

Investment Performance Review
Period Ending June 30, 2017

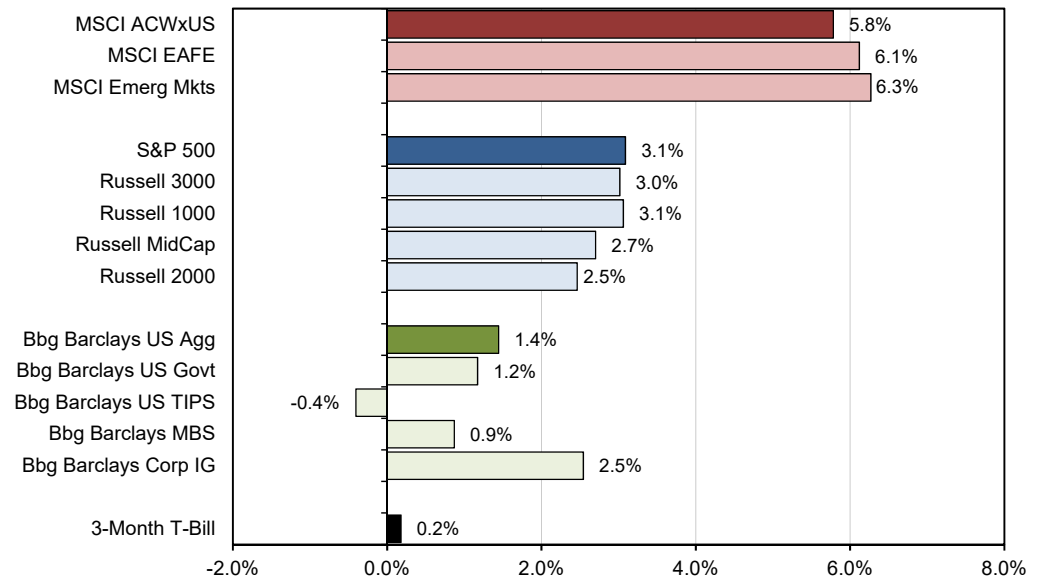
Austin Police



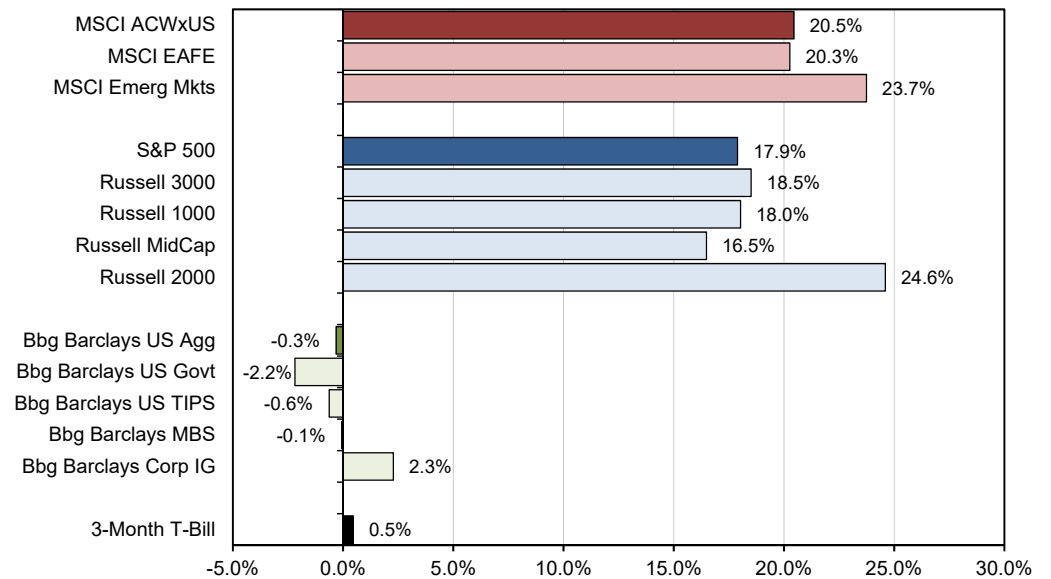
2nd Quarter 2017 Market Environment

- Returns for the 2nd quarter of 2017 were positive for most major equity and fixed income indices. Broad domestic and international equity market performance was largely fueled by continued improvement in economic data worldwide. Domestic equities trailed international indices during the quarter. While U.S. economic fundamentals and corporate earnings growth were viewed positively, political concerns surrounding the pace of implementation of Trump administration expansive fiscal policy reforms and the fallout associated with the dismissal of FBI Director James Comey dampened investor enthusiasm. Despite these concerns, investor optimism remained high and many major domestic equity indices hit record levels during the quarter. Large cap stocks continued a year-to-date trend of outperformance relative to small cap equities with the S&P 500 Index returning 3.1% versus a 2.5% return for the Russell 2000 Index. However, small cap stock returns still show substantial outperformance relative to large cap indices over the one-year period due to their remarkable performance in the second half of 2016.
- International equity market benchmarks continued to outpace U.S. markets through the 2nd quarter of 2017 as both developed and emerging market international equities saw benefits from continued strength in global macroeconomic data, a weakening U.S. Dollar (USD) and ongoing accommodative global central bank policies. While the ongoing improvement in the global economy pushed international index returns higher, gains were tempered toward the end of the quarter as central banks began to signal an increased probability of a future reduction in stimulus. Emerging markets narrowly outperformed developed markets for the quarter. The MSCI Emerging Market Index returned 6.3% for the quarter and a solid 23.7% for the 1-year period. While weaker by comparison, the developed market MSCI EAFE Index also posted robust performance returning 6.1% for the quarter and 20.3% for the year.
- The yield curve flattened through the 2nd quarter of 2017 as interest rates in the U.S. declined through the majority of the second quarter before rising moderately in June. The rise in interest rates coincided with the Federal Open Market Committee's (FOMC) June meeting and their decision to further tighten monetary policy by raising short-term interest rates by 0.25%. The Fed also announced a plan to systematically shrink the size of its balance sheet, gradually reducing its securities holdings by tapering the amount they reinvest as securities mature. This can be viewed similarly to a tightening of monetary policy. Broad fixed income indices were generally positive through the quarter with the bellwether Bloomberg Barclays U.S. Aggregate Index returning 1.4% for the quarter. Benefitting from falling credit spreads, corporate credit was the only investment grade sector to post gains over the 1-year period returning 2.3% versus a -0.3% return for the Bloomberg Barclays U.S. Aggregate Index.

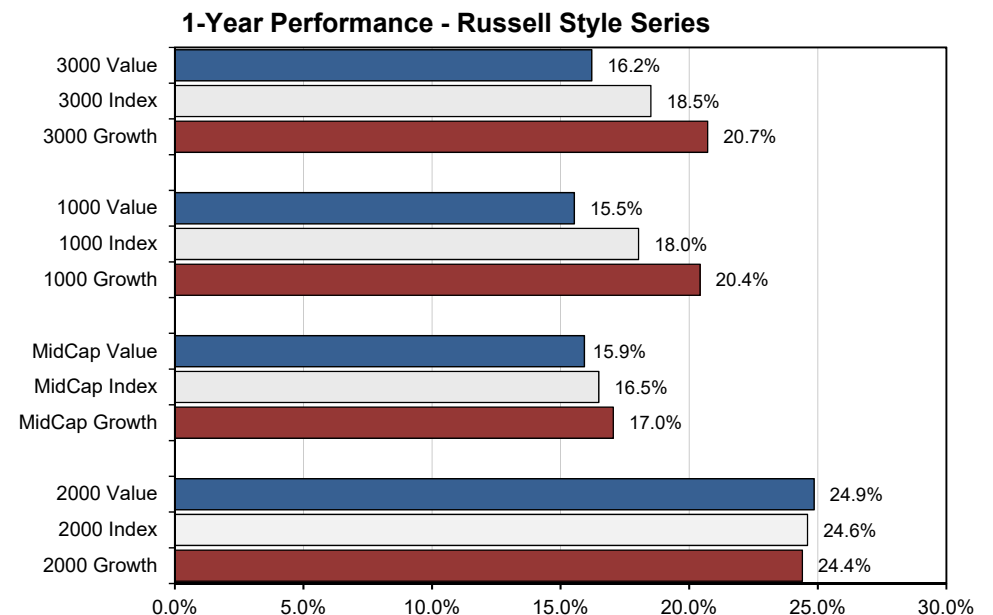
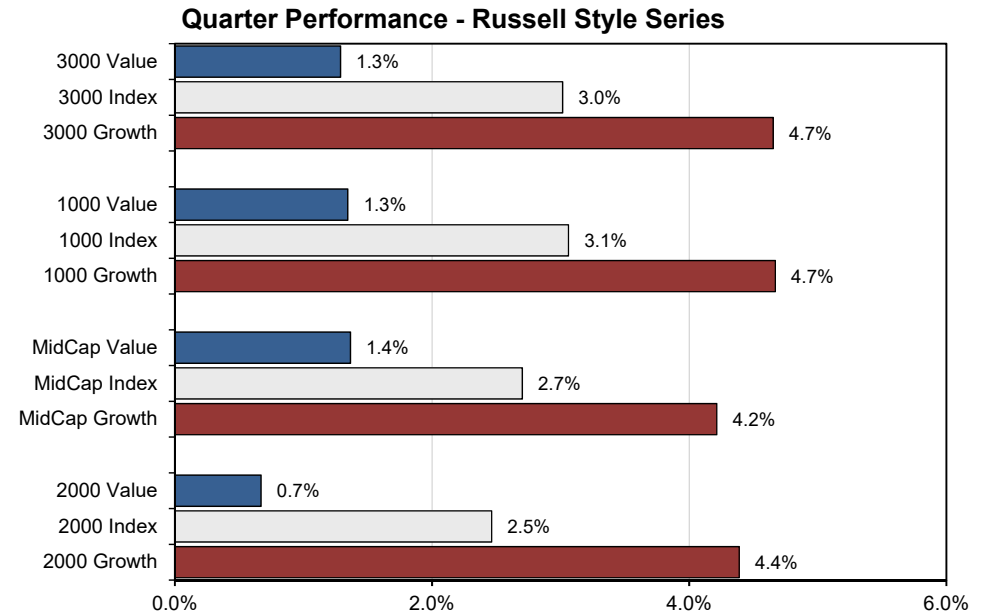
Quarter Performance



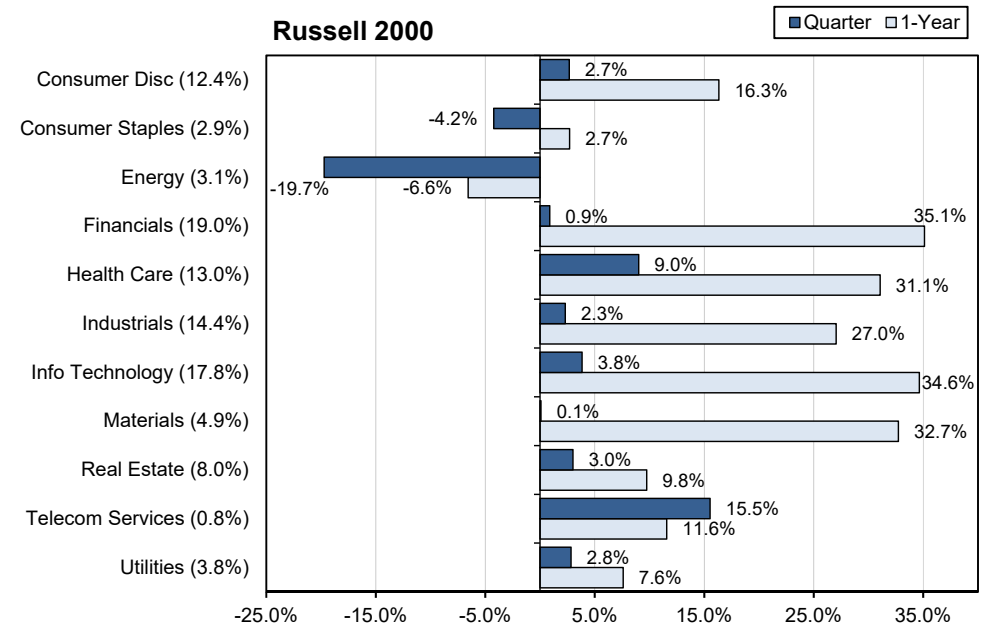
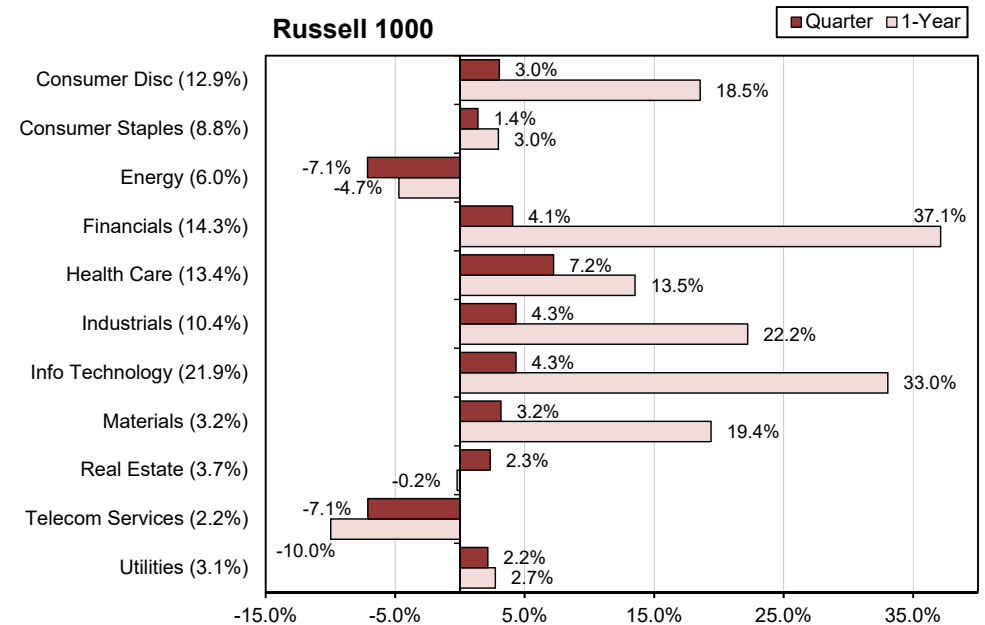
1-Year Performance



- U.S. equity index returns were positive across the style and capitalization spectrum for the 2nd quarter and the trailing 1-year period. Domestic equity index returns were driven by positive trends in economic data reported throughout the period including improvements in GDP, consumer and business sentiment, and employment. In addition, corporate earnings grew at a double digit pace for 1Q 2017 with most sectors showing improvement. U.S. equity returns were somewhat subdued by ongoing political concerns. Media attention surrounding the dismissal of FBI Director James Comey and the ongoing gridlock associated with the repeal and replacement of the Affordable Care Act has cast doubt on the current administration's ability to implement promised expansionary fiscal policy measures.
- Large cap stocks were the best performing capitalization segment for the quarter for both core and growth issues while mid cap equities posted a slight premium relative to other capitalizations within the value spectrum. While large cap stocks were the best performers, returns for the quarter fell in a narrow range for the period. Large-cap stocks represented by the Russell 1000 Index returned 3.1% for the quarter while the small cap Russell 2000 Index returned 2.5%. This return spread was partially due to the effects of rising interest rates and a falling USD. Conversely, over the 1-year period, small cap issues still maintain a considerable performance advantage, with the Russell 2000 returning 24.6% versus a return of 18.0% for the Russell 1000.
- Building on trends from the 1st quarter, index sector allocations were a substantial contributor to growth index outperformance during the 2nd quarter. Growth indices benefitted from significant underweights to the energy and telecommunications sectors, both of which lagged the broad index return. Growth benchmarks also benefitted from greater exposure to the information technology and health care sectors which posted strong sector returns. The Russell 2000 Value Index's return of 0.7% was the worst performing style index for the period. Over the 1-year period, growth indices outperformed value indices in the large and mid cap market capitalizations, but underperformed value equities within the small cap space.
- Domestic equity valuations appear stretched relative to historical levels based on Forward Price/Earnings ratios (P/E), with even the most reasonably valued indices trading above their historical P/E valuations. Index P/E valuations range from 112% to 134% of their respective 15-year P/E averages. The mid cap core and small cap value indices appear the most inexpensive and the large cap growth and small cap growth segments look the most overvalued.



- Sector performance within the Russell 1000 Index was largely positive for the 2nd quarter. Five of eleven economic sectors outpaced the Russell 1000 Index return, and nine of eleven sectors posted gains during the period. Energy trailed for the second consecutive quarter as crude prices continued to fall. While OPEC continues to take measures to limit production, accelerating output from shale producers in the U.S. fueled concerns of oversupply, putting downward pressure on prices. Telecommunication services was the only other large cap sector to post negative performance for the quarter, also returning -7.1%. Despite continued uncertainty surrounding potential reform, health care was the best performing sector in the large cap index, returning 7.2%. Technology and industrials also performed well as increasing business and consumer confidence and strong earnings pushed stock prices 4.3% higher in both sectors through the quarter. Over the trailing 1-year period, financials and technology were the best performing sectors in the Russell 1000, each returning greater than 30%. Eight of eleven large cap economic sectors posted positive returns for the 1-year period with six posting double digit returns.
- Small cap sector results generally lagged their large capitalization counterparts for the 2nd straight quarter. Six of eleven economic sectors outpaced the Russell 2000 Index return for the quarter, and nine of eleven sectors posted positive results for the period. Most of the sector trends observable in large cap index sector performance also impacted small cap sectors. However, small cap telecom services outperformed large cap telecom stocks by over 20%, returning 15.5%. Similar to large cap issues, energy was the biggest detractor, falling -19.7% for the quarter. Returns for health care were also solid through the quarter posting a 9.0% gain. Over the 1-year period, the materials, financials, health care and technology sectors each posted returns in excess of 30% and seven sectors had gains greater than 10%. Energy was the only Russell 2000 sector to post a negative return over last year, falling -6.6%.
- Using S&P 500 sector valuations as a proxy for the market, Forward P/E ratios for eight of the GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the energy, materials and utilities sectors appear the most extended. In contrast the technology, health care and telecommunications sectors were trading at a discount to their long-term average P/E ratios.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of June 30, 2017

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.24%	0.7%	53.5%	Information Technology
Microsoft Corp	2.23%	5.2%	38.0%	Information Technology
Amazon.com Inc	1.66%	9.2%	35.3%	Consumer Discretionary
Johnson & Johnson	1.54%	6.9%	12.0%	Health Care
Facebook Inc A	1.52%	6.3%	32.1%	Information Technology
Exxon Mobil Corp	1.48%	-0.6%	-10.7%	Energy
Berkshire Hathaway Inc B	1.40%	1.6%	17.0%	Financials
JPMorgan Chase & Co	1.39%	4.6%	51.0%	Financials
Alphabet Inc A	1.19%	9.7%	32.1%	Information Technology
Alphabet Inc C	1.18%	9.5%	31.3%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Wayfair Inc Class A	0.01%	89.9%	97.1%	Consumer Discretionary
Alnylam Pharmaceuticals Inc	0.03%	55.6%	43.7%	Health Care
SunPower Corp	0.00%	53.1%	-39.7%	Information Technology
First Solar Inc	0.01%	47.2%	-17.7%	Information Technology
Zillow Group Inc C	0.02%	45.6%	35.1%	Information Technology
Yum China Holdings Inc	0.06%	45.0%	N/A	Consumer Discretionary
Zillow Group Inc A	0.01%	44.5%	33.3%	Information Technology
Whole Foods Market Inc	0.06%	43.0%	33.9%	Consumer Staples
IAC/InterActiveCorp	0.03%	40.0%	83.4%	Information Technology
Akorn Inc	0.01%	39.3%	17.7%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Frontier Communications Corp Class B	0.00%	-44.2%	-73.4%	Telecommunication Services
Enesco PLC Class A	0.00%	-42.3%	-46.6%	Energy
Weatherford International PLC	0.01%	-41.8%	-30.3%	Energy
Whiting Petroleum Corp	0.01%	-41.8%	-40.5%	Energy
Noble Corp PLC	0.00%	-41.5%	-55.9%	Energy
Nabors Industries Ltd	0.01%	-37.3%	-17.3%	Energy
Chicago Bridge & Iron Co NV	0.00%	-35.5%	-42.3%	Industrials
Diamond Offshore Drilling Inc	0.00%	-35.2%	-55.5%	Energy
Hertz Global Holdings Inc	0.00%	-34.4%	-73.8%	Industrials
United States Steel Corp	0.02%	-34.4%	32.4%	Materials

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Kite Pharma Inc	0.26%	32.1%	107.3%	Health Care
Gramercy Property Trust	0.23%	13.0%	11.8%	Real Estate
Catalent Inc	0.23%	23.9%	52.7%	Health Care
Medidata Solutions Inc	0.23%	35.6%	66.8%	Health Care
Parexel International Corp	0.23%	37.7%	38.2%	Health Care
Healthsouth Corp	0.22%	13.6%	27.5%	Health Care
Idacorp Inc	0.22%	3.6%	7.8%	Utilities
bluebird bio Inc	0.22%	15.6%	142.7%	Health Care
Fair Isaac Corp	0.22%	8.1%	23.4%	Information Technology
WGL Holdings Inc	0.22%	1.7%	21.1%	Utilities

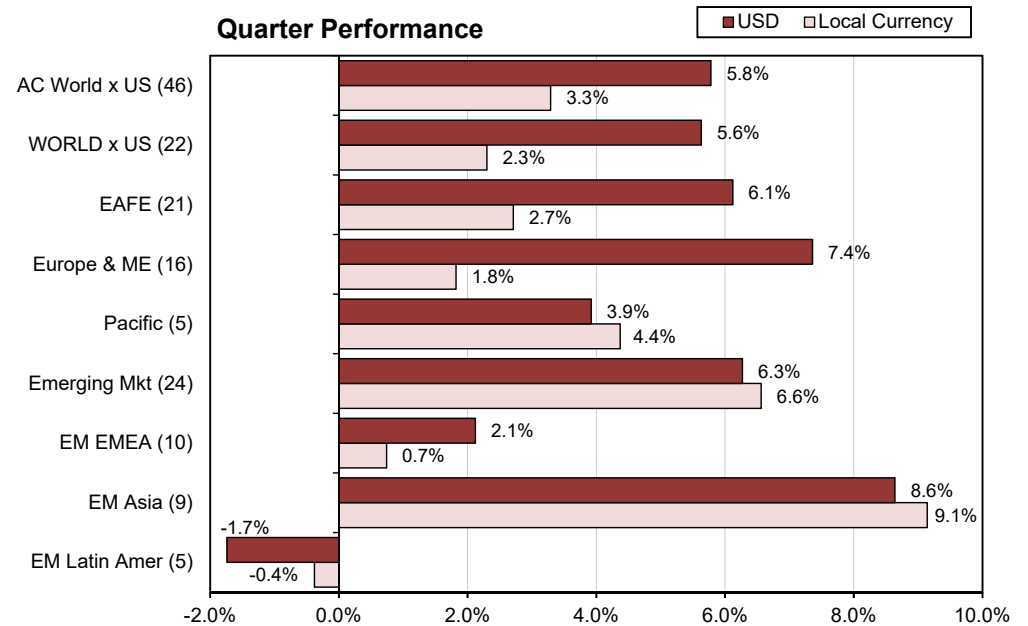
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Straight Path Communications Inc	0.08%	399.4%	549.3%	Telecommunication Services
Altimmune Inc	0.00%	294.3%	146.8%	Health Care
Global Sources Ltd	0.01%	142.4%	118.1%	Information Technology
Puma Biotechnology Inc	0.13%	134.9%	193.4%	Health Care
Angie's List Inc	0.03%	124.4%	96.5%	Information Technology
Conn's Inc	0.02%	118.3%	154.0%	Consumer Discretionary
Weight Watchers International Inc	0.05%	114.6%	187.4%	Consumer Discretionary
NantKwest Inc	0.01%	113.8%	22.0%	Health Care
NovoCure Ltd	0.05%	113.6%	48.2%	Health Care
Vivint Solar Inc	0.01%	108.9%	90.6%	Industrials

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
First NBC Bank Holding Co	0.00%	-99.3%	-99.8%	Financials
Seadrill Ltd	0.00%	-76.8%	-88.6%	Energy
Avinger Inc	0.00%	-76.4%	-96.2%	Health Care
Bonanza Creek Energy Inc	0.03%	-75.5%	-85.9%	Energy
EXCO Resources Inc	0.00%	-71.5%	-86.4%	Energy
XBiotech Inc	0.00%	-71.5%	-77.5%	Health Care
Vince Holding Corp	0.00%	-69.6%	-91.4%	Consumer Discretionary
NewLink Genetics Corp	0.01%	-69.5%	-34.7%	Health Care
Cobalt International Energy Inc	0.00%	-69.1%	-87.7%	Energy
Terravia Holdings Inc	0.00%	-67.8%	-91.1%	Materials

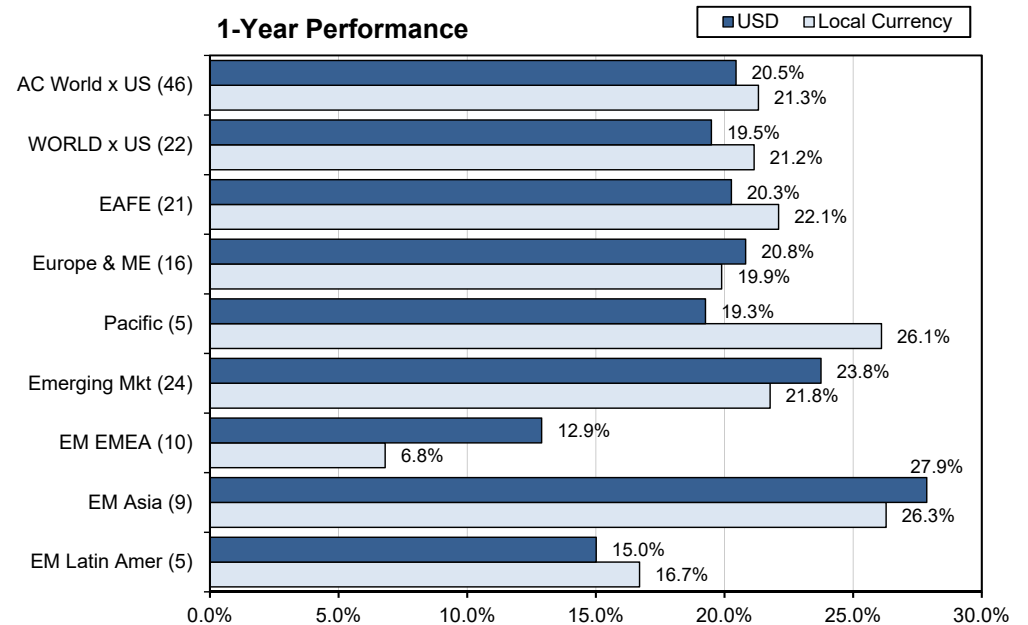


- International equity returns for the 2nd quarter were largely driven by ongoing improvement in the global economy, a weakening USD and political news in Europe and the U.K. Emerging markets were the greatest beneficiaries of these trends, outperforming developed economies for the second straight quarter. While USD strength remains on the high side of its 10-year range, the USD continued its year-to-date decline, providing further tailwinds to international index returns denominated in USD. However, the 1-year performance for broad international indices still show a modest negative currency impact due to USD strength.
- Broad developed market international index performance was positive for the 2nd quarter in both USD and local currency terms with the MSCI EAFE Index returning 6.1% and 2.7% respectively. Eurozone, U.K. and Japanese markets advanced on the back of positive macroeconomic data and strong corporate earnings. Similar to U.S. markets, ongoing political developments also had an effect on international markets with elections in France and the U.K. making headline news. In France, the presidential election of centrist candidate Emmanuel Macron calmed market fears of further break-up within the European Union. Macron's party also won parliamentary majority giving rise to optimism on the possibility of new economic reforms. In the U.K., Prime Minister Theresa May's decision to call special elections in an attempt to strengthen her party's parliamentary position prior to the start of Brexit negotiations had the opposite effect and resulted in a hung parliament, increasing the odds of a "hard Brexit" scenario. Markets gave back some gains towards the end of the quarter as central bank commentary indicated the increased possibility of tightened monetary policy in the future. When viewed over the last 12 months, developed market index performance is robust in both USD and local currency terms, with the MSCI EAFE returning 20.3% and 22.1% respectively.
- A supportive global economic environment and a weakening USD allowed emerging markets to build on their strong start to the year, outperforming developed markets, and returning 6.3% and 6.6% in USD and local currency terms respectively. Greece had a particularly good quarter, returning 33.8% in USD terms, after it was able to reach an agreement to obtain additional bailout funds needed to pay creditors. Russia, Qatar and Brazil were the worst performing countries in the index. Russia and Qatar both suffered from falling oil prices. Qatar was also subject to a blockade by several neighboring countries alleging that Qatar is responsible for supporting instability within the region. Brazilian equities fell as corruption allegations against its President, Michel Temer, increased political risk within the country, putting downward pressure on equity markets. One year returns on the MSCI Emerging Market Index are an impressive 23.8% in USD terms.

Quarter Performance



1-Year Performance



Source: MSCI Global Index Monitor (Returns are Net)



The Market Environment
U.S. Dollar International Index Attribution & Country Detail
As of June 30, 2017

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	12.1%	4.7%	24.2%
Consumer Staples	11.5%	7.6%	7.3%
Energy	4.7%	-0.7%	6.1%
Financials	21.5%	7.2%	39.8%
Health Care	10.8%	7.2%	4.6%
Industrials	14.5%	7.0%	24.5%
Information Technology	6.1%	9.5%	35.8%
Materials	7.5%	3.3%	33.1%
Real Estate	3.6%	4.6%	7.7%
Telecommunication Services	4.3%	4.8%	2.2%
Utilities	3.4%	7.2%	7.1%
Total	100.0%	6.1%	20.3%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	11.3%	5.6%	23.7%
Consumer Staples	9.9%	7.1%	6.5%
Energy	6.3%	-2.9%	6.5%
Financials	23.3%	5.7%	33.6%
Health Care	8.1%	7.2%	4.3%
Industrials	12.0%	6.8%	23.8%
Information Technology	10.8%	12.9%	41.9%
Materials	7.6%	1.7%	27.2%
Real Estate	3.2%	5.8%	9.1%
Telecommunication Services	4.4%	4.0%	3.3%
Utilities	3.1%	5.2%	5.9%
Total	100.0%	5.8%	20.5%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	10.6%	8.4%	21.4%
Consumer Staples	6.8%	5.1%	2.5%
Energy	6.6%	-4.9%	15.9%
Financials	23.6%	3.9%	26.6%
Health Care	2.4%	4.4%	1.9%
Industrials	5.7%	3.9%	16.1%
Information Technology	26.6%	15.5%	46.9%
Materials	7.1%	-0.5%	28.1%
Real Estate	2.7%	11.4%	18.6%
Telecommunication Services	5.4%	2.0%	5.1%
Utilities	2.6%	-1.8%	1.6%
Total	100.0%	6.3%	23.8%

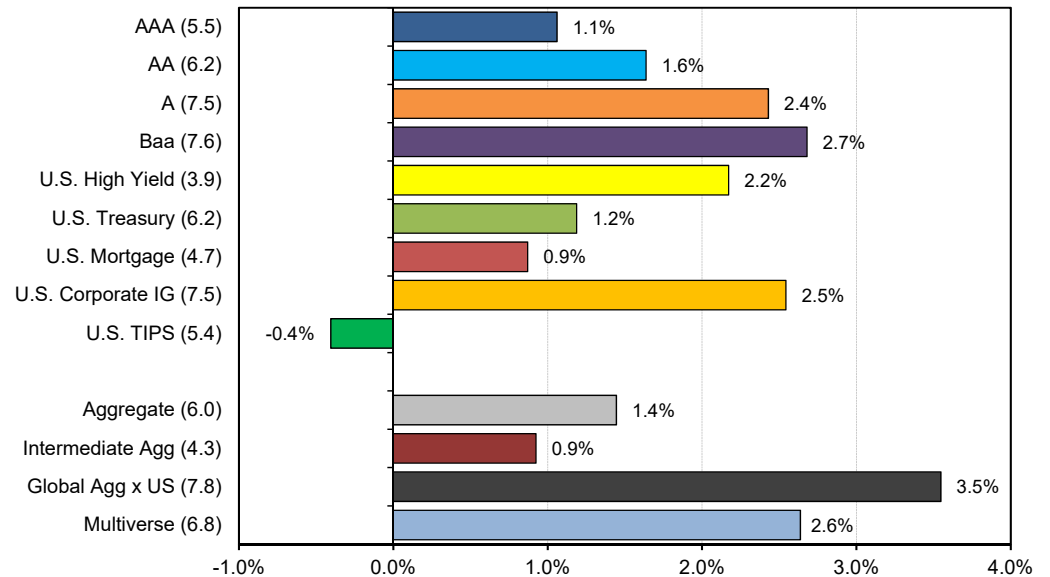
Country	MSCI-EAFE Weight	MSCI-ACWIXUS Weight	Quarter Return	1-Year Return
Japan	23.5%	16.3%	5.2%	19.2%
United Kingdom	17.7%	12.3%	4.7%	13.4%
France	10.5%	7.3%	9.1%	28.1%
Germany	9.5%	6.6%	6.4%	28.7%
Switzerland	8.5%	5.9%	9.0%	16.5%
Australia	7.1%	4.9%	-1.9%	18.3%
Netherlands	3.5%	2.5%	7.8%	28.2%
Hong Kong	3.5%	2.4%	7.2%	23.8%
Spain	3.5%	2.4%	7.9%	38.4%
Sweden	2.9%	2.0%	8.6%	26.7%
Italy	2.3%	1.6%	9.0%	30.9%
Denmark	1.8%	1.3%	15.3%	4.7%
Singapore	1.3%	0.9%	5.3%	14.9%
Belgium	1.1%	0.8%	4.8%	2.1%
Finland	1.0%	0.7%	13.4%	25.0%
Israel	0.7%	0.5%	6.5%	-2.3%
Norway	0.6%	0.4%	4.1%	14.9%
Ireland	0.5%	0.3%	3.8%	15.8%
Austria	0.2%	0.2%	21.8%	65.0%
New Zealand	0.2%	0.1%	8.1%	10.4%
Portugal	0.2%	0.1%	3.1%	15.2%
Total EAFE Countries	100.0%	69.6%	6.1%	20.3%
Canada		6.6%	0.6%	11.7%
Total Developed Countries		76.2%	5.6%	19.5%
China		6.6%	10.6%	32.2%
Korea		3.7%	10.2%	34.9%
Taiwan		3.0%	8.8%	32.9%
India		2.1%	2.9%	17.5%
Brazil		1.6%	-6.7%	17.0%
South Africa		1.6%	3.5%	10.2%
Mexico		0.9%	7.2%	12.0%
Russia		0.8%	-10.0%	10.3%
Indonesia		0.6%	8.5%	17.2%
Malaysia		0.6%	5.1%	2.7%
Thailand		0.5%	2.4%	17.1%
Poland		0.3%	13.6%	42.6%
Philippines		0.3%	7.1%	-6.2%
Turkey		0.3%	19.3%	8.1%
Chile		0.3%	-2.1%	14.0%
United Arab Emirates		0.2%	1.3%	8.4%
Qatar		0.2%	-10.9%	-2.3%
Colombia		0.1%	2.5%	8.8%
Peru		0.1%	7.2%	17.2%
Greece		0.1%	33.8%	50.4%
Hungary		0.1%	19.4%	44.4%
Czech Republic		0.0%	8.1%	10.0%
Pakistan		0.0%	-2.3%	18.3%
Egypt		0.0%	3.2%	-2.1%
Total Emerging Countries		23.8%	6.3%	23.8%
Total ACWIXUS Countries		100.0%	5.8%	20.5%

Source: MSCI Global Index Monitor (Returns are Net in USD)

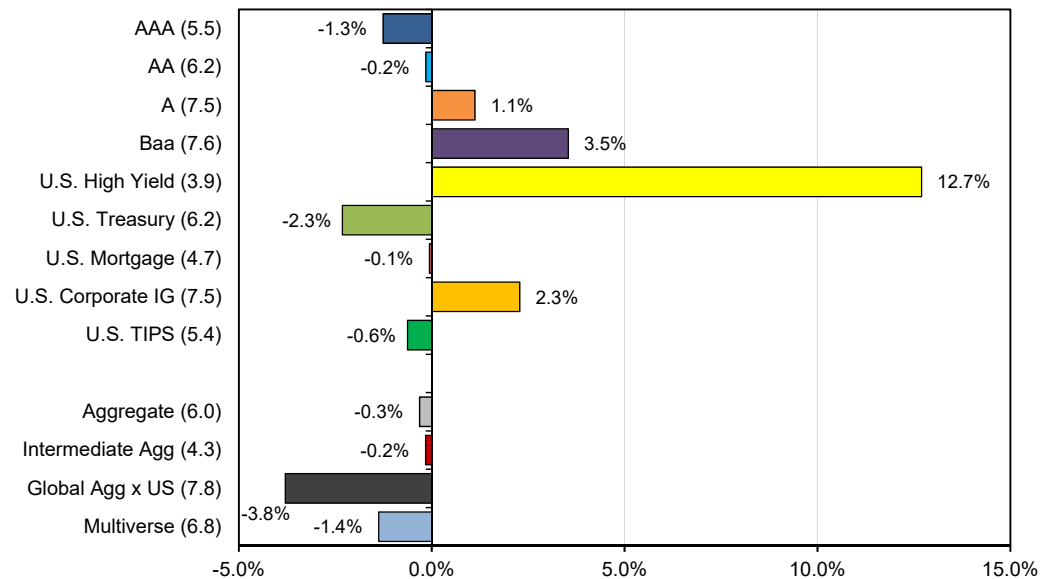


- Most broad fixed income benchmarks finished the 2nd quarter with modest gains. The Bloomberg Barclays U.S. Aggregate Index ended the quarter with a 1.4% increase. Interest rates fell through most of the period before rising near the end of the quarter. The Federal Open Market Committee (FOMC) voted to increase short-term interest rates by 25 basis points (bps) during their June meeting. This represented the third consecutive interest rate increase in the last 3 quarters. While inflation remains below target, the Fed viewed the economy as healthy enough to warrant continued tightening. This caused a flattening of the yield curve as short-term market yields rose through the quarter, but long term interest rates fell. The Fed also outlined plans to gradually reduce its balance sheet by slowing the rate of reinvestment of the Treasury and mortgage backed securities (MBS) it holds on its books as the securities mature. The amount reinvested each month will fall systematically, reducing the size of the Fed's balance sheet over time. Implementation of this plan could begin before the end of the year and would be viewed as further tightening of monetary policy. This news from the Fed put upward pressure on interest rates as the quarter came to a close. Most investment grade indices posting slightly negative returns over the last year. The Bloomberg Barclays U.S. Aggregate index returned -0.3% for the 1-year period.
- Lower quality bonds outperformed higher quality issues for both the quarter and 1-year period as contracting credit spreads from improvements in economic fundamentals acted as a tailwind to these issues. During the 2nd quarter credit spreads for high yield debt decreased by 19 bps versus only 9 bps for investment grade corporate issues. BAA issues more than doubled the return of AAA securities, returning 2.7% versus a more modest 1.1% for AAA debt. High yield debt has been the largest beneficiary of the strengthening economy, returning 2.2% for the quarter and 12.7% for the 1-year period.
- A review of sector performance shows investment grade credit outpacing other Treasuries, and MBS indices. As previously mentioned, corporate issues benefited from tightening credit spreads. MBS trailed Treasuries and investment grade corporates for the quarter as the Fed's plan to taper their ongoing reinvestment in agency MBS pushed spreads on MBS 5 bps higher while spreads tightened across all other fixed income sectors. TIPS posted the worst returns for the quarter, falling -0.4%, as lower inflation expectations drove prices lower. Led by a weakening USD, global bond indices posted solid results for the quarter. However, hawkish comments from several global central banks pared some gains at the end of the period. Fixed income returns over the 1-year period were broadly negative with only corporate issues posting gains. Despite a strong start to 2017, global bond returns trail domestic indices over the 1-year period with the Bloomberg Barclays Aggregate ex U.S. returning -3.8% for the period.

Quarter Performance

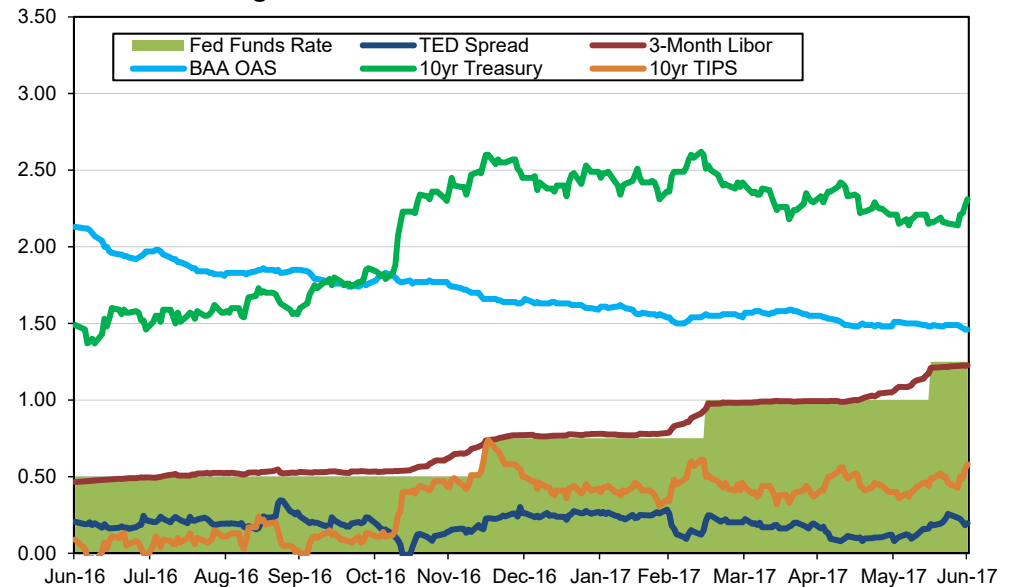


1-Year Performance

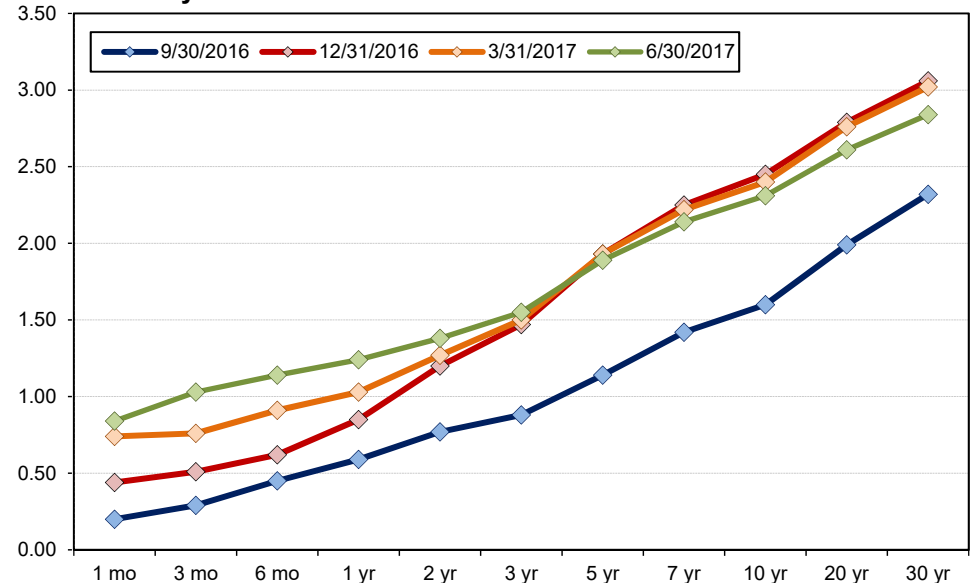


- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) rose dramatically in the 4th quarter of 2016, held largely steady during the 1st quarter of 2017 and then gradually fell through most of 2nd quarter before spiking at the end of June. The yield on the 10-year Treasury has fallen to 2.31% from 2.45% at the start of the year. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a steady decline in credit spreads throughout 2016 and into 2017. This decline is equivalent to an interest rate decrease on corporate bonds, which produces a tailwind for corporate bond index returns. These credit spreads have tightened by about 65 bps over the last 12-months. The green shading at the bottom of the graph illustrates the continued increase in the Federal Funds Rate due to a less accommodative Fed monetary policy.
- The lower graph provides a snapshot of the U.S. Treasury yield curve at each of the last four calendar quarters. Similar to the 1st quarter, the yield curve flattened further throughout the 2nd quarter as yields on shorter-term maturities rose, while interest rates on the long end of the curve (5-years and beyond) continued to decline. Interest rate movement during the period was relatively muted, the significant upward shift in interest rates since the end of 2016 is clearly visible. Yields on the 3-month Treasury Bill have jumped by almost 75 bps since September 30, 2016. Yields on the 30-year Treasury Bond have increased by more than 50 bps over the same period.
- Despite the rise in short-term interest rates, most fixed income indices finished the 2nd quarter in positive territory. In a rising rate environment, it is generally expected that longer-duration market indices will fall more than equivalent lower-duration benchmarks. However, the magnitude of interest rate shifts across the term structure and spread movements can lead to atypical short-term results. Finally, while global benchmarks are impacted by the same local yield and duration factors as domestic benchmarks, the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. This currency effect can either be an offsetting benefit to negative yield and duration factors in a rising rate environment as it has been year-to-date, or it can further exacerbate negative performance as it did in 2016.

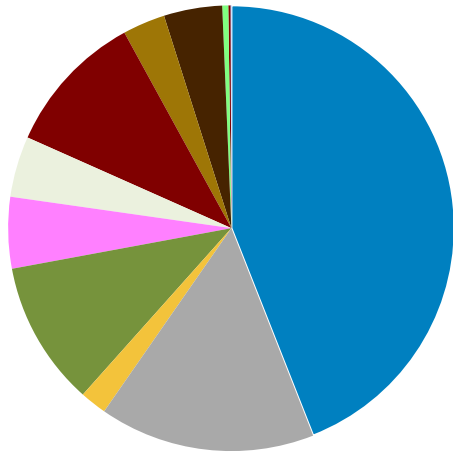
1-Year Trailing Market Rates



Treasury Yield Curve



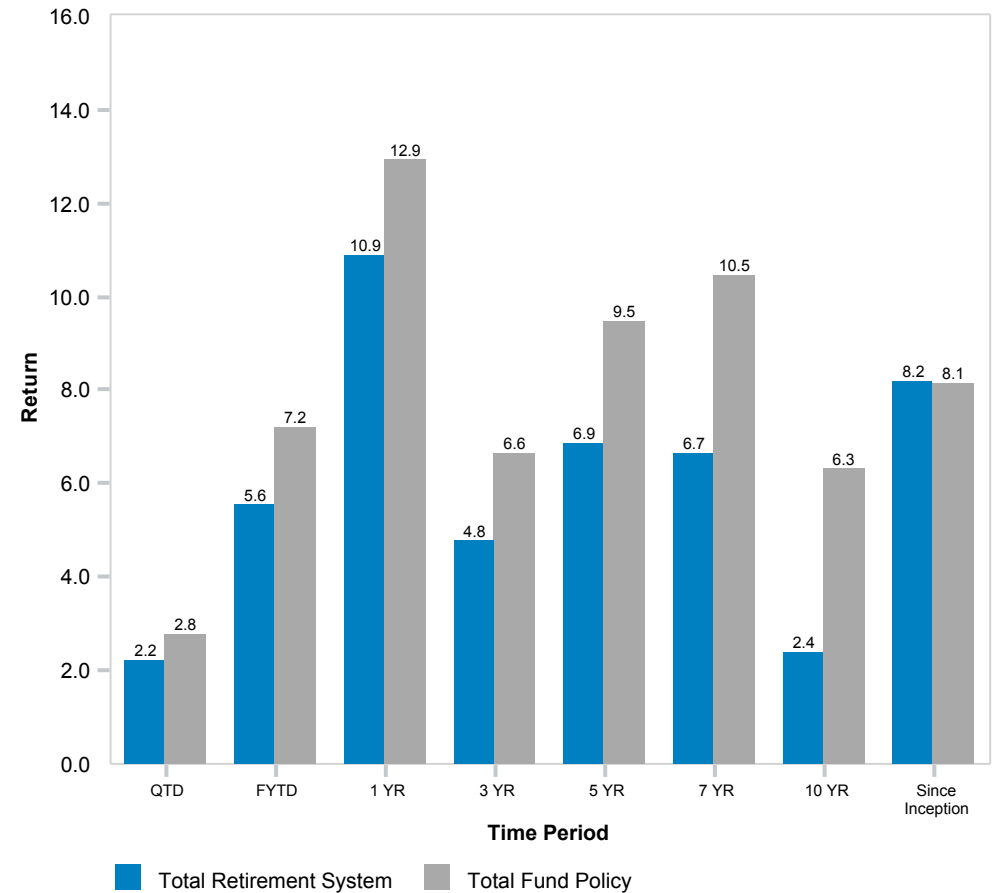
Asset Allocation by Segment
June 30, 2017 : \$725,369,011



Gain/Loss Summary

	QTD	FYTD	1 YR
Total Retirement System			
Beginning Market Value	711,609,666	687,852,466	652,013,561
Net Contributions	-2,041,100	-886,508	1,952,700
Return on Investment	16,407,201	39,293,371	73,043,767
Ending Market Value	725,369,011	725,369,011	725,369,011

Comparative Performance



Allocation

	Market Value	Allocation
Total Domestic Equity	319,433,093	44.0
Total International Equity	113,301,796	15.6
Total Other Equity	14,020,025	1.9
Total Core Fixed Income	76,102,422	10.5
Total Non Core Fixed Income	37,530,474	5.2
Total Other Fixed Income	32,021,225	4.4
Total Real Estate	75,179,812	10.4
Total Timber Funds	22,370,220	3.1
Total Hedge Funds	30,602,065	4.2
Cash Account	3,165,968	0.4
Cash Account PE	-	0.0
Retiree Death Benefit Account	1,139,557	0.2
APRS Building	502,355	0.1

Market values subject to availability from Northern Trust and individual managers.
All performance data is Net of Fees. Please refer to the end of the report for Investment Pricing Summary and Additional Notes.

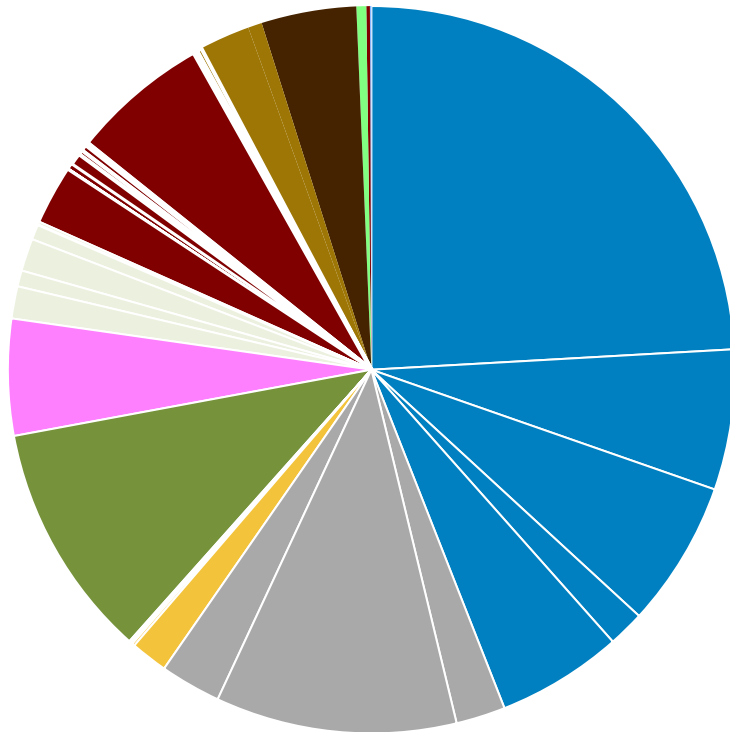


Asset Allocation by Manager
Total Fund
As of June 30, 2017

June 30, 2017 : \$725,369,011

Allocation

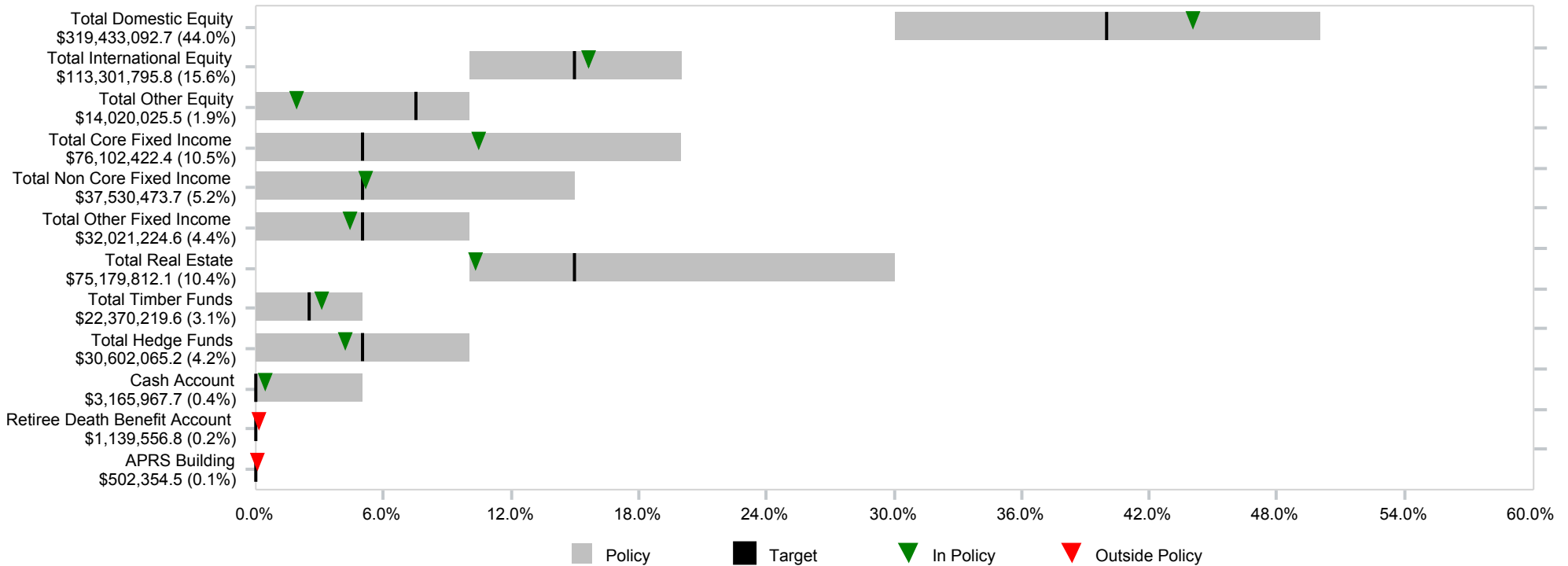
	Market Value	Allocation
■ NT Collective Russell 3000 Index	174,813,269	24.1
■ Baird Mid Cap Growth	45,242,767	6.2
■ Seizert Mid Cap Value	47,148,161	6.5
■ Wellington Energy Fund	11,645,368	1.6
■ Kennedy Small Cap Value	40,583,528	5.6
■ Driehaus International Small Cap Growth	15,936,406	2.2
■ Thompson Siegel & Walmsley	77,728,229	10.7
■ LMCG Emerging Markets Fund	19,637,160	2.7
■ Huff Energy Fund	11,947,286	1.6
■ Sail Venture Fund I	842,107	0.1
■ Sail Venture Fund II	323,492	0.0
■ Sail Pre-Exit Acceleration Fund	321,092	0.0
■ Excelsior Investors, Ltd.	586,048	0.1
■ Orleans Capital	76,102,422	10.5
■ Templeton Global Multisector Plus	37,530,474	5.2
■ LBC Credit Partners III	10,390,950	1.4
■ LBC Credit Partners IV	5,133,814	0.7
■ Providence Debt Fund III	10,525,318	1.5
■ Capital Point Partners	4,760,121	0.7
■ Franchise Equity Capital Partners II	283,055	0.0
■ Franchise Equity Capital Partners III	927,967	0.1
■ Rockspring Capital Land Funds (I - VI)	18,834,896	2.6
■ CB Richard Ellis (I - V)	259,123	0.0
■ Sentinel (II, IV & VI)	119,899	0.0
■ New Boston (V & VI)	47,056	0.0
■ VEF Advisors (V & VI)	1,684,390	0.2
■ INVESCO Real Estate Funds (I & II)	37,367	0.0
■ Edison Investments	3,970,505	0.5
■ JPM India Property Fund	1,536,856	0.2
■ Vision Capital Partners	2,043,713	0.3
■ FWAR Investments	923,043	0.1
■ Morgan Stanley	44,466,466	6.1
■ AEW Partners Fund VIII	1,256,498	0.2
■ BTG Pactual (1, 2 & 3)	1,587,265	0.2
■ Capitol Timberland Investments	16,302,449	2.2
■ Timbervest	4,480,506	0.6
■ Double Eagle Capital Ace Fund, Ltd.	30,602,065	4.2
■ Cash Account	3,165,968	0.4
■ Cash Account PE	-	0.0
■ Retiree Death Benefit Account	1,139,557	0.2
■ APRS Building	502,355	0.1



Market values subject to availability from Northern Trust and individual managers.
Please refer to the end of the report for Investment Pricing Summary and Additional Notes.



Executive Summary



Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
Total Retirement System	725,369,011	100.0	N/A	N/A	100.0
Total Domestic Equity	319,433,093	44.0	30.0	50.0	40.0
Total International Equity	113,301,796	15.6	10.0	20.0	15.0
Total Other Equity	14,020,025	1.9	0.0	10.0	7.5
Total Core Fixed Income	76,102,422	10.5	0.0	20.0	5.0
Total Non Core Fixed Income	37,530,474	5.2	0.0	15.0	5.0
Total Other Fixed Income	32,021,225	4.4	0.0	10.0	5.0
Total Real Estate	75,179,812	10.4	10.0	30.0	15.0
Total Timber Funds	22,370,220	3.1	0.0	5.0	2.5
Total Hedge Funds	30,602,065	4.2	0.0	10.0	5.0
Cash Account	3,165,968	0.4	0.0	5.0	0.0
Retiree Death Benefit Account	1,139,557	0.2	0.0	0.0	0.0
APRS Building	502,355	0.1	0.0	0.0	0.0



Financial Reconciliation
Total Fund
1 Quarter Ending June 30, 2017

Financial Reconciliation Quarter to Date

	Market Value 04/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 06/30/2017
Total Retirement System	711,609,666	-	12,983,015	-15,024,115	-570,114	-36,643	2,136,597	14,270,604	16,407,201	725,369,011
Total Equity	432,227,420	264,653	-	-	-322,448	-	537,974	14,047,315	14,585,289	446,754,914
Total Domestic Equity	312,369,080	264,653	-	-	-322,448	-	537,974	6,583,834	7,121,807	319,433,093
NT Collective Russell 3000 Index	169,642,569	19,676	-	-	-23,504	-	3,828	5,170,700	5,174,528	174,813,269
Wellington Energy Fund	12,938,401	-22,689	-	-	-31,278	-	51,508	-1,290,574	-1,239,066	11,645,368
Baird Mid Cap Growth	42,276,729	73,969	-	-	-73,969	-	87,401	2,878,636	2,966,037	45,242,767
Seizert Mid Cap Value	46,869,564	-	-	-	-	-	219,739	58,858	278,597	47,148,161
Kennedy Small Cap Value	40,641,816	193,697	-	-	-193,697	-	175,498	-233,786	-58,289	40,583,528
Total International Equity	105,838,315	-	-	-	-	-	-	7,463,481	7,463,481	113,301,796
Driehaus International Small Cap Growth	14,134,657	-	-	-	-	-	-	1,801,750	1,801,750	15,936,406
Thompson Siegel & Walmsley	73,367,510	-	-	-	-	-	-	4,360,719	4,360,719	77,728,229
LMCG Emerging Markets Fund	18,336,148	-	-	-	-	-	-	1,301,013	1,301,013	19,637,160
Total Other Equity	14,020,025	-	-	-	-	-	-	-	-	14,020,025
Huff Energy Fund	11,947,286	-	-	-	-	-	-	-	-	11,947,286
Sail Venture Fund I	842,107	-	-	-	-	-	-	-	-	842,107
Sail Venture Fund II	323,492	-	-	-	-	-	-	-	-	323,492
Sail Pre-Exit Acceleration Fund	321,092	-	-	-	-	-	-	-	-	321,092
Excelsior Investors, Ltd.	586,048	-	-	-	-	-	-	-	-	586,048
Total Fixed Income	143,698,643	578,120	-	-	-203,768	-	1,152,300	428,825	1,581,126	145,654,121
Orleans Capital	74,743,659	28,029	-	-	-28,029	-	602,187	756,577	1,358,763	76,102,422
Templeton Global Mulisector Plus Trust	37,833,361	189,293	-	-	-189,293	-	-	-302,887	-302,887	37,530,474
Total Other Fixed Income	31,121,623	360,798	-	-	13,554	-	550,113	-24,864	525,249	32,021,225
Capital Point Partners	4,784,985	-	-	-	-	-	-	-24,864	-24,864	4,760,121
Franchise Equity Capital Partners II	283,055	-	-	-	-	-	-	-	-	283,055
Franchise Equity Capital Partners III	950,467	-22,500	-	-	-	-	-	-	-	927,967
LBC Credit Partners III	10,943,985	-728,665	-	-	13,554	-	162,077	-	162,077	10,390,950
LBC Credit Partners IV	3,633,814	1,416,738	-	-	-	-	83,262	-	83,262	5,133,814
Providence Debt Fund III	10,525,318	-304,774	-	-	-	-	304,774	-	304,774	10,525,318

Please refer to the end of the report for additional notes.



Financial Reconciliation
Total Fund
1 Quarter Ending June 30, 2017

	Market Value 04/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 06/30/2017
Total Real Estate & Timber	97,387,691	-381,982	-	-	-43,899	-1,643	429,570	160,296	589,866	97,550,032
Total Real Estate	74,785,004	-238,419	-	-	-864	-1,643	429,570	206,165	635,735	75,179,812
Rockspring Capital Land Funds (I - VI)	20,030,637	-745,885	-	-	-	-	-	-449,856	-449,856	18,834,896
Rockspring Capital Land Fund I	698,514	-76,074	-	-	-	-	-	-1,872	-1,872	620,569
Rockspring Capital Land Fund II	6,440,495	-10,290	-	-	-	-	-	-4,498	-4,498	6,425,707
Rockspring Capital Land Fund III	2,700,312	-	-	-	-	-	-	-1,337	-1,337	2,698,975
Rockspring Capital Land Fund IV	3,816,087	-473,390	-	-	-	-	-	-201,706	-201,706	3,140,992
Rockspring Capital Land Fund V	3,483,457	-186,131	-	-	-	-	-	-194,484	-194,484	3,102,842
Rockspring Capital Land Fund VI	2,891,771	-	-	-	-	-	-	-45,960	-45,960	2,845,812
CB Richard Ellis (I - V)	259,020	-	-	-	-	-	-	103	103	259,123
CB Richard Ellis IV	259,020	-	-	-	-	-	-	103	103	259,123
Sentinel (II, IV & VI)	110,101	-	-	-	-	-	-	9,798	9,798	119,899
Sentinel IV	110,101	-	-	-	-	-	-	9,798	9,798	119,899
New Boston (V & VI)	47,056	-	-	-	-	-	-	-	-	47,056
New Boston VI	47,056	-	-	-	-	-	-	-	-	47,056
VEF Advisors (V & VI)	1,611,767	-	-	-	-864	-	-	73,487	73,487	1,684,390
Value Enhancement Fund V	617,135	-	-	-	-	-	-	4,982	4,982	622,116
Value Enhancement Fund VI	994,632	-	-	-	-864	-	-	68,506	68,506	1,062,274
INVESCO Real Estate Funds (I & II)	38,361	-	-	-	-	-	-	-994	-994	37,367
INVESCO Real Estate Fund I	9,129	-	-	-	-	-	-	4	4	9,133
INVESCO Real Estate Fund II	29,232	-	-	-	-	-	-	-998	-998	28,234
Edison Investments	3,934,558	-	-	-	-	-	-	35,947	35,947	3,970,505
JPM India Property Fund	2,287,531	-750,675	-	-	-	-	-	-	-	1,536,856
Vision Capital Partners	2,043,713	-	-	-	-	-	-	-	-	2,043,713
FWAR Investments	926,875	1,643	-	-	-	-1,643	-	-3,832	-3,832	923,043
Morgan Stanley	43,495,385	-	-	-	-	-	429,570	541,511	971,081	44,466,466
AEW Partners Fund VIII	-	1,256,498	-	-	-	-	-	-	-	1,256,498
Total Timber Funds	22,602,687	-143,563	-	-	-43,035	-	-	-45,869	-45,869	22,370,220
BTG Pactual (1, 2 & 3)	1,590,582	3,484	-	-	-3,484	-	-	-3,317	-3,317	1,587,265
BTG Pactual 1	1,510,238	3,310	-	-	-3,310	-	-	-1,163	-1,163	1,509,075
BTG Pactual 2	80,344	174	-	-	-174	-	-	-2,154	-2,154	78,190
Capitol Timberland Investments	16,345,001	39,551	-	-	-39,551	-	-	-42,552	-42,552	16,302,449
Timbervest	4,667,104	-186,598	-	-	-	-	-	-	-	4,480,506

Please refer to the end of the report for additional notes.



Financial Reconciliation
Total Fund
1 Quarter Ending June 30, 2017

	Market Value 04/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 06/30/2017
Total Hedge Funds	30,967,933	-	-	-	-	-	-	-365,868	-365,868	30,602,065
Double Eagle Capital Ace Fund, Ltd.	30,967,933	-	-	-	-	-	-	-365,868	-365,868	30,602,065
Cash Account	5,714,565	-460,791	12,917,268	-14,984,912	-	-35,000	14,802	36	14,837	3,165,968
Cash Account PE	-	-	-	-	-	-	-	-	-	-
Retiree Death Benefit Account	1,111,061	-	65,748	-39,203	-	-	1,952	-	1,952	1,139,557
APRS Building	502,355	-	-	-	-	-	-	-	-	502,355

Please refer to the end of the report for additional notes.



Financial Reconciliation
Total Fund
Year To Date Ending June 30, 2017

Financial Reconciliation Year to Date										
	Market Value 01/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 06/30/2017
Total Retirement System	687,852,466	-	28,074,212	-28,960,721	-843,827	-46,491	3,789,883	35,503,488	39,293,371	725,369,011
Total Equity	379,875,678	15,416,557	-	-	-527,806	-	972,501	51,017,983	51,990,484	446,754,914
Total Domestic Equity	281,787,883	15,416,557	-	-	-527,806	-	972,501	21,783,956	22,756,458	319,433,093
NT Collective Russell 3000 Index	145,635,046	15,034,451	-	-	-38,279	-	3,828	14,178,223	14,182,051	174,813,269
Wellington Energy Fund	13,832,516	-44,358	-	-	-63,062	-	100,150	-2,179,877	-2,079,728	11,645,368
Baird Mid Cap Growth	38,820,774	141,884	-	-	-141,884	-	156,294	6,265,698	6,421,992	45,242,767
Seizert Mid Cap Value	44,093,043	-	-	-	-	-	383,550	2,671,568	3,055,118	47,148,161
Kennedy Small Cap Value	39,406,504	284,580	-	-	-284,580	-	328,680	848,345	1,177,024	40,583,528
Total International Equity	98,087,795	-	-	-	-	-	-	15,214,001	15,214,001	113,301,796
Driehaus International Small Cap Growth	13,031,260	-	-	-	-	-	-	2,905,147	2,905,147	15,936,406
Thompson Siegel & Walmsley	68,590,593	-	-	-	-	-	-	9,137,636	9,137,636	77,728,229
LMCG Emerging Markets Fund	16,465,942	-	-	-	-	-	-	3,171,218	3,171,218	19,637,160
Total Other Equity	15,296,714	-	-	-	-	-	-	-1,276,689	-1,276,689	14,020,025
Huff Energy Fund	13,278,117	-	-	-	-	-	-	-1,330,831	-1,330,831	11,947,286
Sail Venture Fund I	842,107	-	-	-	-	-	-	-	-	842,107
Sail Venture Fund II	323,492	-	-	-	-	-	-	-	-	323,492
Sail Pre-Exit Acceleration Fund	321,092	-	-	-	-	-	-	-	-	321,092
Excelsior Investors, Ltd.	531,906	-	-	-	-	-	-	54,142	54,142	586,048
Total Fixed Income	110,206,835	584,401	-	-	-217,227	-	1,973,958	33,106,154	35,080,112	145,654,121
Orleans Capital	74,300,938	55,368	-	-	-55,368	-	1,185,780	615,705	1,801,485	76,102,422
Templeton Global Multisector Plus	35,905,897	189,293	-	-	-189,293	-	-	1,624,577	1,624,577	37,530,474
Total Other Fixed Income	32,391,962	339,741	-	-	27,433	-	788,179	-1,526,090	-737,911	32,021,225
Capital Point Partners	6,616,249	-	-	-	-	-	-	-1,856,128	-1,856,128	4,760,121
Franchise Equity Capital Partners II	251,741	-	-	-	-	-	-	31,314	31,314	283,055
Franchise Equity Capital Partners III	959,897	-63,450	-	-	-	-	13,967	17,553	31,520	927,967
LBC Credit Partners III	11,165,843	-1,016,368	-	-	27,433	-	386,175	-172,133	214,042	10,390,950
LBC Credit Partners IV	3,049,054	1,916,738	-	-	-	-	83,262	84,760	168,022	5,133,814
Providence Debt Fund III	10,349,179	-497,179	-	-	-	-	304,774	368,544	673,318	10,525,318

Please refer to the end of the report for additional notes.



Financial Reconciliation

Total Fund

Year To Date Ending June 30, 2017

	Market Value 01/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 06/30/2017
Total Real Estate & Timber	93,812,762	3,372,192	-	-	-98,794	-1,643	809,270	-343,755	465,515	97,550,032
Total Real Estate	68,958,609	4,761,581	-	-	-1,635	-1,643	809,270	653,631	1,462,901	75,179,812
Rockspring Capital Land Funds (I - VI)	20,102,352	-745,885	-	-	-	-	-	-521,571	-521,571	18,834,896
Rockspring Capital Land Fund I	703,127	-76,074	-	-	-	-	-	-6,484	-6,484	620,569
Rockspring Capital Land Fund II	6,453,861	-10,290	-	-	-	-	-	-17,863	-17,863	6,425,707
Rockspring Capital Land Fund III	2,704,630	-	-	-	-	-	-	-5,655	-5,655	2,698,975
Rockspring Capital Land Fund IV	3,847,886	-473,390	-	-	-	-	-	-233,504	-233,504	3,140,992
Rockspring Capital Land Fund V	3,493,650	-186,131	-	-	-	-	-	-204,677	-204,677	3,102,842
Rockspring Capital Land Fund VI	2,899,199	-	-	-	-	-	-	-53,387	-53,387	2,845,812
CB Richard Ellis (I - V)	259,885	-	-	-	-	-	-	-762	-762	259,123
CB Richard Ellis IV	259,885	-	-	-	-	-	-	-762	-762	259,123
Sentinel (II, IV & VI)	110,474	-	-	-	-	-	-	9,425	9,425	119,899
Sentinel IV	110,474	-	-	-	-	-	-	9,425	9,425	119,899
New Boston (V & VI)	60,329	-	-	-	-	-	-	-13,273	-13,273	47,056
New Boston VI	60,329	-	-	-	-	-	-	-13,273	-13,273	47,056
VEF Advisors (V & VI)	1,567,343	-	-	-	-1,635	-	7,539	111,143	118,682	1,684,390
Value Enhancement Fund V	621,404	-	-	-	-	-	-	713	713	622,116
Value Enhancement Fund VI	945,939	-	-	-	-1,635	-	7,539	110,430	117,969	1,062,274
INVESCO Real Estate Funds (I & II)	39,431	-	-	-	-	-	-	-2,064	-2,064	37,367
INVESCO Real Estate Fund I	12,100	-	-	-	-	-	-	-2,967	-2,967	9,133
INVESCO Real Estate Fund II	27,331	-	-	-	-	-	-	903	903	28,234
Edison Investments	3,894,436	-	-	-	-	-	-	76,069	76,069	3,970,505
JPM India Property Fund	2,185,361	-750,675	-	-	-	-	-	102,170	102,170	1,536,856
Vision Capital Partners	2,043,713	-	-	-	-	-	-	-	-	2,043,713
FWAR Investments	926,922	1,643	-	-	-	-1,643	-	-3,879	-3,879	923,043
Morgan Stanley	37,768,363	5,000,000	-	-	-	-	801,731	896,373	1,698,103	44,466,466
AEW Partners Fund VIII	-	1,256,498	-	-	-	-	-	-	-	1,256,498
Total Timber Funds	24,854,153	-1,389,388	-	-	-97,160	-	-	-997,386	-997,386	22,370,220
BTG Pactual (1, 2 & 3)	2,409,854	-784,292	-	-	-15,708	-	-	-22,589	-22,589	1,587,265
BTG Pactual 1	1,444,483	10,644	-	-	-10,644	-	-	64,592	64,592	1,509,075
BTG Pactual 2	965,371	-794,936	-	-	-5,064	-	-	-87,181	-87,181	78,190
Capitol Timberland Investments	17,776,819	-418,498	-	-	-81,452	-	-	-974,420	-974,420	16,302,449
Timbervest	4,667,480	-186,598	-	-	-	-	-	-377	-377	4,480,506

Please refer to the end of the report for additional notes.



Financial Reconciliation

Total Fund

Year To Date Ending June 30, 2017

	Market Value 01/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 06/30/2017
Total Hedge Funds	31,190,318	-	-	-	-	-	-	-588,252	-588,252	30,602,065
Double Eagle Capital Ace Fund, Ltd.	31,190,318	-	-	-	-	-	-	-588,252	-588,252	30,602,065
Cash Account	23,490,995	-19,373,151	27,943,521	-28,881,517	-	-44,848	30,934	34	30,968	3,165,968
Cash Account PE	-	-	-	-	-	-	-	-	-	-
Retiree Death Benefit Account	1,084,848	-	130,692	-79,203	-	-	3,220	-	3,220	1,139,557
APRS Building	502,355	-	-	-	-	-	-	-	-	502,355

Please refer to the end of the report for additional notes.



Comparative Performance Trailing Returns

	Performance (%)								Inception	Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR			
Total Retirement System (Net)	2.22	5.56	10.89	4.76	6.86	6.66	2.41	8.21	10/01/1992	
Total Retirement System (Gross)	2.30	5.69	11.13	5.01	7.19	7.05	2.96	8.53	10/01/1992	
Total Fund Policy	2.79	7.20	12.94	6.64	9.47	10.45	6.32	8.15		
Variance	-0.49	-1.51	-1.81	-1.63	-2.28	-3.40	-3.36	0.38		
Total Equity	3.30	8.84	19.60	5.03	12.04	10.97	3.33	8.81	01/01/1994	
Total Equity Policy	3.73	10.01	18.73	6.38	12.59	12.88	5.37	8.26		
Variance	-0.43	-1.17	0.87	-1.35	-0.55	-1.91	-2.04	0.55		
Domestic Equity	2.18 (59)	7.53 (49)	20.22 (37)	6.73 (58)	N/A	N/A	N/A	10.98 (55)	05/01/2013	
Russell 3000 Index	3.02	8.93	18.51	9.10	14.58	15.34	7.26	12.66		
Variance	-0.84	-1.40	1.71	-2.37	N/A	N/A	N/A	-1.68		
IM U.S. Equity (SA+CF+MF) Median	2.58	7.34	18.30	7.20	13.44	14.08	6.73	11.27		
NT Collective Russell 3000 Index	3.04 (44)	8.95 (41)	18.55 (54)	9.13 (34)	N/A	N/A	N/A	9.86 (32)	01/01/2014	
Russell 3000 Index	3.02	8.93	18.51	9.10	14.58	15.34	7.26	9.84		
Variance	0.02	0.02	0.04	0.03	N/A	N/A	N/A	0.02		
IM U.S. All Cap Core Equity (SA+CF) Median	2.86	8.15	19.20	8.23	14.73	15.30	7.43	8.93		
Baird Mid Cap Growth	6.84 (17)	16.16 (17)	19.27 (50)	6.47 (76)	N/A	N/A	N/A	6.47 (76)	07/01/2014	
Russell Midcap Growth Index	4.21	11.40	17.05	7.83	14.19	15.24	7.87	7.83		
Variance	2.63	4.76	2.22	-1.36	N/A	N/A	N/A	-1.36		
IM U.S. Mid Cap Growth Equity (SA+CF) Median	4.54	12.60	19.15	7.80	13.81	15.11	8.47	7.80		
Seizert Mid Cap Value	0.59 (87)	6.93 (61)	32.10 (1)	6.03 (83)	N/A	N/A	N/A	6.03 (83)	07/01/2014	
Russell Midcap Index	2.70	7.99	16.48	7.69	14.72	15.28	7.67	7.69		
Variance	-2.11	-1.06	15.62	-1.66	N/A	N/A	N/A	-1.66		
IM U.S. Mid Cap Equity (SA+CF) Median	2.71	8.24	18.67	7.96	14.68	15.38	8.47	7.96		
Wellington Energy Fund	-9.82 (100)	-15.51 (100)	-2.74 (100)	-13.41 (100)	0.77 (100)	2.51 (100)	-0.09 (100)	6.12 (97)	12/01/2004	
Wellington Energy Hybrid	-6.36	-12.61	-4.14	-11.90	1.01	5.53	0.78	5.59		
Variance	-3.46	-2.90	1.40	-1.51	-0.24	-3.02	-0.87	0.53		
IM U.S. Equity (SA+CF) Median	2.78	7.90	19.92	8.43	14.62	15.33	7.78	9.08		
Kennedy Small Cap Value	-0.62 (84)	2.26 (48)	23.30 (47)	N/A	N/A	N/A	N/A	24.24 (66)	03/01/2016	
Russell 2000 Value Index	0.67	0.54	24.86	7.02	13.39	13.50	5.92	29.41		
Variance	-1.29	1.72	-1.56	N/A	N/A	N/A	N/A	-5.17		
IM U.S. Small Cap Value Equity (SA+CF) Median	0.94	2.08	23.12	7.70	15.00	15.04	7.95	26.05		

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



Comparative Performance
Total Fund
As of June 30, 2017

	Performance (%)								Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	
International Equity	7.05 (39)	15.51 (56)	21.07 (43)	1.88 (49)	N/A	N/A	N/A	7.11 (18)	05/01/2013
MSCI AC World ex USA	5.99	14.45	21.00	1.27	7.70	7.14	1.59	4.22	
Variance	1.06	1.06	0.07	0.61	N/A	N/A	N/A	2.89	
IM International Equity (SA+CF+MF) Median	6.49	16.07	20.07	1.79	8.12	7.67	1.97	4.64	
Driehaus International Small Cap Growth	12.75 (1)	22.29 (4)	17.34 (71)	5.42 (23)	N/A	N/A	N/A	12.06 (22)	09/01/2012
MSCI AC World ex USA Small Growth	7.07	16.79	17.48	4.04	10.04	9.20	2.81	9.46	
Variance	5.68	5.50	-0.14	1.38	N/A	N/A	N/A	2.60	
IM International SMID Cap Growth Equity (MF) Median	8.56	18.41	20.10	3.83	11.15	10.80	3.47	10.88	
Thompson Siegel & Walmsley	5.94 (81)	13.32 (82)	21.13 (48)	N/A	N/A	N/A	N/A	4.22 (60)	10/01/2014
MSCI EAFE Index	6.37	14.23	20.83	1.61	9.18	8.40	1.50	4.01	
Variance	-0.43	-0.91	0.30	N/A	N/A	N/A	N/A	0.21	
IM International Large Cap Core Equity (SA+CF) Median	6.62	15.00	20.86	2.53	9.71	9.21	2.32	4.66	
LMCG Emerging Markets Fund	7.10 (38)	19.26 (51)	23.69 (51)	-0.08 (83)	N/A	N/A	N/A	1.78 (85)	04/01/2014
MSCI Emerging Markets Index	6.38	18.60	24.17	1.44	4.33	4.22	2.25	3.38	
Variance	0.72	0.66	-0.48	-1.52	N/A	N/A	N/A	-1.60	
IM Emerging Markets Equity (SA+CF) Median	6.47	19.31	23.74	2.26	5.82	5.60	3.06	4.42	
Total Other Equity	0.00	-8.35	N/A	N/A	N/A	N/A	N/A	-8.35	01/01/2017
Huff Energy Fund	0.00	-10.02	-13.37	-6.96	-4.82	0.75	N/A	0.75	07/01/2010
Russell 3000 Energy SP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Variance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sail Venture Fund I	0.00	0.00	0.00	-15.33	-26.93	-21.85	N/A	-21.46	06/01/2010
Sail Venture Fund II	0.00	0.00	0.00	-39.17	-43.33	-31.25	N/A	-31.25	07/01/2010
Sail Pre-Exit Acceleration Fund	0.00	0.00	0.00	-37.89	N/A	N/A	N/A	-45.48	01/01/2013
Excelsior Investors, Ltd.	0.00	10.18	17.61	-15.59	-14.18	-8.40	N/A	-6.07	12/01/2008

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Comparative Performance

Total Fund

As of June 30, 2017

	Performance (%)								Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	
Total Fixed Income	0.96	1.74	2.12	0.91	2.10	3.32	4.08	7.07	12/01/1993
Total Fixed Income Policy	2.04	3.42	-0.84	1.17	1.65	2.93	4.19	5.15	
Variance	-1.08	-1.68	2.96	-0.26	0.45	0.39	-0.11	1.92	
Orleans Capital	1.78 (11)	2.35 (69)	0.26 (51)	2.60 (72)	N/A	N/A	N/A	3.36 (75)	01/01/2014
Bloomberg Barclays U.S. Aggregate Index	1.45	2.27	-0.31	2.48	2.21	3.19	4.48	3.25	
Variance	0.33	0.08	0.57	0.12	N/A	N/A	N/A	0.11	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.53	2.51	0.29	2.75	2.69	3.72	4.97	3.55	
Templeton Global Multisector Plus Trust	-1.30 (100)	4.00 (60)	10.09 (1)	1.31 (32)	N/A	N/A	N/A	2.51 (28)	03/01/2014
Bimbg. Barc. Global Multiverse	2.64	4.58	-1.38	-0.16	1.05	2.64	3.85	0.60	
Variance	-3.94	-0.58	11.47	1.47	N/A	N/A	N/A	1.91	
IM Global Fixed Income (MF) Median	2.25	4.27	1.04	0.45	1.64	2.81	3.79	1.12	
Total Other Fixed Income	1.72	-2.24	N/A	N/A	N/A	N/A	N/A	-2.24	01/01/2017
Capital Point Partners	-0.52	-28.05	-28.05	-10.53	-6.59	-1.46	N/A	-1.46	07/01/2010
Franchise Equity Capital Partners II	0.00	12.44	-54.69	-33.95	-20.06	-13.51	N/A	-7.85	04/01/2008
Franchise Equity Capital Partners III	0.00	3.43	4.89	-0.39	1.20	6.15	N/A	14.68	12/01/2009
LBC Credit Partners III	1.53	1.98	4.97	12.27	N/A	N/A	N/A	12.57	03/01/2014
Credit Suisse Leveraged Loan Index	0.75	1.96	7.49	3.52	4.85	5.31	4.17	3.72	
Variance	0.78	0.02	-2.52	8.75	N/A	N/A	N/A	8.85	
LBC Credit Partners IV	2.34	5.17	N/A	N/A	N/A	N/A	N/A	8.30	09/01/2016
Credit Suisse Leveraged Loan Index	0.75	1.96	7.49	3.52	4.85	5.31	4.17	5.17	
Variance	1.59	3.21	N/A	N/A	N/A	N/A	N/A	3.13	
Providence Debt Fund III	2.93	6.67	16.20	11.10	N/A	N/A	N/A	11.51	04/01/2014
Credit Suisse Leveraged Loan Index	0.75	1.96	7.49	3.52	4.85	5.31	4.17	3.70	
Variance	2.18	4.71	8.71	7.58	N/A	N/A	N/A	7.81	

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Comparative Performance
Total Fund
As of June 30, 2017

	Performance (%)								Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	
Alternative Investments									
Hedge Funds	-1.18	-1.89	1.63	-0.87	1.52	2.39	N/A	6.06	12/01/2008
HFRI Fund of Funds Composite Index	0.70	3.03	6.26	1.46	3.85	2.98	0.83	3.39	
Variance	-1.88	-4.92	-4.63	-2.33	-2.33	-0.59	N/A	2.67	
Double Eagle Capital Ace Fund, Ltd.	-1.18	-1.89	1.63	-0.31	3.61	N/A	N/A	3.36	09/01/2010
HFRI Fund of Funds Composite Index	0.70	3.03	6.26	1.46	3.85	2.98	0.83	2.92	
Variance	-1.88	-4.92	-4.63	-1.77	-0.24	N/A	N/A	0.44	
Other Assets									
Cash Account	0.17	0.28	0.44	0.18	0.14	0.20	0.85	4.70	06/01/1988
Cash Account PE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	03/01/2014
Retiree Death Benefit Account	0.17	0.29	0.44	0.19	0.14	0.29	0.71	1.37	12/01/2004
Other Alternative Assets									
Total Real Estate	0.86	2.07	1.31	11.51	10.14	9.44	0.92	3.90	08/01/2005
NCREIF Property Index	1.75	3.32	6.97	10.17	10.49	11.58	6.42	8.26	
Variance	-0.89	-1.25	-5.66	1.34	-0.35	-2.14	-5.50	-4.36	
Total Timber Funds	-0.40	-4.63	-11.15	-0.94	-0.62	-0.89	-0.35	1.80	08/01/2005
NCREIF Timberland Index	0.70	1.47	3.35	5.54	7.16	5.31	5.55	7.18	
Variance	-1.10	-6.10	-14.50	-6.48	-7.78	-6.20	-5.90	-5.38	

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



Comparative Performance Fiscal Year Returns

	Performance (%)								
	YTD	2016	2015	2014	2013	2012	2011	2010	2009
Total Retirement System (Net)	5.56	7.67	-1.05	5.61	10.66	8.79	-3.16	10.99	9.24
Total Retirement System (Gross)	5.69	7.87	-0.83	5.94	11.16	9.31	-2.68	12.25	9.92
Total Fund Policy	7.20	8.03	2.44	8.08	17.56	11.31	4.69	12.13	18.40
Variance	-1.51	-0.16	-3.27	-2.14	-6.40	-2.00	-7.37	0.12	-8.48
Total Equity	8.84	11.41	-2.87	5.30	29.57	10.82	-8.56	16.73	37.03
Total Equity Policy	10.01	9.61	-0.51	6.91	29.57	16.70	-3.34	14.51	30.41
Variance	-1.17	1.80	-2.36	-1.61	0.00	-5.88	-5.22	2.22	6.62
Domestic Equity	7.53 (49)	15.76 (31)	-3.09 (62)	8.03 (58)	N/A	N/A	N/A	N/A	N/A
Russell 3000 Index	8.93	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34
Variance	-1.40	3.02	-3.57	-4.53	N/A	N/A	N/A	N/A	N/A
IM U.S. Equity (SA+CF+MF) Median	7.34	11.53	-1.67	9.18	33.88	15.24	-1.69	17.86	30.44
NT Collective Russell 3000 Index	8.95 (41)	12.79 (49)	0.49 (49)	12.55 (32)	N/A	N/A	N/A	N/A	N/A
Russell 3000 Index	8.93	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34
Variance	0.02	0.05	0.01	-0.01	N/A	N/A	N/A	N/A	N/A
IM U.S. All Cap Core Equity (SA+CF) Median	8.15	12.47	0.36	10.69	35.95	16.17	0.12	16.96	27.82
Baird Mid Cap Growth	16.16 (17)	5.35 (52)	-3.03 (81)	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Growth Index	11.40	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29
Variance	4.76	-1.98	-2.83	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Growth Equity (SA+CF) Median	12.60	5.41	0.79	8.63	36.40	15.13	-0.95	26.75	41.78
Seizert Mid Cap Value	6.93 (61)	24.86 (6)	-10.83 (98)	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	7.99	13.80	-2.44	13.22	34.76	17.28	-1.55	25.47	40.48
Variance	-1.06	11.06	-8.39	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Equity (SA+CF) Median	8.24	12.41	-1.15	9.76	36.35	16.46	-1.06	24.97	37.45
Wellington Energy Fund	-15.51 (100)	36.97 (1)	-20.71 (98)	-16.23 (100)	24.52 (96)	1.00 (99)	-7.51 (91)	16.62 (64)	56.48 (6)
Wellington Energy Hybrid	-12.61	27.36	-22.18	-10.01	25.86	3.87	3.42	21.85	17.91
Variance	-2.90	9.61	1.47	-6.22	-1.34	-2.87	-10.93	-5.23	38.57
IM U.S. Equity (SA+CF) Median	7.90	12.86	-0.51	10.00	35.81	15.98	-0.01	19.63	31.24
Kennedy Small Cap Value	2.26 (48)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2000 Value Index	0.54	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58
Variance	1.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Small Cap Value Equity (SA+CF) Median	2.08	26.17	-4.30	5.71	38.09	17.48	-3.15	27.38	33.82

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	Performance (%)									
	YTD	2016	2015	2014	2013	2012	2011	2010	2009	
International Equity	15.51 (56)	0.67 (63)	-2.40 (50)	-0.27 (23)	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA	14.45	5.01	-5.25	-3.44	15.78	17.39	-13.33	11.60	42.14	
Variance	1.06	-4.34	2.85	3.17	N/A	N/A	N/A	N/A	N/A	
IM International Equity (SA+CF+MF) Median	16.07	2.20	-2.43	-4.01	18.06	18.90	-14.35	13.64	37.41	
Driehaus International Small Cap Growth	22.29 (4)	-6.24 (87)	12.59 (12)	-4.32 (41)	29.24 (35)	N/A	N/A	N/A	N/A	
MSCI AC World ex USA Small Growth	16.79	-0.04	6.74	-3.35	18.80	17.17	-17.67	27.55	61.64	
Variance	5.50	-6.20	5.85	-0.97	10.44	N/A	N/A	N/A	N/A	
IM International SMID Cap Growth Equity (MF) Median	18.41	-2.18	7.74	-5.27	26.95	21.90	-15.21	22.22	46.26	
Thompson Siegel & Walmsley	13.32 (82)	0.47 (62)	1.38 (37)	N/A	N/A	N/A	N/A	N/A	N/A	
MSCI EAFE Index	14.23	1.51	-0.39	-4.48	23.29	17.90	-11.73	8.21	32.46	
Variance	-0.91	-1.04	1.77	N/A	N/A	N/A	N/A	N/A	N/A	
IM International Large Cap Core Equity (SA+CF) Median	15.00	1.14	0.33	-3.83	23.21	19.44	-12.25	11.14	32.83	
LMCG Emerging Markets Fund	19.26 (51)	7.14 (71)	-18.73 (95)	N/A	N/A	N/A	N/A	N/A	N/A	
MSCI Emerging Markets Index	18.60	11.60	-14.60	-1.82	-2.27	18.64	-18.17	19.20	79.02	
Variance	0.66	-4.46	-4.13	N/A	N/A	N/A	N/A	N/A	N/A	
IM Emerging Markets Equity (SA+CF) Median	19.31	10.07	-12.66	-0.14	0.95	20.55	-18.11	21.81	80.29	
Total Other Equity	-8.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Huff Energy Fund	-10.02	44.55	-20.83	-18.64	-29.83	43.24	-5.31	N/A	N/A	
Russell 3000 Energy SP	N/A	N/A	N/A	-10.01	25.86	3.87	3.42	21.85	17.91	
Variance	N/A	N/A	N/A	-8.63	-55.69	39.37	-8.73	N/A	N/A	
Sail Venture Fund I	0.00	0.00	0.00	-51.72	-37.04	-32.91	-13.87	N/A	N/A	
Sail Venture Fund II	0.00	0.00	0.00	-90.44	-22.84	-24.33	10.90	N/A	N/A	
Sail Pre-Exit Acceleration Fund	0.00	0.00	0.00	-93.68	3.26	N/A	N/A	N/A	N/A	
Excelsior Investors, Ltd.	10.18	13.49	-40.49	-13.16	-23.59	-2.73	2.92	15.69	1.86	

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Comparative Performance
Total Fund
As of June 30, 2017

	Performance (%)								
	YTD	2016	2015	2014	2013	2012	2011	2010	2009
Total Fixed Income	1.74	4.36	-0.97	1.69	-3.42	13.45	-1.20	15.23	24.71
Total Fixed Income Policy	3.42	2.77	-1.37	3.20	-2.10	4.54	6.72	6.24	7.01
Variance	-1.68	1.59	0.40	-1.51	-1.32	8.91	-7.92	8.99	17.70
Orleans Capital	2.35 (69)	3.79 (27)	0.57 (72)	5.08 (94)	N/A	N/A	N/A	N/A	N/A
Bloomberg Barclays U.S. Aggregate Index	2.27	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93
Variance	0.08	1.14	0.02	-0.89	N/A	N/A	N/A	N/A	N/A
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.51	3.10	0.82	6.15	-1.56	5.85	7.83	7.24	9.88
Templeton Global Multisector Plus Trust	4.00 (60)	7.33 (9)	-4.27 (62)	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. Global Multiverse	4.58	2.84	-3.29	0.48	-2.19	4.84	5.55	5.84	8.04
Variance	-0.58	4.49	-0.98	N/A	N/A	N/A	N/A	N/A	N/A
IM Global Fixed Income (MF) Median	4.27	3.33	-3.83	1.95	-2.47	7.34	4.06	6.00	11.80
Total Other Fixed Income	-2.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Capital Point Partners	-28.05	0.00	1.14	-7.09	-6.18	15.06	7.40	N/A	N/A
Franchise Equity Capital Partners II	12.44	-70.03	-13.41	21.33	21.10	-16.06	-7.72	7.86	16.31
Franchise Equity Capital Partners III	3.43	7.95	9.06	-19.72	22.20	3.61	18.41	2.08	N/A
LBC Credit Partners III	1.98	11.13	16.17	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	1.96	9.87	-0.41	2.18	6.16	9.43	1.82	9.98	44.86
Variance	0.02	1.26	16.58	N/A	N/A	N/A	N/A	N/A	N/A
LBC Credit Partners IV	5.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	1.96	9.87	-0.41	2.18	6.16	9.43	1.82	9.98	44.86
Variance	3.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Providence Debt Fund III	6.67	13.97	2.91	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	1.96	9.87	-0.41	2.18	6.16	9.43	1.82	9.98	44.86
Variance	4.71	4.10	3.32	N/A	N/A	N/A	N/A	N/A	N/A

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



Comparative Performance
Total Fund
As of June 30, 2017

	Performance (%)								
	YTD	2016	2015	2014	2013	2012	2011	2010	2009
Alternative Investments									
Hedge Funds	-1.89	0.37	-1.70	-6.00	12.18	9.71	-4.32	13.31	36.40
HFRI Fund of Funds Composite Index	3.03	0.33	-0.17	3.41	9.00	4.85	-5.84	5.63	11.40
Variance	-4.92	0.04	-1.53	-9.41	3.18	4.86	1.52	7.68	25.00
Double Eagle Capital Ace Fund, Ltd.	-1.89	-1.53	0.78	0.17	16.13	8.92	-6.81	N/A	N/A
HFRI Fund of Funds Composite Index	3.03	0.33	-0.17	3.41	9.00	4.85	-5.84	5.63	11.40
Variance	-4.92	-1.86	0.95	-3.24	7.13	4.07	-0.97	N/A	N/A
Other Assets									
Cash Account	0.28	0.27	0.01	0.06	0.02	0.59	-0.21	0.36	0.30
Cash Account PE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Retiree Death Benefit Account	0.29	0.27	0.02	0.01	0.01	0.15	1.24	0.06	0.30
Other Alternative Assets									
Total Real Estate	2.07	0.76	5.40	31.16	10.25	7.49	6.25	2.00	-29.70
NCREIF Property Index	3.32	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85
Variance	-1.25	-7.21	-7.93	19.34	-0.73	-3.05	-8.01	-11.11	-12.85
Total Timber Funds	-4.63	-6.92	1.93	10.81	-4.18	0.02	-1.33	3.80	-10.95
NCREIF Timberland Index	1.47	2.59	4.97	10.48	9.69	7.75	1.57	-0.15	-4.75
Variance	-6.10	-9.51	-3.04	0.33	-13.87	-7.73	-2.90	3.95	-6.20

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



Comparative Performance - IRR
Other Alternative Investments
As of June 30, 2017

Comparative Performance - IRR									
	Market Value (\$)	QTR	YTD	1 YR	3 YR	5 YR	Inception IRR	Inception Date	
Total Real Estate Investments	75,179,812	0.86	2.06	1.51	13.27	11.82	7.07	07/31/2005	
Sentinel (IV & VI)	119,899	8.90	8.53	13.22	30.10	24.38	9.54	08/31/1992	
Edison Investments	3,970,505	0.91	1.95	4.10	26.35	18.30	12.04	09/30/1996	
New Boston (V & VI)	47,056	0.00	-22.00	-6.97	-21.02	-22.86	2.41	12/31/2001	
VEF Advisors (V & VI)	1,684,390	4.51	7.47	19.80	20.79	14.72	3.64	05/31/2002	
Rockspring Capital Land Funds (I - VI)	18,834,896	-2.33	-2.64	-10.13	1.01	4.54	1.58	11/30/2003	
CB Richard Ellis (I - V)	259,123	0.04	-0.29	-39.50	-26.59	-12.01	4.14	04/30/2000	
INVESCO Real Estate Funds (I & II)	37,367	-2.59	-5.23	-4.91	5.91	13.94	4.32	03/31/2005	
JPM India Property Fund	1,536,856	0.00	5.02	2.39	-1.26	-1.16	-1.90	05/24/2007	
Vision Capital Partners	2,043,713	0.00	0.00	0.00	-8.29	-7.72	-8.10	01/31/2008	
FWAR Investments	923,043	-0.59	-0.60	-3.92	-3.45	-18.94	-18.94	07/18/2012	
Morgan Stanley	44,466,466	2.23	4.22	9.08	N/A	N/A	9.00	12/31/2015	
AEW Partners Fund VIII	1,256,498	N/A	N/A	N/A	N/A	N/A	0.00	06/26/2017	
Total Timber Funds	22,370,220	-0.40	-4.60	-11.01	0.73	0.30	-0.10	07/31/2005	
BTG Pactual (1, 2 & 3)	1,587,265	-0.43	-2.06	-29.46	-0.48	-3.38	3.92	11/30/1996	
Capitol Timberland Investments	16,302,449	-0.50	-6.09	-7.14	1.59	1.82	3.75	09/30/2004	
Timbervest	4,480,506	0.00	-0.01	-2.28	-2.29	-1.18	-0.45	04/30/2008	
Total Other Equity	14,020,025	0.00	N/A	N/A	N/A	N/A	0.00	01/01/2017	
Huff Energy Fund	11,947,286	0.00	-10.02	-13.37	-7.07	-5.15	3.31	12/31/2006	
Sail Venture Fund I	842,107	0.00	0.00	0.00	-15.32	-27.77	-17.77	12/31/2008	
Sail Venture Fund II	323,492	0.00	0.00	0.00	-39.15	-44.15	-32.39	02/28/2009	
Sail Pre-Exit Acceleration Fund	321,092	0.00	0.00	0.00	-37.86	N/A	-46.44	01/31/2013	
Excelsior Investors, Ltd.	586,048	0.00	10.18	17.54	N/A	N/A	-18.84	12/31/2014	
Total Other Fixed Income	32,021,225	0.59	N/A	N/A	N/A	N/A	0.00	01/03/2017	
Capital Point Partners	4,760,121	-0.52	-28.05	-28.05	-13.44	-8.95	1.37	03/31/2007	
Franchise Equity Capital Partners II	283,055	0.00	12.44	-54.69	-15.43	-6.30	0.40	04/28/2008	
Franchise Equity Capital Partners III	927,967	0.00	3.42	4.81	-4.80	0.60	7.11	12/21/2009	
LBC Credit Partners III	10,390,950	1.66	2.24	5.48	11.18	N/A	11.49	03/07/2014	
LBC Credit Partners IV	5,133,814	2.30	5.11	N/A	N/A	N/A	8.76	09/19/2016	
Providence Debt Fund III	10,525,318	2.94	6.65	16.33	10.83	N/A	11.15	04/21/2014	



**Summary of Partnerships
Other Alternative Investments**

As of June 30, 2017

Private Equity Summary of Partnership

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
Total Real Estate Investments					
Sentinel IV	4,929,840	119,899	12,959,907	8.6	2.7
Edison Investments	8,146,177	3,970,505	17,262,464	12.0	2.6
New Boston VI	4,862,459	47,056	1,740,268	-18.6	0.4
Value Enhancement Fund V	5,000,000	622,116	5,317,805	5.9	1.2
Value Enhancement Fund VI	5,000,000	1,062,274	5,180,762	2.7	1.2
Rockspring Capital Land Fund I	3,618,330	620,569	4,738,306	10.7	1.5
Rockspring Capital Land Fund II	7,832,911	6,425,707	4,962,701	4.0	1.5
Rockspring Capital Land Fund III	5,125,000	2,698,975	4,302,644	3.7	1.4
Rockspring Capital Land Fund IV	7,615,498	3,140,992	6,398,910	3.1	1.3
Rockspring Capital Land Fund V	5,093,604	3,102,842	2,148,413	0.3	1.0
Rockspring Capital Land Fund VI	3,500,000	2,845,812	553,516	-0.3	1.0
CB Richard Ellis IV	7,500,000	259,123	170,790	-27.1	0.1
INVESCO Real Estate Fund I	4,624,194	9,133	5,000,080	1.5	1.1
INVESCO Real Estate Fund II	7,027,609	28,234	9,105,937	6.8	1.3
JPM India Property Fund	4,354,162	1,536,856	2,310,946	-1.9	0.9
Vision Capital Partners	5,415,936	2,043,713	570,711	-8.1	0.5
FWAR Investments	4,467,760	923,043	800,073	-18.9	0.4
Morgan Stanley	40,000,000	44,466,466	-	9.0	1.1
AEW Partners Fund VIII	1,256,498	1,256,498	-	0.0	1.0
Total Timber Investments					
BTG Pactual 1	8,780,678	1,509,075	13,862,803	3.5	1.8
BTG Pactual 2	3,883,988	78,190	3,150,000	-1.4	0.8
Capitol Timberland Investments	14,069,193	16,302,449	3,318,605	3.7	1.4
Timbervest	7,500,000	4,480,506	2,830,398	-0.5	1.0



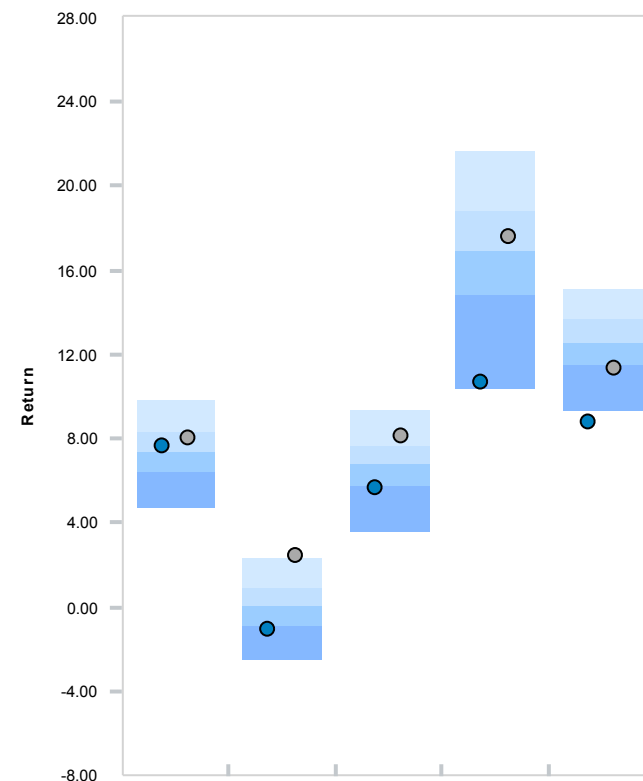
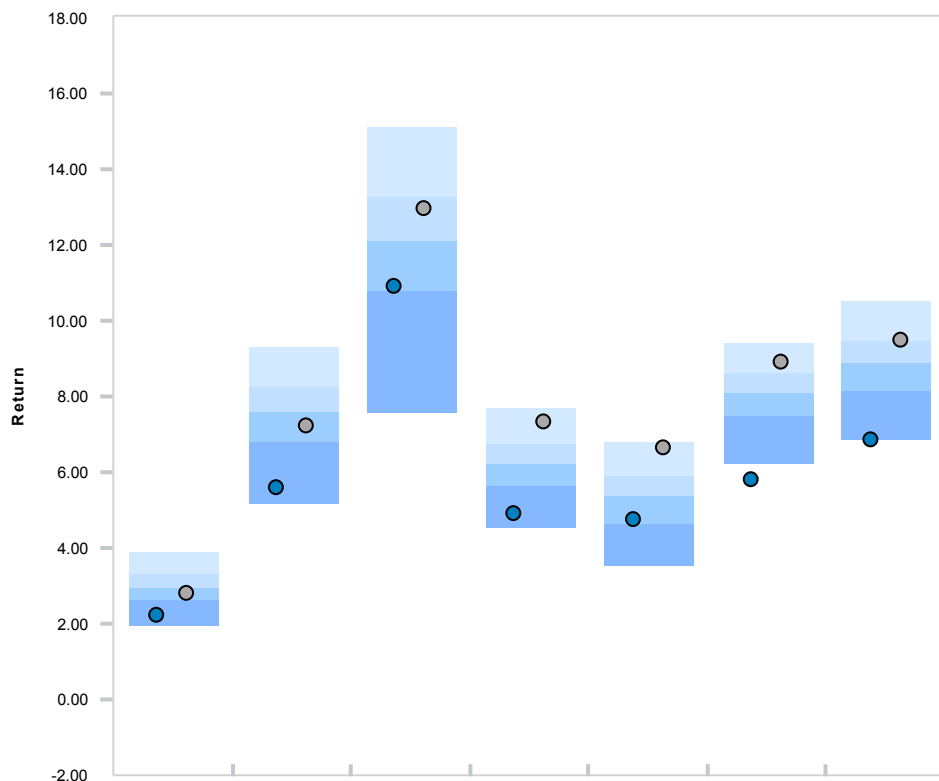
**Summary of Partnerships
Other Alternative Investments**

As of June 30, 2017

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
Total Other Equity					
Huff Energy Fund	11,095,509	11,947,286	1,786,358	3.3	1.2
Sail Venture Fund I	5,000,000	842,107	343,503	-17.8	0.2
Sail Venture Fund II	5,366,749	323,492	688,247	-32.4	0.2
Sail Pre-Exit Acceleration Fund	4,947,894	321,092	-	-46.4	0.1
Excelsior Investors, Ltd.	1,018,466	586,048	20,562	-18.8	0.6
Total Other Fixed Income					
Capital Point Partners	12,058,210	4,760,121	8,004,090	1.4	1.1
Franchise Equity Capital Partners II	14,663,847	283,055	14,584,198	0.4	1.0
Franchise Equity Capital Partners III	4,943,551	927,967	5,314,311	7.1	1.3
LBC Credit Partners III	18,837,140	10,390,950	12,238,294	11.5	1.2
LBC Credit Partners IV	5,000,000	5,133,814	83,262	8.8	1.0
Providence Debt Fund III	10,017,001	10,525,318	1,644,531	11.1	1.2



Plan Sponsor Peer Group Analysis - All Public Plans-Total Fund



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Retirement System	2.22 (89)	5.56 (92)	10.89 (74)	4.88 (92)	4.76 (71)	5.81 (97)	6.86 (95)
● Total Fund Policy	2.79 (64)	7.20 (65)	12.95 (31)	7.30 (12)	6.65 (7)	8.92 (17)	9.47 (26)
Median	2.96	7.56	12.09	6.20	5.35	8.10	8.90

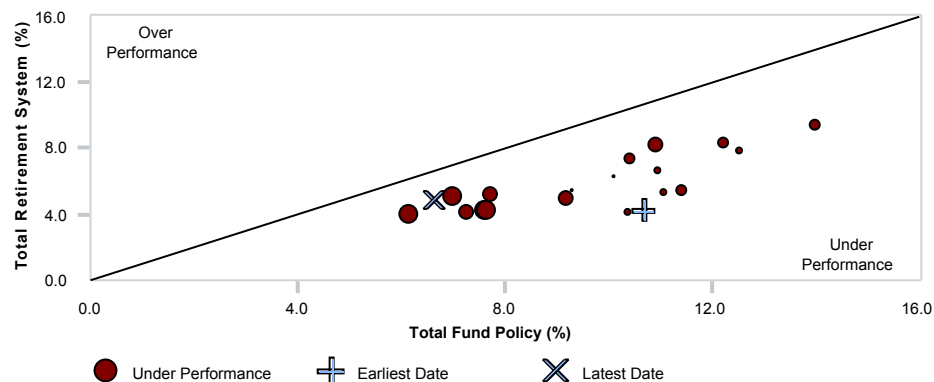
	2016	2015	2014	2013	2012
● Total Retirement System	7.67 (41)	-1.05 (79)	5.61 (77)	10.66 (95)	8.79 (97)
● Total Fund Policy	8.04 (33)	2.43 (5)	8.08 (19)	17.56 (43)	11.31 (80)
Median	7.32	0.06	6.75	16.89	12.57

Comparative Performance

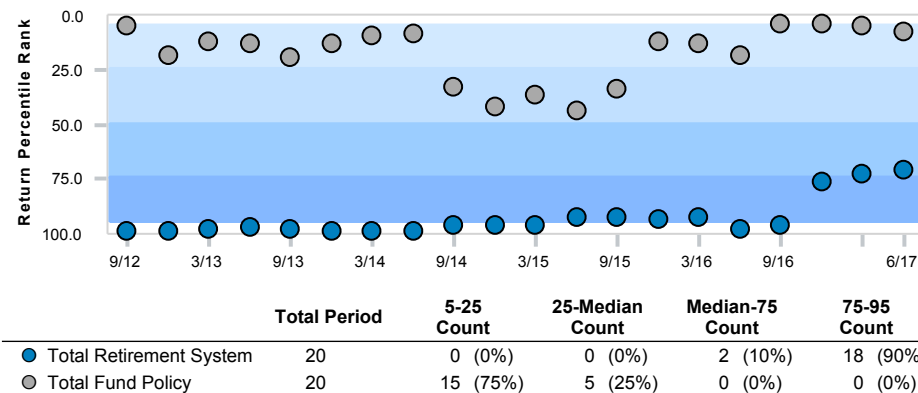
	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016	1 Qtr Ending Jun-2016	1 Qtr Ending Mar-2016	1 Qtr Ending Dec-2015
Total Retirement System	3.27 (94)	1.53 (18)	3.46 (48)	0.95 (95)	1.53 (24)	1.59 (95)
Total Fund Policy	4.29 (61)	1.77 (12)	3.53 (45)	1.78 (60)	0.75 (67)	3.94 (7)
All Public Plans-Total Fund Median	4.44	0.79	3.41	1.90	1.05	2.88



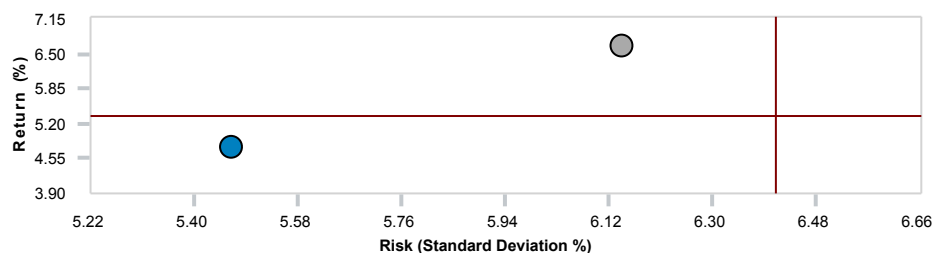
3 Yr Rolling Under/Over Performance - 5 Years



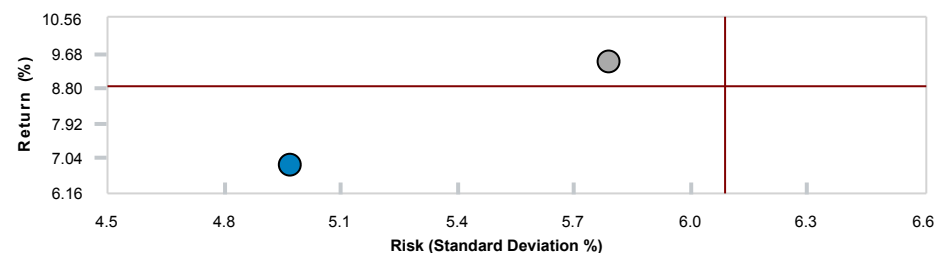
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

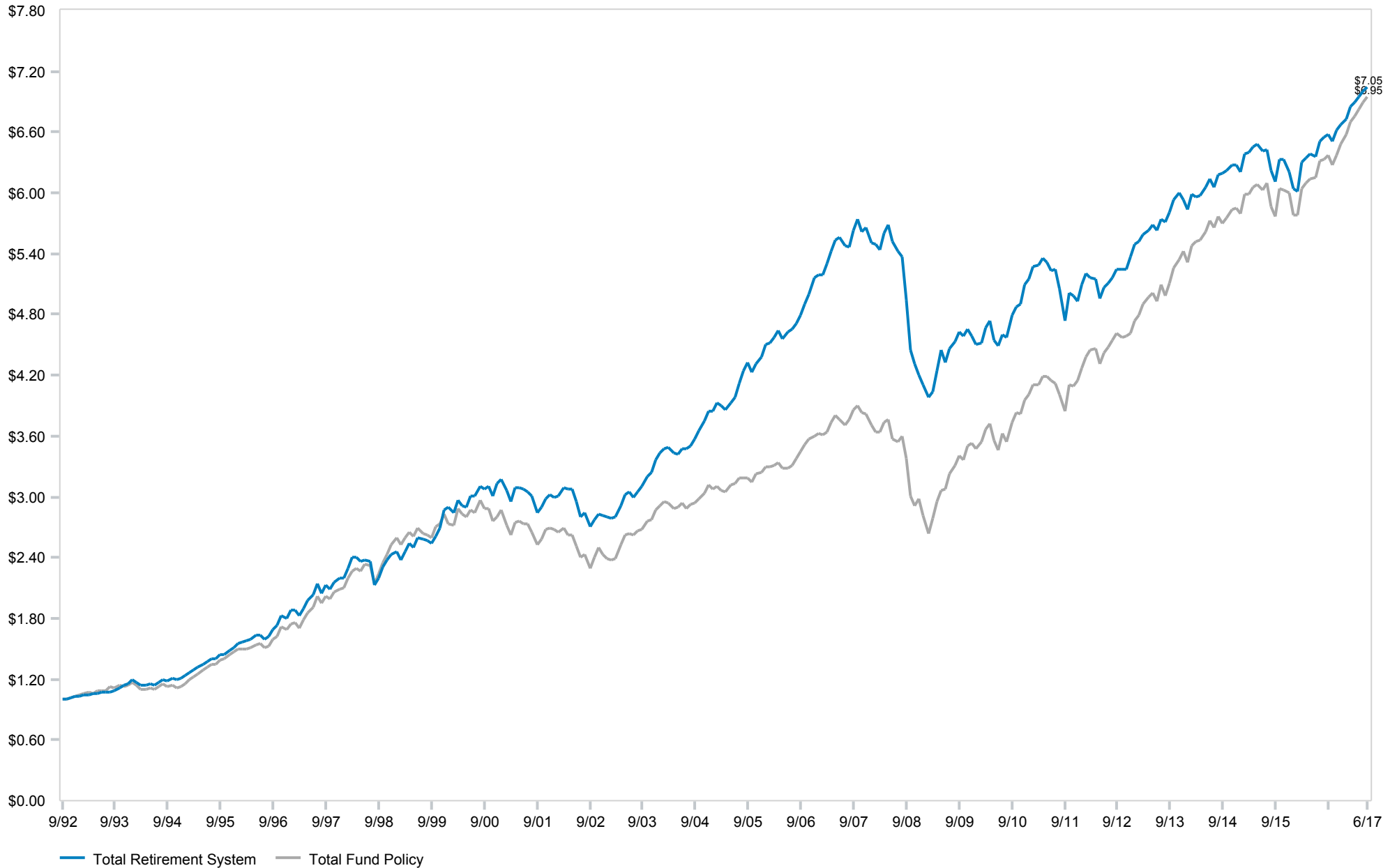
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.86	80.53	91.04	-0.83	-0.98	0.84	0.85	3.13
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	1.05	1.00	3.50

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	2.37	75.30	79.71	-0.48	-1.04	1.33	0.78	2.65
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	1.57	1.00	3.07



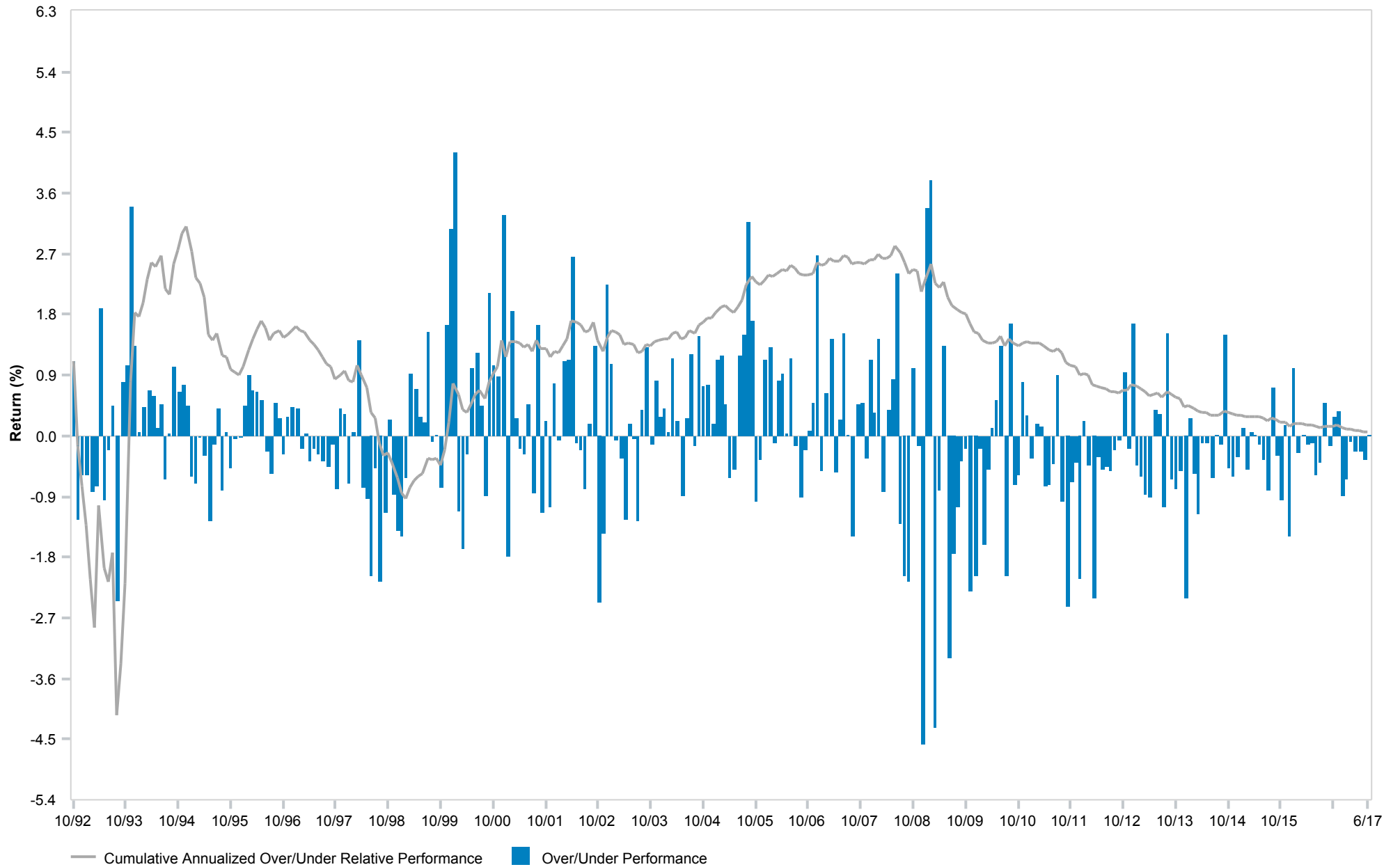
Growth of \$1



Calculation based on monthly periodicity.



Relative Performance



Calculation based on monthly periodicity.



Austin Police Retirement System
Investment Pricing Summary
as of 6/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Total Retirement System			
Total Equity			
Total Domestic Equity			
NT Collective Russell 3000 Fund	6/30/2017	Monthly	Custodian
Wellington Energy Fund	6/30/2017	Monthly	Custodian
Baird Mid Cap Growth	6/30/2017	Monthly	Custodian
Seizert Mid Cap Value	6/30/2017	Monthly	Custodian
Kennedy Small Cap Value	6/30/2017	Monthly	Custodian
Total International Equity			
Thompson Siegel & Walmsley	6/30/2017	Monthly	Custodian
Driehaus International Small Cap Growth	6/30/2017	Monthly	Custodian
LMCG Emerging Markets	6/30/2017	Monthly	Custodian
Total Other Equity			
Huff Energy Fund	3/31/2017	Quarterly	Manager
Sail Venture Fund I	12/31/2014	Quarterly	Manager
Sail Venture Fund II	12/31/2014	Quarterly	Manager
Sail Pre-Exit Acceleration Fund	12/31/2014	Quarterly	Manager
Excelsior Investors, Ltd.	3/31/2017	Monthly	Manager
Total Fixed Income			
Total Fixed Income Funds			
Orleans Capital	6/30/2017	Monthly	Custodian
Templeton Global Multisector Plus	6/30/2017	Monthly	Custodian

Austin Police Retirement System
Investment Pricing Summary
as of 6/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Total Other Fixed Income Funds			
Capital Point Partners	6/30/2017	Quarterly	Manager
Franchise Equity Capital Partners II	3/31/2017	Quarterly	Manager
Franchise Equity Capital Partners III	3/31/2017	Quarterly	Manager
LBC Credit Partners III	3/31/2017	Quarterly	Manager
LBC Credit Partners IV	3/31/2017	Quarterly	Manager
Providence Debt Fund III	3/31/2017	Quarterly	Manager
Total Alternatives			
Total Real Estate (Composite)(6091100)			
Rockspring Capital Land Funds (I - VI)	6/30/2017	Quarterly	Manager
Rockspring Capital Land Fund I	6/30/2017	Quarterly	Manager
Rockspring Capital Land Fund II	6/30/2017	Quarterly	Manager
Rockspring Capital Land Fund III	6/30/2017	Quarterly	Manager
Rockspring Capital Land Fund IV	6/30/2017	Quarterly	Manager
Rockspring Capital Land Fund V	6/30/2017	Quarterly	Manager
Rockspring Capital Land Fund VI	6/30/2017	Quarterly	Manager
CB Richard Ellis (IV)	6/30/2017	Quarterly	Manager
CB Richard Ellis IV	6/30/2017	Quarterly	Manager
Sentinel (IV)	6/30/2017	Quarterly	Manager
Sentinel IV	6/30/2017	Quarterly	Manager
New Boston (V & VI)	3/31/2017	Quarterly	Manager
New Boston VI	3/31/2017	Quarterly	Manager

Austin Police Retirement System
Investment Pricing Summary
as of 6/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
VEF Advisors (V & VI)	6/30/2017	Quarterly	Manager
Value Enhancement Fund V	6/30/2017	Quarterly	Manager
Value Enhancement Fund VI	6/30/2017	Quarterly	Manager
INVESCO Real Estate Funds (I & II)	6/30/2017	Quarterly	Manager
INVESCO Real Estate Fund I	6/30/2017	Quarterly	Manager
INVESCO Real Estate Fund II	6/30/2017	Quarterly	Manager
Edison Investments	6/30/2017	Quarterly	Manager
JPM India Property Fund	3/31/2017	Quarterly	Manager
Vision Capital Partners	9/30/2014	Quarterly	Manager
FWAR Investments	6/30/2017	Quarterly	Manager
Morgan Stanley	6/30/2017	Quarterly	Manager
AEW Parters VIII	6/30/2017	Quarterly	Manager
Total Timber Funds			
BTG Pactual (1 & 2)	6/30/2017	Quarterly	Manager
BTG Pactual 1	6/30/2017	Quarterly	Manager
BTG Pactual 2	6/30/2017	Quarterly	Manager
Capitol Timberland Investments	6/30/2017	Quarterly	Manager
Timbervest	3/31/2017	Quarterly	Manager
Total Hedge Funds			
Double Eagle Capital Ace Fund, Ltd.	6/30/2017	Monthly	Manager
Cash Account	6/30/2017	Monthly	Custodian
PE Cash Account	6/30/2017	Monthly	Custodian

Austin Police Retirement System
Investment Pricing Summary
as of 6/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Retiree Death Benefit Account	6/30/2017	Monthly	Custodian
APRS Building			

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Domestic Equity	0.32	319,433,093	1,033,147	
NT Collective Russell 3000 Index	0.02	174,813,269	34,963	0.02 % of Assets
Wellington Energy Fund	0.95	11,645,368	110,631	0.95 % of Assets
Baird Mid Cap Growth	0.70	45,242,767	316,699	0.70 % of First \$50 M 0.60 % Thereafter
Seizert Mid Cap Val (Perf Fee 150-300 .60% +300 .90%)	0.35	47,148,161	165,019	0.35 % of Assets
Kennedy Small Cap Value	1.00	40,583,528	405,835	1.00 % of Assets
Total International Equity	0.82	113,301,796	926,618	
Thompson Siegel & Walmsley	0.65	77,728,229	505,233	0.65 % of Assets
Driehaus International Small Cap Growth	1.72	15,936,406	274,106	1.72 % of Assets
LMCG Emerging Markets Fund	0.75	19,637,160	147,279	0.75 % of Assets
Total Other Equity	1.14	14,020,025	160,000	
Huff Energy Fund	1.26	11,947,286	150,000	
Sail Venture Fund I	0.00	842,107	-	
Sail Venture Fund II	0.00	323,492	-	
Sail Pre-Exit Acceleration Fund	0.00	321,092	-	
Excelsior Investors, Ltd.	1.71	586,048	10,000	
Total Fixed Income	0.46	145,654,121	670,377	
Orleans Capital	0.15	76,102,422	114,154	0.15 % of Assets
Templeton Global Mulisector Plus Trust	0.62	37,530,474	232,689	0.62 % of First \$50 M 0.51 % of Next \$50 M 0.45 % Thereafter
Total Other Fixed Income	1.01	32,021,225	323,535	
Capital Point Partners	0.00	4,760,121	2	
Franchise Equity Capital Partners II	2.00	283,055	5,661	
Franchise Equity Capital Partners III	2.00	927,967	18,559	
LBC Credit Partners III	1.25	10,390,950	129,887	
LBC Credit Partners IV	1.25	5,133,814	64,173	
Providence Debt Fund III	1.00	10,525,318	105,253	
Total Real Estate	0.98	75,179,812	738,565	
Rockspring Capital Land Fund I	1.25	620,569	7,757	1.25 % of Assets
Rockspring Capital Land Fund II	1.25	6,425,707	80,321	1.25 % of Assets
Rockspring Capital Land Fund III	1.25	2,698,975	33,737	1.25 % of Assets
Rockspring Capital Land Fund IV	1.25	3,140,992	39,262	1.25 % of Assets
Rockspring Capital Land Fund V	1.25	3,102,842	38,786	1.25 % of Assets
Rockspring Capital Land Fund VI	1.25	2,845,812	35,573	1.25 % of Assets



	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
CB Richard Ellis IV	0.00	259,123	-	0.00 % of Assets
Sentinel IV	1.00	119,899	1,199	1.00 % of Assets
New Boston VI	1.50	47,056	706	1.50 % of Assets
Value Enhancement Fund V	0.85	622,116	5,288	0.85 % of Assets
Value Enhancement Fund VI	0.85	1,062,274	9,029	0.85 % of Assets
INVESCO Real Estate Fund I	1.50	9,133	137	1.50 % of Assets
INVESCO Real Estate Fund II	1.50	28,234	424	1.50 % of Assets
Edison Investments	1.00	3,970,505	39,705	1.00 % of Assets
JPM India Property Fund	2.00	1,536,856	30,737	2.00 % of Assets
Vision Capital Partners	0.00	2,043,713	-	0.00 % of Assets
FWAR Investments	0.00	923,043	-	0.00 % of Assets
Morgan Stanley	0.90	44,466,466	400,198	0.90 % of Assets
AEW Partners Fund VIII	1.25	1,256,498	15,706	1.25 % of Assets
Total Timber Funds	1.05	22,370,220	234,903	
BTG Pactual 1	1.00	1,509,075	15,091	1.00 % of Assets
BTG Pactual 2	1.00	78,190	782	1.00 % of Assets
Capitol Timberland Investments	1.00	16,302,449	163,024	1.00 % of Assets
Timbervest	1.25	4,480,506	56,006	1.25 % of Assets
Total Hedge Funds	1.00	30,602,065	306,021	
Double Eagle Capital Ace Fund, Ltd. (1% Mgt Fee & 10% of profit after a 7% retn)	1.00	30,602,065	306,021	1.00 % of Assets
Cash Account	0.00	3,165,968	-	0.00 % of Assets
Cash Account PE		-	-	0.00 % of Assets
Retiree Death Benefit Account	0.00	1,139,557	-	0.00 % of Assets
APRS Building	0.00	502,355	-	0.00 % of Assets
Total Retirement System	0.56	725,369,011	4,069,632	



Total Fund Policy		Total Equity Policy		Total Fixed Income Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1976		Jan-1979		Dec-1993	
S&P 500 Index	60.00	Russell 3000 Index	67.00	Bloomberg Barclays U.S. Aggregate Index	100.00
Bloomberg Barclays U.S. Aggregate Index	40.00	MSCI World ex U.S.	33.00		
Jan-2014		Jan-2017		Jan-1999	
Russell 3000 Index	30.00	Russell 3000 Index	75.00	Bloomberg Barclays U.S. Aggregate Index	50.00
MSCI World ex U.S.	15.00	MSCI World ex U.S.	25.00	Blmbg. Barc. Global Multiverse	50.00
Bloomberg Barclays U.S. Aggregate Index	5.00				
Blmbg. Barc. Global Multiverse	5.00				
NCREIF Property Index	15.00				
NCREIF Timberland Index (Monthly)	5.00				
Russell 3000 + 300 bps	12.50				
HFRI Fund of Funds Composite Index	10.00				
Citigroup 3 Month T-Bill Index	2.50				
Jan-2017		Total Private Equity Policy		Wellington Energy Hybrid	
Russell 3000 Index	45.00	Allocation Mandate		Allocation Mandate	
MSCI World ex U.S.	15.00	Weight (%)		Weight (%)	
Bloomberg Barclays U.S. Aggregate Index	5.00	May-2013		Jan-1999	
Blmbg. Barc. Global Multiverse	5.00	Russell 3000 Index	100.00	Russell 3000 Energy SP	100.00
NCREIF Property Index	15.00	Jan-2017		Oct-2015	
NCREIF Timberland Index (Monthly)	2.50	Credit Suisse Leveraged Loan Index	67.00	S&P 500 Energy	100.00
HFRI Fund of Funds Composite Index	5.00	Cambridge Associates Private Equity Index (Proxy)	33.00		
Credit Suisse Leveraged Loan Index	5.00				
Cambridge Associates Private Equity Index (Proxy)	2.50				
Total Hedge Fund Policy		Total Timber Policy		Total Real Estate Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1990		Apr-1987		Jan-1978	
HFRI Fund of Funds Composite Index	100.00	NCREIF Timberland Index	100.00	NCREIF Property Index	100.00



- All market value and performance information through April 30, 2013 is provided by the previous consultant, CSG.
- All historical return data is presented Net of Fees.
- Best efforts have been made to acquire the most accurate data but due to reporting lag times Private Fixed Income, Real Estate, Timber, Private Equity and Hedge Fund information may not be current. Market values for these investments are subject to revision in future reports as more current information becomes available.
- NCREIF Property Index is updated quarterly. One month return information is shown as 0.00%.
- Effective May 1, 2013 the Sail Xtreme APRS Fund, LP and Xtreme Power, Inc. investments have been reclassified as Private Fixed Income under the Alternative Investments category. Prior to that they were listed as Fixed Income by the prior consultant.
- Returns for all Real Estate, Timber and Private Equity managers are Internal Rates of Return. All other managers are Time Weighted Rates of Return.
- Actuarial Assumption is currently 8.0%
- Prior to 1/1/2009 Capital Point and Clinton Magnolia performance is included in the Total Fixed Income performance.
- The information contained in this report is obtained from third party sources and is not warranted to be accurate, complete or timely. All returns and market values are preliminary and subject to revision in future reports upon final reconciliation.
- Pricing may differ between the custodian and manager for reasons beyond the control of The Bogdahn Group. Every effort will be made to use the most accurate and timely information available when the report is generated.
- * Xtreme Power declared bankruptcy in January 2014. After discussions with the Fund's Accountant, Auditor and Legal Counsel the investments in this company have been marked down to \$0.00 as of December 31st.
If any proceeds are recovered in the bankruptcy process they will be credited to the Fund at that time.
- As of 12/31/14 the Excelsior Investors, LTD position was reclassified to from the Hedge Fund composite to the Private Equity composite.
- The Wellington Energy Fund hybrid history consists of the Russell 3000 Energy SP Index until September 30, 2015, thereafter the history is now linked to the S&P 500 Energy Index.
- Capital Point Partners market value sourced from the March 2015 Capital Point Partners Quarterly Portfolio Review.

Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



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AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

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