

Investment Performance Review  
Period Ending December 31, 2018

## Austin Police

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As we start 2019, we first want to say “Thank you” for giving AndCo the opportunity to serve you. On behalf of our entire organization, we are extremely grateful for our client partnerships and we will continue working hard to maintain your trust and confidence. Our mission statement reads – “To represent the sole interest of our clients by redefining independence”. We’re happy to report we remain steadfast in this core belief and continue to build an organization and service model that is singularly focused and independent. This helps ensure all recommendations are truly in the best interest of our valued clients. We believe this approach will drive value for our client partnerships long into the future.

AndCo also remains committed to delivering high quality, customized services. As we start 2019, we are 89 employees strong advising approximately \$90 billion in client assets - both record highs for AndCo. In 2018 we hired 7 new team members including one consultant, two research professionals, one additional compliance officer, one technology administrator and two team members within our client solutions group. All hires were made to better service our clients.

2019 will represent another year of reinvestment in the organization to better serve our clients and make AndCo stronger. For example, we have already hired a new Senior Research Analyst bringing our dedicated research team to 15 professionals. As 2019 progresses, we are targeting additional hires in research, software development, content creation and our client solutions group. We will also be partnering with an external firm this year to conduct an in-depth client assessment to help ensure we are meeting the evolving needs of our clients and exceeding their service expectations. There will be more information regarding this survey from the firm and your consultant over the coming months.

Finally, we just completed our annual Firmwide retreat. This retreat was a great opportunity for our firm to spend time together with colleagues and get a clear understanding of where the company is going, and more importantly, why we’re headed in that direction. Since the inception of AndCo, the idea has been to make the firm a multigenerational organization owned and managed by its employees. As a result, since 2015, along with the strategic elements of our annual retreat, we also started the process of announcing new partners of the firm to foster this succession plan and today we have 8 partners controlling 100% of the company.

The evolution of our firm would not be possible without great partners like you. Our name reminds us who we work for every day: “Our Client” &Co. You will always be first in our service approach. As we continue to discuss updates with our firm, please know every decision is made by asking “How does this benefit our clients?” If it doesn’t benefit you, we don’t do it, it’s that simple. We know our clients are facing many challenges and we want to be there to help get you through all environments. We are honored and humbled you have chosen AndCo as your partner. We don’t take that relationship for granted and will continue to work tirelessly to exceed your expectations.

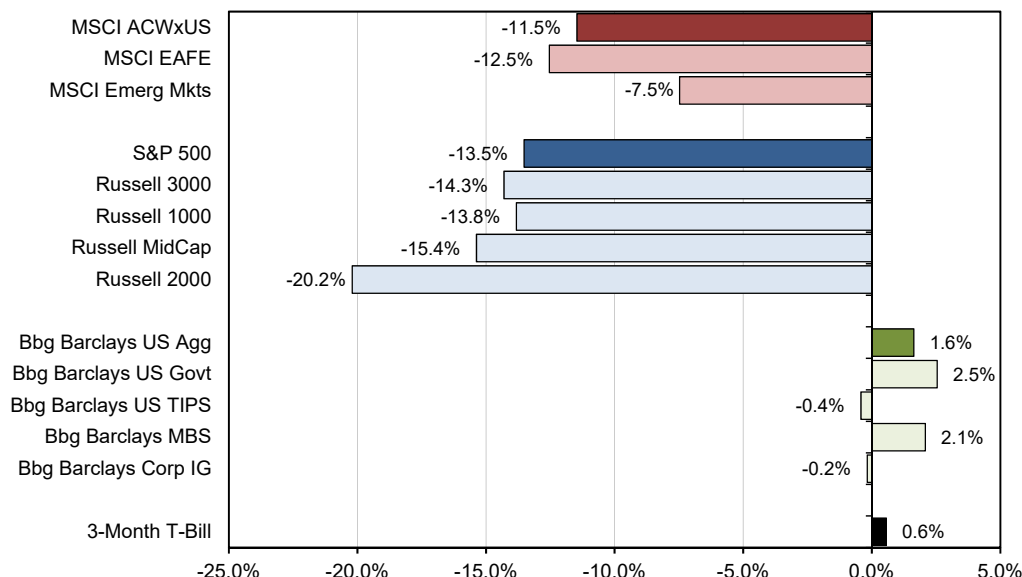
On behalf of AndCo, thank you for your valued partnership and the opportunity to serve you.



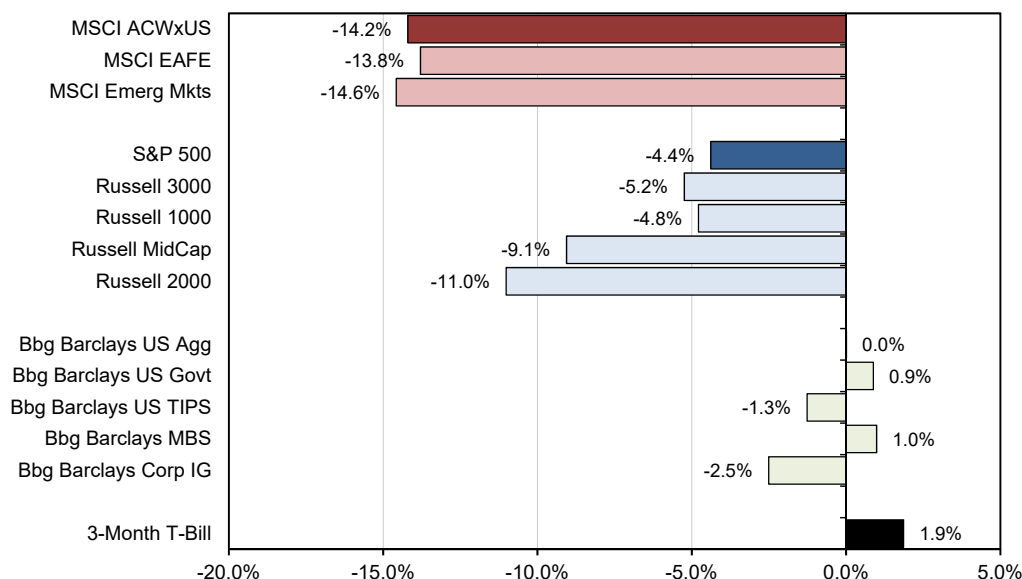
Mike Welker, CFA®  
President/CEO

- Markets were volatile to end the 2018 calendar year. Both international and domestic equity markets had considerable losses during the 4<sup>th</sup> quarter while fixed income returns were muted, but outperformed relative to equities. Within equities, domestic stocks trailed international markets, reversing the 2018 trend of US market strength. Trade tensions between the US and China, midterm elections in US Congress, the effects of ongoing monetary policy tightening by the Federal Reserve (Fed), federal debt ceiling negotiations and the subsequent partial government shutdown outweighed generally positive corporate earnings and macroeconomic data reported during the quarter. The large cap S&P 500 Index returned -13.5% during the quarter while the small cap Russell 2000 Index fell by over 20% for the period. The drop in equity prices over the last three months was enough to take the returns for major US equity indices into negative territory for the 2018 calendar year. Returns over the 1-year period were -4.4% and -11.0% for the S&P 500 and Russell 2000 respectively.
- Similar to US equities, international equity index returns finished the quarter in negative territory with the MSCI ACWI ex US Index returning -11.5%. International markets faced headwinds from softening global macroeconomic data, tightening global monetary policy, uncertainty around Brexit negotiations, turmoil surrounding global trade relations, falling commodity prices and continued US Dollar (USD) strength. The developed market MSCI EAFE Index fell -12.5% during the 4<sup>th</sup> quarter, ending the year down -13.8%. Emerging markets performed well by comparison, only losing -7.5% during the quarter. Despite the 4<sup>th</sup> quarter outperformance, returns for emerging market equities trailed developed markets over the 1-year period with the MSCI Emerging Markets Index returning -14.6% versus a -13.8% return for the MSCI EAFE Index.
- Fixed income securities outperformed equities through both the 4<sup>th</sup> quarter and calendar year 2018 with the broad market Bloomberg Barclays Aggregate Index returning 1.6% and 0.0% respectively. Interest rates on the US Treasury Yield Curve continued their 2018 flattening trend as short-term rates increased to near-term highs while long-term rates fell during the quarter. Some of the increase in short-term rates can be attributed to the late December Fed interest rate hike. This marked the fourth Fed interest rate increase of 2018. This movement in rates did lead to some short-term rates being higher than those of longer dated maturities. More conservative fixed income sectors such as Treasuries and mortgage backed securities outperformed during the quarter and for the year as investors moved toward the relative safety these securities provide while widening credit spreads acted as a headwind to corporate issues.

### Quarter Performance

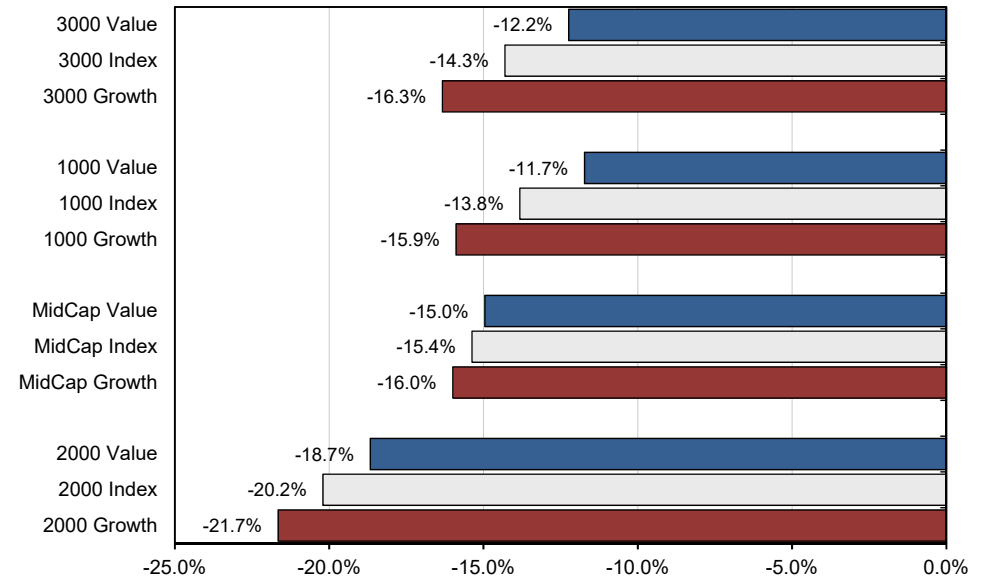


### 1-Year Performance

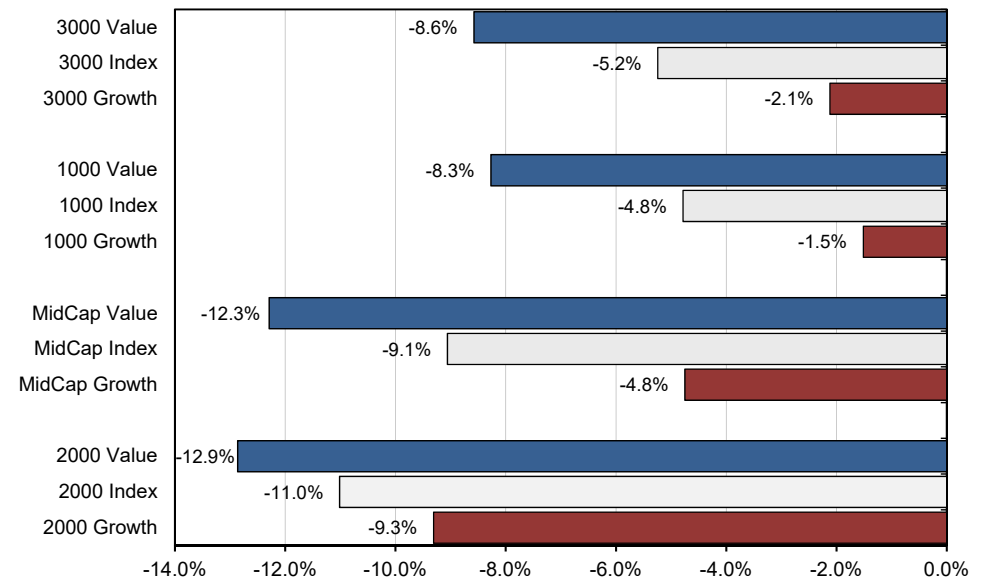


- US equity index returns were strongly negative across the style and capitalization spectrum during the 4<sup>th</sup> quarter of 2018. Despite these negative results, there was positive data in GDP, unemployment, wage growth, retail sales, and corporate earnings during the period. These positive economic factors were offset by softening data in housing, consumer confidence and manufacturing, tightening monetary policy, negative guidance for future corporate earnings and signs of slowing global growth which all contributed to the heavy selling in equities. Investors also considered the effects of ongoing trade negotiations, especially between the US and China, and the results of the US congressional midterm elections which likely reduced the chances of any major policy changes or new fiscal stimulus measures. The effects of partisan politics was particularly evident at the end of the quarter as budget negotiations between Democrats and Republicans collapsed over disagreement around the inclusion of funds for a border wall with Mexico, leading to a partial government shutdown to end the year.
- During the quarter, large cap stocks outperformed mid and small cap equities across growth, value and core indices. The large cap Russell 1000 Index fell -13.8% during the 4<sup>th</sup> quarter versus a -20.2% drop for the Russell 2000 Index. Part of the reason for weakness in small cap names is the steady increase in interest rates that occurred over 2018 as small cap companies typically maintain a higher percentage of debt than their large cap peers. Small cap names are also typically more volatile than larger companies and they have historically underperformed during market downturns. Similar to the most recent quarter, large cap stocks outperformed relative to small caps through calendar year 2018. The Russell 1000 returned -4.8% for the 1-year periods compared to a -11.0% return for the Russell 2000.
- Value indices outperformed growth indices across the market cap spectrum during the 4<sup>th</sup> quarter, reversing a year-to-date trend of growth stock outperformance. The large cap Russell 1000 Value Index was the best performing style index for the period, returning -11.7% for the quarter, while the Russell 2000 Growth Index was the worst performer, returning -21.7%. Value benchmarks tend to outperform in down markets as they benefit from their relative safety and higher dividend yields. Despite the short-term underperformance, growth benchmarks continue to outperform over the 1-year period, however, many of the sector exposures that drove growth stock outperformance during the first three quarters of the year, such as technology and consumer discretionary, were relative detractors during the 4<sup>th</sup> quarter.

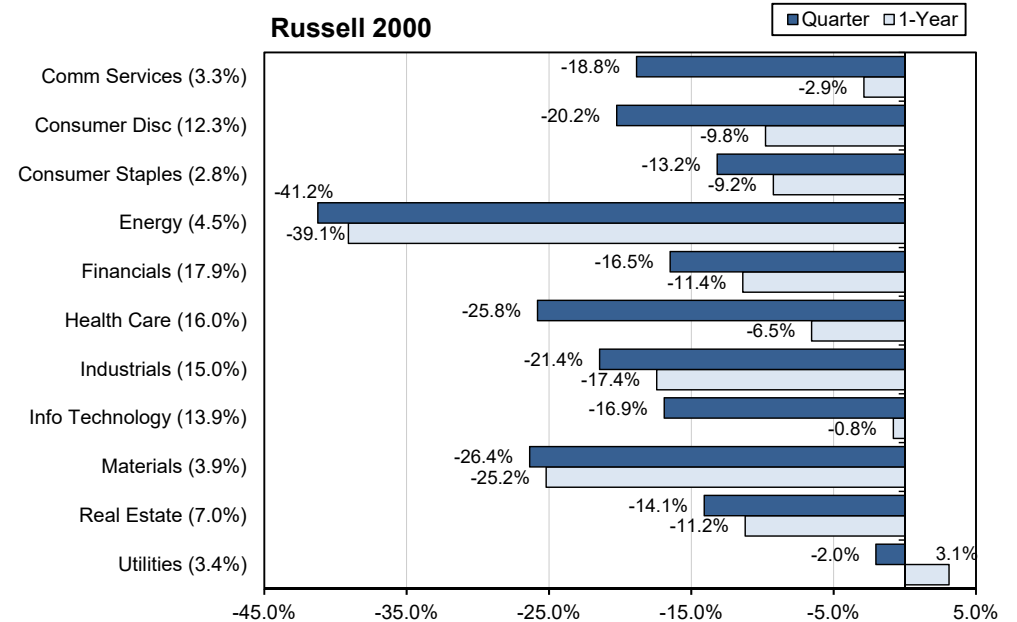
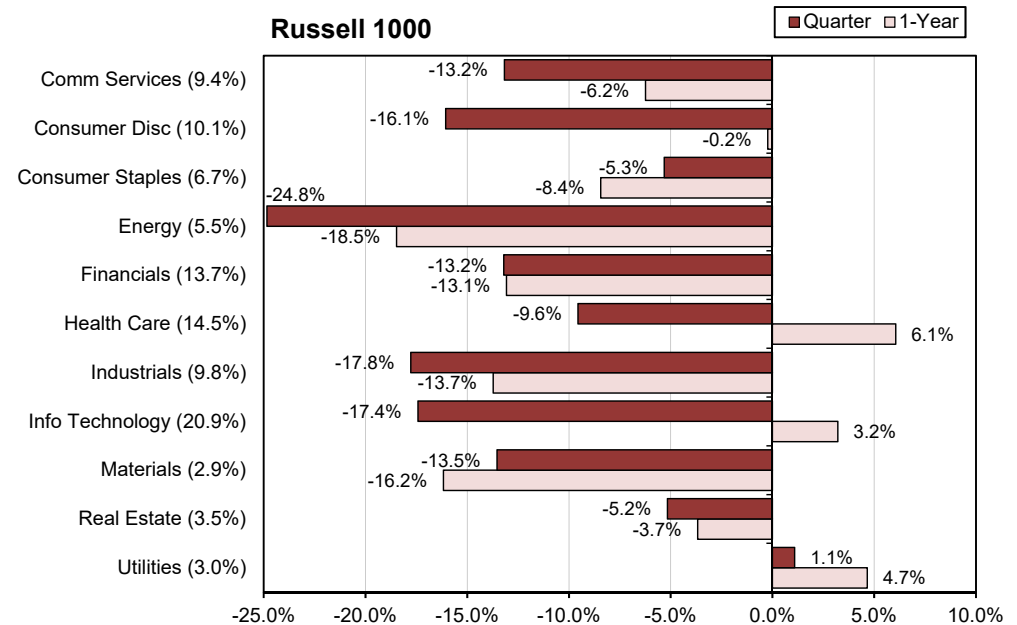
#### Quarter Performance - Russell Style Series



#### 1-Year Performance - Russell Style Series



- Both S&P Dow Jones Indices and MSCI made changes to the Global Industry Classification Standard (GICS) sector configurations of their indices, creating a new GICS sector classification called Communication Services which replaced the Telecommunications sector on September 28, 2018. The Communication Services sector is comprised of companies in the Telecommunications sector, as well as certain companies formerly classified as Consumer Discretionary and Information Technology. As a result, the sector, went from a weighting of about 2% of the Russell 1000 Index to almost 10% post reclassification. Notable names now classified under Communication Services include Netflix, Alphabet, Facebook and Disney. This is just the second change to the GICS classifications since 1999.
- Sector performance was broadly negative across large cap sectors for the 4<sup>th</sup> quarter. All sectors within the Russell 1000 Index with the exception of the utilities sector posted negative returns for the period with seven sectors outpacing the return on the index. Cyclical sectors such as energy, industrials and technology were the worst performers through the quarter returning -24.8%, -17.8% and -17.4% respectively. Energy companies were hurt by a steep decline in oil prices during the quarter while technology and industrial companies fell on negative guidance for future earnings. More defensive, higher dividend paying sectors such as utilities, REITs and consumer staples were the strongest performing sectors with returns of 1.1%, -5.2% and -5.3% respectively. Only three sectors (health care, utilities, technology) posted positive results over the 1-year period with the remaining sectors losing ground during the calendar year.
- Quarterly results for small cap sectors were generally lower relative to their large capitalization counterparts. All eleven sectors had negative returns during the period with six of eleven economic sectors outpacing the Russell 2000 Index return for the quarter. Energy, materials and healthcare posted the worst returns for the period returning -41.2%, -26.4% and -25.8% respectively. Similar to large caps, defensive sectors performed well with utilities, consumer staples and real estate detracting the least returning -2.0%, -13.2% and -14.1% respectively. Over the trailing 1-year period, only utilities posted a gain returning 3.1%. Energy stocks were the worst performers in 2018, falling a considerable -41.2%.
- Using S&P 500 sector valuations as a proxy for the market, forward P/E ratios for three of the eleven GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the utilities, consumer discretionary and real estate sectors appear the most extended. In contrast the financials, technology and energy 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 December 31, 2018

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	3.27%	-11.2%	20.3%	Information Technology
Apple Inc	3.24%	-29.9%	-5.4%	Information Technology
Amazon.com Inc	2.59%	-25.0%	28.4%	Consumer Discretionary
Berkshire Hathaway Inc B	1.68%	-4.6%	3.0%	Financials
Johnson & Johnson	1.47%	-6.0%	-5.1%	Health Care
JPMorgan Chase & Co	1.39%	-12.9%	-6.6%	Financials
Alphabet Inc Class C	1.34%	-13.2%	-1.0%	Communication Services
Alphabet Inc A	1.32%	-13.4%	-0.8%	Communication Services
Facebook Inc A	1.32%	-20.3%	-25.7%	Communication Services
Exxon Mobil Corp	1.23%	-19.0%	-15.1%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Tesaro Inc	0.01%	90.3%	-10.4%	Health Care
Red Hat Inc	0.13%	28.9%	46.2%	Information Technology
Virtu Financial Inc A	0.00%	27.1%	45.9%	Financials
Tesla Inc	0.19%	25.7%	6.9%	Consumer Discretionary
SCANA Corp	0.03%	23.2%	23.1%	Utilities
Tribune Media Co A	0.02%	18.9%	9.7%	Communication Services
MarketAxess Holdings Inc	0.03%	18.6%	5.6%	Financials
ARRIS International PLC	0.02%	17.6%	19.0%	Information Technology
United States Cellular Corp	0.00%	16.1%	38.1%	Communication Services
Newmont Mining Corp	0.08%	15.2%	-6.2%	Materials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Weatherford International PLC	0.00%	-79.4%	-86.6%	Energy
Nabors Industries Ltd	0.00%	-66.8%	-69.3%	Energy
Extraction Oil & Gas Inc	0.00%	-62.0%	-70.0%	Energy
Adient PLC	0.01%	-61.4%	-80.4%	Consumer Discretionary
Whiting Petroleum Corp	0.01%	-57.2%	-14.3%	Energy
Kosmos Energy Ltd	0.00%	-56.5%	-40.6%	Energy
Chesapeake Energy Corp	0.01%	-53.2%	-47.0%	Energy
Conduent Inc	0.01%	-52.8%	-34.2%	Information Technology
NVIDIA Corp	0.33%	-52.4%	-30.8%	Information Technology
SM Energy Co	0.01%	-50.8%	-29.6%	Energy

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Integrated Device Technology Inc	0.35%	3.0%	62.9%	Information Technology
Etsy Inc	0.32%	-7.4%	132.6%	Consumer Discretionary
Five Below Inc	0.31%	-21.3%	54.3%	Consumer Discretionary
Haemonetics Corp	0.29%	-12.7%	72.3%	Health Care
Ciena Corp	0.27%	8.5%	62.0%	Information Technology
Planet Fitness Inc A	0.26%	-0.8%	54.8%	Consumer Discretionary
Idacorp Inc	0.26%	-5.6%	4.6%	Utilities
HubSpot Inc	0.26%	-16.7%	42.2%	Information Technology
LivaNova PLC	0.25%	-26.2%	14.5%	Health Care
Cree Inc	0.24%	13.0%	15.2%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Electro Scientific Industries Inc	0.05%	71.7%	39.8%	Information Technology
Fluent Inc	0.01%	67.4%	3.4%	Communication Services
Mitek Systems Inc	0.02%	53.3%	20.8%	Information Technology
Arsanis Inc	0.00%	43.2%	-81.8%	Health Care
Inovalon Holdings Inc	0.05%	41.1%	-5.5%	Health Care
K12 Inc	0.05%	40.1%	55.9%	Consumer Discretionary
Investment Technology Group Inc	0.05%	39.9%	59.0%	Financials
Eidos Therapeutics Inc	0.01%	37.9%	N/A	Health Care
Belmond Ltd Class A	0.13%	37.2%	104.3%	Consumer Discretionary
Pacific Biosciences of California Inc	0.06%	36.8%	180.3%	Health Care

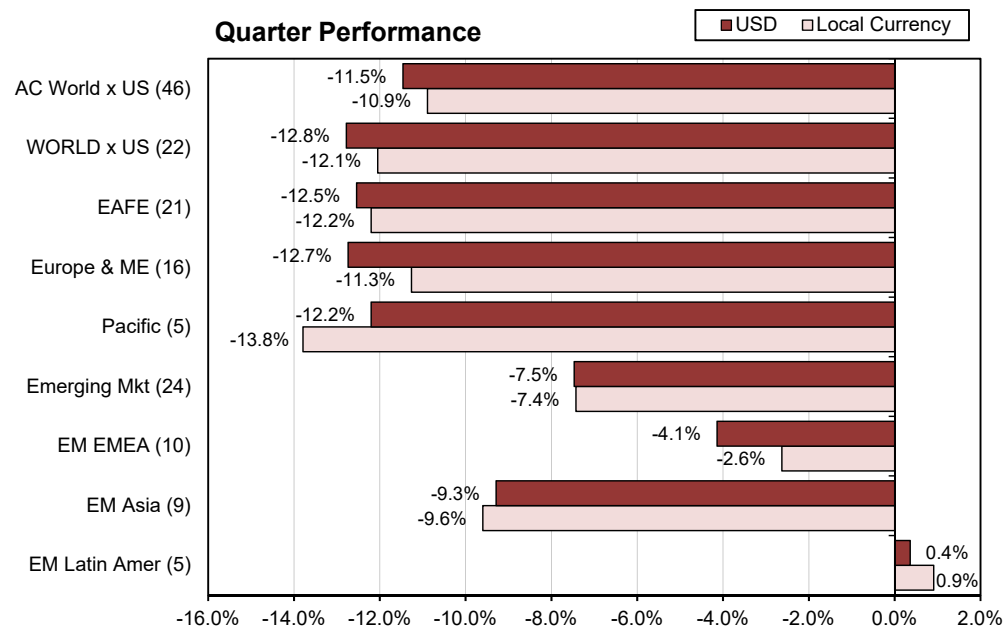
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Synergy Pharmaceuticals Inc	0.00%	-93.3%	-94.9%	Health Care
Sanchez Energy Corp	0.00%	-88.3%	-94.9%	Energy
Sienna Biopharmaceuticals Inc	0.00%	-84.3%	-87.2%	Health Care
Cloud Peak Energy Inc	0.00%	-84.1%	-91.8%	Energy
Selecta Biosciences Inc	0.00%	-82.9%	-72.9%	Health Care
Clearside Biomedical Inc	0.00%	-82.6%	-84.7%	Health Care
Key Energy Services Inc	0.00%	-81.9%	-82.4%	Energy
AAC Holdings Inc	0.00%	-81.7%	-84.4%	Health Care
PHI Inc Non-Voting Shares	0.00%	-80.2%	-84.0%	Energy
Bristow Group Inc	0.00%	-80.0%	-82.0%	Energy



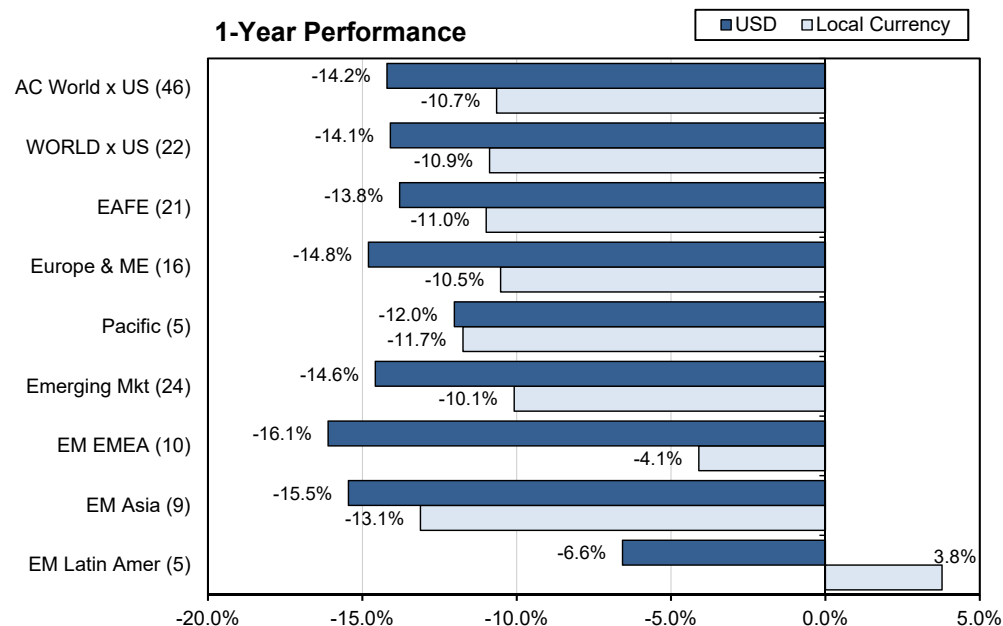


- Broad international equity returns were negative for the quarter in both local currency and USD terms. Geopolitical concerns, weakening economic data and the tightening of global monetary policy drove most of the negative performance. The USD also continued to strengthen against most currencies for the period which provided a headwind for USD based investors. The MSCI ACWI ex US Index fell -10.9% in local currency terms and -11.5% in USD terms during the 4<sup>th</sup> quarter. Returns for international indices were also broadly negative over the 1-year period in both local currency and USD terms with the MSCI ACWI ex US returning -10.7% and -14.2% respectively.
- Fourth quarter results for developed market international indices were negative in both local currency and USD terms with the MSCI EAFE Index returning -12.2% and -12.5% respectively. Returns were dampened for US investors as the USD continued to appreciate against most currencies, pushing returns lower. Global economic reporting during the quarter fueled concerns that global growth was beginning to slow. Japanese economic data faced headwinds from several natural disasters and data out of Europe was generally disappointing. Investors also weighed the effects of several significant political events in Europe including riots in France, ongoing budget negotiations between Italy and the EU and uncertainty around Brexit. Concerns over a “no deal” Brexit grew during the quarter as the draft withdrawal agreement presented by UK Prime Minister Theresa May was poorly received leading to a wave of cabinet resignations, a delay in the parliamentary vote and a “no confidence” vote which she ultimately won. The MSCI EAFE Index returned -11.0% and -13.8% for the last twelve months in local currency and USD terms respectively.
- Emerging markets outperformed relative to developed markets for the 4<sup>th</sup> quarter, but still declined in both local currency and USD terms with the MSCI Emerging Markets Index returning -7.4% and -7.5% respectively. Returns in emerging markets were hurt by the continued uncertainty surrounding trade relations between the US and China as both countries agreed to a 90-day hold on any new tariffs to allow for continued negotiations. Chinese economic data also appeared to be slowing during the quarter prompting the announcement of additional monetary and fiscal stimulus. The election of President Andres Manuel Lopez Obrador hurt returns in Mexico as investors feared the potential ramifications of his nationalist campaign promises. In contrast, Brazil was one of the few bright spots during the quarter as market participants looked favorably on the election of President Jair Bolsonaro in anticipation of market friendly economic reforms, including reforms associated with the country's bloated state pension system which has weighed heavily on the country's debt load. One year returns for the MSCI Emerging Market Index were -10.1% in local currency terms and -14.6% in USD terms.

**Quarter Performance**



**1-Year Performance**



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of December 31, 2018

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.6%	-7.7%	-12.1%
Consumer Discretionary	11.2%	-14.2%	-16.1%
Consumer Staples	11.6%	-8.4%	-10.8%
Energy	5.9%	-17.5%	-7.2%
Financials	19.5%	-13.7%	-20.1%
Health Care	11.2%	-10.3%	-4.3%
Industrials	14.3%	-14.6%	-15.7%
Information Technology	6.0%	-16.7%	-15.6%
Materials	7.4%	-15.2%	-17.5%
Real Estate	3.7%	-5.4%	-9.9%
Utilities	3.8%	-0.1%	1.1%
<b>Total</b>	<b>100.0%</b>	<b>-12.5%</b>	<b>-13.8%</b>

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.6%	-5.5%	-11.9%
Consumer Discretionary	10.6%	-14.1%	-20.2%
Consumer Staples	9.9%	-7.4%	-11.2%
Energy	7.3%	-16.3%	-8.1%
Financials	22.2%	-10.7%	-16.8%
Health Care	8.4%	-11.2%	-6.2%
Industrials	11.7%	-13.7%	-15.1%
Information Technology	8.0%	-14.6%	-17.6%
Materials	7.7%	-13.4%	-15.9%
Real Estate	3.4%	-3.8%	-11.6%
Utilities	3.4%	0.5%	-0.9%
<b>Total</b>	<b>100.0%</b>	<b>-11.5%</b>	<b>-14.2%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	14.1%	-3.7%	-14.9%
Consumer Discretionary	10.4%	-13.5%	-32.5%
Consumer Staples	6.7%	-4.6%	-13.7%
Energy	8.0%	-10.6%	4.7%
Financials	24.8%	-0.9%	-8.7%
Health Care	2.8%	-16.2%	-20.9%
Industrials	5.5%	-3.8%	-12.6%
Information Technology	14.2%	-12.7%	-19.3%
Materials	7.7%	-10.8%	-11.6%
Real Estate	3.0%	1.4%	-17.2%
Utilities	2.7%	3.6%	-3.8%
<b>Total</b>	<b>100.0%</b>	<b>-7.5%</b>	<b>-14.6%</b>

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	24.6%	16.6%	-14.2%	-12.9%
United Kingdom	16.9%	11.4%	-11.8%	-14.2%
France	11.1%	7.5%	-15.1%	-12.8%
Germany	8.8%	6.0%	-15.5%	-22.2%
Switzerland	8.7%	5.8%	-8.9%	-9.1%
Australia	6.9%	4.7%	-10.0%	-12.0%
Hong Kong	3.9%	2.6%	-4.5%	-7.8%
Netherlands	3.4%	2.3%	-11.0%	-13.1%
Spain	3.1%	2.1%	-8.7%	-16.2%
Sweden	2.7%	1.8%	-14.2%	-13.7%
Italy	2.3%	1.5%	-11.8%	-17.8%
Denmark	1.8%	1.2%	-9.8%	-15.4%
Singapore	1.4%	0.9%	-6.7%	-9.4%
Finland	1.0%	0.7%	-14.7%	-3.4%
Belgium	1.0%	0.6%	-18.5%	-26.9%
Norway	0.7%	0.5%	-18.1%	-8.6%
Ireland	0.5%	0.4%	-17.7%	-25.3%
Israel	0.5%	0.4%	-14.4%	-5.5%
Austria	0.2%	0.2%	-20.7%	-27.4%
New Zealand	0.2%	0.2%	-6.6%	-4.0%
Portugal	0.2%	0.1%	-14.3%	-11.1%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>67.5%</b>	<b>-12.5%</b>	<b>-13.8%</b>
Canada		6.5%	-15.3%	-17.2%
<b>Total Developed Countries</b>		<b>74.0%</b>	<b>-12.8%</b>	<b>-14.1%</b>
China		7.9%	-10.7%	-18.9%
Korea		3.6%	-13.1%	-20.9%
Taiwan		3.0%	-13.7%	-8.9%
India		2.4%	2.5%	-7.3%
Brazil		2.0%	13.4%	-0.5%
South Africa		1.6%	-3.8%	-24.8%
Russia		1.0%	-9.0%	-0.7%
Mexico		0.7%	-18.8%	-15.5%
Malaysia		0.6%	-5.8%	-6.0%
Thailand		0.6%	-10.2%	-5.5%
Indonesia		0.6%	9.7%	-9.2%
Poland		0.3%	-3.0%	-12.9%
Philippines		0.3%	5.3%	-16.5%
Qatar		0.3%	8.4%	29.8%
Chile		0.3%	-8.7%	-19.7%
United Arab Emirates		0.2%	-5.5%	-7.7%
Turkey		0.2%	4.8%	-41.4%
Colombia		0.1%	-19.0%	-11.5%
Peru		0.1%	-2.9%	1.6%
Hungary		0.1%	5.9%	-6.1%
Greece		0.1%	-16.0%	-36.8%
Czech Republic		0.0%	-8.7%	-4.5%
Egypt		0.0%	-9.4%	-14.0%
Pakistan		0.0%	-22.4%	-34.8%
<b>Total Emerging Countries</b>		<b>26.0%</b>	<b>-7.5%</b>	<b>-14.6%</b>
<b>Total ACWIxUS Countries</b>		<b>100.0%</b>	<b>-11.5%</b>	<b>-14.2%</b>

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

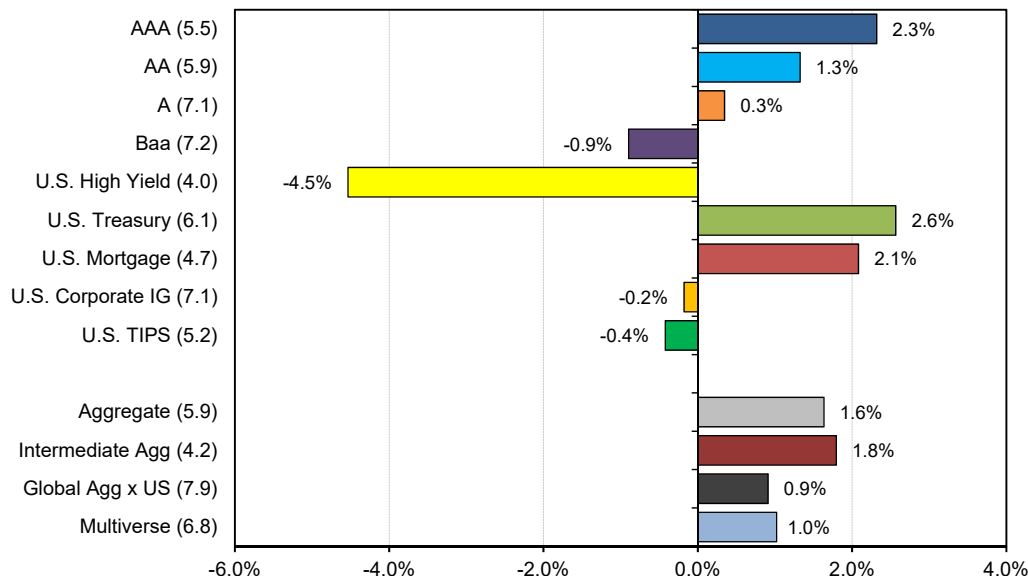
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



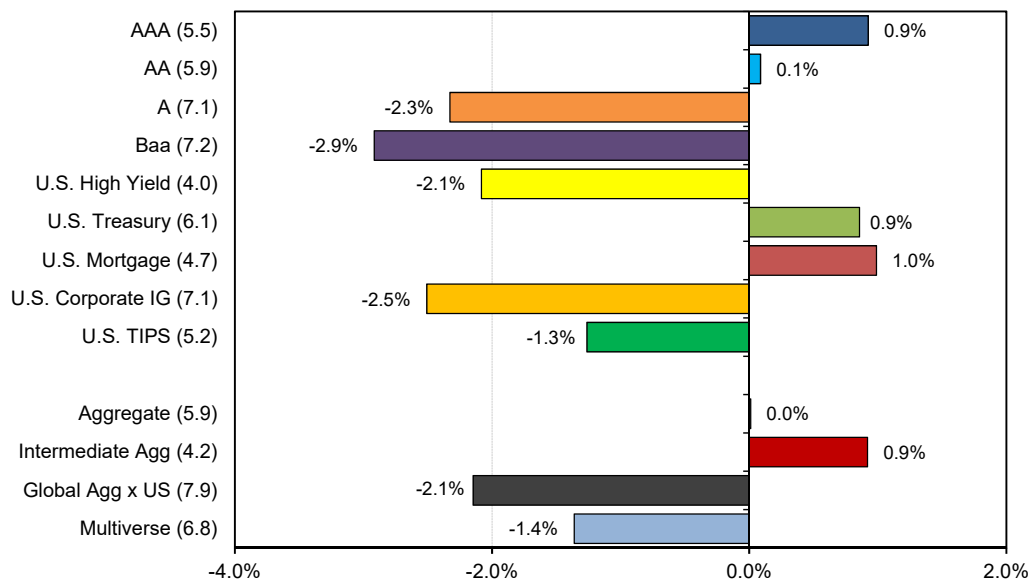


- Broad fixed income benchmarks had mixed results during the 4<sup>th</sup> quarter. Interest rates rose across short-term maturities, but fell on those on the middle and long end of the US Treasury Yield Curve. The Federal Open Market Committee (FOMC), decided to increase short-term interest rates by 25 basis points at their December meeting citing the strength of the US economy which caused an increase in short-term interest rates, but equity market volatility led market participants toward less volatile assets, pushing rates lower on maturities greater than 1-year. This was the fourth rate hike of 2018. The current Fed Funds Rate target range sits at 2.25%-2.50%. This caused continued flattening in the yield curve with some moderate inversion, which happens when short-term maturities have greater yields than long-term securities, in the middle of curve. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.21%. Historically, an inverted yield curve has signaled a greater probability of a recession. The Fed is also continuing the reduction of the size of its balance sheet by slowing its pace of reinvestment as the securities it holds mature. However, the Fed did lower its guidance for future rate increases in 2019 following a reduction in expectations for GDP and inflation. The Fed is now projecting just two additional interest rate increases in 2019. The Bloomberg Barclays US Aggregate Index was positive during the quarter, posting a 1.6% return, but was flat, returning 0.0% over the 1-year period.
- Within investment grade credit, higher quality issues outperformed lower quality issues as investors preferred more conservative securities. On an absolute basis, without negating the duration differences in the sub-indices, AAA rated credit was the best performing investment grade credit quality segment returning 2.3% for the quarter, while Baa was the worst performing, falling -0.9%. High yield debt trailed investment grade credit as spreads widened the most for these issues, returning -4.5%. Returns are mixed for the investment grade quality segments when viewed over the 1-year period with higher quality issues outperforming lower quality securities. High yield performed well relative to lower quality investment grade debt due to the relatively strong returns experienced during the first three quarters of 2018.
- During the 4<sup>th</sup> quarter, the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors were the best performers returning 2.6% and 2.1% respectively. Investment grade corporate credit underperformed, returning -0.2%, as credit spreads widened considerably during the period. This trend carried through to the 1-year period as both Treasuries and mortgage backed securities outperformed both investment grade and high yield corporate debt. Calendar year 2018 performance for the Treasury, mortgage backed and investment grade corporate issues was 0.9%, 1.0% and -2.5% respectively. US TIPS returned -0.4% and -1.3% for the 4<sup>th</sup> quarter and 1-year period.

### Quarter Performance

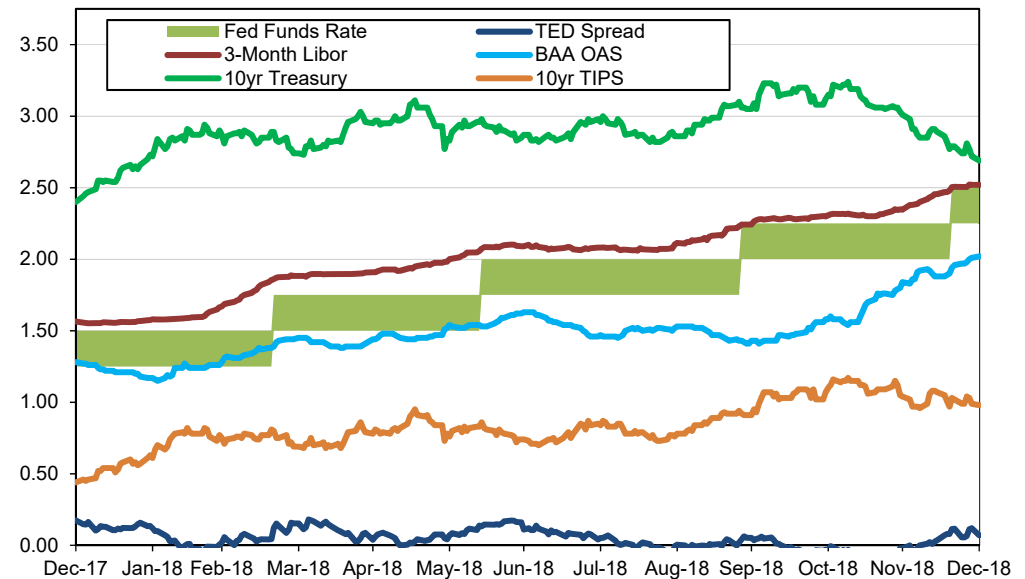


### 1-Year Performance

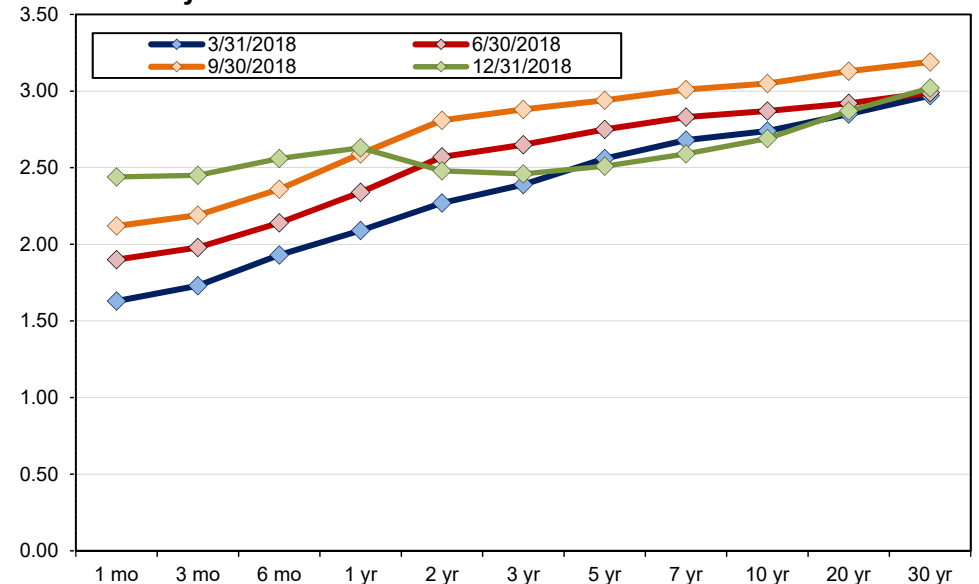


- Global fixed income indices continue to struggle relative to their domestic counterparts, underperforming during the 4<sup>th</sup> quarter. These indices have lower yields and the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. During the 4<sup>th</sup> quarter the USD strengthened against most other currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 0.9% and -2.1% for the quarter and 1-year period respectively. As the global economy continues to recover, several international central banks have started to move toward less accommodative postures. Notably, the ECB, began to slow its monthly bond purchase program in September, reducing new purchases to 15 billion euro per month from 30 billion euro per month and ended the program entirely at year end. However, they have indicated a continuation of reinvestment in maturing securities and would likely not raise interest rates from current levels until summer 2019. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.
- 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) fell during the 4<sup>th</sup> quarter after rising steadily through most of the year as investors moved to safe haven assets during the period, ending the year at 2.69%. 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 relatively tight range in credit spreads throughout most of 2018, but highlights an abrupt increase during the 4<sup>th</sup> quarter as investors moved to higher quality assets. This increase is equivalent to an interest rate increase on corporate bonds, which produces an additional headwind for corporate bond index returns. These credit spreads have widened by about 59 basis points over the last 3-months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate (four increases in the last twelve months) due to the continued tightening of US monetary policy.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. As mentioned, the yield curve continues to flatten as yields on shorter-term maturities have risen more than interest rates on the long end of the curve. The upward momentum of interest rates as well as a general flattening of the yield curve are clearly visible over the last twelve months with some minor inversion visible in the middle of the yield curve.

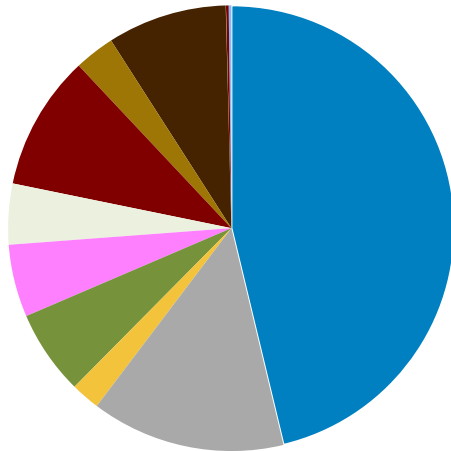
**1-Year Trailing Market Rates**



**Treasury Yield Curve**



Asset Allocation by Segment  
December 31, 2018 : \$717,464,234



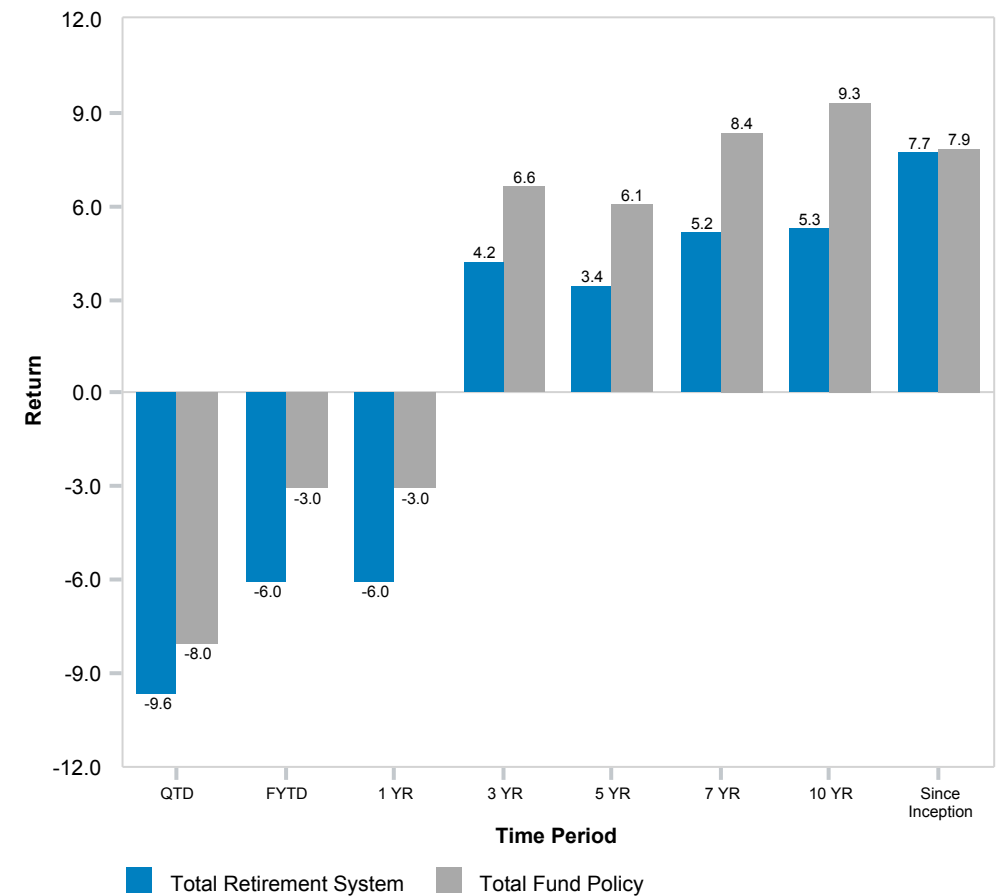
Allocation

	Market Value	Allocation
Total Domestic Equity	331,888,664	46.3
Total International Equity	100,707,860	14.0
Total Other Equity	15,115,175	2.1
Total Core Fixed Income	44,093,031	6.1
Total Non Core Fixed Income	37,805,826	5.3
Total Other Fixed Income	31,628,709	4.4
Total Real Estate	70,250,526	9.8
Total Timber Funds	20,938,730	2.9
Total Multi Asset Funds	62,087,711	8.7
Cash Account	110,402	0.0
Cash Account PE	-	0.0
Retiree Death Benefit Account	1,399,563	0.2
APRS Building	1,438,036	0.2

Gain/Loss Summary

	QTD	FYTD	1 YR
Total Retirement System			
Beginning Market Value	797,509,342	769,894,927	769,894,927
Net Contributions	-3,301,711	-5,821,677	-5,821,677
Return on Investment	-76,193,743	-44,425,076	-44,425,076
Ending Market Value	717,464,234	717,464,234	717,464,234

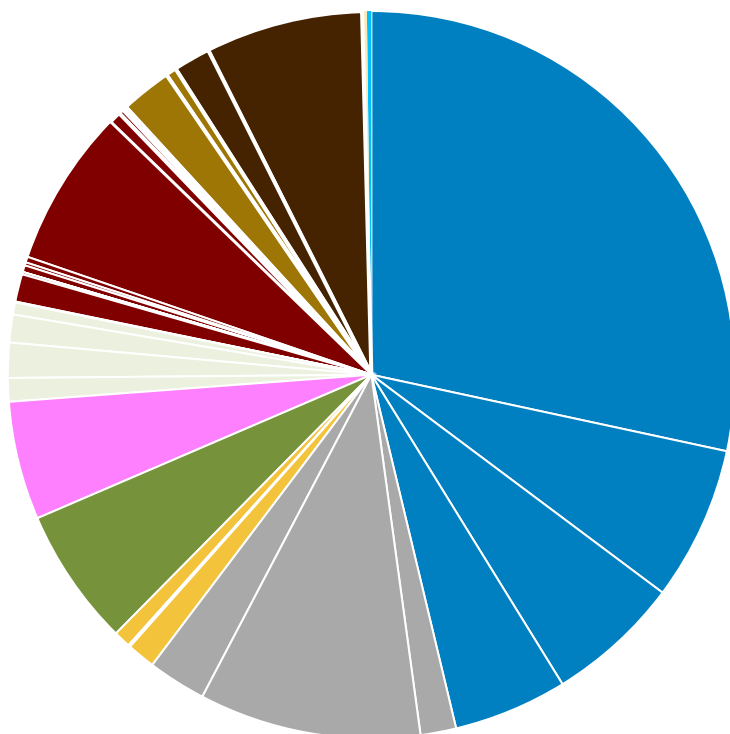
Comparative Performance



# Asset Allocation by Manager Total Fund

As of December 31, 2018

December 31, 2018 : \$717,464,234



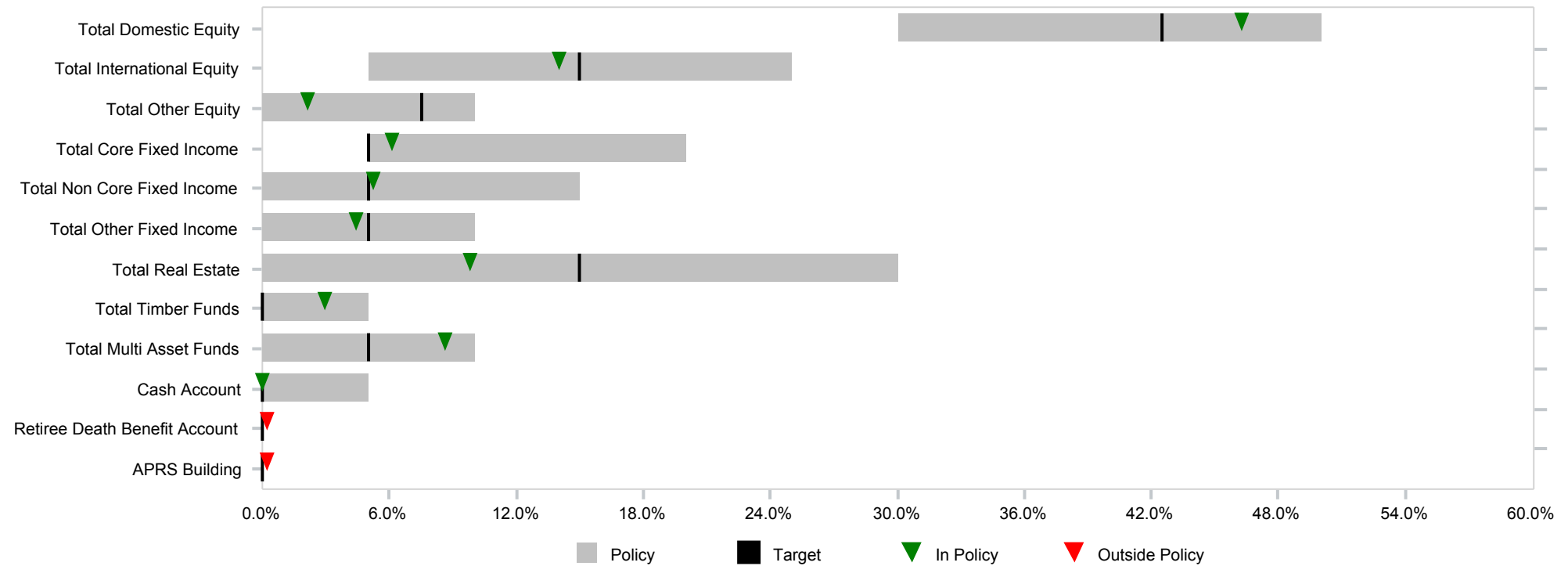
## Allocation

	Market Value	Allocation
NT Collective Russell 3000 Index	203,581,085	28.4
Baird Mid Cap Growth	49,155,025	6.9
Seizert Mid Cap Value	42,823,370	6.0
Kennedy Small Cap Value	36,329,184	5.1
Driehaus International Small Cap Growth	11,355,213	1.6
Thompson Siegel & Walmsley	70,752,231	9.9
LMCG Emerging Markets Fund	18,600,416	2.6
Huff Energy Fund	9,063,469	1.3
Sail Venture Fund I	1	0.0
Sail Venture Fund II	1	0.0
Sail Pre-Exit Acceleration Fund	1	0.0
Excelsior Investors, Ltd.	654,928	0.1
Franklin Park Private Equity	5,396,775	0.8
Orleans Capital	44,093,031	6.1
Templeton Global Multisector Plus	37,805,826	5.3
LBC Credit Partners III	7,499,241	1.0
LBC Credit Partners IV	11,154,213	1.6
Providence Debt Fund III	8,876,247	1.2
Capital Point Partners	3,832,950	0.5
Franchise Equity Capital Partners II	266,058	0.0
Rockspring Capital Land Funds (I - VI)	8,809,174	1.2
ARES Advisors (V & VI)	762,581	0.1
INVESCO Real Estate Funds (I & II)	26,898	0.0
Edison Investments	2,157,705	0.3
India Property Fund	981,301	0.1
Gainesville Property	1,818,400	0.3
Morgan Stanley	50,104,031	7.0
AEW Partners Fund VIII	3,941,449	0.5
GreenOak US III	1,648,988	0.2
BTG Pactual 1	1,194,512	0.2
Capitol Timberland Investments	16,326,965	2.3
Domain Environmental Investments II	3,417,253	0.5
Double Eagle Capital Ace Fund, Ltd.	11,802,108	1.6
BlackRock Multi Asset Fund	50,285,603	7.0
Cash Account	110,402	0.0
Cash Account PE	-	0.0
Retiree Death Benefit Account	1,399,563	0.2
APRS Building	1,438,036	0.2

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	717,464,234	100.0	N/A	N/A	100.0
Total Domestic Equity	331,888,664	46.3	30.0	50.0	42.5
Total International Equity	100,707,860	14.0	5.0	25.0	15.0
Total Other Equity	15,115,175	2.1	0.0	10.0	7.5
Total Core Fixed Income	44,093,031	6.1	5.0	20.0	5.0
Total Non Core Fixed Income	37,805,826	5.3	0.0	15.0	5.0
Total Other Fixed Income	31,628,709	4.4	0.0	10.0	5.0
Total Real Estate	70,250,526	9.8	0.0	30.0	15.0
Total Timber Funds	20,938,730	2.9	0.0	5.0	0.0
Total Multi Asset Funds	62,087,711	8.7	0.0	10.0	5.0
Cash Account	110,402	0.0	0.0	5.0	0.0
Retiree Death Benefit Account	1,399,563	0.2	0.0	0.0	0.0
APRS Building	1,438,036	0.2	0.0	0.0	0.0

**Total Fund Compliance:**

**Yes      No      N/A**

The total plan return equaled or exceeded the total plan benchmark over the trailing three and five year periods.

•

The total plan return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.

•

The total plan return equaled or exceeded the actuarial earnings assumption of 7.7% over the three and five year periods.

•

**Equity Compliance:**

**Yes      No      N/A**

Total domestic equity return equaled or exceeded the benchmark over the trailing three and five year periods.

•

Total domestic equity return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.

•

Total international equity return equaled or exceeded the benchmark over the trailing three and five year periods.

•

Total international equity return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.

•

The total equity allocation was less than or equal to 85% but greater than or equal to 35% of the total fund value at market.

•

The total domestic equity allocation was less than or equal to 50% but greater than or equal to 30% of the total fund value at market.

•

The total international equity allocation was less than or equal to 25% but greater than or equal to 5% of the total fund value at market.

•

**Fixed Income Compliance:**

**Yes      No      N/A**

Total core fixed income return equaled or exceed the benchmark over the trailing three and five year periods. 3-yr only.

•

Total core fixed income return ranked within the top 50th percentile of its peer group over the trailing three and five year periods. 3-yr only.

•

Total non-US fixed income return equaled or exceed the benchmark over the trailing three and five year periods. 3-yr only.

•

Total non-US fixed income return ranked within the top 50th percentile of its peer group over the trailing three and five year periods. 3-yr only.

•

The total fixed income allocation was less than or equal to 45% but greater than or equal to 5% of the total fund value at market.

•

The core fixed income allocation was less than or equal to 20% but greater than or equal to 5% of the total fund value at market.

•

The total non-US fixed income allocation was less than or equal to 15% of the total fund value at market.

•



	Baird Mid Cap			Seizert Mid Cap			Kennedy SC			Driehaus			TS&W		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
Manager outperformed the index over the trailing three and five year periods.	•				•				•	•				•	
Manager ranked within the top 50%-tile over trailing three and five year periods.	•				•				•	•				•	
Less than four consecutive quarters of under performance relative to the benchmark.	•			•				•		•			•		
Three and five-year downside capture ratios less than 100%	•			•					•	•				•	
Manager maintained style consistency for the mandate	•			•			•			•			•		
Manager maintained low turnover in portfolio team or senior management.	•			•			•			•			•		
Benchmark and index remained the same for the portfolio.	•			•			•			•			•		
Manager sustained compliance with IPS.	•			•			•			•			•		
No investigation by SEC was conducted on the manager.	•			•			•			•			•		
Manager did not experience significant asset flows into or out of the company.	•			•			•			•			•		
Manager is charging the same fee.	•			•			•			•			•		
No reported servicing issues with manager.	•			•			•			•			•		

	LMCG			Orleans			Templeton								
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
Manager outperformed the index over the trailing three and five year periods.		•		•			•								
Manager ranked within the top 50%-tile over trailing three and five year periods.		•			•		•								
Less than four consecutive quarters of under performance relative to the benchmark.	•			•			•								
Three and five-year downside capture ratios less than 100%		•		•			•								
Manager maintained style consistency for the mandate	•			•			•								
Manager maintained low turnover in portfolio team or senior management.	•			•			•								
Benchmark and index remained the same for the portfolio.	•			•			•								
Manager sustained compliance with IPS.	•			•			•								
No investigation by SEC was conducted on the manager.	•			•			•								
Manager did not experience significant asset flows into or out of the company.	•			•			•								
Manager is charging the same fee.	•			•			•								
No reported servicing issues with manager.	•			•			•								

\*The 3 & 5 year periods used for evaluation represent the historical performance of composite portfolios. As such, this data represents a combination of current managers, strategies and allocations as well as the realized performance of terminated portfolios and prior allocation strategies. The peer universes used are gross of fees therefore the manager returns used for the purpose of measuring compliance are also gross.



## Financial Reconciliation Quarter to Date

	Market Value 10/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2018
<b>Total Retirement System</b>	<b>797,509,342</b>	<b>-</b>	<b>13,056,309</b>	<b>-16,358,020</b>	<b>-503,447</b>	<b>-46,207</b>	<b>4,238,244</b>	<b>-80,431,986</b>	<b>-76,193,743</b>	<b>717,464,234</b>
<b>Total Equity</b>	<b>522,956,870</b>	<b>1,206,631</b>	<b>-</b>	<b>-</b>	<b>-329,625</b>	<b>-</b>	<b>2,406,998</b>	<b>-78,529,175</b>	<b>-76,122,177</b>	<b>447,711,700</b>
<b>Total Domestic Equity</b>	<b>392,577,052</b>	<b>-732,875</b>	<b>-</b>	<b>-</b>	<b>-267,125</b>	<b>-</b>	<b>509,134</b>	<b>-60,197,522</b>	<b>-59,688,388</b>	<b>331,888,664</b>
NT Collective Russell 3000 Index	238,627,214	-988,069	-	-	-11,931	-	-	-34,046,129	-34,046,129	203,581,085
Baird Mid Cap Growth	58,121,240	99,668	-	-	-99,668	-	113,833	-9,080,049	-8,966,216	49,155,025
Seizert Mid Cap Value	50,070,716	43,636	-	-	-43,636	-	208,321	-7,455,667	-7,247,345	42,823,370
Kennedy Small Cap Value	45,757,881	111,890	-	-	-111,890	-	186,980	-9,615,677	-9,428,697	36,329,184
<b>Total International Equity</b>	<b>119,039,513</b>	<b>-1,838,162</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,838,162</b>	<b>-18,331,653</b>	<b>-16,493,491</b>	<b>100,707,860</b>
Driehaus International Small Cap Growth	16,020,209	-1,838,162	-	-	-	-	1,838,162	-4,664,995	-2,826,834	11,355,213
Thompson Siegel & Walmsley	82,508,026	-	-	-	-	-	-	-11,755,795	-11,755,795	70,752,231
LMCG Emerging Markets Fund	20,511,278	-	-	-	-	-	-	-1,910,862	-1,910,862	18,600,416
<b>Total Other Equity</b>	<b>11,340,305</b>	<b>3,777,668</b>	<b>-</b>	<b>-</b>	<b>-62,500</b>	<b>-</b>	<b>59,702</b>	<b>-</b>	<b>59,702</b>	<b>15,115,175</b>
Huff Energy Fund	9,063,469	-	-	-	-	-	-	-	-	9,063,469
Sail Venture Fund I	1	-	-	-	-	-	-	-	-	1
Sail Venture Fund II	1	-	-	-	-	-	-	-	-	1
Sail Pre-Exit Acceleration Fund	1	-	-	-	-	-	-	-	-	1
Excelsior Investors, Ltd.	654,928	-41,121	-	-	-	-	41,121	-	41,121	654,928
Franklin Park Private Equity	1,621,905	3,818,789	-	-	-62,500	-	18,581	-	18,581	5,396,775
<b>Total Fixed Income</b>	<b>106,986,005</b>	<b>4,633,673</b>	<b>-</b>	<b>-</b>	<b>-50,215</b>	<b>-</b>	<b>940,978</b>	<b>1,017,125</b>	<b>1,958,103</b>	<b>113,527,566</b>
Orleans Capital	38,517,394	5,014,444	-	-	-14,444	-	410,233	165,405	575,638	44,093,031
Templeton Global Mulisector Plus Trust	36,979,770	44,163	-	-	-44,163	-	-	826,056	826,056	37,805,826
<b>Total Other Fixed Income</b>	<b>31,488,842</b>	<b>-424,934</b>	<b>-</b>	<b>-</b>	<b>8,392</b>	<b>-</b>	<b>530,745</b>	<b>25,664</b>	<b>556,409</b>	<b>31,628,709</b>
Capital Point Partners	3,832,950	-	-	-	-	-	-	-	-	3,832,950
Franchise Equity Capital Partners II	285,658	-54,450	-	-	-	-	34,850	-	34,850	266,058
LBC Credit Partners III	7,618,119	-255,735	-	-	8,392	-	128,465	-	128,465	7,499,241
LBC Credit Partners IV	9,750,281	1,249,998	-	-	-	-	153,934	-	153,934	11,154,213
Providence Debt Fund III	10,001,833	-1,364,746	-	-	-	-	213,496	25,664	239,160	8,876,247

## Financial Reconciliation

## Total Fund

1 Quarter Ending December 31, 2018

	Market Value 10/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2018
<b>Total Real Estate &amp; Timber</b>	<b>90,816,417</b>	<b>-154,908</b>	<b>-</b>	<b>-</b>	<b>-123,607</b>	<b>-46,207</b>	<b>491,410</b>	<b>206,152</b>	<b>697,562</b>	<b>91,189,256</b>
<b>Total Real Estate</b>	<b>70,149,634</b>	<b>-196,934</b>	<b>-</b>	<b>-</b>	<b>-81,582</b>	<b>-46,207</b>	<b>491,410</b>	<b>-65,795</b>	<b>425,615</b>	<b>70,250,526</b>
<b>Rockspring Capital Land Funds (I - VI)</b>	<b>9,991,483</b>	<b>-533,966</b>	<b>-</b>	<b>-</b>	<b>-31,961</b>	<b>-39,563</b>	<b>-</b>	<b>-576,821</b>	<b>-576,821</b>	<b>8,809,174</b>
Rockspring Capital Land Fund I	494,581	-	-	-	-	-	-	-16,772	-16,772	477,809
Rockspring Capital Land Fund II	3,325,176	-	-	-	-	-	-	-516,449	-516,449	2,808,727
Rockspring Capital Land Fund III	1,055,949	-	-	-	-	-	-	9,653	9,653	1,065,602
Rockspring Capital Land Fund IV	104,643	-43,406	-	-	-	-	-	-61,238	-61,238	-
Rockspring Capital Land Fund V	3,515,497	-490,560	-	-	-31,961	-39,563	-	185,643	185,643	3,139,057
Rockspring Capital Land Fund VI	1,495,638	-	-	-	-	-	-	-177,659	-177,659	1,317,979
<b>ARES Advisors (V &amp; VI)</b>	<b>1,098,965</b>	<b>-356,695</b>	<b>-</b>	<b>-</b>	<b>-786</b>	<b>-</b>	<b>-</b>	<b>21,097</b>	<b>21,097</b>	<b>762,581</b>
ARES Value Enhancement Fund V	272,767	-196,715	-	-	-	-	-	-2,055	-2,055	73,997
ARES Value Enhancement Fund VI	826,198	-159,980	-	-	-786	-	-	23,152	23,152	688,584
<b>INVESCO Real Estate Funds (I &amp; II)</b>	<b>26,929</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-31</b>	<b>-31</b>	<b>26,898</b>
INVESCO Real Estate Fund II	26,929	-	-	-	-	-	-	-31	-31	26,898
Edison Investments	2,149,407	-7,114	-	-	-	-	7,114	8,298	15,412	2,157,705
India Property Fund	981,301	-	-	-	-	-	-	-	-	981,301
Gainesville Property	1,818,400	-	-	-	-	-	-	-	-	1,818,400
Morgan Stanley	49,138,074	-	-	-	-	-	484,296	481,662	965,957	50,104,031
AEW Partners Fund VIII	3,453,525	487,924	-	-	-	-	-	-	-	3,941,449
GreenOak US III	1,491,550	212,917	-	-	-48,835	-6,644	-	-	-	1,648,988
<b>Total Timber Funds</b>	<b>20,666,783</b>	<b>42,025</b>	<b>-</b>	<b>-</b>	<b>-42,025</b>	<b>-</b>	<b>-</b>	<b>271,947</b>	<b>271,947</b>	<b>20,938,730</b>
<b>BTG Pactual (1, 2 &amp; 3)</b>	<b>1,194,512</b>	<b>2,802</b>	<b>-</b>	<b>-</b>	<b>-2,802</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,194,512</b>
BTG Pactual 1	1,194,512	2,802	-	-	-2,802	-	-	-	-	1,194,512
Capitol Timberland Investments	16,055,018	39,223	-	-	-39,223	-	-	271,947	271,947	16,326,965
Domain Environmental Investments II	3,417,253	-	-	-	-	-	-	-	-	3,417,253

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



## Financial Reconciliation

## Total Fund

1 Quarter Ending December 31, 2018

	Market Value 10/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2018
<b>Total Multi Asset Funds</b>	<b>69,975,172</b>	<b>-5,001,191</b>	-	-	-	-	<b>339,085</b>	<b>-3,225,356</b>	<b>-2,886,270</b>	<b>62,087,711</b>
Double Eagle Capital Ace Fund, Ltd.	22,111,645	-10,000,000	-	-	-	-	-	-309,537	-309,537	11,802,108
BlackRock Multi Asset Fund	23,888,277	28,262,513	-	-	-	-	337,895	-2,203,082	-1,865,187	50,285,603
Westwood Income Opportunity Fund	23,975,250	-23,263,704	-	-	-	-	1,191	-712,737	-711,546	-
<b>Cash Account</b>	<b>4,091,072</b>	<b>-684,205</b>	<b>13,009,049</b>	<b>-16,358,020</b>	-	-	<b>52,507</b>	-	<b>52,507</b>	<b>110,402</b>
<b>Cash Account PE</b>	-	-	-	-	-	-	-	-	-	-
<b>Retiree Death Benefit Account</b>	<b>1,345,037</b>	-	<b>47,259</b>	-	-	-	<b>7,266</b>	-	<b>7,266</b>	<b>1,399,563</b>
<b>APRS Building</b>	<b>1,338,769</b>	-	-	-	-	-	-	<b>99,267</b>	<b>99,267</b>	<b>1,438,036</b>

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



## Financial Reconciliation Year to Date

	Market Value 01/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2018
<b>Total Retirement System</b>	<b>769,894,927</b>	<b>-</b>	<b>57,442,477</b>	<b>-63,264,154</b>	<b>-1,887,440</b>	<b>-296,500</b>	<b>10,890,532</b>	<b>-55,315,607</b>	<b>-44,425,076</b>	<b>717,464,234</b>
<b>Total Equity</b>	<b>487,658,319</b>	<b>8,646,623</b>	<b>-</b>	<b>-</b>	<b>-1,250,614</b>	<b>-</b>	<b>3,747,575</b>	<b>-51,090,203</b>	<b>-47,342,628</b>	<b>447,711,700</b>
<b>Total Domestic Equity</b>	<b>352,647,228</b>	<b>5,003,058</b>	<b>-</b>	<b>-</b>	<b>-1,017,314</b>	<b>-</b>	<b>1,811,320</b>	<b>-26,555,627</b>	<b>-24,744,307</b>	<b>331,888,664</b>
NT Collective Russell 3000 Index	210,766,922	4,029,821	-	-	-44,077	-	14,256	-11,185,837	-11,171,580	203,581,085
Baird Mid Cap Growth	49,625,774	368,995	-	-	-368,995	-	365,661	-836,410	-470,749	49,155,025
Seizert Mid Cap Value	47,389,979	169,192	-	-	-169,192	-	741,367	-5,307,976	-4,566,609	42,823,370
Kennedy Small Cap Value	44,864,553	435,050	-	-	-435,050	-	690,035	-9,225,404	-8,535,369	36,329,184
<b>Total International Equity</b>	<b>122,447,653</b>	<b>-1,838,162</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,838,162</b>	<b>-21,739,793</b>	<b>-19,901,631</b>	<b>100,707,860</b>
Driehaus International Small Cap Growth	15,908,472	-1,838,162	-	-	-	-	1,838,162	-4,553,259	-2,715,097	11,355,213
Thompson Siegel & Walmsley	84,157,697	-	-	-	-	-	-	-13,405,466	-13,405,466	70,752,231
LMCG Emerging Markets Fund	22,381,484	-	-	-	-	-	-	-3,781,068	-3,781,068	18,600,416
<b>Total Other Equity</b>	<b>12,563,438</b>	<b>5,481,727</b>	<b>-</b>	<b>-</b>	<b>-233,300</b>	<b>-</b>	<b>98,093</b>	<b>-2,794,783</b>	<b>-2,696,690</b>	<b>15,115,175</b>
Huff Energy Fund	11,940,332	-	-	-	-	-	-	-2,876,863	-2,876,863	9,063,469
Sail Venture Fund I	1	-	-	-	-	-	-	-	-	1
Sail Venture Fund II	1	-	-	-	-	-	-	-	-	1
Sail Pre-Exit Acceleration Fund	1	-	-	-	-	-	-	-	-	1
Excelsior Investors, Ltd.	623,103	-79,512	-	-	-	-	79,512	31,825	111,337	654,928
Franklin Park Private Equity	-	5,561,239	-	-	-233,300	-	18,581	50,255	68,836	5,396,775
<b>Total Fixed Income</b>	<b>146,253,245</b>	<b>-33,788,575</b>	<b>-</b>	<b>-</b>	<b>-216,072</b>	<b>-</b>	<b>3,584,882</b>	<b>-2,305,913</b>	<b>1,278,969</b>	<b>113,527,566</b>
Orleans Capital	77,291,906	-32,924,846	-	-	-75,154	-	1,494,324	-1,693,199	-198,875	44,093,031
Templeton Global Multisector Plus	37,668,150	177,600	-	-	-177,600	-	-	137,676	137,676	37,805,826
<b>Total Other Fixed Income</b>	<b>31,293,189</b>	<b>-1,041,329</b>	<b>-</b>	<b>-</b>	<b>36,681</b>	<b>-</b>	<b>2,090,557</b>	<b>-750,390</b>	<b>1,340,168</b>	<b>31,628,709</b>
Capital Point Partners	4,501,369	-	-	-	-	-	-	-668,419	-668,419	3,832,950
Franchise Equity Capital Partners II	383,876	-138,600	-	-	-	-	65,781	-44,999	20,782	266,058
Franchise Equity Capital Partners III	50,429	-75,179	-	-	-	-	50,429	-25,679	24,750	-
LBC Credit Partners III	8,135,414	-1,116,871	-	-	36,681	-	482,631	-38,614	444,017	7,499,241
LBC Credit Partners IV	8,062,084	2,378,838	-	-	-	-	553,450	159,842	713,291	11,154,213
Providence Debt Fund III	10,160,018	-2,089,517	-	-	-	-	938,267	-132,521	805,746	8,876,247

## Financial Reconciliation

## Total Fund

Year To Date Ending December 31, 2018

	Market Value 01/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2018
<b>Total Real Estate &amp; Timber</b>	<b>91,921,760</b>	<b>-3,821,667</b>	-	-	<b>-420,753</b>	<b>-185,122</b>	<b>2,069,261</b>	<b>1,625,778</b>	<b>3,695,039</b>	<b>91,189,256</b>
<b>Total Real Estate</b>	<b>69,571,925</b>	<b>-2,423,005</b>	-	-	<b>-249,475</b>	<b>-185,122</b>	<b>2,069,261</b>	<b>1,466,943</b>	<b>3,536,204</b>	<b>70,250,526</b>
<b>Rockspring Capital Land Funds (I - VI)</b>	<b>12,924,594</b>	<b>-3,586,491</b>	-	-	<b>-31,961</b>	<b>-41,784</b>	-	<b>-455,184</b>	<b>-455,184</b>	<b>8,809,174</b>
Rockspring Capital Land Fund I	504,054	-	-	-	-	-	-	-26,245	-26,245	477,809
Rockspring Capital Land Fund II	4,752,538	-1,407,188	-	-	-	-	-	-536,623	-536,623	2,808,727
Rockspring Capital Land Fund III	2,658,720	-1,595,583	-	-	-	-	-	2,465	2,465	1,065,602
Rockspring Capital Land Fund IV	139,998	-72,114	-	-	-	-	-	-67,884	-67,884	-
Rockspring Capital Land Fund V	3,343,242	-490,560	-	-	-31,961	-39,563	-	357,898	357,898	3,139,057
Rockspring Capital Land Fund VI	1,526,042	-21,047	-	-	-	-2,221	-	-184,795	-184,795	1,317,979
<b>ARES Advisors (V &amp; VI)</b>	<b>1,437,746</b>	<b>-808,586</b>	-	-	<b>-4,174</b>	-	-	<b>137,594</b>	<b>137,594</b>	<b>762,581</b>
ARES Value Enhancement Fund V	578,974	-519,891	-	-	-	-	-	14,914	14,914	73,997
ARES Value Enhancement Fund VI	858,772	-288,695	-	-	-4,174	-	-	122,680	122,680	688,584
<b>INVESCO Real Estate Funds (I &amp; II)</b>	<b>28,601</b>	-	-	-	-	-	-	<b>-1,703</b>	<b>-1,703</b>	<b>26,898</b>
INVESCO Real Estate Fund II	28,601	-	-	-	-	-	-	-1,703	-1,703	26,898
Edison Investments	4,044,680	-2,565,830	-	-	-	-	172,553	506,302	678,855	2,157,705
India Property Fund	1,294,532	-	-	-	-	-	-	-313,231	-313,231	981,301
Gainesville Property	1,818,400	17,014	-	-	-4,157	-12,857	-	-	-	1,818,400
FWAR Investments	11,855	-26,679	-	-	-	-	-	14,824	14,824	-
Morgan Stanley	46,408,049	-	-	-	-	-	1,883,525	1,812,457	3,695,982	50,104,031
AEW Partners Fund VIII	1,603,468	2,357,058	-	-	-	-	13,183	-32,260	-19,077	3,941,449
GreenOak US III	-	2,190,509	-	-	-209,184	-130,481	-	-201,856	-201,856	1,648,988
<b>Total Timber Funds</b>	<b>22,349,835</b>	<b>-1,398,662</b>	-	-	<b>-171,278</b>	-	-	<b>158,835</b>	<b>158,835</b>	<b>20,938,730</b>
<b>BTG Pactual (1, 2 &amp; 3)</b>	<b>1,642,490</b>	<b>-537,676</b>	-	-	<b>-12,324</b>	-	-	<b>102,022</b>	<b>102,022</b>	<b>1,194,512</b>
BTG Pactual 1	1,642,490	-537,818	-	-	-12,182	-	-	102,022	102,022	1,194,512
BTG Pactual 2	-	142	-	-	-142	-	-	-	-	-
Capitol Timberland Investments	16,476,687	-481,328	-	-	-118,612	-	-	450,218	450,218	16,326,965
Domain Environmental Investments II	4,230,658	-379,658	-	-	-40,342	-	-	-393,405	-393,405	3,417,253

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





## Financial Reconciliation

## Total Fund

Year To Date Ending December 31, 2018

	Market Value 01/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2018
<b>Total Multi Asset Funds</b>	<b>31,444,001</b>	<b>32,991,419</b>	-	-	-	-	<b>1,297,254</b>	<b>-3,644,963</b>	<b>-2,347,709</b>	<b>62,087,711</b>
Double Eagle Capital Ace Fund, Ltd.	31,444,001	-20,000,000	-	-	-	-	-	358,107	358,107	11,802,108
BlackRock Multi Asset Fund	-	52,260,643	-	-	-	-	982,270	-2,957,309	-1,975,039	50,285,603
Westwood Income Opportunity Fund	-	730,776	-	-	-	-	314,985	-1,045,761	-730,776	-
<b>Cash Account</b>	<b>10,051,278</b>	<b>-4,027,800</b>	<b>57,212,805</b>	<b>-63,184,154</b>	-	<b>-111,378</b>	<b>169,224</b>	<b>426</b>	<b>169,651</b>	<b>110,402</b>
<b>Cash Account PE</b>	-	-	-	-	-	-	-	-	-	-
<b>Retiree Death Benefit Account</b>	<b>1,227,556</b>	-	<b>229,672</b>	<b>-80,000</b>	-	-	<b>22,336</b>	-	<b>22,336</b>	<b>1,399,563</b>
<b>APRS Building</b>	<b>1,338,769</b>	-	-	-	-	-	-	<b>99,267</b>	<b>99,267</b>	<b>1,438,036</b>

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



## Comparative Performance Trailing Returns

	Performance (%)								Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	
<b>Total Retirement System (Net)</b>	<b>-9.60</b>	<b>-6.04</b>	<b>-6.04</b>	4.22	3.42	5.18	5.27	7.71	10/01/1992
<b>Total Retirement System (Gross)</b>	<b>-9.54 (85)</b>	<b>-5.82 (87)</b>	<b>-5.82 (87)</b>	4.45 (88)	3.67 (84)	5.50 (91)	5.74 (94)	8.02 (21)	10/01/1992
Total Fund Policy	-8.03	-3.05	-3.05	6.64	6.07	8.38	9.34	7.85	
Variance	-1.51	-2.77	-2.77	-2.19	-2.40	-2.88	-3.60	0.17	
All Public Plans-Total Fund Median	-8.30	-4.24	-4.24	5.72	4.74	7.46	8.40	7.50	
<b>Total Equity</b>	<b>-14.60</b>	<b>-9.78</b>	<b>-9.78</b>	6.00	4.03	8.31	9.85	8.18	01/01/1994
Total Equity Policy	-13.89	-7.34	-7.34	7.43	5.69	10.36	11.15	7.86	
Variance	-0.71	-2.44	-2.44	-1.43	-1.66	-2.05	-1.30	0.32	
<b>Domestic Equity</b>	<b>-15.28 (49)</b>	<b>-7.19 (49)</b>	<b>-7.19 (49)</b>	8.04 (38)	5.72 (50)	N/A	N/A	8.21 (52)	05/01/2013
Russell 3000 Index	-14.30	-5.24	-5.24	8.97	7.91	12.46	13.18	10.17	
Variance	-0.98	-1.95	-1.95	-0.93	-2.19	N/A	N/A	-1.96	
IM U.S. Equity (SA+CF+MF) Median	-15.48	-7.43	-7.43	7.12	5.70	10.85	12.40	8.34	
NT Collective Russell 3000 Index	-14.29 (35)	-5.23 (48)	-5.23 (48)	9.00 (38)	7.93 (37)	N/A	N/A	7.93 (37)	01/01/2014
Russell 3000 Index	-14.30	-5.24	-5.24	8.97	7.91	12.46	13.18	7.91	
Variance	0.01	0.01	0.01	0.03	0.02	N/A	N/A	0.02	
IM U.S. All Cap Core Equity (SA+CF) Median	-14.85	-5.43	-5.43	8.24	7.29	12.71	13.16	7.29	
Baird Mid Cap Growth	-15.58 (27)	-1.64 (36)	-1.64 (36)	9.58 (37)	N/A	N/A	N/A	5.96 (67)	07/01/2014
Russell Midcap Growth Index	-15.99	-4.75	-4.75	8.59	7.42	12.27	15.12	6.77	
Variance	0.41	3.11	3.11	0.99	N/A	N/A	N/A	-0.81	
IM U.S. Mid Cap Growth Equity (SA+CF) Median	-16.71	-4.29	-4.29	8.26	7.05	11.87	14.84	6.84	
Seizert Mid Cap Value	-14.55 (20)	-9.95 (56)	-9.95 (56)	6.48 (64)	N/A	N/A	N/A	1.68 (93)	07/01/2014
Russell Midcap Index	-15.37	-9.06	-9.06	7.04	6.26	11.49	14.03	5.02	
Variance	0.82	-0.89	-0.89	-0.56	N/A	N/A	N/A	-3.34	
Russell Midcap Value Index	-14.95	-12.29	-12.29	6.06	5.44	10.89	13.03	3.61	
Variance	0.40	2.34	2.34	0.42	N/A	N/A	N/A	-1.93	
IM U.S. Mid Cap Equity (SA+CF) Median	-16.66	-9.26	-9.26	7.52	6.26	11.60	14.15	5.37	
Kennedy Small Cap Value	-20.82 (78)	-19.83 (92)	-19.83 (92)	N/A	N/A	N/A	N/A	5.96 (88)	03/01/2016
Russell 2000 Value Index	-18.67	-12.86	-12.86	7.37	3.61	9.57	10.40	10.24	
Variance	-2.15	-6.97	-6.97	N/A	N/A	N/A	N/A	-4.28	
IM U.S. Small Cap Value Equity (SA+CF) Median	-19.21	-14.36	-14.36	6.34	4.10	10.47	13.10	8.84	

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 December 31, 2018

	Performance (%)							Inception	Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR		
<b>International Equity</b>	<b>-13.88 (69)</b>	<b>-16.28 (56)</b>	<b>-16.28 (56)</b>	<b>2.39 (69)</b>	<b>0.88 (52)</b>	<b>N/A</b>	<b>N/A</b>	<b>3.71 (25)</b>	<b>05/01/2013</b>
MSCI AC World ex USA	-11.41	-13.78	-13.78	4.98	1.14	5.33	7.06	2.40	
Variance	-2.47	-2.50	-2.50	-2.59	-0.26	N/A	N/A	1.31	
IM International Equity (SA+CF+MF) Median	-12.16	-15.76	-15.76	3.87	0.95	5.45	7.38	2.21	
Driehaus International Small Cap Growth	-17.50 (59)	-16.92 (31)	-16.92 (31)	3.22 (42)	3.45 (21)	N/A	N/A	8.36 (18)	09/01/2012
MSCI AC World ex USA Small Growth	-15.75	-18.07	-18.07	3.14	2.51	6.71	10.34	6.10	
Variance	-1.75	1.15	1.15	0.08	0.94	N/A	N/A	2.26	
IM International SMID Cap Growth Equity (MF) Median	-16.79	-19.46	-19.46	2.68	1.46	7.51	10.12	6.47	
Thompson Siegel & Walmsley	-14.25 (74)	-15.93 (72)	-15.93 (72)	1.20 (91)	N/A	N/A	N/A	0.46 (86)	10/01/2014
MSCI EAFE (Net) Index	-12.54	-13.79	-13.79	2.87	0.53	5.75	6.32	0.96	
Variance	-1.71	-2.14	-2.14	-1.67	N/A	N/A	N/A	-0.50	
IM International Large Cap Core Equity (SA+CF) Median	-13.19	-14.63	-14.63	3.11	1.32	6.72	7.73	1.67	
LMCG Emerging Markets Fund	-9.32 (83)	-16.89 (69)	-16.89 (69)	6.57 (76)	N/A	N/A	N/A	0.06 (91)	04/01/2014
MSCI Emerging Markets Index	-7.40	-14.25	-14.25	9.65	2.03	3.61	8.39	2.21	
Variance	-1.92	-2.64	-2.64	-3.08	N/A	N/A	N/A	-2.15	
IM Emerging Markets Equity (SA+CF) Median	-7.28	-15.23	-15.23	8.69	2.25	4.71	9.38	2.35	
<b>Total Other Equity</b>	<b>-0.05</b>	<b>-20.96</b>	<b>-20.96</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-19.29</b>	<b>01/01/2017</b>
Huff Energy Fund	0.00	-24.09	-24.09	-0.45	-8.74	-6.36	N/A	-2.73	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	
Excelsior Investors, Ltd.	6.45	18.82	18.82	19.46	-2.50	-5.87	-2.28	-2.23	12/01/2008
Franklin Park Private Equity	-3.18	N/A	N/A	N/A	N/A	N/A	N/A	-45.46	02/01/2018
Cambridge Associates Private Equity Index	0.00	12.32	12.32	14.29	11.90	13.38	13.95	12.32	
Variance	-3.18	N/A	N/A	N/A	N/A	N/A	N/A	-57.78	
Sail Venture Fund I	0.00	0.00	0.00	-99.00	-94.55	-89.03	N/A	-83.81	06/01/2010
Sail Venture Fund II	0.00	0.00	0.00	-98.56	-95.08	-89.34	N/A	-83.72	07/01/2010
Sail Pre-Exit Acceleration Fund	0.00	0.00	0.00	-98.56	-95.48	N/A	N/A	-92.38	01/01/2013

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 December 31, 2018

	Performance (%)								Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	
<b>Total Fixed Income</b>	<b>1.73</b>	<b>0.94</b>	<b>0.94</b>	<b>2.71</b>	<b>1.76</b>	<b>2.59</b>	<b>5.43</b>	<b>6.72</b>	<b>12/01/1993</b>
Total Fixed Income Policy	1.33	-0.66	-0.66	2.54	1.87	1.67	3.14	4.89	
Variance	0.40	1.60	1.60	0.17	-0.11	0.92	2.29	1.83	
Orleans Capital	1.13 (75)	0.07 (50)	0.07 (50)	2.56 (41)	2.66 (73)	N/A	N/A	2.66 (73)	01/01/2014
Bimbg. Barc. U.S. Aggregate Index	1.64	0.01	0.01	2.06	2.52	2.10	3.48	2.52	
Variance	-0.51	0.06	0.06	0.50	0.14	N/A	N/A	0.14	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.40	0.07	0.07	2.48	2.86	2.63	4.41	2.86	
Templeton Global Multisector Plus Trust	2.11 (6)	-0.11 (19)	-0.11 (19)	3.64 (20)	N/A	N/A	N/A	1.67 (30)	03/01/2014
Bimbg. Barc. Global Multiverse	1.02	-1.36	-1.36	2.99	1.20	1.22	2.77	0.73	
Variance	1.09	1.25	1.25	0.65	N/A	N/A	N/A	0.94	
IM Global Fixed Income (MF) Median	0.33	-1.76	-1.76	2.68	1.27	1.71	3.49	0.92	
<b>Total Other Fixed Income</b>	<b>1.87</b>	<b>4.59</b>	<b>4.59</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.02</b>	<b>01/01/2017</b>
Capital Point Partners	0.00	-14.85	-14.85	-16.64	-11.45	-7.52	N/A	-3.86	07/01/2010
Franchise Equity Capital Partners II	14.18	9.99	9.99	-16.89	-9.62	-6.75	-3.98	-3.83	04/01/2008
LBC Credit Partners III	1.83	6.55	6.55	6.64	N/A	N/A	N/A	9.18	03/01/2014
Credit Suisse Leveraged Loan Index	-3.08	1.14	1.14	5.02	3.35	4.59	8.31	3.26	
Variance	4.91	5.41	5.41	1.62	N/A	N/A	N/A	5.92	
LBC Credit Partners IV	1.60	8.62	8.62	N/A	N/A	N/A	N/A	11.48	09/01/2016
Credit Suisse Leveraged Loan Index	-3.08	1.14	1.14	5.02	3.35	4.59	8.31	3.66	
Variance	4.68	7.48	7.48	N/A	N/A	N/A	N/A	7.82	
Providence Debt Fund III	2.55	8.55	8.55	10.13	N/A	N/A	N/A	9.48	04/01/2014
Credit Suisse Leveraged Loan Index	-3.08	1.14	1.14	5.02	3.35	4.59	8.31	3.24	
Variance	5.63	7.41	7.41	5.11	N/A	N/A	N/A	6.24	

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# Comparative Performance

## Total Fund

As of December 31, 2018

	Performance (%)								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Alternative Investments									
Multi Asset Funds	-4.58	-2.74	-2.74	-0.53	-1.88	1.62	5.17	5.13	12/01/2008
HFRI Fund of Funds Composite Index	-5.01	-4.09	-4.09	1.28	1.38	2.92	3.11	2.93	
Variance	0.43	1.35	1.35	-1.81	-3.26	-1.30	2.06	2.20	
Double Eagle Capital Ace Fund, Ltd.	-2.56	-1.09	-1.09	-0.61	-0.18	3.28	N/A	2.95	09/01/2010
HFRI Fund of Funds Composite Index	-5.01	-4.09	-4.09	1.28	1.38	2.92	3.11	2.44	
Variance	2.45	3.00	3.00	-1.89	-1.56	0.36	N/A	0.51	
BlackRock Multi Asset Fund	-4.69	N/A	N/A	N/A	N/A	N/A	N/A	-5.27	02/01/2018
BlackRock Multi Hybrid	-6.03	-4.19	-4.19	N/A	N/A	N/A	N/A	-6.13	
Variance	1.34	N/A	N/A	N/A	N/A	N/A	N/A	0.86	
Other Assets									
Cash Account	0.54	1.72	1.72	0.92	0.56	0.49	0.39	4.54	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	0.53	1.72	1.72	0.92	0.55	0.42	0.45	1.38	12/01/2004
Other Alternative Assets									
Total Real Estate	0.50	4.92	4.92	2.85	8.51	8.61	3.11	3.89	08/01/2005
NCREIF Property Index	1.37	6.72	6.72	7.21	9.33	9.74	7.49	8.11	
Variance	-0.87	-1.80	-1.80	-4.36	-0.82	-1.13	-4.38	-4.22	
Total Timber Funds	1.11	-0.04	-0.04	-3.67	0.19	-0.47	-1.24	1.65	08/01/2005
NCREIF Timberland Index	0.97	3.44	3.44	3.22	4.98	6.04	3.83	6.79	
Variance	0.14	-3.48	-3.48	-6.89	-4.79	-6.51	-5.07	-5.14	

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## Comparative Performance Fiscal Year Returns

	Performance (%)								
	YTD	2017	2016	2015	2014	2013	2012	2011	2010
<b>Total Retirement System (Net)</b>	<b>-6.04</b>	<b>11.89</b>	<b>7.67</b>	<b>-1.05</b>	<b>5.61</b>	<b>10.66</b>	<b>8.79</b>	<b>-3.16</b>	<b>10.99</b>
<b>Total Retirement System (Gross)</b>	<b>-5.82 (87)</b>	<b>12.17 (91)</b>	<b>7.87 (38)</b>	<b>-0.83 (73)</b>	<b>5.94 (71)</b>	<b>11.16 (93)</b>	<b>9.31 (94)</b>	<b>-2.68 (96)</b>	<b>12.25 (66)</b>
Total Fund Policy	-3.05	15.77	8.04	2.43	8.08	17.56	11.31	4.69	12.13
Variance	-2.77	-3.60	-0.17	-3.26	-2.14	-6.40	-2.00	-7.37	0.12
All Public Plans-Total Fund Median	-4.24	15.35	7.36	0.03	6.82	17.04	12.48	0.30	12.81
<b>Total Equity</b>	<b>-9.78</b>	<b>18.49</b>	<b>11.41</b>	<b>-2.87</b>	<b>5.30</b>	<b>29.57</b>	<b>10.82</b>	<b>-8.56</b>	<b>16.73</b>
Total Equity Policy	-7.34	22.07	9.61	-0.51	6.91	29.57	16.70	-3.34	14.51
Variance	-2.44	-3.58	1.80	-2.36	-1.61	0.00	-5.88	-5.22	2.22
<b>Domestic Equity</b>	<b>-7.19 (49)</b>	<b>17.39 (54)</b>	<b>15.76 (32)</b>	<b>-3.09 (63)</b>	<b>8.03 (58)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Russell 3000 Index	-5.24	21.13	12.74	0.48	12.56	33.55	16.42	1.03	16.93
Variance	-1.95	-3.74	3.02	-3.57	-4.53	N/A	N/A	N/A	N/A
IM U.S. Equity (SA+CF+MF) Median	-7.43	18.18	11.71	-1.45	9.18	33.88	15.25	-1.67	17.89
NT Collective Russell 3000 Index	-5.23 (48)	21.15 (47)	12.79 (47)	0.49 (50)	12.55 (32)	N/A	N/A	N/A	N/A
Russell 3000 Index	-5.24	21.13	12.74	0.48	12.56	33.55	16.42	1.03	16.93
Variance	0.01	0.02	0.05	0.01	-0.01	N/A	N/A	N/A	N/A
IM U.S. All Cap Core Equity (SA+CF) Median	-5.43	20.89	12.17	0.45	10.80	35.95	15.97	0.32	16.99
Baird Mid Cap Growth	-1.64 (36)	26.98 (30)	5.35 (54)	-3.03 (81)	N/A	N/A	N/A	N/A	N/A
Russell Midcap Growth Index	-4.75	25.27	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38
Variance	3.11	1.71	-1.98	-2.83	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Growth Equity (SA+CF) Median	-4.29	25.42	5.64	1.04	8.69	36.42	15.13	-0.95	26.75
Seizert Mid Cap Value	-9.95 (56)	7.38 (99)	24.86 (6)	-10.83 (97)	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	-9.06	18.52	13.80	-2.44	13.22	34.76	17.28	-1.55	25.47
Variance	-0.89	-11.14	11.06	-8.39	N/A	N/A	N/A	N/A	N/A
Russell Midcap Value Index	-12.29	13.34	20.00	-4.78	14.75	33.46	18.51	-1.38	24.75
Variance	2.34	-5.96	4.86	-6.05	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Equity (SA+CF) Median	-9.26	19.89	12.71	-1.12	9.78	36.42	16.57	-1.06	24.87
Kennedy Small Cap Value	-19.83 (92)	12.51 (43)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2000 Value Index	-12.86	7.84	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50
Variance	-6.97	4.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Small Cap Value Equity (SA+CF) Median	-14.36	11.61	26.17	-4.28	5.66	38.07	17.52	-3.17	27.52

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# Comparative Performance

## Total Fund

As of December 31, 2018

	Performance (%)								
	YTD	2017	2016	2015	2014	2013	2012	2011	2010
<b>International Equity</b>	<b>-16.28 (56)</b>	<b>27.37 (61)</b>	<b>0.67 (64)</b>	<b>-2.40 (52)</b>	<b>-0.27 (24)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
MSCI AC World ex USA	-13.78	27.77	5.01	-5.25	-3.44	15.78	17.39	-13.33	11.60
Variance	-2.50	-0.40	-4.34	2.85	3.17	N/A	N/A	N/A	N/A
IM International Equity (SA+CF+MF) Median	-15.76	29.30	2.36	-2.09	-3.96	18.15	18.89	-14.30	13.64
Driehaus International Small Cap Growth	-16.92 (31)	41.19 (7)	-6.24 (88)	12.59 (12)	-4.32 (39)	29.24 (34)	N/A	N/A	N/A
MSCI AC World ex USA Small Growth	-18.07	33.99	-0.04	6.74	-3.35	18.80	17.17	-17.67	27.55
Variance	1.15	7.20	-6.20	5.85	-0.97	10.44	N/A	N/A	N/A
IM International SMID Cap Growth Equity (MF) Median	-19.46	34.38	-1.01	6.83	-5.01	26.57	21.71	-15.16	22.42
Thompson Siegel & Walmsley	-15.93 (72)	22.70 (92)	0.47 (64)	1.38 (37)	N/A	N/A	N/A	N/A	N/A
MSCI EAFE (Net) Index	-13.79	25.03	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75
Variance	-2.14	-2.33	-0.53	2.19	N/A	N/A	N/A	N/A	N/A
IM International Large Cap Core Equity (SA+CF) Median	-14.63	26.49	1.38	0.25	-3.70	23.32	19.45	-12.34	11.25
LMCG Emerging Markets Fund	-16.89 (69)	35.93 (57)	7.14 (72)	-18.73 (95)	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index	-14.25	37.75	11.60	-14.60	-1.82	-2.27	18.64	-18.17	19.20
Variance	-2.64	-1.82	-4.46	-4.13	N/A	N/A	N/A	N/A	N/A
IM Emerging Markets Equity (SA+CF) Median	-15.23	36.92	10.16	-12.59	-0.05	1.00	20.52	-18.07	21.86
<b>Total Other Equity</b>	<b>-20.96</b>	<b>-17.60</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Huff Energy Fund	-24.09	-10.08	44.55	-20.83	-18.98	-30.35	43.24	-5.31	N/A
Russell 3000 Energy SP	N/A	N/A	N/A	N/A	-10.01	25.86	3.87	3.42	21.85
Variance	N/A	N/A	N/A	N/A	-8.97	-56.21	39.37	-8.73	N/A
Excelsior Investors, Ltd.	18.82	26.42	13.49	-40.49	-13.16	-23.59	-2.73	2.92	15.69
Franklin Park Private Equity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cambridge Associates Private Equity Index	12.32	17.52	13.11	5.65	11.22	21.08	13.36	11.16	21.74
Variance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sail Venture Fund I	0.00	-100.00	0.00	0.00	-51.72	-39.19	-34.69	-15.98	N/A
Sail Venture Fund II	0.00	-100.00	0.00	0.00	-90.44	-24.18	-28.20	9.12	N/A
Sail Pre-Exit Acceleration Fund	0.00	-100.00	0.00	0.00	-93.68	3.26	N/A	N/A	N/A

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# Comparative Performance

## Total Fund

As of December 31, 2018

	Performance (%)								
	YTD	2017	2016	2015	2014	2013	2012	2011	2010
<b>Total Fixed Income</b>	<b>0.94</b>	<b>2.86</b>	<b>4.36</b>	<b>-0.97</b>	<b>1.69</b>	<b>-3.42</b>	<b>13.45</b>	<b>-1.20</b>	<b>15.23</b>
Total Fixed Income Policy	-0.66	5.60	2.77	-1.37	3.20	-2.10	4.54	6.72	6.24
Variance	1.60	-2.74	1.59	0.40	-1.51	-1.32	8.91	-7.92	8.99
Orleans Capital	0.07 (50)	3.87 (60)	3.79 (28)	0.57 (72)	5.08 (94)	N/A	N/A	N/A	N/A
Bimbg. Barc. U.S. Aggregate Index	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54
Variance	0.06	0.33	1.14	0.02	-0.89	N/A	N/A	N/A	N/A
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.07	4.05	3.11	0.82	6.17	-1.56	5.92	7.84	7.24
Templeton Global Multisector Plus Trust	-0.11 (19)	3.84 (82)	7.33 (8)	-4.27 (62)	N/A	N/A	N/A	N/A	N/A
Bimbg. Barc. Global Multiverse	-1.36	7.69	2.84	-3.29	0.48	-2.19	4.84	5.55	5.84
Variance	1.25	-3.85	4.49	-0.98	N/A	N/A	N/A	N/A	N/A
IM Global Fixed Income (MF) Median	-1.76	6.81	2.92	-3.83	1.91	-2.52	7.33	4.01	5.97
<b>Total Other Fixed Income</b>	<b>4.59</b>	<b>-0.49</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Capital Point Partners	-14.85	-31.96	0.00	1.14	-7.09	-7.62	15.06	7.40	N/A
Franchise Equity Capital Partners II	9.99	74.16	-70.03	-13.41	21.33	21.10	-16.06	-9.07	5.42
LBC Credit Partners III	6.55	2.55	11.00	13.39	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	1.14	4.25	9.87	-0.41	2.18	6.16	9.43	1.82	9.98
Variance	5.41	-1.70	1.13	13.80	N/A	N/A	N/A	N/A	N/A
LBC Credit Partners IV	8.62	15.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	1.14	4.25	9.87	-0.41	2.18	6.16	9.43	1.82	9.98
Variance	7.48	10.95	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Providence Debt Fund III	8.55	7.95	13.97	2.91	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	1.14	4.25	9.87	-0.41	2.18	6.16	9.43	1.82	9.98
Variance	7.41	3.70	4.10	3.32	N/A	N/A	N/A	N/A	N/A

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# Comparative Performance

## Total Fund

As of December 31, 2018

	Performance (%)								
	YTD	2017	2016	2015	2014	2013	2012	2011	2010
<b>Alternative Investments</b>									
<b>Multi Asset Funds</b>	<b>-2.74</b>	<b>0.81</b>	<b>0.37</b>	<b>-1.70</b>	<b>-6.00</b>	<b>12.18</b>	<b>9.71</b>	<b>-4.32</b>	<b>13.31</b>
HFRI Fund of Funds Composite Index	-4.09	7.77	0.51	-0.27	3.37	8.96	4.79	-5.72	5.70
Variance	1.35	-6.96	-0.14	-1.43	-9.37	3.22	4.92	1.40	7.61
Double Eagle Capital Ace Fund, Ltd.	-1.09	0.81	-1.53	0.78	0.17	16.13	8.92	-6.81	N/A
HFRI Fund of Funds Composite Index	-4.09	7.77	0.51	-0.27	3.37	8.96	4.79	-5.72	5.70
Variance	3.00	-6.96	-2.04	1.05	-3.20	7.17	4.13	-1.09	N/A
BlackRock Multi Asset Fund	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BlackRock Multi Hybrid	-4.19	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	N/A
<b>Other Assets</b>									
Cash Account	1.72	0.76	0.27	0.01	0.06	0.02	0.59	-0.21	0.36
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	1.72	0.77	0.27	0.02	0.01	0.01	0.15	1.24	0.06
<b>Other Alternative Assets</b>									
Total Real Estate	4.92	2.90	0.76	5.40	31.16	10.25	7.49	6.25	2.00
NCREIF Property Index	6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26	13.11
Variance	-1.80	-4.06	-7.21	-7.93	19.34	-0.73	-3.05	-8.01	-11.11
Total Timber Funds	-0.04	-3.94	-6.92	1.93	10.81	-4.18	0.02	-1.33	3.80
NCREIF Timberland Index	3.44	3.63	2.59	4.97	10.48	9.69	7.75	1.57	-0.15
Variance	-3.48	-7.57	-9.51	-3.04	0.33	-13.87	-7.73	-2.90	3.95

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Comparative Performance - IRR

Other Alternative Investments

As of December 31, 2018

Comparative Performance - IRR								
	Market Value (\$)	QTR	YTD	1 YR	3 YR	5 YR	Inception IRR	Inception Date
<b>Total Real Estate Investments</b>	<b>70,250,526</b>	<b>0.43</b>	<b>4.59</b>	<b>4.59</b>	<b>2.68</b>	<b>9.93</b>	<b>6.84</b>	<b>07/31/2005</b>
Edison Investments	2,157,705	0.72	26.52	26.52	9.83	13.01	12.09	09/30/1996
ARES Advisors (V & VI)	762,581	2.24	11.38	11.38	12.69	17.77	3.94	05/31/2002
Rockspring Capital Land Funds (I - VI)	8,809,174	-6.67	-4.87	-4.87	-5.92	-0.20	1.31	11/30/2003
INVESCO Real Estate Funds (I & II)	26,898	-0.12	-5.95	-5.95	3.27	8.43	4.31	03/31/2005
India Property Fund	981,301	0.00	-24.20	-24.20	-10.69	-4.39	-3.94	05/24/2007
Gainesville Property	1,818,400	0.00	-0.93	-0.93	-4.11	-7.28	-8.10	01/31/2008
Morgan Stanley	50,104,031	1.97	7.96	7.96	8.59	N/A	8.59	12/31/2015
AEW Partners Fund VIII	3,941,449	0.00	-0.78	-0.78	N/A	N/A	-8.60	06/26/2017
GreenOak US III	1,648,988	-3.70	N/A	N/A	N/A	N/A	-28.78	06/22/2018
<b>Total Timber Funds</b>	<b>20,938,730</b>	<b>1.11</b>	<b>-0.06</b>	<b>-0.06</b>	<b>-3.83</b>	<b>1.49</b>	<b>-0.06</b>	<b>07/31/2005</b>
BTG Pactual 1	1,194,512	-0.23	6.20	6.20	-11.29	-0.66	3.94	11/30/1996
Capitol Timberland Investments	16,326,965	1.45	2.05	2.05	-1.76	3.65	3.51	09/30/2004
Domain Environmental Investments II	3,417,253	0.00	-10.65	-10.65	-4.42	-3.56	-1.45	04/30/2008
<b>Total Other Equity</b>	<b>15,115,175</b>	<b>-0.02</b>	<b>-20.86</b>	<b>-20.86</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00</b>	<b>01/01/2017</b>
Huff Energy Fund	9,063,469	0.00	-24.09	-24.09	-0.45	-8.73	-0.29	12/31/2006
Excelsior Investors, Ltd.	654,928	6.61	18.65	18.65	19.28	N/A	-6.03	12/31/2014
Franklin Park Private Equity	5,396,775	-1.63	-10.25	-10.25	N/A	N/A	-10.25	01/31/2018
Sail Venture Fund I	1	0.00	0.00	0.00	-98.94	-94.35	-65.39	12/31/2008
Sail Venture Fund II	1	0.00	0.00	0.00	-98.54	-95.05	-89.17	02/28/2009
Sail Pre-Exit Acceleration Fund	1	0.00	0.00	0.00	-98.53	-95.43	-92.73	01/31/2013
<b>Total Other Fixed Income</b>	<b>31,628,709</b>	<b>1.87</b>	<b>4.55</b>	<b>4.55</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00</b>	<b>01/03/2017</b>
Capital Point Partners	3,832,950	0.00	-14.85	-14.85	-18.89	-13.18	-0.42	03/31/2007
Franchise Equity Capital Partners II	266,058	13.66	6.34	6.34	-20.36	2.25	0.69	04/28/2008
LBC Credit Partners III	7,499,241	1.83	6.38	6.38	7.38	N/A	9.79	03/07/2014
LBC Credit Partners IV	11,154,213	1.57	8.47	8.47	N/A	N/A	10.83	09/19/2016
Providence Debt Fund III	8,876,247	2.69	8.49	8.49	10.22	N/A	9.24	04/21/2014



**Summary of Partnerships  
Other Alternative Investments**

As of December 31, 2018

**Private Equity Summary of Partnership**

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
<b>Total Real Estate Investments</b>					
Edison Investments	8,146,177	2,157,705	19,857,145	12.1	2.7
ARES Value Enhancement Fund V	5,000,000	73,997	5,893,900	5.9	1.2
ARES Value Enhancement Fund VI	5,000,000	688,584	5,837,197	3.2	1.3
Rockspring Capital Land Fund I	3,618,330	477,809	4,738,306	10.2	1.4
Rockspring Capital Land Fund II	7,870,282	2,808,727	7,784,100	3.1	1.3
Rockspring Capital Land Fund III	5,125,000	1,065,602	5,898,227	3.4	1.4
Rockspring Capital Land Fund IV	7,615,498	-	9,438,696	3.0	1.2
Rockspring Capital Land Fund V	5,165,128	3,139,057	2,923,031	1.5	1.2
Rockspring Capital Land Fund VI	3,502,221	1,317,979	1,752,469	-1.4	0.9
INVESCO Real Estate Fund II	7,027,609	26,898	9,105,937	6.8	1.3
India Property Fund	4,354,162	981,301	2,339,421	-3.9	0.8
Gainesville Property	5,432,950	1,818,400	570,711	-8.1	0.4
Morgan Stanley	40,000,000	50,104,031	-	8.6	1.3
AEW Partners Fund VIII	5,256,838	3,941,449	1,017,778	-8.6	0.9
GreenOak US III	2,190,509	1,648,988	-	-28.8	0.8
<b>Total Timber Investments</b>					
BTG Pactual 1	8,796,365	1,194,512	14,412,803	3.5	1.8
Capitol Timberland Investments	14,266,434	16,326,965	3,918,545	3.5	1.4
Domain Environmental Investments II	7,540,342	3,417,253	3,456,648	-1.4	0.9



**Summary of Partnerships  
Other Alternative Investments**

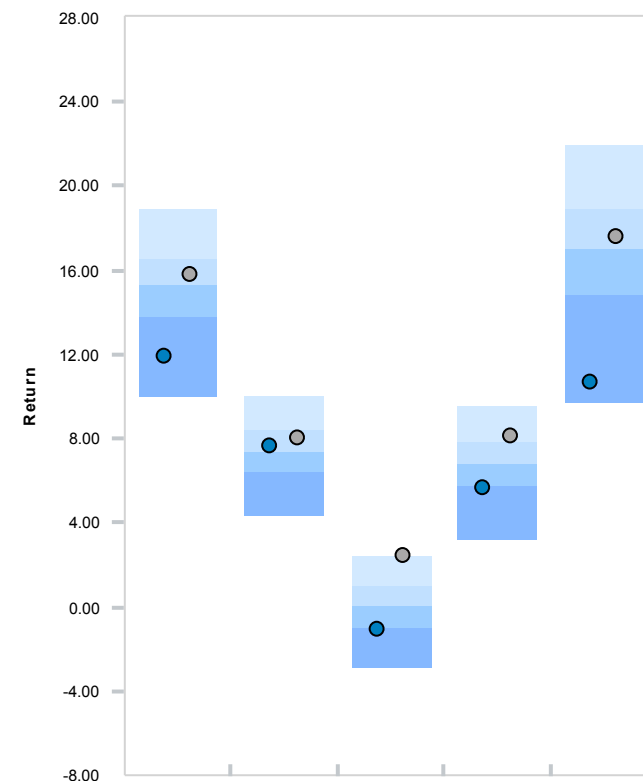
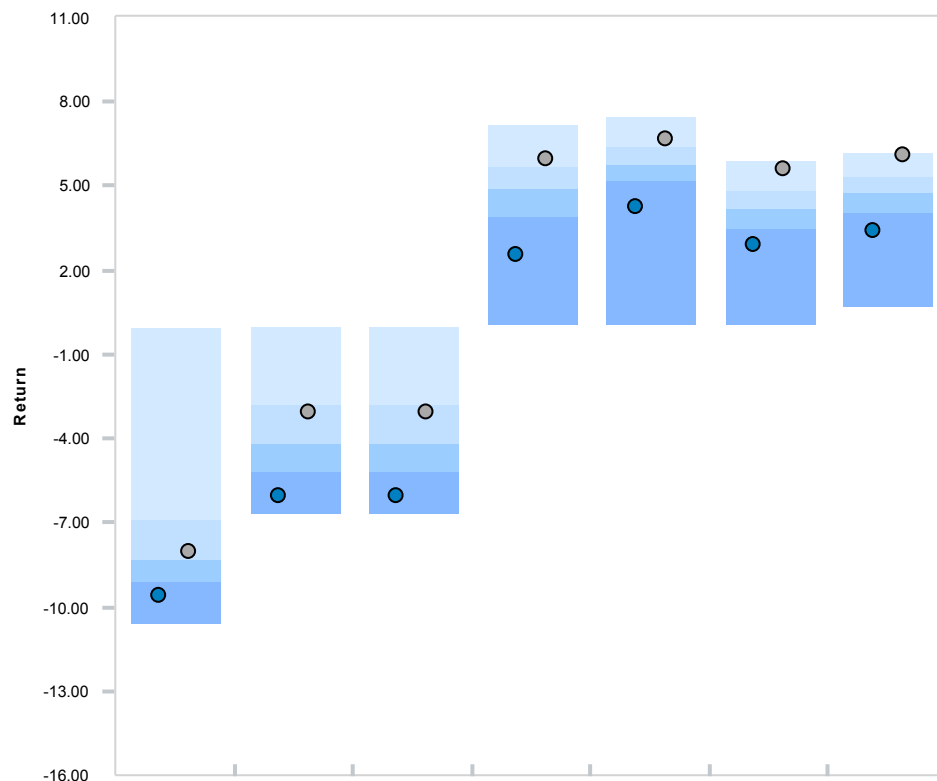
As of December 31, 2018

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
<b>Total Other Equity</b>					
Huff Energy Fund	11,095,509	9,063,469	1,786,358	-0.3	1.0
Excelsior Investors, Ltd.	1,018,466	654,928	146,555	-6.0	0.8
Franklin Park Private Equity	5,579,820	5,396,775	18,581	-10.2	1.0
Sail Venture Fund I	5,000,000	1	343,503	-65.4	0.1
Sail Venture Fund II	5,366,749	1	688,247	-89.2	0.1
Sail Pre-Exit Acceleration Fund	4,947,894	1	-	-92.7	0.0
<b>Total Other Fixed Income</b>					
Capital Point Partners	12,058,210	3,832,950	8,004,090	-0.4	1.0
Franchise Equity Capital Partners II	14,663,847	266,058	14,765,362	0.7	1.0
LBC Credit Partners III	18,837,140	7,499,241	15,630,346	9.8	1.2
LBC Credit Partners IV	12,000,000	11,154,213	2,233,554	10.8	1.1
Providence Debt Fund III	10,017,001	8,876,247	4,223,368	9.2	1.3





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	-9.60 (86)	-6.04 (91)	-6.04 (91)	2.53 (90)	4.22 (89)	2.87 (89)	3.42 (88)
● Total Fund Policy	-8.03 (43)	-3.05 (29)	-3.05 (29)	5.94 (19)	6.64 (19)	5.57 (7)	6.07 (6)
Median	-8.30	-4.24	-4.24	4.90	5.72	4.20	4.74

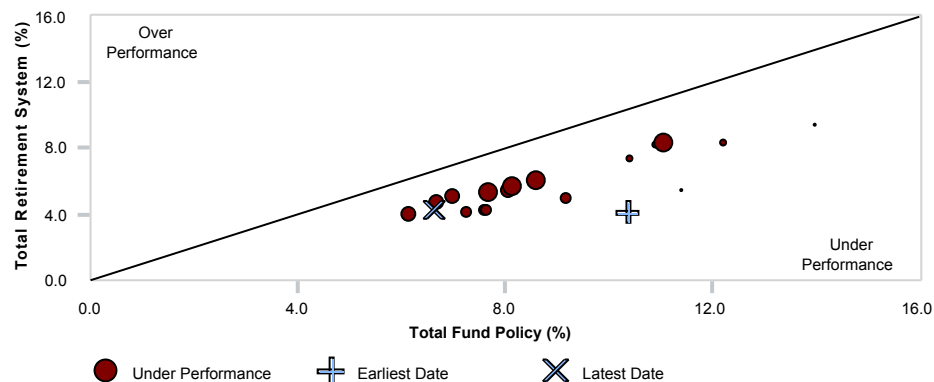
	2017	2016	2015	2014	2013
● Total Retirement System	11.89 (91)	7.67 (43)	-1.05 (77)	5.61 (78)	10.66 (94)
● Total Fund Policy	15.77 (41)	8.04 (35)	2.43 (5)	8.08 (21)	17.56 (43)
Median	15.35	7.36	0.03	6.82	17.04

Comparative Performance

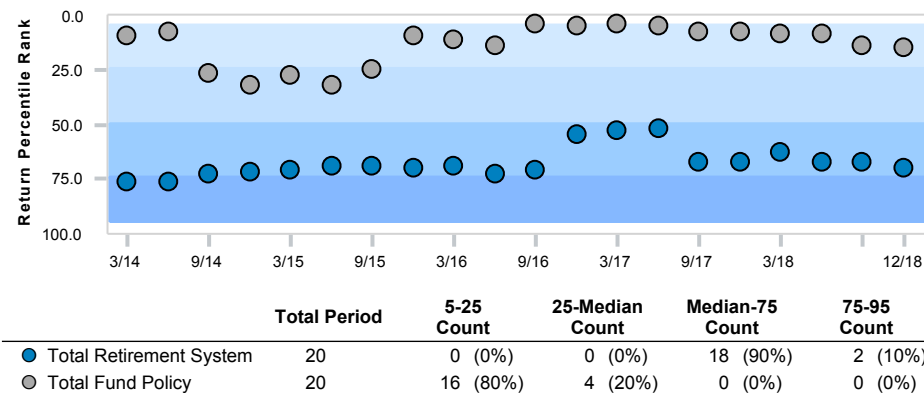
	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017
Total Retirement System	2.80 (63)	1.15 (65)	-0.04 (35)	3.13 (85)	2.86 (87)	2.13 (89)
Total Fund Policy	3.64 (26)	1.90 (27)	-0.18 (43)	4.16 (21)	3.58 (39)	2.89 (53)
All Public Plans-Total Fund Median	3.09	1.43	-0.27	3.71	3.43	2.93



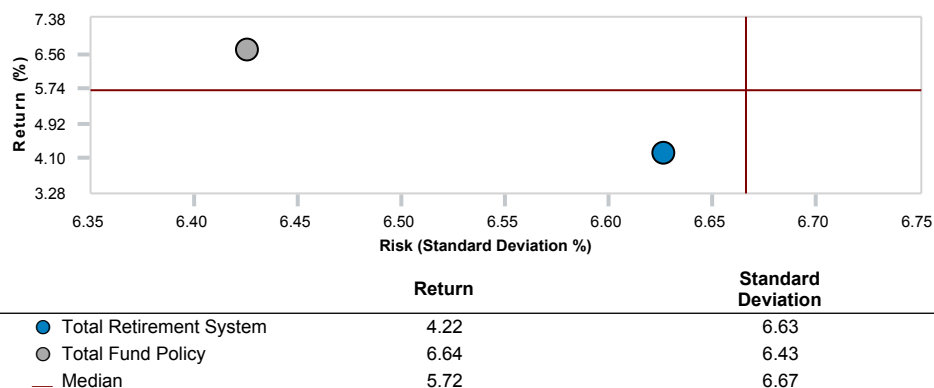
### 3 Yr Rolling Under/Over Performance - 5 Years



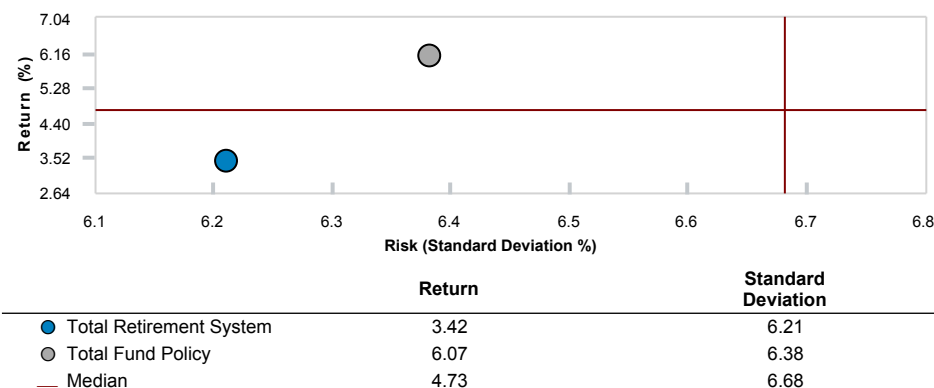
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



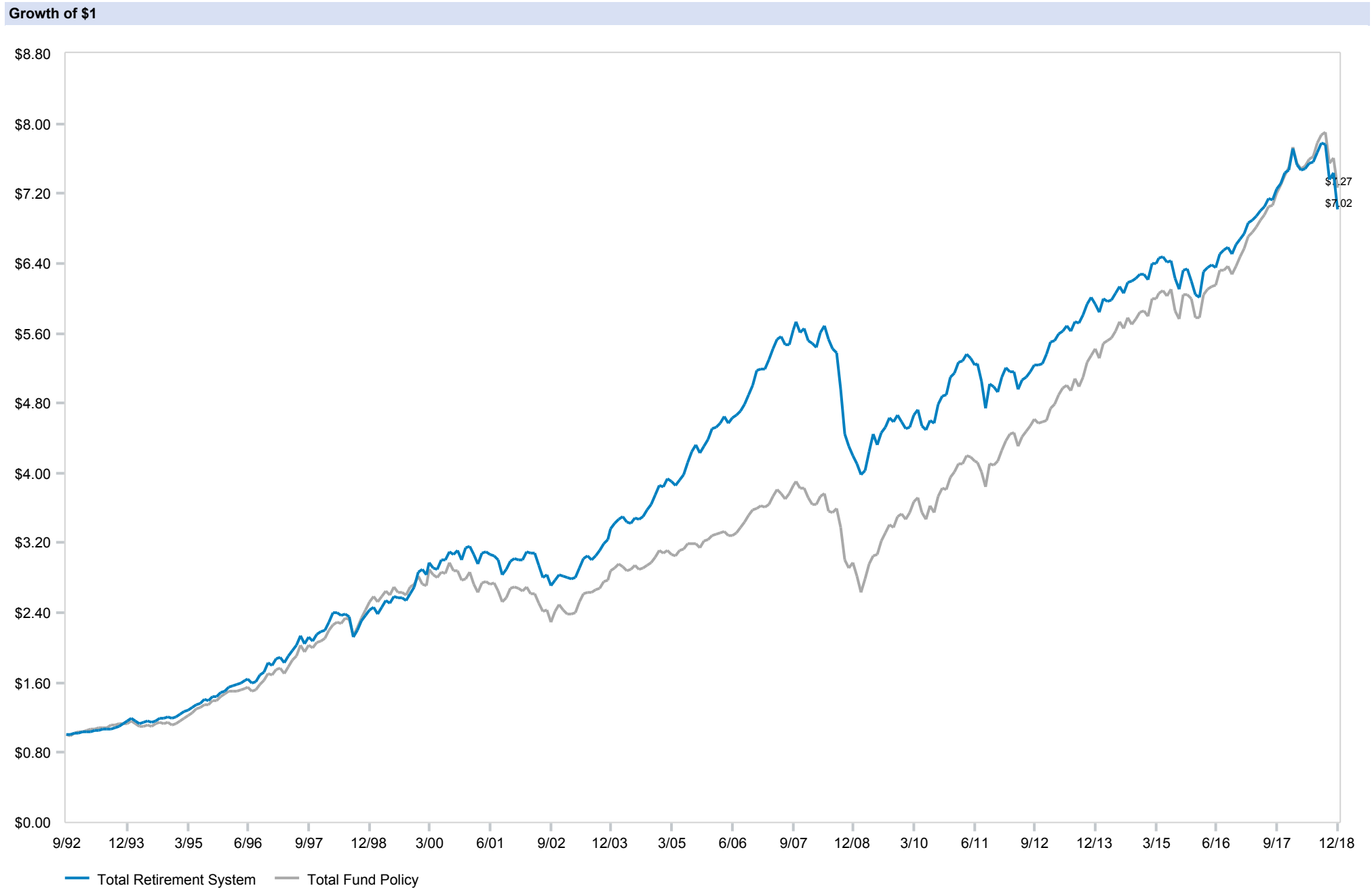
### Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.32	83.88	105.09	-2.34	-1.74	0.50	1.01	4.94
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.88	1.00	4.54

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.66	79.17	100.87	-2.16	-1.54	0.47	0.94	4.41
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.86	1.00	4.18

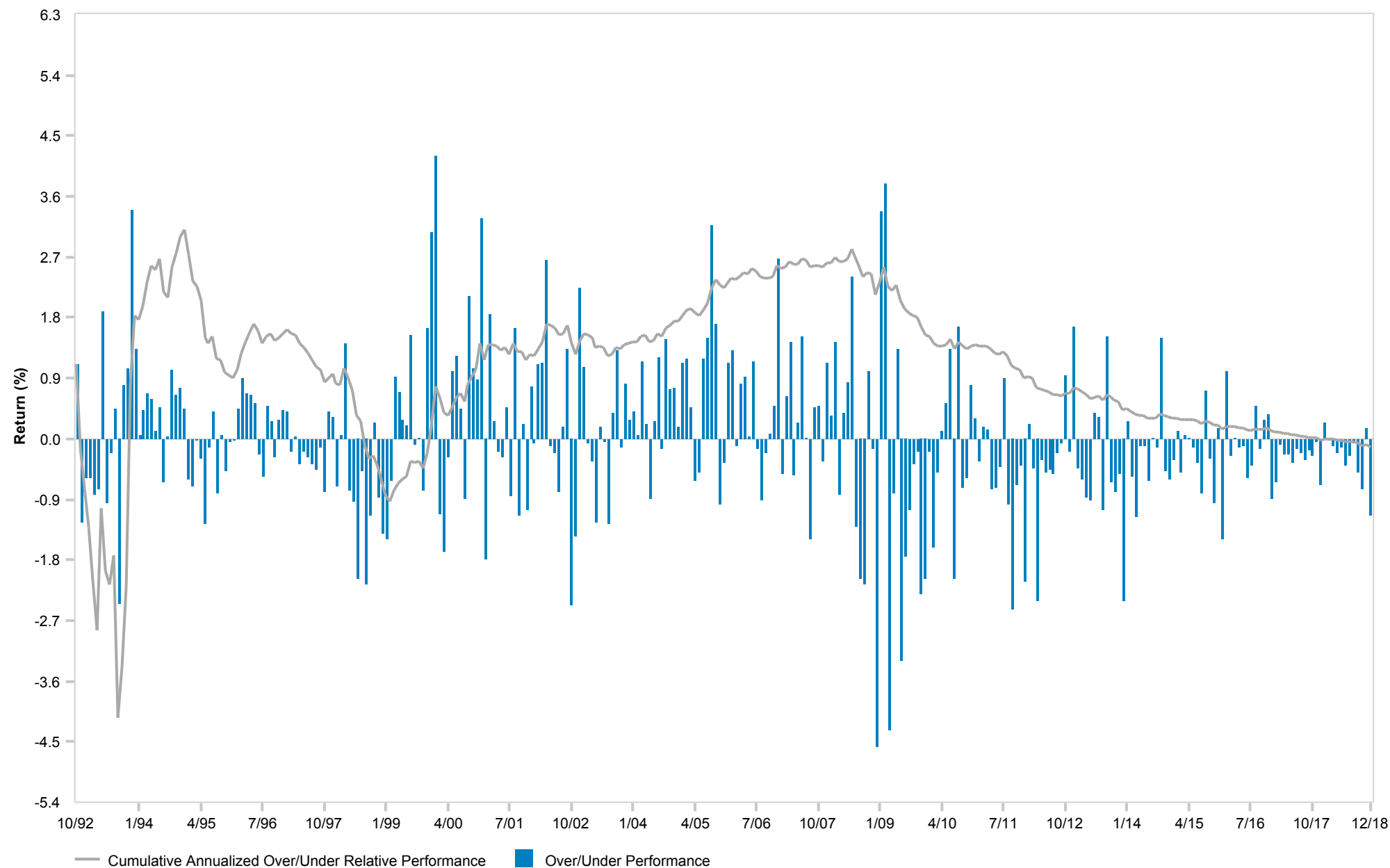




Calculation based on monthly periodicity.



## Relative Performance



Calculation based on monthly periodicity.



**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 12/31/2018

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
<b>Total Retirement System</b>			
<b>Total Equity</b>			
<b>Total Domestic Equity</b>			
NT Collective Russell 3000 Fund	12/31/2018	Monthly	Custodian
Baird Mid Cap Growth	12/31/2018	Monthly	Custodian
Seizert Mid Cap Value	12/31/2018	Monthly	Custodian
Kennedy Small Cap Value	12/31/2018	Monthly	Custodian
<b>Total International Equity</b>			
Thompson Siegel & Walmsley	12/31/2018	Monthly	Custodian
Driehaus International Small Cap Growth	12/31/2018	Monthly	Custodian
LMCG Emerging Markets	12/31/2018	Monthly	Custodian
<b>Total Other Equity</b>			
Huff Energy Fund	12/31/2017	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.	5/31/2018	Monthly	Manager
Franklin Park	9/30/2018	Quarterly	Manager
<b>Total Fixed Income</b>			
<b>Total Fixed Income Funds</b>			
Orleans Capital	12/31/2018	Monthly	Custodian
Templeton Global Multisector Plus	12/31/2018	Monthly	Custodian

**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 12/31/2018

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
<b>Total Other Fixed Income Funds</b>			
Capital Point Partners	9/30/2018	Quarterly	Manager
Franchise Equity Capital Partners II	9/30/2018	Quarterly	Manager
LBC Credit Partners III	9/30/2018	Quarterly	Manager
LBC Credit Partners IV	9/30/2018	Quarterly	Manager
Providence Debt Fund III	9/30/2018	Quarterly	Manager
<b>Total Alternatives</b>			
<b>Total Real Estate (Composite)(6091100)</b>			
<b>Rockspring Capital Land Funds (I - VI)</b>	<b>12/31/2018</b>	<b>Quarterly</b>	<b>Manager</b>
Rockspring Capital Land Fund I	12/31/2018	Quarterly	Manager
Rockspring Capital Land Fund II	12/31/2018	Quarterly	Manager
Rockspring Capital Land Fund III	12/31/2018	Quarterly	Manager
Rockspring Capital Land Fund IV	12/31/2018	Quarterly	Manager
Rockspring Capital Land Fund V	12/31/2018	Quarterly	Manager
Rockspring Capital Land Fund VI	12/31/2018	Quarterly	Manager
<b>Ares Advisors (V &amp; VI)</b>	<b>12/31/2018</b>	<b>Quarterly</b>	<b>Manager</b>
Ares Value Enhancement Fund V	12/31/2018	Quarterly	Manager
Ares Value Enhancement Fund VI	12/31/2018	Quarterly	Manager
INVESCO Real Estate Fund II	12/31/2018	Quarterly	Manager
Edison Investments	12/31/2018	Quarterly	Manager
India Property Fund	9/30/2018	Quarterly	Manager
Gainesville Property	12/31/2017	Quarterly	Manager

**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 12/31/2018

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Morgan Stanley	12/31/2018	Quarterly	Manager
AEW Parters VIII	9/30/2018	Quarterly	Manager
GreenOak US III	9/30/2018	Quarterly	Manager
<b>Total Timber Funds</b>			
BTG Pactual 1	9/30/2018	Quarterly	Manager
Capitol Timberland Investments	12/31/2018	Quarterly	Manager
Domain Environmental	9/30/2018	Quarterly	Manager
<b>Total Multi Asset Funds</b>			
Double Eagle Capital Ace Fund, Ltd.	12/31/2018	Monthly	Manager
BlackRock Multi Asset	12/31/2018	Monthly	Manager
Cash Account	12/31/2018	Monthly	Custodian
PE Cash Account	12/31/2018	Monthly	Custodian
Retiree Death Benefit Account	12/31/2018	Monthly	Custodian
APRS Building			

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Total Domestic Equity</b>	<b>0.27</b>	<b>331,888,664</b>	<b>897,975</b>	
NT Collective Russell 3000 Index	0.02	203,581,085	40,716	0.02 % of Assets
Baird Mid Cap Growth	0.70	49,155,025	344,085	0.70 % of First \$50 M 0.60 % Thereafter
Seizert Mid Cap Val (Perf Fee 150-300 .60% +300 .90%)	0.35	42,823,370	149,882	0.35 % of Assets
Kennedy Small Cap Value	1.00	36,329,184	363,292	1.00 % of Assets
<b>Total International Equity</b>	<b>0.71</b>	<b>100,707,860</b>	<b>712,945</b>	
Thompson Siegel & Walmsley	0.65	70,752,231	459,890	0.65 % of Assets
Driehaus International Small Cap Growth	1.00	11,355,213	113,552	1.00 % of Assets
LMCG Emerging Markets Fund	0.75	18,600,416	139,503	0.75 % of Assets
<b>Total Other Equity</b>	<b>1.15</b>	<b>15,115,175</b>	<b>173,492</b>	
Huff Energy Fund	1.65	9,063,469	150,000	
Sail Venture Fund I	0.00	1	-	
Sail Venture Fund II	0.00	1	-	
Sail Pre-Exit Acceleration Fund	0.00	1	-	
Excelsior Investors, Ltd.	1.53	654,928	10,000	
*Franklin Park Private Equity	0.25	5,396,775	13,492	0.25 % of Assets
*In addition to the 25 bps management fee, a 1% commitment fee for the first year of that commitment and can potentially earn an incentive fee of 5% after APRS receives an 8% IRR preferred return on its investment.				
<b>Total Fixed Income</b>	<b>0.55</b>	<b>113,527,566</b>	<b>627,789</b>	
Orleans Capital	0.15	44,093,031	66,140	0.15 % of Assets
Templeton Global Multisector Plus Trust	0.62	37,805,826	234,396	0.62 % of First \$50 M 0.51 % of Next \$50 M 0.45 % Thereafter
<b>Total Other Fixed Income</b>	<b>1.03</b>	<b>31,628,709</b>	<b>327,253</b>	
Capital Point Partners	0.00	3,832,950	2	
Franchise Equity Capital Partners II	2.00	266,058	5,321	
LBC Credit Partners III	1.25	7,499,241	93,741	
LBC Credit Partners IV	1.25	11,154,213	139,428	
Providence Debt Fund III	1.00	8,876,247	88,762	





	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Total Real Estate</b>	<b>0.97</b>	<b>70,250,526</b>	<b>683,142</b>	
Rockspring Capital Land Fund I	1.25	477,809	5,973	1.25 % of Assets
Rockspring Capital Land Fund II	1.25	2,808,727	35,109	1.25 % of Assets
Rockspring Capital Land Fund III	1.25	1,065,602	13,320	1.25 % of Assets
Rockspring Capital Land Fund V	1.25	3,139,057	39,238	1.25 % of Assets
Rockspring Capital Land Fund VI	1.25	1,317,979	16,475	1.25 % of Assets
 ARES Value Enhancement Fund V	 0.85	 73,997	 629	 0.85 % of Assets
ARES Value Enhancement Fund VI	0.85	688,584	5,853	0.85 % of Assets
INVESCO Real Estate Fund II	1.50	26,898	403	1.50 % of Assets
Edison Investments	1.00	2,157,705	21,577	1.00 % of Assets
India Property Fund	2.00	981,301	19,626	2.00 % of Assets
Gainesville Property	0.00	1,818,400	-	0.00 % of Assets
Morgan Stanley	0.90	50,104,031	450,936	0.90 % of Assets
AEW Partners Fund VIII	1.25	3,941,449	49,268	1.25 % of Assets
GreenOak US III	1.50	1,648,988	24,735	1.50 % of Assets
<b>Total Timber Funds</b>	<b>1.04</b>	<b>20,938,730</b>	<b>217,930</b>	
BTG Pactual 1	1.00	1,194,512	11,945	1.00 % of Assets
Capitol Timberland Investments	1.00	16,326,965	163,270	1.00 % of Assets
Domain Environmental Investments II	1.25	3,417,253	42,716	1.25 % of Assets
<b>Total Multi Asset Funds</b>	<b>0.65</b>	<b>62,087,711</b>	<b>404,649</b>	
Double Eagle Capital Ace Fund, Ltd. (1% Mgt Fee & 10% of profit after a 7% retn)	1.00	11,802,108	118,021	1.00 % of Assets
BlackRock Multi Asset Fund	0.57	50,285,603	286,628	0.57 % of Assets
 Cash Account	 0.00	 110,402	 -	 0.00 % of Assets
Cash Account PE		-	-	0.00 % of Assets
Retiree Death Benefit Account	0.00	1,399,563	-	0.00 % of Assets
APRS Building	0.00	1,438,036	-	0.00 % of Assets
<b>Total Retirement System</b>	<b>0.52</b>	<b>717,464,234</b>	<b>3,717,923</b>	



**Austin Police Retirement System**  
**Historical Hybrid Compositions**  
As of December 31, 2018

Total Fund Policy		Total Equity Policy		Total Fixed Income Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
<b>Jan-1976</b>		<b>Jan-1979</b>		<b>Dec-1993</b>	
S&P 500 Index	60.00	Russell 3000 Index	67.00	Blmbg. Barc. U.S. Aggregate Index	100.00
Blmbg. Barc. U.S. Aggregate Index	40.00	MSCI World ex U.S.	33.00		
<b>Jan-2014</b>		<b>Jan-2017</b>		<b>Jan-1999</b>	
Russell 3000 Index	30.00	Russell 3000 Index	75.00	Blmbg. Barc. 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
Blmbg. Barc. 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				
FTSE 3 Month T-Bill	2.50				
<b>Jan-2017</b>					
Russell 3000 Index	45.00				
MSCI World ex U.S.	15.00				
Blmbg. Barc. U.S. Aggregate Index	5.00				
Blmbg. Barc. Global Multiverse	5.00				
NCREIF Property Index	15.00				
NCREIF Timberland Index (Monthly)	2.50				
HFRI Fund of Funds Composite Index	5.00				
Credit Suisse Leveraged Loan Index	5.00				
Cambridge Associates Private Equity Index	2.50				
<b>Jan-2018</b>					
Russell 3000 Index	42.50				
MSCI World ex U.S.	15.00				
Blmbg. Barc. U.S. Aggregate Index	10.00				
Blmbg. Barc. Global Multiverse	5.00				
NCREIF Property Index	15.00				
HFRI Fund of Funds Composite Index	5.00				
Credit Suisse Leveraged Loan Index	5.00				
Cambridge Associates Private Equity Index	2.50				
Total Hedge Fund Policy		Total Private Equity Policy		Wellington Energy Hybrid	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
<b>Jan-1990</b>		<b>May-2013</b>		<b>Jan-1999</b>	
HFRI Fund of Funds Composite Index	100.00	Russell 3000 Index	100.00	Russell 3000 Energy SP	100.00
		<b>Jan-2017</b>		<b>Oct-2015</b>	
		Credit Suisse Leveraged Loan Index	67.00	S&P 500 Energy	100.00
		Cambridge Associates Private Equity Index	33.00		
Total Timber Policy		Total Real Estate Policy			
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
<b>Apr-1987</b>		<b>Jan-1978</b>			
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 AndCo Consulting. 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.
- Capital Point Partners market value sourced from the March 2015 Capital Point Partners Quarterly Portfolio Review.

<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- 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.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- 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.
<b>Distributed to Paid In (DPI)</b>	- 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.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- 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.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- 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.
<b>Public Market Equivalent (PME)</b>	- 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.
<b>R-Squared</b>	- 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.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- 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.
<b>Standard Deviation</b>	- 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.
<b>Total Value to Paid In (TVPI)</b>	- 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
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- 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.
<b>Up Market Capture</b>	- 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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