Investment Performance Review Period Ending September 30, 2017

# **Austin Police**

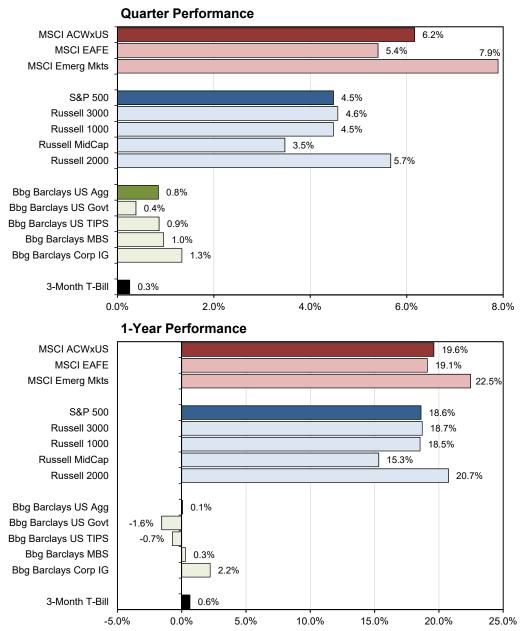


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**3rd Quarter 2017 Market Environment** 



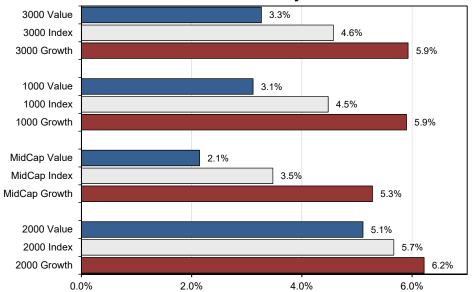
- Returns were positive for major equity and fixed income indices for the 3<sup>rd</sup> . guarter of 2017. Broad domestic and international equity market performance was largely fueled by continued improvement in corporate earnings and macroeconomic data worldwide. Domestic equities trailed international indices during the guarter. While U.S. economic fundamentals and corporate earnings growth were viewed positively, market participants faced headwinds from increasing tension between the U.S. and North Korea, several major weather events and ongoing political concerns surrounding the pace of implementation of Trump administration expansive fiscal policy reforms. Despite these concerns, investor optimism remained high and many major domestic equity indices hit record levels during the quarter. Small cap equities outperformed large cap stocks for the guarter with the Russell 2000 Index returning 5.7% versus a 4.5% return for the S&P 500 Index. Small cap companies have also been the best performers domestically over the last 12 months, returning over 20%. While small cap equities lead the charge, all U.S. core market capitalization indices returned over 15% over the last year.
- International equity market benchmarks continued to outpace U.S. markets through the 3<sup>rd</sup> quarter of 2017 as both developed and emerging market international equities saw benefits from continued strength in global macroeconomic data, a weakening U.S. Dollar (USD) and ongoing accommodative global central bank policies. The improving economic fundamentals worldwide have led many international central banks to begin telegraphing an eventual reduction in stimulus going forward, with both the European Central Bank and the Bank of England expected to announce plans to reduce stimulus before year end. Emerging markets, which benefitted from a weakening USD and rising commodity prices during the period, continued their trend of outperformance relative to developed markets. The MSCI Emerging Market Index returned 7.9% for the guarter and a solid 22.5% for the 1-year period. While weaker by comparison, the developed market MSCI EAFE Index also posted robust performance, returning 5.4% for the guarter and 19.1% for the year.
- The yield curve continued to flatten through the 3<sup>rd</sup> quarter of 2017 as interest rates rose slightly from the prior quarter, but with greater magnitude in short-term maturities. The Federal Reserve announced that its plan to systematically shrink the size of its balance sheet would begin in October. Broad fixed income indices posted positive results with the bellwether Bloomberg Barclays U.S. Aggregate Index returning 0.8% for the quarter. Benefitting from tightening credit spreads, corporate credit has been the best performer among the investment grade sectors with the Bloomberg Barclays U.S. Corporate Index returning 1.3% and 2.2% over the quarter and 1-year period respectively.

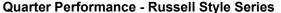


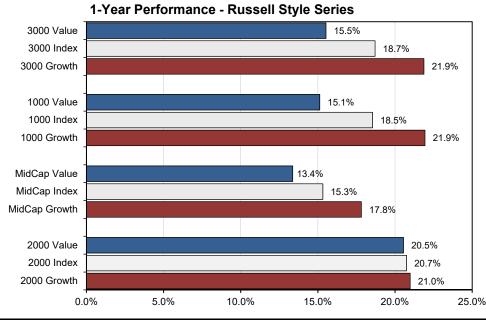


- Despite political gridlock in Washington, increased aggression between the U.S. and North Korea and several major weather events, including three hurricanes that caused catastrophic damage to Texas, Florida and Puerto Rico, domestic equity prices pushed higher during the 3<sup>rd</sup> quarter. U.S. equity index returns were positive across the style and capitalization spectrum for the 3<sup>rd</sup> quarter and trailing 1-year period. Encouraging economic data continued to facilitate gains in U.S. equity markets as positive trends in GDP, consumer and business sentiment, corporate earnings and employment continued throughout the period. Over the past twelve months, there has only been one instance of a negative quarterly return being posted by the Russell market cap and style indices, which was a -0.13% return by the Russell 2000 Value Index during 1Q 2017.
- Small cap stocks were the best performing capitalization segment across the spectrum for the 3<sup>rd</sup> quarter, bucking a year-to-date trend of large cap outperformance. The small cap Russell 2000 Index posted a 5.7% return for the period. While small cap stocks were the best performers, large and mid cap indices also posted solid returns. Interestingly, the returns for the large cap Russell 1000 Index outperformed the Russell MidCap Index, which is somewhat unusual during a period of small cap outperformance. Small cap stocks also outperform larger companies over the 1-year period, with the Russell 2000 returning 20.7% versus a return of 18.5% for the Russell 1000.
- The 3<sup>rd</sup> quarter built on year-to-date trends as growth style indices outperformed their value counterparts. Growth indices benefitted from significant overweight's to the information technology sector, which was the best performing sector during the 3<sup>rd</sup> quarter. Growth benchmarks also benefitted from their exposures to more cyclical names within the information technology, health care and industrials sectors. The Russell Midcap Value Index's return of 2.1% was the worst performing style index for the period. Over the 1-year period, growth indices outperform value indices across the market cap spectrum with the Russell 1000 Growth Index returning an impressive 21.9%. However, all market cap and style indices have returns in the double digits with most returning greater than 15% for the year.
- Domestic equity valuations appear stretched relative to historical levels based on Forward Price/Earnings ratios (P/E), with even the most reasonably valued indices trading well above their historical P/E valuations. Index P/E valuations range from 115% to 138% of their respective 15-year P/E averages. The mid cap core and small cap value indices appear the most inexpensive and the small cap growth and small cap core segments look the most overvalued.



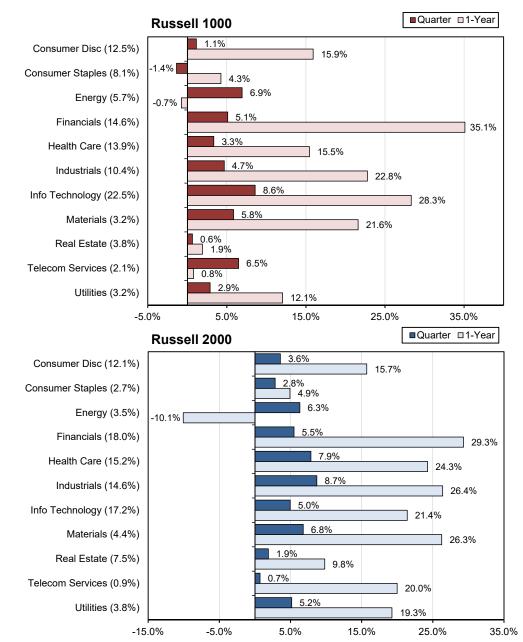








- Sector performance within the Russell 1000 Index was largely positive for the 3<sup>rd</sup> guarter. Six of eleven economic sectors outpaced the Russell 1000 Index return, and ten of eleven sectors posted gains during the period. Technology stocks were the best performers, returning 8.6% for the guarter on the back of another strong earnings season. Energy and materials stocks also performed well relative to other sectors, rising 6.9% and 5.8% respectively, benefitting from increased commodity prices. Brent crude prices rose over 20% through the guarter as U.S. inventories fell faster than expected, there were concerns of potential supply disruptions in U.S. oil refining operations in Texas due to flooding caused by Hurricane Harvey, OPEC remained committed to limiting production overseas and the USD weakened. Industrial metal prices also rose on positive economic news out of China. Other cyclical sectors such as industrials and financials also posted strong results. Telecommunication services returned an notable 6.5% due to strong performance of the sector's largest weighted companies, Verizon and AT&T. Over the trailing 1-year period, financials and technology were the best performing sectors in the Russell 1000, returning 35.1% and 28.3% respectively. Ten of eleven large cap economic sectors posted positive returns for the year with seven posting double digit returns. Energy was the only large cap sector to post a negative return over the last year, returning -0.7%.
- Small cap sector results generally outperformed their large capitalization counterparts for the quarter. Four of eleven economic sectors outpaced the Russell 2000 Index return for the quarter, and all eleven sectors posted positive results for the period. Most of the sector trends observable in large cap index sector performance also impacted small cap sectors. However, small cap telecom services underperformed large cap telecom stocks meaningfully. Over the 1-year period, six of eleven sectors have returns greater than 20% and eight have posted double digit returns. Energy was the only Russell 2000 sector to post a negative return over last year, falling 10.1%.
- Using S&P 500 sector valuations as a proxy for the market, Forward P/E ratios for eight of the GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the energy, materials and utilities sectors appear the most extended. In contrast the technology, health care and telecommunications sectors were trading at a discount to their longterm average P/E ratios.





The Market Environment Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000

As of September 30, 2017
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Top 10 Weighted Stocks						
Russell 1000	Weight	Weight 1-Qtr Return		Sector		
Apple Inc	3.35%	7.4%	38.8%	Information Technology		
Microsoft Corp	2.33%	8.6%	32.4%	Information Technology		
Facebook Inc A	1.66%	13.2%	33.2%	Information Technology		
Amazon.com Inc	1.59%	-0.7%	14.8%	Consumer Discretionary		
Berkshire Hathaway Inc B	1.47%	8.2%	26.9%	Financials		
Johnson & Johnson	1.46%	-1.1%	13.0%	Health Care		
Exxon Mobil Corp	1.45%	2.5%	-2.5%	Energy		
JPMorgan Chase & Co	1.41%	5.1%	46.9%	Financials		
Alphabet Inc C	1.21%	5.5%	23.4%	Information Technology		
Alphabet Inc A	1.21%	4.7%	21.1%	Information Technology		

Top 10 Performing Stocks (by Quarter)					
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector	
Juno Therapeutics Inc	0.01%	50.1%	49.5%	Health Care	
NRG Energy Inc	0.03%	48.8%	130.0%	Utilities	
Alnylam Pharmaceuticals Inc	0.04%	47.3%	73.3%	Health Care	
Alcoa Corp	0.04%	42.8%	N/A	Materials	
Take-Two Interactive Software Inc	0.04%	39.3%	126.8%	Information Technology	
Orbital ATK Inc	0.03%	35.8%	77.0%	Industrials	
International Game Technology PLC	0.01%	35.5%	4.5%	Consumer Discretionary	
ACADIA Pharmaceuticals Inc	0.02%	35.1%	18.4%	Health Care	
Spirit AeroSystems Holdings Inc	0.04%	34.3%	75.6%	Industrials	
Gap Inc	0.03%	34.3%	38.3%	Consumer Discretionary	

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Bottom 10 Performing Stocks (by Quarter)							
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector			
Intercept Pharmaceuticals Inc	0.00%	-52.1%	-64.7%	Health Care			
Uniti Group Inc	0.01%	-39.3%	-47.9%	Real Estate			
Tahoe Resources Inc	0.01%	-38.8%	-58.1%	Materials			
Spirit Airlines Inc	0.01%	-35.3%	-21.4%	Industrials			
Rite Aid Corp	0.01%	-33.6%	-74.5%	Consumer Staples			
DexCom Inc	0.02%	-33.1%	-44.2%	Health Care			
Dick's Sporting Goods Inc	0.01%	-31.8%	-51.6%	Consumer Discretionary			
Mednax Inc	0.02%	-28.6%	-34.9%	Health Care			
Envision Healthcare Corp	0.02%	-28.3%	-33.0%	Health Care			
Foot Locker Inc	0.02%	-28.1%	-47.0%	Consumer Discretionary			

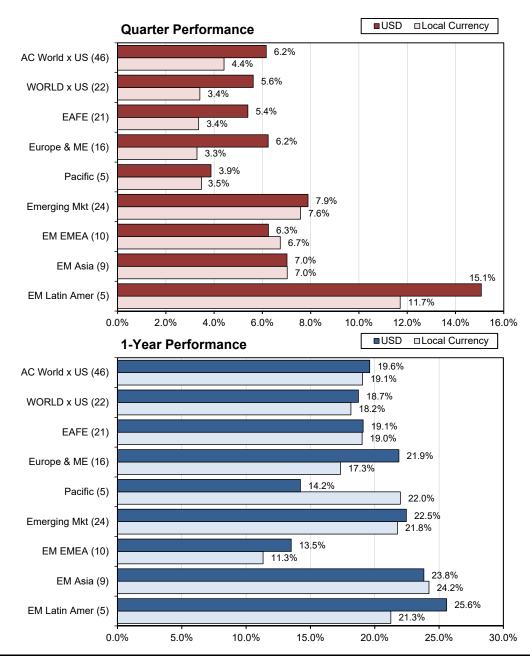
Top 10 Weighted Stocks					
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector	
Kite Pharma Inc	0.43%	73.4%	221.9%	Health Care	
bluebird bio Inc	0.31%	30.7%	102.6%	Health Care	
Exact Sciences Corp	0.27%	33.2%	153.7%	Health Care	
Knight-Swift Transportation Hldgs A	0.25%	12.3%	45.8%	Industrials	
MKS Instruments Inc	0.25%	40.6%	91.8%	Information Technology	
Catalent Inc	0.24%	13.7%	54.5%	Health Care	
Aspen Technology Inc	0.23%	13.7%	34.2%	Information Technology	
Starwood Waypoint Homes	0.23%	6.7%	30.2%	Real Estate	
MGIC Investment Corp	0.23%	11.9%	56.6%	Financials	
Curtiss-Wright Corp	0.23%	13.9%	15.4%	Industrials	

Top 10 Performing Stocks (by Quarter)						
Russell 2000 We		1-Qtr Return	1-Year Return	Sector		
Veritone Inc	0.01%	288.1%	N/A	Information Technology		
MyoKardia Inc	0.04%	227.1%	162.2%	Health Care		
Madrigal Pharmaceuticals Inc	0.01%	176.6%	254.7%	Health Care		
Abeona Therapeutics Inc	0.02%	166.4%	184.2%	Health Care		
Zogenix Inc	0.04%	141.7%	206.6%	Health Care		
Voyager Therapeutics Inc	0.01%	129.8%	71.4%	Health Care		
Dynavax Technologies Corp	0.06%	122.8%	105.0%	Health Care		
Hertz Global Holdings Inc	0.06%	94.4%	-44.3%	Industrials		
Intrepid Potash Inc	0.02%	92.9%	285.8%	Materials		
Spectrum Pharmaceuticals Inc	0.05%	88.9%	201.3%	Health Care		

Bottom 10 Performing Stocks (by Quarter)						
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
Versartis Inc	0.00%	-86.0%	-80.0%	Health Care		
Otonomy Inc	0.00%	-82.8%	-82.1%	Health Care		
Genocea Biosciences Inc	0.00%	-72.0%	-71.5%	Health Care		
Babcock & Wilcox Enterprises Inc	0.01%	-71.7%	-79.8%	Industrials		
Ominto Inc	0.00%	-70.5%	38.0%	Information Technology		
Axovant Sciences Ltd	0.01%	-70.3%	-50.9%	Health Care		
RAIT Financial Trust	0.00%	-64.9%	-75.1%	Real Estate		
Radisys Corp	0.00%	-63.6%	-74.4%	Information Technology		
CPI Card Group Inc	0.00%	-58.6%	-79.7%	Information Technology		
Tintri Inc	0.00%	-56.8%	N/A	Information Technology		



- International equity returns for the 3<sup>rd</sup> quarter were largely driven by ongoing improvement in the global economy and continued weakness in the USD. These trends, in tandem with rising commodity prices, helped emerging markets continue their 2017 outperformance relative to developed market equities. While USD strength remains on the high side of its 10-year range, the USD continued its year-to-date decline against most major currencies through the period. This provided additional tailwinds to international index returns denominated in USD. The recent weakness in USD is also visible in the 1-year performance for broad international indices, with most indices showing stronger returns in terms of USD. However, Asian-Pacific markets stand out as an exception.
- Returns for broad developed market international indices were broadly positive . for the 3rd guarter in both USD and local currency terms with the MSCI EAFE Index returning 5.4% and 3.4% respectively. Eurozone, U.K. and Japanese markets advanced on the back of positive macroeconomic data and improvement in corporate earnings. As economic data has continued to stabilize, many developed market central banks have started to take a less accommodative stance toward monetary policy and economic stimulus. In Europe, European Central Bank (ECB) President Mario Draghi acknowledged that the ECB has been discussing plans to begin the wind down of their quantitative easing program. Investors are expecting a formal announcement in October. In the U.K., the Bank of England telegraphed that an interest rate hike was likely before the end of the year, and in Canada, the Bank of Canada raised interest rates twice this guarter. Despite increased tensions with North Korea and the early dissolution of the lower house of parliament by Prime Minister Abe leading to snap elections in October, Japanese equities rose over the quarter. Performance for the past year has been strong on an absolute basis with the MSCI EAFE Index returning 19.1% and 19.0% in USD and local currency terms respectively.
- A supportive global economic environment, increasing commodity prices and a weakening USD led to continued growth in emerging market equity prices. The MSCI Emerging Market Index outperformed developed markets during the 3<sup>rd</sup> quarter, returning 7.9% and 7.6% in USD and local currency terms respectively. Returns in China, Brazil and Russia were particularly strong as China advanced on an improving growth outlook, Brazil on improving political stability and progress on social and economic reform initiatives, and Russia largely on improvement in oil prices. One year returns on the MSCI Emerging Market Index are an impressive 22.5% in USD terms and 21.8% in terms of local currency.





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

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	12.2%	7.4%	20.3%
Consumer Staples	11.2%	0.8%	6.2%
Energy	5.1%	13.4%	22.1%
Financials	21.5%	5.2%	32.5%
Health Care	10.6%	0.7%	7.8%
Industrials	14.4%	6.3%	21.8%
Information Technology	6.3%	8.6%	28.5%
Materials	7.9%	11.0%	27.6%
Real Estate	3.5%	3.2%	5.9%
Telecommunication Services	4.1%	1.7%	4.4%
Utilities	3.4%	4.3%	11.6%
Total	100.0%	5.4%	19.1%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	11.3%	7.0%	19.7%
Consumer Staples	9.6%	1.1%	5.7%
Energy	6.6%	12.7%	17.5%
Financials	23.3%	6.1%	28.8%
Health Care	7.9%	0.8%	7.2%
Industrials	11.8%	5.6%	20.7%
Information Technology	11.2%	10.0%	35.1%
Materials	7.9%	10.7%	25.0%
Real Estate	3.2%	6.1%	10.3%
Telecommunication Services	4.2%	2.4%	5.4%
Utilities	3.1%	4.6%	10.5%
Total	100.0%	6.2%	19.6%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	10.3%	5.0%	16.3%
Consumer Staples	6.5%	2.5%	3.8%
Energy	6.8%	12.9%	21.2%
Financials	23.4%	7.2%	21.7%
Health Care	2.3%	3.3%	2.9%
Industrials	5.4%	1.7%	12.6%
Information Technology	27.6%	11.0%	40.5%
Materials	7.2%	10.1%	28.0%
Real Estate	2.9%	17.9%	29.9%
Telecommunication Services	5.1%	3.3%	6.3%
Utilities	2.6%	6.4%	7.2%
Total	100.0%	7.9%	22.5%

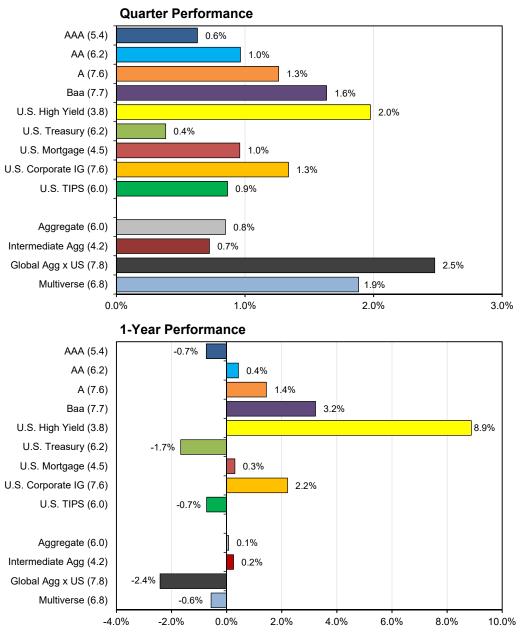
	MSCI-EAFE	MSCI-ACWIxUS	Quarter	1- Year
Country	Weight	Weight	Return	Return
Japan	23.0%	15.9%	4.0%	14.1%
United Kingdom	17.8%	12.3%	5.2%	14.6%
France	10.8%	7.5%	8.4%	30.6%
Germany	9.8%	6.8%	7.7%	26.1%
Switzerland	8.2%	5.7%	2.0%	15.7%
Australia	6.8%	4.7%	3.1%	13.1%
Netherlands	3.7%	2.6%	9.3%	28.4%
Spain	3.5%	2.4%	4.3%	32.0%
Hong Kong	3.5%	2.4%	5.1%	16.3%
Sweden	2.9%	2.0%	5.5%	24.3%
Italy	2.5%	1.7%	13.7%	45.6%
Denmark	1.9%	1.3%	7.7%	20.3%
Singapore	1.3%	0.9%	3.1%	18.7%
Belgium	1.2%	0.8%	9.2%	6.2%
Finland	1.0%	0.7%	3.3%	20.2%
Norway	0.7%	0.5%	19.2%	28.9%
Israel	0.5%	0.3%	-12.7%	-13.0%
Ireland	0.5%	0.3%	6.1%	14.4%
Austria	0.3%	0.2%	12.7%	59.3%
Portugal	0.2%	0.1%	13.2%	22.6%
New Zealand	0.2%	0.1%	-0.1%	-2.0%
Total EAFE Countries	100.0%	69.2%	5.4%	19.1%
Canada		6.7%	7.9%	15.0%
Total Developed Countries		75.9%	5.6%	18.7%
China		7.1%	14.7%	33.0%
Korea		3.6%	2.7%	24.8%
Taiwan		2.8%	0.8%	19.9%
India		2.0%	3.0%	14.2%
Brazil		1.8%	23.0%	29.2%
South Africa		1.5%	3.8%	7.6%
Mexico		0.8%	1.5%	16.2%
Russia		0.8%	17.6%	19.6%
Indonesia		0.6%	-1.1%	5.9%
Malaysia		0.6%	1.8%	6.2%
Thailand		0.5%	10.5%	20.7%
Poland		0.3%	9.3%	51.2%
Chile		0.3%	16.9%	35.6%
Philippines		0.3%	3.0%	2.1%
Turkey		0.3%	0.3%	14.5%
United Arab Emirates		0.2%	4.1%	6.4%
Qatar		0.1%	-6.9%	-14.9%
Colombia		0.1%	6.5%	12.7%
Peru		0.1%	14.1%	32.3%
Greece		0.1%	-12.2%	30.9%
Hungary		0.1%	9.6%	42.8%
Czech Republic		0.0%	10.0%	21.5%
Egypt		0.0%	2.2%	-17.7%
Pakistan		0.0%	-16.5%	-7.1%
Total Emerging Countries		24.1%	7.9%	22.5%
Total ACWIxUS Countries		100.0%	6.2%	19.6%



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

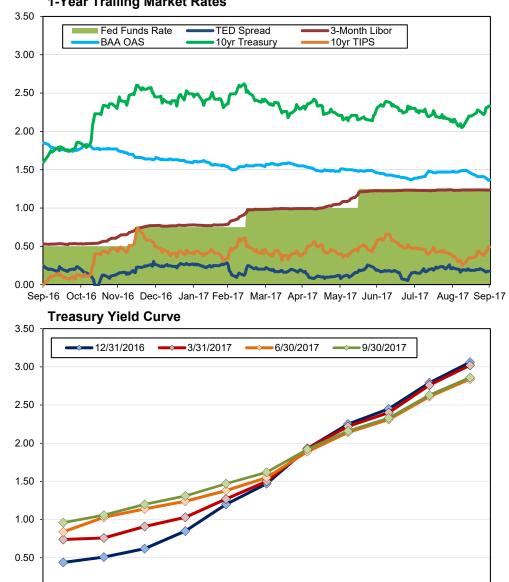
#### The Market Environment Domestic Bond Sector & Broad/Global Bond Market Performance (Duration) As of September 30, 2017

- Broad fixed income benchmarks gained ground during the 3<sup>rd</sup> guarter. The Bloomberg Barclays U.S. Aggregate Index ended the quarter with a 0.8% gain despite modestly rising interest rates. Interest rates fell during the first half of the guarter when investors looked to safe-haven assets as international relations between the U.S. and North Korea began to deteriorate and extreme weather created anxiety in markets. However, rates reversed course in the beginning of September, ending slightly higher than where they began the period. The Federal Open Market Committee (FOMC) voted not to increase short-term interest rates during the third guarter, but market expectations are for one additional increase prior to year end. While inflation remains subdued, the Fed feels the economy is tracking to be healthy enough to warrant continued tightening. This caused a flattening of the yield curve as short-term market yields rose more aggressively than rates on long-term maturities. The Fed also announced that its plan to gradually reduce its balance sheet by slowing the rate of reinvestment of the Treasury and mortgage backed securities (MBS) it holds on its books as the securities mature would begin in October. The amount reinvested each month will fall systematically, reducing the size of the Fed's balance sheet over time. This can be viewed as further tightening of monetary policy. This put additional upward pressure on interest rates as the quarter came to a close. The Bloomberg Barclays U.S. Aggregate Index stayed slightly positive over the 1-year period returning 0.1%, with the various investment grade sectors posting mixed results.
- Lower quality bonds outperformed higher quality issues for both the quarter and 1-year period as contracting credit spreads from improvements in economic fundamentals acted as a tailwind to these issues. During the 3<sup>rd</sup> quarter, credit spreads for high yield debt decreased by 17 bps versus only 8 bps for investment grade (IG) corporate issues. BAA issues more than doubled the return of AAA securities for the second straight quarter, returning 1.6% versus a 0.6% return for AAA debt. High yield debt continues to be the largest beneficiary of the strengthening economy, returning 2.0% for the quarter and 8.9% for the 1-year period.
- A review of sector performance shows that IG credit has continued its 2017 trend of outperformance versus Treasuries and MBS securities. As previously mentioned, corporate issues benefited from tightening credit spreads throughout the period. Treasuries were the worst performer due to their higher duration and expectations for additional tightening of monetary policy. MBS also benefitted from some spread compression through the quarter, but enthusiasm for these securities was dimmed by the Fed's planned balance sheet reduction strategy. Treasury securities posted the worst returns for the quarter, appreciating 0.4%. U.S. IG corporate bonds were the best performing IG sector over the 1-year period, returning 2.2%.





- Global fixed income indices also posted strong results for the guarter. Global benchmarks are impacted by the same local yield and duration factors as domestic benchmarks. While these indices have relatively high durations, the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. This currency effect can either be an offsetting benefit to negative yield and duration factors in a rising rate environment as it has been year-to-date, or it can further exacerbate negative performance as it did in 2016. Led by a weakening USD, global bond indices outperformed domestic issues for the for the guarter. However, hawkish comments from several global central banks muted returns during the final month of the period. Global bonds have had a currency effect tailwind so far in 2017, but global bond returns still trail domestic indices over the 1-year period, primarily due to their relative underperformance in the 4<sup>th</sup> guarter of 2016. The Bloomberg Barclays Aggregate ex U.S. posted a -2.4% return for the period.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) rose dramatically in the 4<sup>th</sup> guarter of 2016, held largely steady during the 1st quarter of 2017 and then gradually fell through most of 2<sup>nd</sup> quarter before spiking at the end of June. As described on the last page, rates then fell through the first half of quarter before rising to the levels where they began the guarter. The yield on the 10-year Treasury has fallen to 2.33% from 2.45% at the start of the year. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional vield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a steady decline in credit spreads throughout 2016 and 2017. This decline is equivalent to an interest rate decrease on corporate bonds, which produces a tailwind for corporate bond index returns. These credit spreads have tightened by about 48 bps over the last 12-months. The green shading at the bottom of the graph illustrates the gradual increase in the Federal Funds Rate due to a less accommodative Fed monetary policy.
- The lower graph provides a snapshot of the U.S. Treasury yield curve at each of the last four calendar guarters. As mentioned, the yield curve continues to flatten as yields on shorter-term maturities have risen, while interest rates on the long end of the curve (5-years and beyond) have generally declined. Interest rate movement during the guarter was relatively muted, especially at the long end of the curve. However, the significant upward shift in short-term interest rates and decline of long-term interest rates since the end of 2016 is clearly visible.



#### **1-Year Trailing Market Rates**

0.00

1 mo

3 mo

6 mo

1 yr

2 yr

3 yr

5 yr

7 yr



30 yr

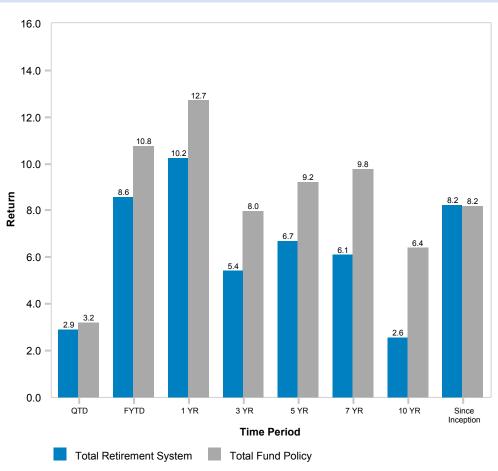
10 yr

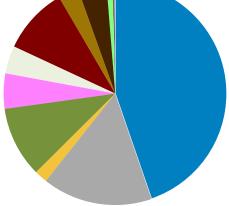
20 yr

#### Asset Allocation and Performance At-A-Glance **Total Fund** As of September 30, 2017

Asset Allocation by Segment	Gain/Loss Summary	Gain/Loss Summary								
September 30, 2017 : \$747,550,037		QTD	FYTD	1 YR						
	Total Retirement System									
	Beginning Market Value	725,040,520	687,852,466	677,341,239						
	Net Contributions	1,546,504	659,995	812,352						
	Return on Investment	21,482,689	60,447,569	71,220,496						
	Ending Market Value	747,550,037	747,550,037	747,550,037						

#### **Comparative Performance**





Allocation

	Market Value	Allocation	
Total Domestic Equity	334,390,957	44.7	
Total International Equity	119,080,469	15.9	
Total Other Equity	14,037,007	1.9	
Total Core Fixed Income	76,822,362	10.3	
Total Non Core Fixed Income	38,136,248	5.1	
Total Other Fixed Income	30,116,999	4.0	
Total Real Estate	72,184,498	9.7	
Total Timber Funds	21,991,610	2.9	
Total Hedge Funds	31,249,424	4.2	
Cash Account	7,003,264	0.9	
Cash Account PE	-	0.0	
Retiree Death Benefit Account	1,198,430	0.2	
APRS Building	1,338,769	0.2	

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

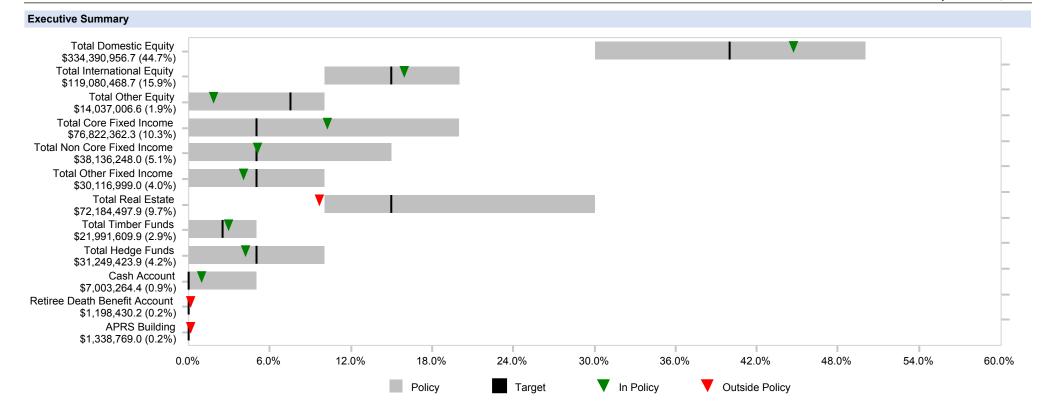


September 30, 2017 : \$747,550,037	Allocation		
		Market Value	Allocation
	NT Collective Russell 3000 Index	198,204,147	26.5
	Baird Mid Cap Growth	46,936,703	6.3
	Seizert Mid Cap Value	46,025,952	6.2
	Kennedy Small Cap Value	43,224,155	5.8
	Driehaus International Small Cap Growth	17,444,848	2.3
	Thompson Siegel & Walmsley	80,738,104	10.8
	LMCG Emerging Markets Fund	20,897,516	2.8
	Huff Energy Fund	11,944,482	1.6
	Sail Venture Fund I	842,107	0.1
	Sail Venture Fund II	323,492	0.0
	Sail Pre-Exit Acceleration Fund	321,092	0.0
	Excelsior Investors, Ltd.	605,834	0.1
	Orleans Capital	76,822,362	10.3
	Templeton Global Multisector Plus	38,136,248	5.1
	LBC Credit Partners III	8,754,669	1.2
	LBC Credit Partners IV	5,934,609	0.8
	Providence Debt Fund III	10,363,553	1.4
	Capital Point Partners	4,686,534	0.6
	Franchise Equity Capital Partners II	322,396	0.0
	Franchise Equity Capital Partners III	55,238	0.0
	Rockspring Capital Land Funds (I - VI)	15,332,274	2.1
	CB Richard Ellis (I - V)	33,159	0.0
	New Boston (V & VI)	8,295	0.0
	ARES Advisors (V & VI)	1,566,369	0.2
	INVESCO Real Estate Funds (I & II)	28,398	0.0
	Edison Investments	4,007,359	0.5
	JPM India Property Fund	1,481,085	0.2
	Vision Capital Partners	2,043,713	0.3
	FWAR Investments	268,554	0.0
	Morgan Stanley	45,461,684	6.1
	AEW Partners Fund VIII	1,953,609	0.3
	BTG Pactual (1, 2 & 3)	1,587,265	0.2
	Capitol Timberland Investments	16,123,499	2.2
	Domain Environmental Investments II	4,280,846	0.6
	Double Eagle Capital Ace Fund, Ltd.	31,249,424	4.2
	Cash Account	7,003,264	0.9
	Cash Account PE	-	0.0
	Retiree Death Benefit Account	1,198,430	0.2
	APRS Building	1,338,769	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.

#### Asset Allocation Compliance Total Fund As of September 30, 2017



#### Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
Total Retirement System	747,550,037	100.0	N/A	N/A	100.0
Total Domestic Equity	334,390,957	44.7	30.0	50.0	40.0
Total International Equity	119,080,469	15.9	10.0	20.0	15.0
Total Other Equity	14,037,007	1.9	0.0	10.0	7.5
Total Core Fixed Income	76,822,362	10.3	0.0	20.0	5.0
Total Non Core Fixed Income	38,136,248	5.1	0.0	15.0	5.0
Total Other Fixed Income	30,116,999	4.0	0.0	10.0	5.0
Total Real Estate	72,184,498	9.7	10.0	30.0	15.0
Total Timber Funds	21,991,610	2.9	0.0	5.0	2.5
Total Hedge Funds	31,249,424	4.2	0.0	10.0	5.0
Cash Account	7,003,264	0.9	0.0	5.0	0.0
Retiree Death Benefit Account	1,198,430	0.2	0.0	0.0	0.0
APRS Building	1,338,769	0.2	0.0	0.0	0.0



Financial Reconciliation Quarter to Date										
	Market Value 07/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2017
Total Retirement System	725,040,520	-	15,388,601	-13,842,097	-431,516	-88,160	2,191,645	19,291,044	21,482,689	747,550,037
Total Equity	446,765,815	3,576,915	-	-	-222,529	-	458,039	16,930,192	17,388,232	467,508,432
Total Domestic Equity	319,433,093	3,576,915	-	-	-222,529	-	458,039	11,145,439	11,603,478	334,390,957
NT Collective Russell 3000 Index	174,813,269	15,016,977	-	-	-17,223	-	246	8,390,877	8,391,124	198,204,147
Wellington Energy Fund	11,645,368	-11,616,830	-	-	-28,538	-	-	-	-	-
Baird Mid Cap Growth	45,242,767	79,145	-	-	-79,145	-	83,482	1,610,454	1,693,936	46,936,703
Seizert Mid Cap Value	47,148,161	-	-	-	-	-	209,415	-1,331,624	-1,122,209	46,025,952
Kennedy Small Cap Value	40,583,528	97,623	-	-	-97,623	-	164,896	2,475,731	2,640,628	43,224,155
Total International Equity	113,301,796	-	-	-	-	-	-	5,778,673	5,778,673	119,080,469
Driehaus International Small Cap Growth	15,936,406	-	-	-	-	-	-	1,508,442	1,508,442	17,444,848
Thompson Siegel & Walmsley	77,728,229	-	-	-	-	-	-	3,009,875	3,009,875	80,738,104
LMCG Emerging Markets Fund	19,637,160	-	-	-	-	-	-	1,260,356	1,260,356	20,897,516
Total Other Equity	14,030,926	-	-	-	-	-	-	6,080	6,080	14,037,007
Huff Energy Fund	11,944,482	-	-	-	-	-	-	-	-	11,944,482
Sail Venture Fund I	842,107	-	-	-	-	-	-	-	-	842,107
Sail Venture Fund II	323,492	-	-	-	-	-	-	-	-	323,492
Sail Pre-Exit Acceleration Fund	321,092	-	-	-	-	-	-	-	-	321,092
Excelsior Investors, Ltd.	599,753	-	-	-	-	-	-	6,080	6,080	605,834
Total Fixed Income	145,370,760	-2,089,952	-	-	-165,100	-	1,253,528	706,372	1,959,901	145,075,609
Orleans Capital	76,102,422	28,291	-	-	-28,291	-	619,342	100,598	719,940	76,822,362
Templeton Global Mulisector Plus Trust	37,530,474	149,530	-	-	-149,530	-	-	605,774	605,774	38,136,248
Total Other Fixed Income	31,737,864	-2,267,772	-	-	12,721	-	634,186	-	634,186	30,116,999
Capital Point Partners	4,686,534	-	-	-	-	-	-	-	-	4,686,534
Franchise Equity Capital Partners II	322,396	-27,714	-	-	-	-	27,714	-	27,714	322,396
Franchise Equity Capital Partners III	960,508	-912,483	-	-	-	-	7,213	-	7,213	55,238
LBC Credit Partners III	10,160,039	-1,666,020	-	-	12,721	-	247,929	-	247,929	8,754,669
LBC Credit Partners IV	5,244,834	580,235	-	-	-	-	109,540	-	109,540	5,934,609
Providence Debt Fund III	10,363,553	-241,790	-	-	-	-	241,790	-	241,790	10,363,553



**Financial Reconciliation** 

**Total Fund** 

1 Quarter Ending September 30, 2017

	Market Value 07/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Valu 09/30/2017
Total Real Estate & Timber	97,494,001	-3,878,382	-	-	-43,887	-12,328	445,966	170,738	616,705	94,176,108
Total Real Estate	75,117,191	-3,715,127	-	-	-893	-12,328	445,966	349,688	795,655	72,184,49
Rockspring Capital Land Funds (I - VI)	18,834,896	-3,623,104	-	-	-	-12,328	-	132,810	132,810	15,332,27
Rockspring Capital Land Fund I	620,569	-	-	-	-	-	-	-2,407	-2,407	618,16
Rockspring Capital Land Fund II	6,425,707	-	-	-	-	-	-	-37,656	-37,656	6,388,05
Rockspring Capital Land Fund III	2,698,975	-	-	-	-	-	-	-1,421	-1,421	2,697,55
Rockspring Capital Land Fund IV	3,140,992	-2,689,998	-	-	-	-	-	-3,397	-3,397	447,59
Rockspring Capital Land Fund V	3,102,842	-	-	-	-	-	-	178,738	178,738	3,281,58
Rockspring Capital Land Fund VI	2,845,812	-933,107	-	-	-	-12,328	-	-1,046	-1,046	1,899,33
CB Richard Ellis (I - V)	259,123	-	-	-	-	-	-	-225,964	-225,964	33,15
CB Richard Ellis IV	259,123	-	-	-	-	-	-	-225,964	-225,964	33,15
Sentinel (II, IV & VI)	119,899	-119,899	-	-	-	-	-	-	-	
Sentinel IV	119,899	-119,899	-	-	-	-	-	-	-	
New Boston (V & VI)	8,295	-	-	-	-	-	-	-	-	8,29
New Boston VI	8,295	-	-	-	-	-	-	-	-	8,29
ARES Advisors (V & VI)	1,684,390	-240,075	-	-	-893	-	-	122,946	122,946	1,566,36
ARES Value Enhancement Fund V	622,116	-56,204	-	-	-	-	-	4,408	4,408	570,31
ARES Value Enhancement Fund VI	1,062,274	-183,870	-	-	-893	-	-	118,539	118,539	996,04
INVESCO Real Estate Funds (I & II)	37,367	-7,724	-	-	-	-	-	-1,245	-1,245	28,39
INVESCO Real Estate Fund I	9,133	-7,724	-	-	-	-	-	-1,409	-1,409	
INVESCO Real Estate Fund II	28,234	-	-	-	-	-	-	164	164	28,39
Edison Investments	3,970,505	-	-	-	-	-	-	36,854	36,854	4,007,35
JPM India Property Fund	1,481,085	-	-	-	-	-	-	-	-	1,481,08
Vision Capital Partners	2,043,713	-	-	-	-	-	-	-	-	2,043,71
FWAR Investments	923,043	-382,333	-	-	-	-	-	-272,156	-272,156	268,55
Morgan Stanley	44,466,466	-	-	-	-	-	438,775	556,442	995,217	45,461,68
AEW Partners Fund VIII	1,288,409	658,009	-	-	-	-	7,191	-	7,191	1,953,60
Total Timber Funds	22,376,810	-163,256	-	-	-42,994	-	-	-178,950	-178,950	21,991,61
BTG Pactual (1, 2 & 3)	1,587,265	3,504	-	-	-3,504	-	-	-	-	1,587,26
BTG Pactual 1	1,509,075	3,329	-	-	-3,329	-	-	-	-	1,509,07
BTG Pactual 2	78,190	175	-	-	-175	-	-	-	-	78,19
Capitol Timberland Investments	16,302,449	39,490	-	-	-39,490	-	-	-178,950	-178,950	16,123,49
Domain Environmental Investments II	4,487,096	-206,250	-	-	-	-	-	-	-	4,280,84



1 Quarter Ending September 30, 2017

	Market Value 07/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2017
Total Hedge Funds	30,602,065	-	-	-	-	-	-	647,359	647.359	31,249,424
Double Eagle Capital Ace Fund, Ltd.	30,602,065	-	-	-	-	-	-	647,359	647,359	31,249,424
Cash Account	3,165,968	2,391,419	15,322,389	-13,832,097	-	-75,832	31,449	-32	31,417	7,003,264
Cash Account PE	-	-		-	-	-	-	-	-	-
Retiree Death Benefit Account	1,139,557	-	66,211	-10,000	-	-	2,662	-	2,662	1,198,430
APRS Building	502,355	-	-	-	-	-	-	836,414	836,414	1,338,769

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

Financial Reconciliation Year to Date										
	Market Value 01/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2017
Total Retirement System	687,852,466	-	43,462,813	-42,802,817	-1,275,343	-134,651	6,265,532	54,182,037	60,447,569	747,550,037
Total Equity	379,875,678	18,993,472	-	-	-750,335	-	1,430,541	67,959,076	69,389,617	467,508,432
Total Domestic Equity	281,787,883	18,993,472	-	-	-750,335	-	1,430,541	32,929,395	34,359,936	334,390,957
NT Collective Russell 3000 Index	145,635,046	30,051,427	-	-	-55,502	-	4,074	22,569,100	22,573,175	198,204,147
Wellington Energy Fund	13,832,516	-11,661,188	-	-	-91,601	-	100,150	-2,179,877	-2,079,728	-
Baird Mid Cap Growth	38,820,774	221,029	-	-	-221,029	-	239,776	7,876,153	8,115,929	46,936,703
Seizert Mid Cap Value	44,093,043	-	-	-	-	-	592,965	1,339,943	1,932,908	46,025,952
Kennedy Small Cap Value	39,406,504	382,203	-	-	-382,203	-	493,576	3,324,076	3,817,652	43,224,155
Total International Equity	98,087,795	-	-	-	-	-	-	20,992,674	20,992,674	119,080,469
Driehaus International Small Cap Growth	13,031,260	-	-	-	-	-	-	4,413,588	4,413,588	17,444,848
Thompson Siegel & Walmsley	68,590,593	-	-	-	-	-	-	12,147,511	12,147,511	80,738,104
LMCG Emerging Markets Fund	16,465,942	-	-	-	-	-	-	4,431,574	4,431,574	20,897,516
Total Other Equity	15,296,714	-	-	-	-	-	-	-1,259,707	-1,259,707	14,037,007
Huff Energy Fund	13,278,117	-	-	-	-	-	-	-1,333,635	-1,333,635	11,944,482
Sail Venture Fund I	842,107	-	-	-	-	-	-	-	-	842,107
Sail Venture Fund II	323,492	-	-	-	-	-	-	-	-	323,492
Sail Pre-Exit Acceleration Fund	321,092	-	-	-	-	-	-	-	-	321,092
Excelsior Investors, Ltd.	531,906	-	-	-	-	-	-	73,928	73,928	605,834

Fotal Fixed Income	110,206,835	-1,505,550	-	-	-382,327	-	3,227,486	33,529,166	36,756,652	145,075,60
Orleans Capital	74,300,938	83,658	-	-	-83,658	-	1,805,121	716,303	2,521,425	76,822,36
Templeton Global Multisector Plus	35,905,897	338,822	-	-	-338,822	-	-	2,230,351	2,230,351	38,136,24
Total Other Fixed Income	32,391,962	-1,928,031	-	-	40,154	-	1,422,365	-1,809,450	-387,085	30,116,99
Capital Point Partners	6,616,249	-	-	-	-	-	-	-1,929,715	-1,929,715	4,686,53
Franchise Equity Capital Partners II	251,741	-27,714	-	-	-	-	27,714	70,655	98,369	322,39
Franchise Equity Capital Partners III	959,897	-975,933	-	-	-	-	21,180	50,094	71,274	55,2
LBC Credit Partners III	11,165,843	-2,682,388	-	-	40,154	-	634,105	-403,044	231,061	8,754,6
LBC Credit Partners IV	3,049,054	2,496,973	-	-	-	-	192,802	195,780	388,582	5,934,6
Providence Debt Fund III	10,349,179	-738,969	-	-	-	-	546,564	206,779	753,343	10,363,5



**Financial Reconciliation** 

Total Fund

Year To Date Ending September 30, 2017

	Market Value 01/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Valu 09/30/2017
Total Real Estate & Timber	93,812,762	-506,190	-	-	-142,681	-13,971	1,539,240	-513,051	1,026,188	94,176,108
Total Real Estate	68,958,609	1,046,454	-	-	-2,528	-13,971	1,539,240	656,694	2,195,934	72,184,498
Rockspring Capital Land Funds (I - VI)	20,102,352	-4,368,990	-	-	-	-12,328	-	-388,760	-388,760	15,332,274
Rockspring Capital Land Fund I	703,127	-76,074	-	-	-	-	-	-8,892	-8,892	618,16
Rockspring Capital Land Fund II	6,453,861	-10,290	-	-	-	-	-	-55,519	-55,519	6,388,05
Rockspring Capital Land Fund III	2,704,630	-	-	-	-	-	-	-7,076	-7,076	2,697,55
Rockspring Capital Land Fund IV	3,847,886	-3,163,388	-	-	-	-	-	-236,901	-236,901	447,59
Rockspring Capital Land Fund V	3,493,650	-186,131	-	-	-	-	-	-25,939	-25,939	3,281,58
Rockspring Capital Land Fund VI	2,899,199	-933,107	-	-	-	-12,328	-	-54,433	-54,433	1,899,33
CB Richard Ellis (I - V)	259,885	-	-	-	-	-	-	-226,726	-226,726	33,15
CB Richard Ellis IV	259,885	-	-	-	-	-	-	-226,726	-226,726	33,15
Sentinel (II, IV & VI)	110,474	-119,899	-	-	-	-	-	9,425	9,425	
Sentinel IV	110,474	-119,899	-	-	-	-	-	9,425	9,425	
New Boston (V & VI)	60,329	-	-	-	-	-	-	-52,034	-52,034	8,29
New Boston VI	60,329	-	-	-	-	-	-	-52,034	-52,034	8,29
ARES Advisors (V & VI)	1,567,343	-240,075	-	-	-2,528	-	7,539	234,089	241,629	1,566,36
ARES Value Enhancement Fund V	621,404	-56,204	-	-	-	-	-	5,120	5,120	570,31
ARES Value Enhancement Fund VI	945,939	-183,870	-	-	-2,528	-	7,539	228,969	236,508	996,04
INVESCO Real Estate Funds (I & II)	39,431	-7,724	-	-	-	-	-	-3,309	-3,309	28,39
INVESCO Real Estate Fund I	12,100	-7,724	-	-	-	-	-	-4,376	-4,376	
INVESCO Real Estate Fund II	27,331	-	-	-	-	-	-	1,067	1,067	28,39
Edison Investments	3,894,436	-	-	-	-	-	-	112,923	112,923	4,007,35
JPM India Property Fund	2,185,361	-750,675	-	-	-	-	-	46,399	46,399	1,481,08
Vision Capital Partners	2,043,713	-	-	-	-	-	-	-	-	2,043,71
FWAR Investments	926,922	-380,690	-	-	-	-1,643	-	-276,035	-276,035	268,55
Morgan Stanley	37,768,363	5,000,000	-	-	-	-	1,240,506	1,452,815	2,693,320	45,461,68
AEW Partners Fund VIII	-	1,914,507	-	-	-	-	291,195	-252,093	39,102	1,953,60
Total Timber Funds	24,854,153	-1,552,644	-	-	-140,154	-	-	-1,169,746	-1,169,746	21,991,61
BTG Pactual (1, 2 & 3)	2,409,854	-780,788	-	-	-19,212	-	-	-22,589	-22,589	1,587,26
BTG Pactual 1	1,444,483	13,973	-	-	-13,973	-	-	64,592	64,592	1,509,07
BTG Pactual 2	965,371	-794,761	-	-	-5,239	-	-	-87,181	-87,181	78,19
Capitol Timberland Investments	17,776,819	-379,008	-	-	-120,942	-	-	-1,153,370	-1,153,370	16,123,49
Domain Environmental Investments II	4,667,480	-392,848	-	-	-	-	-	6,213	6,213	4,280,84



#### Financial Reconciliation Total Fund

Year To Date Ending September 30, 2017

									- J - P	
	Market Value 01/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2017
Total Hedge Funds	31,190,318	-	-	-	-	-	-	59,106	59,106	31,249,424
Double Eagle Capital Ace Fund, Ltd.	31,190,318	-	-	-	-	-	-	59,106	59,106	31,249,424
Cash Account	23,490,995	-16,981,732	43,265,910	-42,713,614	-	-120,680	62,383	2	62,385	7,003,264
Cash Account PE	-	-	-	-	-	, -	-	-	-	-
Retiree Death Benefit Account	1,084,848	-	196,903	-89,203	-	-	5,882	-	5,882	1,198,430
APRS Building	502,355	-	-	-	-	-	-	836,414	836,414	1,338,769



As of September 30, 2017

					Performance	ə (%)			
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Retirement System (Net)	2.89	8.57	10.23	5.40	6.70	6.12	2.56	8.25	10/01/1992
Total Retirement System (Gross)	2.95	8.76	10.48	5.64	7.01	6.49	3.10	8.57	10/01/1992
Total Fund Policy	3.22	10.76	12.72	7.96	9.23	9.77	6.42	8.20	
Variance	-0.27	-2.00	-2.24	-2.32	-2.22	-3.28	-3.32	0.37	
Total Equity	3.87	13.06	16.87	7.32	10.99	9.86	3.68	8.88	01/01/1994
Total Equity Policy	4.85	15.35	18.51	8.76	12.22	11.67	5.66	8.38	
Variance	-0.98	-2.29	-1.64	-1.44	-1.23	-1.81	-1.98	0.50	
Domestic Equity	3.59 (67)	11.39 (53)	17.78 (51)	8.65 (61)	N/A	N/A	N/A	11.21 (58)	05/01/2013
Russell 3000 Index	4.57	13.91	18.71	10.74	14.23	14.28	7.57	13.04	
Variance	-0.98	-2.52	-0.93	-2.09	N/A	N/A	N/A	-1.83	
IM U.S. Equity (SA+CF+MF) Median	4.35	11.85	17.88	9.40	13.15	13.01	7.15	11.70	
NT Collective Russell 3000 Index	4.57 (47)	13.93 (37)	18.75 (48)	10.77 (40)	N/A	N/A	N/A	10.49 (32)	01/01/2014
Russell 3000 Index	4.57	13.91	18.71	10.74	14.23	14.28	7.57	10.46	
Variance	0.00	0.02	0.04	0.03	N/A	N/A	N/A	0.03	
IM U.S. All Cap Core Equity (SA+CF) Median	4.46	12.83	18.74	10.22	14.22	14.26	7.86	9.61	
Baird Mid Cap Growth	3.57 (72)	20.30 (32)	20.66 (39)	8.33 (80)	N/A	N/A	N/A	7.11 (80)	07/01/2014
Russell Midcap Growth Index	5.28	17.29	17.82	9.96	14.18	13.84	8.20	8.92	
Variance	-1.71	3.01	2.84	-1.63	N/A	N/A	N/A	-1.81	
IM U.S. Mid Cap Growth Equity (SA+CF) Median	4.56	17.77	19.06	10.43	13.60	13.95	8.62	9.05	
Seizert Mid Cap Value	<mark>-2.38</mark> (100)	4.38 (99)	15.69 (76)	6.42 (93)	N/A	N/A	N/A	4.77 (96)	07/01/2014
Russell Midcap Index	3.47	11.74	15.32	9.54	14.26	13.80	8.08	8.21	
Variance	-5.85	-7.36	0.37	-3.12	N/A	N/A	N/A	-3.44	
IM U.S. Mid Cap Equity (SA+CF) Median	3.77	12.49	17.67	10.18	14.41	14.03	8.95	8.77	
Kennedy Small Cap Value	6.25 (29)	8.65 (35)	21.30 (44)	N/A	N/A	N/A	N/A	24.74 (58)	03/01/2016
Russell 2000 Value Index	5.11	5.68	20.55	12.12	13.27	12.80	7.14	28.22	
Variance	1.14	2.97	0.75	N/A	N/A	N/A	N/A	-3.48	
IM U.S. Small Cap Value Equity (SA+CF) Median	5.28	7.22	20.48	12.08	14.82	14.27	9.00	25.69	



As of September 30, 2017

					Performance	(%)			
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
International Equity	5.10 (72)	21.40 (64)	17.94 (66)	5.14 (60)	N/A	N/A	N/A	7.90 (23)	05/01/2013
MSCI AC World ex USA	6.25	21.61	20.15	5.19	7.45	5.72	1.74	5.42	
Variance	-1.15	-0.21	-2.21	-0.05	N/A	N/A	N/A	2.48	
IM International Equity (SA+CF+MF) Median	6.26	23.33	19.67	5.75	7.95	6.20	2.10	5.80	
Driehaus International Small Cap Growth	9.47 (16)	33.87 (5)	22.36 (36)	11.44 (15)	12.76 (18)	N/A	N/A	13.43 (18)	09/01/2012
MSCI AC World ex USA Small Growth	7.01	24.97	17.42	8.76	9.55	7.54	3.43	10.43	
Variance	2.46	8.90	4.94	2.68	3.21	N/A	N/A	3.00	
IM International SMID Cap Growth Equity (MF) Median	7.93	27.27	21.49	9.06	11.24	9.23	4.09	11.92	
Thompson Siegel & Walmsley	3.87 (95)	17.71 (93)	16.27 (86)	5.19 (78)	N/A	N/A	N/A	5.19 (78)	10/01/2014
MSCI EAFE Index	5.47	20.47	19.65	5.53	8.87	6.87	1.82	5.53	
Variance	-1.60	-2.76	-3.38	-0.34	N/A	N/A	N/A	-0.34	
M International Large Cap Core Equity (SA+CF) Median	5.94	21.55	20.20	6.39	9.56	7.79	2.60	6.39	
LMCG Emerging Markets Fund	6.42 (64)	26.91 (58)	21.23 (61)	2.98 (85)	N/A	N/A	N/A	3.47 (86)	04/01/2014
MSCI Emerging Markets Index	8.04	28.14	22.91	5.28	4.36	2.90	1.65	5.44	
Variance	-1.62	-1.23	-1.68	-2.30	N/A	N/A	N/A	-1.97	
IM Emerging Markets Equity (SA+CF) Median	7.59	28.23	22.62	5.84	5.72	4.31	2.72	6.15	
Total Other Equity	0.04	-8.24	N/A	N/A	N/A	N/A	N/A	-8.24	01/01/2017
Huff Energy Fund	0.00	-10.04	-8.97	-6.62	-4.14	-1.82	N/A	0.72	07/01/2010
Russell 3000 Energy SP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Variance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sail Venture Fund I	0.00	0.00	0.00	-4.80	-23.60	-22.21	N/A	-20.81	06/01/2010
Sail Venture Fund II	0.00	0.00	0.00	-18.68	-41.58	-33.57	N/A	-30.35	07/01/2010
Sail Pre-Exit Acceleration Fund	0.00	0.00	0.00	-18.57	N/A	N/A	N/A	-43.71	01/01/2013
Excelsior Investors, Ltd.	1.01	13.90	15.81	-15.15	-14.05	-8.39	N/A	-5.55	12/01/2008



As of	September	30, 2017
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					Performanc	e (%)			
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Fixed Income	1.24	2.80	2.83	1.70	1.52	2.28	3.80	7.04	12/01/1993
Total Fixed Income Policy	1.37	4.84	-0.23	2.15	1.42	2.43	3.91	5.15	
Variance	-0.13	-2.04	3.06	-0.45	0.10	-0.15	-0.11	1.89	
Orleans Capital	0.91 (52)	3.28 (64)	0.51 (57)	2.95 (57)	N/A	N/A	N/A	3.38 (73)	01/01/2014
Bloomberg Barclays U.S. Aggregate Index	0.85	3.14	0.07	2.71	2.06	2.95	4.27	3.27	
Variance	0.06	0.14	0.44	0.24	N/A	N/A	N/A	0.11	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.92	3.46	0.60	3.01	2.46	3.47	4.78	3.60	
Templeton Global Mulisector Plus Trust	1.21 (71)	5.26 (64)	11.52 (1)	2.03 (42)	N/A	N/A	N/A	2.68 (30)	03/01/2014
Blmbg. Barc. Global Multiverse	1.88	6.55	-0.56	1.56	0.76	1.87	3.50	1.08	
Variance	-0.67	-1.29	12.08	0.47	N/A	N/A	N/A	1.60	
IM Global Fixed Income (MF) Median	1.59	6.06	1.10	1.62	1.38	2.15	3.52	1.58	
Total Other Fixed Income	2.06	-1.14	N/A	N/A	N/A	N/A	N/A	-1.14	01/01/2017
Capital Point Partners	0.00	-29.17	-29.17	-10.99	-7.59	-2.75	N/A	-1.62	07/01/2010
Franchise Equity Capital Partners II	9.15	39.79	-38.35	-29.62	-14.51	-11.22	N/A	-5.51	04/01/2008
Franchise Equity Capital Partners III	1.21	8.35	9.75	6.29	0.26	6.51	N/A	14.86	12/01/2009
LBC Credit Partners III	2.60	2.31	3.01	10.53	N/A	N/A	N/A	11.74	03/01/2014
Credit Suisse Leveraged Loan Index	1.06	3.04	5.36	4.00	4.42	5.01	4.44	3.76	
Variance	1.54	-0.73	-2.35	6.53	N/A	N/A	N/A	7.98	
LBC Credit Partners IV	2.12	10.59	13.89	N/A	N/A	N/A	N/A	12.76	09/01/2016
Credit Suisse Leveraged Loan Index	1.06	3.04	5.36	4.00	4.42	5.01	4.44	5.78	
Variance	1.06	7.55	8.53	N/A	N/A	N/A	N/A	6.98	
Providence Debt Fund III	2.35	7.50	11.34	10.22	N/A	N/A	N/A	10.89	04/01/2014
Credit Suisse Leveraged Loan Index	1.06	3.04	5.36	4.00	4.42	5.01	4.44	3.74	
Variance	1.29	4.46	5.98	6.22	N/A	N/A	N/A	7.15	



As of September 30, 2017

					Performance	e (%)			
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inceptior Date
Iternative Investments									
Hedge Funds	2.12	0.19	3.50	-0.89	1.32	2.15	N/A	6.13	12/01/2008
HFRI Fund of Funds Composite Index	2.27	5.55	6.46	2.22	3.84	2.88	1.07	3.60	
Variance	-0.15	-5.36	-2.96	-3.11	-2.52	-0.73	N/A	2.53	
Double Eagle Capital Ace Fund, Ltd.	2.12	0.19	3.50	0.01	3.57	3.12	N/A	3.55	09/01/2010
HFRI Fund of Funds Composite Index	2.27	5.55	6.46	2.22	3.84	2.88	1.07	3.18	
Variance	-0.15	-5.36	-2.96	-2.21	-0.27	0.24	N/A	0.37	
ther Assets									
Cash Account	0.23	0.51	0.59	0.26	0.18	0.21	0.71	4.67	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	0.23	0.52	0.60	0.27	0.17	0.32	0.61	1.36	12/01/2004
ther Alternative Assets									
Total Real Estate	1.13	3.13	1.62	5.50	10.20	9.15	0.88	3.90	08/01/2005
NCREIF Property Index	1.70	5.07	6.89	9.83	10.35	11.25	6.23	8.24	
Variance	-0.57	-1.94	-5.27	-4.33	-0.15	-2.10	-5.35	-4.34	
Total Timber Funds	-1.00	-5.56	-12.84	-1.47	-0.74	-0.57	-0.63	1.68	08/01/2005
NCREIF Timberland Index	0.60	2.07	3.28	5.24	7.13	5.41	5.21	7.08	
Variance	-1.60	-7.63	-16.12	-6.71	-7.87	-5.98	-5.84	-5.40	



As of September 30, 2017

				F	Performance (	%)			
	YTD	2016	2015	2014	2013	2012	2011	2010	200
Total Retirement System (Net)	8.57	7.67	-1.05	5.61	10.66	8.79	-3.16	10.99	9.24
Fotal Retirement System (Gross)	8.76	7.87	-0.83	5.94	11.16	9.31	-2.68	12.25	9.92
Fotal Fund Policy	10.76	8.04	2.43	8.08	17.56	11.31	4.69	12.13	18.40
Variance	-2.00	-0.17	-3.26	-2.14	-6.40	-2.00	-7.37	0.12	-8.48
Fotal Equity	13.06	11.41	-2.87	5.30	29.57	10.82	-8.56	16.73	37.03
Total Equity Policy	15.35	9.61	-0.51	6.91	29.57	16.70	-3.34	14.51	30.41
Variance	-2.29	1.80	-2.36	-1.61	0.00	-5.88	-5.22	2.22	6.62
Domestic Equity	11.39 (53)	15.76 (31)	- <b>3.09</b> (62)	8.03 (58)	N/A	N/A	N/A	N/A	N/A
Russell 3000 Index	13.91	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34
Variance	-2.52	3.02	-3.57	-4.53	N/A	N/A	N/A	N/A	N/A
M U.S. Equity (SA+CF+MF) Median	11.85	11.54	-1.67	9.18	33.88	15.25	-1.69	17.86	30.44
IT Collective Russell 3000 Index	13.93 (37)	12.79 (48)	0.49 (49)	12.55 (32)	N/A	N/A	N/A	N/A	N/A
Russell 3000 Index	13.91	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34
Variance	0.02	0.05	0.01	-0.01	N/A	N/A	N/A	N/A	N/A
M U.S. All Cap Core Equity (SA+CF) Median	12.83	12.22	0.36	10.69	35.95	16.17	0.12	16.96	27.82
Baird Mid Cap Growth	20.30 (32)	5.35 (53)	- <mark>3.03</mark> (81)	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Growth Index	17.29	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29
Variance	3.01	-1.98	-2.83	N/A	N/A	N/A	N/A	N/A	N/A
M U.S. Mid Cap Growth Equity (SA+CF) Median	17.77	5.42	0.79	8.63	36.40	15.13	-0.95	26.75	41.78
Seizert Mid Cap Value	4.38 (99)	24.86 (6)	-10.83 (98)	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	11.74	13.80	-2.44	13.22	34.76	17.28	-1.55	25.47	40.48
Variance	-7.36	11.06	-8.39	N/A	N/A	N/A	N/A	N/A	N/A
M U.S. Mid Cap Equity (SA+CF) Median	12.49	12.46	-1.19	9.76	36.37	16.47	-1.05	25.03	37.45
Kennedy Small Cap Value	8.65 (35)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2000 Value Index	5.68	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58
Variance	2.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
M U.S. Small Cap Value Equity (SA+CF) Median	7.22	26.10	-4.31	5.71	38.09	17.48	-3.17	27.38	33.83



As of September 30, 2017

				I	Performance (%	<b>b</b> )			
	YTD	2016	2015	2014	2013	2012	2011	2010	200
International Equity	21.40 (64)	0.67 (63)	- <b>2.40</b> (50)	- <b>0.27</b> (23)	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA	21.61	5.01	-5.25	-3.44	15.78	17.39	-13.33	11.60	42.14
Variance	-0.21	-4.34	2.85	3.17	N/A	N/A	N/A	N/A	N/A
IM International Equity (SA+CF+MF) Median	23.33	2.21	-2.43	-4.01	18.06	18.89	-14.34	13.64	37.40
Driehaus International Small Cap Growth	33.87 (5)	- <mark>6.24</mark> (87)	12.59 (11)	-4.32 (42)	29.24 (33)	N/A	N/A	N/A	N/A
MSCI AC World ex USA Small Growth	24.97	-0.04	6.74	-3.35	18.80	17.17	-17.67	27.55	61.64
Variance	8.90	-6.20	5.85	-0.97	10.44	N/A	N/A	N/A	N/A
IM International SMID Cap Growth Equity (MF) Median	27.27	-1.85	6.83	-4.87	26.82	21.90	-15.21	22.20	46.24
Thompson Siegel & Walmsley	17.71 (93)	0.47 (62)	1.38 (37)	) N/A	N/A	N/A	N/A	N/A	N/A
MSCI EAFE Index	20.47	1.51	-0.39	-4.48	23.29	17.90	-11.73	8.21	32.46
Variance	-2.76	-1.04	1.77	N/A	N/A	N/A	N/A	N/A	N/A
IM International Large Cap Core Equity (SA+CF) Median	21.55	1.10	0.33	-3.83	23.11	19.45	-12.26	11.18	32.88
LMCG Emerging Markets Fund	26.91 (58)	7.14 (71)	-18.73 (95)	) N/A	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index	28.14	11.60	-14.60	-1.82	-2.27	18.64	-18.17	19.20	79.02
Variance	-1.23	-4.46	-4.13	N/A	N/A	N/A	N/A	N/A	N/A
IM Emerging Markets Equity (SA+CF) Median	28.23	10.07	-12.66	-0.18	0.89	20.53	-18.17	21.83	80.34
Total Other Equity	-8.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Huff Energy Fund	-10.04	44.55	-20.83	-18.64	-29.83	43.24	-5.31	N/A	N/A
Russell 3000 Energy SP	N/A	N/A	N/A	-10.01	25.86	3.87	3.42	21.85	17.91
Variance	N/A	N/A	N/A	-8.63	-55.69	39.37	-8.73	N/A	N/A
Sail Venture Fund I	0.00	0.00	0.00	-51.72	-37.04	-32.91	-13.87	N/A	N/A
Sail Venture Fund II	0.00	0.00	0.00	-90.44	-22.84	-24.33	10.90	N/A	N/A
Sail Pre-Exit Acceleration Fund	0.00	0.00	0.00	-93.68	3.26	N/A	N/A	N/A	N/A
Excelsior Investors, Ltd.	13.90	13.49	-40.49	-13.16	-23.59	-2.73	2.92	15.69	1.86



As of September 30, 2017

				F	Performance (	(%)			
	YTD	2016	2015	2014	2013	2012	2011	2010	200
Total Fixed Income	2.80	4.36	-0.97	1.69	-3.42	13.45	-1.20	15.23	24.71
Total Fixed Income Policy	4.84	2.77	-1.37	3.20	-2.10	4.54	6.72	6.24	7.01
Variance	-2.04	1.59	0.40	-1.51	-1.32	8.91	-7.92	8.99	17.70
Orleans Capital	3.28 (64)	3.79 (26)	0.57 (72)	5.08 (94)	N/A	N/A	N/A	N/A	N/A
Bloomberg Barclays U.S. Aggregate Index	3.14	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93
Variance	0.14	1.14	0.02	-0.89	N/A	N/A	N/A	N/A	N/A
M U.S. Broad Market Core Fixed Income (SA+CF) Median	3.46	3.10	0.82	6.15	-1.56	5.85	7.83	7.24	9.88
Templeton Global Mulisector Plus Trust	5.26 (64)	7.33 (9)	<b>-4.27</b> (62)	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. Global Multiverse	6.55	2.84	-3.29	0.48	-2.19	4.84	5.55	5.84	8.04
Variance	-1.29	4.49	-0.98	N/A	N/A	N/A	N/A	N/A	N/A
M Global Fixed Income (MF) Median	6.06	3.33	-3.83	1.95	-2.47	7.34	4.06	6.00	11.80
Total Other Fixed Income	-1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Capital Point Partners	-29.17	0.00	1.14	-7.09	-6.18	15.06	7.40	N/A	N/A
Franchise Equity Capital Partners II	39.79	-70.03	-13.41	21.33	21.10	-16.06	-7.72	7.86	16.31
Franchise Equity Capital Partners III	8.35	7.95	9.06	-19.72	22.20	3.61	18.41	2.08	N/A
LBC Credit Partners III	2.31	11.13	16.17	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	3.04	9.87	-0.41	2.18	6.16	9.43	1.82	9.98	44.86
Variance	-0.73	1.26	16.58	N/A	N/A	N/A	N/A	N/A	N/A
BC Credit Partners IV	10.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	3.04	9.87	-0.41	2.18	6.16	9.43	1.82	9.98	44.86
Variance	7.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Providence Debt Fund III	7.50	13.97	2.91	N/A	N/A	N/A	N/A	N/A	N/A
Credit Suisse Leveraged Loan Index	3.04	9.87	-0.41	2.18	6.16	9.43	1.82	9.98	44.86
Variance	4.46	4.10	3.32	N/A	N/A	N/A	N/A	N/A	N/A



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

As of September 30, 2017

					Performance (	%)			
	YTD	2016	2015	2014	2013	2012	2011	2010	2009
Iternative Investments									
Hedge Funds	0.19	0.37	-1.70	-6.00	12.18	9.71	-4.32	13.31	36.40
HFRI Fund of Funds Composite Index	5.55	0.51	-0.27	3.37	8.96	4.79	-5.72	5.70	11.47
Variance	-5.36	-0.14	-1.43	-9.37	3.22	4.92	1.40	7.61	24.93
Double Eagle Capital Ace Fund, Ltd.	0.19	-1.53	0.78	0.17	16.13	8.92	-6.81	N/A	N/A
HFRI Fund of Funds Composite Index	5.55	0.51	-0.27	3.37	8.96	4.79	-5.72	5.70	11.47
Variance	-5.36	-2.04	1.05	-3.20	7.17	4.13	-1.09	N/A	N/A
Other Assets									
Cash Account	0.51	0.27	0.01	0.06	0.02	0.59	-0.21	0.36	0.30
Cash Account PE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Retiree Death Benefit Account	0.52	0.27	0.02	0.01	0.01	0.15	1.24	0.06	0.30
ther Alternative Assets									
Total Real Estate	3.13	0.76	5.40	31.16	10.25	7.49	6.25	2.00	-29.70
NCREIF Property Index	5.07	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85
Variance	-1.94	-7.21	-7.93	19.34	-0.73	-3.05	-8.01	-11.11	-12.85
Total Timber Funds	-5.56	-6.92	1.93	10.81	-4.18	0.02	-1.33	3.80	-10.95
NCREIF Timberland Index	2.07	2.59	4.97	10.48	9.69	7.75	1.57	-0.15	-4.75
Variance	-7.63	-9.51	-3.04	0.33	-13.87	-7.73	-2.90	3.95	-6.20



## Comparative Performance - IRR Other Alternative Investments

As of September 30, 2017

Comparative Performance - IRR								
	Market Value (\$)	QTR	YTD	1 YR	3 YR	5 YR	Inception IRR	Inception Date
Total Real Estate Investments	72,184,498	1.10	3.08	1.64	6.01	12.72	7.04	07/31/2005
Edison Investments	4,007,359	0.93	2.90	3.62	10.25	19.19	12.01	09/30/1996
New Boston (V & VI)	8,295	0.00	-86.25	-82.10	-15.10	-23.64	2.34	12/31/2001
ARES Advisors (V & VI)	1,566,369	8.13	15.85	30.29	20.79	15.33	3.78	05/31/2002
Rockspring Capital Land Funds (I - VI)	15,332,274	0.77	-2.16	-10.05	0.85	4.88	1.59	11/30/2003
CB Richard Ellis (I - V)	33,159	-87.20	-87.24	-92.25	-61.14	-21.10	3.86	04/30/2000
INVESCO Real Estate Funds (I & II)	28,398	-3.63	-8.62	-0.24	3.46	10.46	4.32	03/31/2005
JPM India Property Fund	1,481,085	0.00	2.53	-2.87	-1.97	-3.76	-2.09	05/24/2007
Vision Capital Partners	2,043,713	0.00	0.00	0.00	0.00	-7.79	-7.92	01/31/2008
FWAR Investments	268,554	-39.58	-32.88	-32.44	-10.46	-2.01	-21.91	07/18/2012
Morgan Stanley	45,461,684	2.24	6.55	9.06	N/A	N/A	9.03	12/31/2015
AEW Partners Fund VIII	1,953,609	0.59	N/A	N/A	N/A	N/A	3.30	06/26/2017
Total Timber Funds	21,991,610	-1.00	-5.54	-13.59	0.24	0.30	-0.14	07/31/2005
BTG Pactual (1, 2 & 3)	1,587,265	-0.22	-2.35	-41.14	-1.71	-3.10	3.91	11/30/1996
Capitol Timberland Investments	16,123,499	-1.34	-7.34	-9.97	1.23	1.45	3.54	09/30/2004
Domain Environmental Investments II	4,280,846	0.00	0.14	-1.54	-2.28	-1.31	-0.43	04/30/2008
Total Other Equity	14,037,007	0.04	N/A	N/A	N/A	N/A	0.00	01/01/2017
Huff Energy Fund	11,944,482	0.00	-10.04	-8.97	-6.72	-4.50	3.20	12/31/2006
Sail Venture Fund I	842,107	0.00	0.00	0.00	-4.79	-24.35	-17.33	12/31/2008
Sail Venture Fund II	323,492	0.00	0.00	0.00	-18.67	-42.39	-31.38	02/28/2009
Sail Pre-Exit Acceleration Fund	321,092	0.00	0.00	0.00	-18.56	N/A	-44.59	01/31/2013
Excelsior Investors, Ltd.	605,834	1.01	13.90	15.72	N/A	N/A	-16.32	12/31/2014
Total Other Fixed Income	30,116,999	2.11	N/A	N/A	N/A	N/A	0.00	01/03/2017
Capital Point Partners	4,686,534	0.00	-29.17	-29.17	-13.80	-10.22	1.21	03/31/2007
Franchise Equity Capital Partners II	322,396	9.03	39.80	-38.99	-17.89	0.16	0.52	03/31/2007
Franchise Equity Capital Partners III	55,238	0.86	8.14	-38.99 9.43	4.61	-3.32	7.21	12/21/2009
LBC Credit Partners III	8,754,669	2.75	2.63	3.44	9.99	-3.32 N/A	10.90	03/07/2014
LBC Credit Partners IV	5,934,609	2.15	10.26	14.26	9.99 N/A	N/A N/A	14.11	03/07/2014
Providence Debt Fund III	10,363,553	2.15	7.53	14.20	9.87	N/A N/A	10.30	09/19/2010
	10,303,555	2.30	7.55	11.30	9.07	IN/A	10.30	04/21/2014



Summary of Partnerships Other Alternative Investments

As of September 30, 2017

Private Equity Summary of Partnership					
Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
Total Real Estate Investments					
Edison Investments	8,146,177	4,007,359	17,262,464	12.0	2.6
New Boston VI	4,862,459	8,295	1,740,268	-19.7	0.4
ARES Value Enhancement Fund V	5,000,000	570,319	5,374,009	5.9	1.2
ARES Value Enhancement Fund VI	5,000,000	996,049	5,364,632	2.9	1.3
Rockspring Capital Land Fund I	3,618,330	618,161	4,738,306	10.7	1.5
Rockspring Capital Land Fund II	7,832,911	6,388,051	4,962,701	3.9	1.4
Rockspring Capital Land Fund III	5,125,000	2,697,554	4,302,644	3.6	1.4
Rockspring Capital Land Fund IV	7,615,498	447,597	9,088,908	3.1	1.3
Rockspring Capital Land Fund V	5,093,604	3,281,580	2,148,413	0.6	1.1
Rockspring Capital Land Fund VI	3,500,000	1,899,331	1,486,623	-0.4	1.0
CB Richard Ellis IV	7,500,000	33,159	170,790	-36.2	0.0
INVESCO Real Estate Fund II	7,027,609	28,398	9,105,937	6.8	1.3
JPM India Property Fund	4,354,162	1,481,085	2,310,946	-2.1	0.9
Vision Capital Partners	5,415,936	2,043,713	570,711	-7.9	0.5
FWAR Investments	4,467,760	268,554	1,182,406	-21.9	0.3
Morgan Stanley	40,000,000	45,461,684	-	9.0	1.1
AEW Partners Fund VIII	2,285,979	1,953,609	371,472	3.3	1.0
Total Timber Investments					
BTG Pactual 1	8,784,007	1,509,075	13,862,803	3.5	1.8
BTG Pactual 2	3,884,164	78,190	3,150,000	-1.4	0.8
Capitol Timberland Investments	14,108,683	16,123,499	3,318,605	3.5	1.4
Domain Environmental Investments II	7,500,000	4,280,846	3,036,648	-0.4	1.0



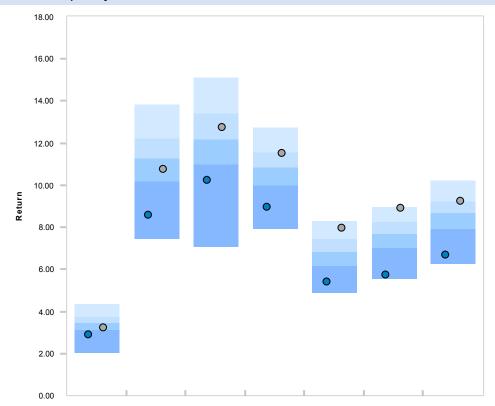
Summary of Partnerships Other Alternative Investments

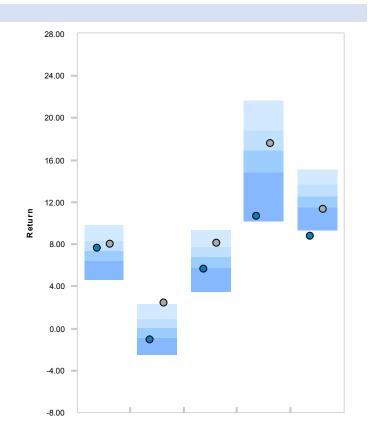
As of September 30, 2017

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
	Ψ	•			
Total Other Equity					
Huff Energy Fund	11,095,509	11,944,482	1,786,358	3.2	1.2
Sail Venture Fund I	5,000,000	842,107	343,503	-17.3	0.2
Sail Venture Fund II	5,366,749	323,492	688,247	-31.4	0.2
Sail Pre-Exit Acceleration Fund	4,947,894	321,092	-	-44.6	0.1
Excelsior Investors, Ltd.	1,018,466	605,834	20,562	-16.3	0.6
Total Other Fixed Income					
Capital Point Partners	12,058,210	4,686,534	8,004,090	1.2	1.1
Franchise Equity Capital Partners II	14,663,847	322,396	14,611,912	0.5	1.0
Franchise Equity Capital Partners III	4,943,551	55,238	6,226,794	7.2	1.3
LBC Credit Partners III	18,837,140	8,754,669	13,904,315	10.9	1.2
LBC Credit Partners IV	6,000,000	5,934,609	503,027	14.1	1.1
Providence Debt Fund III	10,017,001	10,363,553	1,886,321	10.3	1.2



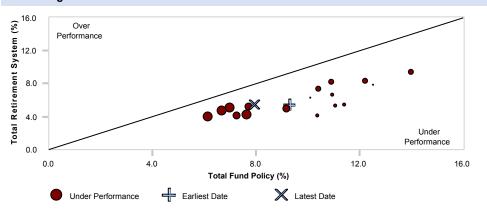
#### Plan Sponsor Peer Group Analysis - All Public Plans-Total Fund





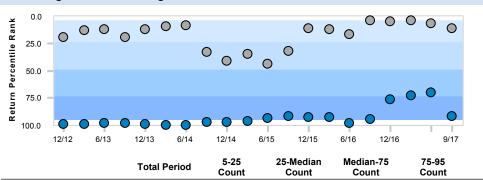
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR		2016	2015	2014	2013	2012
Total Retirement System	2.89 (88)	8.57 (92)	10.23 (85)	8.97 (92)	5.40 (92)	5.72 (95)	6.70 (94)	Total Retirement System	7.67 (41)	-1.05 (79)	5.61 (77)	) 10.66 (9	95) 8.79 (97
Total Fund Policy	3.22 (70)	10.76 (64)	12.72 (40)	11.53 (26)	7.96 (11)	8.90 (7)	9.23 (25)	Total Fund Policy	8.04 (33)	2.43 (5)	8.08 (19)	) 17.56 (4	43) 11.31 (80
Median	3.44	11.29	12.17	10.84	6.83	7.66	8.65	Median	7.30	0.07	6.76	16.92	12.57
Comparative Performance	Э												
		1 Qtr Ending Jun-201		1 ( End Mar-	ling		1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016		1 Qtr Ending Jun-2016			1 Qtr Ending Mar-2016
Total Retirement System		2.17 (9	91)	3.27	(94)		1.53 (19)	3.46 (48)		0.95 (95)		1	.53 (24)
Total Fund Policy		2.89 (5	58)	4.29	(60)		1.77 (13)	3.53 (44)		1.78 (59)		C	).75 (66)
All Public Plans-Total Fund M	edian	2.99		4.44			0.80	3.39		1.90		1	.04





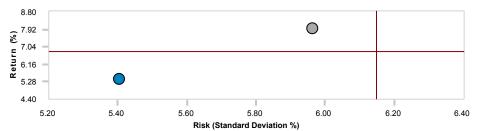
#### 3 Yr Rolling Under/Over Performance - 5 Years

3 Yr Rolling Percentile Ranking - 5 Years

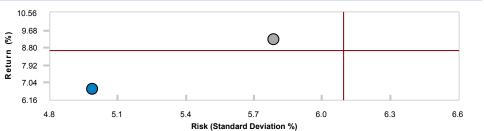


		Count	Count	Count	Count	
Total Retirement System	20	0 (0%)	0 (0%)	2 (10%)	18 (90%)	
Total Fund Policy	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)	

Peer Group Scattergram - 3 Years



#### Peer Group Scattergram - 5 Years



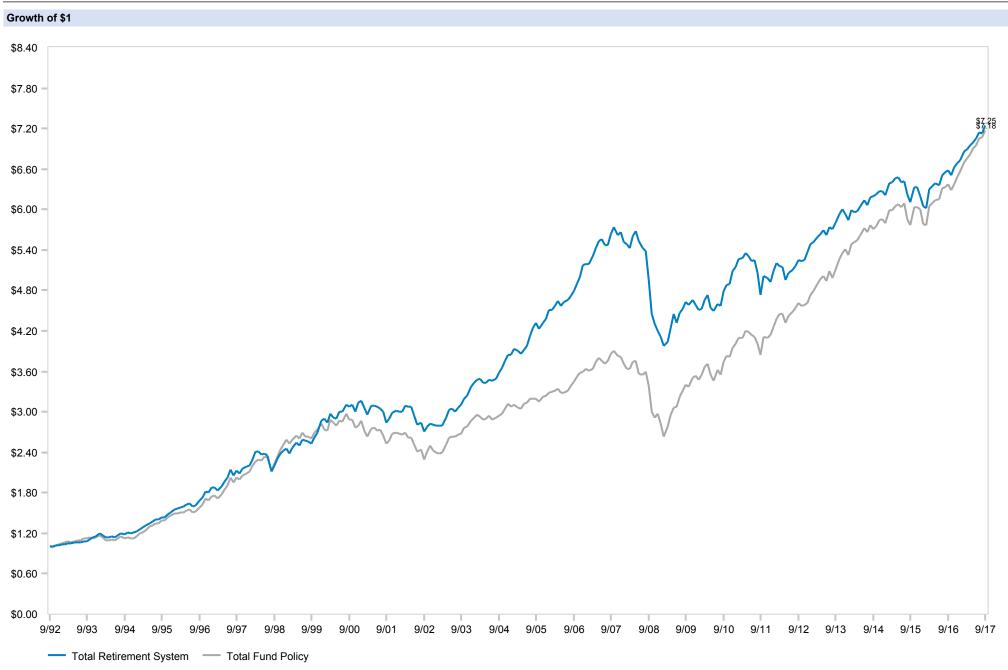
	Return	Standard Deviation		Return	Standard Deviation
Total Retirement System	5.40	5.41	Total Retirement System	6.70	4.99
Total Fund Policy	7.96	5.97	Total Fund Policy	9.23	5.79
Median	6.82	6.15	Median	8.65	6.09

**Historical Statistics - 3 Years** 

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.61	80.30	100.86	-1.44	-1.52	0.95	0.87	3.06
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	1.27	1.00	3.37

	louio							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	2.37	75.41	79.71	-0.48	-1.01	1.29	0.79	2.65
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	1.53	1.00	3.07

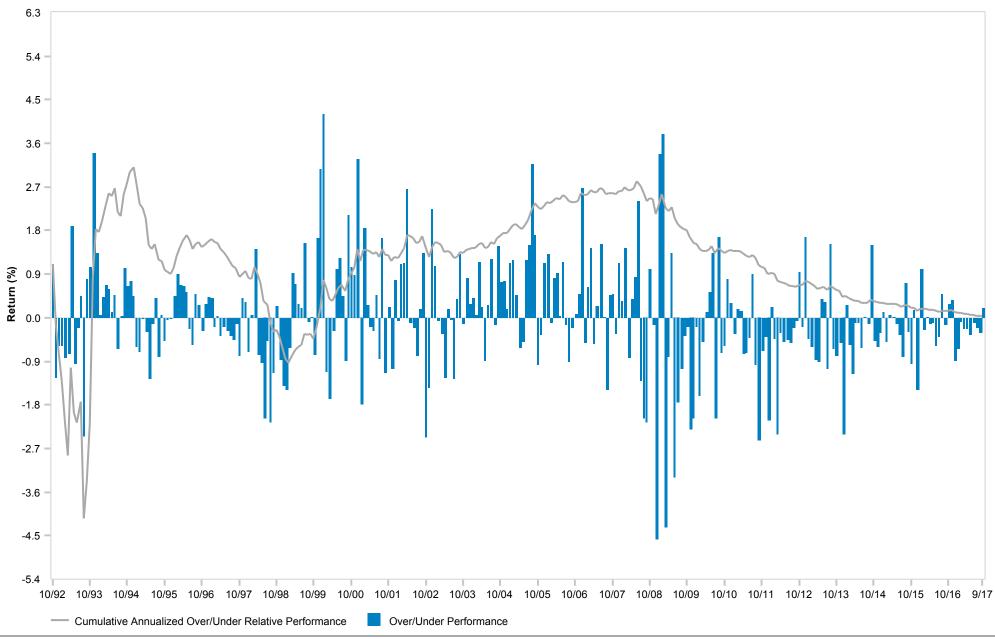




Calculation based on monthly periodicity.



#### **Relative Performance**



Calculation based on monthly periodicity.

# Austin Police Retirement System Investment Pricing Summary as of 9/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Total Retirement System			
Total Equity			
Total Domestic Equity			
NT Collective Russell 3000 Fund	9/30/2017	Monthly	Custodian
Baird Mid Cap Growth	9/30/2017	Monthly	Custodian
Seizert Mid Cap Value	9/30/2017	Monthly	Custodian
Kennedy Small Cap Value	9/30/2017	Monthly	Custodian
Total International Equity			
Thompson Siegel & Walmsley	9/30/2017	Monthly	Custodian
Driehaus International Small Cap Growth	9/30/2017	Monthly	Custodian
LMCG Emerging Markets	9/30/2017	Monthly	Custodian
Total Other Equity			
Huff Energy Fund	6/30/2017	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.	7/31/2017	Monthly	Manager
Total Fixed Income			
Total Fixed Income Funds			
Orleans Capital	9/30/2017	Monthly	Custodian
Templeton Global Multisector Plus	9/30/2017	Monthly	Custodian
Total Other Fixed Income Funds			

# Austin Police Retirement System Investment Pricing Summary as of 9/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Capital Point Partners	6/30/2017	Quarterly	Manager
Franchise Equity Capital Partners II	6/30/2017	Quarterly	Manager
Franchise Equity Capital Partners III	6/30/2017	Quarterly	Manager
LBC Credit Partners III	6/30/2017	Quarterly	Manager
LBC Credit Partners IV	6/30/2017	Quarterly	Manager
Providence Debt Fund III	6/30/2017	Quarterly	Manager
Total Alternatives			
Total Real Estate (Composite)(6091100)			
Rockspring Capital Land Funds (I - VI)	9/30/2017	Quarterly	Manager
Rockspring Capital Land Fund I	9/30/2017	Quarterly	Manager
Rockspring Capital Land Fund II	9/30/2017	Quarterly	Manager
Rockspring Capital Land Fund III	9/30/2017	Quarterly	Manager
Rockspring Capital Land Fund IV	9/30/2017	Quarterly	Manager
Rockspring Capital Land Fund V	9/30/2017	Quarterly	Manager
Rockspring Capital Land Fund VI	9/30/2017	Quarterly	Manager
CB Richard Ellis (IV)	9/30/2017	Quarterly	Manager
CB Richard Ellis IV	9/30/2017	Quarterly	Manager
New Boston (V & VI)	6/30/2017	Quarterly	Manager
New Boston VI	6/30/2017	Quarterly	Manager
Ares Advisors (V & VI)	9/30/2017	Quarterly	Manager
Ares Value Enhancement Fund V	9/30/2017	Quarterly	Manager
Ares Value Enhancement Fund VI	9/30/2017	Quarterly	Manager

Austin Police Retirement System Investment Pricing Summary as of 9/30/2017

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
INVESCO Real Estate Funds (I & II)	9/30/2017	Quarterly	Manager
INVESCO Real Estate Fund II	9/30/2017	Quarterly	Manager
Edison Investments	9/30/2017	Quarterly	Manager
JPM India Property Fund	6/30/2017	Quarterly	Manager
Vision Capital Partners	9/30/2014	Quarterly	Manager
FWAR Investments	9/30/2017	Quarterly	Manager
Morgan Stanley	9/30/2017	Quarterly	Manager
AEW Parters VIII	6/30/2017	Quarterly	Manager
Total Timber Funds			
BTG Pactual (1 & 2)	6/30/2017	Quarterly	Manager
BTG Pactual 1	6/30/2017	Quarterly	Manager
BTG Pactual 2	6/30/2017	Quarterly	Manager
Capitol Timberland Investments	9/30/2017	Quarterly	Manager
Domain Environmental	6/30/2017	Quarterly	Manager
Total Hedge Funds			
Double Eagle Capital Ace Fund, Ltd.	9/30/2017	Monthly	Manager
Cash Account	9/30/2017	Monthly	Custodian
PE Cash Account	9/30/2017	Monthly	Custodian
Retiree Death Benefit Account	9/30/2017	Monthly	Custodian
APRS Building			

# Austin Police

Fee Analysis As of September 30, 2017

				As of deptember of
	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Domestic Equity	0.29	334,390,957	961,530	
NT Collective Russell 3000 Index	0.02	198,204,147	39,641	0.02 % of Assets
Baird Mid Cap Growth	0.70	46,936,703	328,557	0.70 % of First \$50 M 0.60 % Thereafter
Seizert Mid Cap Val (Perf Fee 150-300 .60% +300 .90%)	0.35	46,025,952	161,091	0.35 % of Assets
Kennedy Small Cap Value	1.00	43,224,155	432,242	1.00 % of Assets
Total International Equity	0.82	119,080,469	981,580	
Thompson Siegel & Walmsley	0.65	80,738,104	524,798	0.65 % of Assets
Driehaus International Small Cap Growth	1.72	17,444,848	300,051	1.72 % of Assets
LMCG Emerging Markets Fund	0.75	20,897,516	156,731	0.75 % of Assets
Total Other Equity	1.14	14,037,007	160,000	
Huff Energy Fund	1.26	11,944,482	150,000	
Sail Venture Fund I	0.00	842,107	-	
Sail Venture Fund II	0.00	323,492	-	
Sail Pre-Exit Acceleration Fund	0.00	321,092	-	
Excelsior Investors, Ltd.	1.65	605,834	10,000	
Total Fixed Income	0.45	145,075,609	646,484	
Orleans Capital	0.15	76,822,362	115,234	0.15 % of Assets
Templeton Global Mulisector Plus Trust	0.62	38,136,248	236,445	0.62 % of First \$50 M 0.51 % of Next \$50 M 0.45 % Thereafter
Total Other Fixed Income	0.98	30,116,999	294,806	
Capital Point Partners	0.00	4,686,534	2	
Franchise Equity Capital Partners II	2.00	322,396	6,448	
Franchise Equity Capital Partners III	2.00	55,238	1,105	
LBC Credit Partners III	1.25	8,754,669	109,433	
LBC Credit Partners IV	1.25	5,934,609	74,183	
Providence Debt Fund III	1.00	10,363,553	103,636	
Total Real Estate	0.98	72,184,498	708,789	
Rockspring Capital Land Fund I	1.25	618,161	7,727	1.25 % of Assets
Rockspring Capital Land Fund II	1.25	6,388,051	79,851	1.25 % of Assets
Rockspring Capital Land Fund III	1.25	2,697,554	33,719	1.25 % of Assets
Rockspring Capital Land Fund IV	1.25	447,597	5,595	1.25 % of Assets
Rockspring Capital Land Fund V	1.25	3,281,580	41,020	1.25 % of Assets
Rockspring Capital Land Fund VI	1.25	1,899,331	23,742	1.25 % of Assets



## Austin Police Fee Analysis As of September 30, 2017

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
CB Richard Ellis IV	0.00	33,159	-	0.00 % of Assets
New Boston VI	1.50	8,295	124	1.50 % of Assets
ARES Value Enhancement Fund V	0.85	570,319	4,848	0.85 % of Assets
ARES Value Enhancement Fund VI	0.85	996,049	8,466	0.85 % of Assets
INVESCO Real Estate Fund II	1.50	28,398	426	1.50 % of Assets
Edison Investments	1.00	4,007,359	40,074	1.00 % of Assets
JPM India Property Fund	2.00	1,481,085	29,622	2.00 % of Assets
Vision Capital Partners	0.00	2,043,713	-	0.00 % of Assets
FWAR Investments	0.00	268,554	-	0.00 % of Assets
Morgan Stanley	0.90	45,461,684	409,155	0.90 % of Assets
AEW Partners Fund VIII	1.25	1,953,609	24,420	1.25 % of Assets

Total Timber Funds	1.05	21,991,610	230,618	
BTG Pactual 1	1.00	1,509,075	15,091	1.00 % of Assets
BTG Pactual 2	1.00	78,190	782	1.00 % of Assets
Capitol Timberland Investments	1.00	16,123,499	161,235	1.00 % of Assets
Domain Environmental Investments II	1.25	4,280,846	53,511	1.25 % of Assets
Total Hedge Funds	1.00	31,249,424	312,494	
Double Eagle Capital Ace Fund, Ltd. (1% Mgt Fee & 10% of profit after a 7% retn)	1.00	31,249,424	312,494	1.00 % of Assets
Cash Account	0.00	7,003,264	-	0.00 % of Assets
Cash Account PE		-	-	0.00 % of Assets
Retiree Death Benefit Account	0.00	1,198,430	-	0.00 % of Assets
APRS Building	0.00	1,338,769	-	0.00 % of Assets
Total Retirement System	0.54	747,550,037	4,001,496	



Total Fund Policy		Total Equity Policy		Total Fixed Income Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1976		Jan-1979		Dec-1993	
S&P 500 Index	60.00	Russell 3000 Index	67.00	Bloomberg Barclays U.S. Aggregate Index	100.00
Bloomberg Barclays U.S. Aggregate Index	40.00	MSCI World ex U.S.	33.00	Jan-1999	
Jan-2014		Jan-2017		Bloomberg Barclays U.S. Aggregate Index	50.00
Russell 3000 Index	30.00	Russell 3000 Index	75.00	Blmbg. Barc. Global Multiverse	50.00
MSCI World ex U.S.	15.00	MSCI World ex U.S.	25.00		
Bloomberg Barclays U.S. Aggregate Index	5.00				
Blmbg. Barc. Global Multiverse	5.00				
NCREIF Property Index	15.00				
NCREIF Timberland Index (Monthly)	5.00				
Russell 3000 + 300 bps	12.50				
HFRI Fund of Funds Composite Index	10.00				
Citigroup 3 Month T-Bill Index	2.50				
Jan-2017					
Russell 3000 Index	45.00				
MSCI World ex U.S.	15.00	Total Private Equity Policy		Wellington Energy Hybrid	
Bloomberg Barclays U.S. Aggregate Index	5.00	Allocation Mandate	Weight	%) Allocation Mandate	Neight (%)
Blmbg. Barc. Global Multiverse	5.00	May-2013		Jan-1999	
NCREIF Property Index	15.00	Russell 3000 Index	100.0	Russell 3000 Energy SP	100.00
NCREIF Timberland Index (Monthly)	2.50				
HFRI Fund of Funds Composite Index	5.00	Jan-2017		Oct-2015	
Credit Suisse Leveraged Loan Index	5.00	Credit Suisse Leveraged Loan Index	67.0	) S&P 500 Energy	100.00

Total Hedge Fund Policy		Total Timber Policy		Total Real Estate Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1990		Apr-1987		Jan-1978	
HFRI Fund of Funds Composite Index	100.00	NCREIF Timberland Index	100.00	NCREIF Property Index	100.00

33.00

Cambridge Associates Private Equity Index (Proxy)

2.50



Cambridge Associates Private Equity Index (Proxy)

- 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 or 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.

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



AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

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

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