

### ITEM 15

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For Agenda of: November 7, 2016

November 3, 2016

- TO: President and Members Board of Retirement
- FROM: Steve Davis Chief Investment Officer
- **SUBJECT**: SCERS' Investment Performance Review for Period Ending September 30, 2016

### Recommendation:

It is recommended that your Board receive and file the Verus Performance Report for the third quarter of 2016 and consider taking action on any recommendations made therein.

### Introduction:

Each quarter Verus provides a report on investment performance for the most recent quarter, as well as for the trailing calendar-year, one-year, three-year, five-year and since inception time periods. Performance is also depicted for the fiscal year-to-date period ('FYTD'). The performance report provides investment return results for the Total Fund ('TF'), each asset class and sub-asset class in SCERS' strategic asset allocation, and for each investment portfolio. In addition, the report includes: (1) A comparison of performance to the appropriate fund, asset class and individual manager benchmarks; (2) Peer group rankings; (3) Performance attribution; (4) Risk analysis; and (5) Comments and recommendations by Verus to help interpret the results and identify concerns.

Barry Dennis, John Nicolini, and/or Margaret Jadallah of Verus will present Verus' quarterly performance report. In addition, Staff and Verus will provide qualitative commentary on strategic and tactical considerations related to this report at the Board

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meeting. The discussion that follows outlines key sections of this report, and provides a summary of the portfolio performance data.

### Asset Allocation Analysis: Pages 12-13

This section provides visual information on SCERS' historical asset allocation by asset class over time, in addition to its current asset allocation (both with and without overlay) versus the policy target allocation and the median public fund universe asset allocation. Please note SCERS' overlay program is utilized to rebalance asset allocations to policy targets.

Within the subsequent performance summary report, two benchmarks are provided at the total fund level. First is the policy index, which reflects SCERS' target asset allocation model. Second is an allocation index, which reflects SCERS' actual asset allocation as SCERS transitions toward the asset allocation model. This index should reflect SCERS' current asset allocation excluding the impact of the overlay program. Removing the effects of the overlay program from the allocation index, gives a better gauge of SCERS' actual allocation performance versus the target allocation performance, which is the intent of the allocation index. This is especially true since the proxies that are used within the alternative/illiquid asset classes provide less than optimal exposures. This index will eventually converge on the policy index as the implementation of the current asset allocation will take several years, especially within the private equity and real assets asset classes.

### Performance Summary and Manager Allocation Analysis: Pages 16-41

The Total Fund ('TF') return for the third quarter, including the impact of the overlay program, was 3.9% gross of fees. The TF return was 0.5% higher than the return of the policy index return of 3.4%, and 0.6% above the allocation index return of 3.3%. The return of the TF without the impact of the overlay program was 3.5%, which was slightly above the policy index. Both gross and net of management fees performance are shown within the performance summary report.

On a comparative basis, SCERS' TF return of 3.9% was slightly better than the Public Funds > \$1 billion median return of 3.8%. The TF return ranks in the 41st percentile in the InvestorForce Universe, which is the ranking universe used by Verus. SCERS' TF return including the Overlay outperformed SCERS' TF return ex-Overlay, so the Overlay Program added value during the quarter.

The major asset classes performed well on an absolute basis, with all generating positive returns, except for Opportunities. The returns for the Domestic Equity, International Equity, Fixed Income, Absolute Return, Private Equity, Real Assets (ex-Overlay) and Opportunities asset classes were 4.7%, 7.1%, 1.8%, 2.3%, 2.1%, 1.7% and -1.4%, respectively. International Equities were the top performing asset class and strong returns

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in emerging markets (+8.7%) contributed to this. EM equities rallied after several periods of underperformance.

The performance summary section also examines the performance of individual asset classes to the relevant benchmarks within the policy index. For the quarter, the report shows that outperformance occurred, gross of fees, in the Domestic Equity, International Equity, Fixed Income, Absolute Return, and Real Assets ex-overlay segments. Underperformance occurred in the Private Equity and Opportunities segments. Private Equity underperformed against its benchmark, 2.1% versus 3.0%, and the Opportunities asset class significantly underperforming against its benchmark, -1.4% versus 3.4%. The Opportunities asset class underperformance was solely due to currency exchange decline experienced by DRC European Real Estate Debt Fund II. DRC is a UK denominated fund (Sterling), which suffered a significant sell-off of its currency due to Brexit. Please note that the returns of SCERS' private markets investments, including private equity, private real assets and opportunities commingled funds are delayed one quarter.

Calendar year-to-date, the TF return including the impact of the overlay program is 6.8% gross of fees. The TF return is 0.6% below the policy index return of 7.4%, and 0.2% below the allocation index return of 7.0%. The return of the TF without the impact of the overlay program is 6.1%. On a comparative basis, the return for the calendar year-to-date is 0.3% below the Public Funds > \$1 billion median return of 7.1%. The TF return ranks in the 60th percentile in the InvestorForce Universe.

The 3-year annualized TF return gross of fees is 5.3%, which is 0.9% below the policy index return of +6.2% for the same period. The 5-year annualized TF return gross of fees is +9.4%, which is 0.2% above the policy index return of +9.2% for the same period. The TF gross of fees since inception return from June 1986 of +8.2% is 0.3% below the policy index return of +8.5% for the same period, but above SCERS' actuarial investment return assumption, which has ranged from 8.25% to 7.50% (currently) during the same period.

### Manager Commentary: Pages 14-15

The following discussion summarizes the quarter returns for sub-asset classes and individual investment managers of note, the latter of which are covered in detail in the Verus Executive Performance Summary section.

Within SCERS' portfolio, there was varying levels of outperformance and underperformance by SCERS' investment managers.

SCERS' US large cap equity portfolio returned 4.4%, outperforming the Russell 1000 Index benchmark return of 4.0%. More than half of the US large cap portfolio is made up of passive large cap equity exposure, with active mandates constituting the other half. Among SCERS' active managers, JP Morgan (130/30) returned 6.6%, a significant outperformance compared to the benchmark return of 4.0%. JP Morgan's longer-term relative performance has been very good for SCERS, outperforming the benchmark across all longer reporting periods. Brown Advisory (US large cap growth) returned 3.8%,

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underperforming against its benchmark return of 4.6%. Brown Advisory's return was detracted by its stock selection within the healthcare sectors. Eagle Capital Management (US large cap core) returned 5.3%, and outperformed against its benchmark return of 4.0%. Huber Capital Management (US large cap value) returned 5.1%, which outperformed its benchmark return of 3.5%. Stock selection within healthcare helped performance for Huber, while investments within the utilities sector hurt performance.

SCERS' US large cap active managers run concentrated and high active share portfolios. Accordingly, individual stock selection may have a greater impact on portfolio performance. These active mandates, combined with SCERS' significant large cap passive allocation, create a barbell structure within SCERS' large cap equity portfolio, and since the implementation of this structure in 2012, the results have been mixed. Eagle, which is the largest of the three allocations, has underperformed its benchmark across most reporting periods, but has outperformed the benchmark since inception. Brown Advisory and Huber Capital have also underperformed against their benchmarks across multi-year periods. Huber Capital is currently on SCERS' Watch List due to its underperformance, though Huber's performance has improved over recent quarters. Overall, the barbell structure has generated returns in-line with the Russell Index benchmark since it was implemented.

SCERS' US small cap portfolio returned 9.7%, outperforming the Russell 2000 Index return of 9.0%. Outperformance was achieved by UBS Global Asset Management (US small cap growth) and Weatherbie (US small cap growth) returning 10.4% and 14.8%, respectively, compared to the benchmark return of 9.2%. Weatherbie's outperformance was a result of stock selection in the healthcare sector, and in particular biotech. Both of SCERS' US small cap value managers, DGHM and Wedge Capital, underperformed against the benchmark, returning 7.7% and 6.2%, respectively, compared to the benchmark return of 8.9%. Both manage quality value strategies, which allocates to lower beta stocks. Higher beta stocks were favored by the market during the quarter.

SCERS' domestic REIT manager CenterSquare returned -1.4% during the quarter, which was in line with the NAREIT Equity REIT Index return of -1.4%.

Within SCERS' International Equity portfolio, SCERS' international developed portfolio returned 6.8%, which outperformed the MSCI EAFE Index return of 6.5%. Lazard Asset Management (ACWI ex-US) underperformed against its benchmark, returning 4.6% compared to 7.0% for the benchmark. Lazard's performance was detracted as the market moved into higher risk stocks, which Lazard strategically avoids. LSV (international large cap developed) outperformed its benchmark, returning 8.5% compared to 6.4% for the benchmark. Both Lazard and LSV have generated strong relative performance across most reporting periods. Another international large cap manager, Baring Asset Management, was terminated during 2014 due to significant underperformance and organizational changes, and this exposure is currently being held in a total return swap on the MSCI World ex-US Index, until the replacement search is finalized. The search is anticipated to conclude in the fourth quarter of 2016.

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Among SCERS' international developed small-cap managers, Mondrian generated a return of 7.5%, which underperformed its benchmark return of 8.1%. William Blair returned 8.1%, in line with the benchmark return of 8.1%.

SCERS' emerging markets equity ('EM') portfolio returned 8.7%, which underperformed the MSCI Emerging Markets Index benchmark return of 9.2%. SCERS' recently hired EM all-cap managers delivered mixed results, as Baillie Gifford (+14.2%) outperformed and Mondrian (+4.3%), underperformed the benchmark return of 9.2%. These two managers can often have diverging returns, which is a reason to have them in SCERS' EM manager structure. Baillie Gifford benefited from allocations to technology and consumer businesses, particularly in China. Baillie tends to have an overweight to these sectors. Mondrian was primarily hurt by an underweight to IT, and generally maintains a more defensive portfolio profile, which tended to lag in the market during the quarter.

Both of SCERS' EM small cap managers, Mondrian (6.3%) and William Blair (6.4%) underperformed against the MSCI EM Small Cap Index benchmark return of 7.7%. Mondrian's performance was impacted by negative currency and portfolio defensive positioning. William Blair was adversely impacted by stock selection in industrials and financial sectors. Both Mondrian and William Blair have outperformed the benchmark since inception, and the addition of the EM small cap allocation has benefitted SCERS, as EM small cap has significantly outperformed EM all-cap during this period.

SCERS' lone international REIT manager, CBRE Clarion, returned 5.1%, outperforming against the FTSE EPRA NAREIT Global ex-US return of 4.3%.

SCERS' Fixed Income portfolio returned 1.8%, outperforming against SCERS' custom benchmark return of 0.9%. During the quarter, Neuberger Berman (enhanced index) returned 0.5%, in line with the Barclays Aggregate Index benchmark return of 0.5%. Prudential (core plus fixed income) and TCW (core plus fixed income) returned 0.9% and 0.7% respectively, and outperformed the benchmark return of 0.5%.

SCERS' global opportunistic fixed income mandate managed by Brandywine Global Investment Management, returned 1.8%, and outperformed against its custom benchmark (80% Citi WGBI / 20% JPM GBI EM) index return of 0.7%. SCERS' strategic credit mandate, managed by Brigade Capital Management, returned 6.9% and outperformed against its custom benchmark, (50% MLHY Mast II / 50% CS Lev Loans) index return of 4.3%.

SCERS' absolute return portfolio returned 2.3% during the quarter; compared to the benchmark (91 day T-Bill + 5%) index return of 1.3%, and the HFRI Fund of Funds Composite Index benchmark return of 2.4%. Within SCERS' absolute return portfolio, SCERS did not make any new direct investments during the quarter. Among SCERS' direct absolute return investments, outperformance occurred in AQR Delta Fund II (2.3%); JANA Partners (5.0%); Lakewood Capital (4.3%); OZ Domestic Partners II (3.5%); and Third Point Offshore (5.0%). Underperformance occurred in Brevan Howard (-2.3%); Claren Road (-6.9%); Elliott Associates (0.3%); and Laurion Capital (0.6%). As you will

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recall, SCERS issued a full redemption notice from Claren Road and is in the process of receiving proceeds.

SCERS' diversified Absolute Return Separate Account managed by Grosvenor (SCARF) returned 2.9%, outperforming against the benchmark (91 day T-Bill + 5%) return of 1.3%. Grosvenor (SCARF B), SCERS' interim hedge fund account, returned 1.9% and also outperformed against the benchmark of 1.3%. More in depth performance and analysis on the Absolute Return portfolio will be provided in the Cliffwater quarterly performance report at the December Board meeting.

As you will recall, the Private Equity asset class has experienced poor relative returns versus the Russell 1000 + 3% benchmark index over longer time periods due to SCERS being in the earlier phase/cycle of investments in comparison to the benchmark (the J-curve effect). In addition, the private equity returns listed in the Verus report are time weighted returns ('TWR'), which are required in this report to compute SCERS' total fund return. Private equity returns are typically reported as an internal rate of return ('IRR'), which accounts for the timing of cash flows. As you will also recall, Cliffwater uses IRR in its quarterly reports for private equity. SCERS' three Fund of Fund managers are deeper in the cycle of distributing capital, while SCERS' direct private equity funds in aggregate are investing capital.

SCERS' Private Equity portfolio returned 2.1%, underperforming against the benchmark (Russell 1000 + 3.0%) index return of 3.0%. During the quarter, SCERS did not make any additional commitments. More in depth performance and analysis on the Private Equity portfolio will be provided in the Cliffwater quarterly performance report at the December Board meeting.

Within the Real Assets asset class, SCERS' Private Real Assets portfolio returned 3.5%, outperforming against the benchmark (CPI-U Headline Inflation +5.0%) index return of 1.5%. Similar to the Private Equity portfolio, private real assets are also in the earlier phase/cycle of investments in comparison to the benchmark (the J-curve effect). In addition, the private real assets returns listed in the Verus report are time weighted returns ('TWR'), which are required in this report to compute SCERS' total fund return. Private real assets returns are typically reported as an internal rate of return ('IRR'), which accounts for the timing of cash flows. As you will also recall, Cliffwater uses IRR in its quarterly reports for private real assets.

Within SCERS' core separate account real estate portfolio, BlackRock I and II returned 2.6% and 0.8% respectively, while Cornerstone returned 1.2%, and in aggregate SCERS' core separate account real estate portfolio returned 2.4%, outperforming the benchmark (NFI-ODCE) index return of 2.1%. SCERS' limited partnership core real estate funds in aggregate returned 1.8% during the quarter, underperforming the benchmark (NFI-ODCE) index return of 2.1%. SCERS' limited partnership core real estate funds in aggregate returned 1.8% during the quarter, underperforming the benchmark (NFI-ODCE) index return of 2.1%. SCERS' limited partnership core real estate funds that outperformed against the index include Jamestown Premier Property Fund (2.8%); MetLife Core Property Fund (2.6%); Prime Property Fund (2.5%); Prologis Targeted US Logistics

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(2.9%). Townsend Real Estate Fund drew initial capital during the quarter and a return could not be calculated. SCERS did not make any core real estate commitments during the quarter.

The SSGA Real Assets Strategy, which serves as the overlay proxy for the Real Assets asset class returned 0.9%, which slightly underperformed the CPI-U Headline + 5% benchmark return of 1.2%. You will recall that the SSGA Real Assets Strategy includes publicly traded exposures to global REITs, TIPS (Treasury Inflation Protected Securities), commodities, natural resource stocks, global listed infrastructure and midstream energy companies.

Within SCERS' commodities real asset sub-asset class, Blackstone (-4.4%) underperformed against the Bloomberg Commodity Index return of -3.9%, while Gresham (-3.9%) performed in line the index return during the quarter. These funds have generated negative long-term returns. The returns in commodities and the SSGA Real Asset Strategy continue to be influenced by the volatility in the price of oil, as well as the decline in metals and mining prices. More in depth performance and analysis on the Real Asset portfolio will be provided in the Cliffwater quarterly performance report during the December Board meeting.

SCERS' Opportunities portfolio returned -1.4%, underperforming SCERS' policy index return of 3.4%. In aggregate, the opportunistic real estate managers returned 2.4%, and outperformed their benchmark (NFI-ODCE + 1%) index return of 1.6%, while in aggregate, the value-added real estate managers returned 2.4%, and slightly underperformed against their benchmark (NCREIF + 2%) index return of 2.5%. As referenced earlier, the returns of the DRC European Real Estate Debt Fund II (-11.2%) negatively impacted performance for the asset class during the quarter, primarily due the negative currency effect associated with this Sterling denominated fund. During the quarter, SCERS did not make any investments within the opportunities asset class. More in depth performance and analysis on the Opportunities portfolio will be provided in the Cliffwater and Townsend quarterly performance report at the December Board meeting.

We hope you find this information helpful. Staff will be happy to answer your questions.

Respectfully submitted,

Concur:

JR Pearce Investment Officer Richard Stensrud Chief Executive Officer

Steve Davis Chief Investment Officer

Attachment

Verus<sup>777</sup>

## PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: SEPTEMBER 30, 2016

Investment Performance Review for

Sacramento County Employees' Retirement System

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Total Fund	TAB II
Policy Index and Benchmark History	TAB III

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

### THE ECONOMIC CLIMATE

- The U.S. labor market continues to improve but at a slower pace. Real wage growth has risen but not as quickly as other periods of similar labor market tightness. Consumer expenditures remain the primary positive contributor to GDP growth.
- U.S. inflation has risen steadily with Core CPI at 2.3%
   YoY as of August. Energy and gasoline prices continue to weigh on the Headline CPI figure of 1.1% YoY.
- The presidential election approaches. There has historically been a weak relationship between election outcomes and market performance. This election appears to have unique characteristics and may cause more unpredictable effects.

### MARKET PORTFOLIO IMPACTS

 Central bank discussions indicate we may be nearing fiscal expansion as a next form of policy accommodation. As fiscal policies are typically less analyzed and less understood by investors, markets may be more prone to surprise in this environment.

### THE INVESTMENT CLIMATE

- U.S. corporate earnings are expected to decline by
   -2.1%, which would be the sixth consecutive
   quarter of YoY decline. Almost all of this decline is
   attributable to energy sector weakness.
- Low inflation and low bond yields may help to explain higher than usual equity valuations.
   However, this does not negate the fact that higher equity valuations historically have materially reduced subsequent returns.

### ASSET ALLOCATION ISSUES

- We continue to remain underweight risk and believe that downside market potential outweighs upside market potential.
- Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average on a relative basis and upside potential seems attractive. Investors may consider moving to an overweight in emerging market equities, though risks should be carefully considered.

We remain underweight to risk

Investors should be watchful of corporate earnings, and U.S. inflation trends



## U.S. economics summary

- U.S. real GDP grew 1.4% YoY in Q2, up from 0.8% in Q1. This positive growth reflects contributions from greater consumer expenditures, exports, and non-residential fixed investments. These were partially offset by a decrease in private inventory investment.
- Headline inflation (CPI) rose 1.1% as of August YoY while core CPI rose 2.3%. Lower energy prices, and gasoline in particular (-17.8%), have weighed heavily on the headline inflation figure. Medical care services (+4.9%) and shelter (+3.4%) contributed to higher prices.
- If the U.S. economy continues to move closer to full employment and higher inflation, the market has expected the Fed to want to push harder for rate

"normalization". However, the fear of disrupting financial markets and raising rates too early, too quickly, remains.

- Over the last few quarters we have continued to see the slow and steady return to the workforce of discouraged workers. This may help explain why productivity growth and wage inflation are lower than might be expected at this level of unemployment.
- Additions to nonfarm payrolls averaged slightly under 200,000 in the third quarter as the overall labor market continued to show strength. The unemployment rate increased slightly to 5.0% as more people entered the labor force.

	Most Recent	12 Months Prior
GDP (annual YoY)	1.4% 6/30/16	<b>3.9%</b> 6/30/15
Inflation (CPI YoY, Headline)	1.1% 8/31/16	0.2% 8/31/15
Expected Inflation (5yr-5yr forward)	1.8% 9/30/16	1.8% 9/30/15
Fed Funds Rate	0.25% 9/30/16	0.12% 9/30/15
10 Year Rate	<b>1.6%</b> 9/30/16	<b>2.0%</b> 9/30/15
U-3 Unemployment	5.0% 9/30/16	5.1% 9/30/15
U-6 Unemployment	<b>9.7%</b> 9/30/16	10.0% 9/30/15



## Equity environment

- Equity market risks continue to appear asymmetrical to the downside - the U.S. equity market in particular.
- U.S. equities rallied to start the quarter as central banks communicated to the markets that further monetary easing would be available if necessary, in response to the Brexit vote. In the final two months of the quarter, the U.S. equity markets stayed relatively flat and volatility was below average.
- A sixth consecutive quarter of year-over-year earnings decline is expected for the S&P. FactSet has forecast a -2.1% earnings decline for Q3.
- Information technology (12.9%) was the best performing sector in the S&P 500 by a large margin on the back of higher earnings

expectations. Utilities (-5.9%) and telecom services (-5.6%) were the worst performing sectors in the index.

- The FTSE 100 (hedged) returned 7.1% over the third quarter after concerns over the impact of Brexit somewhat subsided.
- The U.S. dollar fell 0.7% in Q3 on a trade-weighted basis.
   Recent dollar stabilization may be disrupted if the Fed goes ahead with further rate hikes. As most developed economies remain in easing mode, further U.S. hikes would likely add to dollar strength.

	QTD TOTAI	1 YEAR TOTAL AL RETURN YTD TOTAL RETURN RETURN						
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)		
US Large Cap (Russell 1000)	4.0	%	7.9	9%	14.9%			
US Small Cap (Russell 2000)	9.0	%	11.	.5%	15.5%			
US Large Value (Russell 1000 Value)	3.5	%	10.	.0%	16.2%			
US Large Growth (Russell 1000 Growth)	4.6	%	6.0	0%	13.8	3%		
International Large (MSCI EAFE)	6.4%	6.3%	1.7%	(1.0%)	6.5%	5.3%		
Eurozone (Euro Stoxx 50)	6.3%	4.8%	(2.4%)	(4.1%)	0.4%	0.5%		
U.K. (FTSE 100)	4.0%	7.1%	0.6%	14.1%	1.5%	18.4%		
Japan (NIKKEI 225)	8.2%	5.9%	4.4%	(14.3%)	13.6%	(6.2%)		
Emerging Markets (MSCI Emerging Markets)	9.0%	6.3%	16.0%	9.7%	16.8%	10.7%		

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/16



## Domestic equity

After minimal reaction to Brexit, domestic equities continued higher in July, then delivered two quiet months to finish the quarter. The S&P 500 returned 3.9% in Q3. The market appears to be taking a waitand-see approach with important oncoming events such as elections and Federal Reserve meetings.

With higher equity prices and lower overall earnings, valuations have expanded. The forward earnings multiple for the S&P 500 was 18.5 at quarter end,

relative to its 25-year average of 16.6 (in the 81<sup>st</sup> percentile). Year-over-year earnings growth is expected to be negative for the sixth consecutive quarter, heavily influenced by the energy sector and lower oil prices. As the effects of monetary stimulus on U.S. financial markets wanes, earnings will play an important role for future equity returns.

### U.S. earnings results will likely dictate the path of equities

10% 5%

0%

-5%

-10%

-15%



SECTOR IMPACT ON S&P 500 EARNINGS GROWTH

### U.S. EQUITIES



## Domestic equity size and style

Growth stocks outperformed value during the third quarter as the Russell 1000 Growth Index and Russell 1000 Value Index returned 4.6% and 3.5%, respectively. However, value has outperformed growth by 4.0% yearto-date.

In the third quarter, the Russell 2000 Index returned 9.0% and the Russell 1000 Index returned 4.0%. Small cap equities have also beaten large cap equities by 3.5% year-to-date, reversing a recent trend of large cap outperformance. The relative P/E ratio of small to large cap equities at the end of September was 2.07 - well above its long-term average of 1.39 - suggesting that small cap stocks may be relatively overvalued.

#### SMALL CAP VS LARGE CAP (YOY)



#### VALUE VS GROWTH (YOY)



#### **RELATIVE P/E RATIO (SMALL VS LARGE)**



Source: Russell Investments, as of 9/30/16

Source: Russell Investments, as of 9/30/16

Source: Russell, Bloomberg, as of 9/30/16



## International economics summary

- Developed economies continued to experience slow growth and low inflation. While inflation ticked up slightly in the Eurozone to 0.4%, it remains materially under the ECB's target of "below, but close to, 2%".
- The ECB left monetary policy unchanged at its September meeting, and cut economic growth expectations for the next three years.
- The BOJ shook up its monetary policy after completing a "comprehensive assessment of its current easing programs". The central bank stated it will intentionally overshoot its inflation target of 2% and introduced a 0% target for the 10-year yield.

- Britain elected new prime minister Theresa May, who will be responsible for implementing Brexit. Increased uncertainty surrounding the timing and nature of the political change will continue. The potential impact of this uncertainty led to the first rate cut by the BOE since 2009.
- The IMF once again downgraded global growth forecasts for 2016 and 2017, this time to just above 3%. It now warns against economic stagnation and states that countries have found themselves in the position of relying on monetary and fiscal policy to lift growth prospects, and that this may be unsustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.4% 6/30/16	1.1% 8/31/16	5.0% 9/30/16
Western Europe	<b>1.8%</b> 6/30/16	<b>0.4%</b> 9/30/16	<b>8.5%</b> 6/30/16
Japan	<b>0.8%</b> 6/30/16	(0.5%) 8/31/16	<b>3.2%</b> 6/30/16
BRIC Nations	5.1% 6/30/16	<b>3.8%</b> 6/30/16	<b>5.5%</b> 6/30/16
Brazil	(3.8%) 6/30/16	9.0% 8/31/16	<b>11.7%</b> 9/30/16
Russia	(0.6%) 6/30/16	6.9% 8/31/16	<b>5.6%</b> 6/30/16
India	<b>7.1%</b> 6/30/16	5.1% 8/31/16	<b>7.1%</b> <i>12/31/15</i>
China	<b>6.7%</b> 6/30/16	1.3% 8/31/16	<b>4.1%</b> 6/30/16



## International equity

Central banks remained accommodative in Q3, helping to generate a rally in international equities. Low and negative yields in Japan and the Eurozone helped maintain the relative attractiveness of equities in these markets.

On a hedged basis, international developed equities outperformed domestic equities with the MSCI EAFE returning 6.3%, and the S&P 500 returning only 3.9% during the quarter. Financial stocks continue to lag, though the third quarter saw more healthy returns. Banks in Japan and the Eurozone were given a boost when the BOJ and ECB chose not to increase stimulus measures. Significant headwinds remain, however, as negative interest rates continue to hurt bank profitability.

#### **GLOBAL EQUITY PERFORMANCE**



#### 12-MONTH ROLLING RELATIVE FINANCIAL SECTOR RETURNS



#### **INTERNATIONAL FORWARD P/E RATIOS**



Source: Bloomberg, as of 9/30/16

Source: MPI, as of 9/30/16, in local currency terms

Source: MSCI, as of 9/30/16

## Emerging market equity

Emerging market equities experienced a rebound during Q3, returning 6.3% on a hedged basis and 9% unhedged. Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average and materially more attractive than those of developed markets.

Moderating commodity prices, continued developed central bank accommodation, less U.S. dollar strengthening, and stability in China, have helped to bolster investor risk appetites and the emerging market outlook, fueling fund flows into these markets.

Many emerging market economies experienced a rough readjustment period following the commodity supercycle reversal and saw severe currency depreciation. However, many economies such as Russia have allowed currency devaluation to work as an effective economic shock absorber to mitigate current account problems which these economies often experience during commodity (export) price choppiness.

#### ECONOMIC GROWTH (REAL GDP YOY)





#### FORWARD P/E



Source: Bloomberg, as of 6/30/16

Source: Bloomberg, as of 6/30/16

Source: MSCI, as of 9/30/16



## Interest rate environment

- The U.S. Treasury curve continued to flatten, influenced by increased expectations of an interest rate hike by the end of the year.
- Global interest rates remain near all time lows, although volatility picked up. Continued easing by central banks in addition to low inflation and expectations for slowing growth contribute to an environment of secularly low yields.
- When thinking about bond yields today, it may be useful not only to consider nominal yields, which are at historic lows, but also *real* yields, which paint a much more reasonable picture. Current levels of inflation and future expectations may help put things into context. Furthermore, investors may see markets drive yields higher if inflation expectations were to rise.

- Negative yielding sovereign and corporate debt was \$11.6 trillion at quarter end, mostly from Japan and the Eurozone. We remain concerned about Japanese and European rates as negative yields and low liquidity detract from the attractiveness of these assets.
- Yields on Japanese Treasuries increased sharply in late July after the BOJ chose to keep stimulus measures on hold. The 10-year JGB yield briefly traded around 0% before falling back into negative territory at the end of September.
- European sovereign bonds sold off during the beginning of September over concerns that central banks may begin cutting back on monetary easing measures.

Area	Short Term (3M)	10 Year
United States	0.27%	1.59%
Germany	(0.76%)	(0.12%)
France	(0.67%)	0.19%
Spain	(0.60%)	0.88%
Italy	(0.39%)	1.19%
Greece	3.34%	8.28%
U.K.	0.32%	0.75%
Japan	(0.33%)	(0.09%)
Australia	1.75%	1.91%
China	2.23%	2.74%
Brazil	13.73%	11.60%
Russia	9.80%	8.17%

Source: Bloomberg, as of 9/30/16



## Yield environment





#### **GLOBAL GOVERNMENT YIELD CURVES**



Global investors continue to prefer U.S. Treasuries due to higher relative yields

#### YIELD CURVE CHANGES OVER LAST FIVE YEARS



#### IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/16



## Currency

The U.S. dollar, weighted by major trading partners, fell 0.7% in the third quarter, benefitting investors with unhedged equity exposure. The pound sterling has had the opposite effect for U.S. investors, as new multi-decade lows were reached during the quarter, following a significant market flash crash (but recovery).

After a recent period of appreciation, the dollar has stabilized so far this year. Moderation of the USD would have a positive impact on earnings of U.S. companies with significant international exposure. However, with the Fed expected to continue increasing interest rates while other central banks are still in easing mode, there may be upward pressure on the dollar as interest rate differentials increase.

The pound sterling fell to a 31-year low against the U.S. dollar, influenced by uncertainty surrounding the details of the U.K.'s exit from the European Union. Theresa May announced that she would invoke Article 50 by March 2017.

#### LONG-TERM TRADE WEIGHTED USD





**EFFECT OF CURRENCY (1YR ROLLING)** 





Source: FRED, as of 9/30/16

Source: MSCI, as of 9/30/16

*Source: FRED, as of 10/19/16* 





	2003	2004	2005	2006	2007	2008
uity	39.2	40.4	35.4	35.5	33.1	27.2
tional Equity	20.6	17.5	22.3	22.0	20.9	16.8
ed Income	30.6	26.9	23.1	23.3	21.7	23.5
state	7.5	8.5	11.9	13.1	12.4	16.1
te Return	-	4.9	4.8	4.4	5.1	5.6
Equity	-	-	-	-	0.1	2.5
unistic / Commodities	-	-	-	-	-	3.5
	2.1	1.8	2.4	1.2	5.8	1.4
	-	0.1	-	0.4	0.9	3.4
	-					
	2009	2010	2011	2012	2013	2014
uity	30.9	31.7	31.4	28.4	26.5	25.2
tional Equity	21.5	20.7	17.6	24.5	24.3	17.5
ed Income	19.3	17.8	18.4	17.1	17.7	18.9
ssets	11.9	12.2	12.4	9.9	9.0	7.6
te Return	5.3	4.9	7.3	5.2	8.8	9.4
Equity	0.5	0.9	1.6	2.2	3.0	4.6
unistic / Commodities	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
-		•				
	2015	2016	2016	2016		
		1Q+	2Q+	3Q+		
	26.4	26.4	26.8	26.6		
tional Equity	17.3	17.5	17.5	17.8		
ed Income	18.7	19.5	19.8	19.1		
ssets	8.3	8.6	9.7	9.5		
te Retum	9.7	9.4	9.4	9.1		
Equity	6.3	6.4	6.9	6.8		
unistic / Commodities	2.1	2.2	2.3	2.2		
	3.2	3.7	2.5	2.7		
· · · · · · · · · · · · · · · · · · ·	7.9	6.4	5.2	6.3		
ns without overlay.						
duxdes SSoyA Overlay, SSoyA Real As	sets and closin	g accounts.				

Allocation

Cash Other \*

\* Other includes SSgA Overlay, SSgA Real Assets and closing accounts.



### Current w/Overlay



	MARKET VALUE		
ASSET ALLOCATION	W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	1,790,342,408	22.2%	26.6%
International Equity	1,817,869,399	22.5%	17.8%
Fixed Income	1,589,888,077	19.7%	19.1%
Absolute Return	810,964,969	10.0%	9.1%
Private Equity	780,280,999	9.7%	6.8%
Real Assets	1,108,050,612	13.7%	9.5%
Opportunistic	174,402,909	2.2%	2.2%
Cash and Other *	9,549,384	0.1%	9.0%
TOTAL	8,081,348,758	100.0%	100.0%
		TADOFT	DIEE
ASSET ALLOCATION	ACTUAL	TARGET	DIFF
US Equity	22.2%	22.5%	-0.3%
International Equity	22.5%	22.5%	0.0%
Fixed Income	19.7%	20.0%	-0.3%
Absolute Return	10.0%	10.0%	0.0%
Private Equity	9.7%	10.0%	-0.3%
Real Assets	13.7%	15.0%	-1.3%
Opportunistic	2.2%	0.0%	2.2%
Cash and Other *	0.1%	0.0%	0.1%
ASSET ALLOCATION	TARGET	MEDIAN	DIFF
US Equity	22.5%	28%	-5.5%
International Equity	22.5%	18%	4.5%
Fixed Income	20.0%	27%	-7.0%
Absolute Return	10.0%	7%	3.0%
Private Equity	10.0%	8%	2.0%
Real Assets	15.0%	8%	7.0%
Opportunistic	0.0%	0%	0.0%
Cash and Other *	0.0%	4%	-4.0%

 Other includes closing accounts (Heitman), SSgA Overlay of \$170 million and SSgA Real Asset of \$342 million, which serve as overlay proxy for Real Assets.



- The Total Plan returned 3.8% net in the third quarter of 2016 and ranked in the 50<sup>th</sup> percentile among other public funds greater than \$1 billion (3.8% median). The fund exceeded its policy index (3.4%) during this time period. The Total Plan w/o Overlay net also returned 3.4% for the quarter. Longer term, the three and five-year returns of 5.0% and 9.1% net ranked below median among large public plans (6.2% and 9.5%, respectively).
- Third quarter results (net) were enhanced by the following factors:
  - 1. Weatherbie returned 14.7% for the quarter outperforming the Russell 2000 Growth by 550 bps and ranked in the top decile of its peers. Stock selection was strong during the third quarter. Healthcare was most additive, especially biotech.
  - 2. Baillie Gifford Emerging All Cap returned 14.2%, ranked in the top of its peers and topped its index by 5%. The portfolio's significant exposure to a broad range of technology and consumer businesses, especially in China, contributed to the strong returns.
  - Brigade (6.9%) outperformed the index (4.3%) and ranked in the 2<sup>nd</sup> percentile of its peers. The largest contributor to performance was Sprint which had strong earnings. AMD also added to performance with higher Q3 guidance in July.
  - 4. Prudential topped the Barclays Aggregate (1.9% vs 0.5%) and ranked in the top decile of its peers. Security selection and duration positioning contributed to the outperformance.
- Third quarter results (net) were hindered by the following factors:
  - Mondrian Emerging All Cap lagged the MSCI Emerging markets (4.1% vs 9.2%). Stock selection, especially within Brazil and China, were the two most significant detractors from performance. The Fund's underweight in the IT sector also contributed to underperformance.
  - 2. Wedge Capital gained 5.9%, trailing the Russell 2000 value by 3%. A low quality rally produced lower relative performance. Stock selection within consumer staples, healthcare, financials and industrials contributed to the underperformance.
  - 3. Lazard underperformed the MSCI ACWI ex US (4.6% vs 7.0%), and was in the bottom quartile of its peers. The strategy lagged due to a "risk-on" market that rewarded high volatility stocks and those with lower profitability (which Lazard strategically avoids).



- 4. Mondrian Emerging Small Cap underperformed the MSCI Emerging Small Cap by 2.1% (5.6% vs 7.7). The defensive positioning of the portfolio along with a negative currency effect lead to the weaker relative performance.
- 5. William Blair Emerging Small Cap gained 6.1%, lagging the MSCI Emerging Mkts Small Cap index by 1.6%. Performance was adversely impacted by stock selection in the industrials and financials sectors.
- 6. Brown Advisory underperformed the benchmark by 1.1% returning 3.7%. Stock selection within the healthcare sector was the largest detractor to the portfolio.



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank*	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since+
Total Fund- Gross <sup>*</sup>	8,081,348,758	100.0	3.9	41	6.8	60	8.7	85	5.3	75	9.4	51	8.2	Jun-86
Total Fund- Net			3.8	50	6.5	73	8.3	91	5.0	83	9.1	61	8.0	
Policy Index <sup>1</sup>			3.4	78	7.4	36	9.3	74	6.2	51	9.2	59	8.5	Jun-86
InvestorForce Public DB > \$1B Gross Median			3.8		7.1		9.7		6.2		9.5		8.2	Jun-86
Total Fund ex Overlay- Gross **	7,569,650,258	93.7	3.5	69	6.1	88	8.7	85	5.5	71	9.2	60	8.1	Jun-86
Total Fund ex Overlay- Net			3.4	75	5.9	98	8.4	91	5.2	82	8.9	70	7.9	
Policy Index <sup>1</sup>			3.4	78	7.4	36	9.3	74	6.2	51	9.2	59	8.5	Jun-86
Allocation ex Overlay Index			3.3	83	7.0	55	9.2	75	5.6	70				Jun-86
US Equity- Gross	2,148,780,552	26.6	4.7	48	7.1	70	13.9	55	9.7	50	16.2	42	9.8	Jun-86
US Equity- Net			4.6	54	6.8	74	13.5	62	9.4	62	15.9	58	9.6	
Russell 3000 <sup>1</sup>			4.4	68	8.2	43	15.0	31	10.4	23	16.4	34	9.9	Jun-86
InvestorForce All DB US Eq Gross Median			4.7		8.0		14.1		9.7		16.0		9.8	Jun-86
Large Cap- Gross	1,743,808,421	21.6	4.4		6.4		13.3		10.0		16.2		5.3	Mar-98
Large Cap- Net			4.3		6.1		13.0		9.7		16.0		5.1	
Russell 1000			4.0		7.9		14.9		10.8		16.4		5.9	Mar-98
Large Cap - Index- Gross	1,127,148,240	13.9	4.0		7.9		14.8		10.8		16.3		10.6	Sep-08
Large Cap - Index- Net			4.0		7.8		14.8		10.7		16.3		10.6	
Russell 1000			4.0		7.9		14.9		10.8		16.4		10.6	Sep-08
AB- Gross	1,127,148,240	13.9	4.0	31	7.9	50	14.8	85	10.7	72	16.3	63	9.7	Apr-89
AB- Net			4.0	32	7.8	53	14.8	86	10.7	73	16.3	69	9.7	
Russell 1000 <sup>1</sup>			4.0	27	7.9	38	14.9	81	10.8	68	16.4	27		Apr-89
eA US Passive Large Cap Equity Gross Median			3.9		7.9		15.4		11.1		16.4		9.7	Apr-89

\*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



(\$) Portfolio       (%)	Since Sep-08 Sep-08
Equity Active (130/30)- Net 6.4 4.6 12.0 10.4 17.1 10.7	
	Sep-08
	Sep-08
Russell 1000 4.0 7.9 14.9 10.8 16.4 10.6 S	
JP Morgan 130/30- Gross 126,159,720 1.6 6.6 7 5.1 59 12.8 48 11.1 74 17.5 67 10.9	Jul-08
JP Morgan 130/30- Net 6.4 11 4.6 71 12.0 61 10.4 86 16.7 89 10.2	
Russell 1000 4.0 62 7.9 30 14.9 28 10.8 84 16.4 93 9.2	Jul-08
eA Extended US 130/30 Equity Gross Median 4.5 5.5 12.6 12.5 17.7 10.2	Jul-08
Large Cap Growth- Gross 118,904,370 1.5 3.8 2.4 10.3 8.6 14.2 9.7 S	Sep-08
Large Cap Growth- Net 3.7 2.2 10.0 8.3 13.9 9.3	
Russell 1000 Growth 4.6 6.0 13.8 11.8 16.6 12.0 S	Sep-08
Brown Advisory- Gross 118,904,370 1.5 3.8 80 2.4 74 10.3 65 8.6 88 10.4 F	Feb-12
Brown Advisory- Net 3.7 81 2.2 75 10.0 68 8.3 89 10.2	
Russell 1000 Growth 4.6 63 6.0 24 13.8 23 11.8 33 16.6 39 13.1 I	Feb-12
eA US Large Cap Growth Equity Gross Median 5.3 4.2 11.5 10.9 16.0 12.5 H	Feb-12
Large Cap Value- Gross 371,596,091 4.6 5.2 3.7 9.9 7.6 16.3 9.6 S	Sep-08
Large Cap Value- Net 4.9 2.9 8.9 6.9 15.6 9.1	
Russell 1000 Value 3.5 10.0 16.2 9.7 16.2 9.2 S	Sep-08
Eagle Capital- Gross         259,851,037         3.2         5.3         28         3.4         88         10.3         77         9.3         47          13.2         F	Feb-12
Eagle Capital- Net         4.9         34         2.6         93         9.3         83         8.5         63          12.5	
Russell 1000 4.0 49 7.9 53 14.9 39 10.8 15 16.4 29 12.9 H	Feb-12
Russell 1000 Value 3.5 58 10.0 29 16.2 29 9.7 38 16.2 35 12.7 H	Feb-12
eA US Large Cap Value Equity Gross Median 3.8 8.1 13.6 9.1 15.4 12.1 H	Feb-12
Huber Capital- Gross         111,745,054         1.4         5.1         31         4.4         84         9.0         85         4.1         96          9.6         F	Feb-12
Huber Capital- Net 4.7 38 3.6 87 8.0 91 3.4 99 8.9	
Russell 1000 Value 3.5 58 10.0 29 16.2 29 9.7 38 16.2 35 12.7 H	Feb-12
eA US Large Cap Value Equity Gross Median 3.8 8.1 13.6 9.1 15.4 12.1 H	Feb-12



													moop	
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Small Cap- Gross	285,370,724	3.5	9.7		9.8		14.8		5.7		15.3		11.7	Dec-90
Small Cap- Net			9.5		9.1		13.8		4.9		14.4		11.0	
Russell 2000			9.0		11.5		15.5		6.7		15.8		10.6	Dec-90
Small Cap - Growth- Gross	137,661,689	1.7	12.9		6.5		13.7		2.8		14.0		9.6	Sep-08
Small Cap - Growth- Net			12.8		6.2		13.2		2.1		13.2		8.8	
Russell 2000 Growth			9.2		7.5		12.1		6.6		16.1		10.7	Sep-08
UBS- Gross	58,890,134	0.7	10.4	26	4.0	80	8.9	64					-5.8	Jul-15
UBS- Net			10.4	26	4.0	80	8.9	64					-5.8	
Russell 2000 Growth			9.2	38	7.5	50	12.1	43	6.6	52	16.1	56	-2.5	Jul-15
eA US Small Cap Growth Equity Gross Median			8.0		7.4		11.1		6.6		16.5		-1.7	Jul-15
Weatherbie- Gross	78,771,555	1.0	14.8	4	8.5	42	17.6	14	5.6	64	16.1	57	11.3	Dec-02
Weatherbie- Net			14.7	4	7.8	46	16.6	19	4.7	73	15.2	70	10.4	
Russell 2000 Growth			9.2	38	7.5	50	12.1	43	6.6	52	16.1	56	10.8	Dec-02
eA US Small Cap Growth Equity Gross Median			8.0		7.4		11.1		6.6		16.5		11.7	Dec-02
Small Cap - Value- Gross	147,709,034	1.8	6.9		12.9		15.7		8.9		16.7		10.1	Sep-08
Small Cap - Value- Net			6.6		11.9		14.4		8.0		15.6		9.1	
Russell 2000 Value			8.9		15.5		18.8		6.8		15.4		8.2	Sep-08
Dalton, Greiner- Gross	70,134,495	0.9	7.7	49	11.4	60	14.1	65	7.5	53	16.2	62	10.5	Dec-00
Dalton, Greiner- Net			7.3	56	10.5	72	13.0	73	6.8	66	15.3	72	9.7	
Russell 2000 Value			8.9	25	15.5	23	18.8	25	6.8	69	15.4	71	8.8	Dec-00
eA US Small Cap Value Equity Gross Median			7.6		12.8		15.8		7.7		16.9		11.0	Dec-00
WEDGE Capital- Gross	77,574,540	1.0	6.2	76	14.4	29	17.2	40	10.2	12	18.1	24	9.9	Apr-08
WEDGE Capital- Net			5.9	82	13.3	45	15.8	50	9.1	25	16.9	49	8.9	
Russell 2000 Value			8.9	25	15.5	23	18.8	25	6.8	69	15.4	71	7.6	Apr-08
eA US Small Cap Value Equity Gross Median			7.6		12.8		15.8		7.7		16.9		9.5	Apr-08





													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
CenterSquare- Gross	119,524,329	1.5	-1.4	78	12.4	17	21.1	14	16.2	14	17.3	27	9.8	Jan-06
CenterSquare- Net			-1.8	90	11.8	27	20.3	21	15.5	21	16.7	41	9.2	
FTSE NAREIT Equity REIT			-1.4	83	11.8	27	19.9	27	14.2	72	15.9	70	7.3	Jan-06
eA US REIT Gross Median			-1.1		10.6		18.9		14.6		16.4		8.3	Jan-06
Principal Global Inv- Gross *	77,079	0.0												
Principal Global Inv- Net														
International Equity- Gross	1,435,379,528	17.8	7.1	45	6.9	36	11.2	29	1.3	55	7.3	62	6.2	Dec-87
International Equity- Net			7.0	53	6.5	43	10.7	38	0.9	65	6.9	70	5.9	
MSCI ACWI ex US <sup>1</sup>			7.0	50	6.3	46	9.8	51	0.6	76	6.5	80	6.0	Dec-87
InvestorForce All DB ex-US Eq Gross Median			7.0		6.0		9.8		1.4		7.8		6.8	Dec-87
International - Developed- Gross	1,032,755,235	12.8	6.8	46	4.9	40	10.4	34	2.0	41	8.2	46	3.9	Mar-98
International - Developed- Net			6.6	52	4.5	47	9.9	36	1.5	54	7.7	57	3.5	
MSCI EAFE Gross			6.5	53	2.2	75	7.1	55	0.9	67	7.9	55	4.1	Mar-98
InvestorForce All DB Dev Mkt ex-US Eq Gross Median			6.7		4.3		7.5		1.7		8.0		4.9	Mar-98
Lazard- Gross	407,094,175	5.0	4.6	88	5.0	54	9.2	59	3.4	38			9.5	Jun-12
Lazard- Net			4.6	88	4.7	57	8.8	64	3.1	43			9.2	
MSCI ACWI ex USA Gross			7.0	49	6.3	39	9.8	52	0.6	83	6.5	88	6.0	Jun-12
eA All ACWI ex-US Equity Gross Median			7.0		5.4		9.9		2.6		9.1		8.4	Jun-12
LSV- Gross	426,503,566	5.3	8.5	25	4.4	35	10.1	11	2.0	45	8.8	36	3.9	Dec-04
LSV- Net			8.3	27	4.0	37	9.5	19	1.6	51	8.4	42	3.4	
MSCI World ex US <sup>1</sup>			6.4	61	3.6	39	7.7	45	0.8	62	7.2	73	3.7	Dec-04
MSCI EAFE Value Gross			8.1	30	1.4	72	4.2	91	-1.0	96	6.6	83	3.5	Dec-04
eA EAFE Large Cap Value Gross Median			7.1		2.2		7.6		1.7		8.1		5.0	Dec-04

\* Liquidating as of April 2013

1. See Policy Index and Benchmark History.



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Mondrian Dev Small Cap- Gross	91,718,222	1.1	7.5	53	7.8	29	15.5	24	3.8	69	10.3	78	9.7	Aug-10
Mondrian Dev Small Cap- Net			7.1	60	6.9	45	14.5	30	3.1	73	9.5	86	9.0	
MSCI World ex US Small Cap GD			8.1	42	7.6	35	13.9	39	4.5	65	10.1	79	9.2	Aug-10
eA ACWI ex-US Small Cap Equity Gross Median			7.9		6.4		12.8		5.0		12.0		10.3	Aug-10
William Blair Dev Small Cap- Gross	107,305,750	1.3	8.1	40	4.5	70	12.7	53	4.7	60	11.9	53	10.4	Sep-08
William Blair Dev Small Cap- Net			7.7	52	3.6	81	11.5	65	3.8	69	11.0	69	9.4	
MSCI World ex US Small Cap GD			8.1	42	7.6	35	13.9	39	4.5	65	10.1	79	8.8	Sep-08
eA ACWI ex-US Small Cap Equity Gross Median			7.9		6.4		12.8		5.0		12.0		10.5	Sep-08
Baring- Gross *	133,522	0.0												
Baring- Net														
International - Emerging- Gross	320,175,901	4.0	8.7	41	12.9	93	13.9	93	-1.5	93	2.0	91	5.9	Jan-00
International - Emerging- Net			8.5	47	12.6	94	13.5	93	-1.7	96	1.9	94	5.5	
MSCI Emerging Markets Gross			9.2	29	16.4	54	17.2	67	-0.2	65	3.4	66	6.5	Jan-00
InvestorForce All DB Emg Mkt Eq Gross Median			8.5		16.6		18.2		0.3		3.8		6.5	Jan-00
Baillie Gifford Emg All Cap- Gross	138,401,068	1.7	14.2	1									13.0	Mar-16
Baillie Gifford Emg All Cap- Net			14.2	1									13.0	
MSCI Emerging Markets Gross			9.2	44	16.4	44	17.2	56	-0.2	76	3.4	81	10.0	Mar-16
eA Emg Mkts Equity Gross Median			8.8		15.7		18.1		1.2		5.1		10.9	Mar-16
Mondrian Emg All Cap- Gross	129,911,657	1.6	4.3	95									6.1	Mar-16
Mondrian Emg All Cap- Net			4.1	96									5.9	
MSCI Emerging Markets Gross			9.2	44	16.4	44	17.2	56	-0.2	76	3.4	81	10.0	Mar-16
eA Emg Mkts Equity Gross Median			8.8		15.7		18.1		1.2		5.1		10.9	Mar-16

\* Liquidating as of October 2014.



Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Mondrian Emg Small Cap- Gross	25,256,547	0.3	6.3	92	7.1	94	11.4	84					4.7	Jan-14
Mondrian Emg Small Cap- Net			5.6	97	5.7	98	9.5	89					3.5	
MSCI Emerging Markets Small Cap Gross			7.7	73	9.3	84	13.0	73	1.6	95	5.0	99	2.3	Jan-14
eA Emg Mkts Small Cap Equity Gross Median			8.5		11.9		15.4		4.3		8.6		5.2	Jan-14
William Blair Emg Small Cap- Gross	26,606,628	0.3	6.4	90	7.6	91	7.3	96					5.5	Dec-13
William Blair Emg Small Cap- Net			6.1	94	7.3	93	6.7	98					4.8	
MSCI Emerging Markets Small Cap Gross			7.7	73	9.3	84	13.0	73	1.6	95	5.0	99	1.3	Dec-13
eA Emg Mkts Small Cap Equity Gross Median			8.5		11.9		15.4		4.3		8.6		3.3	Dec-13
CBRE Clarion- Gross	82,448,392	1.0	5.1	25	10.6	17	10.8	35	3.4	37	10.9	39	12.2	Oct-08
CBRE Clarion- Net			5.0	31	10.3	31	10.5	41	3.2	40	10.6	59	12.0	
FTSE NAREIT Developed ex US Gross			4.3	47	10.4	19	11.7	16	3.2	39	10.4	81	10.7	Oct-08
eA EAFE REIT Gross Median			4.1		7.7		8.9		3.0		10.8		10.1	Oct-08
Fixed Income- Gross	1,544,024,930	19.1	1.8	31	8.8	29	7.6	33	4.4	31	4.3	53	7.4	Jun-86
Fixed Income- Net			1.7	33	8.6	30	7.4	35	4.2	37	4.1	58	7.3	
Fixed Income Custom <sup>1</sup>			0.9	69	7.3	41	6.5	47	3.6	60	2.8	90	6.6	Jun-86
InvestorForce All DB Total Fix Inc Gross Median			1.3		6.8		6.2		3.8		4.4		7.3	Jun-86
Neuberger Berman Fixed- Gross	365,041,404	4.5	0.5	70	6.0	61	5.5	61	4.3	61	3.5	63	6.9	Jun-88
Neuberger Berman Fixed- Net			0.5	71	5.9	65	5.4	65	4.2	67	3.5	67	6.8	
Barclays Aggregate			0.5	73	5.8	72	5.2	76	4.0	81	3.1	90	6.6	Jun-88
eA US Core Fixed Inc Gross Median			0.7		6.1		5.7		4.4		3.8		7.0	Jun-88
Prudential- Gross	423,334,562	5.2	1.9	3	8.5	3	7.7	3					5.3	Jul-14
Prudential- Net			1.9	3	8.4	3	7.5	4					5.1	
Barclays Aggregate			0.5	73	5.8	72	5.2	76	4.0	81	3.1	90	3.9	Jul-14
eA US Core Fixed Inc Gross Median			0.7		6.1		5.7		4.4		3.8		4.2	Jul-14

1. See Policy Index and Benchmark History.



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
TCW MetWest Fixed- Gross	381,581,301	4.7	0.9	24	5.7	76	5.4	63	4.2	67	4.8	8	6.5	Dec-01
TCW MetWest Fixed- Net			0.8	36	5.4	84	5.2	78	3.9	84	4.6	11	6.3	
Barclays Aggregate			0.5	73	5.8	72	5.2	76	4.0	81	3.1	90	4.9	Dec-01
eA US Core Fixed Inc Gross Median			0.7		6.1		5.7		4.4		3.8		5.3	Dec-01
Brandywine Global- Gross	215,338,561	2.7	1.8	59	12.5	17	12.0	13	3.3	50			2.3	May-13
Brandywine Global- Net			1.7	61	12.2	18	11.5	16	2.9	58			2.0	
Brandywine Custom <sup>1</sup>			0.7	87	12.2	18	11.2	19	0.9	82			1.1	May-13
eA All Global Fixed Inc Gross Median			2.2		9.0		8.3		3.2		4.0		2.8	May-13
Brigade Capital- Gross	158,729,102	2.0	6.9	2	20.2	1	12.6	11					3.3	Nov-13
Brigade Capital- Net			6.9	2	20.2	1	12.6	11					3.3	
Brigade Custom <sup>1</sup>			4.3	70	11.3	60	9.0	72					4.0	Nov-13
eA US High Yield Fixed Inc Gross Median			4.8		11.9		10.5		5.0		8.0		4.3	Nov-13
Absolute Return- Gross ++	738,372,473	9.1	2.3	54	0.3	56	0.7	44	2.2	55	5.4	26	4.5	Aug-04
Absolute Return- Net			2.3	54	0.3	56	0.7	44	2.2	55	5.3	28	4.0	
91 Day T-Bill +5%			1.3	85	3.9	7	5.2	9	5.1	6	5.1	36	6.3	Aug-04
HFRI Fund of Funds Composite Index			2.4	51	-0.2	67	0.5	49	2.2	56	3.2	82	2.9	Aug-04
InvestorForce All DB Hedge Funds Gross Median			2.4		0.6		0.4		2.3		4.6		4.5	Aug-04
AQR DELTA II- Gross	48,183,240	0.6	2.3	49	-0.5	77	1.5	68	7.5	34			6.3	May-13
AQR DELTA II- Net			2.3	49	-0.5	77	1.5	68	7.5	34			6.3	
91 Day T-Bill +5%			1.3	65	3.9	52	5.2	47	5.1	49	5.1	56	5.1	May-13
eV Alt All Multi-Strategy Median			2.2		4.9		4.8		4.9		5.7		4.8	May-13
Brevan Howard US - Gross	33,645,942	0.4	-2.3	69	-3.4	76	-5.5	83					-1.5	Feb-14
Brevan Howard US - Net			-2.3	69	-3.4	76	-5.5	83					-1.5	
91 Day T-Bill +5%			1.3	27	3.9	35	5.2	26	5.1	33	5.1	21	5.1	Feb-14
HFRI Fund of Funds Composite Index			2.4	16	-0.2	63	0.5	54	2.2	58	3.2	37	0.6	Feb-14
eV Alt All Macro Median			-0.3		1.4		1.3		3.1		2.3		2.6	Feb-14

1. See Policy Index and Benchmark History.

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



Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Claren Road Credit- Gross Claren Road Credit- Net	3,508,714	0.0	-6.9 -6.9	99 99	-8.7 -8.7	99 99	-14.9 -14.9	99 99	-9.9 -9.9	99 99			-5.1 -5.2	Jan-12
91 Day T-Bill +5% eV Alt Fundamental - Long/Short Credit Median			1.3 4.0	89	3.9 8.9	74	5.2 7.5	64	5.1 4.4	44	5.1 5.5	58	5.1 5.7	Jan-12 Jan-12
Elliot Associates- Gross +++ Elliot Associates- Net	45,590,614	0.6	0.3 0.3		4.8 4.8		4.6 4.6		5.0 5.0				6.9 6.9	Apr-12
91 Day T-Bill +5%			1.3		3.9		5.2		5.1		5.1		5.1	Apr-12
Grosvenor- Gross	256,979	0.0	-0.7	96	-0.5	54	-6.2	95	-2.1	99	1.8	89	2.5	Aug-04
Grosvenor- Net			-0.7	96	-0.5	54	-6.2	95	-2.1	99	1.8	89	2.1	
91 Day T-Bill +5%			1.3	78	3.9	11	5.2	9	5.1	14	5.1	46	6.3	Aug-04
eV Alt Fund of Funds - Multi-Strategy Median	044.074.400	0.0	2.8	40	0.0	40	0.0	05	2.3	75	4.9		4.4	Aug-04
Grosvenor SC Abs Return- Gross Grosvenor SC Abs Return- Net	244,271,496	3.0	2.9 2.9	49 49	0.2 0.2	48 48	-0.9 -0.9	65 65	1.3 1.3	75 75			4.8 4.7	Nov-11
91 Day T-Bill +5%			1.3	78	3.9	11	5.2	9	5.1	14	5.1	46	5.1	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			2.8		0.0		0.0		2.3		4.9		4.8	Nov-11
Grosvenor SC Abs Return B- Gross	162,617,156	2.0	1.9	68	-1.5	67	-1.6	72	1.3	75			3.0	Jan-13
Grosvenor SC Abs Return B- Net			1.9	68	-1.5	67	-1.6	72	1.3	75			3.0	
91 Day T-Bill +5%			1.3	78	3.9	11	5.2	9	5.1	14	5.1	46	5.1	Jan-13
eV Alt Fund of Funds - Multi-Strategy Median			2.8		0.0		0.0		2.3		4.9		3.3	Jan-13
JANA Partners- Gross	37,077,010	0.5	5.0	34	-1.0	90	0.3	81	0.7	84			1.5	Jul-13
JANA Partners- Net			5.0	34	-1.0	90	0.3	81	0.7	84			1.5	
91 Day T-Bill +5%			1.3	81	3.9	58	5.2	55	5.1	33	5.1	62	5.1	Jul-13
eV Alt All Event Driven Median			3.4		4.6		5.7		3.4		6.8		3.7	Jul-13

+++ Preliminary quarterly returns as of 9/30/2016 (Returns are not available at reporting period.)



Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Lakewood- Gross	39,524,834	0.5	4.3	51	4.7	42	10.5	29	7.1	31			6.4	Jun-13
Lakewood- Net			4.3	51	4.7	42	10.5	29	7.1	31			6.4	
91 Day T-Bill +5%			1.3	79	3.9	47	5.2	50	5.1	46	5.1	76	5.1	Jun-13
eV Alt Fundamental - Long/Short Equity Median			4.5		3.4		5.2		4.3		8.4		5.7	Jun-13
Laurion Capital- Gross	40,763,227	0.5	0.6	59	-0.9	90	5.6	66					6.2	Mar-14
Laurion Capital- Net			0.6	59	-0.9	90	5.6	66					6.2	
91 Day T-Bill +5%			1.3	53	3.9	63	5.2	68	5.1	57	5.1	69	5.1	Mar-14
eV Alt Relative Value - Equity Relative Value Median			1.8		6.1		9.2		7.3		6.7		7.4	Mar-14
OZ Domestic II- Gross	40,681,997	0.5	3.5	34	0.9	71	2.6	61	3.1	67			6.7	Dec-11
OZ Domestic II- Net			3.5	34	0.9	71	2.6	61	3.1	67			6.6	
91 Day T-Bill +5%			1.3	65	3.9	52	5.2	47	5.1	49	5.1	56	5.1	Dec-11
eV Alt All Multi-Strategy Median			2.2		4.9		4.8		4.9		5.7		5.8	Dec-11
Third Point Offshore Fund- Gross	42,251,264	0.5	5.0	36	7.4	33	10.9	25	6.3	25			11.1	Apr-12
Third Point Offshore Fund- Net			5.0	36	7.4	33	10.9	25	6.3	25			11.1	
91 Day T-Bill +5%			1.3	81	3.9	58	5.2	55	5.1	33	5.1	62	5.1	Apr-12
eV Alt All Event Driven Median			3.4		4.6		5.7		3.4		6.8		5.6	Apr-12
Private Equity- Gross ++	546,549,115	6.8	2.1	41	4.4	49	4.6	48	12.3	26	9.3	45	-1.7	Dec-07
Private Equity- Net			2.1	41	4.4	49	4.6	48	12.3	26	9.8	44		
Russell 1000 +3% 1Q Lag 1			3.0	26	12.5	1	5.9	37	14.3	11	14.9	2	8.4	Dec-07
Thomson Reuters C A All PE 1 Qtr Lag			0.0	78	0.0	76	-1.1	81	10.2	46	10.5	33	7.9	Dec-07
InvestorForce All DB Private Eq Net Median			1.7		4.2		4.4		9.5		8.8		7.0	Dec-07
Abbott VI- Gross	61,821,336	0.8	4.8		9.3		12.2		14.4		10.2		0.8	Jul-08
Abbott VI- Net			4.8		9.3		12.2		14.4		10.2			
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		10.0	Jul-08

1. See Policy Index and Benchmark History.

++ Returns are one-quarter lag.



Inception

	MarlantV/-	0/ - 5	2.14-		VTD		1. \/=		2 \/==				Defen	
	Market Value (\$)	% of Portfolio	3 Mo (%) F	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Accel-KKR IV- Gross	9,548,562	0.1	1.1		5.8		6.7		-12.0				-20.3	Jun-13
Accel-KKR IV- Net			1.1		5.8		6.7		-12.0				-20.3	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		14.2	Jun-13
Accel-KKR Structured II- Gross	2,370,889	0.0	-1.7		-6.1		-8.5						-22.4	Feb-15
Accel-KKR Structured II- Net			-1.7		-6.1		-8.5						-22.4	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		5.7	Feb-15
Atalaya Special Opp VI- Gross	12,654,650	0.2	-10.1										-10.1	Apr-16
Atalaya Special Opp VI- Net			-10.1										-10.1	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		10.6	Apr-16
Athyrium Opp II- Gross	19,288,319	0.2	3.9		13.7		2.4						-0.9	Jun-15
Athyrium Opp II- Net			3.9		13.7		2.4						-0.9	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		5.3	Jun-15
Dyal Capital II- Gross	8,227,605	0.1	-4.1		-16.8		-19.3						-12.3	Dec-14
Dyal Capital II- Net			-4.1		-16.8		-19.3						-12.3	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		8.1	Dec-14
Garrison Investment Group- Gross	15,306,075	0.2	-4.7		-12.7		-31.7		-1.7				0.8	May-12
Garrison Investment Group- Net			-4.7		-12.7		-31.7		-1.7				0.8	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		15.6	May-12
Harbourvest VIII- Gross	28,062,327	0.3	2.2		5.5		5.6		14.5		11.7		8.3	Dec-07
Harbourvest VIII- Net			2.2		5.5		5.6		14.5		11.7			
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		8.4	Dec-07
Harbourvest Intl VI- Gross	30,522,015	0.4	0.9		7.5		6.2		16.1		6.2		-14.1	Mar-09
Harbourvest Intl VI- Net			0.9		7.5		6.2		16.1		6.2			
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		16.8	Mar-09



Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
H.I.G. Bayside Loan III- Gross	15,503,420	0.2	1.1		3.2		4.7		9.2				3.8	Jan-13
H.I.G. Bayside Loan III- Net			1.1		3.2		4.7		9.2				3.8	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		16.6	Jan-13
H.I.G. Capital V- Gross	2,645,819	0.0	-1.2		-8.4		-12.1		-10.8				-10.3	Jul-13
H.I.G. Capital V- Net			-1.2		-8.4		-12.1		-10.8				-10.3	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		13.9	Jul-13
H.I.G. Europe Capital II - Gross	-255,272	0.0	-11.9											Jan-14
H.I.G. Europe Capital II - Net			-11.9											
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		11.6	Jan-14
Khosla IV- Gross	13,453,046	0.2	1.4		3.5		8.0		19.8		13.8		13.3	Jul-11
Khosla IV- Net			1.4		3.5		8.0		19.8		13.8		13.3	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		13.8	Jul-11
Khosla V- Gross	8,136,400	0.1	-0.2		4.4		4.3						2.0	Nov-14
Khosla V- Net			-0.2		4.4		4.3						2.0	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		7.0	Nov-14
Linden Capital- Gross	9,115,013	0.1	-17.6										-17.6	Jun-16
Linden Capital- Net			-17.6										-17.6	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		3.0	Jun-16
Marlin Equity IV- Gross	10,815,076	0.1	2.2		6.4		5.7						-1.7	Nov-13
Marlin Equity IV- Net			2.2		6.4		5.7						-1.7	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		14.1	Nov-13
Marlin Heritage- Gross	6,650,595	0.1	21.7		37.4		36.0						3.2	Jul-14
Marlin Heritage- Net			21.7		37.4		36.0						3.2	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		9.6	Jul-14



Inception

	Market Value (\$)	% of Portfolio	<sup>3 Mo</sup> (%) F	Rank	YTD (%)	Rank	1 Yr (%) F	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
New Enterprise- Gross	31,394,740	0.4	2.4		10.4		14.7		20.8				11.8	May-12
New Enterprise- Net			2.4		10.4		14.7		20.8				11.8	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		15.6	May-12
New Enterprise 15- Gross	14,890,274	0.2	0.8		2.5		1.4						1.1	Apr-15
New Enterprise 15- Net			0.8		2.5		1.4						1.1	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		8.3	Apr-15
Private Equity X- Gross	49,361,809	0.6	2.0		4.9		4.1		7.6		9.2		-6.7	Jun-08
Private Equity X- Net			2.0		4.9		4.1		7.6		9.2			
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		10.6	Jun-08
RRJ Capital- Gross	26,662,366	0.3	-1.7		-4.2		-6.5		9.7				14.6	May-13
RRJ Capital- Net			-1.7		-4.2		-6.5		9.7				14.6	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		15.3	May-13
RRJ Capital Masterfund III- Gross	2,666,776	0.0	-5.6		-54.7								-54.7	Dec-15
RRJ Capital Masterfund III- Net			-5.6		-54.7								-54.7	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		12.5	Dec-15
Spectrum Equity- Gross	11,510,747	0.1	-0.7		2.3		11.0						-27.2	Dec-14
Spectrum Equity- Net			-0.7		2.3		11.0						-27.2	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		8.1	Dec-14
Summit Credit- Gross	10,146,540	0.1	3.5		8.9		10.1		9.6				7.4	Oct-11
Summit Credit- Net			3.5		8.9		10.1		9.6				7.4	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		15.6	Oct-11
Summit Credit II- Gross	22,153,855	0.3	3.4		6.6		2.3						1.8	Nov-14
Summit Credit II- Net			3.4		6.6		2.3						1.8	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		7.0	Nov-14


Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Summit Ventures- Gross	21,877,196	0.3	10.1		20.5		22.4		12.0				6.8	Jun-12
Summit Ventures- Net			10.1		20.5		22.4		12.0				6.8	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		15.0	Jun-12
Summit Ventures IV- Gross	4,012,041	0.0	19.9										19.9	May-16
Summit Ventures IV- Net			19.9										19.9	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		10.4	May-16
Thoma Bravo XI- Gross	32,589,124	0.4	7.2		13.5		13.5						4.2	Jun-14
Thoma Bravo XI- Net			7.2		13.5		13.5						4.2	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		9.6	Jun-14
Thoma Bravo XII- Gross	4,824,610	0.1	-11.9										-11.9	May-16
Thoma Bravo XII- Net			-11.9										-11.9	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		10.4	May-16
TPG Opp Partners III- Gross	16,744,739	0.2	4.6		6.9		10.6						-38.2	Mar-14
TPG Opp Partners III- Net			4.6		6.9		10.6						-38.2	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		9.8	Mar-14
Trinity Ventures XI- Gross	18,087,004	0.2	-1.3		-6.4		-3.2		2.4				-3.1	Apr-13
Trinity Ventures XI- Net			-1.3		-6.4		-3.2		2.4				-3.1	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		15.4	Apr-13
Trinity Ventures XII- Gross	2,649,818	0.0	-8.3										-8.3	Apr-16
Trinity Ventures XII- Net			-8.3										-8.3	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		10.6	Apr-16



Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
TSG7 A LP- Gross TSG7 A LP- Net	2,331,254	0.0												Mar-16
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		5.0	Mar-16
TSG7 B LP- Gross	247,414	0.0	-3.5										-15.6	Jan-16
TSG7 B LP- Net			-3.5										-15.6	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		4.0	Jan-16
Waterland V- Gross	9,313,038	0.1	-3.0		-2.1		82.4		81.8		12.7		12.5	Aug-11
Waterland V- Net			-3.0		-2.1		82.4		81.8		12.7		12.5	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		14.3	Aug-11
Waterland VI- Gross	2,194,470	0.0	10.2		-27.4		-57.4						-52.7	Jul-15
Waterland VI- Net			10.2		-27.4		-57.4						-52.7	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		4.8	Jul-15
Waterland VI Over- Gross	1,355	0.0	-14.4		-84.5								-84.5	Dec-15
Waterland VI Over- Net			-14.4		-84.5								-84.5	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		12.5	Dec-15
Wayzata Opportunities III- Gross	9,024,070	0.1	8.4		-0.1		-3.1		-6.5				-9.6	Feb-13
Wayzata Opportunities III- Net			8.4		-0.1		-3.1		-6.5				-9.6	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		16.7	Feb-13
Real Assets (with SSgA RA Overlay Proxy)- Gross	1,108,050,612	13.7	1.5		8.6		6.3		4.0		5.5		0.6	May-08
Real Assets (with SSgA RA Overlay Proxy)- Net			1.4		8.2		5.7		3.3		4.9			
CPI-U Headline +5%			1.5		5.1		6.5		5.7					May-08
Real Assets ex SSgA RA Overlay Proxy- Gross	766,261,645	9.5	1.7		5.9		5.6		7.6		8.5		2.2	May-08
Real Assets ex SSgA RA Overlay Proxy- Net			1.6		5.5		4.9		6.6		7.6			
CPI-U Headline +5%			1.5		5.1		6.5		5.7					May-08



#### Inception

	Market Value (\$)	% of Portfolio	3 Mo (%) F	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
RE -Separate- Gross	261,570,318	3.2	2.4		5.1		5.1		10.2		11.0		4.9	Sep-08
RE -Separate- Net			2.1		4.4		4.0		8.7		9.9		3.9	
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		6.9	Sep-08
BlackRock RE Leveraged- Gross	155,792,801	1.9	2.6		7.3		10.4		13.3		13.0		9.8	Dec-98
BlackRock RE Leveraged- Net			2.4		6.8		9.8		11.8		11.9			
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		9.5	Dec-98
BlackRock RE II Leveraged- Gross	44,282,370	0.5	0.8		-1.5		-12.5		-1.4		3.7		6.7	Jun-04
BlackRock RE II Leveraged- Net			0.7		-2.1		-13.3		-2.3		3.0			
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		9.6	Jun-04
Cornerstone Leveraged- Gross	61,495,147	0.8	1.2		5.3		4.3		8.4		10.1		7.1	May-04
Cornerstone Leveraged- Net			1.2		4.4		2.7		7.2		9.0			
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		9.8	May-04
BlackRock RE Unleveraged- Gross			2.4		6.7		9.4		11.9		11.6		10.2	Oct-95
BlackRock RE Unleveraged- Net			2.0		5.5		8.0		10.5		10.4			
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		10.0	Oct-95
BlackRock RE II Unleveraged- Gross			0.8		-0.4		-6.4		0.9		4.3		6.6	Oct-00
BlackRock RE II Unleveraged- Net			0.7		-0.8		-6.9		0.4		3.8			
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		9.3	Oct-00
Cornerstone Unleveraged- Gross			1.1		4.2		3.9		6.6		8.0		6.4	Jun-04
Cornerstone Unleveraged- Net			1.0		3.9		3.4		6.1		7.5			
NFI-ODCE <sup>1</sup>			2.1		6.5		10.1		12.4		12.3		9.8	Jun-04

1. See Policy Index and Benchmark History.



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%) F	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
RE -Limited Partnership- Gross	288,481,034	3.6	1.8		5.9		8.8		12.1		11.8		3.3	Sep-08
RE -Limited Partnership- Net			1.7		5.6		8.4		11.4		11.0		2.6	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		4.9	Sep-08
Jamestown Premier Property - Gross	19,276,153	0.2	2.8		5.6		9.9						12.6	Dec-13
Jamestown Premier Property - Net			2.8		5.6		9.9						12.6	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		12.4	Dec-13
Metlife Core Property - Gross	49,665,923	0.6	2.6		6.0		10.8						14.5	Dec-13
Metlife Core Property - Net			2.5		5.6		10.3						14.0	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		12.4	Dec-13
Prime Property- Gross	50,128,375	0.6	2.5		7.5		11.2		14.2				14.2	Sep-13
Prime Property- Net			2.3		6.7		10.0		13.0				13.0	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		12.4	Sep-13
Principal US Property- Gross	38,251,787	0.5	2.1		6.3								9.3	Oct-15
Principal US Property- Net			2.1		6.3								9.3	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		10.1	Oct-15
Prologis Targeted Euro Logistics- Gross +++	30,478,081	0.4	0.0		3.8								3.8	Oct-15
Prologis Targeted Euro Logistics- Net			0.0		3.8								3.8	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		10.1	Oct-15
Prologis Targeted US Logistics- Gross	32,041,757	0.4	2.9		8.3		13.2						14.3	Jul-15
Prologis Targeted US Logistics- Net			2.9		8.3		13.2						14.3	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		12.0	Jul-15
Townsend Real Estate- Gross +++	68,198,446	0.8	0.0										2.9	Mar-16
Townsend Real Estate- Net			0.0										2.9	
NFI-ODCE			2.1		6.5		10.1		12.4		12.4		4.2	Mar-16

+++ Preliminary quarterly returns as of 9/30/2016 (Returns are not available at reporting period.)



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Commodities- Gross	65,856,528	0.8	-4.2		8.9		-3.5		-12.1		-8.0		-7.4	May-08
Commodities- Net			-4.4		8.2		-4.3		-12.9		-8.6			
Bloomberg Commodity Index TR USD			-3.9		8.9		-2.6		-12.3		-9.4		-10.3	May-08
Blackstone- Gross	40,960,500	0.5	-4.4		9.9		-2.9		-11.6		-7.5		-4.8	May-08
Blackstone- Net			-4.7		9.1		-3.9		-12.5		-8.3			
Bloomberg Commodity Index TR USD			-3.9		8.9		-2.6		-12.3		-9.4		-10.3	May-08
eA Commodities Gross Median														May-08
Gresham- Gross	24,896,028	0.3	-3.9		7.3		-4.4		-12.9		-8.6		-10.0	Apr-08
Gresham- Net			-4.1		6.7		-5.0		-13.5		-9.2			
Bloomberg Commodity Index TR USD			-3.9		8.9		-2.6		-12.3		-9.4		-9.9	Apr-08
eA Commodities Gross Median														Apr-08
Private Real Assets - Gross ++	150,353,764	1.9	3.5		6.5		7.0		19.7				-2.0	Jan-13
Private Real Assets - Net			3.5		6.5		7.0		19.7				-2.0	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				6.0	Jan-13
ACM II- Gross **	4,721,261	0.1												Sep-16
ACM II- Net														
CPI-U Headline +5%			1.5		5.1		6.5		5.7					Sep-16
ArcLight Energy VI- Gross	16,558,261	0.2	6.5		-2.3		-2.3						-2.2	Aug-15
ArcLight Energy VI- Net			6.5		-2.3		-2.3						-2.2	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				6.3	Aug-15
Atalaya SMA- Gross	11,923,362	0.1	3.9		5.0		6.1						7.6	May-15
Atalaya SMA- Net			3.9		5.0		6.1						7.6	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				6.2	May-15
Brookfield Infra III- Gross	6,508,724	0.1	14.1										14.1	May-16
Brookfield Infra III- Net			14.1										14.1	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				2.2	May-16

++ Returns are one-quarter lag.

\*\* Funded in September 2016.



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Carlyle Power II- Gross	12,880,661	0.2	-8.6		-28.3								-28.3	Oct-15
Carlyle Power II- Net CPI-U Headline +5%			-8.6 <i>1.5</i>		-28.3 5.1		 6.5		 5.7				-28.3 5.6	Oct-15
EnCap Energy IX- Gross	26,749,822	0.3	18.0		34.4		28.0		11.5				-7.5	Jan-13
EnCap Energy IX- Net	20,7 10,022	0.0	18.0		34.4		28.0		11.5				-7.5	oun ro
CPI-U Headline +5%			1.5		5.1		6.5		5.7				6.0	Jan-13
EnCap Energy X- Gross	9,834,917	0.1	0.9		-18.3		-26.3						-26.9	Apr-15
EnCap Energy X- Net			0.9		-18.3		-26.3						-26.9	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				6.2	Apr-15
EnCap Flatrock Midstream III- Gross	6,546,581	0.1	1.7		72.0		86.5						0.9	Jul-14
EnCap Flatrock Midstream III- Net			1.7		72.0		86.5						0.9	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				5.2	Jul-14
First Reserve- Gross	7,405,824	0.1	-3.5		1.7		-4.0						-39.3	Dec-14
First Reserve- Net			-3.5		1.7		-4.0						-39.3	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				5.6	Dec-14
Pantheon Ventures- Gross	35,895,784	0.4	0.7		9.8		10.6						38.9	Jul-14
Pantheon Ventures- Net			0.7		9.8		10.6						38.9	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				5.2	Jul-14
Quantum Energy VI - Gross	8,340,241	0.1	-1.5		7.1		55.3						3.5	Nov-14
Quantum Energy VI - Net			-1.5		7.1		55.3						3.5	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				4.9	Nov-14
Wastewater Opportunity- Gross	2,988,326	0.0	-6.3		-57.7								-57.7	Dec-15
Wastewater Opportunity- Net			-6.3		-57.7								-57.7	
CPI-U Headline +5%			1.5		5.1		6.5		5.7				5.1	Dec-15
SSgA Real Asset Overlay Proxy- Gross	341,788,967	4.2	0.9		13.9		10.7		0.3		3.6		0.6	Jan-08
SSgA Real Asset Overlay Proxy- Net			0.9		13.9		10.7		0.3		3.6		0.6	1 00
SSgA Real Asset <sup>1</sup>			1.2		14.2		9.9		0.2		3.7			Jan-08

1. See Policy Index and Benchmark History.



Inception

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
Opportunities- Gross <sup>++</sup>	174,402,909	2.2	-1.4		5.0		8.2		13.9		16.0		9.4	Oct-07
Opportunities- Net			-1.7		4.0		7.0		12.3		14.6			
Policy Index <sup>1</sup>			3.4		7.4		9.3		6.2		8.4		7.7	Oct-07
Opportunistic Credit - Gross	40,704,837	0.5	-11.2		-9.8		-10.4		0.4				0.4	Jul-13
Opportunistic Credit - Net			-11.2		-9.8		-10.4		0.4				0.4	
Atalaya Special Opportunities V- Gross	17,782,592	0.2	1.0		5.7		8.7		6.1				5.8	Jul-13
Atalaya Special Opportunities V- Net			1.0		5.7		8.7		6.1				5.8	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9		13.9	Jul-13
European RE Debt II- Gross	22,922,245	0.3	-18.6		-18.9		-21.6						-4.6	Nov-13
European RE Debt II- Net			-18.6		-18.9		-21.6						-4.6	
RE -Opportunistic- Gross	87,700,977	1.1	2.4		11.3		18.7						37.9	Feb-14
RE -Opportunistic- Net			2.1		10.2		17.0						36.0	
NFI-ODCE net +1%			1.6		6.5		10.1						13.1	Feb-14
CIM Opportunity VIII- Gross	22,890,633	0.3	4.1		8.4		19.4						7.2	Feb-15
CIM Opportunity VIII- Net			3.5		6.3		15.9						3.9	
NFI-ODCE net +1%			1.6		6.5		10.1						13.5	Feb-15
Kohlberg Kravis Roberts - Gross	27,994,719	0.3	1.3		10.9		17.6						40.7	Feb-14
Kohlberg Kravis Roberts - Net			1.3		10.8		17.4						40.1	
NFI-ODCE net +1%			1.6		6.5		10.1						13.1	Feb-14
NREP Nordic Strat FCP-FIS- Gross	21,573,007	0.3	2.7		14.8		24.3						22.7	Dec-14
NREP Nordic Strat FCP-FIS- Net			2.7		14.8		24.3						22.7	
NFI-ODCE net +1%			1.6		6.5		10.1						12.3	Dec-14
NREP Nordic Strat II- Gross	4,707,229	0.1	0.0										0.0	Jun-16
NREP Nordic Strat II- Net			0.0										0.0	
NFI-ODCE net +1%			1.6		6.5		10.1						1.6	Jun-16

1. See Policy Index and Benchmark History.

++ Returns are one-quarter lag.



													Incep	tion
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Return (%)	Since
OZ RE III- Gross	10,535,389	0.1	4.3		11.2		14.5						-11.9	Sep-14
OZ RE III- Net			2.7		5.2		5.8						-19.5	
NFI-ODCE net +1%			1.6		6.5		10.1						12.4	Sep-14
RE -Value Added- Gross <sup>++</sup>	45,997,094	0.6	2.4		11.3		15.0		15.4		15.7		-3.7	Sep-08
RE -Value Added- Net			1.8		9.6		12.7		13.3		13.8		-5.5	
NFI-ODCE net +1% 1Q Lag <sup>1</sup>			2.5		8.9		12.7		13.6		13.5		8.0	Sep-08
AEW II- Gross	2,092,018	0.0	0.6		4.0		8.4		20.3		20.7		4.3	May-07
AEW II- Net			0.3		3.1		7.2		18.9		19.4		2.5	
NFI-ODCE net +1% 1Q Lag			2.5		8.9		12.7		13.6		13.5			May-07
ECE Euro Prime Shopping II- Gross	7,929,296	0.1	3.5		20.8		20.8						17.6	Jul-15
ECE Euro Prime Shopping II- Net			2.7		17.5		17.5						14.8	
NFI-ODCE net +1% 1Q Lag			2.5		8.9		12.7		13.6		13.5		14.0	Jul-15
Hammes II- Gross	11,151,792	0.1	3.2		16.0		29.6						24.9	Jul-15
Hammes II- Net			1.8		9.4		18.8						15.9	
NFI-ODCE net +1% 1Q Lag			2.5		8.9		12.7		13.6		13.5		14.0	Jul-15
Hines US Office II- Gross	3,285,079	0.0	-1.1		11.7		12.8		26.5		20.8		-10.8	Aug-07
Hines US Office II- Net			-2.0		9.3		9.6		22.9		17.2		-15.8	
NFI-ODCE net +1% 1Q Lag			2.5		8.9		12.7		13.6		13.5			Aug-07
UBS RE- Gross	21,538,910	0.3	2.9		9.5		12.8		9.6		11.6		-0.2	Sep-06
UBS RE- Net			2.8		9.1		12.2		9.0		10.9		-1.9	
Russell 1000 +3% 1Q Lag			3.0		12.5		5.9		14.3		14.9			Sep-06
Cash - Gross	215,870,716	2.7	0.3		1.1		2.5		1.0		0.7		3.3	Jun-92
Cash - Net			0.3		1.1		2.5		1.0		0.7			
91 Day T-Bills			0.1		0.2		0.2		0.1		0.1		2.6	Jun-92
Cash Account- Gross	215,870,716	2.7	0.3		1.1		2.5		1.0		0.7		3.3	Jun-92
Cash Account- Net			0.3		1.1		2.5		1.0		0.7			
91 Day T-Bills			0.1		0.2		0.2		0.1		0.1		2.6	Jun-92

++ Returns are one-quarter lag.

1. See Policy Index and Benchmark History.







	Current	%
AB	\$1,127,148,240	13.9%
JP Morgan 130/30	\$126,159,720	1.6%
Brown Advisory	\$118,904,370	1.5%
Eagle Capital	\$259,851,037	3.2%
Huber Capital	\$111,745,054	1.4%
UBS	\$58,890,134	0.7%
Weatherbie	\$78,771,555	1.0%
Dalton, Greiner	\$70,134,495	0.9%
WEDGE Capital	\$77,574,540	1.0%
CenterSquare	\$119,524,329	1.5%
Principal Global Inv	\$77,079	0.0%
Lazard	\$407,094,175	5.0%
LSV	\$426,503,566	5.3%
Mondrian Dev Small Cap	\$91,718,222	1.1%
William Blair Dev Small Cap	\$107,305,750	1.3%
Baring	\$133,522	0.0%
Baillie Gifford Emg All Cap	\$138,401,068	1.7%
Mondrian Emg All Cap	\$129,911,657	1.6%
Mondrian Emg Small Cap	\$25,256,547	0.3%
William Blair Emg Small Cap	\$26,606,628	0.3%
CBRE Clarion	\$82,448,392	1.0%
Neuberger Berman Fixed	\$365,041,404	4.5%
Prudential	\$423,334,562	5.2%
TCW MetWest Fixed	\$381,581,301	4.7%
Brandywine Global	\$215,338,561	2.7%
Brigade Capital	\$158,729,102	2.0%



	Current	%
AQR DELTA II	\$48,183,240	0.6%
Brevan Howard US	\$33,645,942	0.4%
Claren Road Credit	\$3,508,714	0.0%
Elliot Associates	\$45,590,614	0.6%
Grosvenor	\$256,979	0.0%
Grosvenor SC Abs Return	\$244,271,496	3.0%
Grosvenor SC Abs Return B	\$162,617,156	2.0%
JANA Partners	\$37,077,010	0.5%
Lakewood	\$39,524,834	0.5%
Laurion Capital	\$40,763,227	0.5%
OZ Domestic II	\$40,681,997	0.5%
Third Point Offshore Fund	\$42,251,264	0.5%
Abbott VI	\$61,821,336	0.8%
Accel-KKR IV	\$9,548,562	0.1%
Accel-KKR Structured II	\$2,370,889	0.0%
Atalaya Special Opp VI	\$12,654,650	0.2%
Athyrium Opp II	\$19,288,319	0.2%
Dyal Capital II	\$8,227,605	0.1%
Garrison Investment Group	\$15,306,075	0.2%
Harbourvest VIII	\$28,062,327	0.3%
Harbourvest Intl VI	\$30,522,015	0.4%
H.I.G. Bayside Loan III	\$15,503,420	0.2%
H.I.G. Capital V	\$2,645,819	0.0%
H.I.G. Europe Capital II	-\$255,272	0.0%
Khosla IV	\$13,453,046	0.2%



	Current	%
Khosla V	\$8,136,400	0.1%
Linden Capital	\$9,115,013	0.1%
Marlin Equity IV	\$10,815,076	0.1%
Marlin Heritage	\$6,650,595	0.1%
New Enterprise	\$31,394,740	0.4%
New Enterprise 15	\$14,890,274	0.2%
Private Equity X	\$49,361,809	0.6%
RRJ Capital	\$26,662,366	0.3%
RRJ Capital Masterfund III	\$2,666,776	0.0%
Spectrum Equity	\$11,510,747	0.1%
Summit Credit	\$10,146,540	0.1%
Summit Credit II	\$22,153,855	0.3%
Summit Ventures	\$21,877,196	0.3%
Summit Ventures IV	\$4,012,041	0.0%
Thoma Bravo XI	\$32,589,124	0.4%
Thoma Bravo XII	\$4,824,610	0.1%
TPG Opp Partners III	\$16,744,739	0.2%
Trinity Ventures XI	\$18,087,004	0.2%
Trinity Ventures XII	\$2,649,818	0.0%
TSG7 A LP	\$2,331,254	0.0%
TSG7 B LP	\$247,414	0.0%
Waterland V	\$9,313,038	0.1%
Waterland VI	\$2,194,470	0.0%
Waterland VI Over	\$1,355	0.0%
Wayzata Opportunities III	\$9,024,070	0.1%
BlackRock RE Leveraged	\$155,792,801	1.9%



	Current	%
BlackRock RE II Leveraged	\$44,282,370	0.5%
Cornerstone Leveraged	\$61,495,147	0.8%
Jamestown Premier Property	\$19,276,153	0.2%
Metlife Core Property	\$49,665,923	0.6%
Prime Property	\$50,128,375	0.6%
Principal US Property	\$38,251,787	0.5%
Prologis Targeted Euro Logistics	\$30,478,081	0.4%
Prologis Targeted US Logistics	\$32,041,757	0.4%
Townsend Real Estate	\$68,198,446	0.8%
Transition Account	\$440,512	0.0%
Blackstone	\$40,960,500	0.5%
Gresham	\$24,896,028	0.3%
ACM II	\$4,721,261	0.1%
ArcLight Energy VI	\$16,558,261	0.2%
Atalaya SMA	\$11,923,362	0.1%
Brookfield Infra III	\$6,508,724	0.1%
Carlyle Power II	\$12,880,661	0.2%
EnCap Energy IX	\$26,749,822	0.3%
EnCap Energy X	\$9,834,917	0.1%
EnCap Flatrock Midstream III	\$6,546,581	0.1%
First Reserve	\$7,405,824	0.1%
Pantheon Ventures	\$35,895,784	0.4%
Quantum Energy VI	\$8,340,241	0.1%
Wastewater Opportunity	\$2,988,326	0.0%
Atalaya Special Opportunities V	\$17,782,592	0.2%



	Current	%
European RE Debt II	\$22,922,245	0.3%
CIM Opportunity VIII	\$22,890,633	0.3%
Kohlberg Kravis Roberts	\$27,994,719	0.3%
NREP Nordic Strat FCP-FIS	\$21,573,007	0.3%
NREP Nordic Strat II	\$4,707,229	0.1%
OZ RE III	\$10,535,389	0.1%
AEW II	\$2,092,018	0.0%
ECE Euro Prime Shopping II	\$7,929,296	0.1%
Hammes II	\$11,151,792	0.1%
Hines US Office II	\$3,285,079	0.0%
UBS RE	\$21,538,910	0.3%
Cash Account	\$215,870,716	2.7%
Heitman Adv JMB V	\$8,390	0.0%
SSgA Overlay	\$169,909,533	2.1%
SSgA Barclays 1-10 Yrs TIPS Index	\$38,949,015	0.5%
SSgA Real Asset	\$208,677,081	2.6%
SSgA S&P Global Infrastructure Index	\$62,715,291	0.8%
SSgA S&P MLP Index	\$31,447,580	0.4%
Total	\$8,081,348,758	100.0%



#### **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	5.3%	75	6.3%	43	0.8	69	-0.4	92	1.9%	95
Policy Index	6.2%	51	5.4%	11	1.1	18			0.0%	1
Total Fund ex Overlay	5.5%	71	5.8%	29	0.9	49	-0.5	92	1.4%	74
Policy Index	6.2%	51	5.4%	11	1.1	18			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	9.4%	51	7.2%	65	1.3	57	0.1	74	2.0%	95
Policy Index	9.2%	59	6.0%	9	1.5	13			0.0%	1
Total Fund ex Overlay	9.2%	60	6.6%	39	1.4	44	0.0	85	1.6%	86
Policy Index	9.2%	59	6.0%	9	1.5	13			0.0%	1



#### **Total Fund** Peer Universe Comparison



InvestorForce Public DB > \$1B Gross Accounts



Median

•

**Total Fund** 

#### **Total Fund** Peer Universe Comparison (Calender Years)



InvestorForce Public DB > \$1B Gross Accounts



**5th Percentile** 

**25th Percentile** 

75th Percentile

95th Percentile

# of Portfolios

**Total Fund** 

Policy Index

Median

•

#### **Total Fund** Peer Universe Comparison (Calender Years)



InvestorForce Public DB > \$1B Gross Accounts



**5th Percentile** 

**25th Percentile** 

**75th Percentile** 

95th Percentile

# of Portfolios

**Total Fund** 

Policy Index

Median

•

## Total Fund Policy Index and Benchmark History

Total Plan Policy Index	As of:						
	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% (HF)	10%	10%	5%	5%	5%		
Barclays Aggregate	15%	20%	20%	25%	25%	30%	
BofA ML High Yield II	1%						
Bloomberg Commodity			5%				
Citigroup BIG							23%
Citigroup WGBI ex US Unhedged	2.4%						
CPI-U +5% (RA)	15%	15%					
Credit Suisse Leveraged Loans	1%						
JPM GBI EM Diversified	0.6%						
MSCI ACWI ex US	22.5%	22.5%	20%				
MSCI EAFE				15%	15%	15%	15%
MSCI Emerging Markets				5%	5%	5%	
NAREIT			3%	3%			
NCREIF			12%	12%	15%	10%	15%
Russell 1000				30%	30%	35%	
Russell 1000 +3% 1QL (PE)	10%	10%					
Russell 2000				5%	5%	5%	
Russell 3000	22.5%	22.5%	30%				47%
S&P 500 +2% 1QL (PE)			5%				
	100%	100%	100%	100%	100%	100%	100%



US Equity Benchmark	As of:			
	1/1/08	9/1/04	1/1/00	7/1/86
Russell 1000		85.71%	87.5%	
Russell 2000		14.29%	12.5%	
Russell 3000	100%			100%
	100.0%	100.0%	100.0%	100.0%
International Equity Benchmark	As of:			
	1/1/08	1/1/00	7/1/86	
MSCI ACWI ex US	100%			
MSCI EAFE	22275	75%	100%	
MSCI Emerging Markets		25%		
	100.0%	100.0%	100.0%	
Fixed Income Benchmark	As of:			
	1/1/08	1/1/00	7/1/86	
Barclays Aggregate	75%	100%		
BofA ML High Yield II	5%			
Citigroup BIG			100%	
Citigroup WGBI ex US Unhedged	12%			
Credit Suisse Leveraged Loans	5%			
JPM GBI EM Diversified	3%			
	100.0%	100.0%	100.0%	
Absolute Return Benchmark	As of:			
	9/1/04			
91-day UST Bill +5%	100%			
	100.0%			

Private Equity Benchmark	As of:	
Dura II 4000 - 20/ 401	1/1/12	1/1/08
Russell 1000 +3% 1QL S&P 500 +2% 1QL	100%	100%
S&P 500 +2% TQL	100.0%	100%
Real Assets Benchmark	As of:	
	1/1/12	
CPI-U +5%	100%	
	100.0%	
Real Estate Benchmark	As of:	
	4/1/13	1/1/99
NCREIF		100%
NFI-ODCE	100%	
	100.0%	100.0%
Private Real Assets Benchmark	As of:	
	2/1/13	
Russell 1000 +3% 1QL	100%	
	100.0%	
Opportunistic Benchmark	As of:	
	1/1/12	11/1/07
Barclays Aggregate		100%
SCERS Policy	100%	
	100%	100%
RE-Value Added Benchmark	As of:	
	7/1/16	10/1/08
NCREIF +2% 1Q Lag		100%
NFI-ODCE net +1% 1Q Lag	100%	
	100%	100%



AllianceBernstein Benchmark	As of:		
	1/1/01	1/1/98	5/1/89
Russell 1000	100%		
Russell 3000		100%	
Wilshire 2500			100%
	100.0%	100.0%	100.0%
LSV Benchmark	As of:		
	7/1/12	1/1/05	
MSCI EAFE Value		100.0%	
MSCI World ex US	100.0%		
	100.0%	100.0%	
Brandywine Benchmark	As of:		
	6/1/13		
Citigroup WGBI ex US Unhedged	80%		
JPM GBI EM Diversified	20%		
	100.0%		
Brigade Benchmark	As of:		
	12/1/13		
BofA ML High Yield II	50%		
Credit Suisse Leveraged Loans	50%		
	100.0%		
SSgA Real Asset Benchmark	As of: 2/1/08		
Barclays US TIPS	20%		
DJ US Select REIT	30%		
MSCI World Natural Resources	25%		
S&P GS Commodities	25%		
	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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