	5.0	5	8.3	19	8.6	42	10.0	48		10.4	Jun-11	
InvestorForce All DB Real Estate Priv Net Median					1.7		3.7		7.1		8.2		9.8		9.9	Jun-11
Core RE -Separate- Gross	279,372,853	3.0	5.8	--	7.8	--	16.1	--	10.5	--	11.7	--	6.5	Sep-08		
Core RE -Separate- Net			5.5	--	7.4	--	15.4	--	9.7	--	10.5	--		5.6		
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--		5.5	Sep-08	
BlackRock RE Leveraged- Gross	196,771,748	2.1	5.2	--	7.5	--	13.1	--	11.9	--	13.1	--		10.0	Dec-98	
BlackRock RE Leveraged- Net			4.9	--	7.0	--	12.4	--	11.3	--	11.9	--			--	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--		8.6	Dec-98	
Cornerstone Leveraged- Gross	82,601,105	0.9	7.3	--	8.4	--	23.5	--	14.6	--	13.2	--		8.9	May-04	
Cornerstone Leveraged- Net			7.0	--	8.2	--	22.6	--	13.5	--	12.1	--			--	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--		8.3	May-04	
BlackRock RE Unleveraged- Gross	--	--	4.6	--	6.6	--	11.5	--	11.2	--	12.1	--		10.4	Oct-95	
BlackRock RE Unleveraged- Net			3.7	--	5.5	--	9.8	--	9.9	--	10.7	--			--	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--		9.2	Oct-95	

1. See Policy Index and Benchmark History.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Cornerstone Unleveraged- Gross	--	--	5.2	--	6.2	--	16.3	--	10.3	--	9.7	--	7.5	Jun-04
Cornerstone Unleveraged- Net			5.1	--	6.0	--	15.9	--	9.9	--	9.2	--	--	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	8.3	Jun-04
Core RE -Limited Partnership- Gross	387,456,793	4.2	1.6	--	4.7	--	13.1	--	11.2	--	11.9	--	4.8	Sep-08
Core RE -Limited Partnership- Net			1.6	--	4.6	--	12.8	--	10.8	--	11.3	--	4.2	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	5.5	Sep-08
Jamestown Premier Property- Gross	17,591,780	0.2	1.8	--	4.9	--	15.2	--	10.5	--	--	--	11.9	Dec-13
Jamestown Premier Property- Net			1.8	--	4.9	--	15.2	--	10.5	--	--	--	11.9	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	10.7	Dec-13
Metlife Core Property- Gross	57,649,362	0.6	2.8	--	4.9	--	10.8	--	10.6	--	--	--	12.5	Dec-13
Metlife Core Property- Net			2.7	--	4.7	--	10.3	--	10.1	--	--	--	12.0	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	10.7	Dec-13
Prime Property- Gross	57,974,519	0.6	2.1	--	4.4	--	9.4	--	10.8	--	--	--	12.6	Sep-13
Prime Property- Net			1.8	--	3.9	--	8.4	--	9.6	--	--	--	11.4	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	10.8	Sep-13
Principal US Property- Gross	44,145,919	0.5	2.2	--	4.2	--	8.3	--	--	--	--	--	9.1	Oct-15
Principal US Property- Net			2.2	--	4.2	--	8.3	--	--	--	--	--	9.1	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	9.1	Oct-15
Prologis Targeted Euro Logistics- Gross ⁺	38,312,331	0.4	0.0	--	7.1	--	31.7	--	--	--	--	--	13.8	Oct-15
Prologis Targeted Euro Logistics- Net			0.0	--	7.1	--	31.7	--	--	--	--	--	13.8	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	9.1	Oct-15
Prologis Targeted US Logistics- Gross	66,354,422	0.7	3.4	--	7.4	--	20.9	--	--	--	--	--	17.5	Jul-15
Prologis Targeted US Logistics- Net			3.4	--	7.4	--	20.9	--	--	--	--	--	17.5	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	9.6	Jul-15
Townsend Real Estate- Gross ⁺	105,428,460	1.1	0.0	--	2.6	--	7.8	--	--	--	--	--	9.4	Mar-16
Townsend Real Estate- Net			0.0	--	2.6	--	7.8	--	--	--	--	--	9.4	
NFI-ODCE			2.1	--	4.3	--	8.4	--	9.4	--	11.0	--	8.2	Mar-16

+ Preliminary quarterly returns as of 06/30/2018 (Returns are not available at reporting period.)

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Non-Core RE -Opportunistic- Gross ⁺⁺	146,676,699	1.6	4.3	--	13.1	--	25.0	--	22.8	--	--	--	31.9	Feb-14
Non-Core RE -Opportunistic- Net			4.3	--	13.1	--	25.0	--	21.9	--	--	--	30.8	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	11.4	Feb-14
Carlyle China Realty- Gross	2,935,883	0.0	8.3	--	10.7	--	-8.6	--	--	--	--	--	-8.6	Jun-17
Carlyle China Realty- Net			8.3	--	10.7	--	-8.6	--	--	--	--	--	-8.6	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	8.1	Jun-17
Carlyle China Rome Logistics- Gross	17,861,294	0.2	8.0	--	12.7	--	2.0	--	--	--	--	--	2.0	Jun-17
Carlyle China Rome Logistics- Net			8.0	--	12.7	--	2.0	--	--	--	--	--	2.0	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	8.1	Jun-17
CIM Opportunity VIII- Gross	29,726,085	0.3	4.6	--	3.5	--	5.1	--	9.6	--	--	--	6.4	Feb-15
CIM Opportunity VIII- Net			4.6	--	3.5	--	5.1	--	8.0	--	--	--	4.7	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	11.1	Feb-15
Kohlberg Kravis Roberts- Gross	37,550,248	0.4	2.2	--	7.0	--	22.2	--	26.6	--	--	--	36.9	Feb-14
Kohlberg Kravis Roberts- Net			2.2	--	7.0	--	22.2	--	26.5	--	--	--	36.5	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	11.4	Feb-14
NREP Nordic Strat FCP-FIS- Gross	15,708,405	0.2	4.6	--	26.7	--	63.5	--	41.4	--	--	--	32.1	Dec-14
NREP Nordic Strat FCP-FIS- Net			4.6	--	26.7	--	63.5	--	41.4	--	--	--	32.1	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	10.6	Dec-14
NREP Nordic Strat II- Gross	24,818,162	0.3	3.6	--	28.6	--	55.7	--	--	--	--	--	20.2	Jun-16
NREP Nordic Strat II- Net			3.6	--	28.6	--	55.7	--	--	--	--	--	20.2	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	8.2	Jun-16
OZ RE III- Gross	18,076,622	0.2	5.4	--	19.4	--	32.2	--	20.8	--	--	--	4.5	Sep-14
OZ RE III- Net			5.4	--	19.4	--	32.2	--	15.9	--	--	--	-0.7	
NFI-ODCE net +1% 1Q Lag			2.2	--	6.2	--	8.1	--	10.0	--	--	--	10.6	Sep-14

⁺⁺ Returns are one-quarter lag.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date	
Non-Core RE -Value Added- Gross⁺⁺	60,501,507	0.7	1.4	--	6.5	--	3.0	--	7.1	--	9.8	--	-3.2	Sep-08	
Non-Core RE -Value Added- Net			1.4	--	6.5	--	3.0	--	6.2	--	8.9	--	-4.6		
<i>NFI-ODCE net +1% 1Q Lag¹</i>				2.2	--	6.2	--	8.1	--	10.1	--	11.6	--	8.0	Sep-08
AEW II- Gross	45,482	0.0	-3.3	--	-7.7	--	-13.1	--	-9.7	--	3.6	--	-0.4	May-07	
AEW II- Net			-3.3	--	-7.7	--	-13.1	--	-10.2	--	2.8	--	-1.9		
<i>NFI-ODCE net +1% 1Q Lag</i>				2.2	--	6.2	--	8.1	--	10.1	--	11.6	--	--	May-07
ECE Euro Prime Shopping II- Gross	18,205,159	0.2	3.7	--	11.9	--	22.5	--	--	--	--	--	20.7	Jul-15	
ECE Euro Prime Shopping II- Net			3.7	--	11.9	--	22.5	--	--	--	--	--	19.0		
<i>NFI-ODCE net +1% 1Q Lag</i>				2.2	--	6.2	--	8.1	--	10.1	--	11.6	--	10.3	Jul-15
European RE Debt II- Gross	13,340,634	0.1	4.3	--	14.7	--	28.7	--	9.6	--	--	--	7.1	Nov-13	
European RE Debt II- Net			4.3	--	14.7	--	28.7	--	9.6	--	--	--	7.1		
<i>NFI-ODCE net +1% 1Q Lag</i>				2.2	--	6.2	--	8.1	--	10.1	--	11.6	--	11.9	Nov-13
Hammes II- Gross	20,955,623	0.2	1.9	--	4.6	--	-28.8	--	--	--	--	--	-0.5	Jul-15	
Hammes II- Net			1.9	--	4.6	--	-28.8	--	--	--	--	--	-3.7		
<i>NFI-ODCE net +1% 1Q Lag</i>				2.2	--	6.2	--	8.1	--	10.1	--	11.6	--	10.3	Jul-15
Hines US Office II- Gross	575,087	0.0													
Hines US Office II- Net															
UBS RE- Gross	7,379,523	0.1	-2.9	--	-0.8	--	3.8	--	7.2	--	7.8	--	0.5	Sep-06	
UBS RE- Net			-2.9	--	-0.8	--	3.8	--	6.9	--	7.4	--	-1.0		
<i>NFI-ODCE net +1% 1Q Lag</i>				2.2	--	6.2	--	8.1	--	10.1	--	11.6	--	--	Sep-06
Private Real Assets- Gross⁺⁺	400,207,076	4.3	1.4	--	7.8	--	15.7	--	16.5	--	17.3	--	4.6	Jan-13	
Private Real Assets- Net			1.4	--	7.8	--	15.7	--	16.5	--	17.3	--	4.6		
<i>Private Real Assets Custom</i>				1.6	--	5.2	--	10.2	--	7.6	--	6.8	--	6.9	Jan-13
<i>CPI-U Headline +5%</i>				2.0	--	3.8	--	7.9	--	6.8	--	6.3	--	6.5	Jan-13

1. See Policy Index and Benchmark History.

⁺⁺ Returns are one-quarter lag.

Total Fund Performance Summary

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
ACM II- Gross	13,047,124	0.1	-1.1	--	-2.6	--	-6.2	--	--	--	--	--	-7.2	Sep-16
ACM II- Net			-1.1	--	-2.6	--	-6.2	--	--	--	--	--	-7.2	
NCREIF Farmland 1 Qtr Lag			1.3	--	4.3	--	7.1	--	7.6	--	10.4	--	6.8	Sep-16
ArcLight Energy VI- Gross	31,754,821	0.3	0.5	--	2.4	--	5.2	--	--	--	--	--	4.3	Aug-15
ArcLight Energy VI- Net			0.5	--	2.4	--	5.2	--	--	--	--	--	4.3	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	14.9	Aug-15
Atalaya SMA- Gross	26,353,649	0.3	6.1	--	8.5	--	13.7	--	8.7	--	--	--	8.5	May-15
Atalaya SMA- Net			6.1	--	8.5	--	13.7	--	8.7	--	--	--	8.5	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	12.9	May-15
Brookfield Infra III- Gross	15,793,177	0.2	3.5	--	8.5	--	12.5	--	--	--	--	--	14.3	May-16
Brookfield Infra III- Net			3.5	--	8.5	--	12.5	--	--	--	--	--	14.3	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	15.2	May-16
Carlyle Power II- Gross	16,061,788	0.2	-19.0	--	12.9	--	11.4	--	--	--	--	--	-5.7	Oct-15
Carlyle Power II- Net			-19.0	--	12.9	--	11.4	--	--	--	--	--	-5.7	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	13.6	Oct-15
EnCap Energy IX- Gross	23,890,326	0.3	-4.5	--	1.3	--	-1.0	--	18.9	--	10.5	--	-1.0	Jan-13
EnCap Energy IX- Net			-4.5	--	1.3	--	-1.0	--	18.9	--	10.5	--	-1.0	
Cambridge Associates Private Energy 1 Qtr Lag			0.7	--	4.5	--	5.8	--	1.5	--	0.7	--	1.7	Jan-13
EnCap Energy X- Gross	28,484,456	0.3	0.3	--	2.8	--	3.8	--	-3.5	--	--	--	-3.4	Apr-15
EnCap Energy X- Net			0.3	--	2.8	--	3.8	--	-3.5	--	--	--	-3.4	
Cambridge Associates Private Energy 1 Qtr Lag			0.7	--	4.5	--	5.8	--	1.5	--	0.7	--	0.5	Apr-15
EnCap Flatrock Midstream IV- Gross*	914,944	0.0	-9.0	--	--	--	--	--	--	--	--	--	-9.0	Feb-18
EnCap Flatrock Midstream IV- Net			-9.0	--	--	--	--	--	--	--	--	--	-9.0	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	6.6	Feb-18

* Funded in February 2018.

**Total Fund
Performance Summary**

Period Ending: June 30, 2018

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
EnCap Flatrock Midstream III- Gross	7,707,974	0.1	-0.6	--	13.9	--	29.7	--	34.8	--	--	--	8.9	Jul-14
EnCap Flatrock Midstream III- Net			-0.6	--	13.9	--	29.7	--	34.8	--	--	--	8.9	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	11.2	Jul-14
First Reserve- Gross	19,291,940	0.2	-1.4	--	7.2	--	8.8	--	23.2	--	--	--	-4.5	Dec-14
First Reserve- Net			-1.4	--	7.2	--	8.8	--	23.2	--	--	--	-4.5	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	11.8	Dec-14
IFM Global Infrastructure US LP- Gross	101,221,365	1.1	7.1	--	12.0	--	16.9	--	--	--	--	--	14.4	Apr-17
IFM Global Infrastructure US LP- Net			7.1	--	12.0	--	16.9	--	--	--	--	--	14.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	19.0	Apr-17
Meridiam Infra N America III- Gross	385,286	0.0	-44.4	--	-79.0	--	--	--	--	--	--	--	-88.8	Sep-17
Meridiam Infra N America III- Net			-44.4	--	-79.0	--	--	--	--	--	--	--	-88.8	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	11.5	Sep-17
Pantheon Ventures- Gross	71,450,673	0.8	3.1	--	4.9	--	33.7	--	23.1	--	--	--	31.1	Jul-14
Pantheon Ventures- Net			3.1	--	4.9	--	33.7	--	23.1	--	--	--	31.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	11.2	Jul-14
Quantum Energy VI- Gross	24,576,029	0.3	-0.3	--	21.0	--	38.0	--	31.1	--	--	--	25.5	Nov-14
Quantum Energy VI- Net			-0.3	--	21.0	--	38.0	--	31.1	--	--	--	25.5	
Cambridge Associates Private Energy 1 Qtr Lag			0.7	--	4.5	--	5.8	--	1.5	--	0.7	--	-3.6	Nov-14
Quantum Energy VII- Gross	11,223,203	0.1	-1.6	--	7.4	--	--	--	--	--	--	--	-5.1	Aug-17
Quantum Energy VII- Net			-1.6	--	7.4	--	--	--	--	--	--	--	-5.1	
Cambridge Associates Private Energy 1 Qtr Lag			0.7	--	4.5	--	5.8	--	1.5	--	0.7	--	5.8	Aug-17
Wastewater Opportunity- Gross	8,050,321	0.1	-2.0	--	-5.3	--	-10.2	--	--	--	--	--	-35.7	Dec-15
Wastewater Opportunity- Net			-2.0	--	-5.3	--	-10.2	--	--	--	--	--	-35.7	
Cambridge Associates Private Infrastructure 1 Qtr Lag			2.6	--	6.6	--	16.0	--	14.0	--	11.2	--	13.9	Dec-15

Total Fund Performance Summary

Period Ending: June 30, 2018

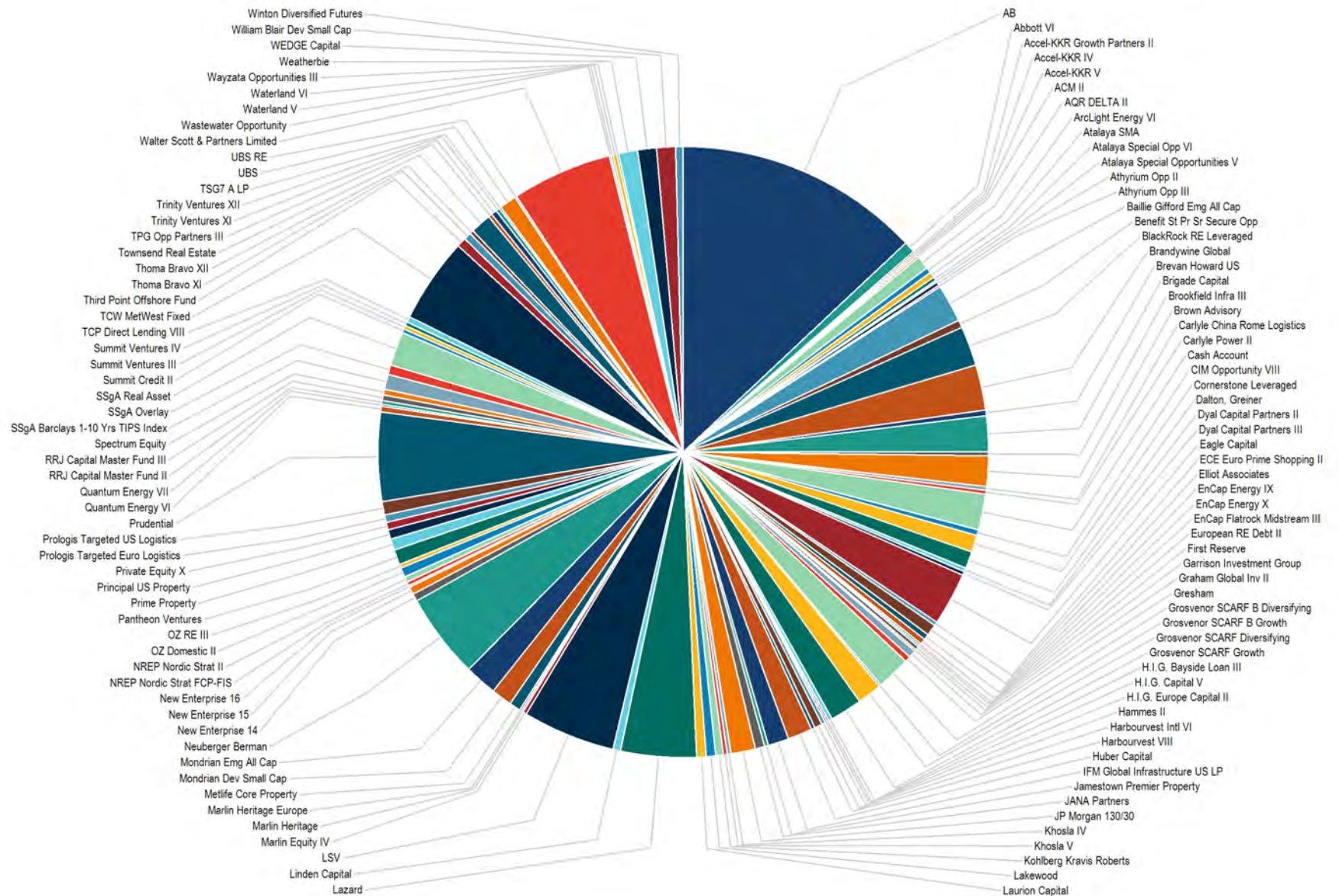
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Commodities- Gross	27,714,211	0.3	2.2	--	2.3	--	3.7	--	-6.3	--	-6.5	--	-6.1	May-08
Commodities- Net			2.0	--	1.9	--	3.2	--	-6.9	--	-7.2	--	--	--
<i>Bloomberg Commodity Index TR USD</i>			0.4	--	0.0	--	7.3	--	-4.5	--	-6.4	--	-8.2	May-08
Gresham- Gross	27,714,211	0.3	2.0	--	2.1	--	13.1	--	-2.8	--	-5.0	--	-7.2	Apr-08
Gresham- Net			1.9	--	1.8	--	12.3	--	-3.5	--	-5.7	--	--	--
<i>Bloomberg Commodity Index TR USD</i>			0.4	--	0.0	--	7.3	--	-4.5	--	-6.4	--	-7.9	Apr-08
Opportunities Asset Category- Gross*	9,297,812	0.1	-0.9	--	-2.9	--	-2.7	--	5.7	--	4.4	--	16.0	Oct-07
Opportunities Asset Category- Net			-0.9	--	-2.9	--	-2.7	--	5.7	--	4.4	--	16.0	--
<i>Policy Index</i>			0.9	--	1.4	--	8.2	--	7.1	--	7.9	--	8.0	Oct-07
Atalaya Special Opportunities V- Gross	9,297,812	0.1	-0.9	--	-2.9	--	-2.7	--	5.5	--	--	--	4.8	Jul-13
Atalaya Special Opportunities V- Net			-0.9	--	-2.9	--	-2.7	--	5.5	--	--	--	4.8	--
<i>Thomson Reuters C A All PE 1 Qtr Lag</i>			2.7	--	7.2	--	14.4	--	11.4	--	14.8	--	14.6	Jul-13
SSgA Real Asset Overlay Proxy- Gross	235,222,360	2.5	2.2	--	-1.4	--	5.2	--	2.8	--	2.2	--	1.3	Jan-08
SSgA Real Asset Overlay Proxy- Net			2.2	--	-1.5	--	5.1	--	2.6	--	2.0	--	1.1	--
<i>SSgA Real Asset¹</i>			2.2	--	-1.3	--	5.2	--	2.6	--	2.0	--	--	Jan-08
Cash - Gross	176,260,970	1.9	-0.4	--	-0.9	--	0.5	--	1.6	--	1.1	--	3.1	Jun-92
Cash - Net			-0.4	--	-0.9	--	0.5	--	1.6	--	1.1	--	--	--
<i>91 Day T-Bills</i>			0.5	--	0.8	--	1.4	--	0.7	--	0.4	--	2.5	Jun-92
Cash Account- Gross	176,260,970	1.9	-0.4	--	-0.9	--	0.5	--	1.6	--	1.1	--	3.2	Jun-92
Cash Account- Net			-0.4	--	-0.9	--	0.5	--	1.6	--	1.1	--	--	--
<i>91 Day T-Bills</i>			0.5	--	0.8	--	1.4	--	0.7	--	0.4	--	2.5	Jun-92

1. See Policy Index and Benchmark History.

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

Total Fund Manager Allocation Analysis

Period Ending: June 30, 2018



Total Fund
Manager Allocation Analysis

Period Ending: June 30, 2018

	Current	%
AB	\$1,197,518,166	13.0%
JP Morgan 130/30	\$123,683,893	1.3%
Brown Advisory	\$145,335,486	1.6%
Eagle Capital	\$260,981,185	2.8%
Huber Capital	\$118,430,272	1.3%
UBS	\$84,317,530	0.9%
Weatherbie	\$95,307,101	1.0%
Dalton, Greiner	\$82,816,566	0.9%
WEDGE Capital	\$93,726,433	1.0%
CenterSquare	\$145,093	0.0%
Lazard	\$370,038,968	4.0%
Walter Scott & Partners Limited	\$489,808,019	5.3%
LSV	\$453,771,807	4.9%
Mondrian Dev Small Cap	\$97,069,844	1.1%
William Blair Dev Small Cap	\$92,481,101	1.0%
Baillie Gifford Emg All Cap	\$181,000,837	2.0%
Mondrian Emg All Cap	\$160,972,861	1.7%
CBRE Clarion	\$68,010	0.0%
Abbott VI	\$56,848,769	0.6%
Accel-KKR IV	\$12,528,794	0.1%
Accel-KKR V	\$6,465,447	0.1%
Accel-KKR Growth Partners II	\$6,396,058	0.1%
Atalya Special Opp VI	\$20,668,773	0.2%
Davidson Kempner LT Dist Opp	\$3,512,785	0.0%
Dyal Capital Partners II	\$14,252,729	0.2%
Dyal Capital Partners III	\$15,079,778	0.2%
Garrison Investment Group	\$13,605,252	0.1%
Harbourvest VIII	\$19,871,385	0.2%

Total Fund
Manager Allocation Analysis

Period Ending: June 30, 2018

	Current	%
Harbourvest Intl VI	\$36,235,785	0.4%
H.I.G. Bayside Loan III	\$22,087,313	0.2%
H.I.G. Capital V	\$9,658,256	0.1%
H.I.G. Europe Capital II	\$10,222,894	0.1%
Khosla IV	\$14,311,902	0.2%
Khosla V	\$17,974,783	0.2%
Linden Capital	\$39,518,448	0.4%
Marlin Equity IV	\$19,616,377	0.2%
Marlin Equity V	\$4,570,183	0.0%
Marlin Heritage	\$8,876,822	0.1%
Marlin Heritage II	\$2,636,566	0.0%
Marlin Heritage Europe	\$4,744,745	0.1%
New Enterprise 14	\$39,234,897	0.4%
New Enterprise 15	\$38,435,440	0.4%
New Enterprise 16	\$9,217,725	0.1%
Private Equity X	\$33,038,060	0.4%
RRJ Capital Master Fund II	\$19,297,856	0.2%
RRJ Capital Master Fund III	\$30,791,411	0.3%
Spectrum Equity	\$24,340,264	0.3%
Spectrum Equity Fund VIII	\$437,500	0.0%
Summit EUR Growth Equity II	\$1,125,598	0.0%
Summit Ventures III	\$16,128,960	0.2%
Summit Ventures IV	\$16,329,489	0.2%
Thoma Bravo XI	\$37,383,880	0.4%
Thoma Bravo XII	\$20,111,264	0.2%
TPG Opp Partners III	\$22,791,483	0.2%
Trinity Ventures XI	\$27,661,960	0.3%
Trinity Ventures XII	\$16,931,969	0.2%

Total Fund
Manager Allocation Analysis

Period Ending: June 30, 2018

	Current	%
TSG7 A LP	\$7,573,970	0.1%
TSG7 B LP	\$446,336	0.0%
Waterland V	\$11,492,034	0.1%
Waterland VI	\$16,994,292	0.2%
Waterland VI Over	\$1,098	0.0%
Wayzata Opportunities III	\$7,204,281	0.1%
Brigade Capital	\$178,136,172	1.9%
Athyrium Opp II	\$15,817,657	0.2%
Athyrium Opp III	\$7,386,909	0.1%
Benefit St Pr Sr Secure Opp	\$39,271,786	0.4%
Summit Credit	\$3,678,730	0.0%
Summit Credit II	\$21,103,808	0.2%
TCP Direct Lending VIII	\$24,610,354	0.3%
Grosvenor	\$60,299	0.0%
Grosvenor SCARF Growth	\$154,516,041	1.7%
Grosvenor SCARF B Growth	\$7,978,541	0.1%
JANA Partners	\$42,834,582	0.5%
Lakewood	\$43,401,189	0.5%
OZ Domestic II	\$48,742,680	0.5%
Third Point Offshore Fund	\$49,783,146	0.5%
Prudential	\$432,374,722	4.7%
TCW MetWest Fixed	\$414,914,025	4.5%
Neuberger Berman	\$418,966,768	4.5%
Brandywine Global	\$221,138,221	2.4%
AQR DELTA II	\$65,536,034	0.7%
Brevan Howard US	\$27,544,875	0.3%
Claren Road Credit	\$47,422	0.0%
Elliot Associates	\$53,795,907	0.6%

Total Fund
Manager Allocation Analysis

Period Ending: June 30, 2018

	Current	%
Graham Global Inv II	\$32,586,818	0.4%
Grosvenor SCARF Diversifying	\$116,668,659	1.3%
Grosvenor SCARF B Diversifying	\$161,957,366	1.8%
Laurion Capital	\$45,841,006	0.5%
Winton Diversified Futures	\$37,471,273	0.4%
BlackRock RE Leveraged	\$196,771,748	2.1%
Cornerstone Leveraged	\$82,601,105	0.9%
Jamestown Premier Property	\$17,591,780	0.2%
Metlife Core Property	\$57,649,362	0.6%
Prime Property	\$57,974,519	0.6%
Principal US Property	\$44,145,919	0.5%
Prologis Targeted Euro Logistics	\$38,312,331	0.4%
Prologis Targeted US Logistics	\$66,354,422	0.7%
Townsend Real Estate	\$105,428,460	1.1%
Carlyle China Realty	\$2,935,883	0.0%
Carlyle China Rome Logistics	\$17,861,294	0.2%
CIM Opportunity VIII	\$29,726,085	0.3%
Kohlberg Kravis Roberts	\$37,550,248	0.4%
NREP Nordic Strat FCP-FIS	\$15,708,405	0.2%
NREP Nordic Strat II	\$24,818,162	0.3%
OZ RE III	\$18,076,622	0.2%
AEW II	\$45,482	0.0%
ECE Euro Prime Shopping II	\$18,205,159	0.2%
European RE Debt II	\$13,340,634	0.1%
Hammes II	\$20,955,623	0.2%
Hines US Office II	\$575,087	0.0%
UBS RE	\$7,379,523	0.1%
ACM II	\$13,047,124	0.1%

Total Fund
Manager Allocation Analysis

Period Ending: June 30, 2018

	Current	%
ArcLight Energy VI	\$31,754,821	0.3%
Atalaya SMA	\$26,353,649	0.3%
Brookfield Infra III	\$15,793,177	0.2%
Carlyle Power II	\$16,061,788	0.2%
EnCap Energy IX	\$23,890,326	0.3%
EnCap Energy X	\$28,484,456	0.3%
EnCap Flatrock Midstream IV	\$914,944	0.0%
EnCap Flatrock Midstream III	\$7,707,974	0.1%
First Reserve	\$19,291,940	0.2%
IFM Global Infrastructure US LP	\$101,221,365	1.1%
Meridiam Infra N America III	\$385,286	0.0%
Pantheon Ventures	\$71,450,673	0.8%
Quantum Energy VI	\$24,576,029	0.3%
Quantum Energy VII	\$11,223,203	0.1%
Wastewater Opportunity	\$8,050,321	0.1%
Gresham	\$27,714,211	0.3%
Atalaya Special Opportunities V	\$9,297,812	0.1%
Cash Account	\$176,260,970	1.9%
Transition Account	\$4	0.0%
Heitman Adv JMB V	\$8,390	0.0%
SSgA Overlay	\$43,775,383	0.5%
SSgA Barclays 1-10 Yrs TIPS Index	\$70,199,166	0.8%
SSgA Real Asset	\$165,023,194	1.8%
Total	\$9,236,785,830	100.0%

Total Fund
Risk vs. Return

Period Ending: June 30, 2018

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	7.6%	26	6.0%	46	1.2	24	0.3	45	1.9%	96
Policy Index	7.1%	50	4.9%	4	1.3	17	--	--	0.0%	1
Total Fund ex Overlay	7.8%	14	5.7%	34	1.3	18	0.5	33	1.7%	94
Policy Index	7.1%	50	4.9%	4	1.3	17	--	--	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	8.3%	49	5.8%	48	1.4	30	0.2	73	1.9%	97
Policy Index	7.9%	63	4.8%	4	1.6	15	--	--	0.0%	1
Total Fund ex Overlay	8.4%	39	5.4%	30	1.5	18	0.3	60	1.5%	93
Policy Index	7.9%	63	4.8%	4	1.6	15	--	--	0.0%	1

Total Fund
Peer Universe Comparison

Period Ending: June 30, 2018

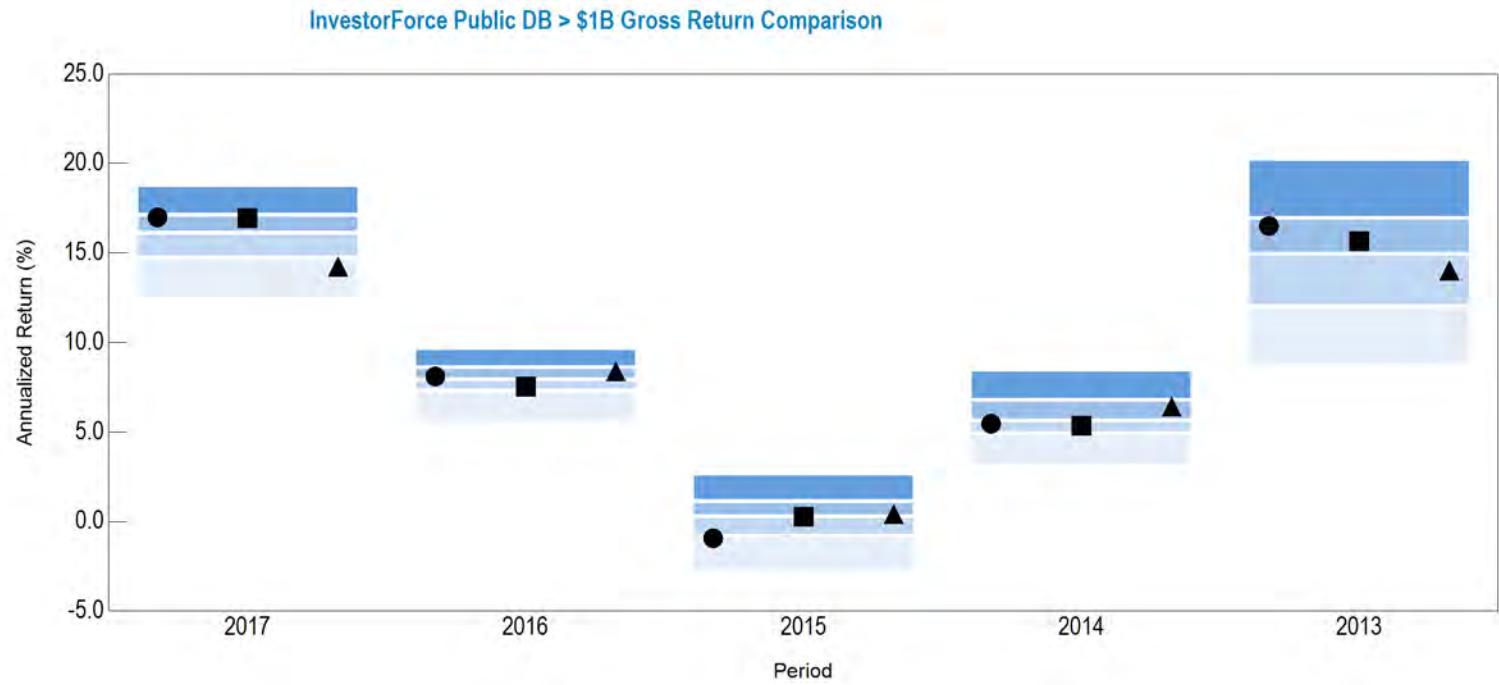


Return (Rank)

5th Percentile	1.8	2.6	10.8	8.6	9.7	9.2	8.1
25th Percentile	1.3	1.6	9.4	7.6	8.7	8.3	7.1
Median	0.9	0.9	8.4	7.0	8.2	7.7	6.6
75th Percentile	0.3	0.1	7.7	6.5	7.3	7.0	6.0
95th Percentile	-0.4	-0.3	6.8	6.2	6.6	6.3	5.4
# of Portfolios	51	51	51	51	50	50	47
Total Fund	1.2 (33)	1.9 (15)	10.1 (8)	7.6 (26)	8.3 (49)	7.8 (44)	6.3 (62)
Total Fund ex Overlay	1.1 (35)	1.9 (10)	10.3 (7)	7.8 (14)	8.4 (39)	7.7 (53)	6.0 (75)
Policy Index	0.9 (51)	1.4 (29)	8.2 (62)	7.1 (50)	7.9 (63)	7.5 (60)	6.2 (66)

Total Fund
Peer Universe Comparison (Calender Years)

Period Ending: June 30, 2018

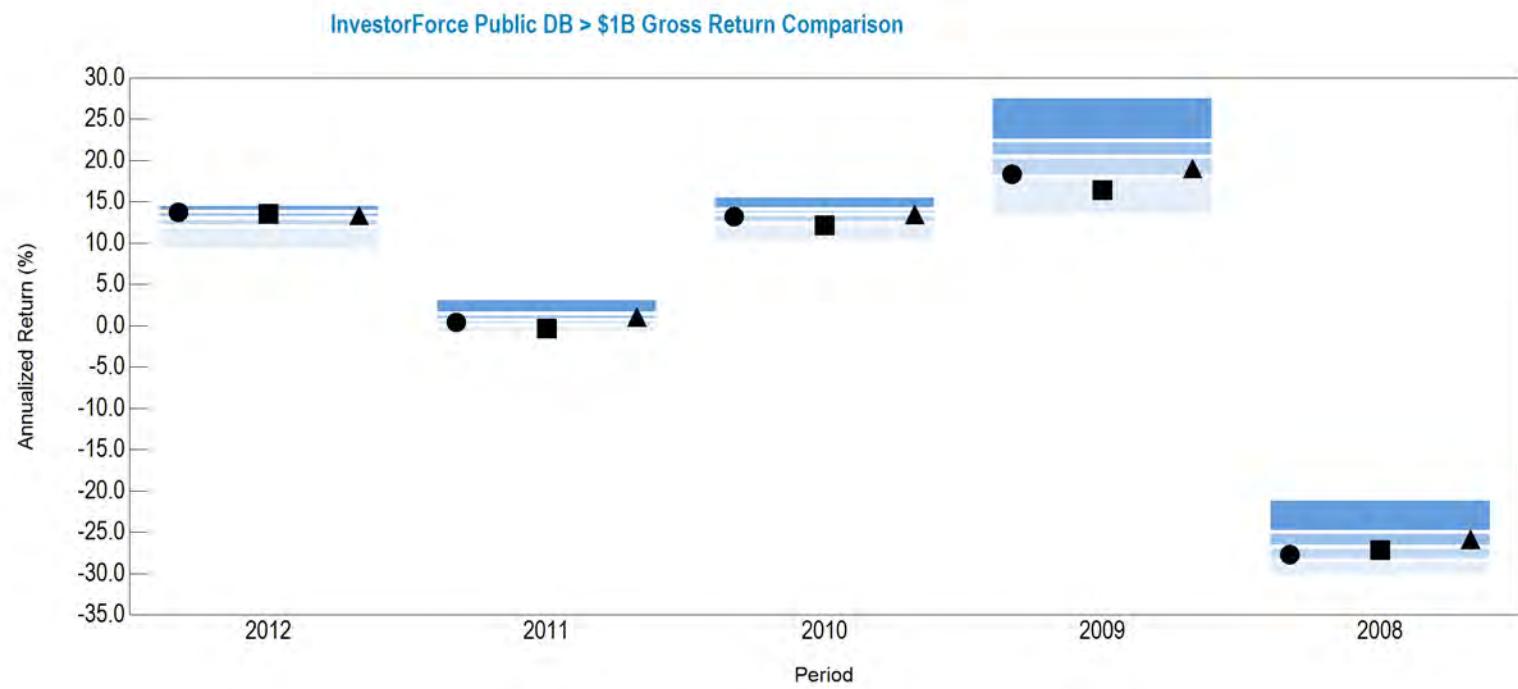


Return (Rank)

	2017	2016	2015	2014	2013			
5th Percentile	18.8	9.7	2.7	8.5	20.2			
25th Percentile	17.2	8.6	1.1	6.8	17.0			
Median	16.2	8.0	0.3	5.7	15.0			
75th Percentile	14.8	7.4	-0.7	4.9	12.0			
95th Percentile	12.4	5.5	-2.8	3.1	8.7			
# of Portfolios	98	92	98	79	67			
Total Fund	17.0	(31)	8.1	(43)	-0.9	(83)	5.5	(61)
Total Fund ex Overlay	16.9	(31)	7.5	(69)	0.3	(51)	5.3	(65)
Policy Index	14.2	(82)	8.4	(34)	0.4	(46)	6.4	(34)

Total Fund
Peer Universe Comparison (Calender Years)

Period Ending: June 30, 2018



Return (Rank)

	2012	2011	2010	2009	2008				
5th Percentile	14.7	3.3	15.7	27.7	-21.0				
25th Percentile	13.9	1.6	14.2	22.5	-24.9				
Median	13.0	0.8	13.5	20.5	-26.7				
75th Percentile	12.1	0.1	12.5	18.1	-28.3				
95th Percentile	9.2	-0.9	10.2	13.4	-30.2				
# of Portfolios	74	68	66	66	65				
Total Fund	13.7	(36)	0.4	(60)	13.2	(62)	18.3	(73)	-27.7
Total Fund ex Overlay	13.6	(41)	-0.3	(86)	12.2	(81)	16.4	(86)	-27.2
Policy Index	13.4	(42)	1.0	(38)	13.5	(53)	19.0	(62)	(42)

Policy Index and Benchmark History

Period Ending: June 30, 2018

Total Plan Policy Index	As of:								
	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%	15.0%	20.0%	20.0%	25.0%	25.0%	30.0%	
BBgBarc US Treasury	5.0%	5.0%							
ICE BofA ML High Yield II	1.0%	1.0%	1.0%						
Bloomberg Commodity	2.0%	2.0%			5.0%				
Cambridge Associates Private Energy 1 Qtr Lag	2.5%								
Cambridge Associates Private Infrastructure 1 Qtr Lag	3.2%								
Citigroup BIG								23.0%	
Citigroup WGBI ex US Unhedged	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%						
Credit Suisse Leveraged Loans +2%	4.0%	4.0%							
JPM GBI EM Diversified	0.6%	0.6%	0.6%						
HFRI FoF Composite Index + 1%	3.0%								
HFRI FoF Conservative Index	7.0%								
MSCI ACWI ex US	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%								
NFI-ODCE net +1% 1Q Lag	2.5%								
NCREIF		7.0%			12.0%	12.0%	15.0%	10.0%	15.0%
NCREIF Farmland 1 Qtr Lag	0.7%								
NCREIF Timberland Index Lagged	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	21.0%	21.0%	22.5%	22.5%	30.0%			47.0%	
S&P 500 +2% 1QL (PE)					5.0%				
Thomson Reuters C A All PE 1 Qtr Lag	9.0%	9.0%							
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: June 30, 2018

Growth Benchmark	As of:				Diversifying Benchmark	As of:	
	7/1/17	4/1/17			7/1/17	4/1/17	
91 Day T-Bill +5%		5.08%			91 Day T-Bill +5%		28.0%
ICE BofA ML High Yield II	1.70%	1.70%			BBgBarc US Aggregate	40.0%	40.0%
Credit Suisse Leveraged Loans	1.70%	1.70%			BBgBarc US Treasury	20.0%	20.0%
Credit Suisse Leveraged Loan + 2%	6.78%	6.78%			Citigroup WGBI ex US Unhedged	9.6%	9.6%
HFRI FoF Composite Index + 1%	5.08%				HFRI FoF Conservative Index	28.0%	
MSCI ACW ex US	33.90%	33.90%			JPM GBI EM Diversified	2.4%	2.4%
Russell 3000	35.59%	35.59%				100.0%	100.0%
Thomson Reuters C A All PE 1 Qtr Lag	15.25%	15.25%					
	100.0%	100.0%					
US Equity Benchmark	As of:				Global Fixed Income Benchmark	As of:	
	1/1/08	9/1/04	1/1/00	7/1/86		6/1/13	
Russell 1000		85.71%	87.5%		Citigroup WGBI ex US Unhedged	80.0%	
Russell 2000		14.29%	12.5%		JPM GBI EM Diversified	20.0%	
Russell 3000	100.0%			100.0%		100.0%	
	100.0%	100.0%	100.0%	100.0%			
International Equity Benchmark	As of:				Diversifying Absolute Return Benchmark	As of:	
	1/1/08	1/1/00	7/1/86			7/1/17	4/1/17
MSCI ACW ex US	100.0%				91-day UST Bill +5%		100.0%
MSCI EAFE		75.0%	100.0%		HFRI FoF Conservative Index	100.0%	
MSCI Emerging Markets		25.0%				100.0%	100.0%
	100.0%	100.0%	100.0%				
Private Equity Benchmark	As of:				Real Return Benchmark	As of:	
	4/1/17	1/1/12	1/1/08			4/1/17	
Russell 1000 +3% 1QL		100.0%			Real Estate Benchmark	43.75%	
S&P 500 +2% 1QL			100.0%		Private Real Assets Benchmark	43.75%	
Thomson Reuters C A All PE 1 Qtr Lag	100.0%				Bloomberg Commodity	12.50%	
	100.0%	100.0%	100.0%			100.0%	
Public Credit Benchmark	As of:				Real Estate Benchmark	As of:	
	4/1/17					7/1/17	7/1/2011
ICE BofA ML High Yield II	50.0%				NCREIF		100.0%
Credit Suisse Leveraged Loans	50.0%				NFI-ODCE	65.0%	
	100.0%				NFI-ODCE net +1% 1Q Lag	35.0%	
Private Credit Benchmark	As of:					100.0%	100.0%
	4/1/17						
Credit Suisse Leveraged Loan + 2%	100.0%			RE-Value Added Benchmark	As of:		
	100.0%				7/1/16	10/1/08	
Growth Oriented Absolute Return Benchmark	As of:				NCREIF +2% 1Q Lag		100.0%
	7/1/17	4/1/17		NFI-ODCE net +1% 1Q Lag	100.0%		
91-day UST Bill +5%		100.0%				100.0%	100.0%
HFRI FoF Composite Index + 1%	100.0%			Private Real Assets Benchmark	As of:		
	100.0%	100.0%			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%	

Policy Index and Benchmark History

Period Ending: June 30, 2018

AllianceBernstein Benchmark	As of:		
	1/1/01	1/1/98	5/1/89
Russell 1000	100.0%		
Russell 3000		100.0%	
Milshire 2500			100.0%
	100.0%	100.0%	100.0%

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

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

SSgA Real Asset Benchmark	As of:	
	10/1/15	2/1/08
BBgBarc US Govt Inflation-Linked 1-10 Yrs	10.0%	
BBgBarc US TIPS	10.0%	20.0%
BBgBarc Roll Select Commodity TR	20.0%	
DJ US Select REIT		30.0%
FTSE EPRA/NAREIT Developed Liquid	10.0%	
MSCI World Natural Resources	20.0%	25.0%
S&P Global Infrastructure	20.0%	
S&P GS Commodities		25.0%
S&P MLP	10.0%	
	100.0%	100.0%

Glossary

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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / 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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