



**CAPTRUST**

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**CITY OF FORT LAUDERDALE  
POLICE AND FIRE RETIREMENT SYSTEM**

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**PERFORMANCE REVIEW  
MARCH 31, 2019**





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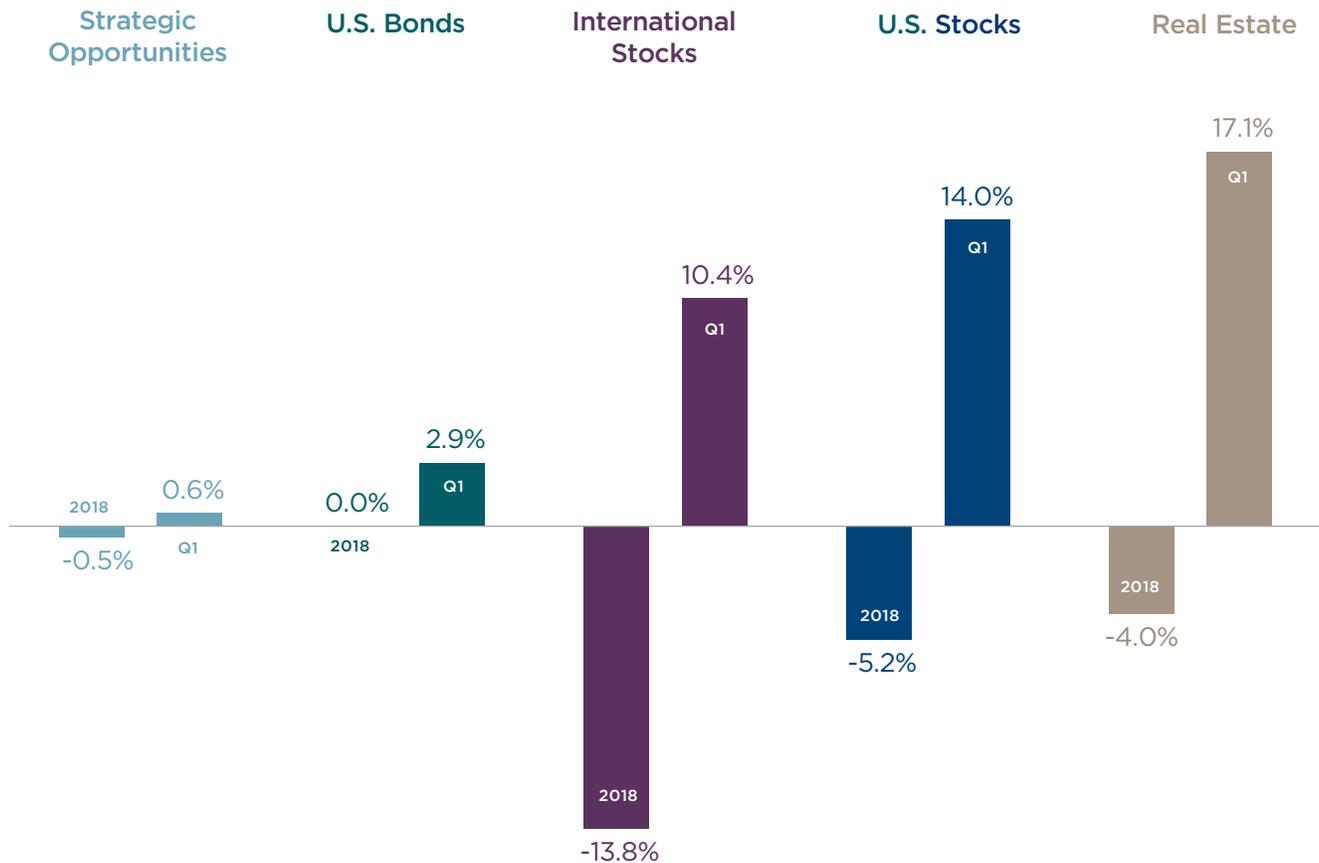
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## MARKETS BOUNCE BACK

After a challenging end to 2018, all major asset classes rang in the new year with solid gains. Public real estate and U.S. and international stocks all but recovered from their fourth quarter woes as a respite from Fed rate hikes renewed investor confidence in stocks and fueled a bond market rally.

- U.S. stocks notched double-digit gains in the first quarter, with large-cap stocks posting their best quarter since 2009 on hopes of a patient Federal Reserve and a trade deal with China.
- International developed stocks followed suit but lagged their U.S. counterparts due to concerns about sluggish European growth. Emerging market stocks also rallied, aided by a stable U.S. dollar and expectations of fiscal stimulus in China.
- Bonds posted a strong March and closed out the first quarter with a solid gain as interest rates fell sharply.
- Public real estate has been this year’s standout performer so far, driven by lower interest rates and favorable market dynamics across most property types.
- Strategic opportunities treaded water in March but have managed a small gain for the year.



Asset class returns are represented by the following indexes: Russell 3000 Index (U.S. stocks), MSCI All-Country World ex USA Index (international stocks), Bloomberg Barclays U.S. Aggregate Bond Index (U.S. bonds), Dow Jones U.S. Real Estate Index (real estate), and HFRX Absolute Return Index (strategic opportunities).

## DIGGING DEEPER – STOCKS AND BONDS

### Equities

	Q1 2019	YTD 2019	Last 12 Months
U.S. Stocks	13.6%	13.6%	9.5%
- Best Sector: Technology	19.9%	19.9%	15.4%
- Worst Sector: Health Care	6.6%	6.6%	14.9%
International Stocks	10.1%	10.1%	-3.2%
Emerging Market Stocks	10.0%	10.0%	-7.1%

### Fixed Income

	3.31.19	12.31.18	3.31.18
1-Year U.S. Treasury Yield	2.40%	2.63%	2.09%
10-Year U.S. Treasury Yield	2.41%	2.69%	2.74%
	QTD 2019	YTD 2019	Last 12 Months
10-Year U.S. Treasury Total Return	3.08%	3.08%	5.60%

### Equities – Relative Performance by Market Capitalization and Style

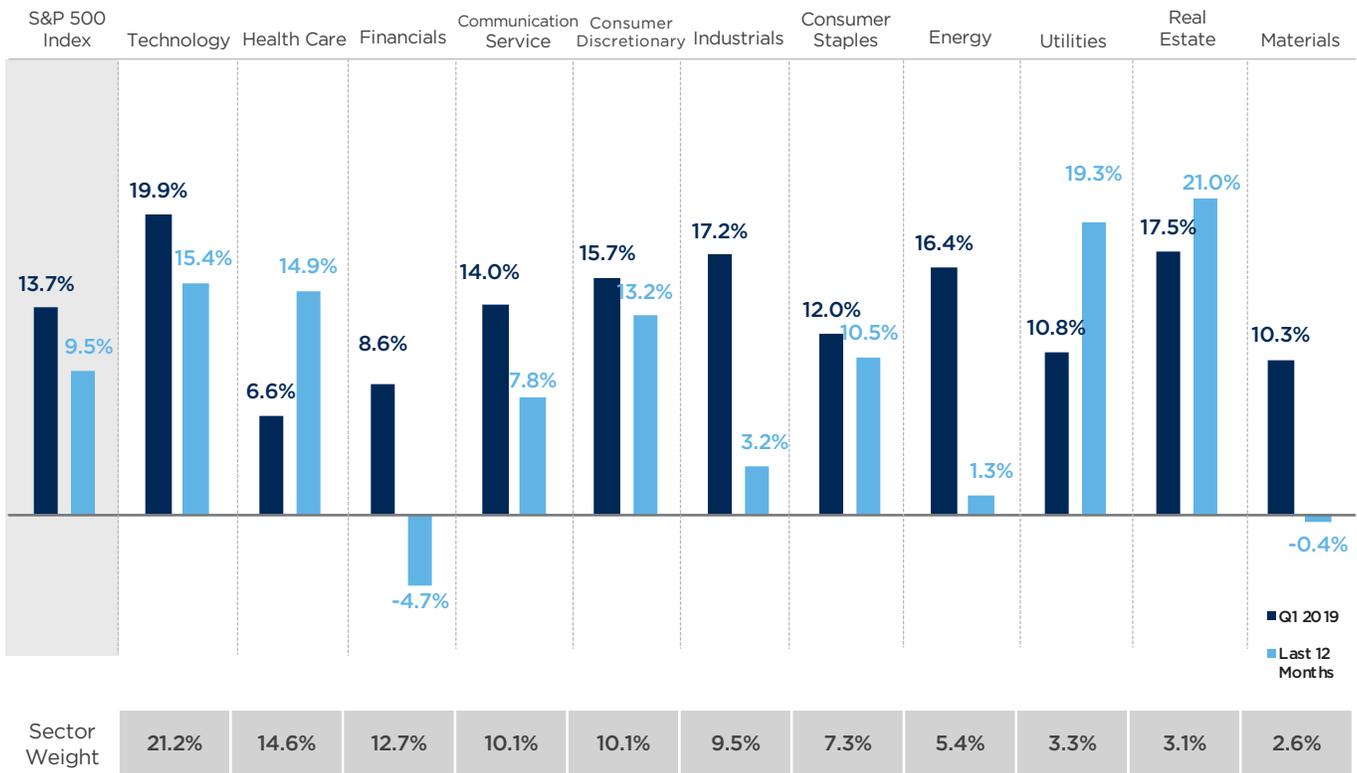
Q1 2019/YTD 2019			2018				Last 12 Months				
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	11.9%	13.6%	16.1%	Large	-8.3%	-4.4%	-1.5%	Large	5.7%	9.5%	12.7%
Mid	14.4%	16.5%	19.6%	Mid	-12.3%	-9.1%	-4.8%	Mid	2.9%	6.5%	11.5%
Small	11.9%	14.6%	17.1%	Small	-12.9%	-11.0%	-9.3%	Small	0.2%	2.0%	3.9%

Asset class returns are represented by the following indexes: S&P 500 Index (U.S. stocks), MSCI EAFE Index (international stocks), and MSCI Emerging Markets Index (emerging market stocks). Relative performance by market capitalization and style is based upon the Russell Pure Style Indexes except for large-cap blend, which is based upon the S&P 500 Index. Source: Bloomberg, U.S. Treasury, Barclays Live.

## DIGGING DEEPER: U.S. EQUITY MARKETS

The S&P 500 Index is a market-capitalization-weighted index of U.S. large-cap stocks across a diversity of industry sectors. The stocks represented in those 11 sectors generated a range of returns over the last 3-12 months.

Returns by S&P 500 Sector



Source: Bloomberg. Data as of 3.31.2019. All calculations are cumulative total return, not annualized, including dividends for the stated period. Past performance is not indicative of future returns.

## DIGGING DEEPER: FIXED INCOME MARKET

Interest Rates	3 Month	2 Year	5 Year	10 Year	30 Year	Mortgage Rate
December 2018	2.45%	2.48%	2.51%	2.69%	3.02%	4.51%
March 2019	2.40%	2.27%	2.23%	2.41%	2.81%	4.08%
Change	-0.05%	-0.21%	-0.28%	-0.28%	-0.21%	-0.43%

Interest rates continued to decline in the first quarter across the yield curve. Mortgage rates declined significantly, providing relief to the housing sector.

Bloomberg Barclays U.S. Aggregate Bond Index	Yield to Worst	Duration	Total Return	Spread	Treasury Rate	AA Spread	BBB Spread
December 2018	3.28%	5.87		0.66%	2.62%	0.74%	1.97%
March 2019	2.93%	5.82		0.58%	2.35%	0.57%	1.57%
Change	-0.35%	-0.05	2.94%	-0.08%	-0.27%	-0.17%	-0.40%

A 2.94% return for the Bloomberg Barclays Aggregate is an unsustainably strong return for the quarter. It is unusual to see both interest rates and credit spreads decline this much at the same time.

Bloomberg Barclays U.S. Long Credit Index	Yield to Worst	Duration	Total Return	Spread	Treasury Rate	AA Spread	BBB Spread
December 2018	4.89%	13.28		1.96%	2.93%	1.18%	2.46%
March 2019	4.39%	13.68		1.72%	2.67%	1.05%	2.17%
Change	-0.50%	0.4	7.86%	-0.24%	-0.26%	-0.13%	-0.29%

Long Credit rallied hard in the first quarter, returning nearly 8%. Both credit spreads and interest rates declined, particularly BBB spreads as liquidity concerns eased.

Source: Bloomberg, Barclays Live, CAPTRUST, U.S. Treasury.



## ECONOMIC OUTLOOK

The global economic picture typically consists of favorable attributes (tailwinds) and challenges (headwinds). Here, we provide our perspective on both and offer our view on which side has the upper hand.

### TAILWINDS

#### Turnabout at the Fed

- The market misbehaved in Q4 2018, but the Federal Reserve reacted by pausing short-term rate increases and halting the decline of its balance sheet.
- In reaction, the stock market posted its best first quarter in 21 years.

#### Bull Market Bounce Back

- Given the current bull market's advancing age, many pundits suggest that its end is near and that a recession is right around the corner.
- However, bull market peak indicators do not suggest to us that a recession is imminent in the near term.

#### Housing Helped by Fed Policy Change

- Mortgage rates declined from more than 5% to 4%, making mortgages (and housing) more affordable.

#### Solid Bank Balance Sheets

- Banks' financial strength, credit quality, and profitability have improved significantly over the past decade.
- Today, banks are much better prepared for economic stress than prior to the financial crisis.



### HEADWINDS

#### Inverted Yield Curve

- An inverted curve always incites recession worries, and Q4's 20% stock price decline added fuel to the fire.
- The stock market's sharp Q1 rebound, however, should dampen recession fears.

#### Moderating Economic Growth

- The global economy continues to grow, albeit at a slowing pace, and economic growth in Europe is anemic.

#### China Trade Deal Hopes

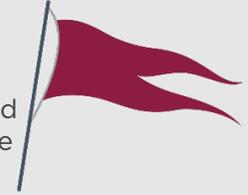
- U.S. and China are on track to sign a trade deal, but the negotiations are volatile and risks remain.
- Lack of resolution continues to weigh on business confidence (although a signed deal could buoy the markets).

#### Confidence Trending Down

- Consumer and business confidence has declined from peak levels in Q2 2018, a negative indicator for corporate reinvestment.

#### Flattish Corporate Earnings

- Earnings growth expectations for 2019 have declined from 7.9% to 3.7% over the last three months.



Remember, the economy isn't the market and the market isn't the economy.



## VOLATILITY WORKS BOTH WAYS

The U.S. stock market suffered its worst quarter (negative volatility) in 7 years in the fourth quarter of 2018. In the first quarter of 2019, volatility caused major swings in the market. But this time it was a positive. The first quarter was the best quarter in 10 years. Interestingly, rather than pointing to a recession, the fourth-quarter slump might have prevented one. The Federal Reserve’s rapid response—announcing policy changes to stop increasing rates and halting the decline of the Fed’s balance sheet—propelled a major market reversal and fueled the first quarter’s stock (and bond) market rally.



Source: Bloomberg

### OBSERVATIONS

- The stock market plunged in 2018’s fourth quarter on investors’ recession fears driven by an economic slowdown, especially in the emerging markets and parts of Europe.
- Investors had worried that Fed interest rate hikes had been too aggressive, hampering U.S. economic growth.
- Bad news from the U.S.-China trade negotiations also contributed to the selloff.
- In Q1, stocks erased Q4’s losses and posted their best first quarter in years. Fed policy changes, in conjunction with aggressive stimulus from Chinese policy makers, relieved concerns about a looming recession triggered by a weak China dragging down a very weak Europe.
- The substantial increase in market prices could be a signal that we have already put a near-term recession in the rearview mirror.

## BULL MARKET CHECKLIST

As the saying goes, “Without data, you’re just another person with an opinion.” Given all the talk in the media about our aging bull market and recession fears, we thought it might be helpful to look at key market indicators at the market tops in 2000 and 2007 to see if they apply to where we sit at the end of the first quarter of 2019.

	Indicator	2000	2007	Now	Comments
1	Blow-off top (steep and rapid rise of stock prices)	✓	✓	X	Equity market expectations have remained constrained since the market low in 2009, and investors are not paying peak multiples for peak earnings.
2	Heavy inflows into equity mutual funds and exchange-traded funds (ETFs)	✓	✓	X	Net inflows into equity mutual funds and ETFs are underwhelming while inflows into bond funds remain robust.
3	Big pick-up in merger and acquisition activity	✓	✓	✓	M&A activity has picked up significantly. In absolute dollar terms, activity is approaching historical highs.
4	Initial public offering (IPO) activity	✓	✓	?	IPO activity has been lackluster during this bull market, but the current list of pending IPOs will test whether fear gives way to greed among investors.
5	Rising real interest rates	✓	✓	X	Real interest rates have declined meaningfully from their peak in early November.
6	Weakening upward earnings revisions	✓	✓	✓	Analysts have revised earnings estimates down recently.
7	Erosion in number of stocks making new highs	✓	✓	X	Breadth has improved significantly during the current rally.
8	Shift towards defensive leadership	✓	✓	X	Cyclical stocks have outpaced defensive stocks since last year’s selloff.
9	Widening credit spreads	✓	✓	X	High yield and investment grade credit spreads have moved higher recently but remain contained compared to historical levels.

Source: Strategas

## IS ANOTHER FINANCIAL CRISIS LOOMING?

In the aftermath of the financial crisis, U.S. and international regulators implemented a regulatory framework to manage the systematic risk of large banks. Banks were forced to get safer, and they now must undergo annual stress tests. They face heavy scrutiny and must do business in less risky ways if they want to satisfy their stringent leverage and capital requirements. Although it's hard to foresee what would trigger another financial crisis, it's unlikely to come from the much stronger global banking system we have today.

Citigroup – Key Financial Strength Measures

Measure	Indicator	2007	2018	Change
Financial Strength	Tangible Common Equity Ratio	2.7%	8.0%	193%
	Tier 1 Capital Ratio	7.1%	13.5%	89%
Credit Quality and Leverage	Nonperforming Loans to Total Loans	1.1%	0.5%	-54%
	Nonperforming Assets to Total Assets	0.5%	0.2%	-60%
	Total Debt to Total Equity	10.1x	2.8x	-72%
	Loans to Deposits	101%	71%	-30%
Profitability	Return on Common Equity	3.1%	9.3%	201%
	Efficiency Ratio	75%	58%	-24%
	Full-time Employees	374,000	204,000	-45%

Source: Bloomberg

## YIELD CURVE INVERSION: CORRELATION, NOT CAUSATION

An inverted yield curve occurs when short-term Treasury yields exceed the yields of longer-term Treasuries. Yield curve inversions are correlated with recessions, but they do not cause recessions. Simply put, yield curve inversion does not mean that the next recession is imminent. The yield curve inversion we are currently experiencing has not been preceded by worries about excessive inflation, wage growth, or credit expansion. Therefore, we don't believe the Fed is trying to engineer an economic slowdown to counter such economic issues. We think the chance of a recession in the U.S. in the next 12 months is less than one in four.

**S&P 500 Returns One Year after Yield Curve Inversion  
(Since 1960)**

Inversion Date	1-Year Return
01.12.1966	-11.1%
12.17.1968	-15.0%
06.01.1973	-16.4%
10.28.1974	30.2%
11.01.1978	4.0%
10.27.1980	-7.3%
02.16.1982	27.1%
03.28.1989	15.1%
09.11.1998	33.6%
04.05.2000	-25.6%
01.18.2006	11.9%
03.22.2019	???
Average	4.2%
% Positive	54.5%



Since 1960, the yield on 3-month Treasuries has exceeded that of the 10-year eleven times. One year later, the S&P 500 had risen 6 times—54% of the time—for an average gain of 4.2%.

Source: Strategas

### POTENTIAL CAUSES OF YIELD CURVE INVERSION THIS TIME:

- Investors lost faith in central bankers' ability to generate higher interest rates and inflation.
- As investors feared a deteriorating global outlook, they retreated from risky assets to longer-term U.S. Treasury bonds, pushing bond prices up and yields down.
- The very low interest rates in Europe, especially in Germany, may act as an anchor pulling U.S. rates down.
- The Federal Reserve is pursuing policies to slow down U.S. economic growth.



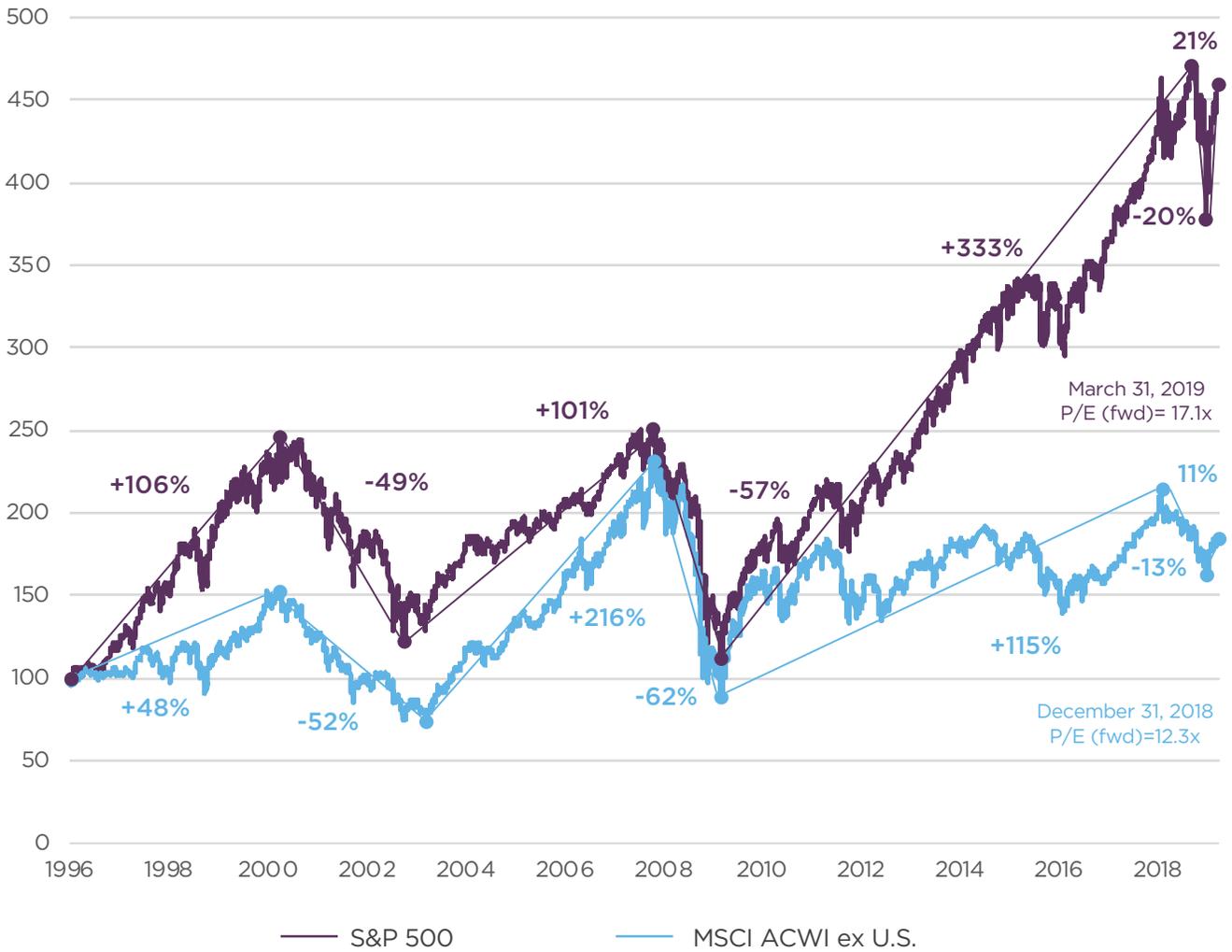
S&P 500 Index: Forward P/E Ratio



Source: Bloomberg, Robert Shiller

Valuation Measure	Description	Latest	25-year Average	Std Dev Over-/Under-Valued	Inception Year
P/E	Forward P/E	17.1x	17.1x	0.0x	1994
CAPE	Shiller's P/E	29.9	26.9	0.5	1994
Div. Yield	Dividend Yield	2.0%	2.1%	-0.3	2006
P/B	Price to Book	3.4	3.0	0.5	1994
P/CF	Price to Cash Flow	12.0	10.4	0.9	2006

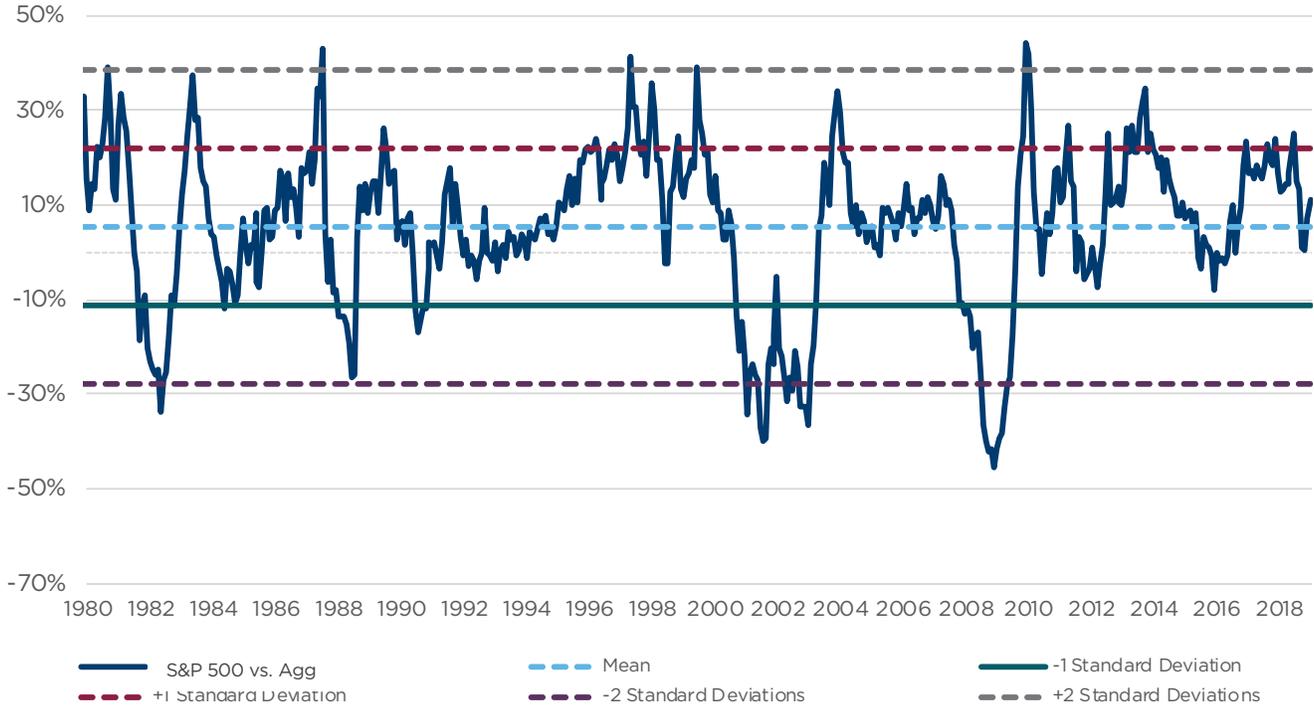
S&P 500 and MSCI ACWI Excluding U.S. Index Price Return  
(January 1996 = 100)



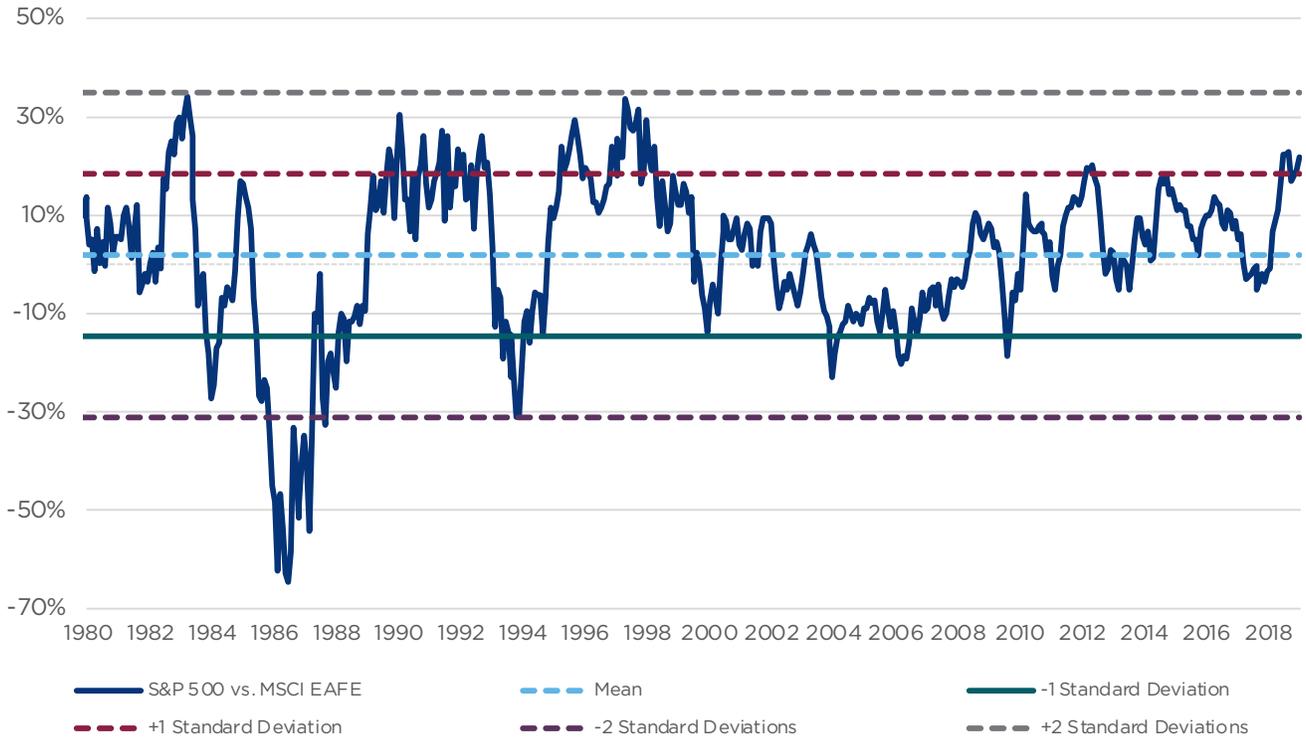
Source: Bloomberg

	P/E	Avg Since 12.31.2005	Div Yield	Avg Since 12.31.2005
S&P 500	17.1x	15.6x	2.0%	2.1%
MSCI ACWI ex-U.S.	13.4x	13.4x	3.4%	3.2%

S&P 500 vs. Bloomberg Barclays U.S. Aggregate



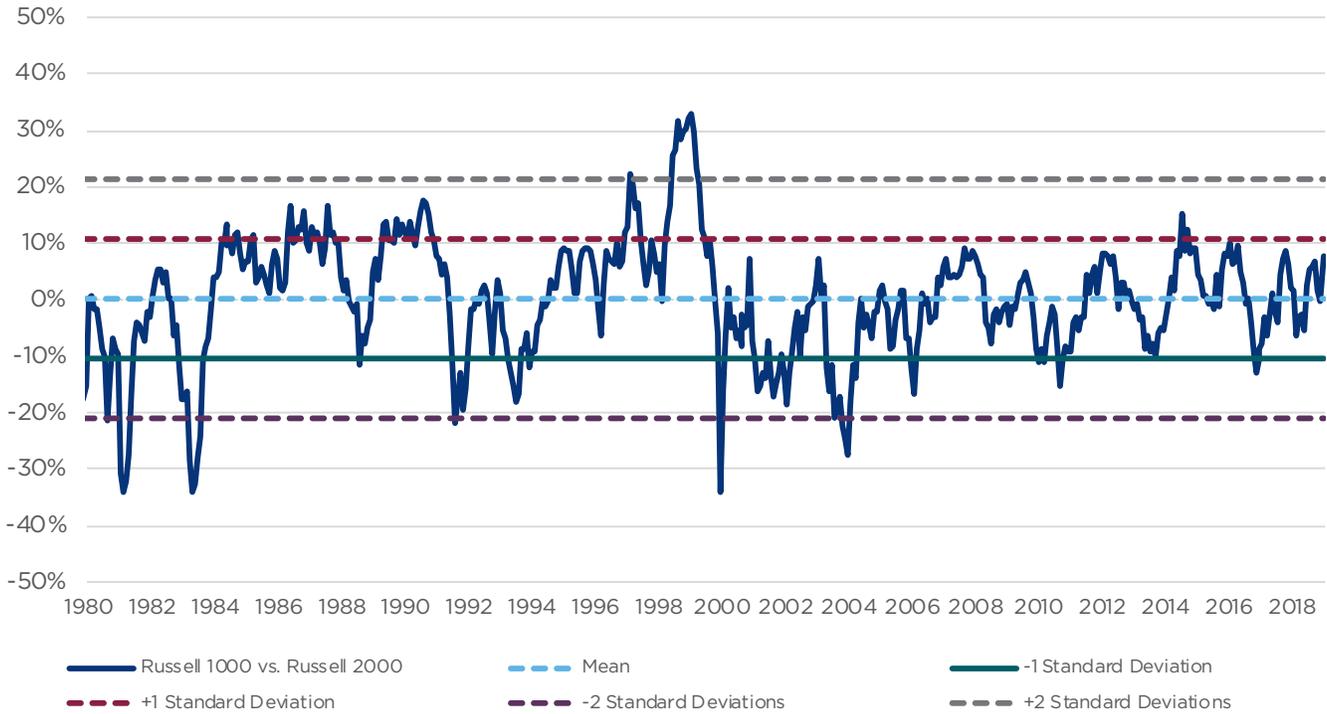
S&P 500 vs. MSCI EAFE



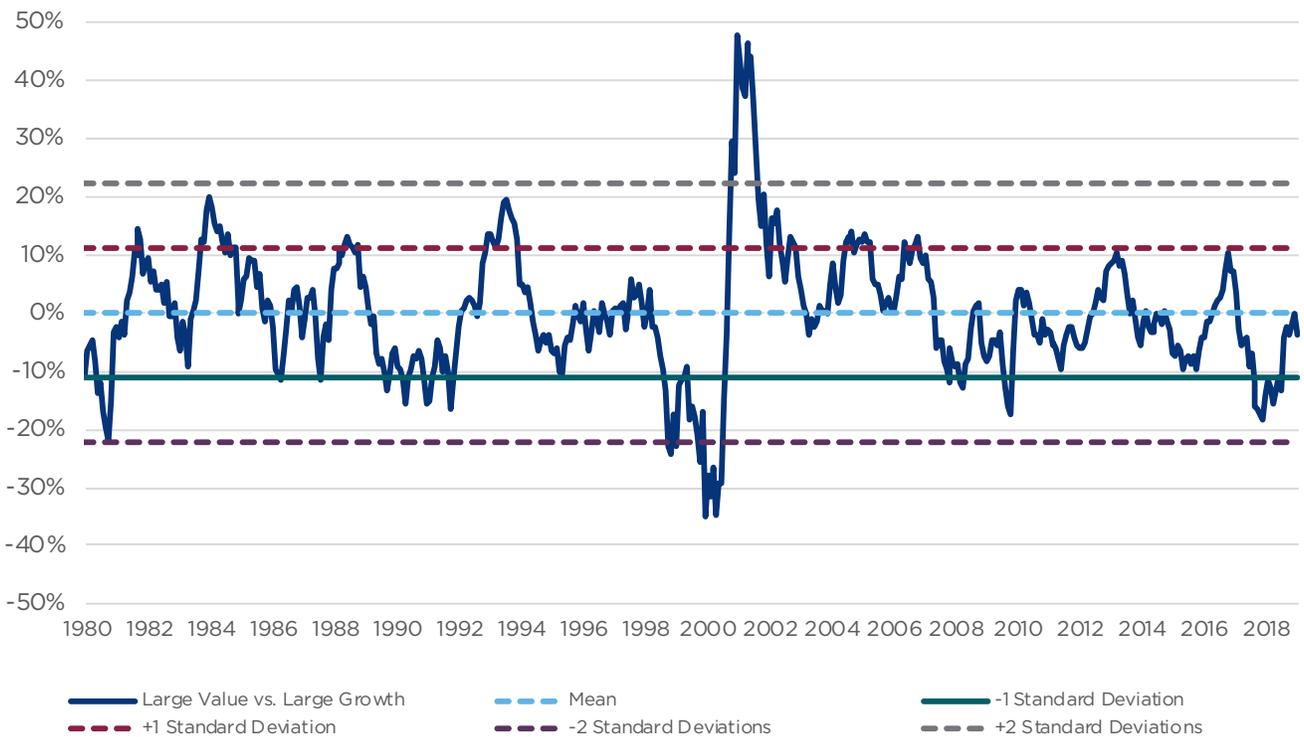
Source: CAPTRUST research, Bloomberg



Russell 1000 vs. Russell 2000

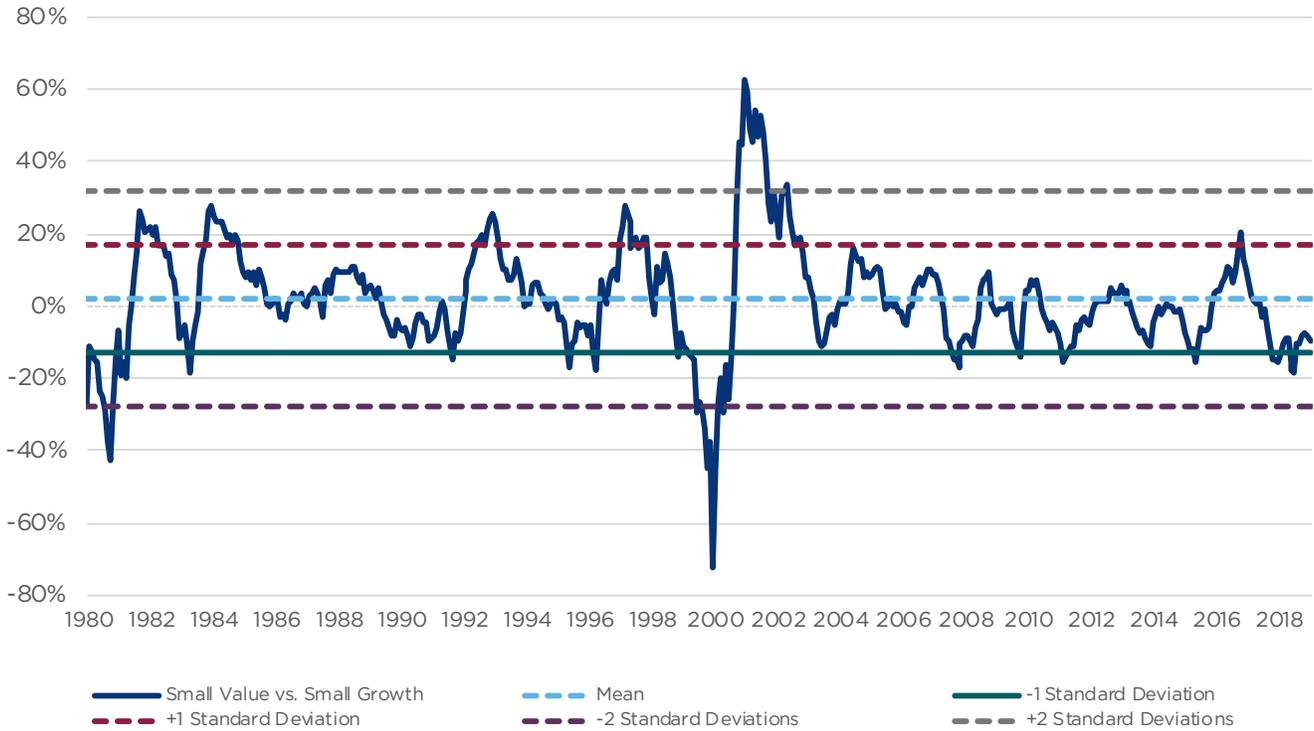


Russell 1000 Value vs. Russell 1000 Growth

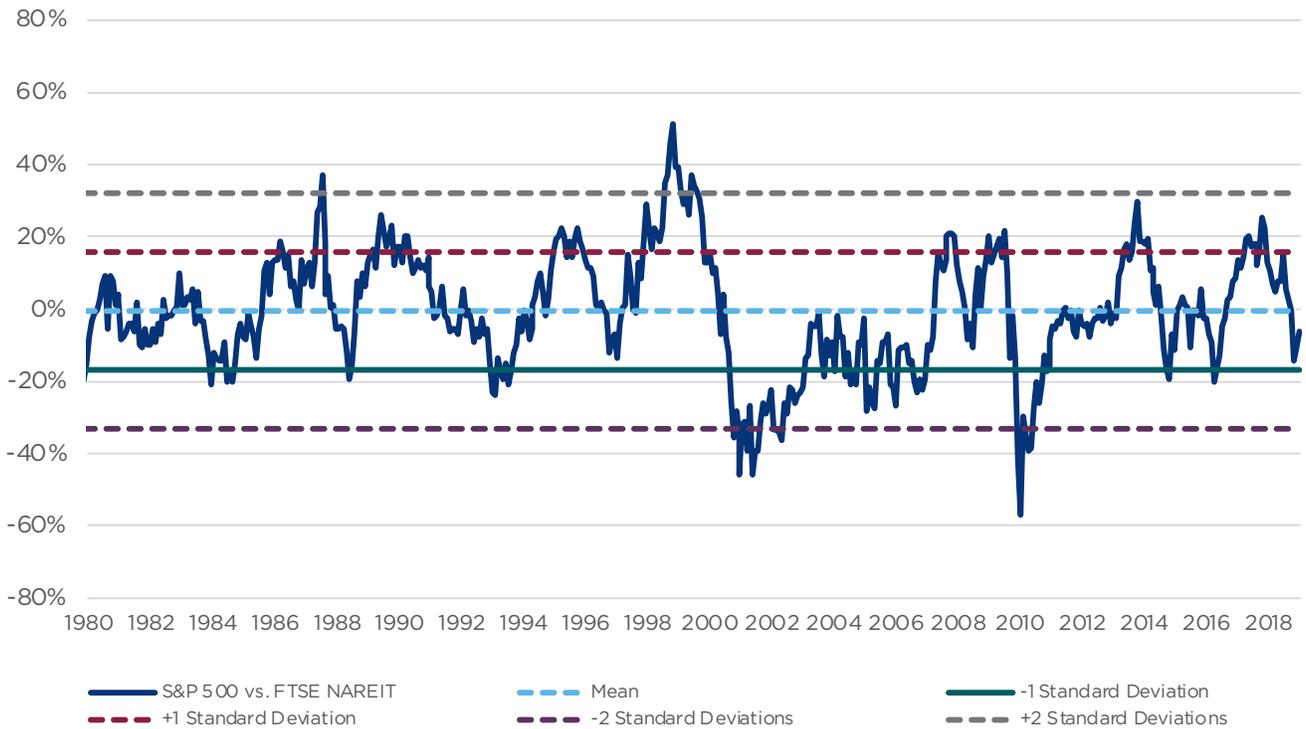


Source: CAPTRUST research, Bloomberg

Russell 2000 Value vs. Russell 2000 Growth

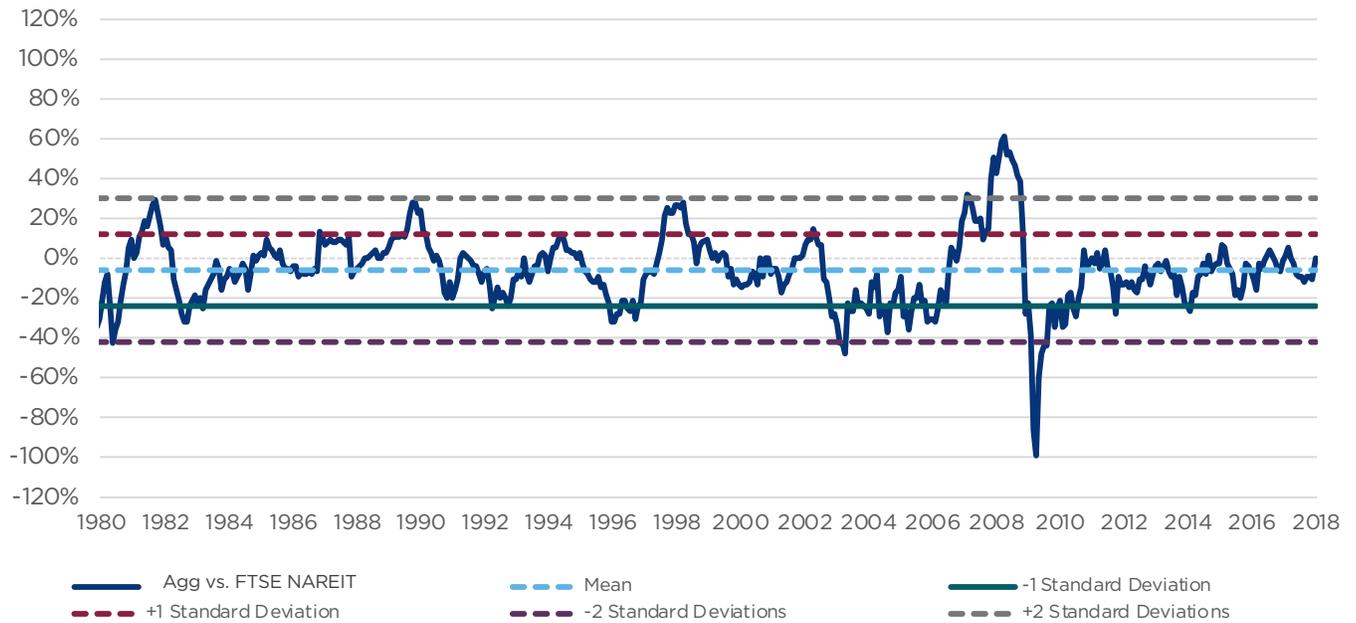


S&P 500 vs. FTSE NAREIT



Source: CAPTRUST research, Bloomberg

Bloomberg Barclays U.S. Aggregate Vs. FTSE NAREIT



Source: CAPTRUST research, Bloomberg

# ASSET CLASS RETURNS

Period Ending 3.31.19 | Q1 19

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Real Estate 35.92%	International Equities 17.12%	Fixed Income 5.24%	International Equities 42.14%	Real Estate 28.48%	Real Estate 8.69%	Real Estate 17.77%	Small-Cap Stocks 38.82%	Real Estate 30.38%	Strategic Opportunities 2.86%	Small-Cap Stocks 21.31%	International Equities 27.77%	Cash 1.87%	Real Estate 17.08%
International Equities 27.16%	Fixed Income 6.97%	Cash 1.51%	Mid-Cap Stocks 40.48%	Small-Cap Stocks 26.85%	Fixed Income 7.84%	International Equities 17.39%	Mid-Cap Stocks 34.76%	Large-Cap Stocks 13.24%	Real Estate 2.14%	Mid-Cap Stocks 13.80%	Large-Cap Stocks 21.69%	Fixed Income 0.01%	Mid-Cap Stocks 16.54%
Small-Cap Stocks 18.37%	Strategic Opportunities 6.68%	Strategic Opportunities -13.09%	Real Estate 28.61%	Mid-Cap Stocks 25.48%	Large-Cap Stocks 1.50%	Mid-Cap Stocks 17.28%	Large-Cap Stocks 33.11%	Mid-Cap Stocks 13.22%	Large-Cap Stocks 0.92%	Large-Cap Stocks 12.05%	Mid-Cap Stocks 18.52%	Strategic Opportunities -0.49%	Small-Cap Stocks 14.58%
Large-Cap Stocks 15.46%	Large-Cap Stocks 5.77%	Small-Cap Stocks -33.79%	Large-Cap Stocks 28.43%	Large-Cap Stocks 16.10%	Cash 0.10%	Large-Cap Stocks 16.42%	International Equities 15.78%	Fixed Income 5.97%	Fixed Income 0.55%	Real Estate 7.56%	Small-Cap Stocks 14.65%	Real Estate -4.03%	Large-Cap Stocks 14.00%
Mid-Cap Stocks 15.26%	Mid-Cap Stocks 5.60%	Large-Cap Stocks -37.60%	Small-Cap Stocks 27.17%	International Equities 11.60%	Mid-Cap Stocks -1.55%	Small-Cap Stocks 16.35%	Strategic Opportunities 3.58%	Small-Cap Stocks 4.89%	Cash 0.05%	International Equities 5.01%	Real Estate 9.84%	Large-Cap Stocks -4.78%	International Equities 10.44%
Strategic Opportunities 7.43%	Cash 4.71%	Real Estate -37.97%	Fixed Income 5.93%	Fixed Income 6.54%	Strategic Opportunities -3.71%	Fixed Income 4.22%	Real Estate 2.47%	Strategic Opportunities 0.79%	Mid-Cap Stocks -2.44%	Fixed Income 2.65%	Fixed Income 3.54%	Mid-Cap Stocks -9.06%	Fixed Income 2.94%
Cash 5.08%	Small-Cap Stocks -1.57%	Mid-Cap Stocks -41.46%	Cash 0.21%	Cash 0.13%	Small-Cap Stocks -4.18%	Strategic Opportunities 0.88%	Cash 0.07%	Cash 0.03%	Small-Cap Stocks -4.41%	Cash 0.33%	Strategic Opportunities 3.40%	Small-Cap Stocks -11.01%	Cash 0.60%
Fixed Income 4.33%	Real Estate -16.82%	International Equities -45.25%	Strategic Opportunities -3.58%	Strategic Opportunities -0.12%	International Equities -13.33%	Cash 0.11%	Fixed Income -2.02%	International Equities -3.44%	International Equities -5.25%	Strategic Opportunities 0.31%	Cash 0.86%	International Equities -13.78%	Strategic Opportunities 0.56%

Source: Markov Processes, Inc., Bloomberg, Mobius

## Large-Cap Stocks (Russell 1000 Index)

The Russell 1000 Index tracks the performance of 1,000 of the largest public companies in the U.S. It includes more than 90% of the total market capitalization of all listed U.S. stocks.

## Mid-Cap Stocks (Russell Mid-Cap Index)

The Russell Mid-Cap Index is a market-capitalization-weighted index representing the smallest 800 companies in the Russell 1000 Index.

## Small-Cap Stocks (Russell 2000 Index)

The Russell 2000 Index tracks the performance of approximately 2,000 small-cap companies contained in the Russell 3000 Index, which is made up of 3,000 of the biggest U.S. stocks.

## International Equities (MSCI ACWI Ex-US Index)

The MSCI ACWI Ex-US Index tracks large- and mid-cap stocks from 22 of 23 developed market countries (excluding the U.S.) and 24 emerging markets countries. This index covers approximately 85% of the global equity opportunity set outside the United States.

## Fixed Income (Bloomberg Barclays U.S. Aggregate Bond Index)

The Bloomberg Barclays U.S. Aggregate Bond Index is a market capitalization-weighted index that tracks the majority of U.S.-traded investment grade bonds. The index includes Treasuries, agency bonds, mortgage-backed bonds, corporate bonds, and a small amount of foreign bonds traded in United States.

## Real Estate (Dow Jones US Real Estate Index)

The Dow Jones US Real Estate Index tracks the performance of publicly traded real estate equity. It is comprised of companies whose charter is the equity ownership and operation of commercial real estate.

## Strategic Opportunities (HFRX Absolute Return Index)

The HFRX Absolute Return Index measures the overall returns of hedge funds. Since hedge funds explore unique investment strategies and seek to generate absolute returns rather than focus on beating a benchmark, the HFRX is representative of all hedge fund strategies.

## Cash (BofA Merrill Lynch 3-Month Treasury Bill Index)

The BofA Merrill Lynch 3-Month Treasury Bill Index tracks the performance of the U.S. dollar denominated U.S. Treasury Bills publicly issued in the U.S. domestic market with a remaining term to maturity of less than 3 months.

The information contained in this report is from sources believed to be reliable, but not warranted by CAPTRUST Financial Advisors to be accurate or complete.



# INDEX PERFORMANCE

Period Ending 3.31.19 | Q1 19

INDEXES	Q1 2019	2018	2017	2016	2015	2014	1 YEAR	3 YEAR	5 YEAR	10 YEAR
90-Day US Treasury	0.60%	1.87%	0.86%	0.33%	0.05%	0.03%	2.12%	1.19%	0.74%	0.43%
Bloomberg Barclays Government 1-3 Year	0.99%	1.58%	0.45%	0.87%	0.57%	0.64%	2.74%	1.00%	0.99%	1.10%
Bloomberg Barclays Intermediate Govt	1.58%	1.43%	1.14%	1.05%	1.18%	2.52%	3.79%	0.97%	1.65%	2.00%
Bloomberg Barclays Muni Bond	2.90%	1.28%	5.45%	0.25%	3.30%	9.05%	5.38%	2.71%	3.73%	4.72%
Bloomberg Barclays Intermediate Govt/Credit	2.32%	0.88%	2.14%	2.08%	1.07%	3.13%	4.24%	1.66%	2.12%	3.14%
Bloomberg Barclays Intermediate Credit	3.55%	0.01%	3.67%	3.68%	0.90%	4.16%	5.00%	2.72%	2.85%	5.21%
Bloomberg Barclays Aggregate Bond	2.94%	0.01%	3.54%	2.65%	0.55%	5.97%	4.48%	2.03%	2.74%	3.77%
Bloomberg Barclays Corporate IG Bond	5.14%	-2.51%	6.42%	6.11%	-0.68%	7.46%	4.94%	3.64%	3.72%	6.66%
Bloomberg Barclays High Yield	7.26%	-2.08%	7.50%	17.13%	-4.47%	2.45%	5.93%	8.56%	4.68%	11.26%
Bloomberg Barclays US Long Corporate	7.97%	-7.24%	12.09%	10.97%	-4.61%	15.73%	4.38%	5.26%	5.31%	9.24%
S&P 500	13.65%	-4.38%	21.83%	11.96%	1.38%	13.69%	9.50%	13.51%	10.91%	15.92%
Dow Jones Industrial Average	11.81%	-3.48%	28.11%	16.50%	0.21%	10.04%	10.09%	16.37%	12.21%	15.97%
NASDAQ Composite	16.49%	-3.88%	28.24%	7.50%	5.73%	13.40%	9.41%	16.65%	12.98%	17.59%
Russell 1000 Value	11.93%	-8.27%	13.66%	17.34%	-3.83%	13.45%	5.67%	10.45%	7.72%	14.52%
Russell 1000	14.00%	-4.78%	21.69%	12.05%	0.92%	13.24%	9.30%	13.52%	10.63%	16.05%
Russell 1000 Growth	16.10%	-1.51%	30.21%	7.08%	5.67%	13.05%	12.75%	16.53%	13.50%	17.52%
Russell Mid-Cap Value Index	14.37%	-12.29%	13.34%	20.00%	-4.78%	14.75%	2.89%	9.50%	7.22%	16.39%
Russell Mid-Cap Index	16.54%	-9.06%	18.52%	13.80%	-2.44%	13.22%	6.47%	11.82%	8.81%	16.88%
Russell Mid-Cap Growth Index	19.62%	-4.75%	25.27%	7.33%	-0.20%	11.90%	11.51%	15.06%	10.89%	17.60%
MSCI EAFE	10.13%	-13.36%	25.62%	1.51%	-0.39%	-4.48%	-3.22%	7.80%	2.81%	9.47%
MSCI ACWI ex US	10.44%	-13.78%	27.77%	5.01%	-5.25%	-3.44%	-3.74%	8.61%	3.05%	9.35%
Russell 2000 Value	11.93%	-12.86%	7.84%	31.74%	-7.47%	4.22%	0.17%	10.86%	5.59%	14.12%
Russell 2000	14.58%	-11.01%	14.65%	21.31%	-4.41%	4.89%	2.05%	12.92%	7.05%	15.36%
Russell 2000 Growth	17.14%	-9.31%	22.17%	11.32%	-1.38%	5.60%	3.85%	14.87%	8.41%	16.52%
MSCI Emerging Markets	9.97%	-14.25%	37.75%	11.60%	-14.60%	-1.82%	-7.06%	11.09%	4.06%	9.31%
Dow Jones US Real Estate Index	17.08%	-4.03%	9.84%	7.56%	2.14%	27.24%	19.41%	8.08%	9.67%	18.06%
HFRX Absolute Return Index	0.56%	-0.49%	3.39%	0.31%	2.86%	0.79%	-0.23%	1.44%	1.21%	0.47%
Consumer Price Index (Inflation)	0.61%	1.85%	2.14%	2.07%	0.73%	0.76%	1.52%	2.01%	1.36%	1.74%
<b>BLENDED BENCHMARKS</b>	<b>Q1 2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>1 YEAR</b>	<b>3 YEAR</b>	<b>5 YEAR</b>	<b>10 YEAR</b>
25% S&P 500/5% MSCI EAFE/70% Barclays Agg	5.94%	-1.55%	8.93%	5.00%	0.92%	7.37%	5.57%	5.22%	4.89%	7.19%
30% S&P 500/10% MSCI EAFE/60% Barclays Agg	6.83%	-2.44%	10.90%	5.43%	0.95%	7.21%	5.46%	6.10%	5.32%	8.12%
35% S&P 500/15% MSCI EAFE/50% Barclays Agg	7.72%	-3.34%	12.90%	5.85%	0.97%	7.04%	5.32%	6.97%	5.74%	9.03%
40% S&P 500/20% MSCI EAFE/40% Barclays Agg	8.62%	-4.25%	14.93%	6.26%	0.96%	6.87%	5.16%	7.84%	6.15%	9.93%
45% S&P 500/25% MSCI EAFE/30% Barclays Agg	9.52%	-5.17%	16.99%	6.65%	0.93%	6.69%	4.98%	8.71%	6.55%	10.82%
60% S&P 500/40% Barclays Agg	9.31%	-2.28%	14.25%	8.41%	1.40%	10.75%	7.82%	9.01%	7.84%	11.28%

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**CAPTRUST**



City of Fort Lauderdale Police and Fire  
 Asset Allocation vs Target & Policy  
 Total Fund Composite  
 As of 3/31/19

Manager	Market Value	Actual %	Target %
Intech Large Core	23,733,623.70	2.54	2.75
Rhumblin Large Cap Fund	138,747,433.42	14.82	8.75
Sawgrass	27,295,264.71	2.92	3.00
Aristotle Capital Management	24,029,913.72	2.57	3.00
Eagle Asset Management	25,676,627.44	2.74	3.75
Rhumblin Mid Cap Fund	58,508,412.71	6.25	5.00
Vaughan Nelson	20,968,519.28	2.24	3.75
Rhumblin Small Cap Fund	19,498,916.01	2.08	0.00
<b>Total Domestic Equity</b>	<b>338,458,710.99</b>	<b>36.16</b>	<b>30.00</b>
Lazard International Equity	69,647,975.32	7.44	7.50
Dodge&Cox International Equity	58,828,410.12	6.29	7.50
<b>Total International Equity</b>	<b>128,476,385.44</b>	<b>13.73</b>	<b>15.00</b>
Agincourt	91,389,186.01	9.76	15.00
Boyd Watterson	88,981,296.72	9.51	15.00
<b>Total Domestic Fixed Income</b>	<b>180,370,482.73</b>	<b>19.27</b>	<b>30.00</b>
Cash	13,255,171.28	1.42	0.00
<b>Total Short Term</b>	<b>13,255,171.28</b>	<b>1.42</b>	<b>0.00</b>
Core Realty Fund	64,243,178.01	6.86	6.88
Prudential RE Investors PRISA II	50,220,244.92	5.37	3.13
American Strategic Value Realty	23,088,616.35	2.47	2.50
<b>Total Real Estate</b>	<b>137,552,039.28</b>	<b>14.70</b>	<b>12.50</b>
Lazard Global Infrastructure	68,640,186.37	7.33	7.00
EnTrust Special Opportunities III	31,292,771.00	3.34	4.00
Invesco International Fund VI	2,761,914.00	0.30	0.55
Invesco US Private Equity Fund VI	5,393,596.00	0.58	0.70
Invesco Venture Fund VI	3,986,889.00	0.43	0.25
Entrust Diversified Class X Series	1,371,263.00	0.15	0.00
Capital Dynamics US MM Credit Fund	18,342,971.74	1.96	0.00
Boyd Watterson GSA	6,070,797.00	0.65	0.00
<b>Total Special Investments</b>	<b>137,860,388.11</b>	<b>14.73</b>	<b>12.50</b>
<b>Total Fund Composite</b>	<b>935,973,177.83</b>	<b>100.00</b>	<b>100.00</b>

City of Fort Lauderdale Police and Fire  
Executive Summary Table  
Periods Ending March 31, 2019  
Net of Fee Return

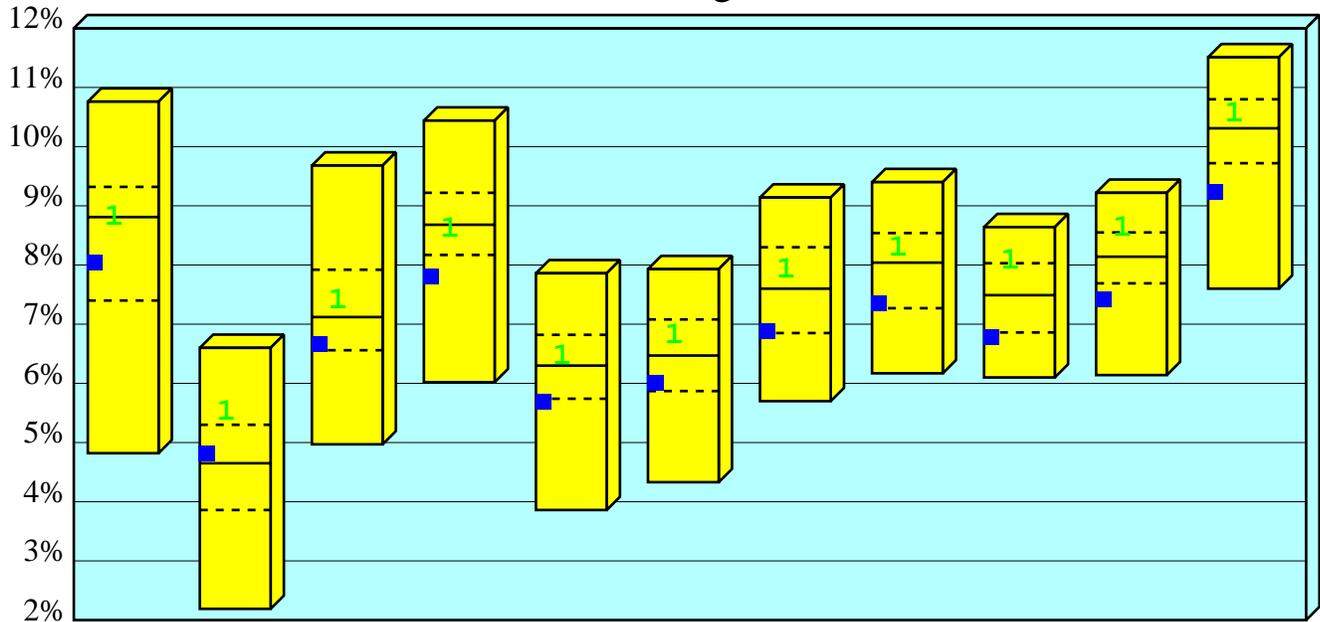
Name	Value \$(000)	% of Fund	Periods Ending 3/31/19						Since Inception	
			Cur Qtr	2 Qtrs	3 Qtrs	1 Year	3 Yrs	5 Yrs	Ret	Date
<b>Total Fund Composite</b>	<b>935,973</b>	<b>100.0</b>	<b>8.02</b>	<b>-0.01</b>	<b>2.93</b>	<b>4.80</b>	<b>7.79</b>	<b>5.99</b>	<b>7.19</b>	<b>9/30/95</b>
<i>Policy Index</i>			8.79	0.09	3.52	5.51	8.60	6.79	7.46	9/30/95
<b>Large Cap Composite</b>	<b>213,806</b>	<b>22.8</b>	<b>13.41</b>	<b>-1.51</b>	<b>5.76</b>	<b>8.98</b>	<b>13.25</b>	<b>10.54</b>	<b>8.06</b>	<b>1/31/07</b>
Aristotle Capital Management	24,030	2.6	12.04	-1.77	1.97	3.62	13.63		11.61	11/30/15
<i>Russell 1000 Value</i>			11.93	-1.19	4.45	5.67	10.45		9.18	11/30/15
Intech Large Core	23,734	2.5	14.44	-2.97	3.37	4.53	11.65	10.26	9.00	3/31/04
<i>Standard &amp; Poors 500</i>			13.65	-1.72	5.86	9.50	13.51	10.91	8.57	3/31/04
Rhumblin Large Cap Fund	138,747	14.8	13.63	-1.73	5.83	9.44	13.43	10.84	9.09	9/30/95
<i>Standard &amp; Poors 500</i>			13.65	-1.72	5.86	9.50	13.51	10.91	9.00	9/30/95
Sawgrass	27,295	2.9	12.63	1.23	11.30	16.08	13.48	11.30	9.18	3/31/07
<i>Russell 1000 Growth</i>			16.10	-2.34	6.61	12.75	16.53	13.50	10.40	3/31/07
<b>Small/Mid Cap Composite</b>	<b>124,652</b>	<b>13.3</b>	<b>14.54</b>	<b>-6.63</b>	<b>-1.77</b>	<b>3.88</b>	<b>11.85</b>	<b>7.81</b>	<b>7.42</b>	<b>10/31/06</b>
Eagle Asset Management	25,677	2.7	16.71	-7.14	2.86	12.08	17.67	10.53	10.85	6/30/11
<i>Russell 2000 Growth</i>			17.14	-8.22	-3.15	3.85	14.87	8.41	10.77	6/30/11
Rhumblin Mid Cap Fund	58,508	6.3	14.44	-5.29	-1.66	2.53	11.17	8.22	10.59	6/30/11
<i>S&amp;P Midcap 400</i>			14.49	-5.29	-1.63	2.59	11.24	8.29	10.62	6/30/11
Rhumblin Small Cap Fund	19,499	2.1	11.58	-10.86	-6.67	1.50			6.63	7/31/17
<i>S&amp;P Smallcap 600</i>			11.61	-10.83	-6.63	1.57			6.71	7/31/17
Vaughan Nelson	20,969	2.2	15.07	-5.56	-2.68	0.76	8.20		5.71	8/31/15
<i>Russell 2000 Value</i>			11.93	-8.97	-7.51	0.17	10.86		9.32	8/31/15
<b>International Equity Composite</b>	<b>128,476</b>	<b>13.7</b>	<b>11.49</b>	<b>-2.15</b>	<b>-1.39</b>	<b>-4.72</b>	<b>7.35</b>	<b>2.03</b>	<b>3.56</b>	<b>11/30/00</b>
Dodge&Cox International Equity	58,828	6.3	9.78	-3.82	-3.03	-8.00	7.87	0.85	2.23	1/31/14
<i>MSCI EAFE (Net)</i>			9.98	-3.81	-2.51	-3.71	7.27	2.33	3.20	1/31/14
Lazard International Equity	69,648	7.4	12.97	-0.69	0.04	-1.75	6.92	3.10	8.39	11/30/11
<i>MSCI EAFE (Net)</i>			9.98	-3.81	-2.51	-3.71	7.27	2.33	6.72	11/30/11
<b>Total Domestic Fixed Income</b>	<b>180,370</b>	<b>19.3</b>	<b>2.72</b>	<b>3.89</b>	<b>4.37</b>	<b>4.44</b>	<b>1.95</b>	<b>2.32</b>	<b>3.96</b>	<b>5/31/05</b>
Agincourt	91,389	9.8	2.68	4.03	4.49	4.54	2.03	2.40	5.16	12/31/95
<i>Barclays Int Govt/Credit</i>			2.32	4.01	4.23	4.24	1.66	2.12	4.86	12/31/95
Boyd Watterson	88,981	9.5	2.76	3.75	4.25	4.35	1.87	2.24	2.48	4/30/11
<i>Barclays Int Govt/Credit</i>			2.32	4.01	4.23	4.24	1.66	2.12	2.38	4/30/11
Cash	13,255	1.4	0.59	1.23	1.63	1.99	1.13	0.76	1.44	1/31/06
<i>Citigroup 3-month T-Bill</i>			0.60	1.17	1.67	2.11	1.17	0.72		1/31/06
<b>Real Estate Composite</b>	<b>137,552</b>	<b>14.7</b>	<b>1.70</b>	<b>3.19</b>	<b>5.18</b>	<b>7.29</b>	<b>7.36</b>	<b>9.57</b>	<b>4.86</b>	<b>6/30/07</b>
American Strategic Value Realty	23,089	2.5	2.29	3.84	5.60	8.60	9.21		10.82	3/31/15
<i>NCREIF Prop Index</i>			1.80	3.19	4.92	6.82	7.07		8.25	3/31/15



City of Fort Lauderdale Police and Fire  
Executive Summary Table  
Periods Ending March 31, 2019  
Net of Fee Return

Name	Value \$(000)	% of Fund	Periods Ending 3/31/19						Since Inception	
			Cur Qtr	2 Qtrs	3 Qtrs	1 Year	3 Yrs	5 Yrs	Ret	Date
Core Realty Fund	64,243	6.9	1.50	3.22	5.22	7.16	6.62	8.76	4.76	7/31/07
<i>NCREIF Prop Index</i>			1.80	3.19	4.92	6.82	7.07	9.12	6.55	7/31/07
Prudential RE Investors PRISA II	50,220	5.4	1.69	2.87	4.92	6.98	7.99	10.49	4.02	7/31/07
<i>NCREIF Prop Index</i>			1.80	3.19	4.92	6.82	7.07	9.12	6.55	7/31/07
Boyd Watterson GSA	6,071	0.6	1.18						1.18	12/31/18
<i>NCREIF ODCE Fund Index</i>			1.42						1.42	12/31/18
Capital Dynamics US MM Credit Fund	18,343	2.0	0.00	-1.39					-1.39	9/30/18
<i>Barclays Int Govt/Credit</i>			2.32	4.01					4.01	9/30/18
EnTrust Special Opportunities III	31,293	3.3	10.62	-1.22	1.42	4.34	6.65		6.25	2/28/15
<i>HFRI FOF: Diversified Index</i>			4.26	-0.63	-0.03	0.67	3.64		1.40	2/28/15
Entrust Diversified Class X Series	1,371	0.1	-0.71	-3.56	-4.34	-5.21			-4.23	1/31/17
<i>HFRI FOF: Diversified Index</i>			4.26	-0.63	-0.03	0.67			3.11	1/31/17
Invesco International Fund VI	2,762	0.3	0.00	0.00	1.80	8.76	14.63		13.12	12/31/15
<i>MSCI EAFE (Net)</i>			9.98	-3.81	-2.51	-3.71	7.27		5.70	12/31/15
Invesco US Private Equity Fund VI	5,394	0.6	0.00	0.00	1.59	6.91	14.52		13.79	12/31/15
<i>Standard &amp; Poors 500</i>			13.65	-1.72	5.86	9.50	13.51		12.87	12/31/15
Invesco Venture Fund VI	3,987	0.4	0.00	0.00	1.61	2.96	9.78		7.72	12/31/15
<i>Standard &amp; Poors 500</i>			13.65	-1.72	5.86	9.50	13.51		12.87	12/31/15
Lazard Global Infrastructure	68,640	7.3	9.47	4.99	4.97	11.74	9.79	10.71	11.95	11/30/13
<i>S&amp;P Global Infrastructure Index</i>			14.06	8.22	6.48	9.24	8.66	5.44	6.72	11/30/13

## City of Fort Lauderdale Police and Fire Cumulative Performance Comparison Total Returns of Total Fund Public Sponsors Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	10.76	6.60	9.68	10.44	7.86	7.93	9.14	9.40	8.64	9.22	11.51
1st Qt	9.32	5.30	7.92	9.22	6.82	7.08	8.30	8.54	8.03	8.55	10.80
Median	8.81	4.65	7.12	8.68	6.30	6.47	7.60	8.04	7.49	8.14	10.31
3rd Qt	7.40	3.86	6.56	8.17	5.74	5.87	6.85	7.27	6.86	7.69	9.72
Low	4.82	2.19	4.97	6.02	3.86	4.33	5.70	6.17	6.10	6.14	7.60

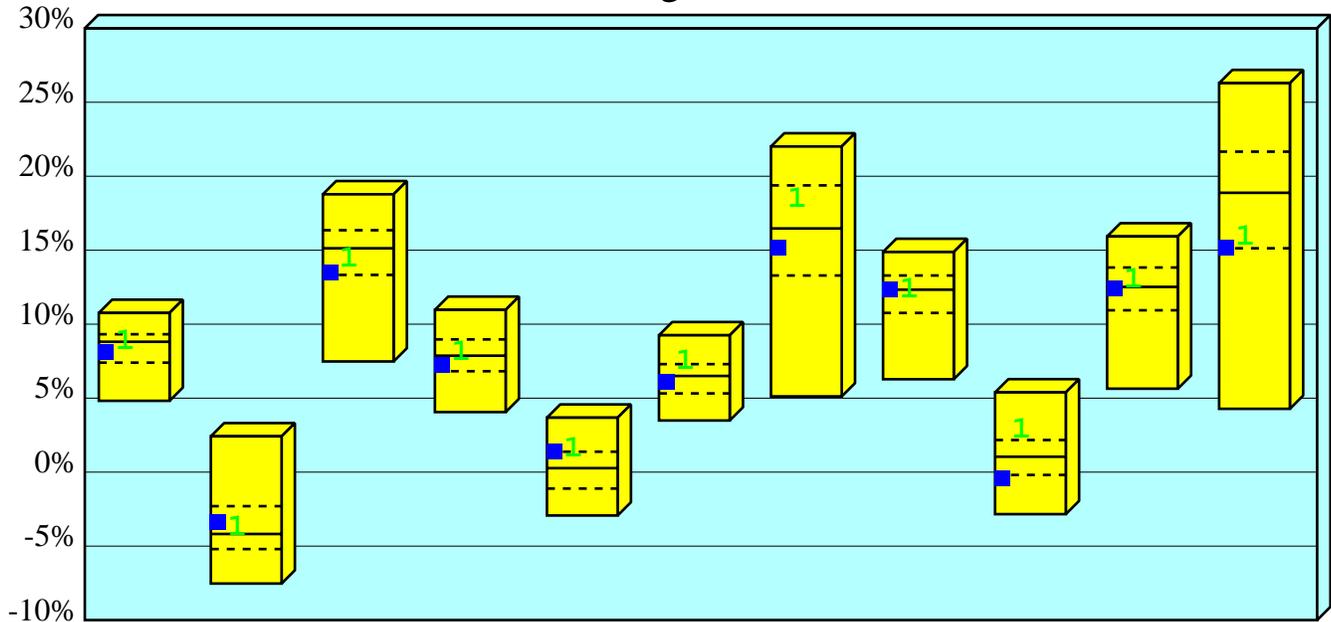
■ Total Fund Composite

Net Ret	8.02	4.80	6.65	7.79	5.67	5.99	6.87	7.33	6.77	7.40	9.21
Rank	64	38	65	84	77	69	72	69	83	82	82

1 Policy Index

Net Ret	8.79	5.51	7.38	8.60	6.44	6.79	7.90	8.27	8.05	8.62	10.54
Rank	50	15	42	56	37	33	40	37	22	22	39

## City of Fort Lauderdale Police and Fire Calendar Year Performance Comparison Total Returns of Total Fund Public Sponsors Years Ending December



3/31/19

	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
High	10.76	2.42	18.78	10.97	3.68	9.25	22.01	14.88	5.39	15.93	26.29
1st Qt	9.32	-2.30	16.35	8.97	1.38	7.30	19.38	13.29	2.17	13.83	21.66
Median	8.81	-4.18	15.13	7.87	0.27	6.50	16.47	12.33	1.04	12.52	18.88
3rd Qt	7.40	-5.20	13.33	6.82	-1.11	5.32	13.29	10.76	-0.19	10.94	15.13
Low	4.82	-7.53	7.48	4.06	-2.93	3.49	5.12	6.28	-2.84	5.64	4.28

■ Total Fund Composite

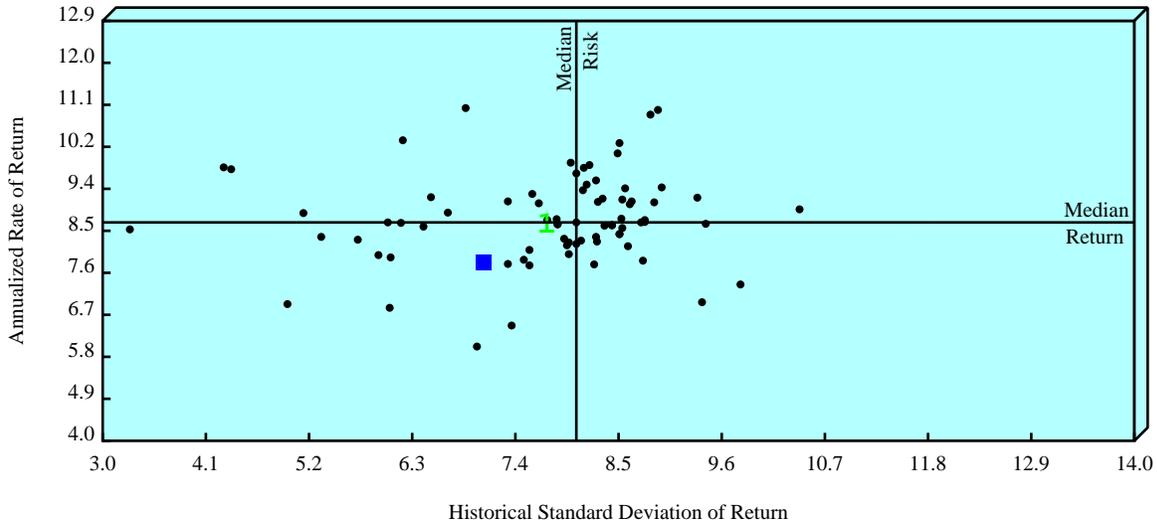
Net Ret	8.02	-3.45	13.39	7.14	1.31	6.01	15.13	12.31	-0.51	12.33	15.13
Rank	64	37	74	66	26	62	62	50	78	53	75

1 Policy Index

Net Ret	8.79	-3.76	14.38	8.03	1.55	7.46	18.42	12.28	2.79	12.92	15.86
Rank	50	42	61	46	22	22	34	51	16	42	68

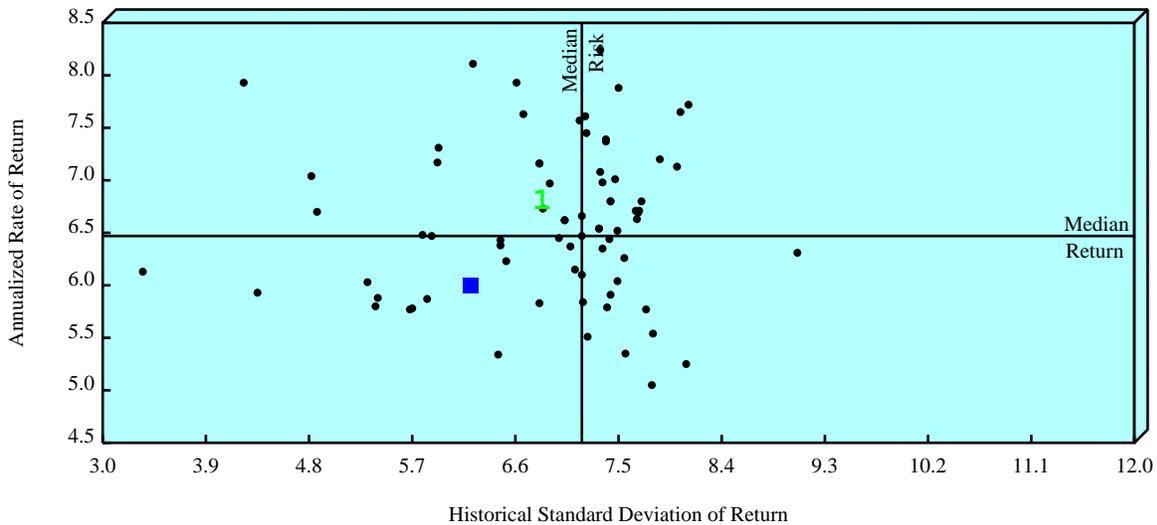
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Total Fund Public Sponsors

3 Years Ending 3/31/19



	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
■ Total Fund Composite	7.79	84	7.13	30
1 Policy Index	8.60	56	7.79	42
Median	8.68		8.05	

5 Years Ending 3/31/19



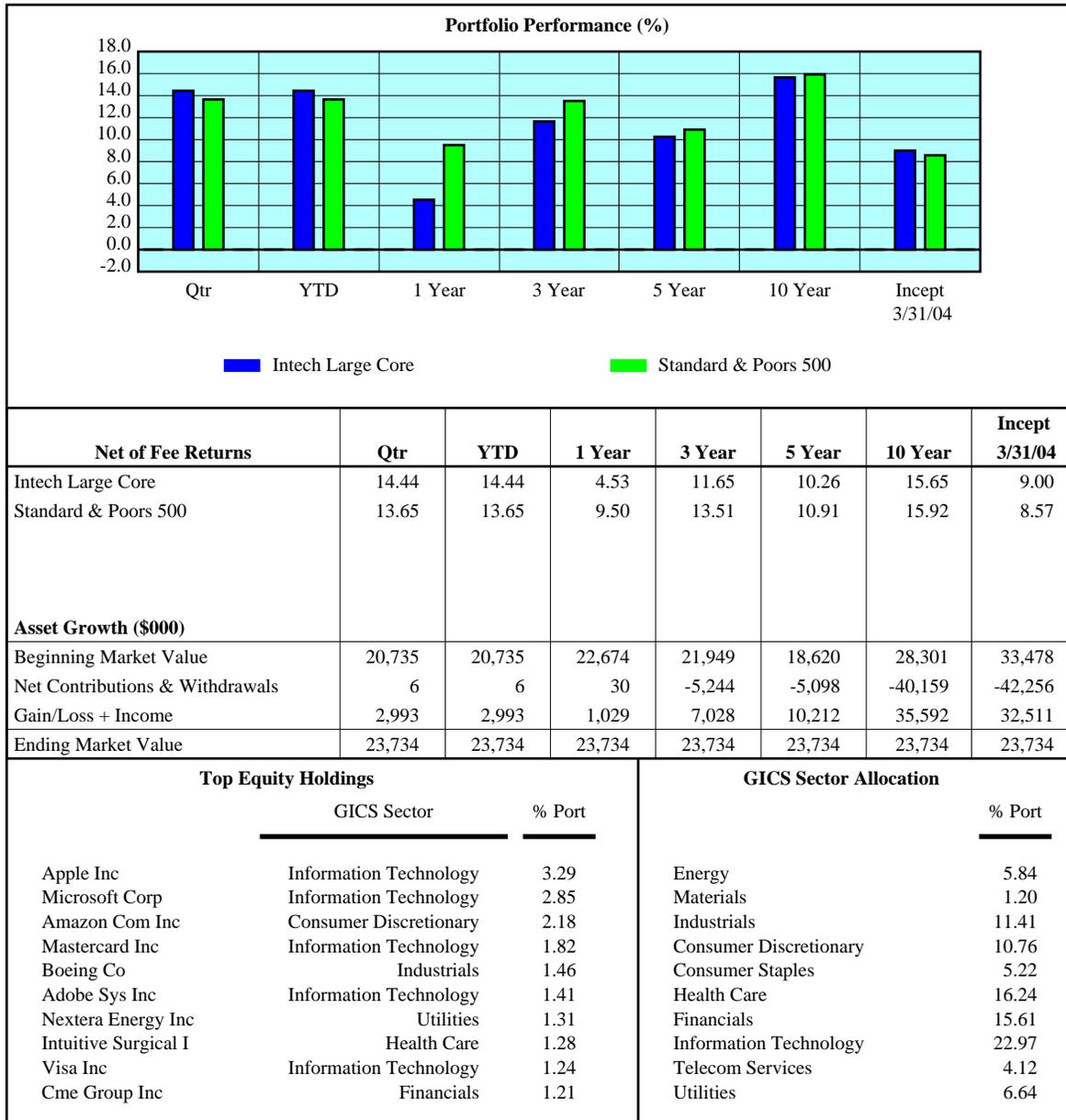
	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
■ Total Fund Composite	5.99	69	6.27	29
1 Policy Index	6.79	33	6.88	43
Median	6.47		7.18	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Total Fund Composite  
Quarterly Periods Ending 3/31/19

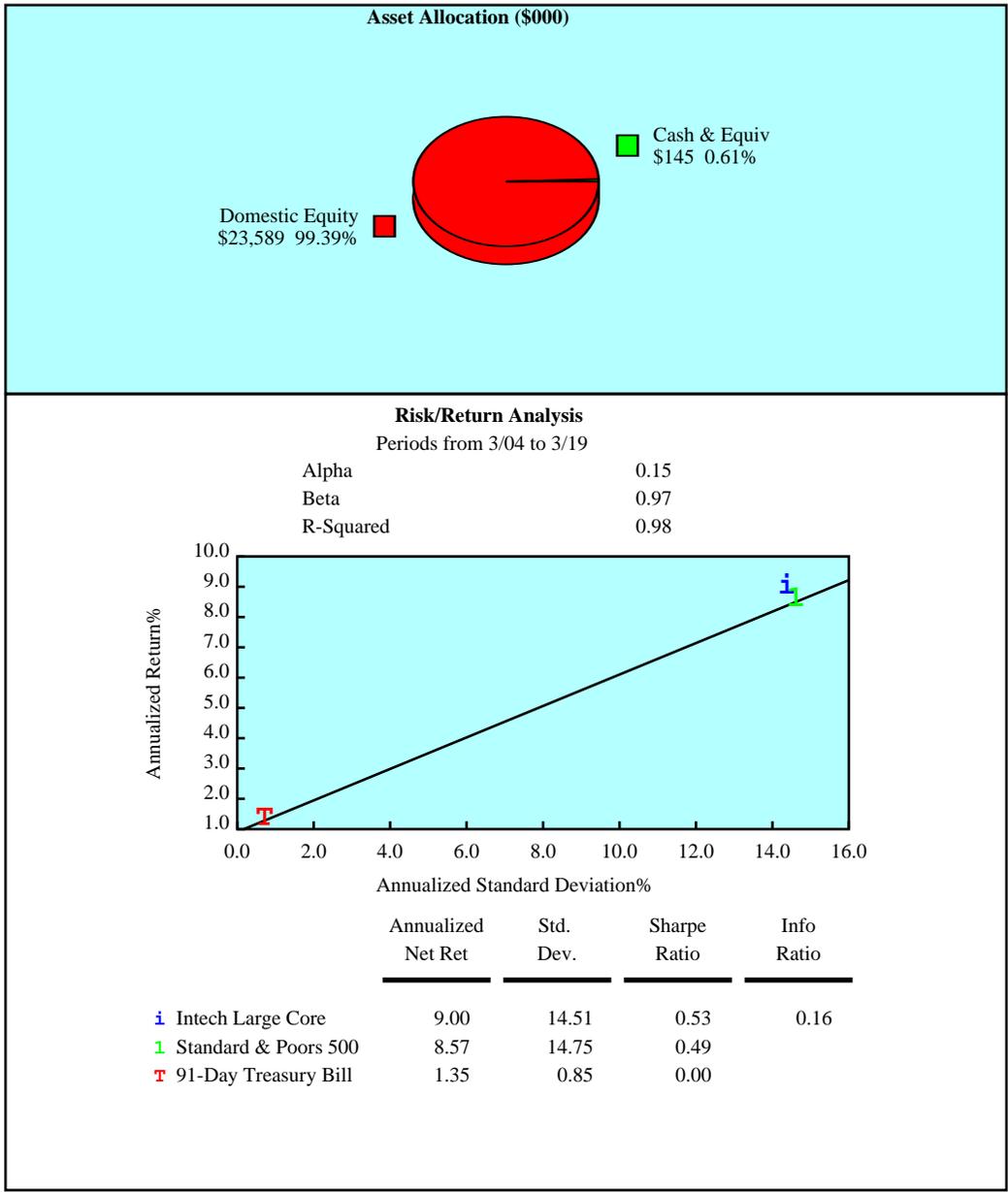
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	2	2	5	4	25	24
Positive Periods	3	3	10	10	15	16	69	70
Up Market Capture	0.91		0.91		0.90		0.95	
Down Market Capture	0.92		0.89		0.91		0.94	
Batting Average	0.25		0.33		0.35		0.44	
Worst Quarter	-7.38	-8.00	-7.38	-8.00	-7.38	-8.00	-11.33	-12.61
Best Quarter	8.06	8.79	8.06	8.79	8.06	8.79	14.12	12.93
Worst 4 Quarters	5.00	5.51	-3.25	-3.76	-3.25	-3.76	-22.18	-24.64
Best 4 Quarters	5.00	5.51	13.59	14.38	13.59	14.38	33.57	32.86
Standard Deviation	12.87	14.02	7.13	7.79	6.28	6.88	9.29	9.61
Beta	0.92		0.91		0.90		0.95	
Alpha	-0.07		0.00		-0.02		0.01	
R-Squared	1.00		0.99		0.98		0.97	
Sharpe Ratio	0.22	0.24	0.95	0.95	0.86	0.88	0.52	0.53
Treynor Ratio	3.13		7.43		5.96		5.13	
Tracking Error	1.18		0.86		1.02		1.80	
Information Ratio	-0.52		-0.74		-0.65		-0.14	



## City of Fort Lauderdale Police and Fire Intech Large Core as of 3/31/19

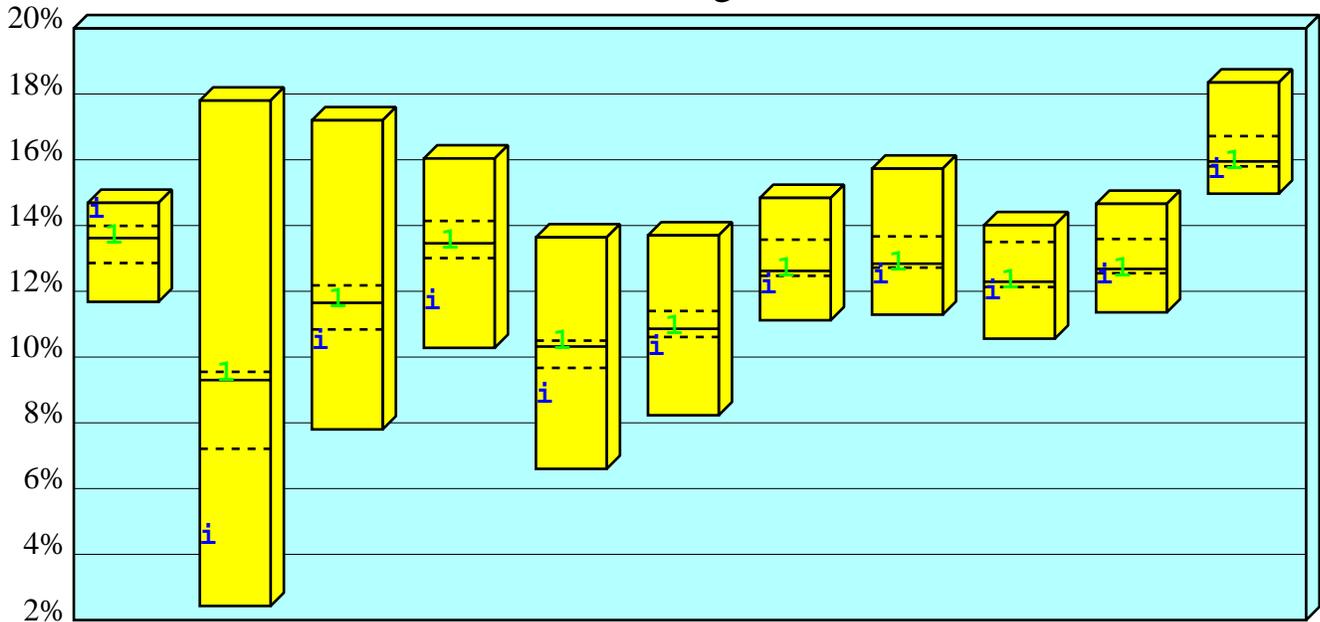


# City of Fort Lauderdale Police and Fire Intech Large Core as of 3/31/19





# City of Fort Lauderdale Police and Fire Large Neutral Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	14.69	17.80	17.20	16.04	13.64	13.70	14.84	15.73	14.01	14.66	18.35
1st Qt	13.99	9.55	12.18	14.14	10.50	11.40	13.57	13.67	13.50	13.59	16.72
Median	13.62	9.30	11.65	13.46	10.32	10.86	12.62	12.84	12.29	12.68	15.95
3rd Qt	12.86	7.21	10.84	13.01	9.67	10.61	12.47	12.72	12.13	12.55	15.80
Low	11.68	2.43	7.80	10.28	6.60	8.23	11.12	11.29	10.56	11.36	14.97

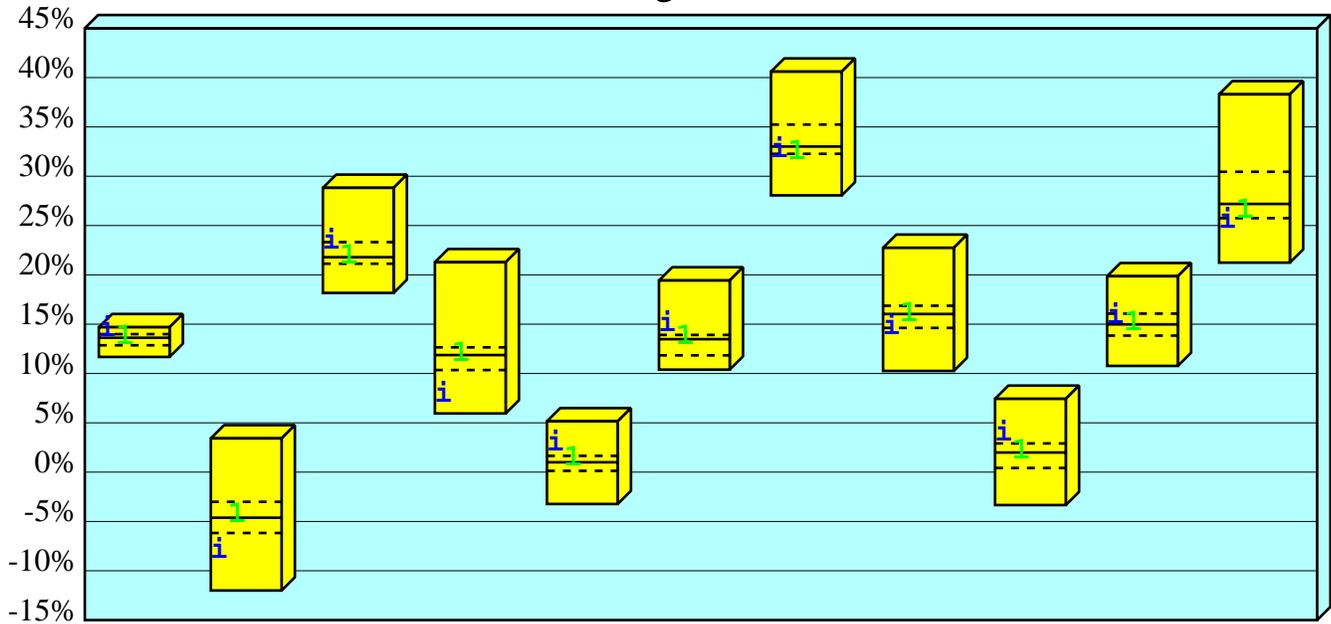
**i** Intech Large Core

Net Ret	14.44	4.53	10.44	11.65	8.81	10.26	12.16	12.46	11.96	12.44	15.65
Rank	13	89	79	89	82	79	84	80	85	80	78

**1** Standard & Poors 500

Net Ret	13.65	9.50	11.72	13.51	10.46	10.91	12.67	12.85	12.30	12.67	15.92
Rank	38	28	32	44	27	36	43	45	47	52	56

# City of Fort Lauderdale Police and Fire Large Neutral Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



3/31/19

	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
High	14.69	3.42	28.82	21.28	5.15	19.43	40.60	22.74	7.43	19.86	38.30
1st Qt	13.99	-3.01	23.32	12.65	1.65	13.91	35.24	16.87	2.91	16.07	30.45
Median	13.62	-4.62	21.79	11.87	1.00	13.48	33.01	16.03	1.99	14.98	27.19
3rd Qt	12.86	-6.17	21.13	10.35	0.13	11.84	32.27	14.62	0.42	13.84	25.75
Low	11.68	-12.00	18.17	5.95	-3.23	10.39	28.06	10.26	-3.34	10.77	21.24

**i** Intech Large Core

Net Ret	14.44	-7.96	23.40	7.79	2.93	15.04	32.60	14.70	3.95	15.77	25.49
Rank	13	86	24	91	14	17	55	73	21	27	78

**1** Standard & Poors 500

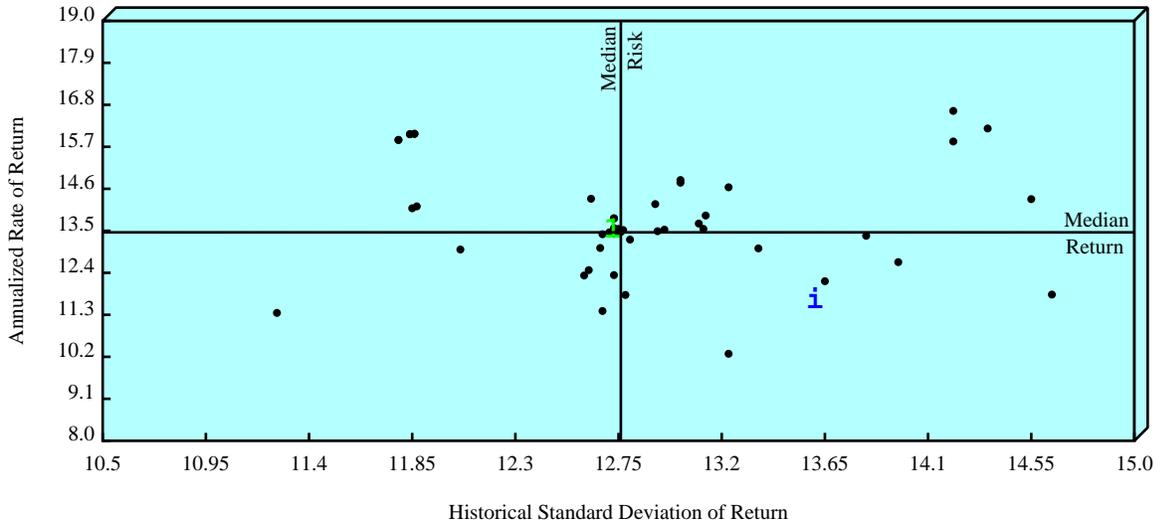
Net Ret	13.65	-4.38	21.83	11.96	1.38	13.69	32.41	15.98	2.12	15.05	26.45
Rank	38	42	47	43	42	37	61	55	47	47	64

# City of Fort Lauderdale Police and Fire

## Return vs Risk

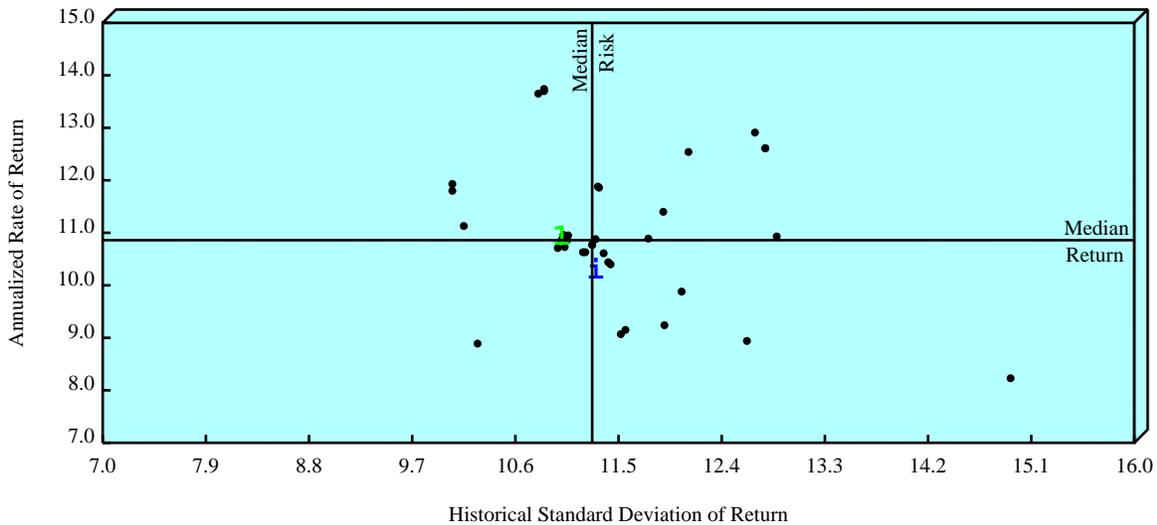
### Total Returns of Large Neutral Portfolios

3 Years Ending 3/31/19



	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
i Intech Large Core	11.65	89	13.63	82
l Standard & Poors 500	13.51	44	12.75	45
Median	13.46		12.76	

5 Years Ending 3/31/19



	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
i Intech Large Core	10.26	79	11.35	63
l Standard & Poors 500	10.91	36	11.05	42
Median	10.86		11.27	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Intech Large Core  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	1	2	3	3	15	16
Positive Periods	3	3	11	10	17	17	45	44
Up Market Capture	0.87		0.91		0.93		0.98	
Down Market Capture	1.12		1.03		0.93		0.93	
Batting Average	0.25		0.50		0.50		0.60	
Worst Quarter	-15.21	-13.52	-15.21	-13.52	-15.21	-13.52	-21.62	-21.93
Best Quarter	14.44	13.65	14.44	13.65	14.44	13.65	15.35	15.93
Worst 4 Quarters	4.53	9.50	-7.96	-4.38	-7.96	-4.38	-37.08	-38.07
Best 4 Quarters	4.53	9.50	23.40	21.83	23.40	21.83	48.89	49.75
Standard Deviation	25.08	23.34	13.63	12.75	11.35	11.05	14.51	14.75
Beta	1.06		1.04		1.00		0.97	
Alpha	-1.24		-0.53		-0.14		0.15	
R-Squared	0.99		0.96		0.94		0.98	
Sharpe Ratio	0.10	0.32	0.77	0.97	0.84	0.92	0.53	0.49
Treynor Ratio	2.26		10.01		9.53		7.86	
Tracking Error	2.68		2.75		2.73		2.19	
Information Ratio	-1.62		-0.59		-0.22		0.16	

City of Fort Lauderdale Police and Fire  
Equity Summary Statistics  
Intech Large Core  
Period Ending 3/19

	<u>Portfolio</u>	<u>Standard &amp; Poors 500</u>
Total Number Of Securities	415	505
Equity Market Value	23,588,763	
Average Capitalization \$(000)	153,630,655	223,539,905
Median Capitalization \$(000)	23,368,020	21,737,177
Equity Segment Yield	1.61	2.00
Equity Segment P/E - Average	21.62	20.96
Equity Segment P/E - Median	21.12	20.65
Equity Segment Beta	0.97	1.00
Price/Book Ratio	3.79	3.53
Debt/Equity Ratio	63.96	67.93
Five Year Earnings Growth	11.82	11.02

Ten Largest Holdings	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Apple Inc	775,186	3.29	20.94
Microsoft Corp	672,258	2.85	16.62
Amazon Com Inc	512,856	2.18	18.56
Mastercard Inc	429,696	1.82	25.02
Boeing Co	345,185	1.46	18.87
Adobe Sys Inc	332,846	1.41	17.79
Nextera Energy Inc	309,892	1.31	11.96
Intuitive Surgical I	301,266	1.28	19.14
Visa Inc	291,763	1.24	18.59
Cme Group Inc	284,394	1.21	-12.13

Ten Best Performers	<u>Quarterly Ret</u>	Ten Worst Performers	<u>Quarterly Ret</u>
Coty Inc	79.27	Kraft Heinz Co	-23.19
Chipotle Mexican Gri	64.50	Biogen Idec Inc	-21.45
Hess Corp	49.35	Centurylink Inc	-19.25
Xilinx Inc	49.35	Macys Inc.	-18.02
Arista Networks Inc	49.25	Cvs Corp	-17.06
Celgene Corp	47.20	Newell Rubbermaid In	-16.33
Ulta Salon Cosmetcs	42.43	Cigna Corp New	-15.30
Keysight Technologie	40.46	Abiomed Inc	-12.14
Devon Energy Corp	40.40	Cme Group Inc	-12.13
Alexion Pharmaceutic	38.85	Abbvie Inc	-11.48

City of Fort Lauderdale Police and Fire  
Equity Contribution to Return  
Intech Large Core  
Period Ending 3/19

	<u>Portfolio</u>	<u>Standard &amp; Poors 500</u>
Total Number Of Securities	415	505
Equity Market Value	23,588,763	
Average Capitalization \$(000)	153,630,655	223,539,905
Median Capitalization \$(000)	23,368,020	21,737,177
Equity Segment Yield	1.61	2.00
Equity Segment P/E - Average	21.62	20.96
Equity Segment P/E - Median	21.12	20.65
Equity Segment Beta	0.97	1.00
Price/Book Ratio	3.79	3.53
Debt/Equity Ratio	63.96	67.93
Five Year Earnings Growth	11.82	11.02

Ten Best Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Apple Inc	775,186	3.29	20.94
Microsoft Corp	672,258	2.85	16.62
Mastercard Inc	429,696	1.82	25.02
Amazon Com Inc	512,856	2.18	18.56
Boeing Co	345,185	1.46	18.87
Baxter Intl Inc	266,209	1.13	23.85
Adobe Sys Inc	332,846	1.41	17.79
Intuitive Surgical I	301,266	1.28	19.14
Netflix Com Inc	164,018	0.70	33.21
Visa Inc	291,763	1.24	18.59

Ten Worst Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Cme Group Inc	284,394	1.21	-12.13
Cigna Corp New	155,191	0.66	-15.30
Centene Corp Del	193,125	0.82	-7.89
Kroger Co	118,843	0.50	-10.11
Abiomed Inc	91,389	0.39	-12.14
Humana Inc	90,706	0.38	-6.95
Cvs Corp	33,005	0.14	-17.06
Resmed Inc	62,174	0.26	-8.34
Berkshire Hathaway I	213,144	0.90	-1.61
Mosaic Co New	47,328	0.20	-6.42

City of Fort Lauderdale Police and Fire  
Equity Sector Attribution Analysis  
Intech Large Core  
Quarter Ending 3/19

GICS Sectors	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Stock	Sector	Total
Energy	5.94	5.31	12.70	16.42	-0.22	0.02	-0.20
Materials	1.00	2.32	3.71	10.27	-0.07	0.04	-0.03
Industrials	11.41	9.60	16.70	17.19	-0.06	0.07	0.02
Consumer Discretionary	11.62	9.93	17.36	15.68	0.19	0.04	0.24
Consumer Staples	4.78	7.40	10.56	12.02	-0.07	0.03	-0.04
Health Care	16.03	15.53	10.49	6.53	0.64	-0.03	0.60
Financials	15.97	13.37	9.41	8.54	0.14	-0.12	0.02
Information Technology	22.68	20.11	19.46	19.86	-0.09	0.17	0.08
Telecom. Services	4.15	10.12	19.12	14.04	0.21	-0.05	0.16
Utilities	6.41	3.34	13.34	11.60	0.11	-0.05	0.06
	100.00	100.00	14.47	13.17	0.79	0.12	0.91

Index - Standard & Poors 500

Stock Selection Return Attribution

[ Portfolio Market Value Sector Percentage ] \* [ Portfolio Sector Return - Index Sector Return ]

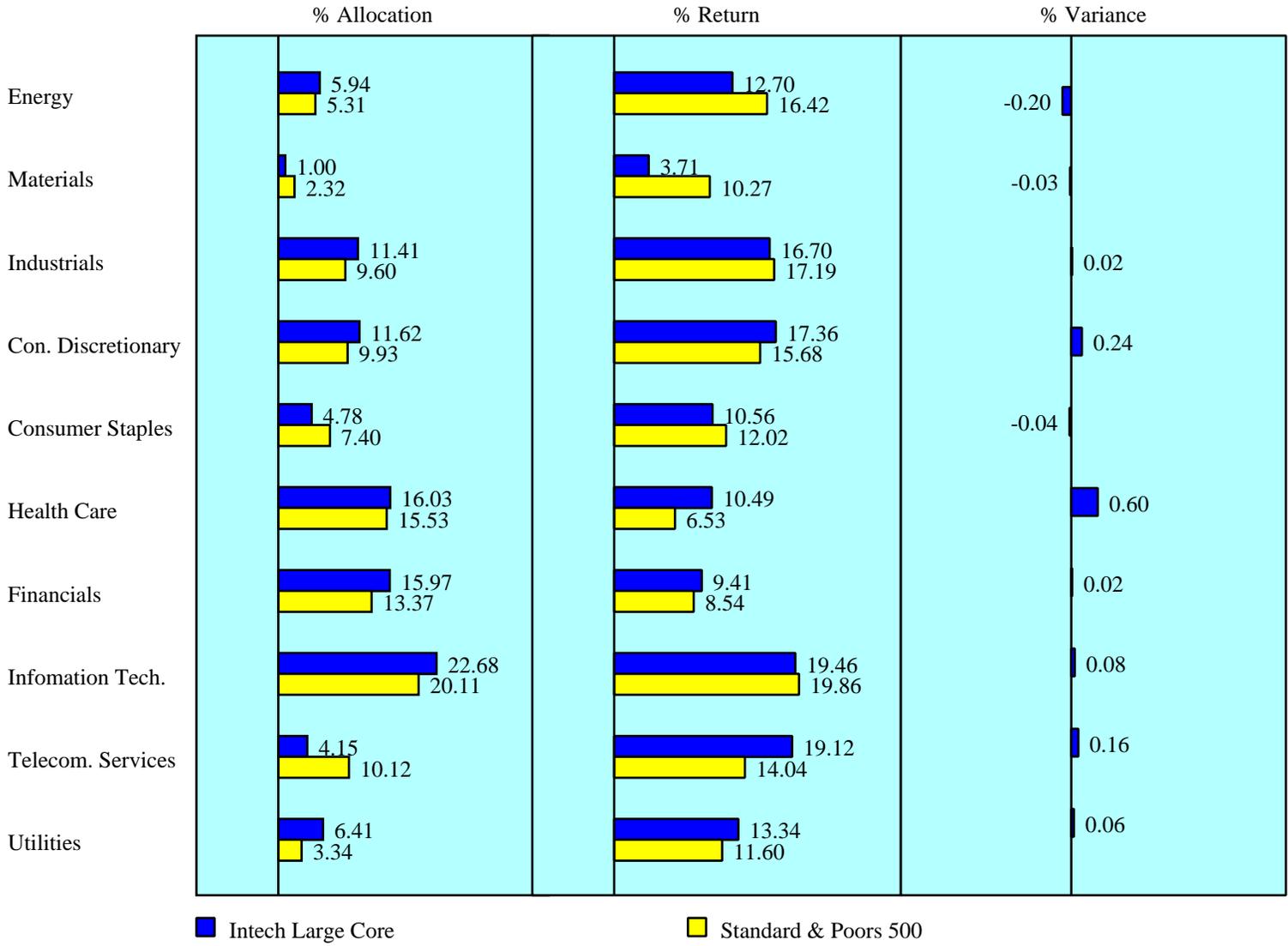
Sector Selection Return Attribution

[ Portfolio Sector Percentage - Index Sector Percentage ] \* [ Index Sector Return - Index Total Return ]

Trading Effect 0.08%

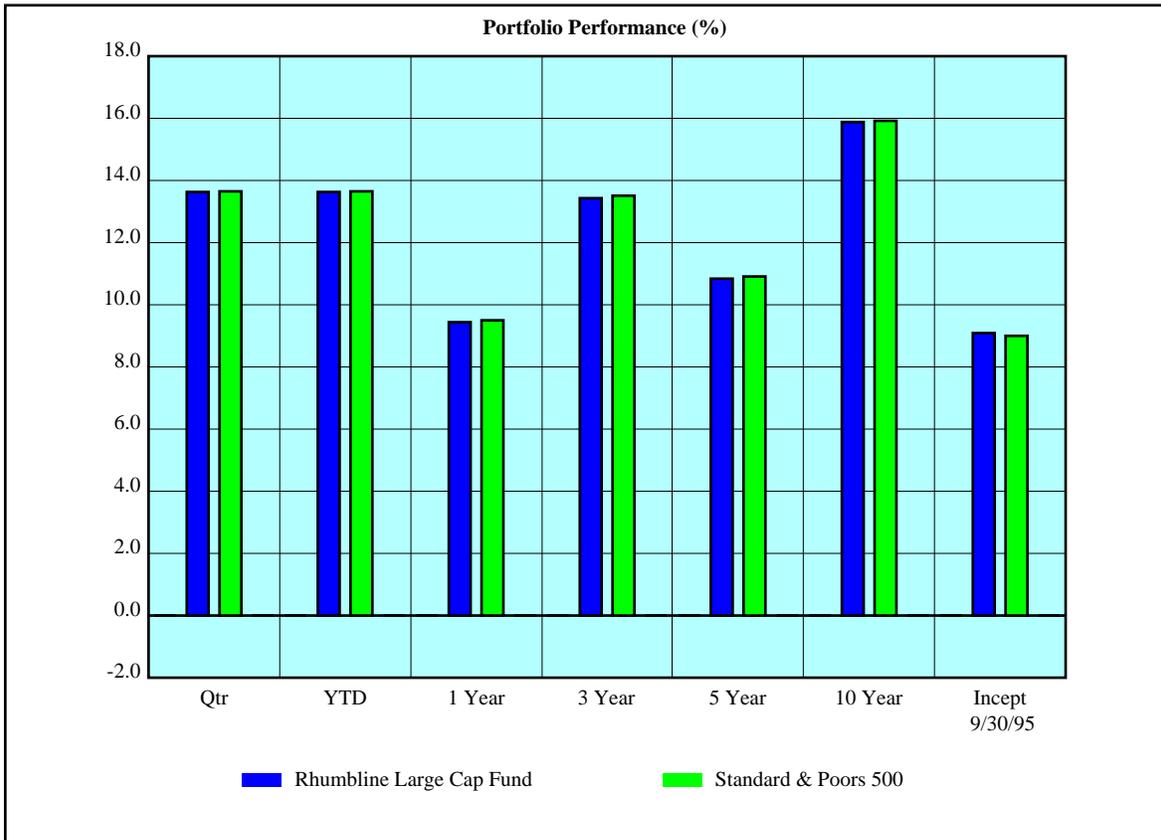
[ Actual Return 14.55% ] - [ Buy Hold Return 14.47% ]

# City of Fort Lauderdale Police and Fire Equity Sector Attribution Chart Intech Large Core Quarter Ending 3/19



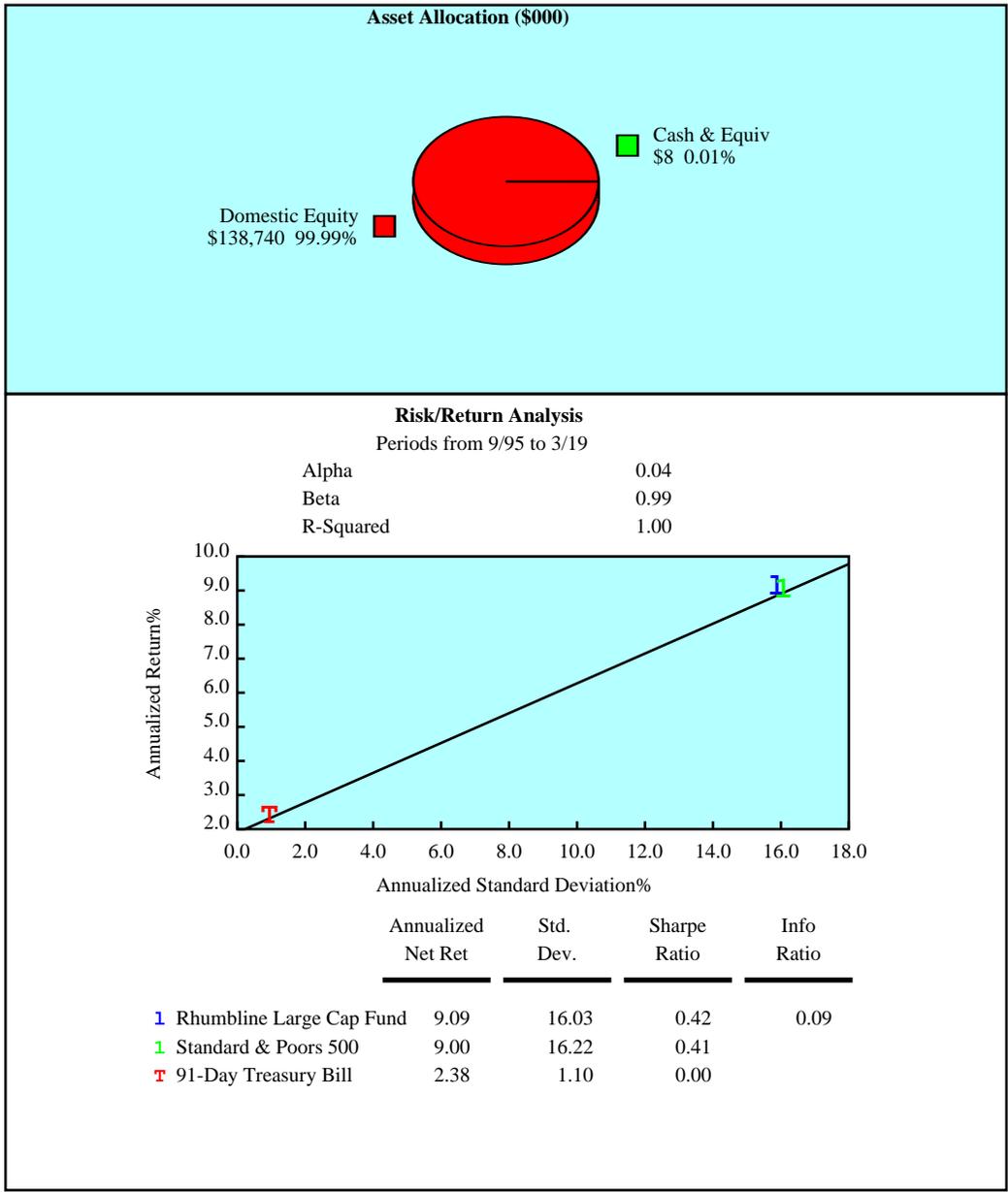


## City of Fort Lauderdale Police and Fire Rhumbline Large Cap Fund as of 3/31/19

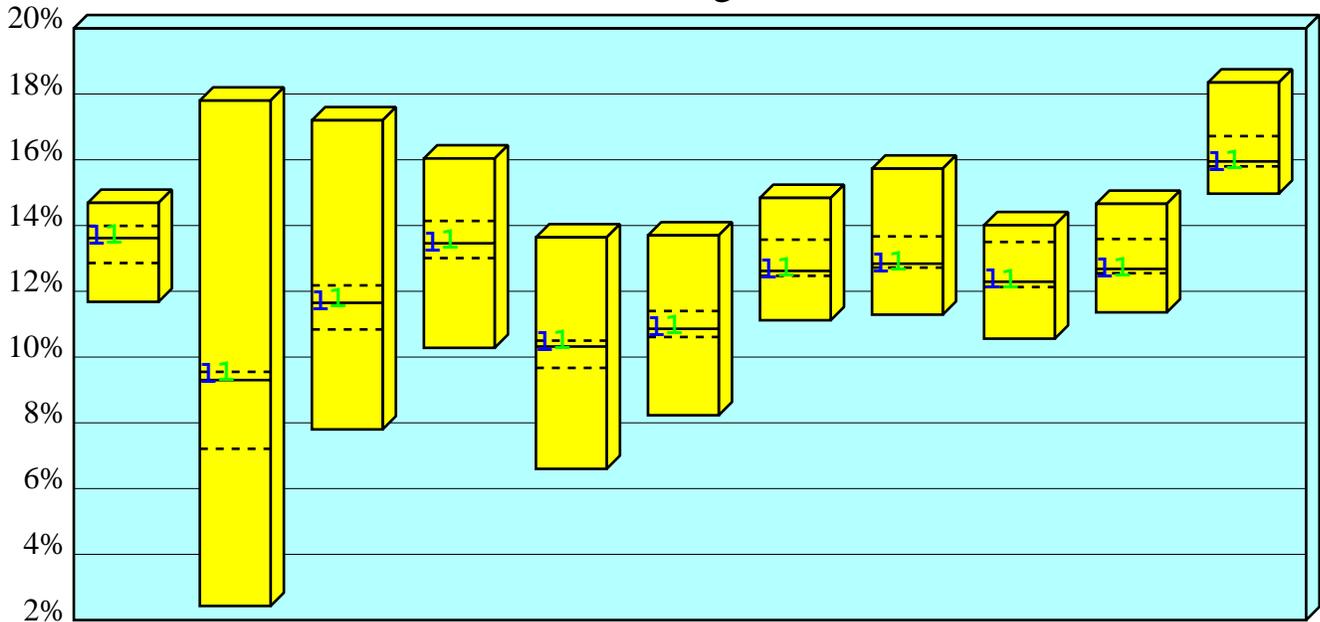


<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 9/30/95</b>
Rhumbline Large Cap Fund	13.63	13.63	9.44	13.43	10.84	15.88	9.09
Standard & Poors 500	13.65	13.65	9.50	13.51	10.91	15.92	9.00
<b>Asset Growth (\$000)</b>							
Beginning Market Value	122,099	122,099	126,740	112,533	78,188	24,792	8,000
Net Contributions & Withdrawals	10	10	39	-21,892	190	11,359	35,249
Gain/Loss + Income	16,638	16,638	11,968	48,107	60,369	102,597	95,499
Ending Market Value	138,747	138,747	138,747	138,747	138,747	138,747	138,747

# City of Fort Lauderdale Police and Fire Rhumblin Large Cap Fund as of 3/31/19



## City of Fort Lauderdale Police and Fire Large Neutral Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	14.69	17.80	17.20	16.04	13.64	13.70	14.84	15.73	14.01	14.66	18.35
1st Qt	13.99	9.55	12.18	14.14	10.50	11.40	13.57	13.67	13.50	13.59	16.72
Median	13.62	9.30	11.65	13.46	10.32	10.86	12.62	12.84	12.29	12.68	15.95
3rd Qt	12.86	7.21	10.84	13.01	9.67	10.61	12.47	12.72	12.13	12.55	15.80
Low	11.68	2.43	7.80	10.28	6.60	8.23	11.12	11.29	10.56	11.36	14.97

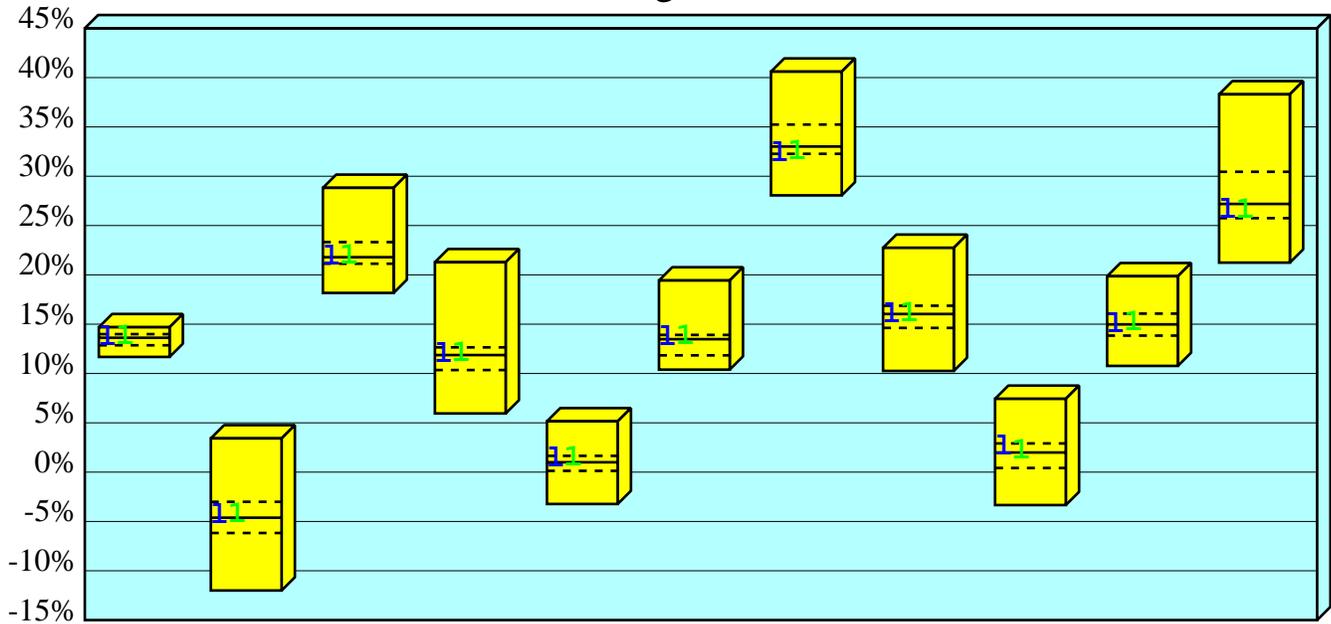
### 1 Rhumblin Large Cap Fund

Net Ret	13.63	9.44	11.64	13.43	10.38	10.84	12.59	12.77	12.30	12.63	15.88
Rank	48	42	50	60	45	59	56	67	47	72	65

### 1 Standard & Poors 500

Net Ret	13.65	9.50	11.72	13.51	10.46	10.91	12.67	12.85	12.30	12.67	15.92
Rank	38	28	32	44	27	36	43	45	47	52	56

# City of Fort Lauderdale Police and Fire Large Neutral Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



3/31/19

	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
High	14.69	3.42	28.82	21.28	5.15	19.43	40.60	22.74	7.43	19.86	38.30
1st Qt	13.99	-3.01	23.32	12.65	1.65	13.91	35.24	16.87	2.91	16.07	30.45
Median	13.62	-4.62	21.79	11.87	1.00	13.48	33.01	16.03	1.99	14.98	27.19
3rd Qt	12.86	-6.17	21.13	10.35	0.13	11.84	32.27	14.62	0.42	13.84	25.75
Low	11.68	-12.00	18.17	5.95	-3.23	10.39	28.06	10.26	-3.34	10.77	21.24

## 1 Rhumblin Large Cap Fund

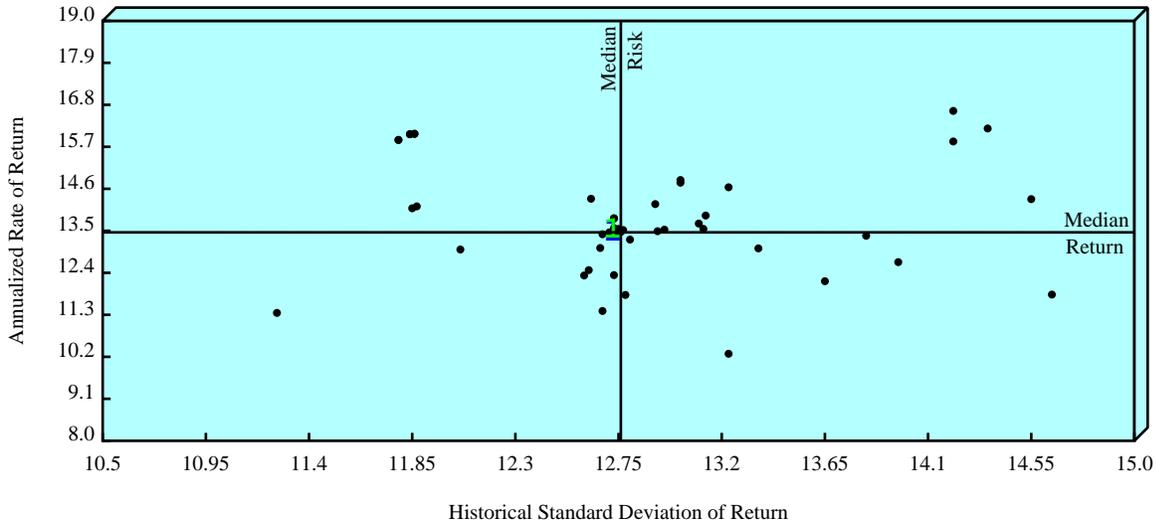
Net Ret	13.63	-4.46	21.74	11.90	1.33	13.63	32.22	15.94	2.48	14.93	26.51
Rank	48	47	56	48	45	43	76	59	27	54	62

## 1 Standard & Poors 500

Net Ret	13.65	-4.38	21.83	11.96	1.38	13.69	32.41	15.98	2.12	15.05	26.45
Rank	38	42	47	43	42	37	61	55	47	47	64

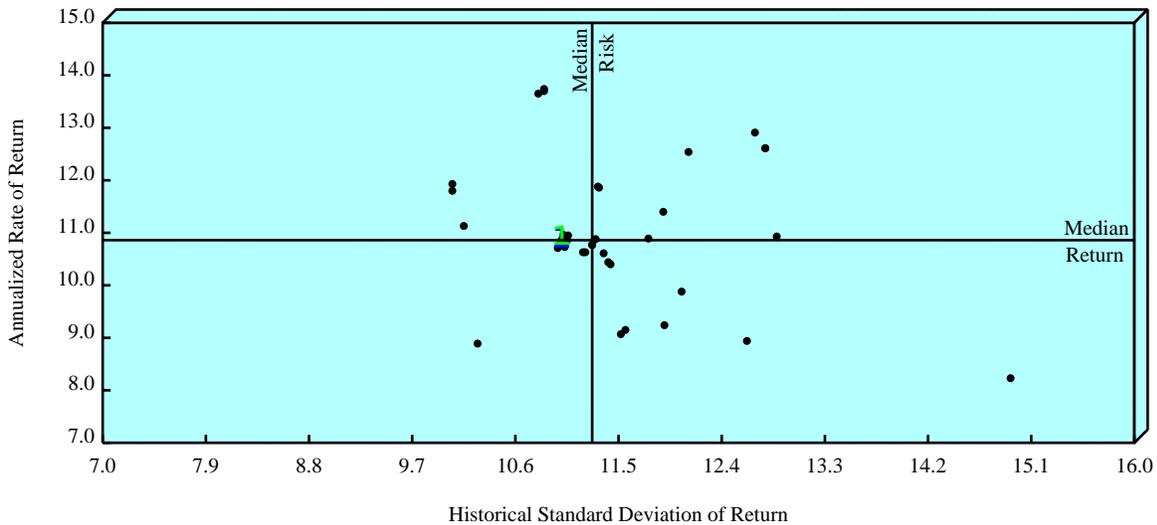
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Large Neutral Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
1	Rhumblin Large Cap Fund	13.43	60	12.75	45
1	Standard & Poors 500	13.51	44	12.75	45
	Median	13.46		12.76	

5 Years Ending 3/31/19

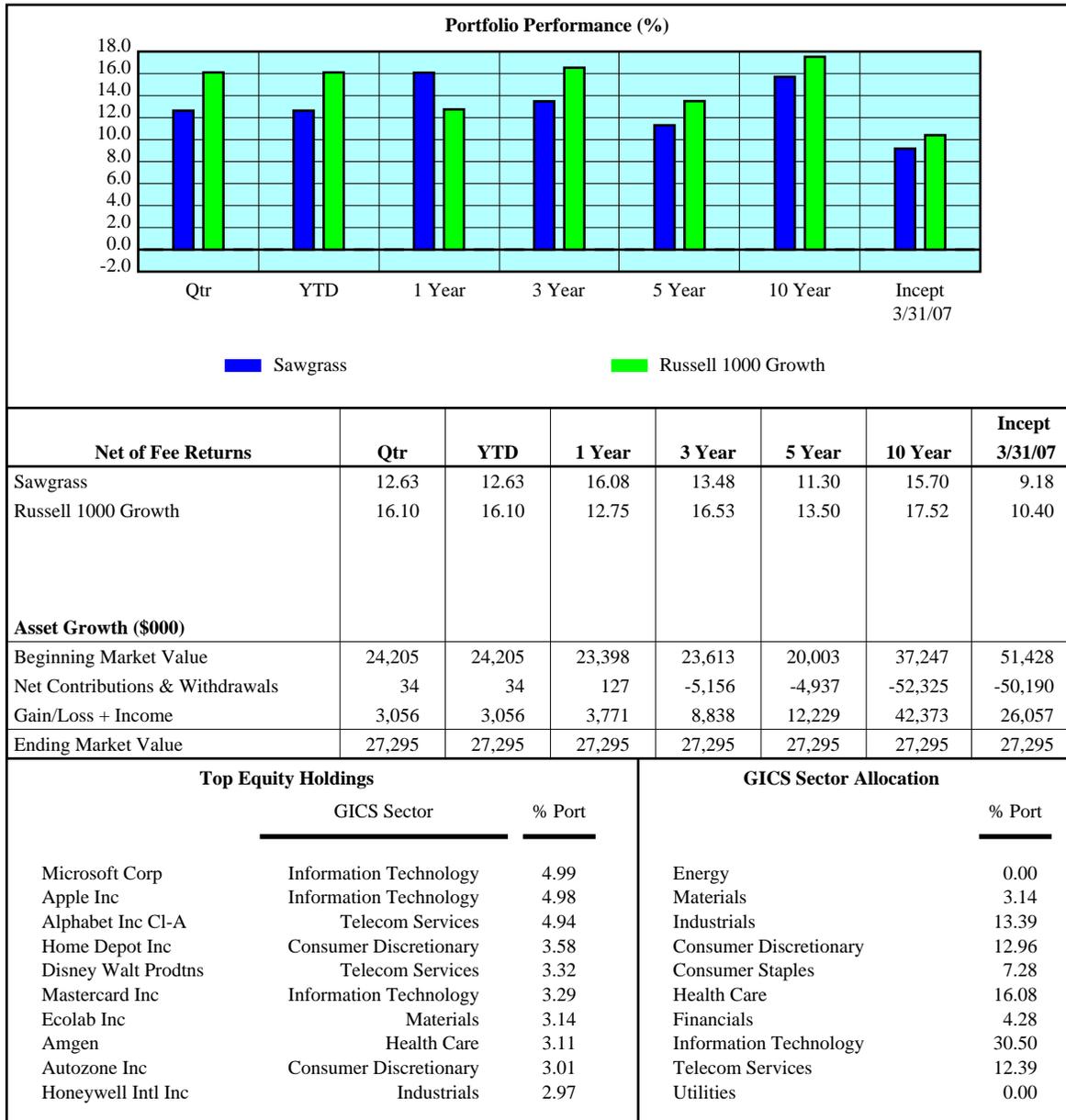


		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
1	Rhumblin Large Cap Fund	10.84	59	11.05	42
1	Standard & Poors 500	10.91	36	11.05	42
	Median	10.86		11.27	

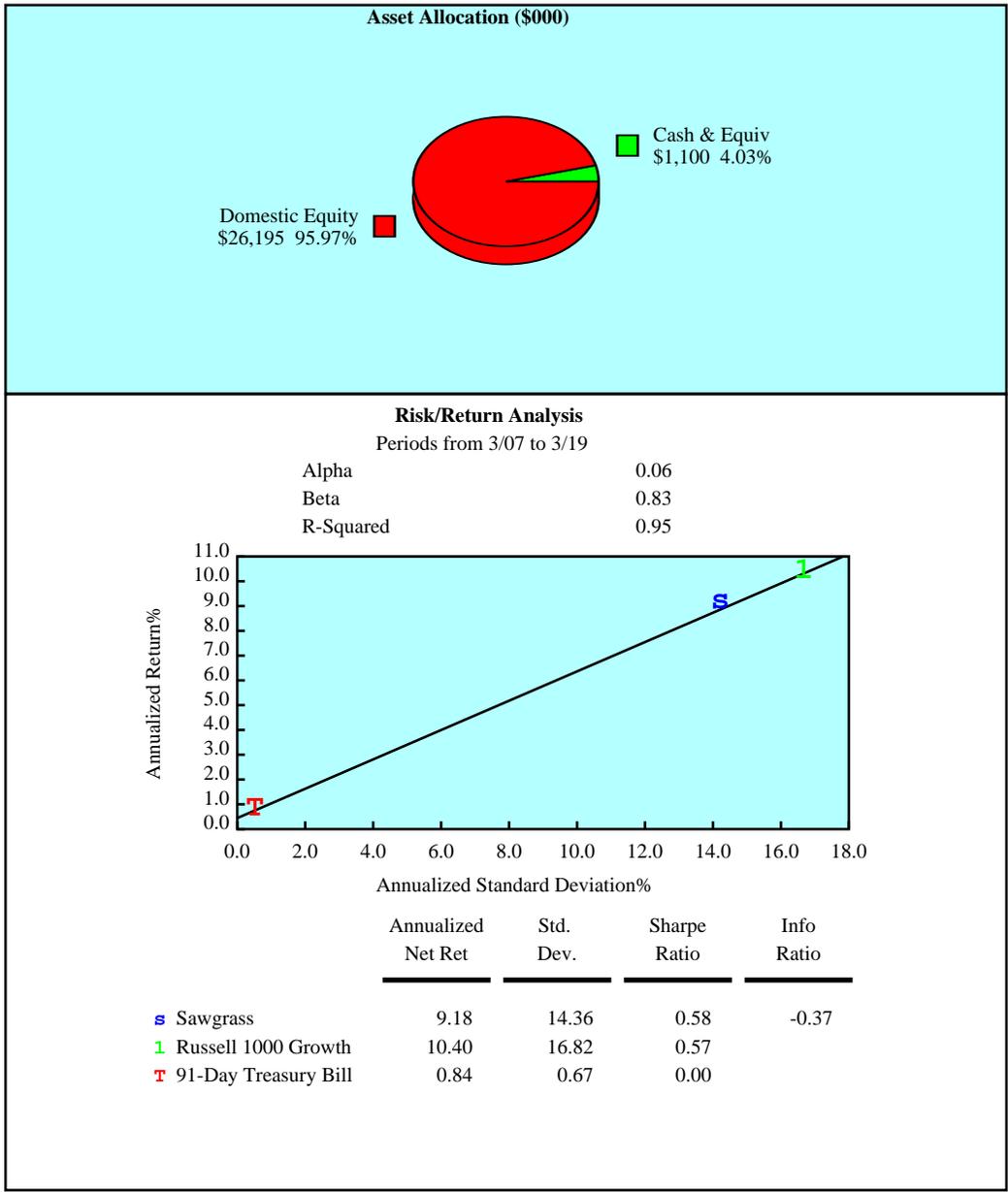
City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Rhumblin Large Cap Fund  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	2	2	3	3	26	26
Positive Periods	3	3	10	10	17	17	68	68
Up Market Capture	1.00		1.00		1.00		1.00	
Down Market Capture	1.00		1.00		1.00		0.99	
Batting Average	0.25		0.17		0.15		0.49	
Worst Quarter	-13.52	-13.52	-13.52	-13.52	-13.52	-13.52	-21.62	-21.93
Best Quarter	13.63	13.65	13.63	13.65	13.63	13.65	21.07	21.32
Worst 4 Quarters	9.44	9.50	-4.46	-4.38	-4.46	-4.38	-37.64	-38.07
Best 4 Quarters	9.44	9.50	21.74	21.83	21.74	21.83	49.68	49.75
Standard Deviation	23.32	23.34	12.75	12.75	11.05	11.05	16.03	16.22
Beta	1.00		1.00		1.00		0.99	
Alpha	-0.01		-0.02		-0.01		0.04	
R-Squared	1.00		1.00		1.00		1.00	
Sharpe Ratio	0.31	0.32	0.96	0.97	0.91	0.92	0.42	0.41
Treynor Ratio	7.32		12.25		10.10		6.79	
Tracking Error	0.02		0.03		0.04		0.57	
Information Ratio	-2.80		-2.20		-1.69		0.09	

## City of Fort Lauderdale Police and Fire Sawgrass as of 3/31/19

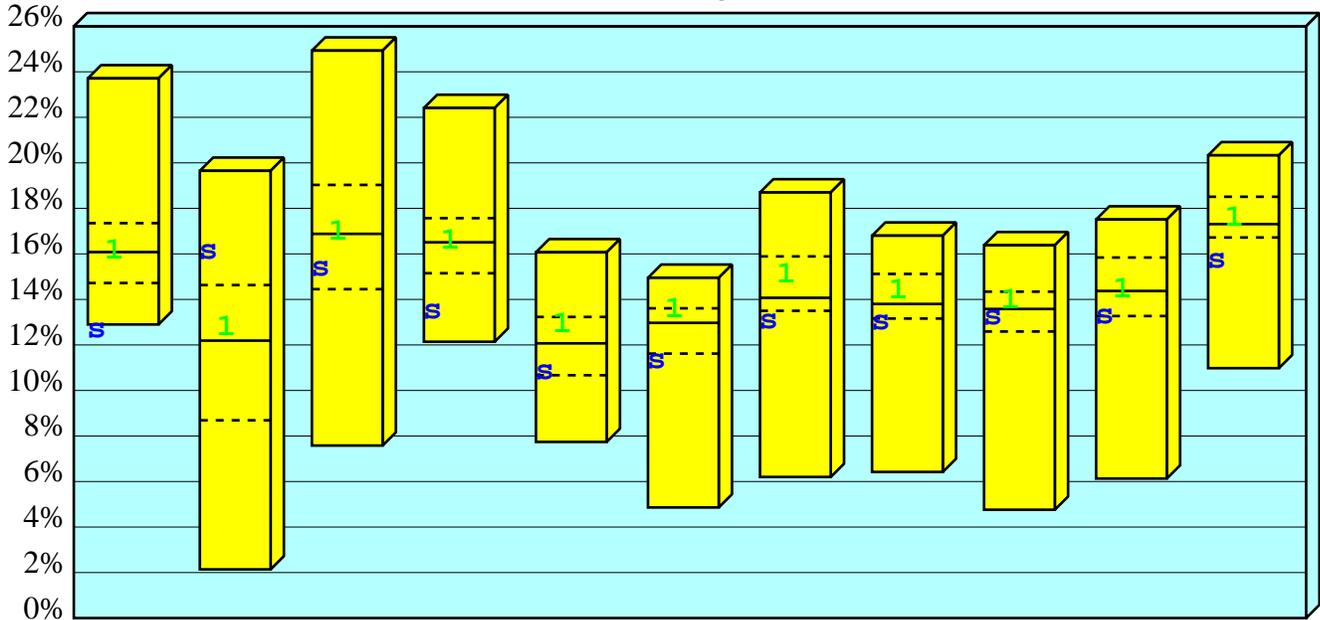


# City of Fort Lauderdale Police and Fire Sawgrass as of 3/31/19





# City of Fort Lauderdale Police and Fire Large Growth Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	23.71	19.65	24.93	22.41	16.07	14.95	18.70	16.80	16.38	17.51	20.33
1st Qt	17.35	14.63	19.03	17.57	13.23	13.61	15.89	15.12	14.34	15.84	18.51
Median	16.08	12.19	16.88	16.51	12.07	12.97	14.07	13.80	13.58	14.37	17.31
3rd Qt	14.72	8.69	14.45	15.15	10.67	11.62	13.50	13.16	12.59	13.27	16.72
Low	12.90	2.14	7.58	12.14	7.74	4.86	6.20	6.42	4.76	6.13	10.98

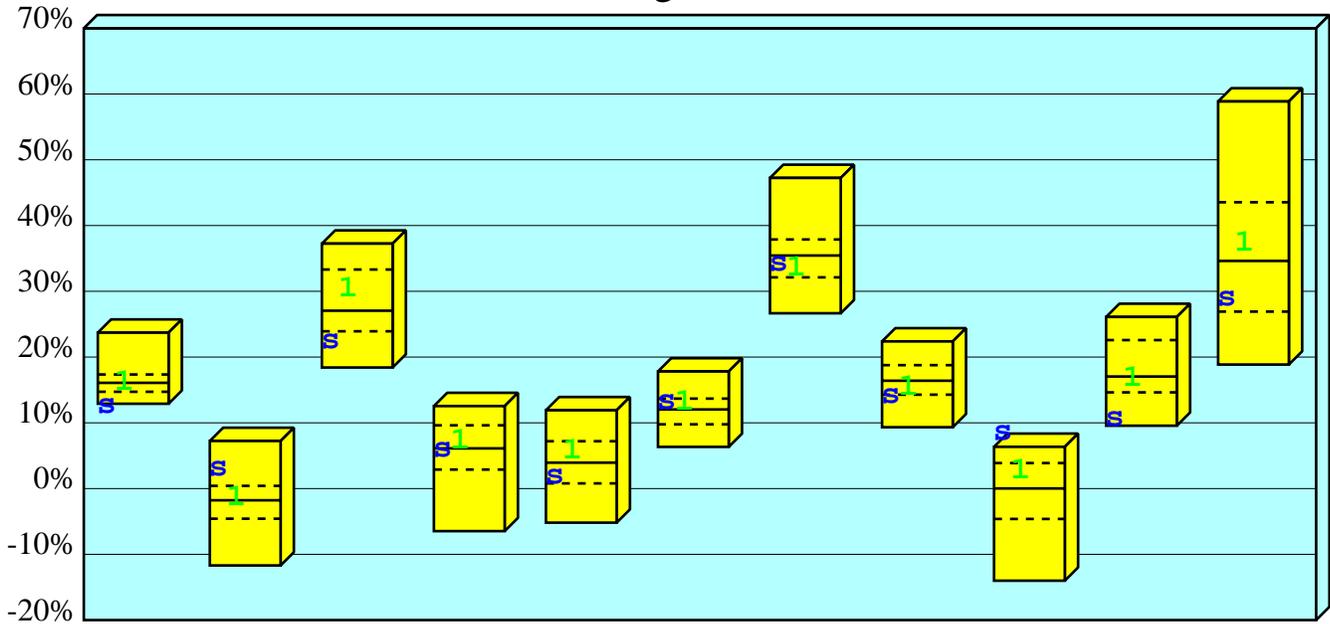
**S** Sawgrass

Net Ret	12.63	16.08	15.35	13.48	10.80	11.30	13.03	13.01	13.23	13.26	15.70
Rank	95	15	60	87	70	75	78	78	56	76	94

**1** Russell 1000 Growth

Net Ret	16.10	12.75	16.92	16.53	12.86	13.50	15.06	14.34	13.92	14.39	17.52
Rank	46	32	42	46	33	29	36	39	45	50	43

# City of Fort Lauderdale Police and Fire Large Growth Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



3/31/19

	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
High	23.71	7.24	37.25	12.55	11.91	17.81	47.24	22.38	6.35	26.10	58.87
1st Qt	17.35	0.41	33.31	9.62	7.20	13.68	37.88	18.77	3.88	22.58	43.54
Median	16.08	-1.78	27.05	6.11	3.94	12.03	35.44	16.40	0.02	17.04	34.62
3rd Qt	14.72	-4.58	23.92	2.89	0.79	9.77	32.12	14.28	-4.62	14.63	26.91
Low	12.90	-11.69	18.41	-6.47	-5.18	6.34	26.66	9.33	-14.01	9.56	18.86

**s** Sawgrass

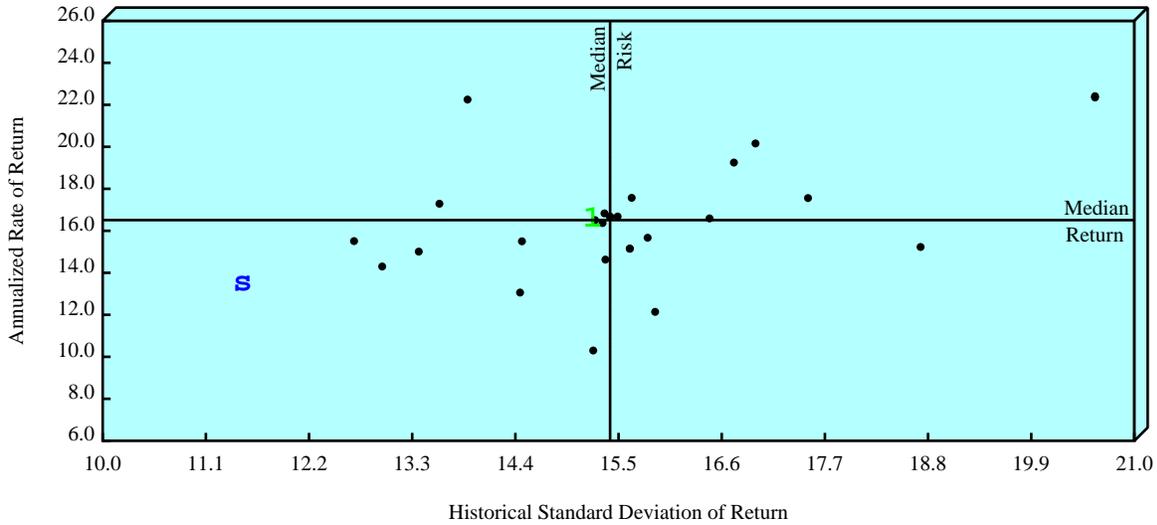
Net Ret	12.63	3.04	22.36	5.95	1.83	13.22	34.20	14.03	8.49	10.69	28.88
Rank	95	14	86	51	68	36	62	77	1	93	64

**1** Russell 1000 Growth

Net Ret	16.10	-1.51	30.21	7.08	5.67	13.05	33.49	15.26	2.63	16.72	37.21
Rank	46	42	39	38	41	42	67	58	36	53	42

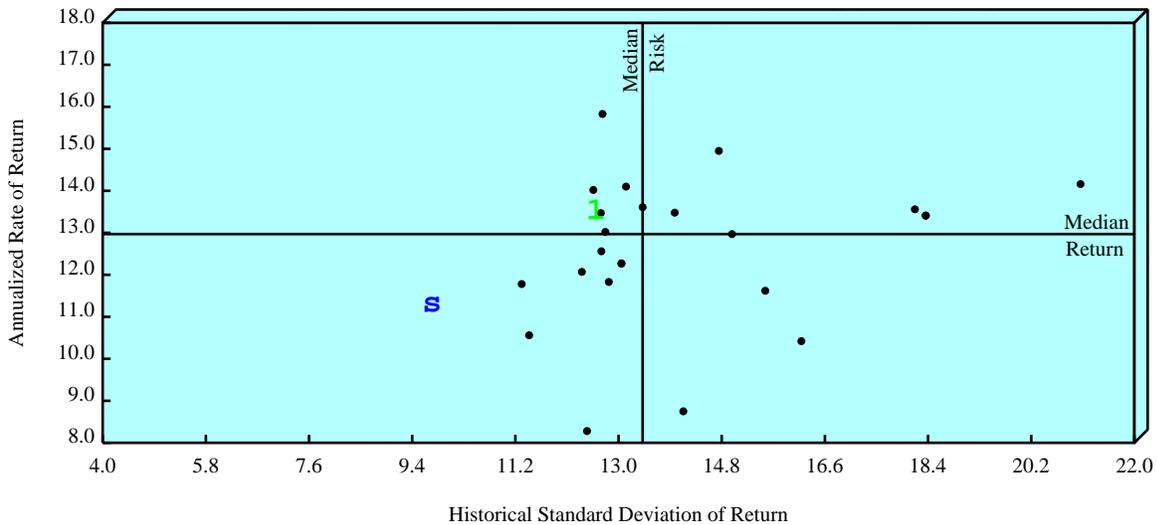
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Large Growth Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
s	Sawgrass	13.48	87	11.55	1
1	Russell 1000 Growth	16.53	46	15.28	39
	Median	16.51		15.41	

5 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
s	Sawgrass	11.30	75	9.84	1
1	Russell 1000 Growth	13.50	29	12.70	26
	Median	12.97		13.42	

City of Fort Lauderdale Police and Fire  
 Risk Measure Summary  
 Sawgrass  
 Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	2	1	4	2	14	11
Positive Periods	3	3	10	11	16	18	34	37
Up Market Capture	0.86		0.75		0.78		0.84	
Down Market Capture	0.64		0.64		0.69		0.85	
Batting Average	0.50		0.33		0.35		0.44	
Worst Quarter	-10.12	-15.89	-10.12	-15.89	-10.12	-15.89	-21.12	-22.79
Best Quarter	12.63	16.10	12.63	16.10	12.63	16.10	13.15	16.32
Worst 4 Quarters	16.08	12.75	3.04	-1.51	1.83	-1.51	-36.37	-38.44
Best 4 Quarters	16.08	12.75	22.73	30.21	22.73	30.21	40.15	49.75
Standard Deviation	20.30	27.61	11.55	15.28	9.84	12.70	14.36	16.82
Beta	0.74		0.73		0.74		0.83	
Alpha	1.26		0.25		0.26		0.06	
R-Squared	0.98		0.93		0.91		0.95	
Sharpe Ratio	0.69	0.38	1.06	1.00	1.07	1.00	0.58	0.57
Treynor Ratio	18.96		16.89		14.31		10.02	
Tracking Error	7.95		5.20		4.43		4.30	
Information Ratio	0.17		-0.64		-0.54		-0.37	

City of Fort Lauderdale Police and Fire  
Equity Summary Statistics  
Sawgrass  
Period Ending 3/19

	<u>Portfolio</u>	<u>Russell 1000 Growth</u>
Total Number Of Securities	49	545
Equity Market Value	26,195,418	
Average Capitalization \$(000)	209,555,377	277,732,884
Median Capitalization \$(000)	94,208,155	11,725,594
Equity Segment Yield	1.58	1.29
Equity Segment P/E - Average	22.93	24.93
Equity Segment P/E - Median	25.05	21.62
Equity Segment Beta	0.93	1.09
Price/Book Ratio	5.36	6.74
Debt/Equity Ratio	68.05	66.81
Five Year Earnings Growth	10.96	16.72

Ten Largest Holdings	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Microsoft Corp	1,306,775	4.99	16.62
Apple Inc	1,304,957	4.98	20.94
Alphabet Inc Cl-A	1,294,579	4.94	12.63
Home Depot Inc	936,423	3.58	12.52
Disney Walt Prodtns	870,475	3.32	1.26
Mastercard Inc	861,747	3.29	25.02
Ecolab Inc	820,911	3.14	20.12
Amgen	815,014	3.11	-1.65
Autozone Inc	788,572	3.01	22.16
Honeywell Intl Inc	778,708	2.97	20.93

Ten Best Performers	<u>Quarterly Ret</u>	Ten Worst Performers	<u>Quarterly Ret</u>
Vmware Inc	31.63	Abbvie Inc	-11.48
Danaher Corp	28.19	F5 Networks Inc	-3.15
Cisco Sys Inc	25.60	Citrix Sys Inc	-2.40
Varian Med Sys Inc	25.07	Amgen	-1.65
Mastercard Inc	25.02	Berkshire Hathaway I	-1.61
Fortive Corp	24.10	Unitedhealth Group I	-0.37
Paychex Inc	24.07	Coca Cola Co	-0.17
Verisk Analytics Inc	22.21	Disney Walt Prodtns	1.26
Autozone Inc	22.16	Clorox Co	4.76
Union Pac Corp	21.59	Verizon Communicatio	6.29

**City of Fort Lauderdale Police and Fire  
Equity Contribution to Return  
Sawgrass  
Period Ending 3/19**

	<u>Portfolio</u>	<u>Russell 1000 Growth</u>
Total Number Of Securities	49	545
Equity Market Value	26,195,418	
Average Capitalization \$(000)	209,555,377	277,732,884
Median Capitalization \$(000)	94,208,155	11,725,594
Equity Segment Yield	1.58	1.29
Equity Segment P/E - Average	22.93	24.93
Equity Segment P/E - Median	25.05	21.62
Equity Segment Beta	0.93	1.09
Price/Book Ratio	5.36	6.74
Debt/Equity Ratio	68.05	66.81
Five Year Earnings Growth	10.96	16.72

Ten Best Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Apple Inc	1,304,957	4.98	20.94
Microsoft Corp	1,306,775	4.99	16.62
Mastercard Inc	861,747	3.29	25.02
Autozone Inc	788,572	3.01	22.16
Cisco Sys Inc	679,194	2.59	25.60
Ecolab Inc	820,911	3.14	20.12
Alphabet Inc Cl-A	1,294,579	4.94	12.63
Honeywell Intl Inc	778,708	2.97	20.93
Danaher Corp	464,710	1.77	28.19
Paychex Inc	541,350	2.07	24.07

Ten Worst Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Abbvie Inc	393,279	1.50	-11.48
Amgen	815,014	3.11	-1.65
F5 Networks Inc	277,766	1.06	-3.15
Berkshire Hathaway I	522,314	1.99	-1.61
Citrix Sys Inc	330,871	1.26	-2.40
Unitedhealth Group I	721,999	2.76	-0.37
Coca Cola Co	451,730	1.73	-0.17
Disney Walt Prodtns	870,475	3.32	1.26
Clorox Co	314,502	1.20	4.76
Nike Inc	110,315	0.42	13.87

City of Fort Lauderdale Police and Fire  
Equity Sector Attribution Analysis  
Sawgrass  
Quarter Ending 3/19

GICS Sectors	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Stock	Sector	Total
Energy	0.00	0.76		14.40	0.00	0.01	0.01
Materials	3.00	1.40	20.12	14.91	0.16	-0.01	0.14
Industrials	12.17	12.27	18.31	16.32	0.24	-0.00	0.24
Consumer Discretionary	12.91	15.13	15.50	15.39	0.01	0.01	0.02
Consumer Staples	7.79	6.03	8.16	10.92	-0.22	-0.08	-0.30
Health Care	18.78	14.29	8.09	7.43	0.13	-0.37	-0.24
Financials	4.53	4.41	8.13	13.27	-0.23	-0.00	-0.24
Information Technology	27.59	31.45	18.06	21.36	-0.91	-0.22	-1.13
Telecom. Services	13.24	11.92	9.72	16.69	-0.92	0.01	-0.91
Utilities	0.00	0.00		0.00	0.00	-0.00	0.00
	100.00	100.00	13.62	15.66	-1.75	-0.66	-2.40

Index - Russell 1000 Growth

Stock Selection Return Attribution

[ Portfolio Market Value Sector Percentage ] \* [ Portfolio Sector Return - Index Sector Return ]

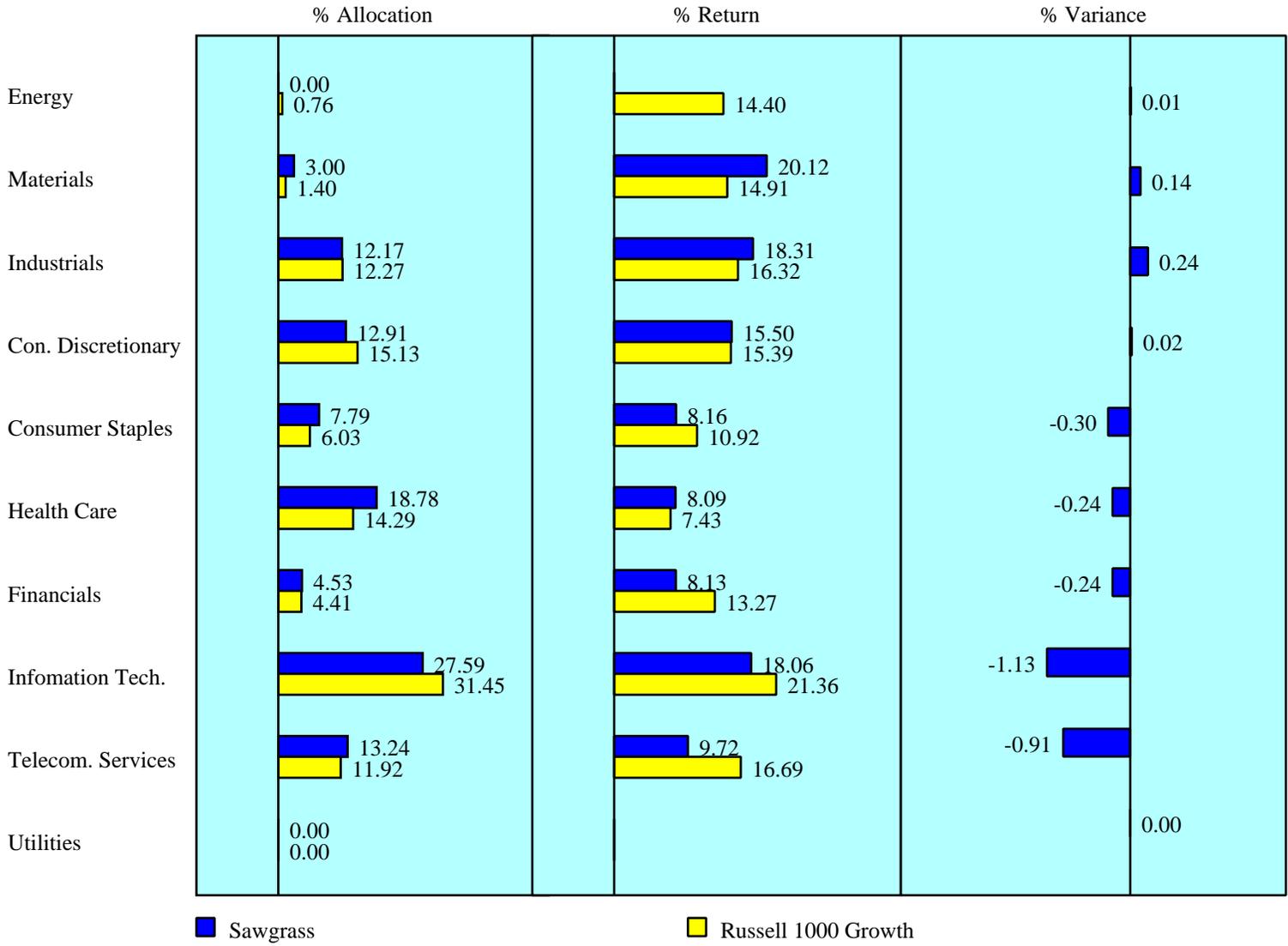
Sector Selection Return Attribution

[ Portfolio Sector Percentage - Index Sector Percentage ] \* [ Index Sector Return - Index Total Return ]

Trading Effect 0.01%

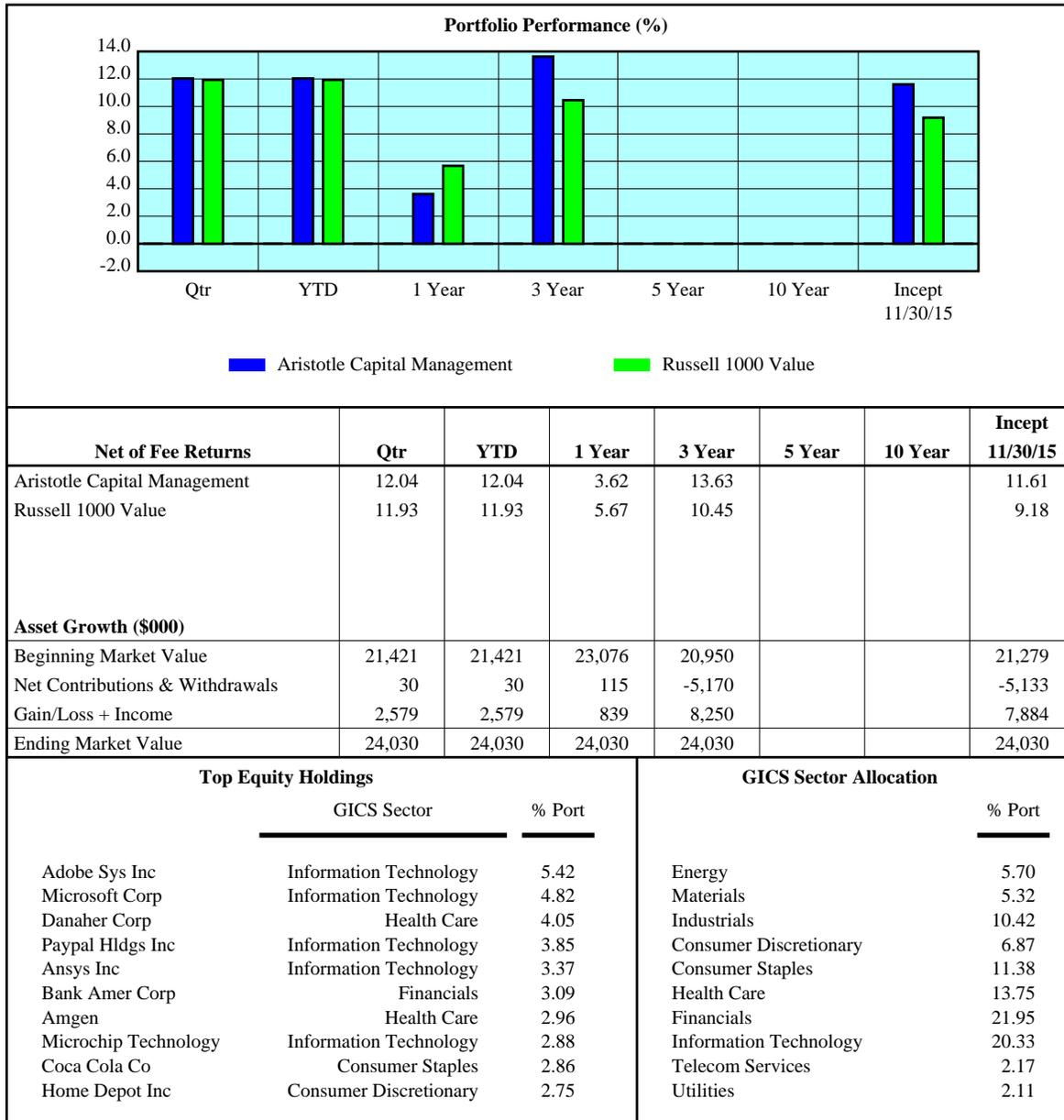
[ Actual Return 13.64% ] - [ Buy Hold Return 13.62% ]

# City of Fort Lauderdale Police and Fire Equity Sector Attribution Chart Sawgrass Quarter Ending 3/19

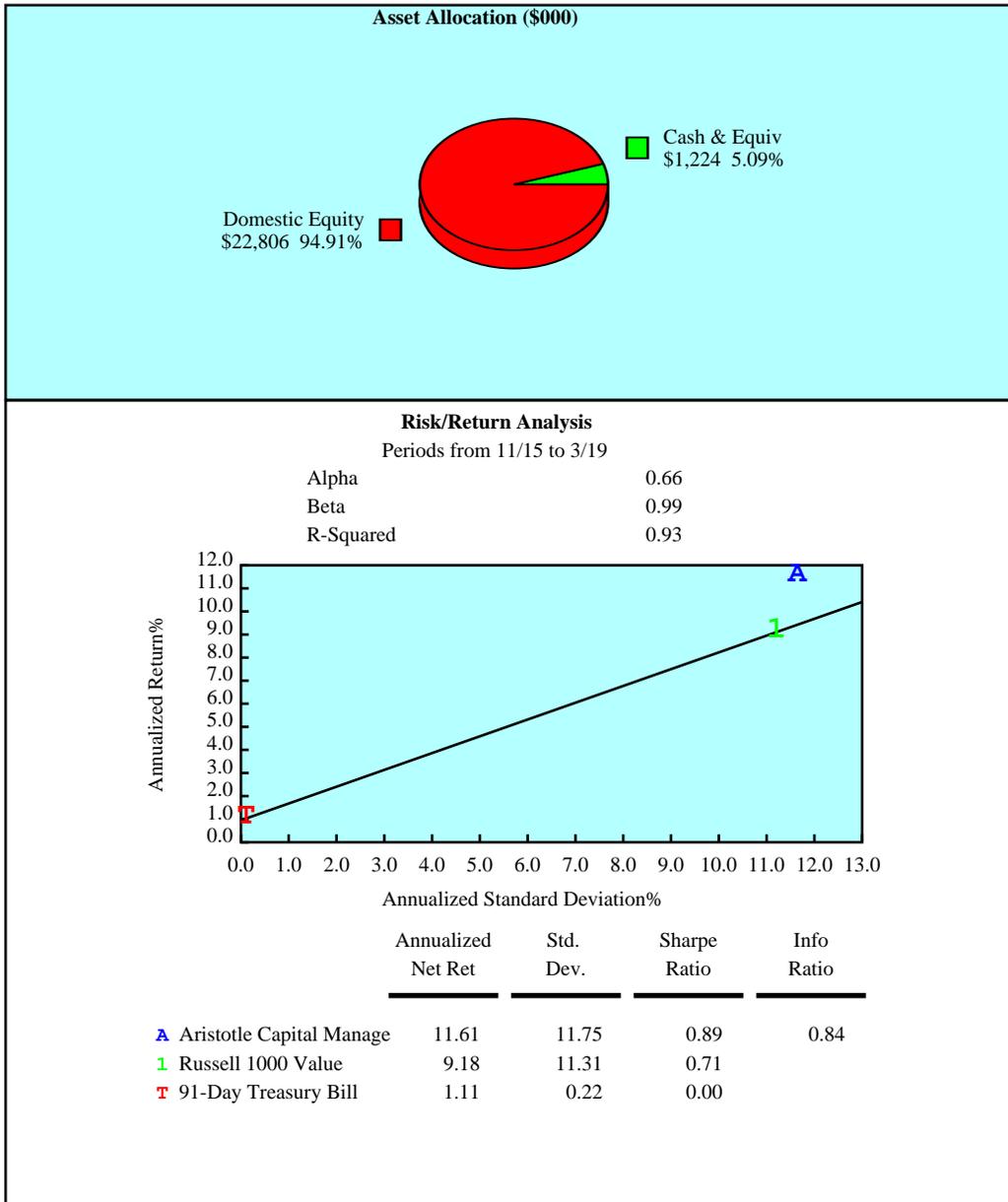




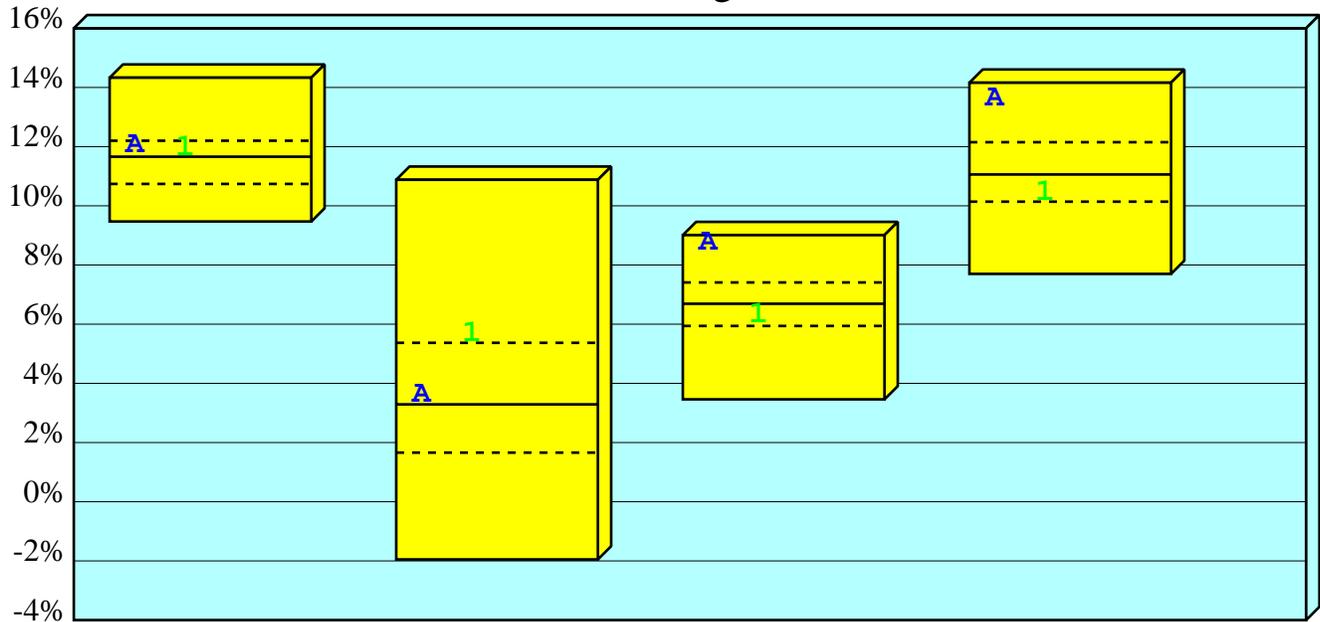
## City of Fort Lauderdale Police and Fire Aristotle Capital Management as of 3/31/19



# City of Fort Lauderdale Police and Fire Aristotle Capital Management as of 3/31/19



## City of Fort Lauderdale Police and Fire Large Value Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years
High	14.33	10.88	9.01	14.16
1st Qt	12.20	5.37	7.41	12.15
Median	11.66	3.29	6.69	11.06
3rd Qt	10.74	1.66	5.94	10.14
Low	9.47	-1.95	3.46	7.70

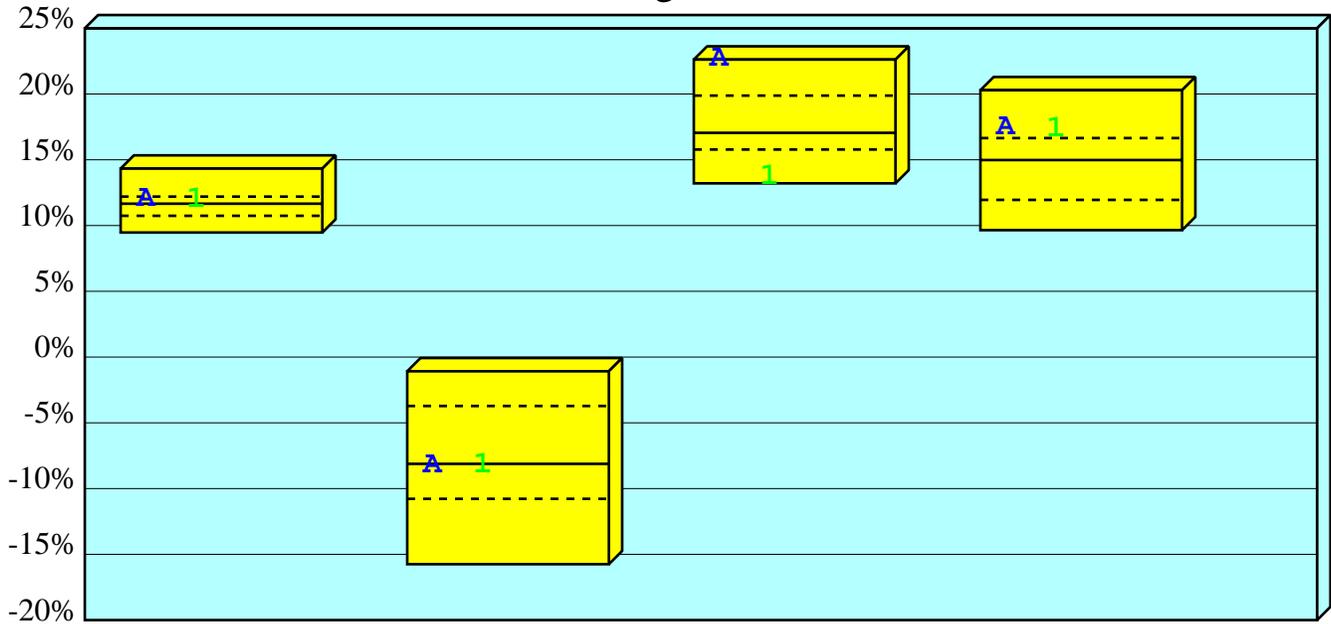
### A Aristotle Capital Management

Net Ret	12.04	3.62	8.74	13.63
Rank	27	44	5	5

### 1 Russell 1000 Value

Net Ret	11.93	5.67	6.31	10.45
Rank	38	22	59	65

## City of Fort Lauderdale Police and Fire Large Value Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



	3/31/19 YTD	2018	2017	2016
High	14.33	-1.08	22.62	20.29
1st Qt	12.20	-3.72	19.88	16.65
Median	11.66	-8.12	17.05	14.98
3rd Qt	10.74	-10.78	15.78	11.95
Low	9.47	-15.75	13.21	9.65

**A** Aristotle Capital Management

Net Ret	12.04	-8.21	22.66	17.50
Rank	27	53	4	16

**1** Russell 1000 Value

Net Ret	11.93	-8.27	13.66	17.34
Rank	38	53	91	17

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Aristotle Capital Management  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	2	2			2	2
Positive Periods	3	3	10	10			11	11
Up Market Capture	0.92		1.17				1.15	
Down Market Capture	1.05		0.91				0.91	
Batting Average	0.50		0.75				0.69	
Worst Quarter	-12.33	-11.72	-12.33	-11.72			-12.33	-11.72
Best Quarter	12.04	11.93	12.04	11.93			12.04	11.93
Worst 4 Quarters	3.62	5.67	-8.21	-8.27			-8.21	-8.27
Best 4 Quarters	3.62	5.67	24.10	19.22			24.10	19.22
Standard Deviation	20.25	20.04	11.63	11.51			11.22	11.04
Beta	1.00		0.99				0.99	
Alpha	-0.49		0.77				0.66	
R-Squared	0.99		0.93				0.93	
Sharpe Ratio	0.07	0.18	1.07	0.80			1.05	0.82
Treynor Ratio	1.49		12.63				11.90	
Tracking Error	2.07		3.02				2.99	
Information Ratio	-0.94		0.97				0.84	

City of Fort Lauderdale Police and Fire  
Equity Summary Statistics  
Aristotle Capital Management  
Period Ending 3/19

	<u>Portfolio</u>	<u>Russell 1000 Value</u>
Total Number Of Securities	44	722
Equity Market Value	22,805,839	
Average Capitalization \$(000)	116,980,254	126,039,671
Median Capitalization \$(000)	30,380,329	9,126,243
Equity Segment Yield	1.78	2.63
Equity Segment P/E - Average	17.48	18.95
Equity Segment P/E - Median	15.29	17.06
Equity Segment Beta	1.09	0.93
Price/Book Ratio	2.78	2.15
Debt/Equity Ratio	66.86	68.58
Five Year Earnings Growth	12.54	3.84

Ten Largest Holdings	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Adobe Sys Inc	1,234,648	5.42	17.79
Microsoft Corp	1,096,842	4.82	16.62
Danaher Corp	922,820	4.05	28.19
Paypal Hldgs Inc	877,448	3.85	23.49
Ansys Inc	767,382	3.37	27.82
Bank Amer Corp	703,545	3.09	12.55
Amgen	674,619	2.96	-1.65
Microchip Technology	655,384	2.88	15.82
Coca Cola Co	650,885	2.86	-0.17
Home Depot Inc	625,945	2.75	12.52

Ten Best Performers	<u>Quarterly Ret</u>	Ten Worst Performers	<u>Quarterly Ret</u>
Tyson Foods Inc	30.81	Sony Corp	-12.51
Danaher Corp	28.19	Kroger Co	-10.11
Ansys Inc	27.82	Walgreens Boots Alli	-6.84
Lennar Corp- Cl A	25.50	Amgen	-1.65
Johnson Ctls Intl Pl	25.49	Coca Cola Co	-0.17
Mondelez Intl Inc	25.36	Medtronic Plc	0.68
Lennar Corp	25.00	Mitsubishi Ufj Finl	1.64
Ameriprise Finl Inc	23.60	J P Morgan Chase & C	4.55
Paypal Hldgs Inc	23.49	General Dynamics Cor	8.28
Oshkosh Truck Corp	22.97	Bva (Bilb-Viz-Arg)	8.32

**City of Fort Lauderdale Police and Fire**  
**Equity Contribution to Return**  
**Aristotle Capital Management**  
**Period Ending 3/19**

	<u>Portfolio</u>	<u>Russell 1000 Value</u>
Total Number Of Securities	44	722
Equity Market Value	22,805,839	
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Ten Best Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Danaher Corp	922,820	4.05	28.19
Adobe Sys Inc	1,234,648	5.42	17.79
Ansys Inc	767,382	3.37	27.82
Paypal Hldgs Inc	877,448	3.85	23.49
Microsoft Corp	1,096,842	4.82	16.62
Oshkosh Truck Corp	608,553	2.67	22.97
Johnson Ctls Intl Pl	533,783	2.34	25.49
Mondelez Intl Inc	504,192	2.21	25.36
Ameriprise Finl Inc	538,020	2.36	23.60
Lennar Corp- Cl A	466,355	2.05	25.50

Ten Worst Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Sony Corp	465,062	2.04	-12.51
Walgreens Boots Alli	417,582	1.83	-6.84
Kroger Co	230,576	1.01	-10.11
Amgen	674,619	2.96	-1.65
Coca Cola Co	650,885	2.86	-0.17
Lennar Corp	7,433	0.03	25.00
Medtronic Plc	619,344	2.72	0.68
Mitsubishi Ufj Finl	262,350	1.15	1.64
J P Morgan Chase & C	425,166	1.87	4.55
Allegion Pub Ltd Co	152,665	0.67	14.15

City of Fort Lauderdale Police and Fire  
Equity Sector Attribution Analysis  
Aristotle Capital Management  
Quarter Ending 3/19

GICS Sectors	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Stock	Sector	Total
Energy	5.68	9.29	12.53	16.61	-0.23	-0.20	-0.43
Materials	5.22	3.77	14.01	9.43	0.24	-0.02	0.21
Industrials	9.25	7.65	18.01	18.69	-0.06	0.12	0.06
Consumer Discretionary	7.19	5.23	6.80	13.22	-0.46	0.04	-0.42
Consumer Staples	12.03	7.83	2.86	12.47	-1.16	0.06	-1.10
Health Care	15.61	15.74	8.17	7.64	0.08	0.00	0.09
Financials	22.01	22.51	11.66	8.02	0.80	0.02	0.82
Information Technology	18.93	9.31	19.82	18.46	0.26	0.70	0.96
Telecom. Services	2.11	7.29	14.41	9.47	0.10	0.09	0.19
Utilities	1.98	6.47	19.94	11.50	0.17	-0.02	0.15
	100.00	100.00	12.23	11.16	-0.26	0.79	0.53

Index - Russell 1000 Value

Stock Selection Return Attribution

[ Portfolio Market Value Sector Percentage ] \* [ Portfolio Sector Return - Index Sector Return ]

Sector Selection Return Attribution

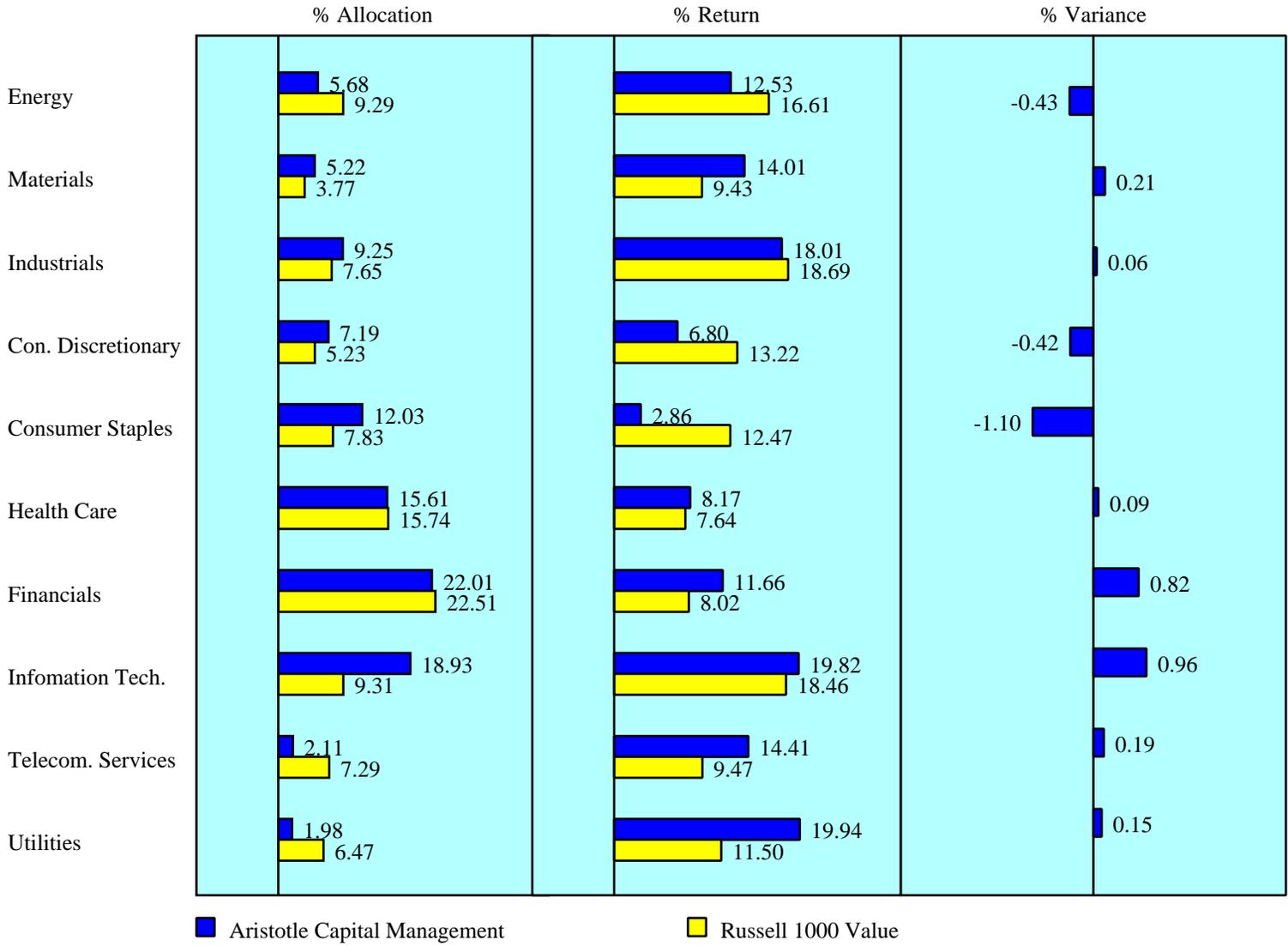
[ Portfolio Sector Percentage - Index Sector Percentage ] \* [ Index Sector Return - Index Total Return ]

Trading Effect 0.66%

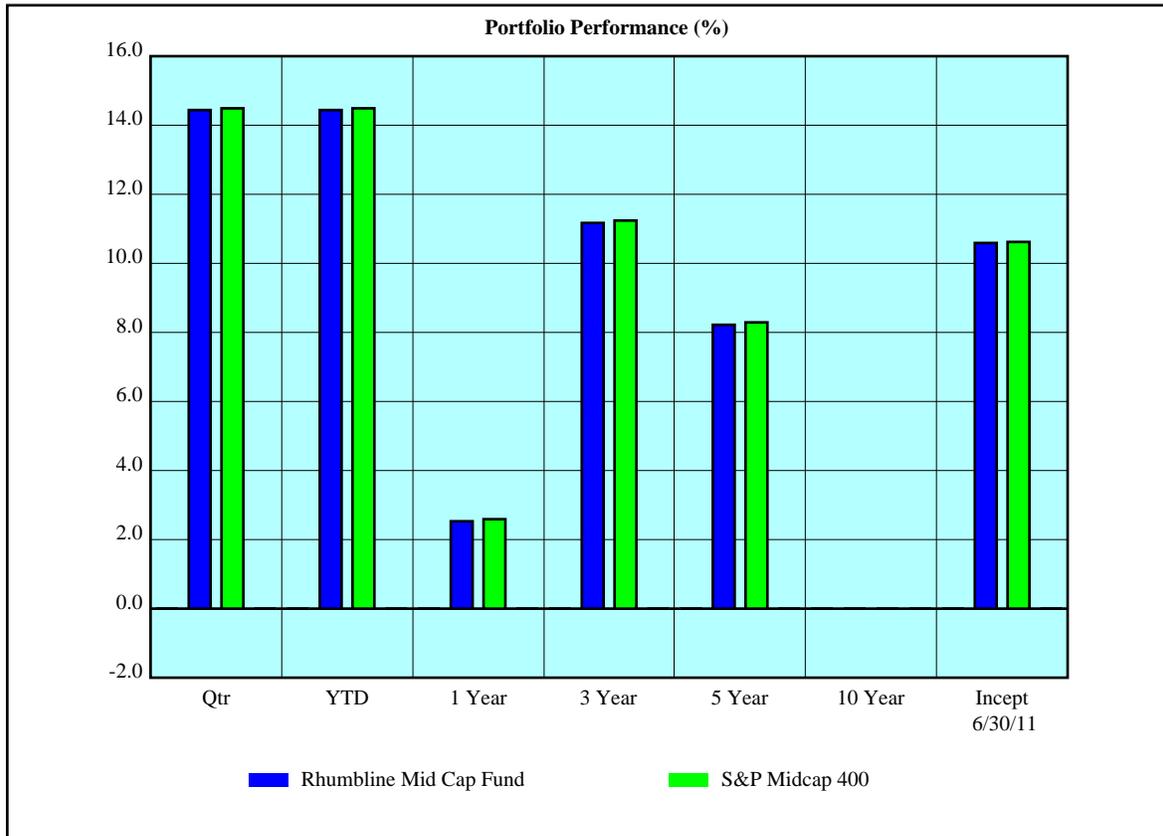
[ Actual Return 12.89% ] - [ Buy Hold Return 12.23% ]



# City of Fort Lauderdale Police and Fire Equity Sector Attribution Chart Aristotle Capital Management Quarter Ending 3/19

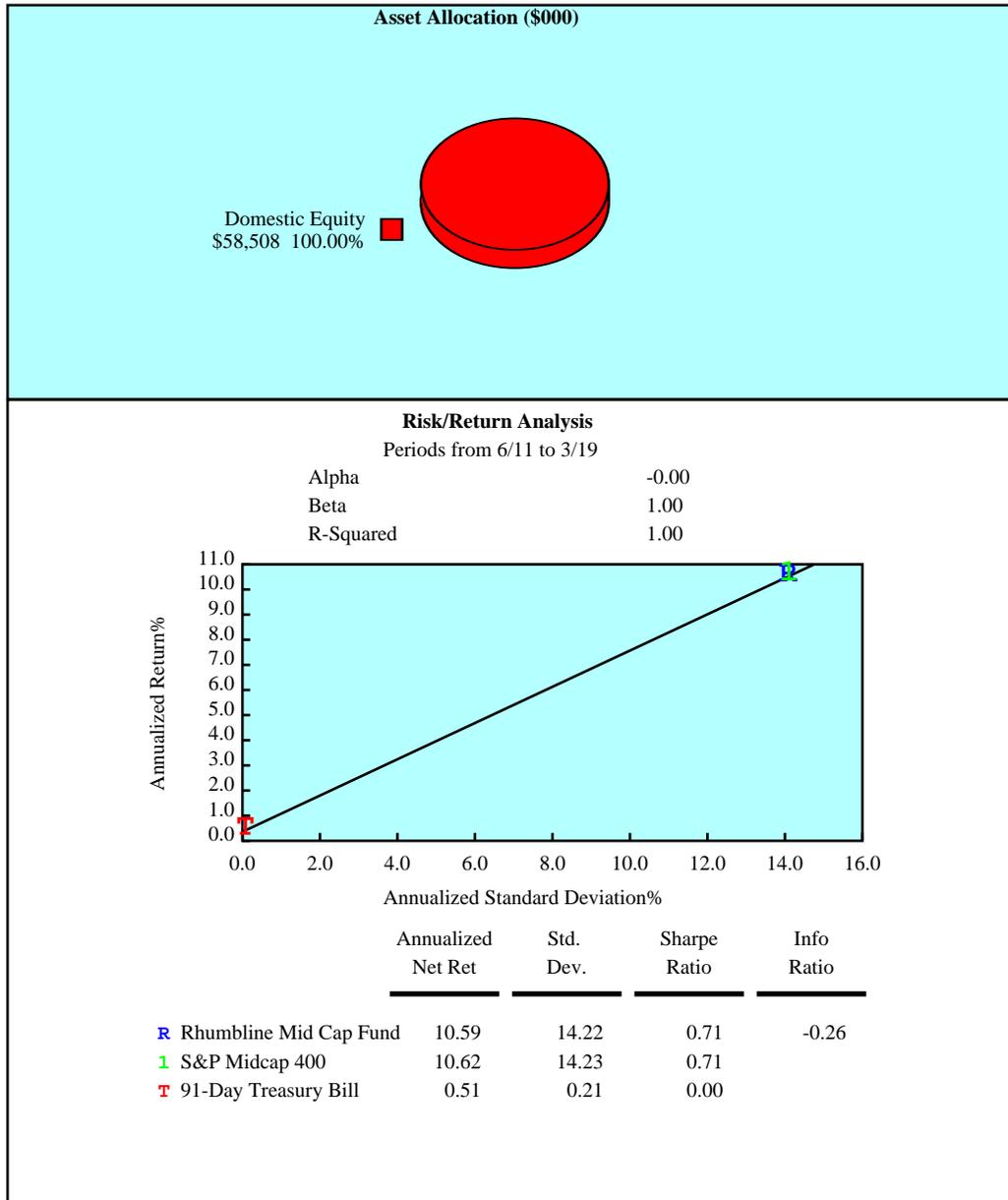


## City of Fort Lauderdale Police and Fire Rhumbleline Mid Cap Fund as of 3/31/19

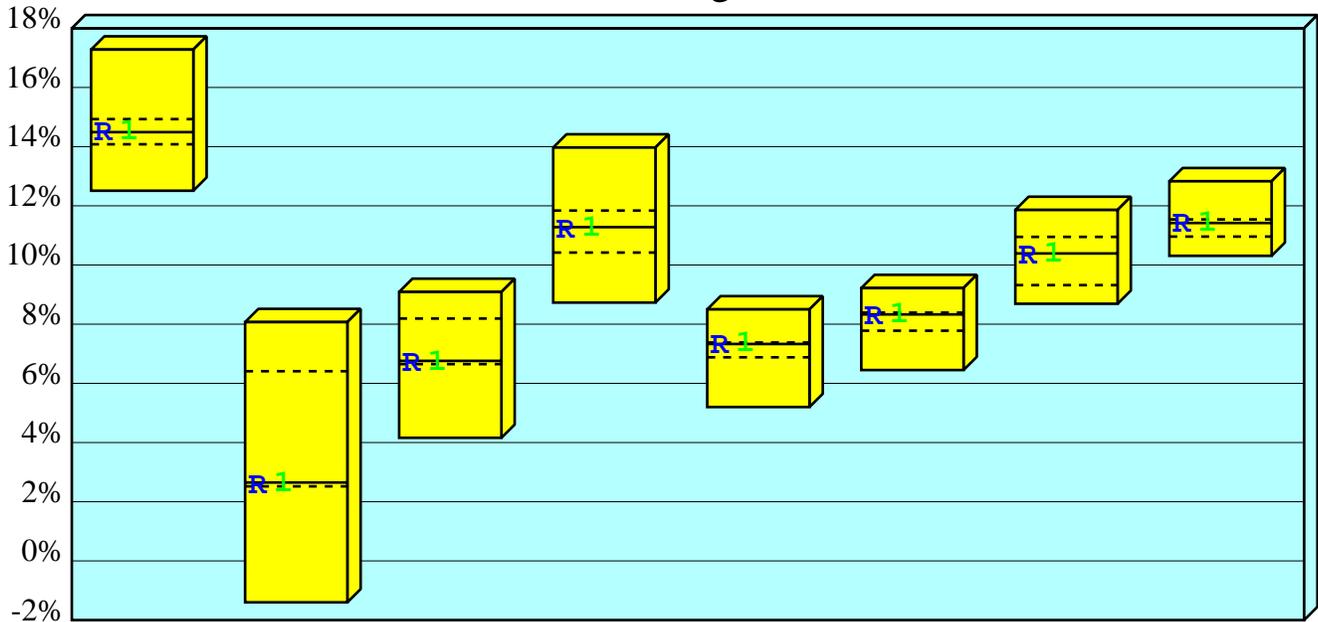


<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 6/30/11</b>
Rhumbline Mid Cap Fund	14.44	14.44	2.53	11.17	8.22		10.59
S&P Midcap 400	14.49	14.49	2.59	11.24	8.29		10.62
<b>Asset Growth (\$000)</b>							
Beginning Market Value	51,122	51,122	57,048	42,543	43,477		13,182
Net Contributions & Withdrawals	4	4	17	53	-7,377		8,293
Gain/Loss + Income	7,382	7,382	1,443	15,912	22,408		37,034
Ending Market Value	58,508	58,508	58,508	58,508	58,508		58,508

# City of Fort Lauderdale Police and Fire Rhumbline Mid Cap Fund as of 3/31/19



# City of Fort Lauderdale Police and Fire Midcap Neutral Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years
High	17.28	8.07	9.09	13.97	8.50	9.22	11.86	12.83
1st Qt	14.93	6.41	8.19	11.84	7.38	8.39	10.95	11.54
Median	14.49	2.65	6.76	11.28	7.33	8.33	10.39	11.42
3rd Qt	14.08	2.52	6.65	10.42	6.88	7.78	9.32	10.96
Low	12.51	-1.40	4.16	8.73	5.20	6.45	8.69	10.31

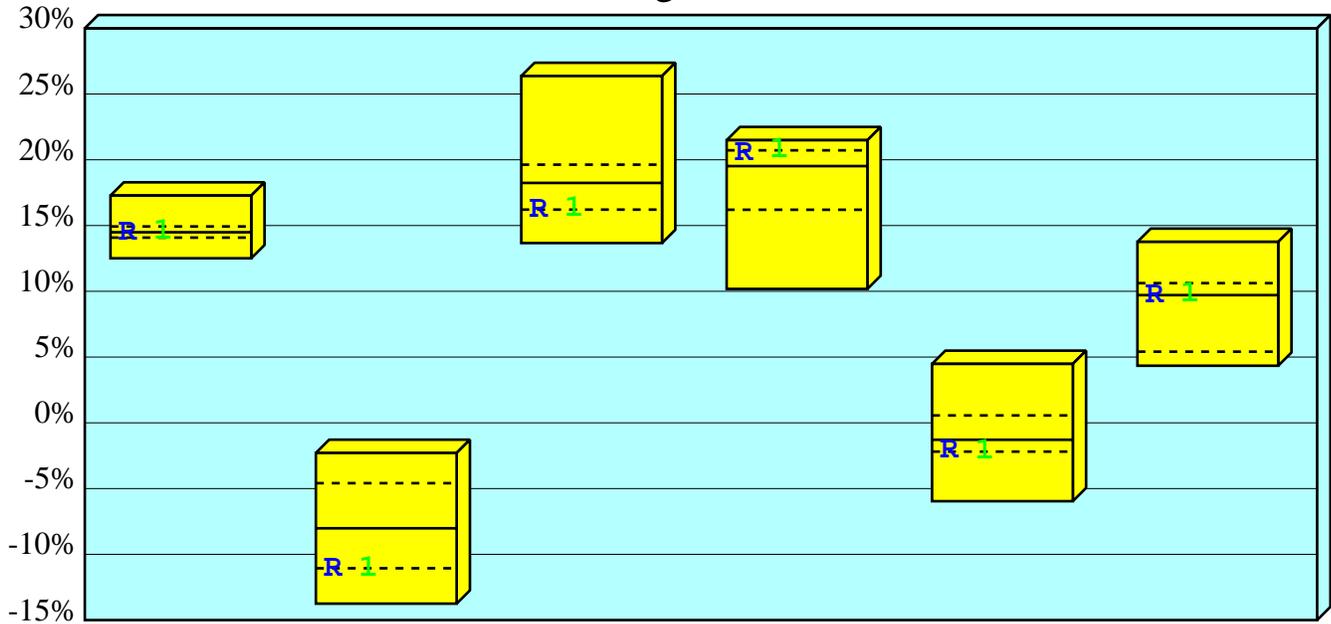
**R** Rhumbline Mid Cap Fund

Net Ret	14.44	2.53	6.64	11.17	7.26	8.22	10.27	11.36
Rank	61	74	76	63	53	55	55	55

**1** S&P Midcap 400

Net Ret	14.49	2.59	6.70	11.24	7.33	8.29	10.35	11.39
Rank	56	69	71	57	51	52	52	53

## City of Fort Lauderdale Police and Fire Midcap Neutral Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



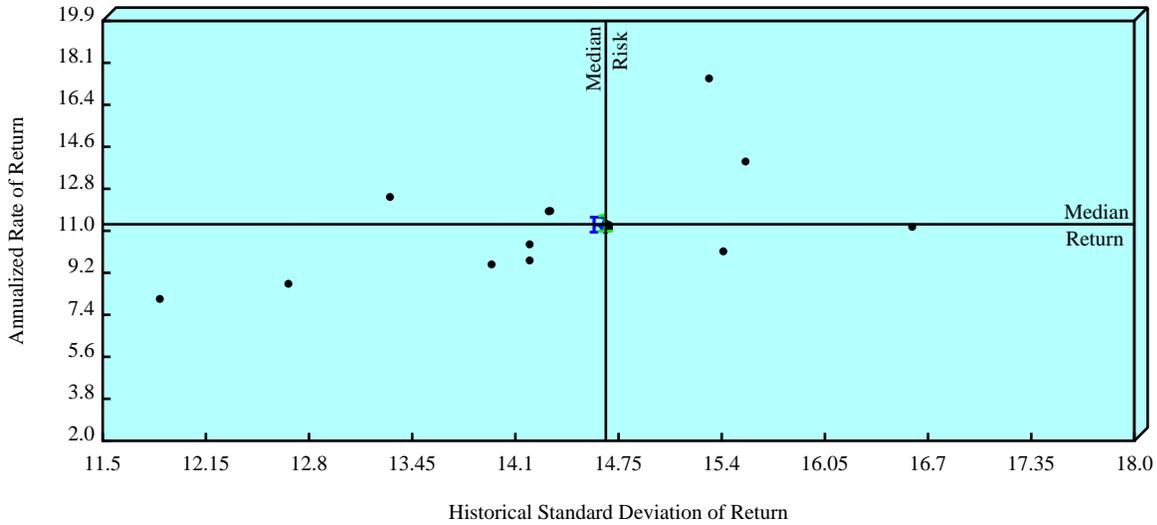
	3/31/19 YTD	2018	2017	2016	2015	2014
High	17.28	-2.29	26.37	21.49	4.48	13.76
1st Qt	14.93	-4.59	19.63	20.72	0.56	10.62
Median	14.49	-8.02	18.24	19.52	-1.29	9.71
3rd Qt	14.08	-11.06	16.21	16.20	-2.19	5.41
Low	12.51	-13.75	13.67	10.18	-5.96	4.34
<b>R Rhumbline Mid Cap Fund</b>						
Net Ret	14.44	-11.10	16.19	20.52	-2.14	9.72
Rank	61	85	75	30	63	47
<b>1 S&amp;P Midcap 400</b>						
Net Ret	14.49	-11.08	16.24	20.74	-2.18	9.77
Rank	56	83	72	16	69	45

# City of Fort Lauderdale Police and Fire

## Return vs Risk

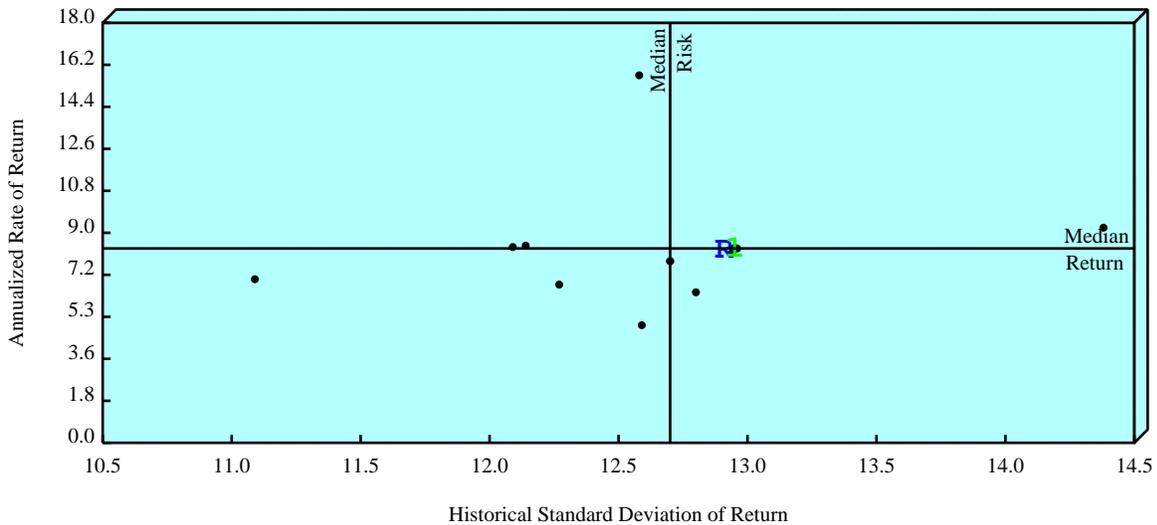
### Total Returns of Midcap Neutral Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
R	Rhumblin Mid Cap Fund	11.17	63	14.66	44
I	S&P Midcap 400	11.24	57	14.70	76
	Median	11.28		14.67	

5 Years Ending 3/31/19

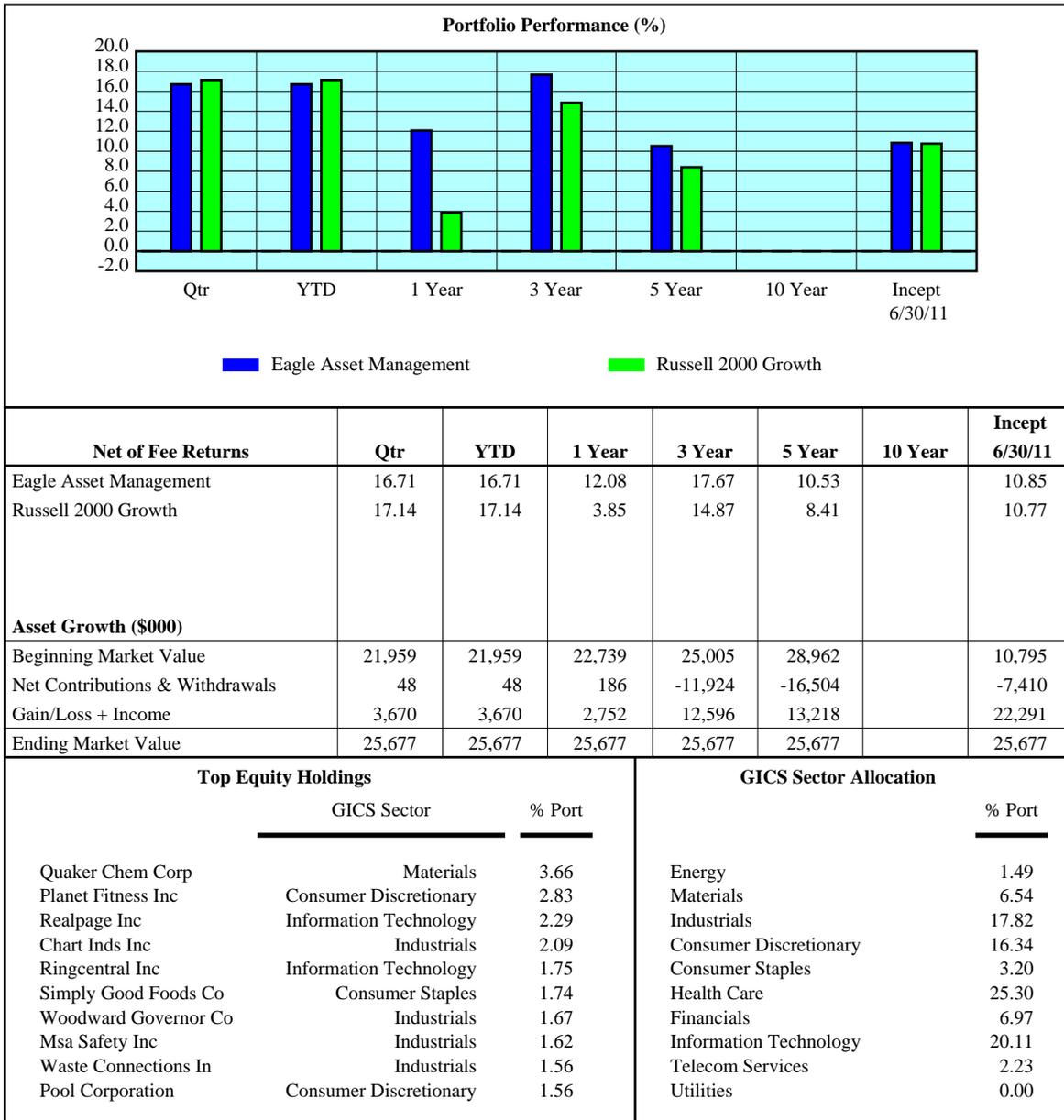


		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
R	Rhumblin Mid Cap Fund	8.22	55	12.93	63
I	S&P Midcap 400	8.29	52	12.97	100
	Median	8.33		12.70	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Rhumbline Mid Cap Fund  
Quarterly Periods Ending 3/31/19

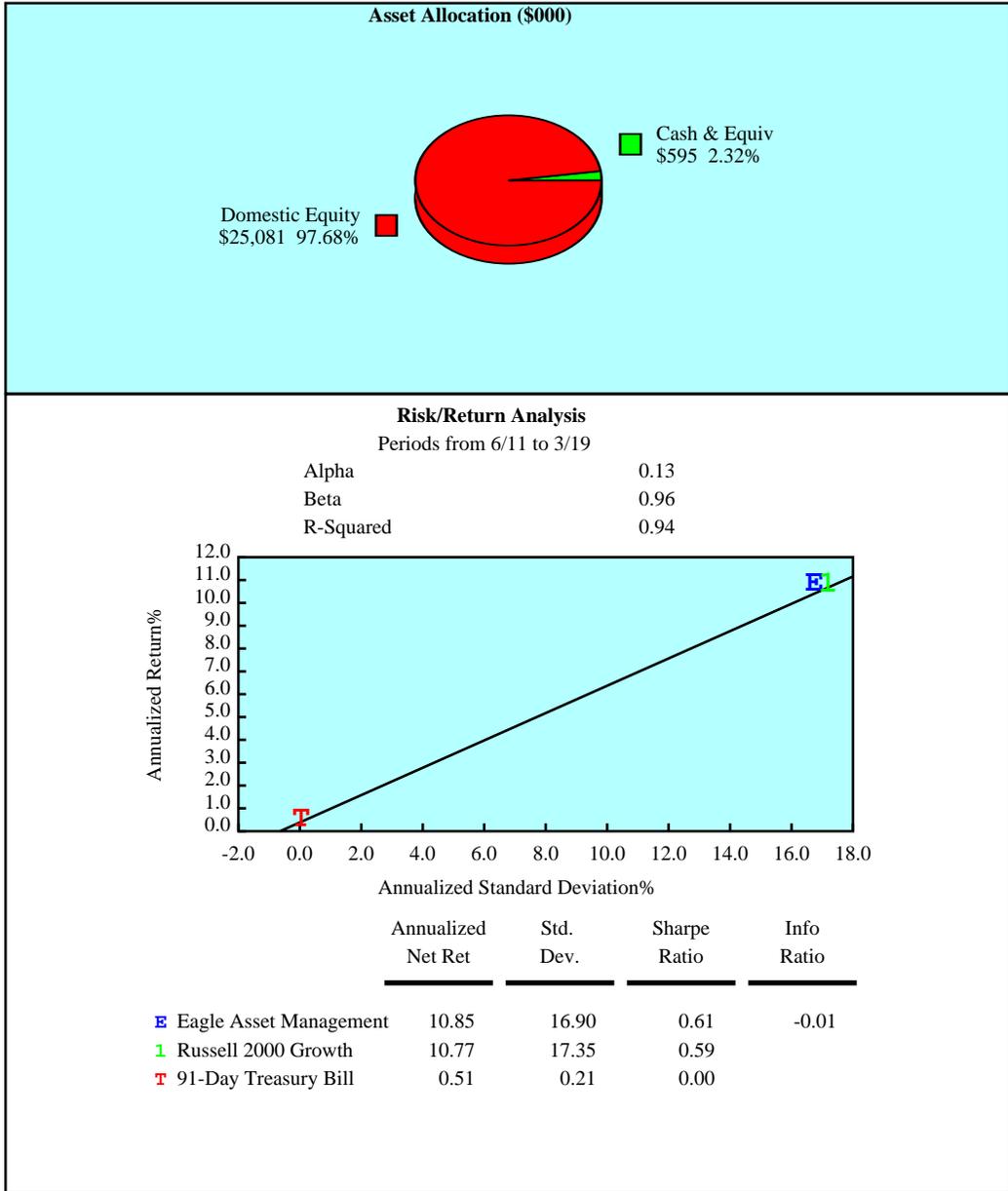
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	2	2	5	5	7	7
Positive Periods	3	3	10	10	15	15	24	24
Up Market Capture	0.99		0.99		0.99		1.00	
Down Market Capture	1.00		1.00		1.00		1.00	
Batting Average	0.25		0.08		0.20		0.29	
Worst Quarter	-17.24	-17.28	-17.24	-17.28	-17.24	-17.28	-19.88	-19.88
Best Quarter	14.44	14.49	14.44	14.49	14.44	14.49	14.44	14.49
Worst 4 Quarters	2.53	2.59	-11.10	-11.08	-11.10	-11.08	-11.10	-11.08
Best 4 Quarters	2.53	2.59	20.80	20.92	20.80	20.92	33.39	33.51
Standard Deviation	26.63	26.70	14.66	14.70	12.93	12.97	15.37	15.38
Beta	1.00		1.00		1.00		1.00	
Alpha	-0.02		-0.01		-0.01		-0.00	
R-Squared	1.00		1.00		1.00		1.00	
Sharpe Ratio	375.61	374.63	682.70	681.03	774.01	771.85	651.43	650.65
Treynor Ratio	10,027.82		10,035.13		10,035.57		10,021.88	
Tracking Error	0.07		0.04		0.06		0.12	
Information Ratio	-1.07		-1.69		-1.17		-0.26	

# City of Fort Lauderdale Police and Fire Eagle Asset Management as of 3/31/19

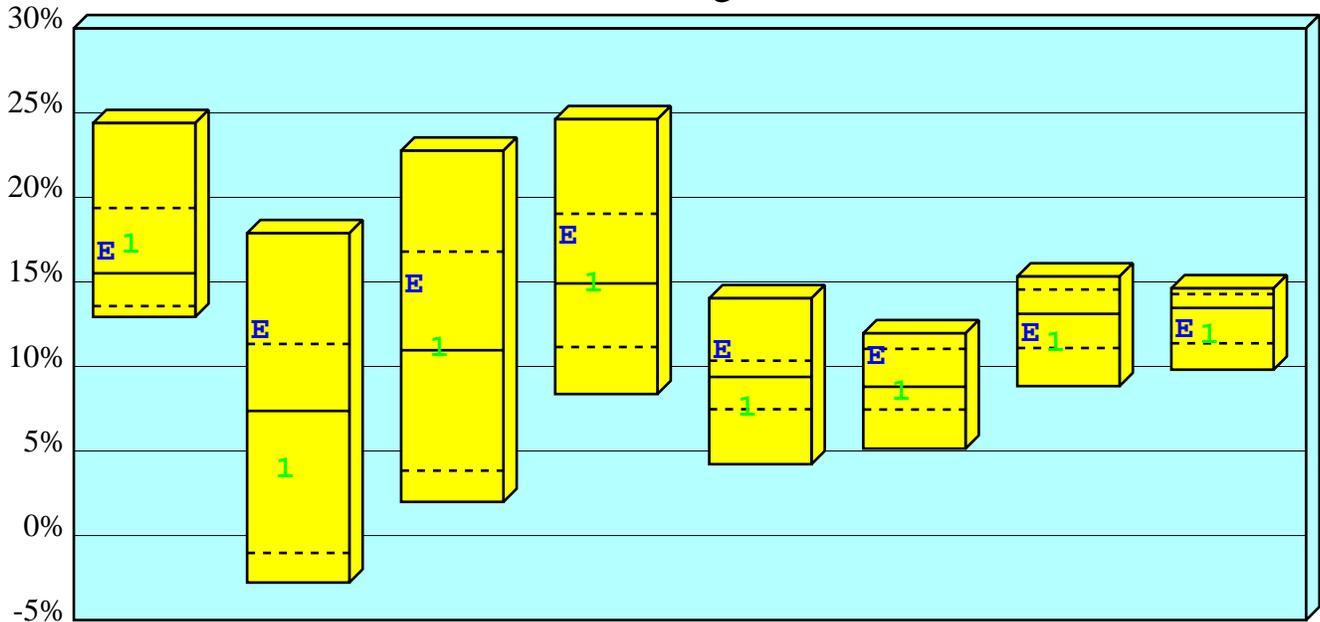




# City of Fort Lauderdale Police and Fire Eagle Asset Management as of 3/31/19



# City of Fort Lauderdale Police and Fire Small Growth Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years
High	24.39	17.88	22.76	24.62	14.03	11.96	15.32	14.62
1st Qt	19.37	11.33	16.79	19.03	10.34	11.04	14.55	14.28
Median	15.51	7.37	10.96	14.91	9.38	8.80	13.11	13.46
3rd Qt	13.57	-1.03	3.84	11.15	7.47	7.45	11.09	11.37
Low	12.93	-2.78	1.99	8.37	4.22	5.14	8.84	9.81

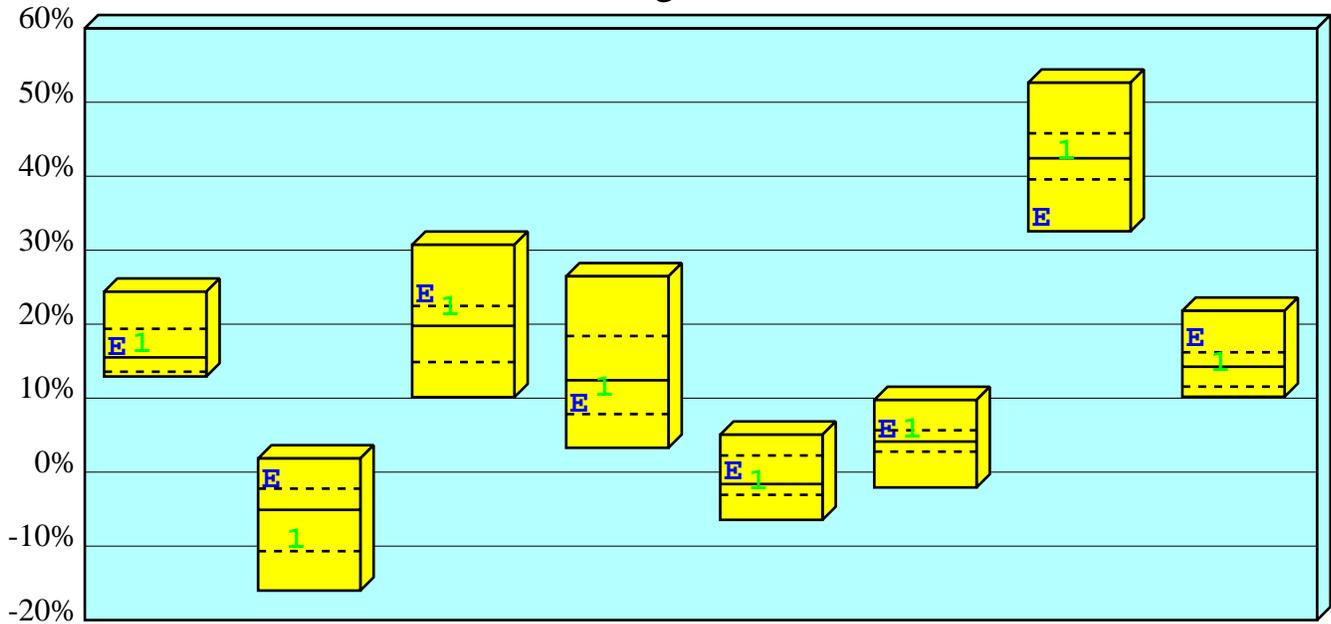
**E** Eagle Asset Management

Net Ret	16.71	12.08	14.79	17.67	10.89	10.53	11.93	12.13
Rank	46	18	35	39	21	33	57	65

**1** Russell 2000 Growth

Net Ret	17.14	3.85	11.00	14.87	7.52	8.41	11.34	11.78
Rank	42	53	46	50	70	62	68	69

# City of Fort Lauderdale Police and Fire Small Growth Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



	3/31/19	2018	2017	2016	2015	2014	2013	2012
High	24.39	1.85	30.73	26.47	5.06	9.75	52.64	21.81
1st Qt	19.37	-2.23	22.46	18.40	2.25	5.66	45.80	16.20
Median	15.51	-5.10	19.77	12.42	-1.61	4.13	42.43	14.25
3rd Qt	13.57	-10.68	14.88	7.85	-3.07	2.77	39.57	11.56
Low	12.93	-16.01	10.14	3.29	-6.45	-2.07	32.56	10.19

**E** Eagle Asset Management

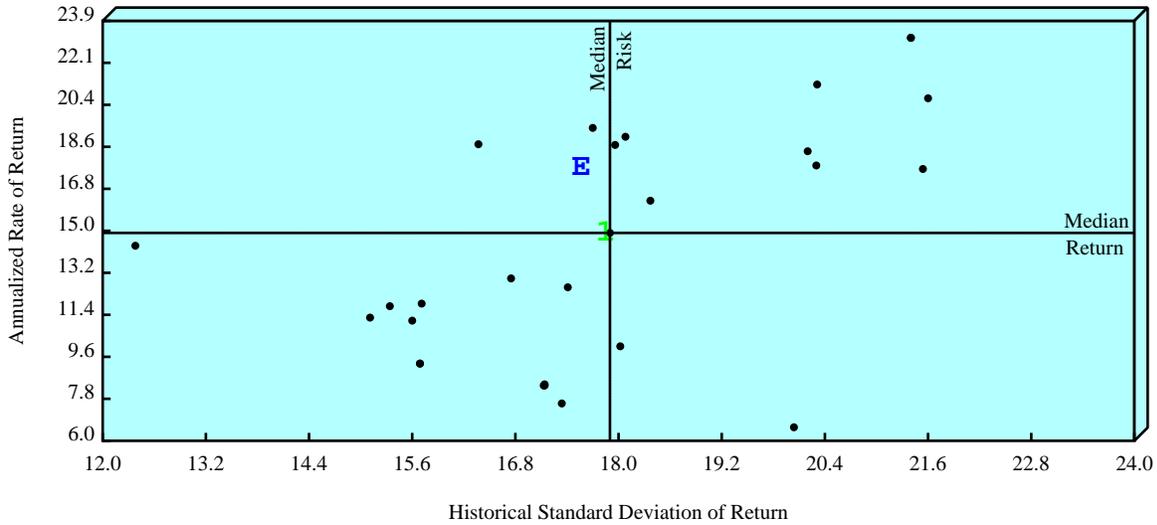
Net Ret	16.71	-1.05	23.86	9.13	-0.01	5.57	34.30	17.98
Rank	46	19	18	68	36	30	91	18

**1** Russell 2000 Growth

Net Ret	17.14	-9.31	22.17	11.32	-1.38	5.60	43.29	14.59
Rank	42	65	27	53	46	27	45	46

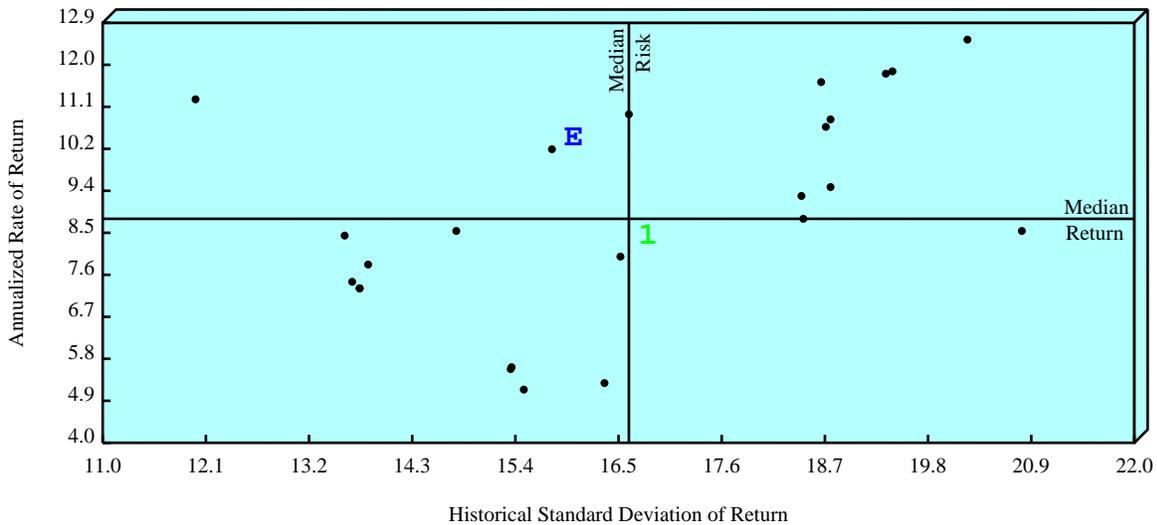
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Small Growth Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
E	Eagle Asset Management	17.67	39	17.62	48
I	Russell 2000 Growth	14.87	50	17.91	55
	Median	14.91		17.90	

5 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
E	Eagle Asset Management	10.53	33	16.07	43
I	Russell 2000 Growth	8.41	62	16.87	56
	Median	8.80		16.61	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Eagle Asset Management  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	1	1	4	4	7	6
Positive Periods	3	3	11	11	16	16	24	25
Up Market Capture	1.26		1.10		1.05		1.00	
Down Market Capture	0.94		0.94		0.90		1.00	
Batting Average	0.75		0.58		0.65		0.52	
Worst Quarter	-20.43	-21.65	-20.43	-21.65	-20.43	-21.65	-23.41	-22.26
Best Quarter	16.71	17.14	16.71	17.14	16.71	17.14	17.16	17.14
Worst 4 Quarters	12.08	3.85	-1.05	-9.31	-7.18	-11.84	-8.37	-11.84
Best 4 Quarters	12.08	3.85	31.30	24.40	31.30	24.40	34.30	43.29
Standard Deviation	33.25	33.24	17.62	17.91	16.07	16.87	18.27	18.40
Beta	0.99		0.95		0.92		0.96	
Alpha	1.95		0.78		0.63		0.13	
R-Squared	0.98		0.93		0.94		0.94	
Sharpe Ratio	0.30	0.05	0.94	0.76	0.61	0.45	0.57	0.56
Treynor Ratio	10.02		17.31		10.62		10.79	
Tracking Error	4.78		4.68		4.24		4.71	
Information Ratio	1.66		0.50		0.42		-0.01	

City of Fort Lauderdale Police and Fire  
Equity Summary Statistics  
Eagle Asset Management  
Period Ending 3/19

	<u>Portfolio</u>	<u>Russell 2000 Growth</u>
Total Number Of Securities	99	1,235
Equity Market Value	25,081,302	
Average Capitalization \$(000)	4,237,966	2,693,935
Median Capitalization \$(000)	3,022,100	892,478
Equity Segment Yield	0.51	0.67
Equity Segment P/E - Average	140.08	88.60
Equity Segment P/E - Median	21.61	12.41
Equity Segment Beta	1.18	1.22
Price/Book Ratio	4.60	3.75
Debt/Equity Ratio	43.93	42.35
Five Year Earnings Growth	8.77	10.50

Ten Largest Holdings	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Quaker Chem Corp	918,112	3.66	12.95
Planet Fitness Inc	710,427	2.83	28.16
Realpage Inc	573,763	2.29	25.94
Chart Inds Inc	522,934	2.09	39.20
Ringcentral Inc	437,560	1.75	30.76
Simply Good Foods Co	437,043	1.74	8.94
Woodward Governor Co	417,611	1.67	27.95
Msa Safety Inc	405,018	1.62	10.09
Waste Connections In	390,328	1.56	19.54
Pool Corporation	390,319	1.56	11.29

Ten Best Performers	<u>Quarterly Ret</u>	Ten Worst Performers	<u>Quarterly Ret</u>
Cymbay Therapeutics	68.74	Evotent Health Inc	-36.94
Tandem Diabetes Care	67.24	Green Dot Corp	-23.73
Sage Therapeutics In	66.04	Dynavax Technologies	-20.11
Bandwidth Inc	64.32	Amn Healthcare Servi	-16.89
Neogenomics Inc	62.25	Haemonetics Corp	-12.56
Acacia Communication	50.92	Tabula Rasa Healthca	-11.51
Zogenix Inc	50.88	Take-Two Interactive	-8.33
Blueprint Medicines	48.49	Ligand Pharmaceutica	-7.36
Universal Electrs In	46.95	Aimmune Therapeutics	-6.56
Proofpoint Inc	44.89	Heron Therapeutics I	-5.78

**City of Fort Lauderdale Police and Fire  
Equity Contribution to Return  
Eagle Asset Management  
Period Ending 3/19**

	<u>Portfolio</u>	<u>Russell 2000 Growth</u>
Total Number Of Securities	99	1,235
Equity Market Value	25,081,302	
Average Capitalization \$(000)	4,237,966	2,693,935
Median Capitalization \$(000)	3,022,100	892,478
Equity Segment Yield	0.51	0.67
Equity Segment P/E - Average	140.08	88.60
Equity Segment P/E - Median	21.61	12.41
Equity Segment Beta	1.18	1.22
Price/Book Ratio	4.60	3.75
Debt/Equity Ratio	43.93	42.35
Five Year Earnings Growth	8.77	10.50

Ten Best Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Tandem Diabetes Care	356,045	1.42	67.24
Chart Inds Inc	522,934	2.09	39.20
Planet Fitness Inc	710,427	2.83	28.16
Acacia Communication	331,139	1.32	50.92
Realpage Inc	573,763	2.29	25.94
Ringcentral Inc	437,560	1.75	30.76
Etsy Inc	322,992	1.29	41.31
Horizon Pharma Plc	342,427	1.37	35.26
Quaker Chem Corp	918,112	3.66	12.95
Woodward Governor Co	417,611	1.67	27.95

Ten Worst Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Green Dot Corp	299,186	1.19	-23.73
Evolent Health Inc	103,911	0.41	-36.94
Amn Healthcare Servi	133,406	0.53	-16.89
Haemonetics Corp	151,865	0.61	-12.56
Dynavax Technologies	85,681	0.34	-20.11
Tabula Rasa Healthca	131,966	0.53	-11.51
Take-Two Interactive	170,149	0.68	-8.33
Ligand Pharmaceutica	183,411	0.73	-7.36
Heron Therapeutics I	126,844	0.51	-5.78
Aimmune Therapeutics	103,101	0.41	-6.56

City of Fort Lauderdale Police and Fire  
Equity Sector Attribution Analysis  
Eagle Asset Management  
Quarter Ending 3/19

GICS Sectors	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Stock	Sector	Total
Energy	1.03	1.72	29.19	23.93	0.05	-0.05	0.00
Materials	6.49	3.38	17.99	17.48	0.03	0.03	0.06
Industrials	17.54	17.77	17.44	13.46	0.70	0.01	0.70
Consumer Discretionary	16.31	14.78	17.20	15.92	0.21	-0.01	0.20
Consumer Staples	3.54	3.12	4.93	6.93	-0.07	-0.04	-0.11
Health Care	27.13	26.30	16.24	17.12	-0.24	0.01	-0.23
Financials	8.63	7.34	6.47	10.83	-0.38	-0.07	-0.45
Information Technology	18.45	18.58	25.88	24.79	0.20	-0.01	0.19
Telecom. Services	0.88	3.52	-8.33	16.28	-0.22	0.01	-0.21
Utilities	0.00	0.52		9.07	0.00	0.04	0.04
	100.00	100.00	17.17	16.49	0.29	-0.10	0.20

Index - Russell 2000 Growth

Stock Selection Return Attribution

[ Portfolio Market Value Sector Percentage ] \* [ Portfolio Sector Return - Index Sector Return ]

Sector Selection Return Attribution

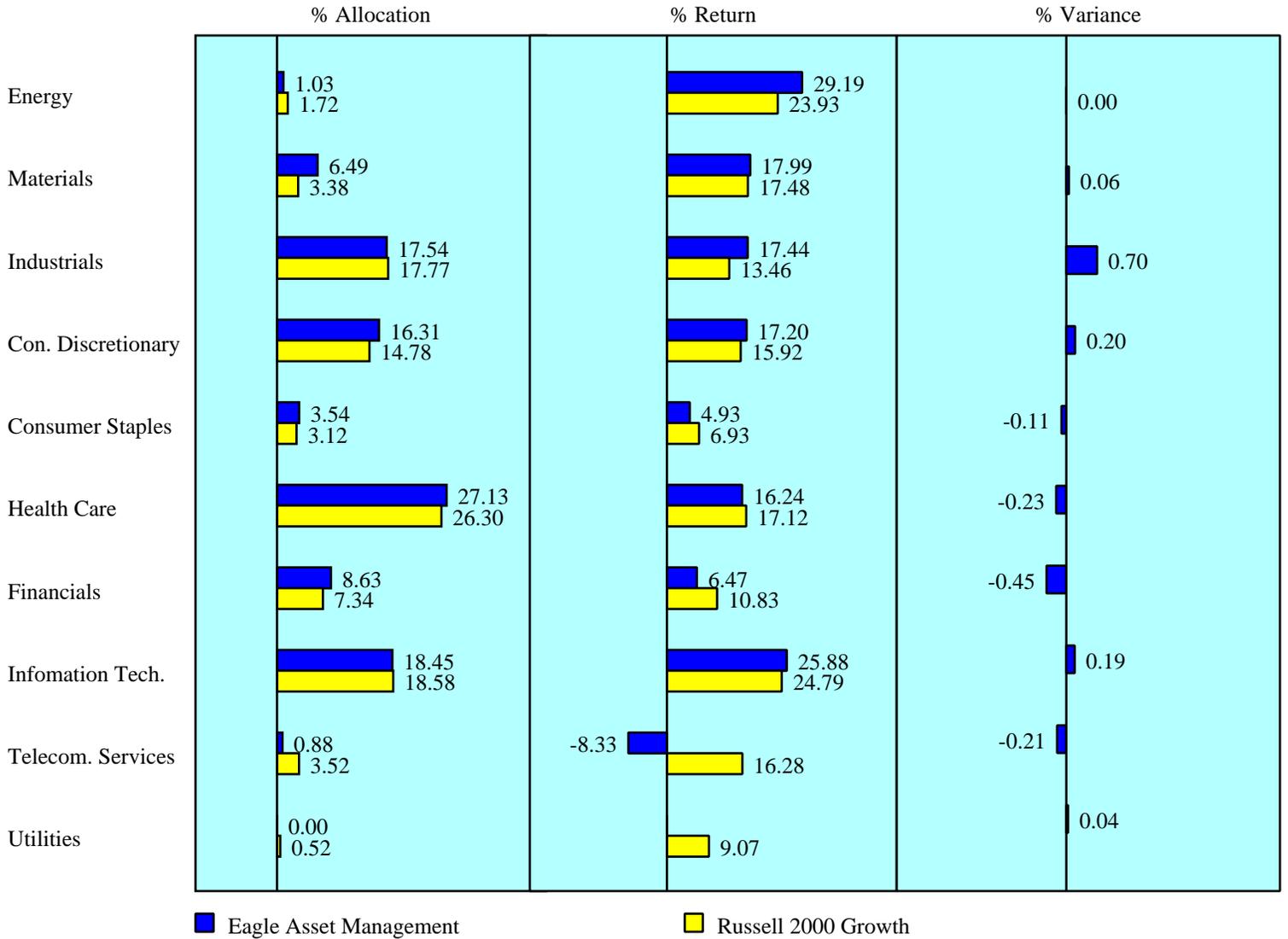
[ Portfolio Sector Percentage - Index Sector Percentage ] \* [ Index Sector Return - Index Total Return ]

Trading Effect 0.28%

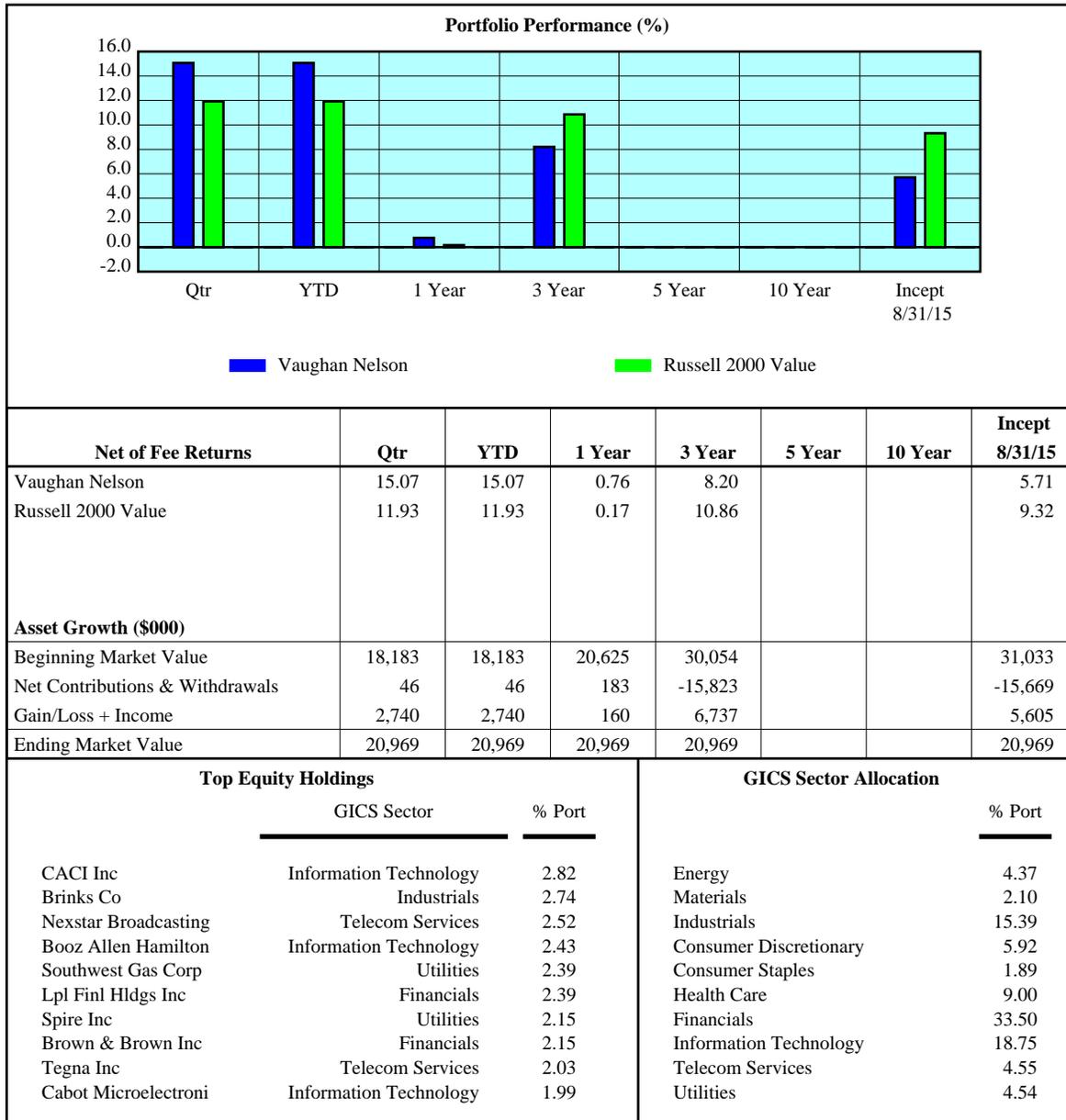
[ Actual Return 17.45% ] - [ Buy Hold Return 17.17% ]



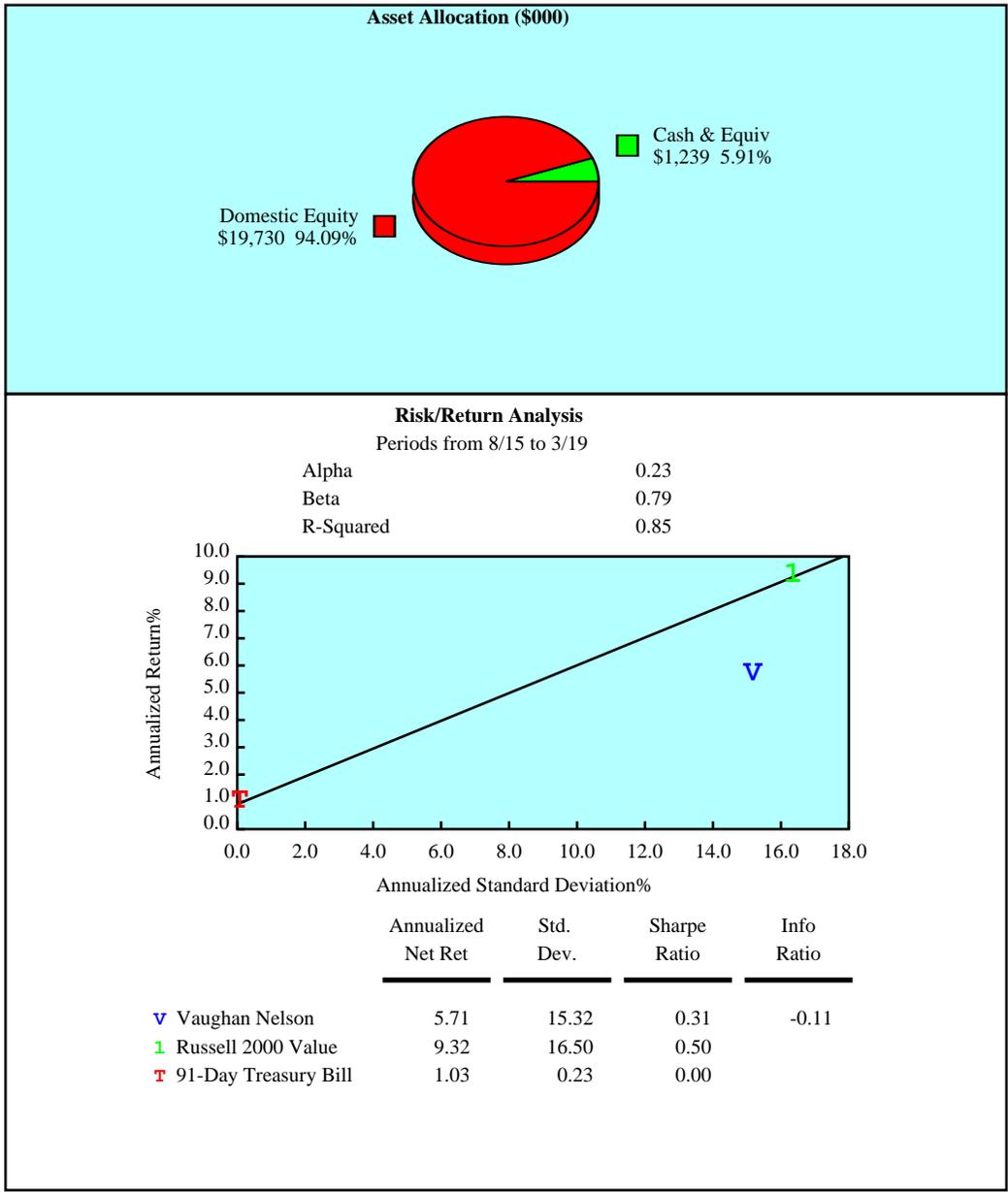
# City of Fort Lauderdale Police and Fire Equity Sector Attribution Chart Eagle Asset Management Quarter Ending 3/19



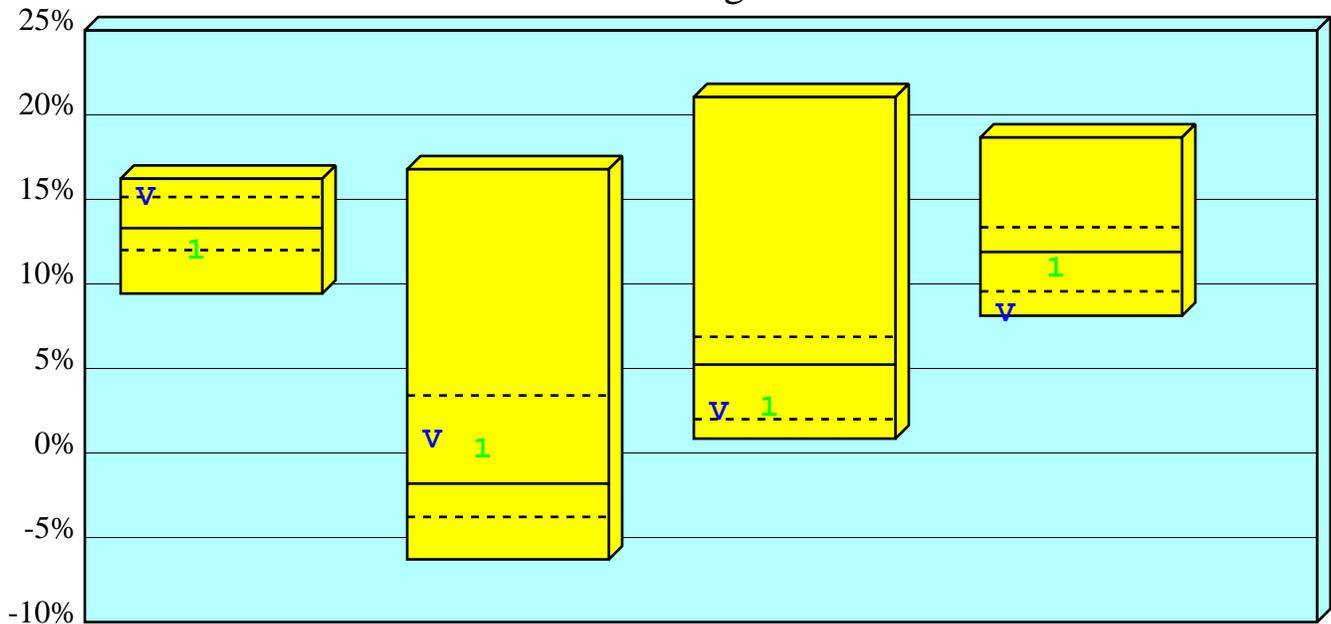
## City of Fort Lauderdale Police and Fire Vaughan Nelson as of 3/31/19



# City of Fort Lauderdale Police and Fire Vaughan Nelson as of 3/31/19



## City of Fort Lauderdale Police and Fire Small Neutral Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years
High	16.22	16.78	21.05	18.66
1st Qt	15.14	3.40	6.87	13.35
Median	13.30	-1.81	5.23	11.89
3rd Qt	12.00	-3.78	2.00	9.56
Low	9.43	-6.29	0.85	8.12

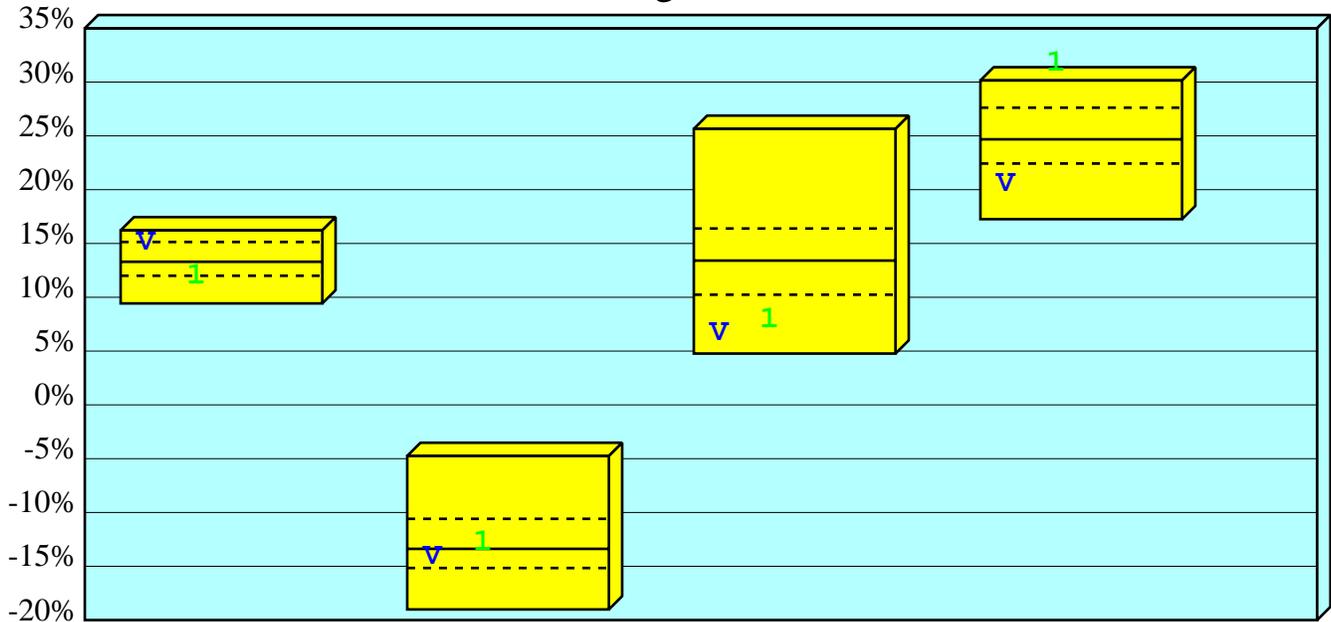
**v** Vaughan Nelson

Net Ret	15.07	0.76	2.36	8.20
Rank	25	34	68	92

**1** Russell 2000 Value

Net Ret	11.93	0.17	2.62	10.86
Rank	75	37	65	53

# City of Fort Lauderdale Police and Fire Small Neutral Consecutive Performance Comparisons Total Returns of Equity Portfolios Years Ending December



	3/31/19 YTD	2018	2017	2016
High	16.22	-4.75	25.65	30.15
1st Qt	15.14	-10.59	16.39	27.62
Median	13.30	-13.38	13.41	24.68
3rd Qt	12.00	-15.16	10.24	22.43
Low	9.43	-19.01	4.77	17.26
<b>v</b> Vaughan Nelson				
Net Ret	15.07	-14.14	6.68	20.48
Rank	25	61	91	86
<b>1</b> Russell 2000 Value				
Net Ret	11.93	-12.86	7.84	31.74
Rank	75	41	83	4

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Vaughan Nelson  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	3	3			3	3
Positive Periods	3	3	9	9			11	11
Up Market Capture	0.98		0.81				0.78	
Down Market Capture	0.96		0.91				0.91	
Batting Average	0.75		0.50				0.43	
Worst Quarter	-17.93	-18.67	-17.93	-18.67			-17.93	-18.67
Best Quarter	15.07	11.93	15.07	14.07			15.07	14.07
Worst 4 Quarters	0.76	0.17	-14.14	-12.86			-14.14	-12.86
Best 4 Quarters	0.76	0.17	20.87	29.37			20.87	31.74
Standard Deviation	27.49	27.32	15.75	16.95			14.53	15.61
Beta	0.97		0.88				0.88	
Alpha	0.15		-0.36				-0.46	
R-Squared	0.94		0.91				0.91	
Sharpe Ratio	-0.05	-0.07	0.44	0.57			0.45	0.62
Treynor Ratio	-1.40		7.92				7.38	
Tracking Error	6.85		5.06				4.68	
Information Ratio	0.06		-0.55				-0.66	

City of Fort Lauderdale Police and Fire  
Equity Summary Statistics  
Vaughan Nelson  
Period Ending 3/19

	<u>Portfolio</u>	<u>Russell 2000 Value</u>
Total Number Of Securities	74	1,363
Equity Market Value	19,729,746	
Average Capitalization \$(000)	3,425,273	2,089,977
Median Capitalization \$(000)	2,779,634	689,330
Equity Segment Yield	1.71	2.20
Equity Segment P/E - Average	22.45	25.23
Equity Segment P/E - Median	17.74	12.72
Equity Segment Beta	1.07	1.05
Price/Book Ratio	2.41	1.23
Debt/Equity Ratio	44.79	55.03
Five Year Earnings Growth	9.78	4.08

Ten Largest Holdings	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
CACI Inc	555,161	2.82	26.38
Brinks Co	539,182	2.74	16.88
Nexstar Broadcasting	495,793	2.52	38.55
Booz Allen Hamilton	479,655	2.43	29.55
Southwest Gas Corp	470,939	2.39	8.25
Lpl Finl Hldgs Inc	470,138	2.39	14.41
Spire Inc	423,794	2.15	11.91
Brown & Brown Inc	422,731	2.15	7.38
Tegna Inc	400,088	2.03	30.34
Cabot Microelectroni	391,860	1.99	17.86

Ten Best Performers	<u>Quarterly Ret</u>	Ten Worst Performers	<u>Quarterly Ret</u>
Propetro Hldg Corp	82.95	Green Dot Corp	-23.73
Versum Matls Inc	81.89	Amn Healthcare Servi	-16.89
Lattice Semiconducto	72.40	Emergent Biosolution	-14.78
Cyberark Software Lt	60.57	Virtu Finl Inc	-6.92
Lantheus Hldgs Inc	56.42	Element Solutions In	-2.23
Kosmos Energy Ltd	54.18	Adtalem Global Ed In	-2.11
American Woodmark Co	48.40	Mercury Genl Corp Ne	-1.97
Maxlinear Inc	45.06	Unit Corp	-0.28
Nexstar Broadcasting	38.55	Fabrinet	2.05
Rambus Inc Del	36.25	First Finl Bancorp	2.24

**City of Fort Lauderdale Police and Fire  
Equity Contribution to Return  
Vaughan Nelson  
Period Ending 3/19**

	<u>Portfolio</u>	<u>Russell 2000 Value</u>
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Debt/Equity Ratio	44.79	55.03
Five Year Earnings Growth	9.78	4.08

Ten Best Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Nexstar Broadcasting	495,793	2.52	38.55
Lattice Semiconducto	240,986	1.22	72.40
Kosmos Energy Ltd	294,523	1.49	54.18
CACI Inc	555,161	2.82	26.38
Versum Matls Inc	177,343	0.90	81.89
Booz Allen Hamilton	479,655	2.43	29.55
American Woodmark Co	278,876	1.42	48.40
Lantheus Hldgs Inc	237,113	1.20	56.42
Tegna Inc	400,088	2.03	30.34
Cyberark Software Lt	187,504	0.95	60.57

Ten Worst Contributors	<u>Market Value</u>	<u>% of Portfolio</u>	<u>Quarterly Ret</u>
Amn Healthcare Servi	253,109	1.28	-16.89
Green Dot Corp	178,918	0.91	-23.73
Emergent Biosolution	163,129	0.83	-14.78
Virtu Finl Inc	334,875	1.70	-6.92
Adtalem Global Ed In	382,603	1.94	-2.11
Element Solutions In	272,953	1.39	-2.23
Mercury Genl Corp Ne	270,378	1.37	-1.97
Unit Corp	63,012	0.32	-0.28
Meridian Bioscience	158,050	0.80	2.25
Silicon Laboratories	149,591	0.76	2.60



City of Fort Lauderdale Police and Fire  
Equity Sector Attribution Analysis  
Vaughan Nelson  
Quarter Ending 3/19

GICS Sectors	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Stock	Sector	Total
Energy	2.85	5.38	35.99	18.75	0.49	-0.22	0.27
Materials	3.15	4.06	10.46	17.13	-0.21	-0.06	-0.27
Industrials	16.32	11.92	14.68	10.20	0.73	0.01	0.74
Consumer Discretionary	6.77	9.43	15.01	8.63	0.43	0.04	0.47
Consumer Staples	1.57	2.63	22.84	7.66	0.24	0.03	0.26
Health Care	7.58	4.28	8.87	9.01	-0.01	-0.03	-0.04
Financials	31.53	29.68	10.32	8.00	0.73	-0.04	0.69
Information Technology	21.90	10.80	23.30	19.53	0.83	1.06	1.88
Telecom. Services	3.61	3.09	35.06	14.41	0.75	0.02	0.77
Utilities	4.73	7.29	9.95	10.58	-0.03	-0.01	-0.04
	100.00	100.00	15.89	10.02	3.94	0.78	4.72

Index - Russell 2000 Value

Stock Selection Return Attribution

[ Portfolio Market Value Sector Percentage ] \* [ Portfolio Sector Return - Index Sector Return ]

Sector Selection Return Attribution

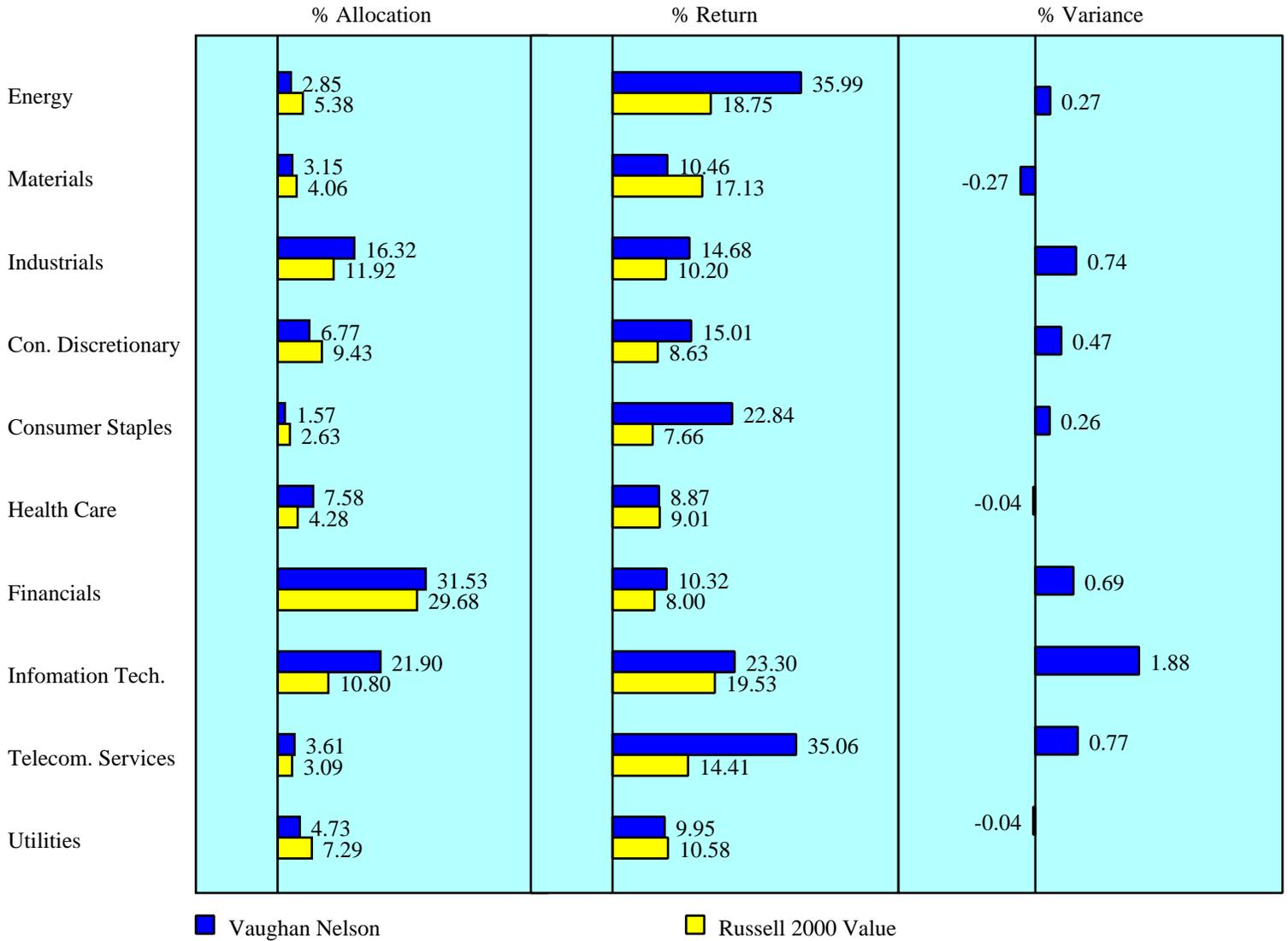
[ Portfolio Sector Percentage - Index Sector Percentage ] \* [ Index Sector Return - Index Total Return ]

Trading Effect -0.04%

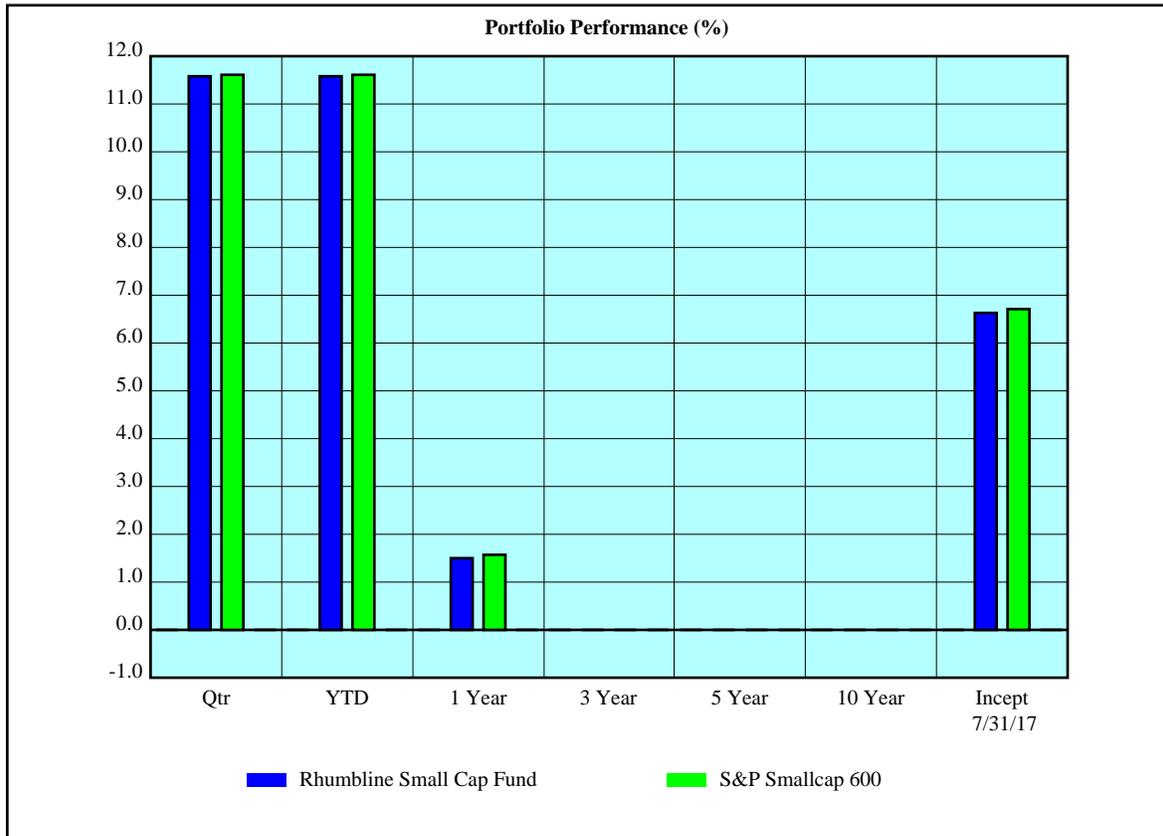
[ Actual Return 15.85% ] - [ Buy Hold Return 15.89% ]

# City of Fort Lauderdale Police and Fire Equity Sector Attribution Chart

Vaughan Nelson  
Quarter Ending 3/19

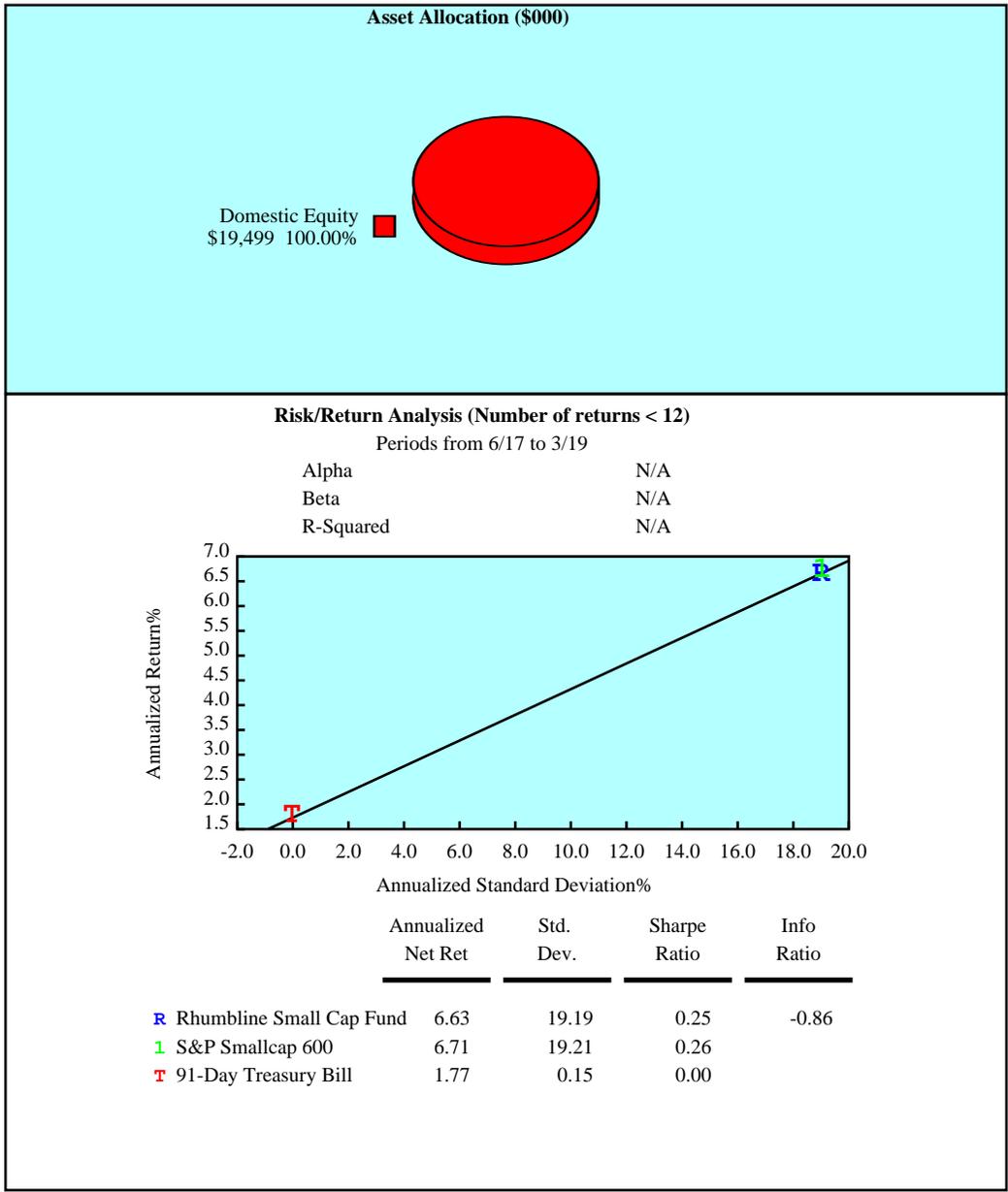


## City of Fort Lauderdale Police and Fire Rhumbleline Small Cap Fund as of 3/31/19

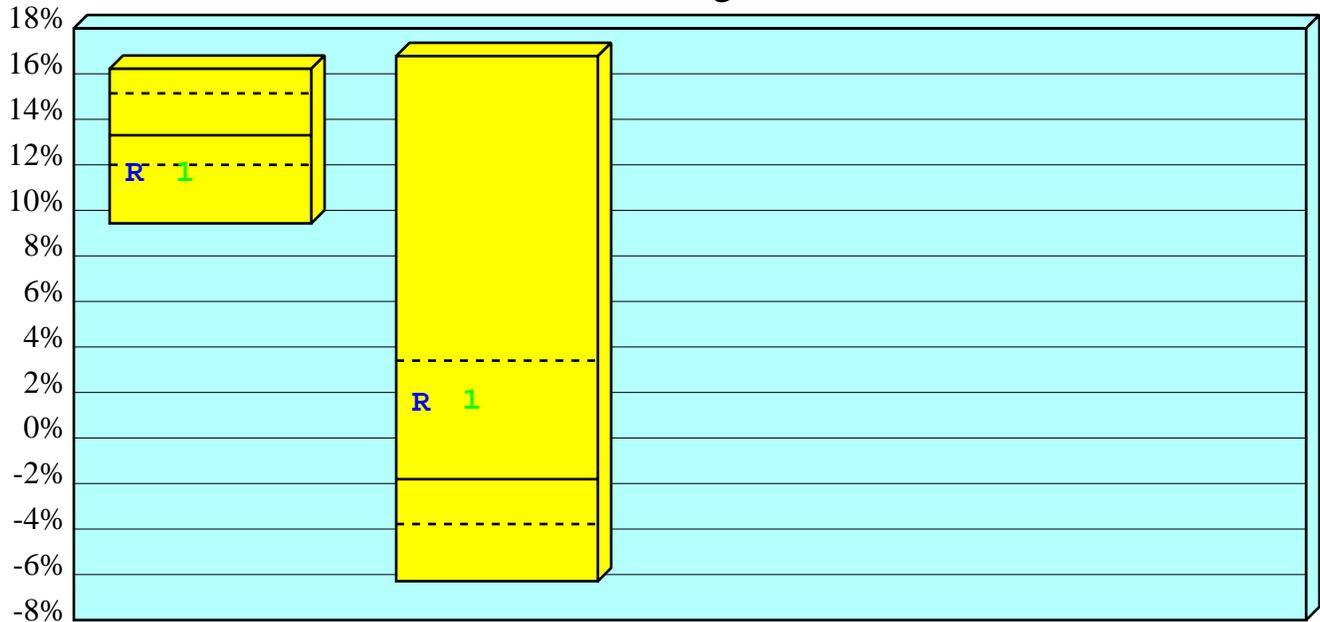


Net of Fee Returns	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Incept 7/31/17
Rhumblin Small Cap Fund	11.58	11.58	1.50				6.63
S&P Smallcap 600	11.61	11.61	1.57				6.71
<b>Asset Growth (\$000)</b>							
Beginning Market Value	17,474	17,474	19,204				17,511
Net Contributions & Withdrawals	1	1	6				10
Gain/Loss + Income	2,023	2,023	289				1,978
Ending Market Value	19,499	19,499	19,499				19,499

# City of Fort Lauderdale Police and Fire Rhumbline Small Cap Fund as of 3/31/19



## City of Fort Lauderdale Police and Fire Small Neutral Cumulative Performance Comparisons Total Returns of Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year
High	16.22	16.78
1st Qt	15.14	3.40
Median	13.30	-1.81
3rd Qt	12.00	-3.78
Low	9.43	-6.29

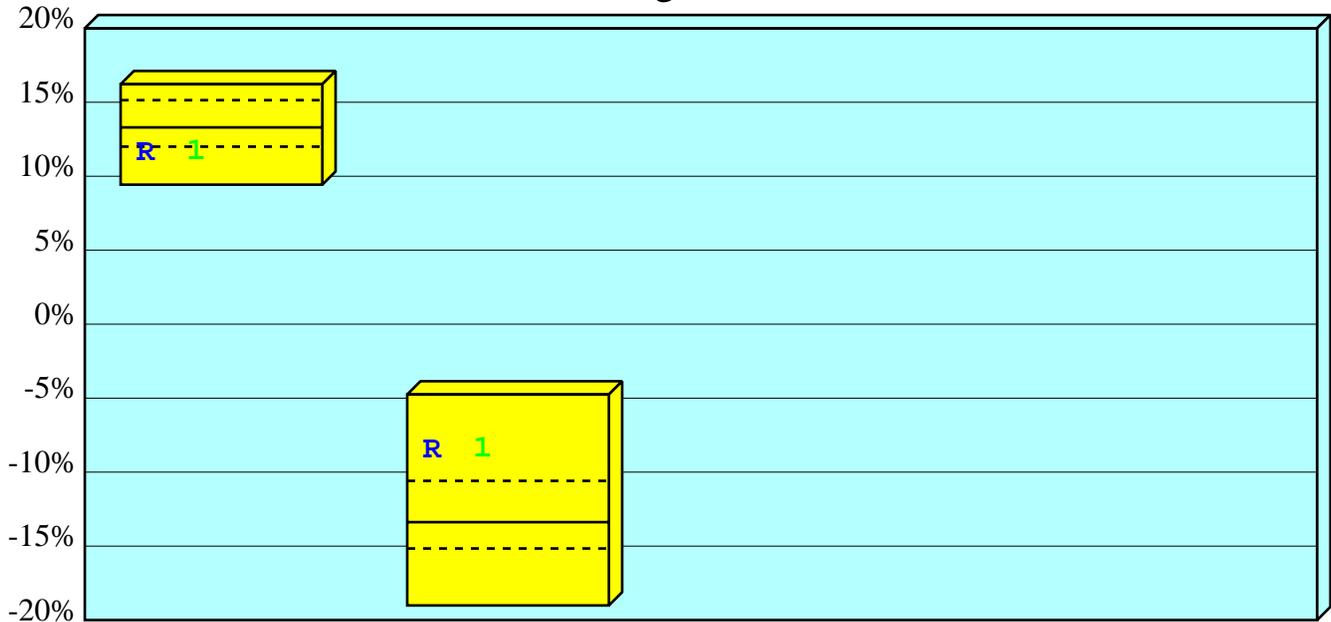
**R** Rhumblin Small Cap Fund

Net Ret	11.58	1.50
Rank	81	31

**1** S&P Smallcap 600

Net Ret	11.61	1.57
Rank	81	31

City of Fort Lauderdale Police and Fire  
 Small Neutral Consecutive Performance Comparisons  
 Total Returns of Equity Portfolios  
 Years Ending December



	3/31/19 YTD	2018
High	16.22	-4.75
1st Qt	15.14	-10.59
Median	13.30	-13.38
3rd Qt	12.00	-15.16
Low	9.43	-19.01

**R** Rhumblin Small Cap Fund

Net Ret	11.58	-8.52
Rank	81	14

**1** S&P Smallcap 600

Net Ret	11.61	-8.48
Rank	81	14

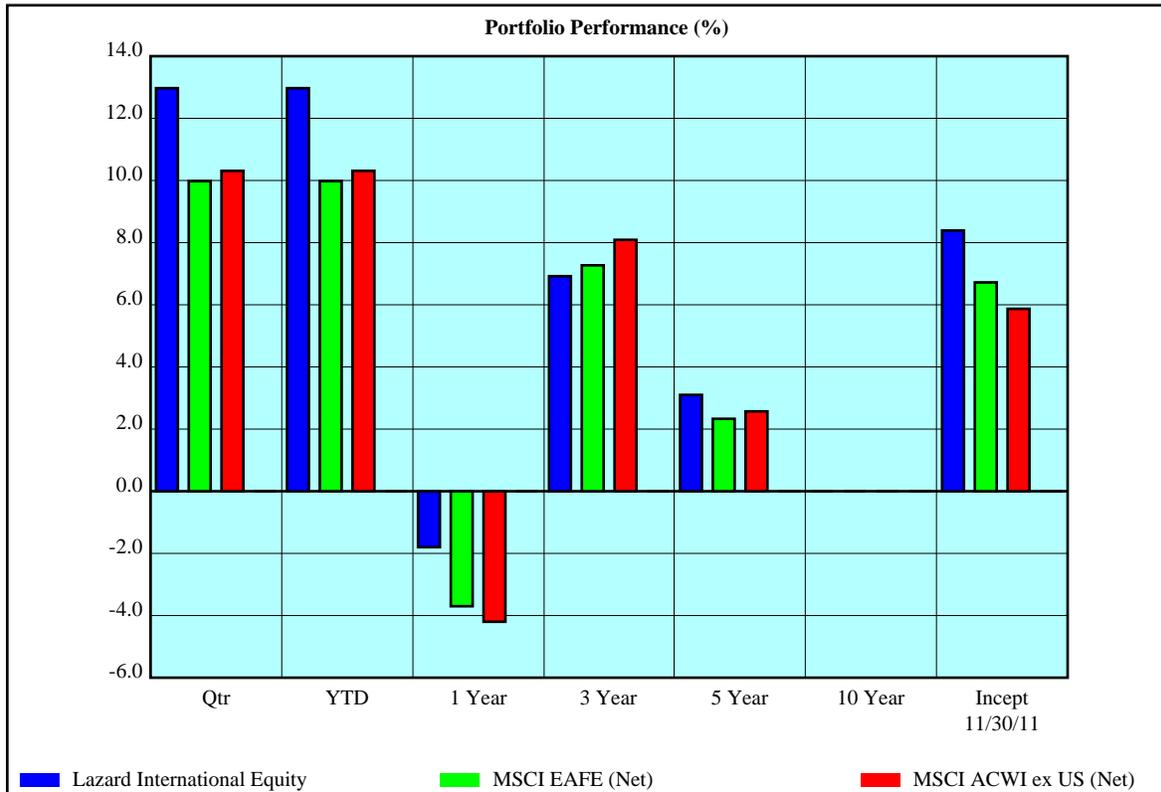
City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Rhumbline Small Cap Fund  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1					1	1
Positive Periods	3	3					6	6
Up Market Capture	1.00						0.97	
Down Market Capture	1.00						1.00	
Batting Average	0.00						0.00	
Worst Quarter	-20.11	-20.10					-20.11	-20.10
Best Quarter	11.58	11.61					11.58	11.61
Worst 4 Quarters	1.50	1.57					-8.52	-8.48
Best 4 Quarters	1.50	1.57					19.38	20.50
Standard Deviation	29.01	29.02					20.79	20.90
Beta	1.00						0.99	
Alpha	-0.02						-0.14	
R-Squared	1.00						1.00	
Sharpe Ratio	-0.02	-0.02					0.22	0.25
Treynor Ratio	-0.62						4.67	
Tracking Error	0.02						0.69	
Information Ratio	-3.63						-0.86	



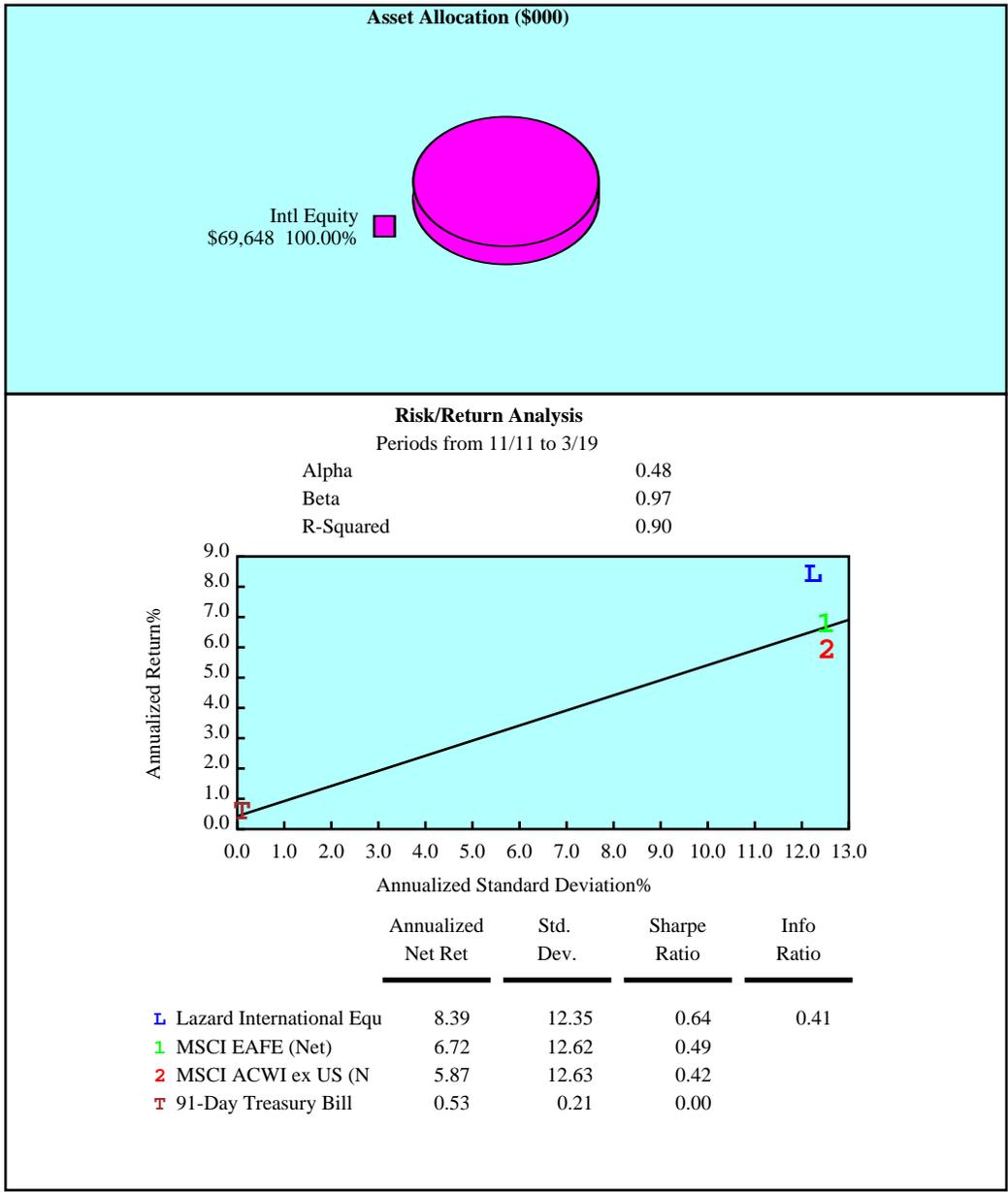


## City of Fort Lauderdale Police and Fire Lazard International Equity as of 3/31/19

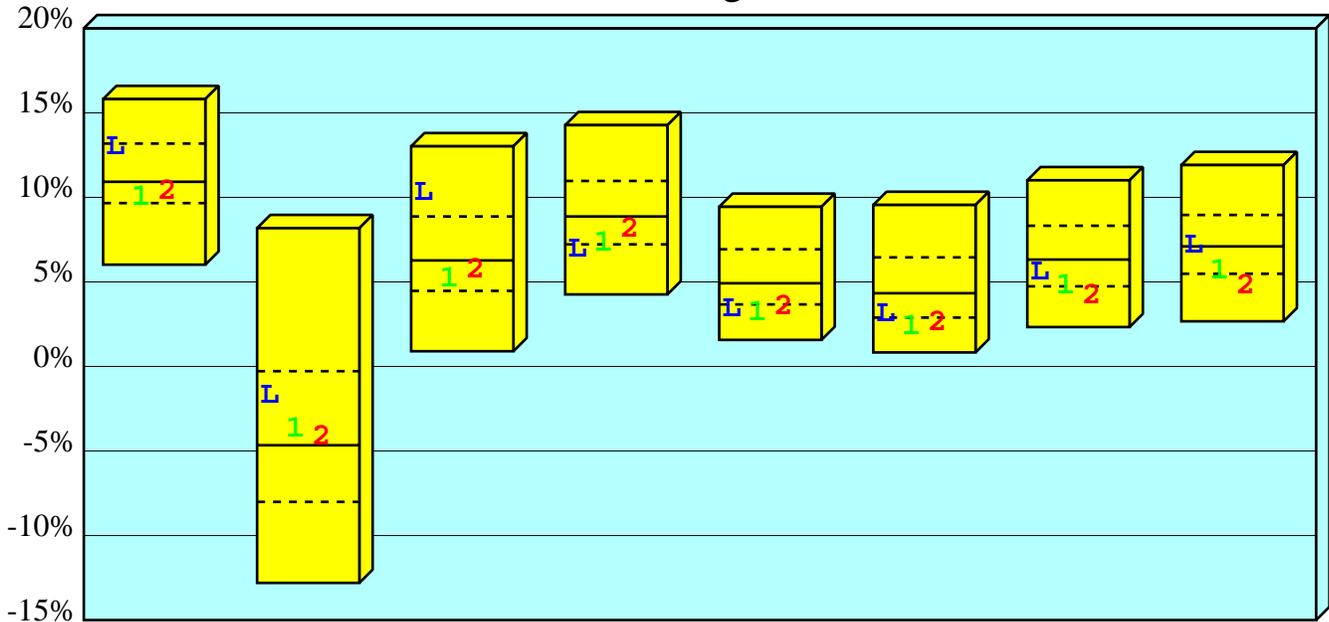


Net of Fee Returns	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Incept 11/30/11
Lazard International Equity	12.97	12.97	-1.75	6.92	3.10		8.39
MSCI EAFE (Net)	9.98	9.98	-3.71	7.27	2.33		6.72
MSCI ACWI ex US (Net)	10.31	10.31	-4.22	8.09	2.57		5.87
<b>Asset Growth (\$000)</b>							
Beginning Market Value	61,542	61,542	70,456	56,639	59,436		23,225
Net Contributions & Withdrawals	122	122	415	415	411		14,411
Gain/Loss + Income	7,984	7,984	-1,223	12,594	9,801		32,012
Ending Market Value	69,648	69,648	69,648	69,648	69,648		69,648

# City of Fort Lauderdale Police and Fire Lazard International Equity as of 3/31/19



## City of Fort Lauderdale Police and Fire Cumulative Performance Comparison Total Returns of International Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years
High	15.81	8.18	13.02	14.27	9.44	9.55	11.01	11.91
1st Qt	13.18	-0.28	8.87	10.97	6.93	6.45	8.32	8.96
Median	10.92	-4.66	6.27	8.87	4.92	4.33	6.32	7.10
3rd Qt	9.66	-8.01	4.47	7.22	3.67	2.89	4.74	5.48
Low	6.02	-12.80	0.90	4.26	1.57	0.83	2.33	2.67

**L** Lazard International Equity

Net Ret	12.97	-1.75	10.25	6.92	3.37	3.10	5.57	7.13
Rank	27	29	16	78	81	71	62	49

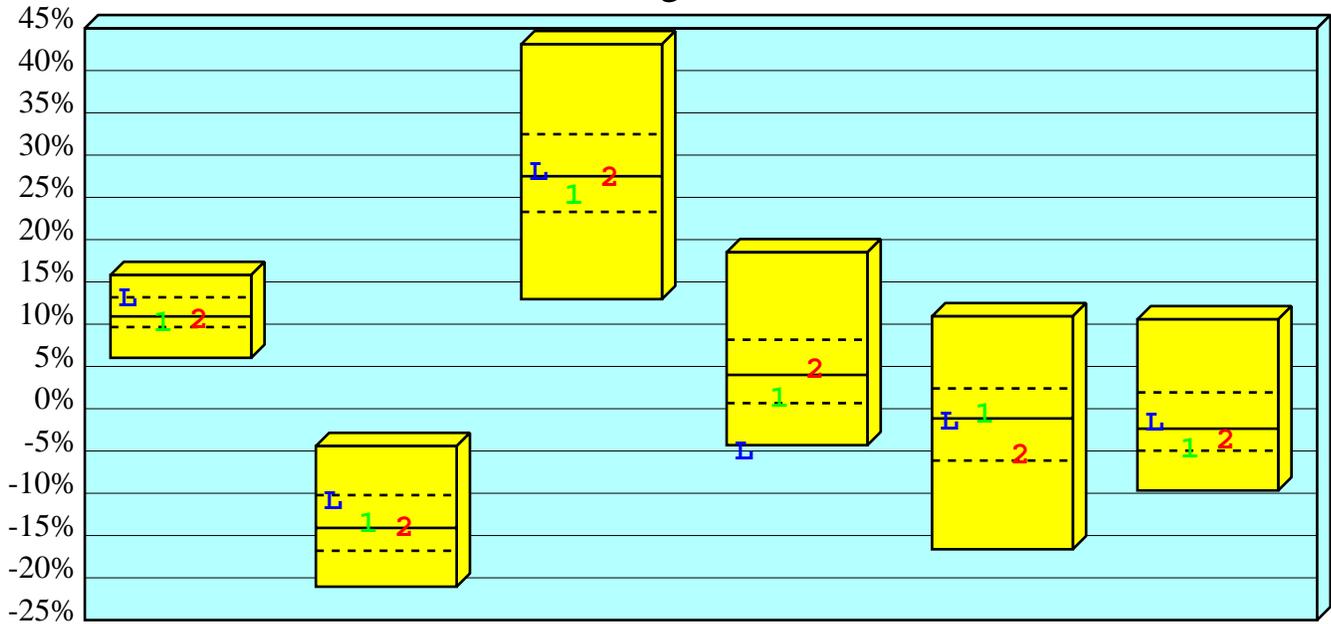
**1** MSCI EAFE (Net)

Net Ret	9.98	-3.71	5.14	7.27	3.16	2.33	4.72	5.63
Rank	69	42	66	74	84	83	75	73

**2** MSCI ACWI ex US (Net)

Net Ret	10.31	-4.22	5.65	8.09	3.48	2.57	4.13	4.72
Rank	60	47	58	60	79	80	83	82

## City of Fort Lauderdale Police and Fire Calendar Year Performance Comparison Total Returns of International Equity Portfolios Years Ending December



	3/31/19 YTD	2018	2017	2016	2015	2014
High	15.81	-4.42	43.11	18.50	10.93	10.57
1st Qt	13.18	-10.22	32.47	8.16	2.40	1.93
Median	10.92	-14.10	27.50	4.00	-1.15	-2.36
3rd Qt	9.66	-16.80	23.28	0.66	-6.13	-4.96
Low	6.02	-21.05	12.96	-4.31	-16.62	-9.67

**L** Lazard International Equity

Net Ret	12.97	-11.04	27.85	-5.17	-1.70	-1.79
Rank	27	27	46	96	53	45

**1** MSCI EAFE (Net)

Net Ret	9.98	-13.79	25.03	1.00	-0.81	-4.90
Rank	69	47	66	73	47	74

**2** MSCI ACWI ex US (Net)

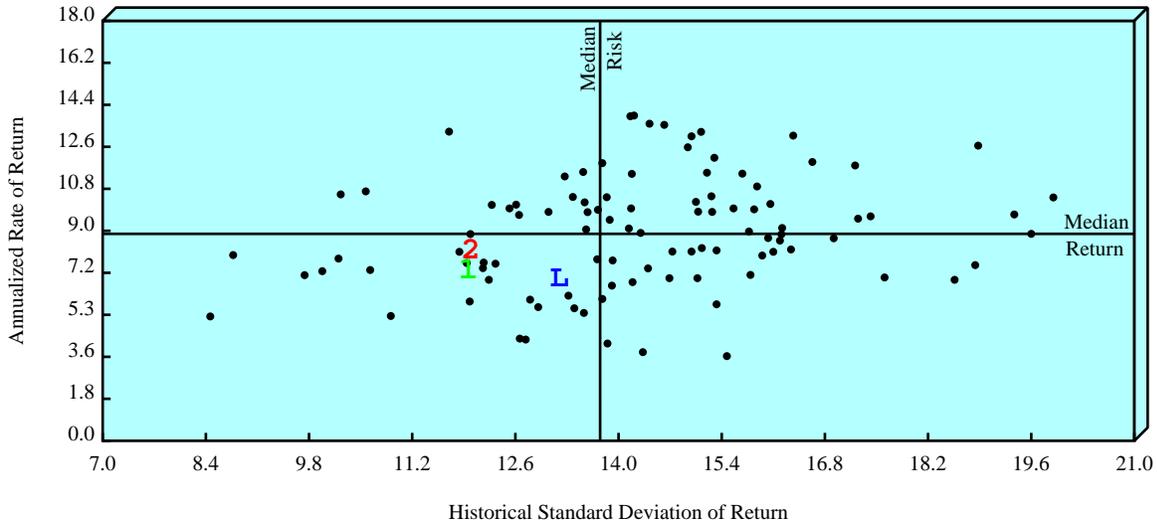
Net Ret	10.31	-14.20	27.19	4.50	-5.66	-3.87
Rank	60	50	52	47	73	62

# City of Fort Lauderdale Police and Fire

## Return vs Risk

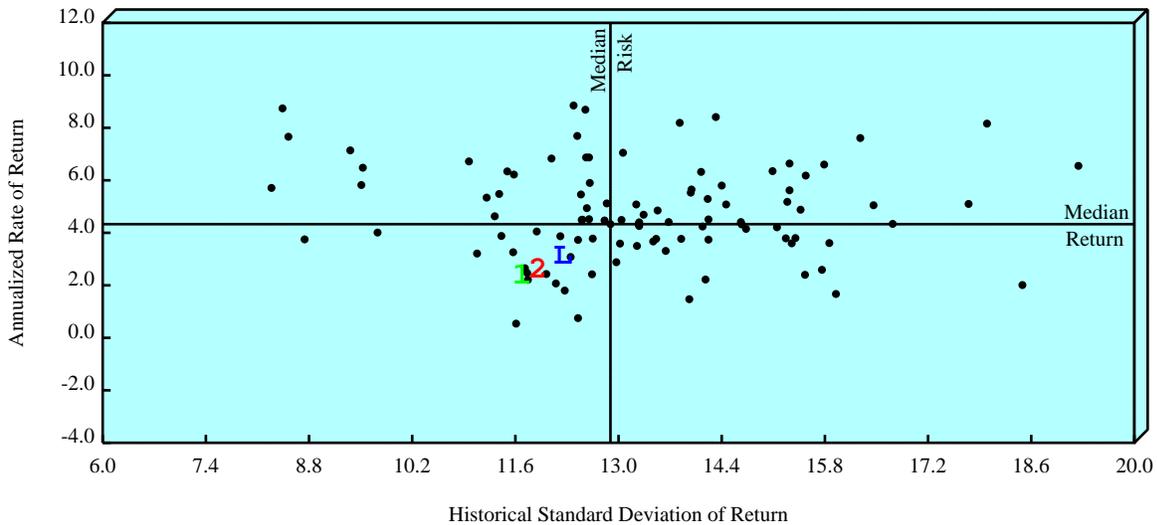
### Total Returns of International Equity Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
L	Lazard International Equity	6.92	78	13.27	40
1	MSCI EAFE (Net)	7.27	74	12.03	18
2	MSCI ACWI ex US (Net)	8.09	60	12.06	18
	Median	8.87		13.75	

5 Years Ending 3/31/19

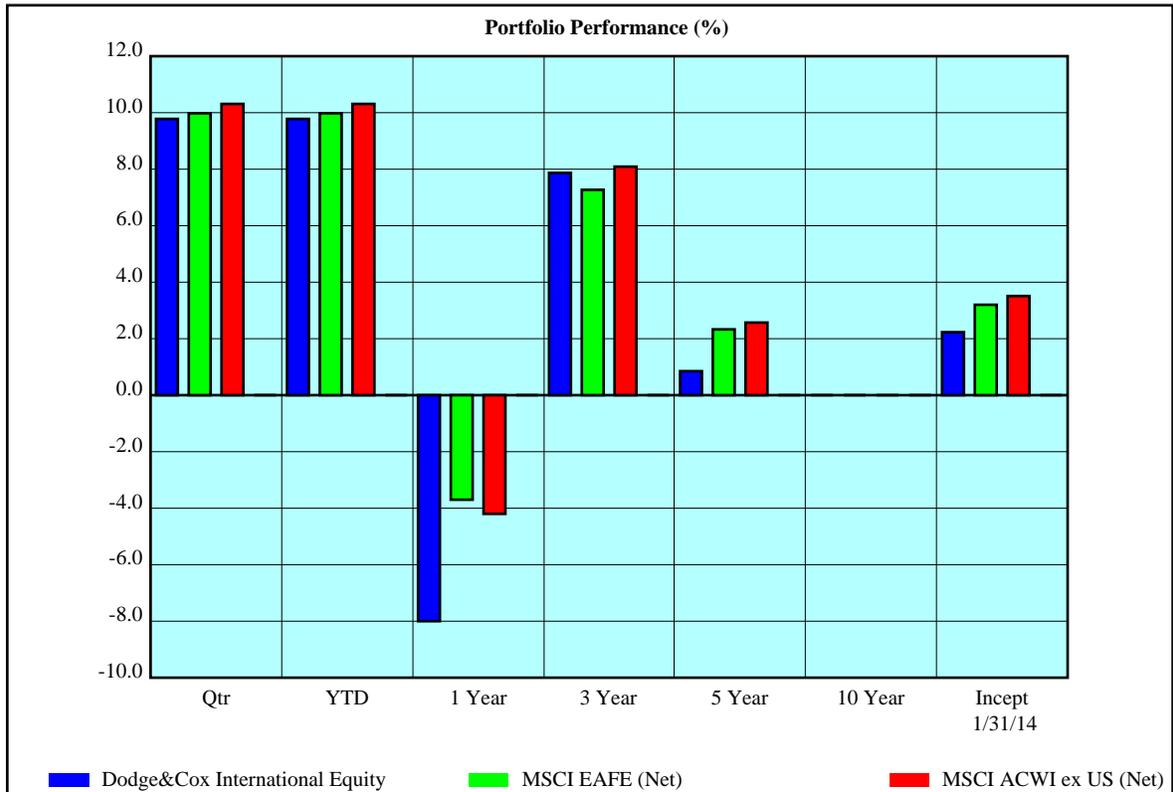


		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
L	Lazard International Equity	3.10	71	12.32	38
1	MSCI EAFE (Net)	2.33	83	11.76	24
2	MSCI ACWI ex US (Net)	2.57	80	11.97	30
	Median	4.33		12.89	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Lazard International Equity  
Quarterly Periods Ending 3/31/19

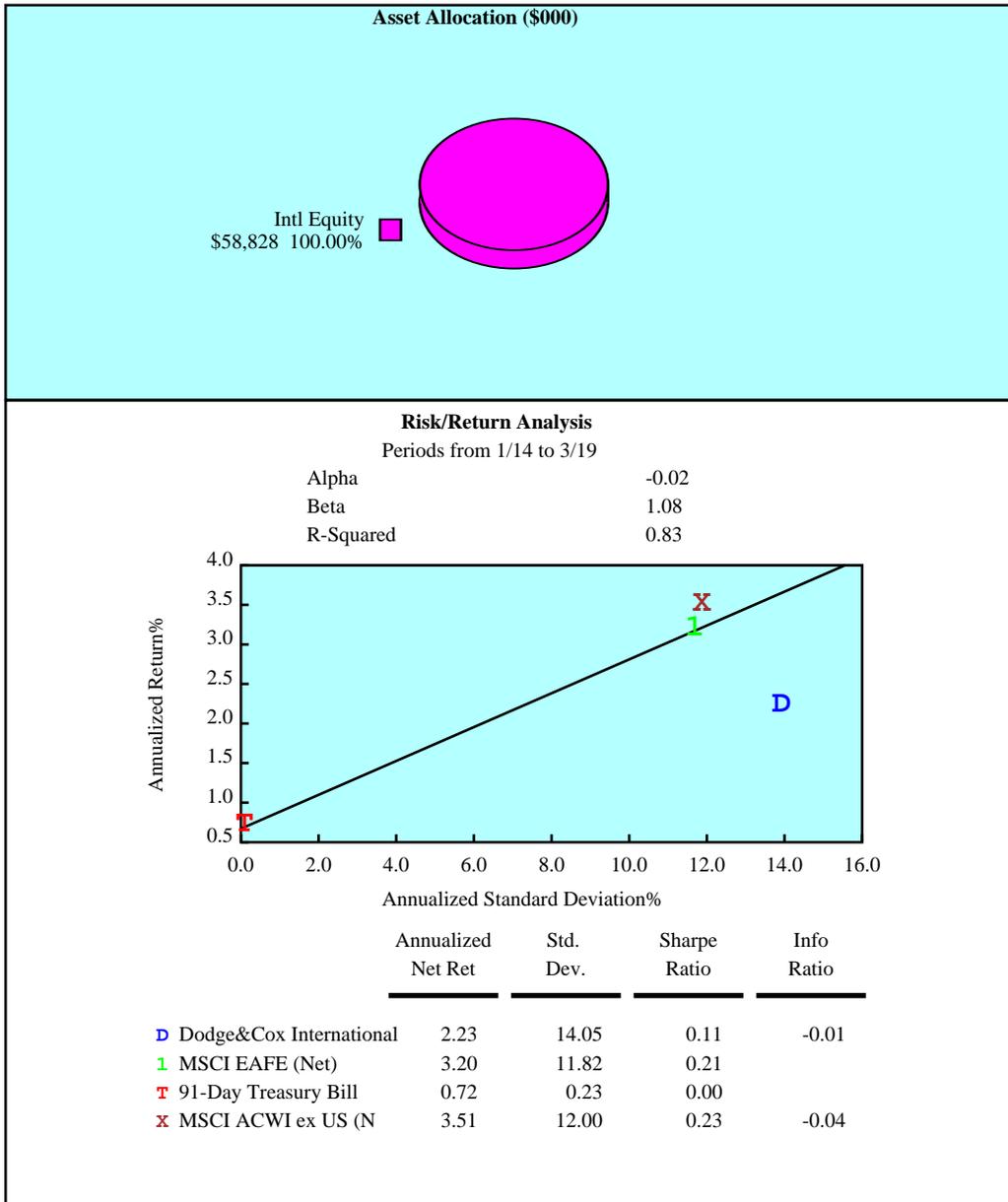
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	2	2	4	5	8	9	9	11
Positive Periods	2	2	8	7	12	11	20	18
Up Market Capture	1.20		1.01		1.01		1.04	
Down Market Capture	1.00		1.06		0.93		0.86	
Batting Average	0.50		0.58		0.65		0.69	
Worst Quarter	-12.09	-12.54	-12.09	-12.54	-12.09	-12.54	-12.09	-12.54
Best Quarter	12.97	9.98	12.97	9.98	12.97	9.98	12.97	11.56
Worst 4 Quarters	-1.75	-3.71	-11.04	-13.79	-11.04	-13.79	-11.04	-13.79
Best 4 Quarters	-1.75	-3.71	27.85	25.03	27.85	25.03	27.85	25.03
Standard Deviation	20.60	18.57	13.27	12.03	12.32	11.76	12.29	12.07
Beta	1.09		1.00		0.98		0.97	
Alpha	0.67		-0.06		0.22		0.48	
R-Squared	0.98		0.84		0.88		0.90	
Sharpe Ratio	-0.19	-0.31	0.43	0.50	0.19	0.13	0.66	0.53
Treynor Ratio	-3.55		5.70		2.40		8.45	
Tracking Error	3.38		5.27		4.33		3.93	
Information Ratio	0.66		-0.06		0.17		0.41	

## City of Fort Lauderdale Police and Fire Dodge&Cox International Equity as of 3/31/19



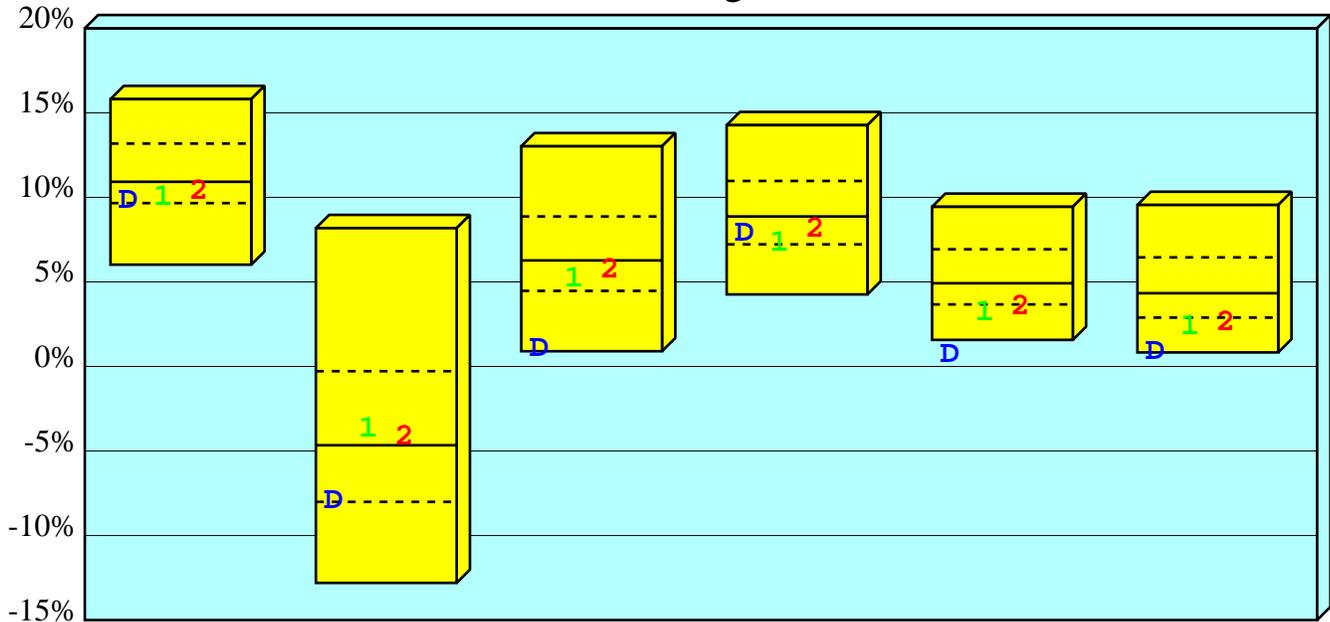
Net of Fee Returns	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Incept 1/31/14
Dodge&Cox International Equity	9.78	9.78	-8.00	7.87	0.85		2.23
MSCI EAFE (Net)	9.98	9.98	-3.71	7.27	2.33		3.20
MSCI ACWI ex US (Net)	10.31	10.31	-4.22	8.09	2.57		3.51
<b>Asset Growth (\$000)</b>							
Beginning Market Value	53,587	53,587	63,941	46,864	56,404		52,502
Net Contributions & Withdrawals	0	0	0	0	0		0
Gain/Loss + Income	5,241	5,241	-5,113	11,965	2,424		6,327
Ending Market Value	58,828	58,828	58,828	58,828	58,828		58,828

# City of Fort Lauderdale Police and Fire Dodge&Cox International Equity as of 3/31/19



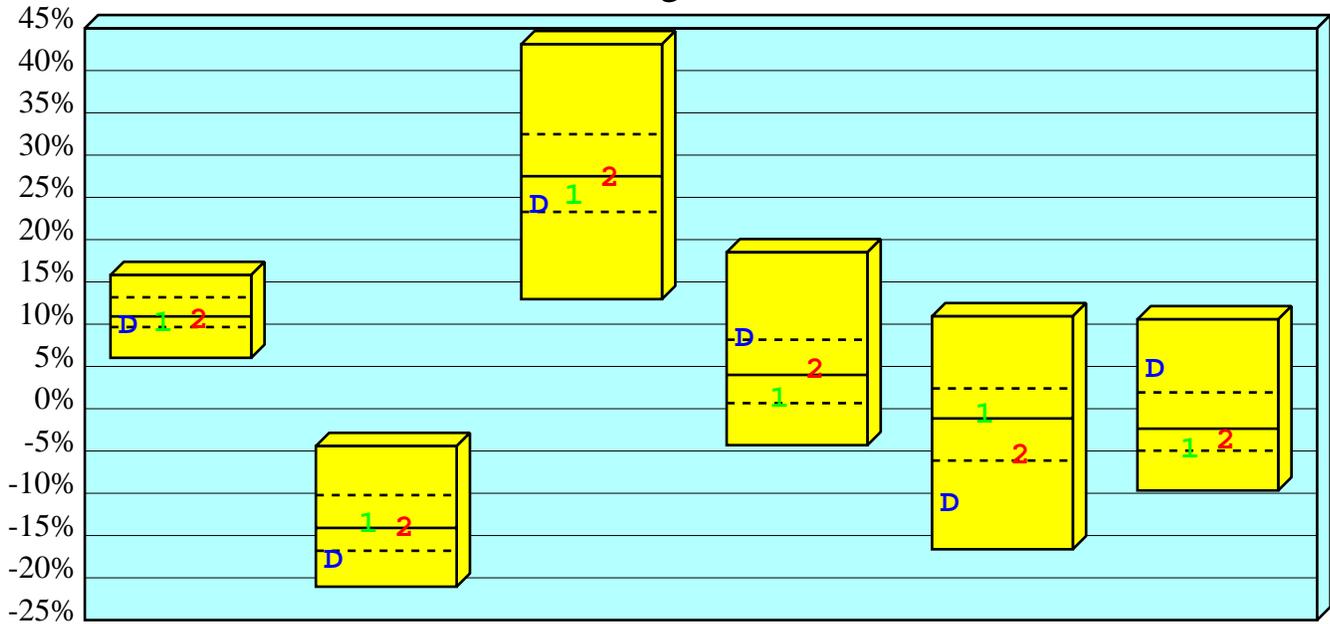


## City of Fort Lauderdale Police and Fire Cumulative Performance Comparison Total Returns of International Equity Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years
High	15.81	8.18	13.02	14.27	9.44	9.55
1st Qt	13.18	-0.28	8.87	10.97	6.93	6.45
Median	10.92	-4.66	6.27	8.87	4.92	4.33
3rd Qt	9.66	-8.01	4.47	7.22	3.67	2.89
Low	6.02	-12.80	0.90	4.26	1.57	0.83
<b>D</b> Dodge&Cox International Equity						
Net Ret	9.78	-8.00	1.04	7.87	0.69	0.85
Rank	73	74	93	64	98	94
<b>1</b> MSCI EAFE (Net)						
Net Ret	9.98	-3.71	5.14	7.27	3.16	2.33
Rank	69	42	66	74	84	83
<b>2</b> MSCI ACWI ex US (Net)						
Net Ret	10.31	-4.22	5.65	8.09	3.48	2.57
Rank	60	47	58	60	79	80

## City of Fort Lauderdale Police and Fire Calendar Year Performance Comparison Total Returns of International Equity Portfolios Years Ending December



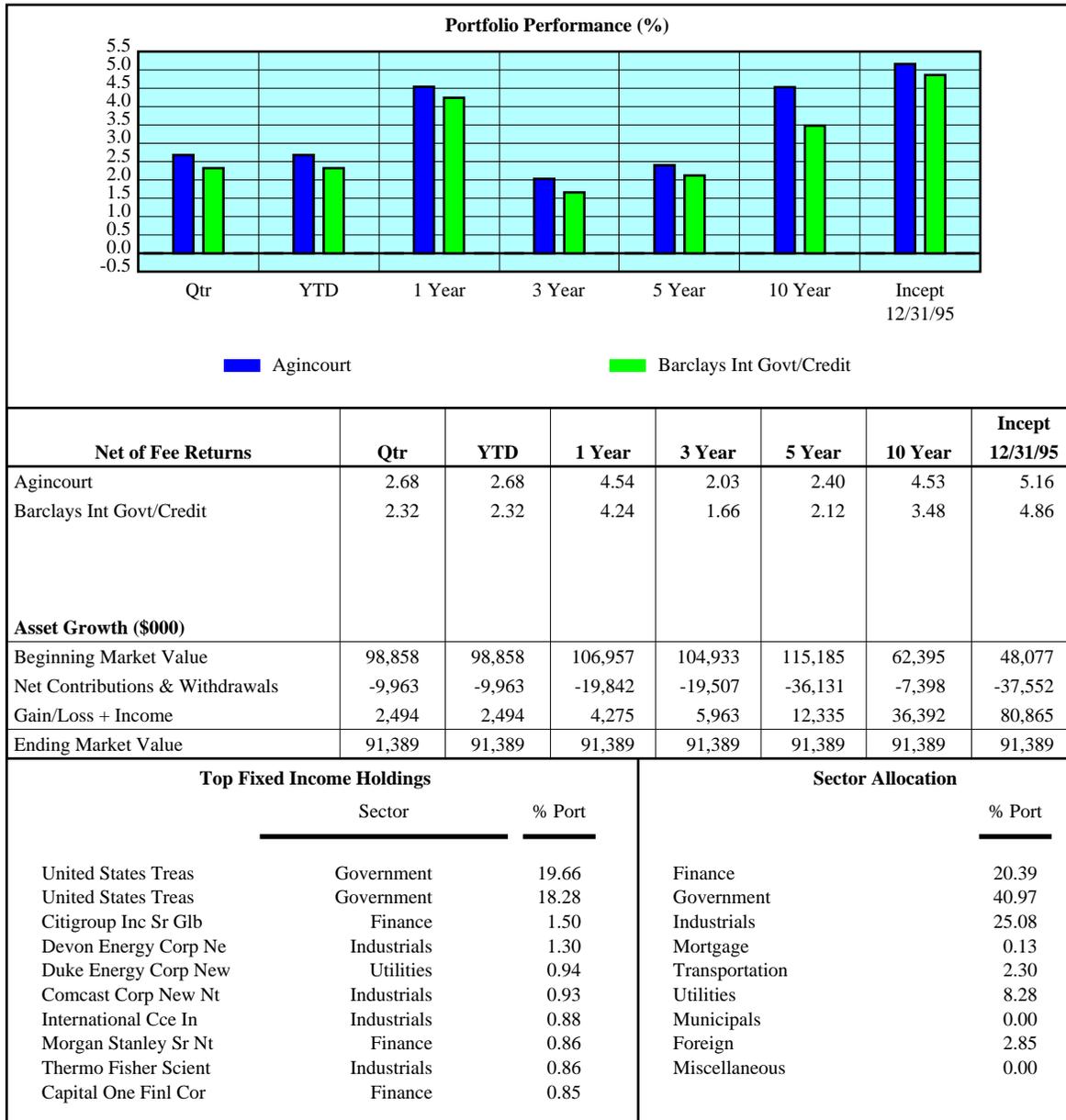
	3/31/19 YTD	2018	2017	2016	2015	2014
High	15.81	-4.42	43.11	18.50	10.93	10.57
1st Qt	13.18	-10.22	32.47	8.16	2.40	1.93
Median	10.92	-14.10	27.50	4.00	-1.15	-2.36
3rd Qt	9.66	-16.80	23.28	0.66	-6.13	-4.96
Low	6.02	-21.05	12.96	-4.31	-16.62	-9.67
<b>D</b> Dodge&Cox International Equity						
Net Ret	9.78	-17.98	23.94	8.26	-11.35	4.62
Rank	73	84	72	24	84	16
<b>1</b> MSCI EAFE (Net)						
Net Ret	9.98	-13.79	25.03	1.00	-0.81	-4.90
Rank	69	47	66	73	47	74
<b>2</b> MSCI ACWI ex US (Net)						
Net Ret	10.31	-14.20	27.19	4.50	-5.66	-3.87
Rank	60	50	52	47	73	62

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Dodge&Cox International Equity  
Quarterly Periods Ending 3/31/19

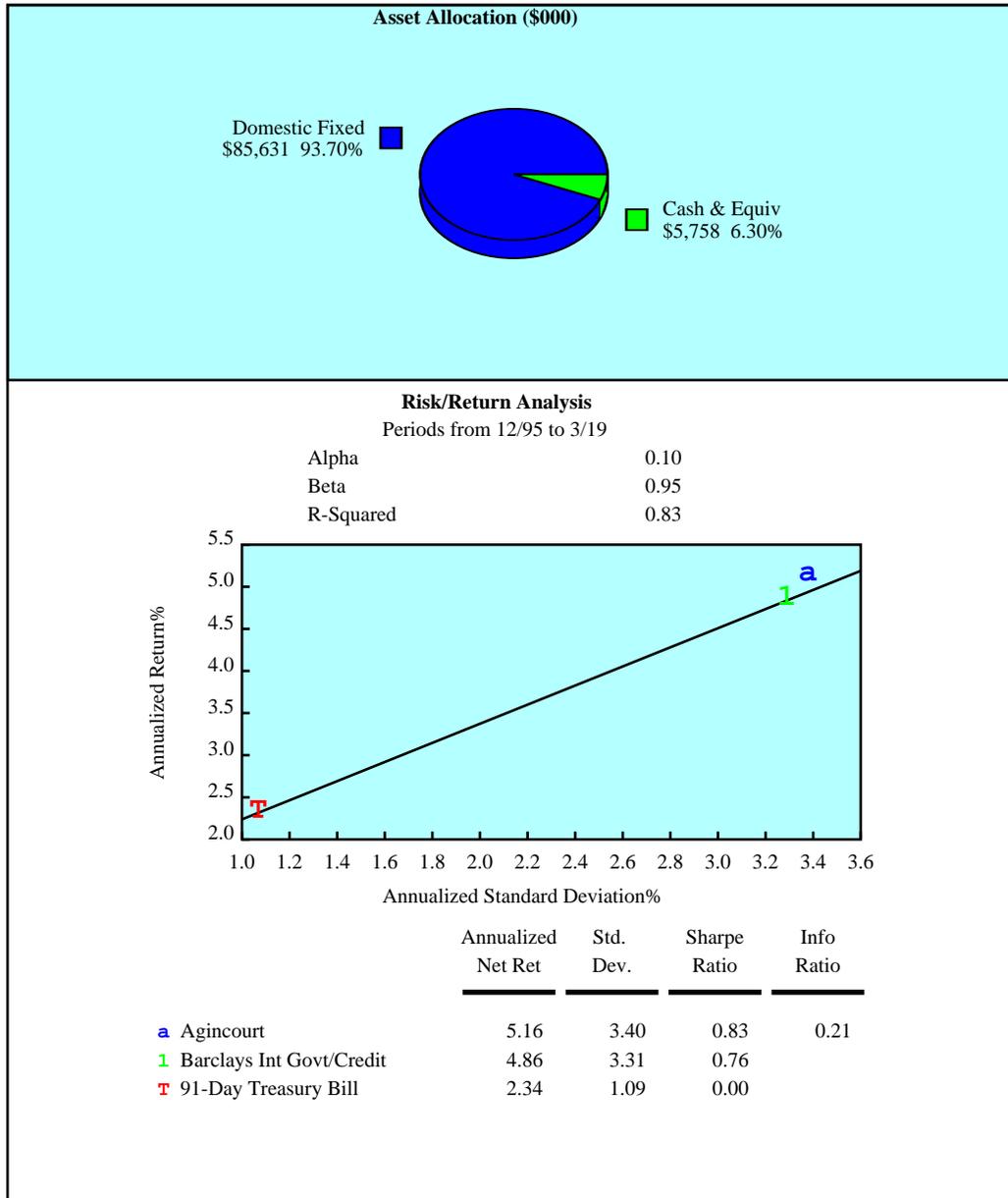
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	2	2	4	5	9	9	9	9
Positive Periods	2	2	8	7	11	11	12	12
Up Market Capture	0.93		1.05		0.95		1.08	
Down Market Capture	1.24		1.01		1.10		1.10	
Batting Average	0.25		0.50		0.40		0.43	
Worst Quarter	-12.39	-12.54	-12.39	-12.54	-15.38	-12.54	-15.38	-12.54
Best Quarter	9.78	9.98	10.15	9.98	10.15	9.98	10.15	9.98
Worst 4 Quarters	-8.00	-3.71	-17.98	-13.79	-18.86	-13.79	-18.86	-13.79
Best 4 Quarters	-8.00	-3.71	30.37	25.03	30.37	25.03	30.37	25.03
Standard Deviation	18.76	18.57	13.50	12.03	13.57	11.76	13.57	11.46
Beta	0.99		1.06		1.08		1.08	
Alpha	-1.12		0.09		-0.35		-0.02	
R-Squared	0.96		0.88		0.87		0.83	
Sharpe Ratio	-0.54	-0.31	0.49	0.50	0.01	0.13	0.11	0.14
Treynor Ratio	-10.19		6.33		0.09		1.37	
Tracking Error	3.73		4.81		4.97		5.75	
Information Ratio	-1.19		0.13		-0.27		-0.01	



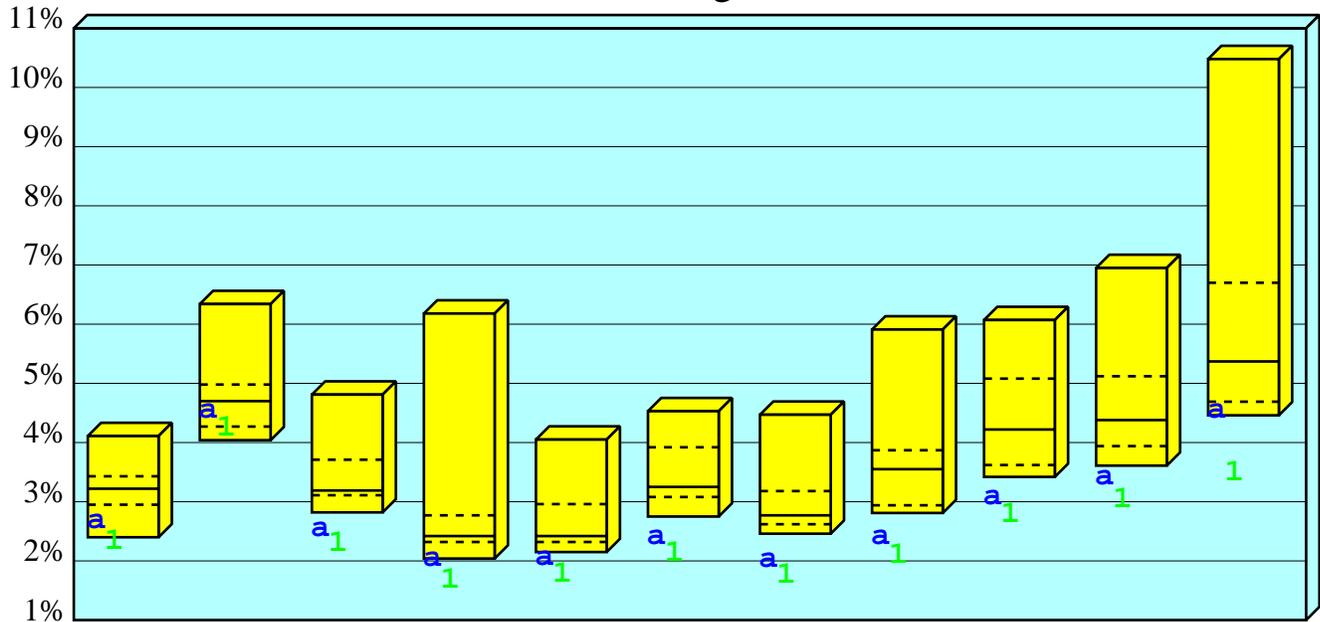
## City of Fort Lauderdale Police and Fire Agincourt as of 3/31/19



# City of Fort Lauderdale Police and Fire Agincourt as of 3/31/19



# City of Fort Lauderdale Police and Fire Fixed Income Core Cumulative Performance Comparisons Total Returns of Fixed Income Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	4.11	6.34	4.81	6.18	4.05	4.53	4.47	5.91	6.07	6.95	10.48
1st Qt	3.43	4.98	3.71	2.77	2.96	3.92	3.18	3.87	5.08	5.12	6.70
Median	3.22	4.70	3.19	2.42	2.42	3.25	2.77	3.55	4.22	4.38	5.37
3rd Qt	2.95	4.27	3.11	2.32	2.32	3.08	2.62	2.94	3.62	3.94	4.69
Low	2.40	4.04	2.82	2.04	2.15	2.75	2.46	2.81	3.42	3.61	4.46

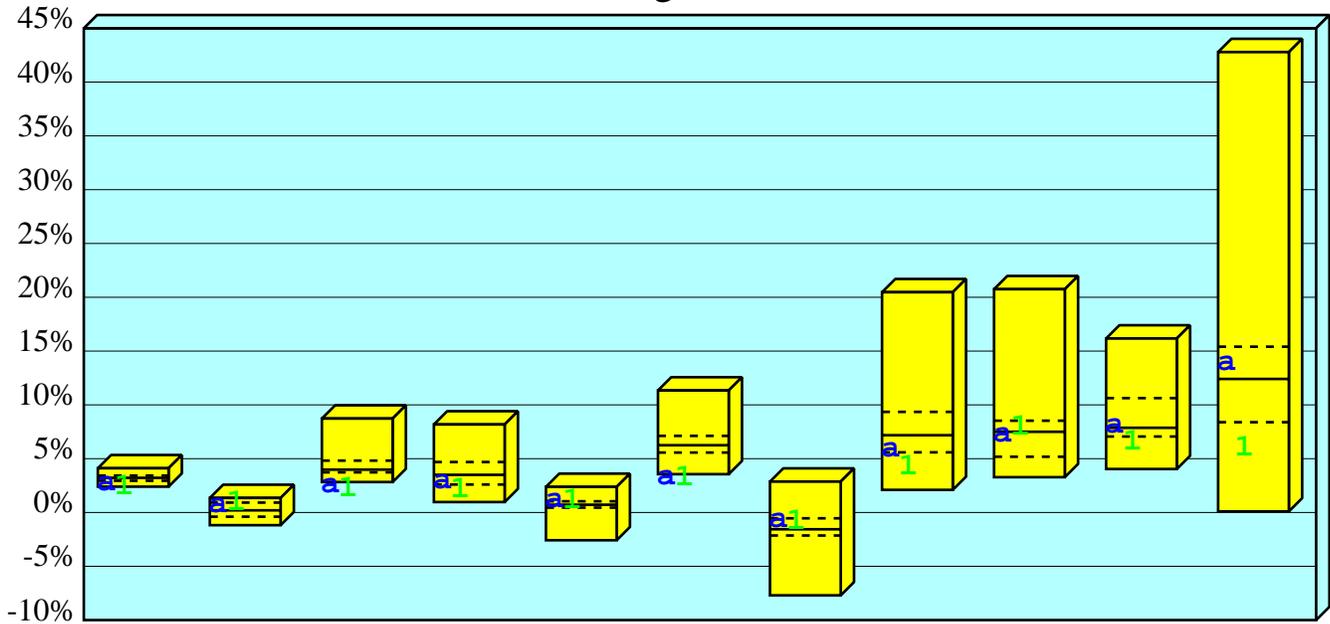
**a** Agincourt

Net Ret	2.68	4.54	2.53	2.03	2.05	2.40	2.01	2.41	3.08	3.41	4.53
Rank	75	64	99	95	95	99	100	100	100	99	82

**1** Barclays Int Govt/Credit

Net Ret	2.32	4.24	2.28	1.66	1.76	2.12	1.74	2.08	2.77	3.03	3.48
Rank	99	75	100	100	100	99	100	100	100	100	100

# City of Fort Lauderdale Police and Fire Fixed Income Core Consecutive Performance Comparisons Total Returns of Fixed Income Portfolios Years Ending December

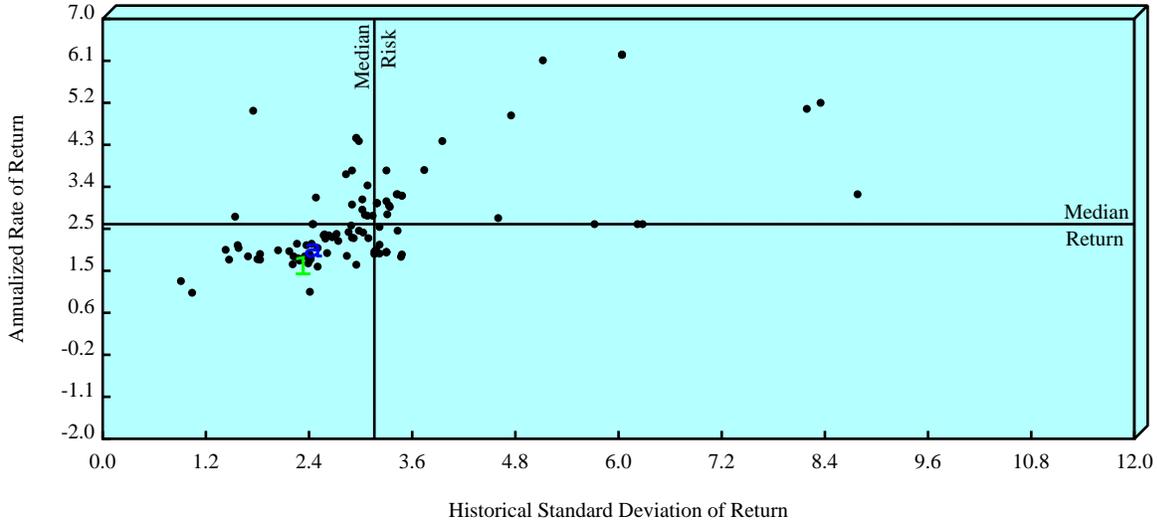


	3/31/19	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
High	4.11	1.35	8.73	8.18	2.38	11.34	2.87	20.47	20.75	16.17	42.79
1st Qt	3.43	0.92	4.82	4.69	1.04	7.12	-0.54	9.35	8.53	10.63	15.41
Median	3.22	0.20	3.98	3.50	0.72	6.25	-1.56	7.18	7.50	7.87	12.41
3rd Qt	2.95	-0.39	3.73	2.60	0.45	5.57	-2.14	5.59	5.18	7.06	8.39
Low	2.40	-1.18	2.83	0.97	-2.58	3.56	-7.70	2.10	3.28	4.04	0.10
<b>a Agincourt</b>											
Net Ret	2.68	0.65	2.54	2.86	1.14	3.30	-0.73	5.83	7.27	8.10	13.88
Rank	75	26	100	68	22	97	26	63	52	45	40
<b>1 Barclays Int Govt/Credit</b>											
Net Ret	2.32	0.88	2.14	2.08	1.07	3.13	-0.86	4.17	7.84	6.54	5.93
Rank	99	25	100	86	23	97	32	89	41	90	89



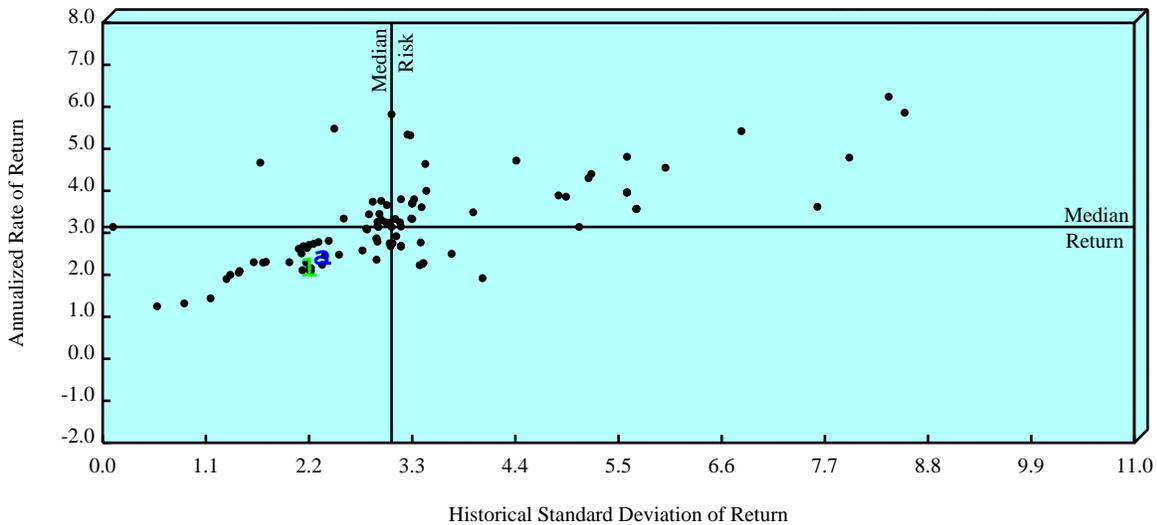
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Fixed Income Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
a	Agincourt	2.03	69	2.51	27
l	Barclays Int Govt/Credit	1.66	84	2.39	23
	Median	2.60		3.16	

5 Years Ending 3/31/19



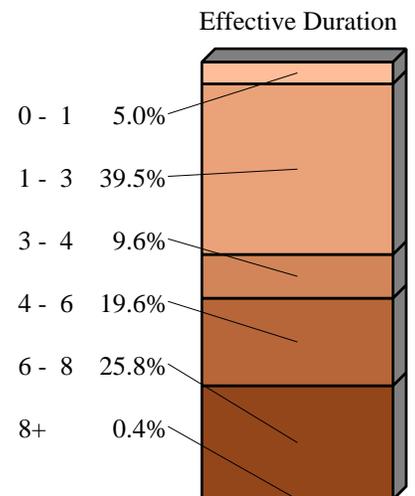
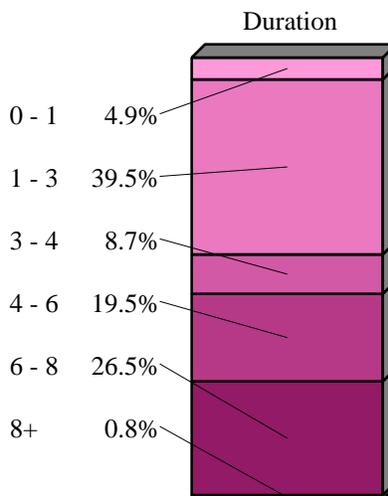
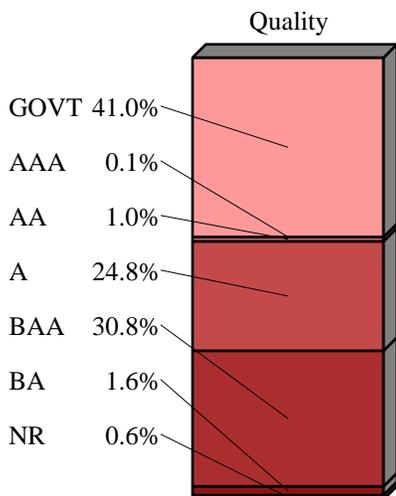
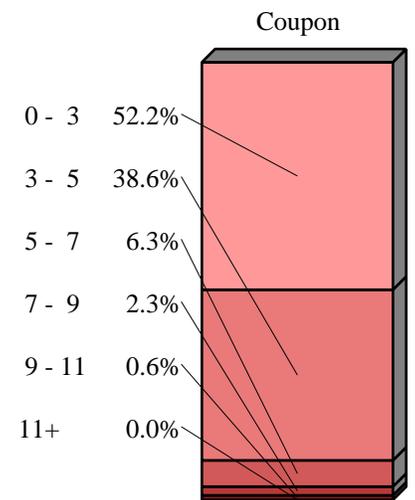
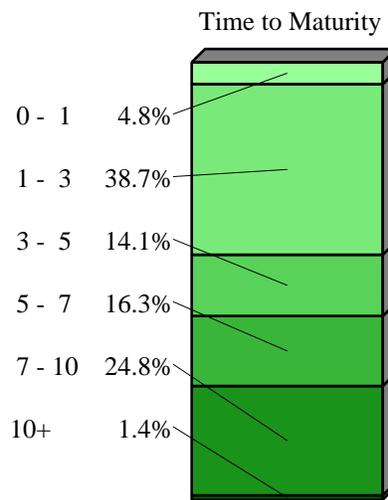
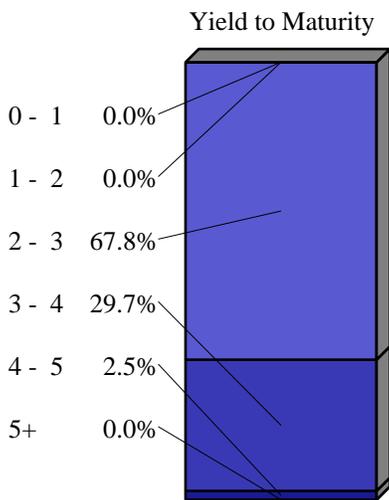
		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
a	Agincourt	2.40	74	2.40	28
l	Barclays Int Govt/Credit	2.12	81	2.26	24
	Median	3.14		3.08	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Agincourt  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	0	3	3	6	6	21	23
Positive Periods	4	4	9	9	14	14	72	70
Up Market Capture	1.07		1.13		1.10		1.06	
Down Market Capture			0.98		1.03		1.01	
Batting Average	0.75		0.83		0.65		0.69	
Worst Quarter	0.05	0.01	-2.01	-2.07	-2.01	-2.07	-2.41	-2.44
Best Quarter	2.68	2.32	2.68	2.32	2.68	2.45	5.72	4.62
Worst 4 Quarters	4.54	4.24	-0.70	-0.96	-0.70	-0.96	-1.67	-0.96
Best 4 Quarters	4.54	4.24	4.54	4.24	4.77	4.33	15.10	12.95
Standard Deviation	2.33	2.24	2.51	2.39	2.40	2.26	3.40	3.31
Beta	1.01		1.05		1.05		0.95	
Alpha	0.06		0.09		0.05		0.10	
R-Squared	0.93		0.98		0.98		0.83	
Sharpe Ratio	1.04	0.94	0.33	0.19	0.69	0.61	0.83	0.76
Treynor Ratio	2.38		0.80		1.57		2.96	
Tracking Error	0.60		0.39		0.35		1.41	
Information Ratio	0.48		0.95		0.78		0.21	

# City of Fort Lauderdale Police and Fire Fixed Income, Mortgage and Municipals Summary Statistics Agincourt Quarter Ending 3/19

	Portfolio	Barclays Int Govt/Credit
Total Number Of Securities	153	4,843
Total Market Value	85,631,224	
Yield to Maturity	2.83	2.62
Time to Maturity	4.32	4.32
Current Coupon	3.12	2.70
Duration	3.93	3.95
Effective Convexity	0.23	0.22
Effective Duration	3.87	3.90
Effective Maturity	4.30	4.32



City of Fort Lauderdale Police and Fire  
Percent Invested by Sector and Quality  
Agincourt  
As of 3/31/19

Name	Moody's Quality Ratings								Total
	Aaa	Aa	A	Baa	Ba	B	Other	NR	
<b>Government</b>	40.97	---	---	---	---	---	---	---	40.97
Treasury	40.97	---	---	---	---	---	---	---	40.97
Agency	---	---	---	---	---	---	---	---	---
<b>Corporate</b>	---	1.03	23.55	29.81	1.61	---	---	0.61	56.61
Industrial	---	0.77	6.94	15.17	1.61	---	---	0.60	25.09
Utility	---	0.26	2.03	5.99	---	---	---	---	8.28
Finance	---	---	14.13	6.25	---	---	---	0.01	20.39
Yankee	---	---	0.44	2.41	---	---	---	---	2.85
<b>Transportation</b>	---	---	1.29	1.01	---	---	---	---	2.30
<b>Mortgage</b>	0.13	---	---	---	---	---	---	---	0.13
GNMA	---	---	---	---	---	---	---	---	---
FHLMC	0.03	---	---	---	---	---	---	---	0.03
FNMA	0.10	---	---	---	---	---	---	---	0.10
Other Mortgage	---	---	---	---	---	---	---	---	---
<b>Municipals</b>	---	---	---	---	---	---	---	---	---
<b>Cash</b>	---	---	---	---	---	---	---	---	---
<b>Other</b>	---	---	---	---	---	---	---	---	---
<b>Total</b>	41.10	1.03	24.83	30.83	1.61	---	---	0.61	100.00

City of Fort Lauderdale Police and Fire  
Fixed Income Sector Attribution Analysis  
Agincourt  
Quarter Ending 3/19

	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Security	Sector	Total
Finance	19.84	0.00	2.70	0.00	0.54	0.00	0.54
Government	35.47	0.00	1.79	0.00	0.64	0.00	0.64
Industrials	27.99	17.28	3.36	0.00	0.94	0.00	0.94
Mortgage	0.11	0.00	1.92	0.00	0.00	0.00	0.00
Transportation	1.96	0.00	2.78	0.00	0.05	0.00	0.05
Utilities	10.96	1.48	2.55	0.00	0.28	0.00	0.28
Municipals	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Foreign	3.66	0.00	4.25	0.00	0.16	0.00	0.16
Miscellaneous	0.00	0.00		0.00	0.00	0.00	0.00
	100.00	100.00	2.60	0.00	2.60	0.00	2.60

Index - Barclays Int Govt/Credit

Security Selection Return Attribution

[ Portfolio Market Value Sector Percentage ] \* [ Portfolio Sector Return - Index Sector Return ]

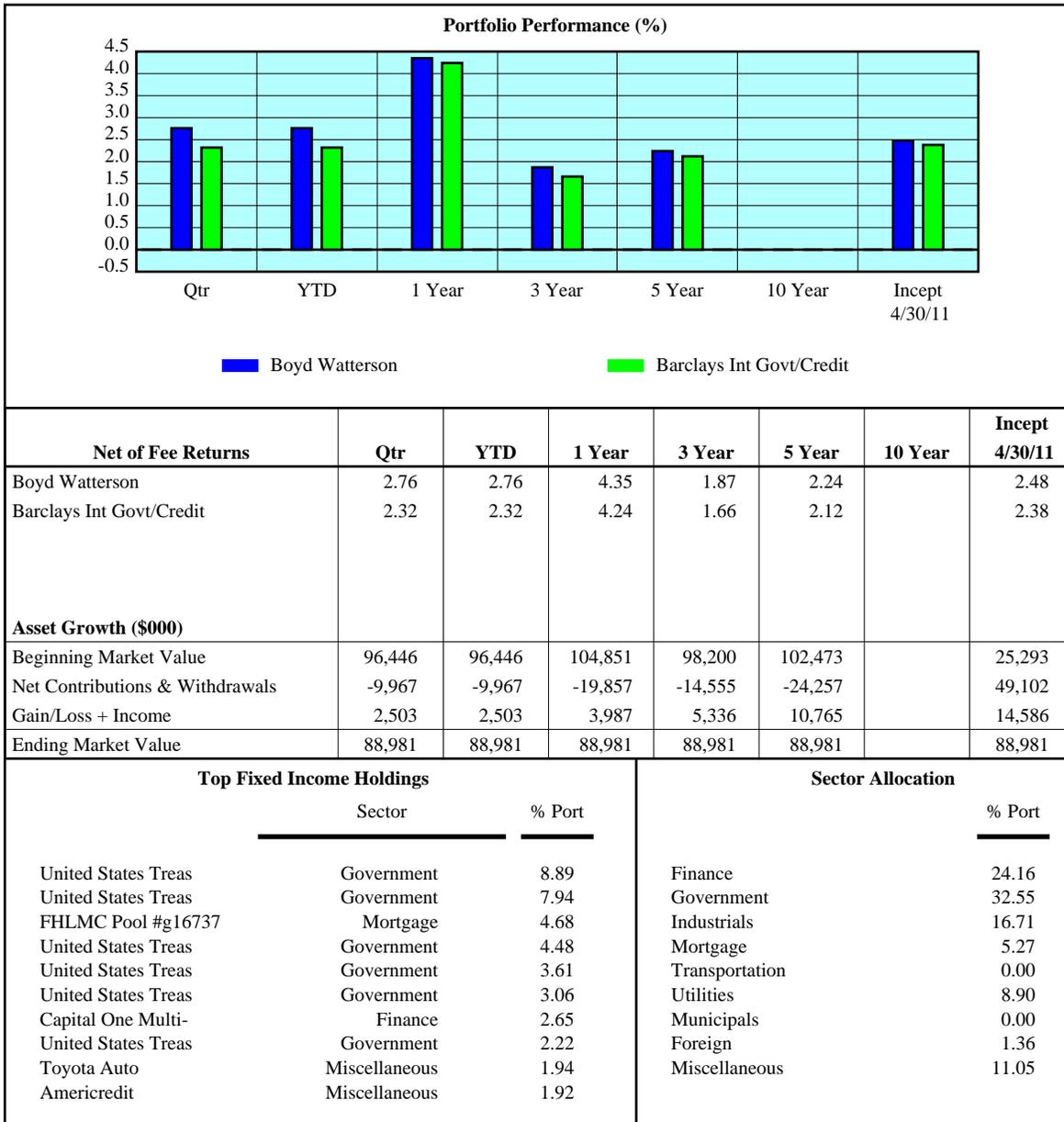
Sector Selection Return Attribution

[ Portfolio Sector Percentage - Index Sector Percentage ] \* [ Index Sector Return - Index Total Return ]

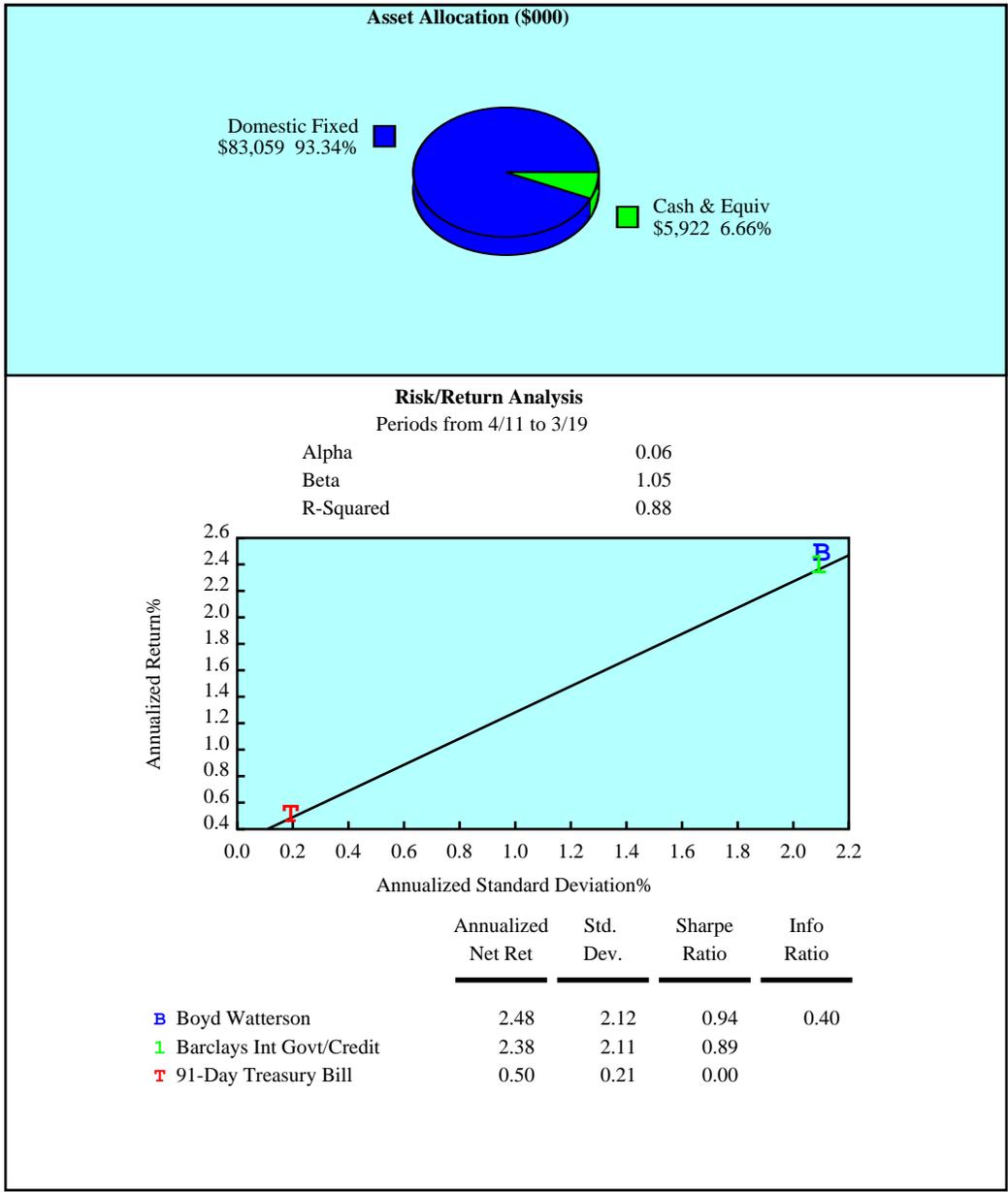
Trading Effect 0.15%

[ Actual Return 2.75% ] - [ Buy Hold Return 2.60% ]

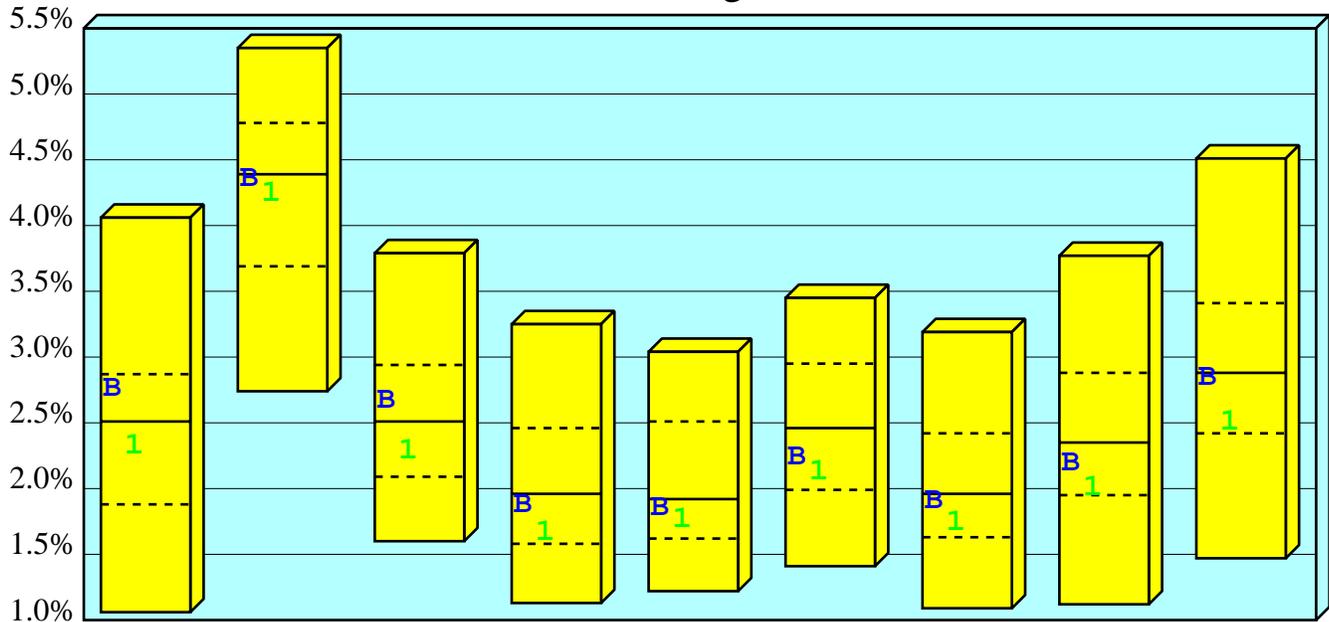
## City of Fort Lauderdale Police and Fire Boyd Watterson as of 3/31/19



# City of Fort Lauderdale Police and Fire Boyd Watterson as of 3/31/19



## City of Fort Lauderdale Police and Fire Intermediate Gov/Corp Cumulative Performance Comparisons Total Returns of Fixed Income Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years
High	4.06	5.35	3.79	3.25	3.04	3.45	3.19	3.77	4.51
1st Qt	2.87	4.78	2.94	2.46	2.51	2.95	2.42	2.88	3.41
Median	2.51	4.39	2.51	1.96	1.92	2.46	1.96	2.35	2.88
3rd Qt	1.88	3.69	2.09	1.58	1.62	1.99	1.63	1.95	2.42
Low	1.06	2.74	1.60	1.13	1.22	1.41	1.09	1.12	1.47

**B** Boyd Watterson

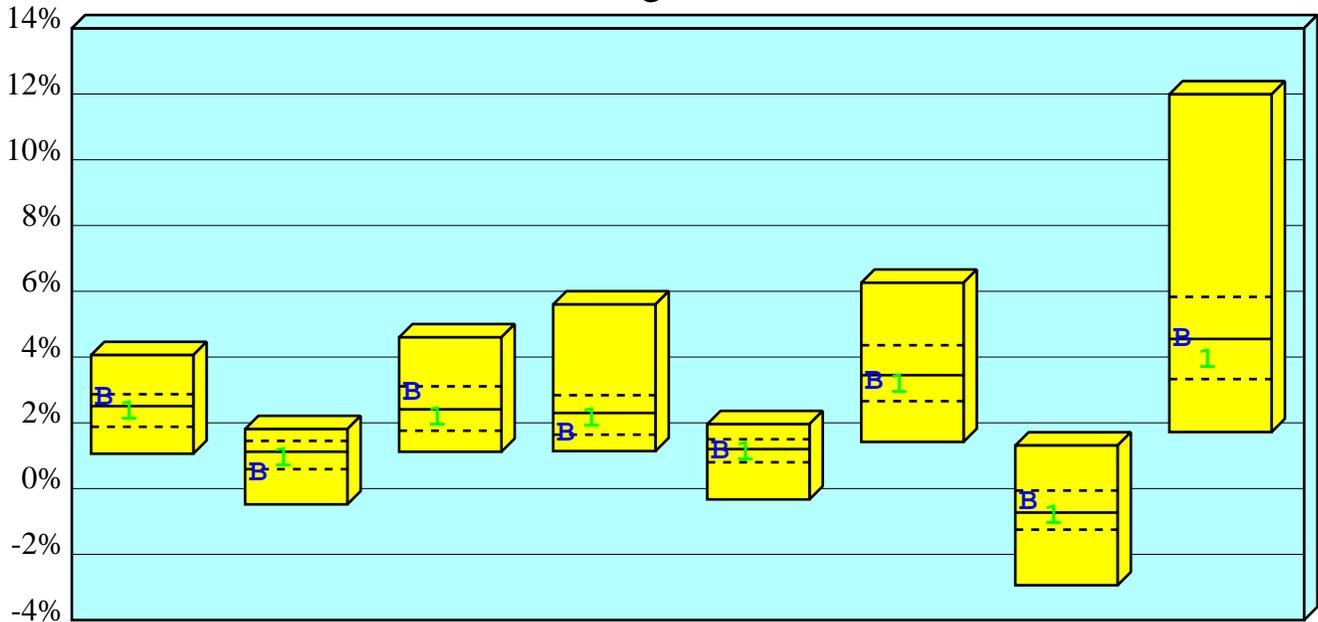
Net Ret	2.76	4.35	2.67	1.87	1.85	2.24	1.90	2.19	2.84
Rank	29	52	35	57	55	52	55	55	50

**1** Barclays Int Govt/Credit

Net Ret	2.32	4.24	2.28	1.66	1.76	2.12	1.74	2.00	2.50
Rank	59	56	65	67	69	63	63	66	69



City of Fort Lauderdale Police and Fire  
Intermediate Gov/Corp Consecutive Performance Comparisons  
Total Returns of Fixed Income Portfolios  
Years Ending December



	3/31/19 YTD	2018	2017	2016	2015	2014	2013	2012
High	4.06	1.81	4.60	5.60	1.96	6.26	1.31	11.99
1st Qt	2.87	1.45	3.11	2.84	1.50	4.36	-0.06	5.83
Median	2.51	1.12	2.41	2.30	1.20	3.45	-0.73	4.55
3rd Qt	1.88	0.59	1.76	1.64	0.80	2.66	-1.25	3.33
Low	1.06	-0.48	1.12	1.14	-0.33	1.42	-2.94	1.72

**B** Boyd Watterson

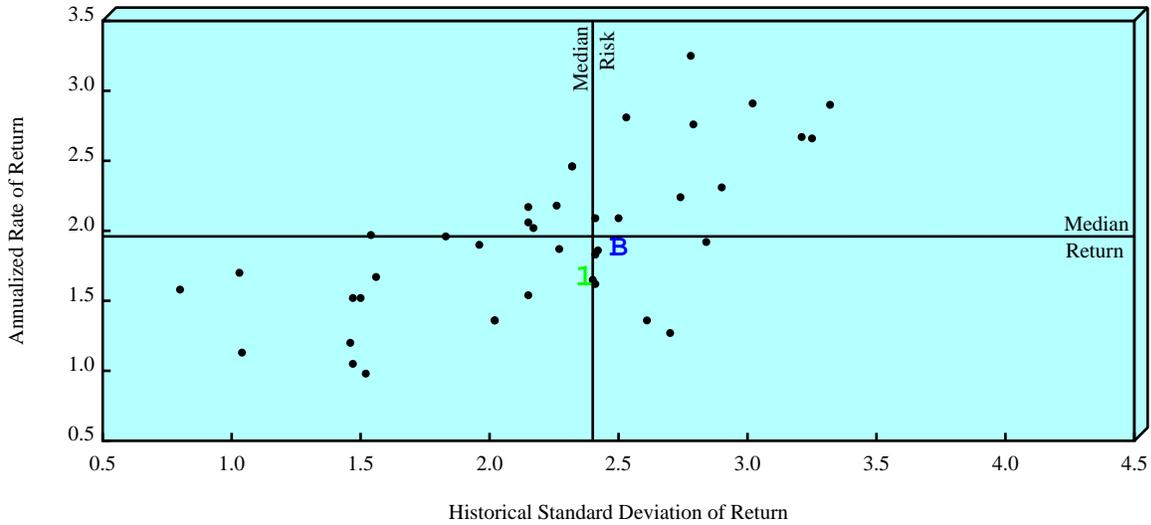
Net Ret	2.76	0.46	2.90	1.68	1.14	3.25	-0.42	4.53
Rank	29	83	30	74	56	61	36	51

**1** Barclays Int Govt/Credit

Net Ret	2.32	0.88	2.14	2.08	1.07	3.13	-0.86	3.89
Rank	59	60	61	59	63	64	57	60

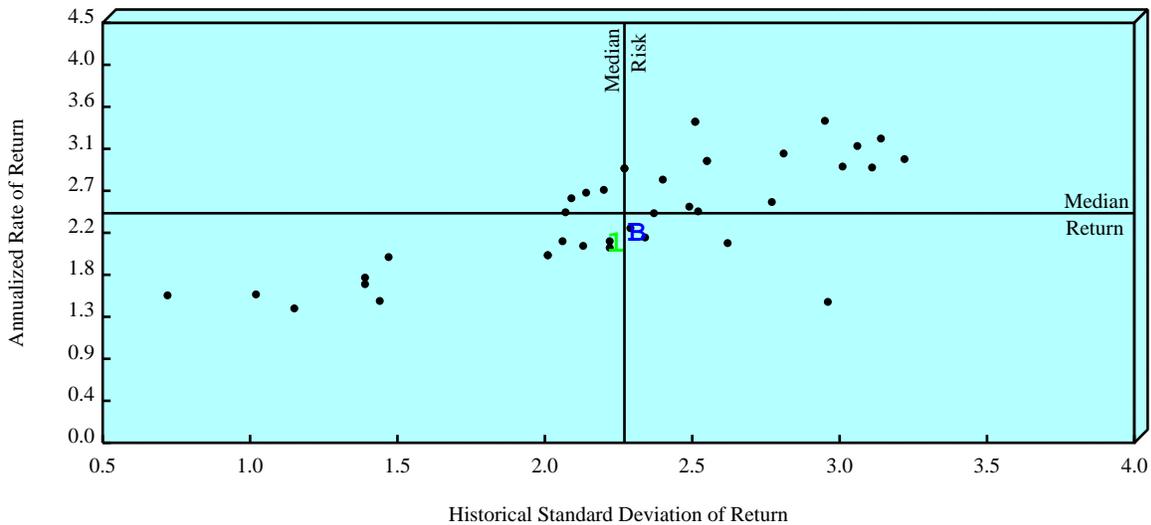
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Intermediate Gov/Corp Portfolios

3 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
B	Boyd Watterson	1.87	57	2.52	66
1	Barclays Int Govt/Credit	1.66	67	2.39	51
	Median	1.96		2.40	

5 Years Ending 3/31/19



		Annualized Net of Fee Return		Standard Deviation	
		Value	Rank	Value	Rank
B	Boyd Watterson	2.24	52	2.33	56
1	Barclays Int Govt/Credit	2.12	63	2.26	51
	Median	2.46		2.27	

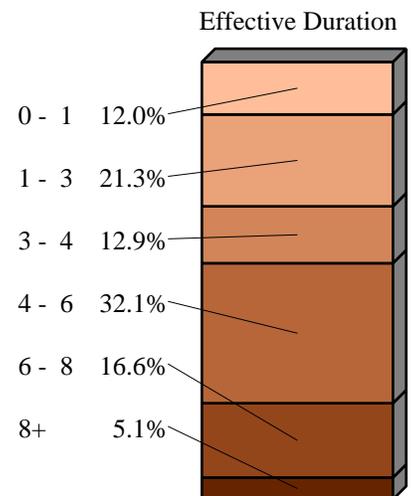
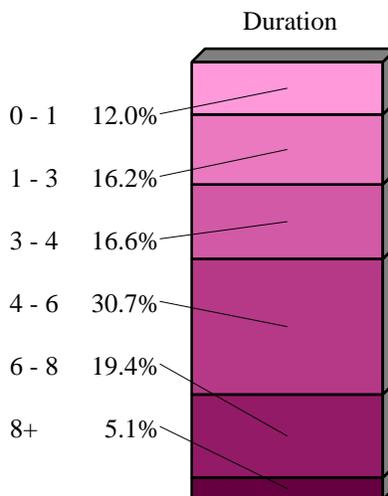
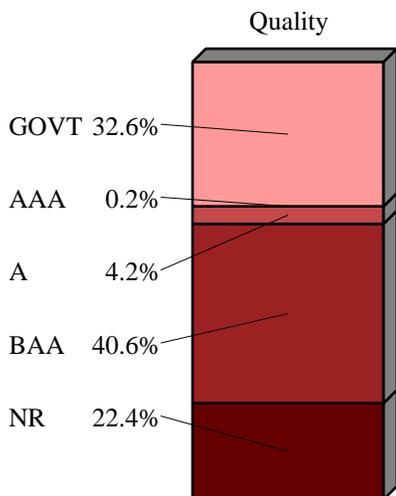
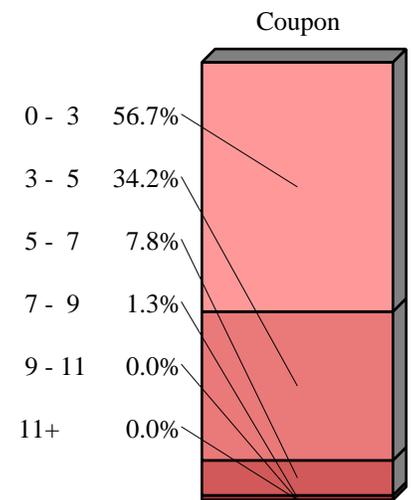
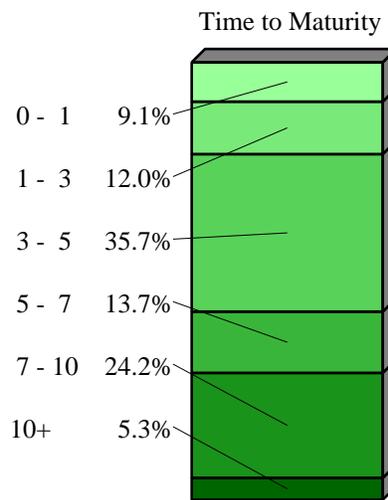
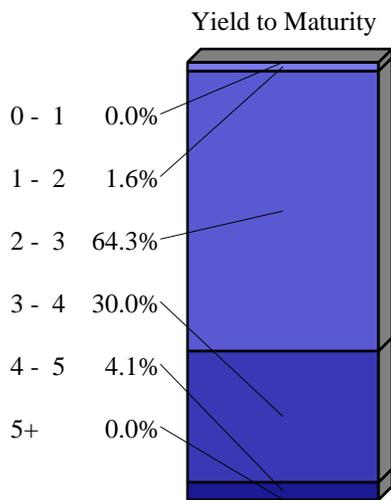
City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Boyd Watterson  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	0	2	3	4	6	5	8
Positive Periods	4	4	10	9	16	14	27	24
Up Market Capture	1.02		1.05		1.03		1.09	
Down Market Capture			0.92		0.97		0.95	
Batting Average	0.75		0.67		0.65		0.66	
Worst Quarter	0.09	0.01	-2.23	-2.07	-2.23	-2.07	-2.23	-2.07
Best Quarter	2.76	2.32	2.76	2.32	2.76	2.45	3.92	2.45
Worst 4 Quarters	4.35	4.24	-0.41	-0.96	-0.41	-0.96	-0.56	-0.96
Best 4 Quarters	4.35	4.24	4.35	4.24	4.39	4.33	7.52	6.09
Standard Deviation	2.36	2.24	2.52	2.39	2.33	2.26	2.44	2.20
Beta	0.96		1.02		1.00		1.05	
Alpha	0.05		0.05		0.03		0.06	
R-Squared	0.82		0.93		0.95		0.88	
Sharpe Ratio	0.94	0.94	0.27	0.19	0.64	0.61	0.96	0.91
Treynor Ratio	2.31		0.66		1.50		2.24	
Tracking Error	1.00		0.62		0.51		0.85	
Information Ratio	0.10		0.34		0.24		0.40	

# City of Fort Lauderdale Police and Fire Fixed Income, Mortgage and Municipals Summary Statistics

Boyd Watterson  
Quarter Ending 3/19

	Portfolio	Barclays Int Govt/Credit
Total Number Of Securities	51	4,843
Total Market Value	83,059,290	
Yield to Maturity	2.84	2.62
Time to Maturity	5.41	4.32
Current Coupon	3.22	2.70
Duration	4.33	3.95
Effective Convexity	0.15	0.22
Effective Duration	4.25	3.90
Effective Maturity	4.75	4.32



City of Fort Lauderdale Police and Fire  
Percent Invested by Sector and Quality  
Boyd Watterson  
As of 3/31/19

Name	Moody's Quality Ratings								Total
	Aaa	Aa	A	Baa	Ba	B	Other	NR	
<b>Government</b>	32.55	---	---	---	---	---	---	---	32.55
Treasury	32.55	---	---	---	---	---	---	---	32.55
Agency	---	---	---	---	---	---	---	---	---
<b>Corporate</b>	---	---	4.23	40.62	---	---	---	6.28	51.13
Industrial	---	---	---	16.71	---	---	---	---	16.71
Utility	---	---	1.36	7.54	---	---	---	---	8.90
Finance	---	---	2.87	15.01	---	---	---	6.28	24.16
Yankee	---	---	---	1.36	---	---	---	---	1.36
<b>Transportation</b>	---	---	---	---	---	---	---	---	---
<b>Mortgage</b>	0.22	---	---	---	---	---	---	5.05	5.27
GNMA	---	---	---	---	---	---	---	---	---
FHLMC	---	---	---	---	---	---	---	5.05	5.05
FNMA	---	---	---	---	---	---	---	---	---
Other Mortgage	0.22	---	---	---	---	---	---	---	0.22
<b>Municipals</b>	---	---	---	---	---	---	---	---	---
<b>Cash</b>	---	---	---	---	---	---	---	---	---
<b>Other</b>	---	---	---	---	---	---	---	11.05	11.05
<b>Total</b>	32.78	---	4.23	40.62	---	---	---	22.38	100.00

City of Fort Lauderdale Police and Fire  
Fixed Income Sector Attribution Analysis  
Boyd Watterson  
Quarter Ending 3/19

	Weight		Return		Selection		
	Portfolio	Index	Portfolio	Index	Security	Sector	Total
Finance	30.30	0.00	2.73	0.00	0.83	0.00	0.83
Government	26.63	0.00	1.91	0.00	0.51	0.00	0.51
Industrials	22.67	17.28	2.82	0.00	0.64	0.00	0.64
Mortgage	0.25	0.00	0.73	0.00	0.00	0.00	0.00
Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utilities	9.06	1.48	2.24	0.00	0.20	0.00	0.20
Municipals	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Foreign	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous	11.09	0.00		0.00	0.00	0.00	0.00
	100.00	100.00	2.18	0.00	2.18	0.00	2.18

Index - Barclays Int Govt/Credit

Security Selection Return Attribution

$$[ \text{Portfolio Market Value Sector Percentage} ] * [ \text{Portfolio Sector Return} - \text{Index Sector Return} ]$$

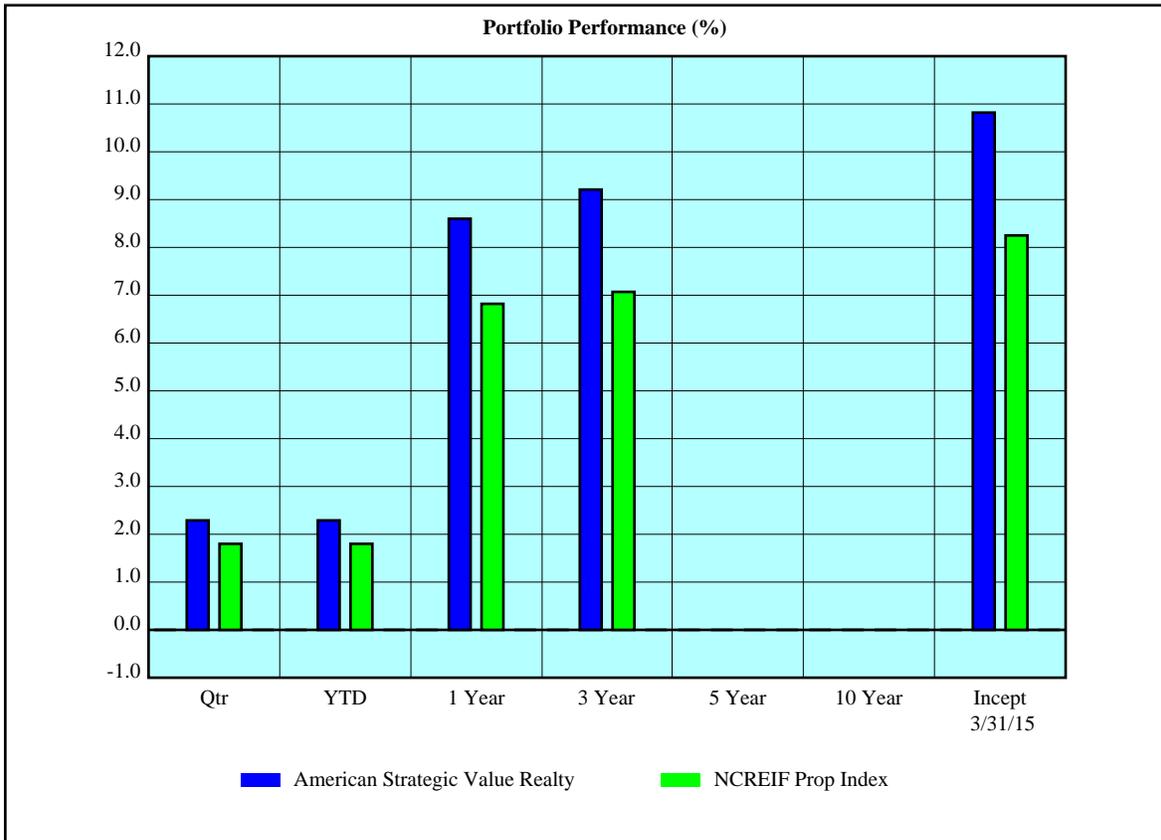
Sector Selection Return Attribution

$$[ \text{Portfolio Sector Percentage} - \text{Index Sector Percentage} ] * [ \text{Index Sector Return} - \text{Index Total Return} ]$$

Trading Effect 0.67%

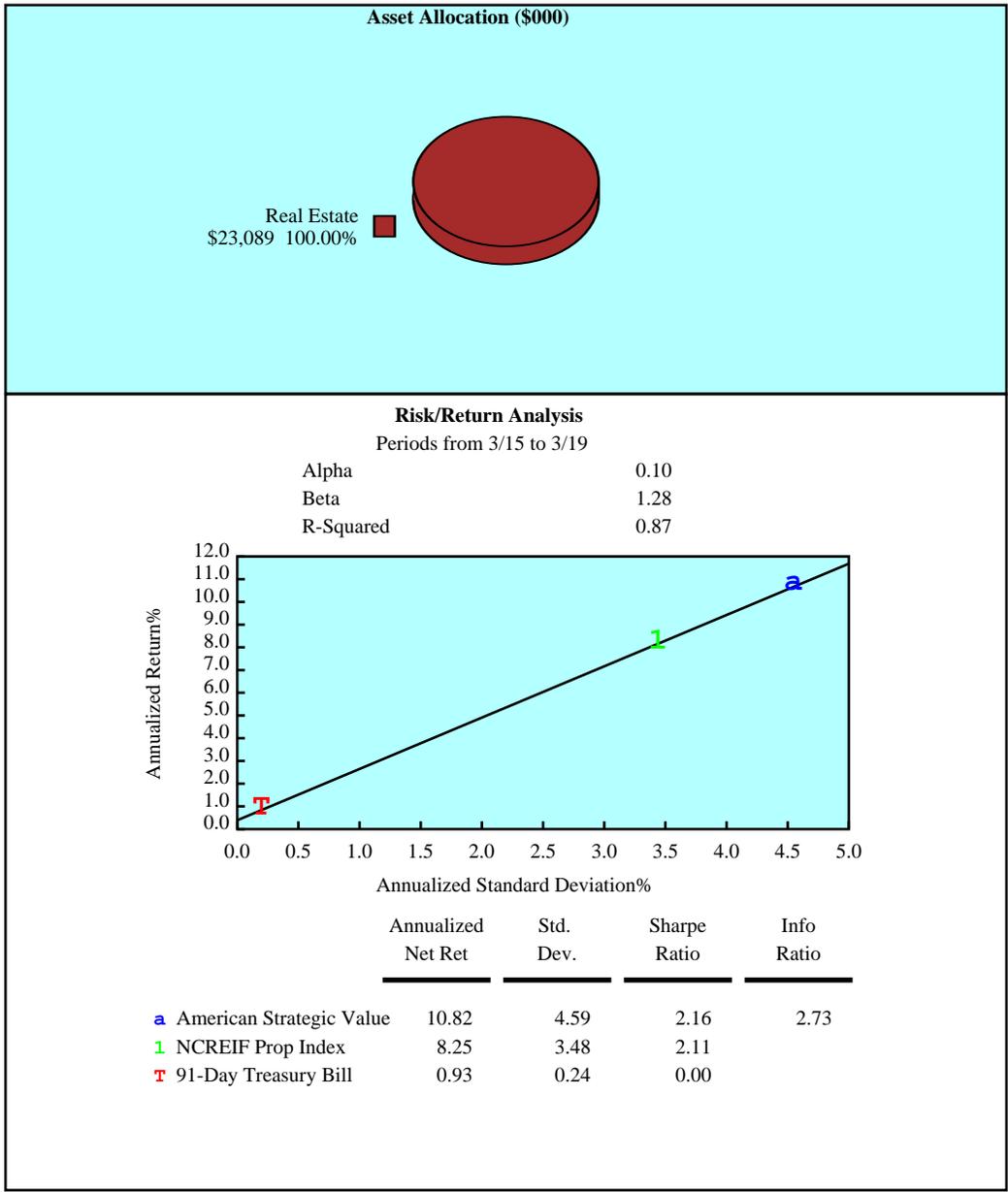
$$[ \text{Actual Return } 2.85\% ] - [ \text{Buy Hold Return } 2.18\% ]$$

## City of Fort Lauderdale Police and Fire American Strategic Value Realty as of 3/31/19



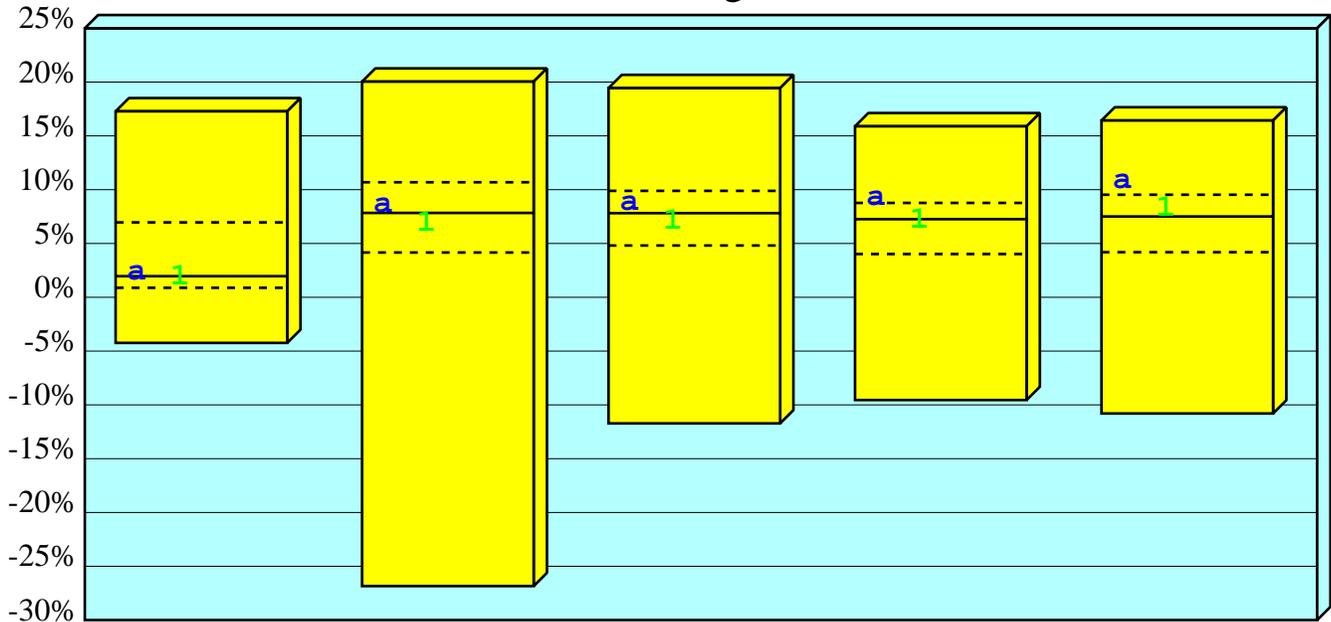
<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 3/31/15</b>
American Strategic Value Realty	2.29	2.29	8.60	9.21			10.82
NCREIF Prop Index	1.80	1.80	6.82	7.07			8.25
<b>Asset Growth (\$000)</b>							
Beginning Market Value	22,572	22,572	14,140	1,317			1,464
Net Contributions & Withdrawals	-70	-70	6,992	17,961			17,589
Gain/Loss + Income	586	586	1,957	3,810			4,036
Ending Market Value	23,089	23,089	23,089	23,089			23,089

# City of Fort Lauderdale Police and Fire American Strategic Value Realty as of 3/31/19





## City of Fort Lauderdale Police and Fire Cumulative Performance Comparison Total Returns of Real Estate Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years
High	17.28	20.04	19.44	15.89	16.43
1st Qt	6.96	10.69	9.89	8.77	9.53
Median	1.96	7.84	7.82	7.26	7.51
3rd Qt	0.88	4.16	4.81	4.02	4.19
Low	-4.24	-26.84	-11.72	-9.55	-10.80

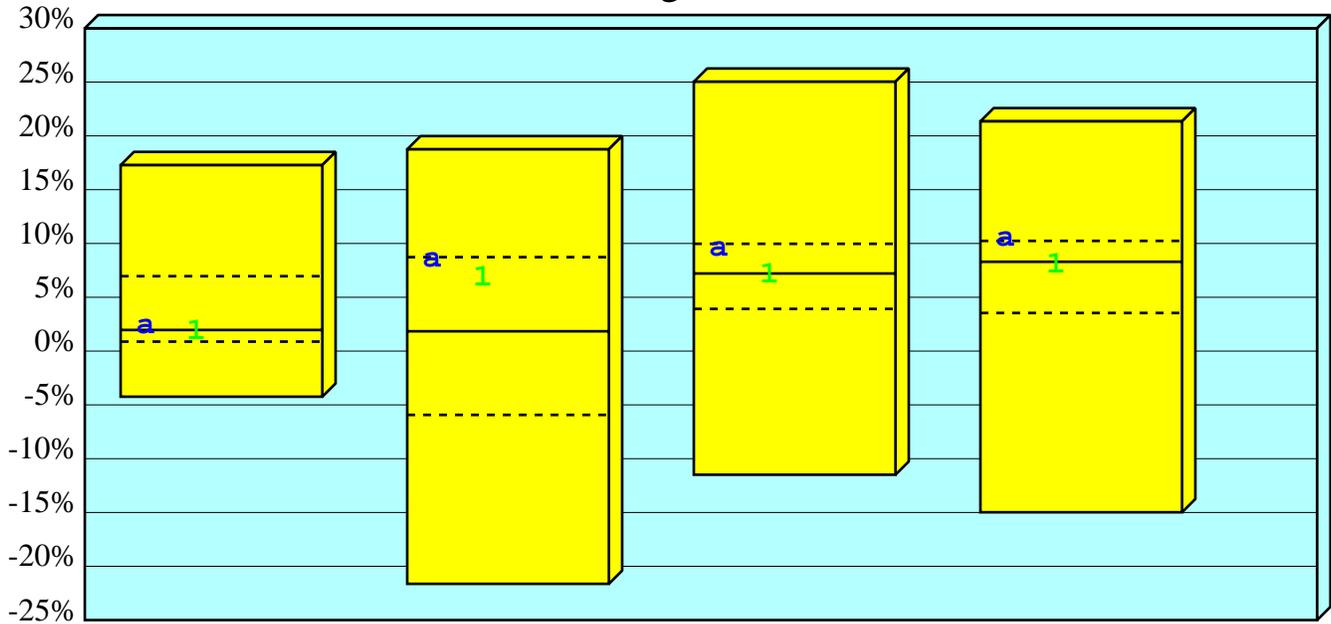
**a** American Strategic Value Realty

Net Ret	2.29	8.60	8.76	9.21	10.82
Rank	40	42	33	22	18

**1** NCREIF Prop Index

Net Ret	1.80	6.82	6.97	7.07	8.25
Rank	52	64	64	53	47

# City of Fort Lauderdale Police and Fire Calendar Year Performance Comparison Total Returns of Real Estate Portfolios Years Ending December



	3/31/19 YTD	2018	2017	2016
High	17.28	18.75	25.03	21.35
1st Qt	6.96	8.73	9.97	10.24
Median	1.96	1.84	7.21	8.30
3rd Qt	0.88	-5.93	3.92	3.54
Low	-4.24	-21.63	-11.49	-14.98

**a** American Strategic Value Realty

Net Ret	2.29	8.51	9.49	10.41
Rank	40	27	28	23

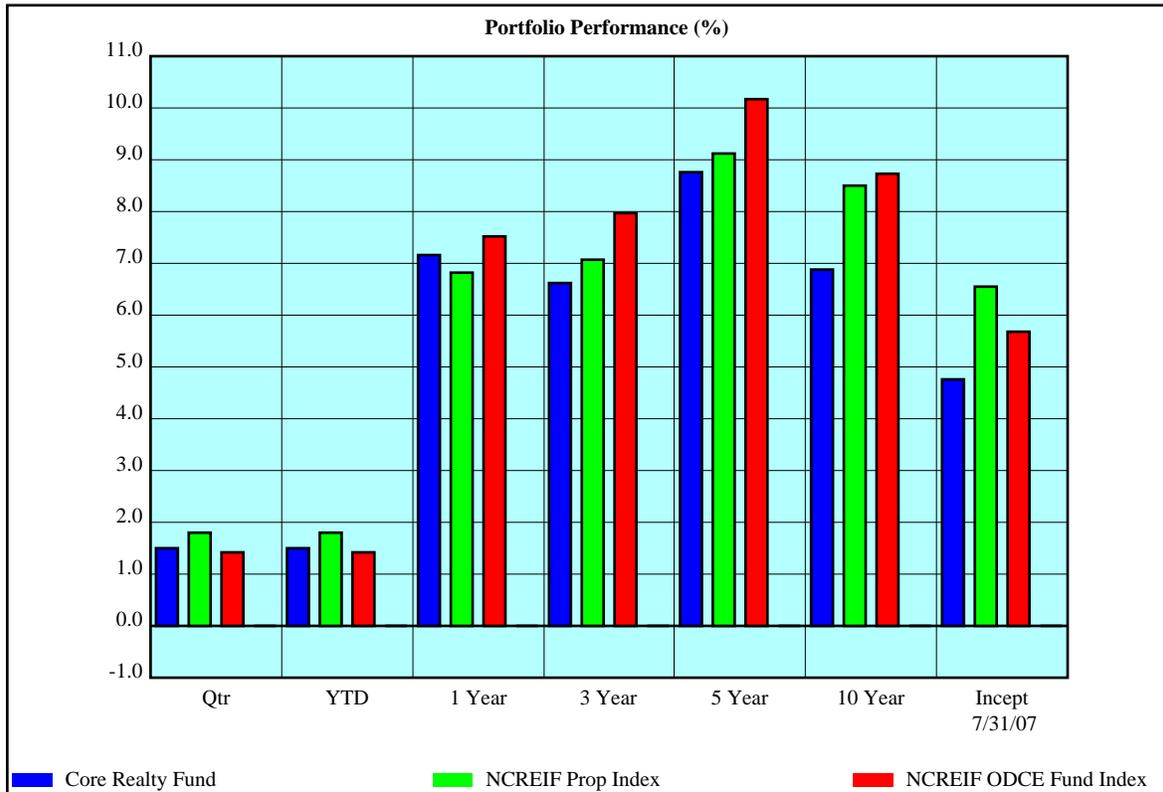
**1** NCREIF Prop Index

Net Ret	1.80	6.71	6.98	7.97
Rank	52	41	52	53

City of Fort Lauderdale Police and Fire  
 Risk Measure Summary  
 American Strategic Value Realty  
 Quarterly Periods Ending 3/31/19

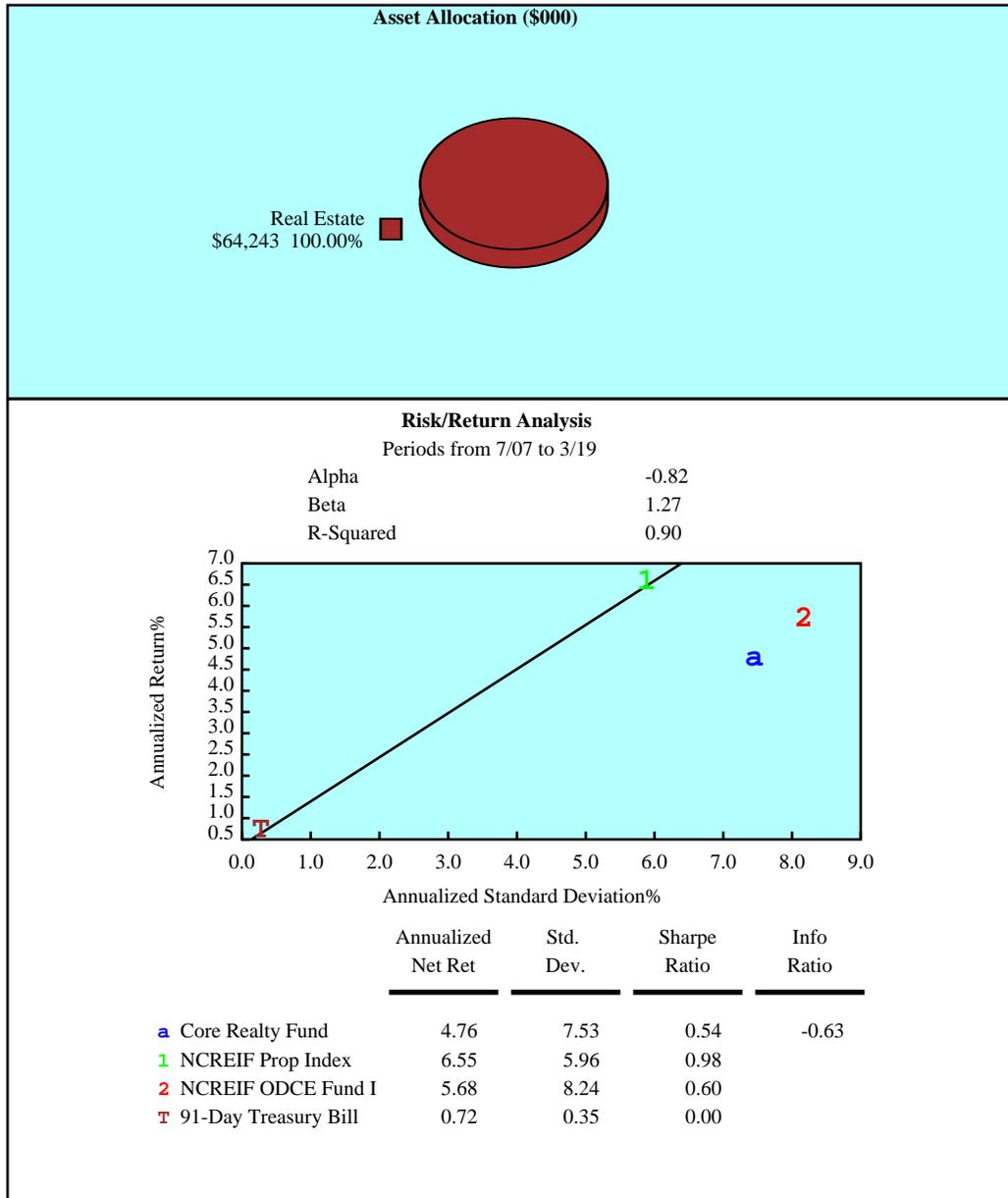
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	0	0	0			0	0
Positive Periods	4	4	12	12			16	16
Up Market Capture	1.49		1.53				1.47	
Down Market Capture								
Batting Average	1.00		1.00				1.00	
Worst Quarter	1.83	1.37	1.83	1.37			1.83	1.37
Best Quarter	3.43	1.81	3.43	2.03			4.56	3.14
Worst 4 Quarters	10.18	6.82	10.18	6.71			10.18	6.71
Best 4 Quarters	10.18	6.82	12.62	7.27			16.16	11.84
Standard Deviation	1.46	0.41	1.12	0.32			1.57	1.10
Beta	1.80		1.48				1.21	
Alpha	-0.12		0.20				0.54	
R-Squared	0.87		0.65				0.77	
Sharpe Ratio	5.51	11.43	8.63	18.59			7.15	6.64
Treynor Ratio	4.47		6.53				9.29	
Tracking Error	1.18		1.10				1.06	
Information Ratio	2.71		3.24				3.47	

## City of Fort Lauderdale Police and Fire Core Realty Fund as of 3/31/19

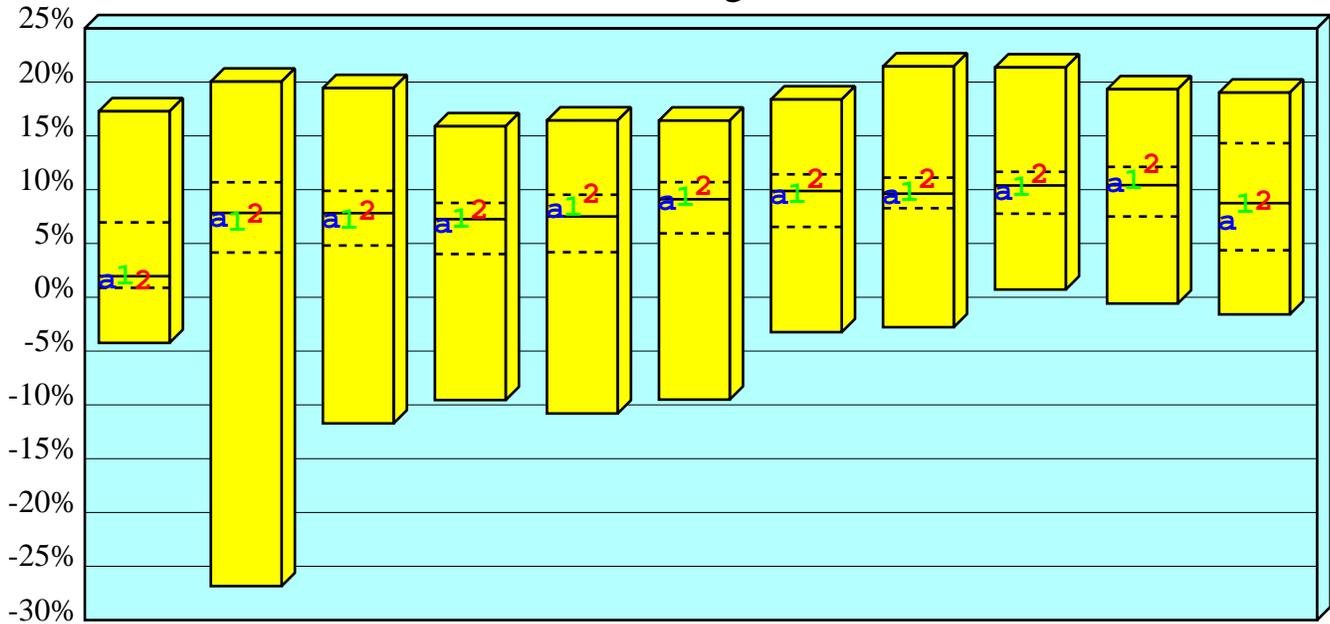


<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 7/31/07</b>
Core Realty Fund	1.50	1.50	7.16	6.62	8.76	6.88	4.76
NCREIF Prop Index	1.80	1.80	6.82	7.07	9.12	8.50	6.55
NCREIF ODCE Fund Index	1.42	1.42	7.52	7.97	10.17	8.73	5.68
<b>Asset Growth (\$000)</b>							
Beginning Market Value	64,089	64,089	62,997	58,530	46,583	21,846	24,999
Net Contributions & Withdrawals	-946	-946	-3,745	-7,269	-7,405	8,348	8,104
Gain/Loss + Income	1,100	1,100	4,991	12,982	25,066	34,049	31,140
Ending Market Value	64,243	64,243	64,243	64,243	64,243	64,243	64,243

# City of Fort Lauderdale Police and Fire Core Realty Fund as of 3/31/19



## City of Fort Lauderdale Police and Fire Cumulative Performance Comparison Total Returns of Real Estate Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	17.28	20.04	19.44	15.89	16.43	16.42	18.38	21.45	21.36	19.33	19.02
1st Qt	6.96	10.69	9.89	8.77	9.53	10.70	11.43	11.12	11.66	12.12	14.32
Median	1.96	7.84	7.82	7.26	7.51	9.11	9.88	9.63	10.39	10.42	8.75
3rd Qt	0.88	4.16	4.81	4.02	4.19	5.94	6.54	8.28	7.77	7.51	4.37
Low	-4.24	-26.84	-11.72	-9.55	-10.80	-9.51	-3.24	-2.78	0.72	-0.58	-1.59

### **a** Core Realty Fund

Net Ret	1.50	7.16	7.08	6.62	8.00	8.76	9.31	9.35	9.71	10.44	6.88
Rank	62	62	60	58	48	57	54	61	58	48	59

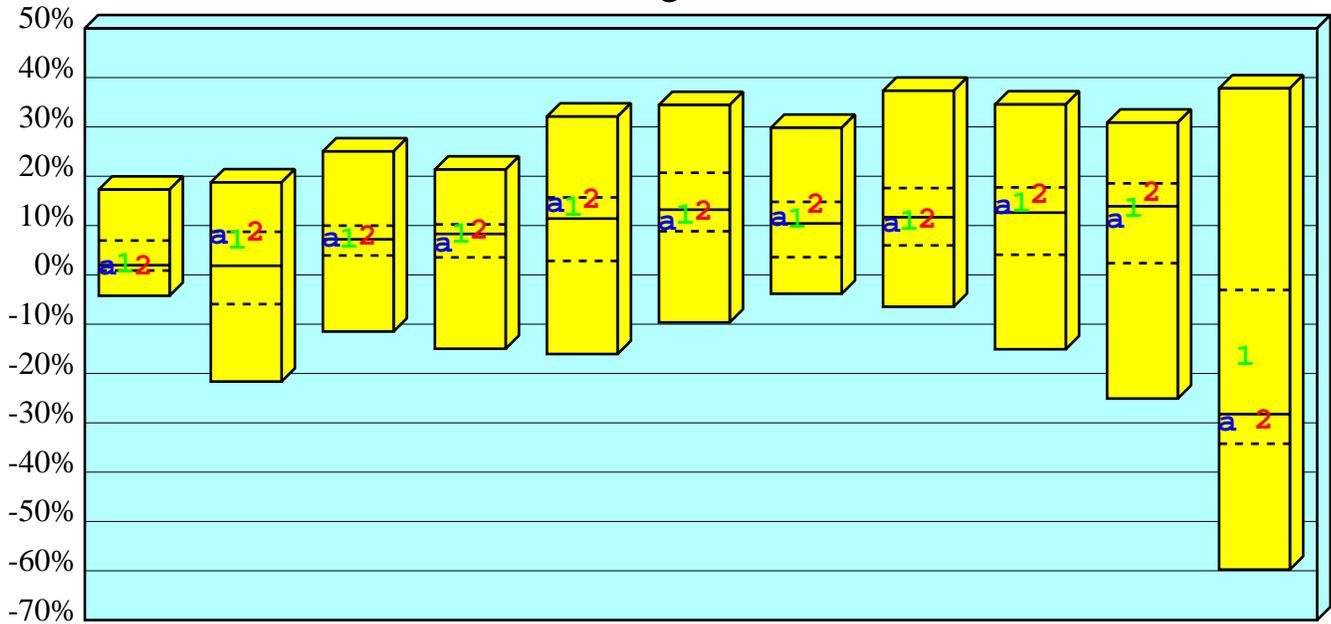
### **1** NCREIF Prop Index

Net Ret	1.80	6.82	6.97	7.07	8.25	9.12	9.46	9.61	10.08	10.73	8.50
Rank	52	64	64	53	47	49	53	57	53	47	51

### **2** NCREIF ODCE Fund Index

Net Ret	1.42	7.52	7.80	7.97	9.37	10.17	10.76	10.77	11.25	12.20	8.73
Rank	64	55	50	36	27	29	31	31	34	21	50

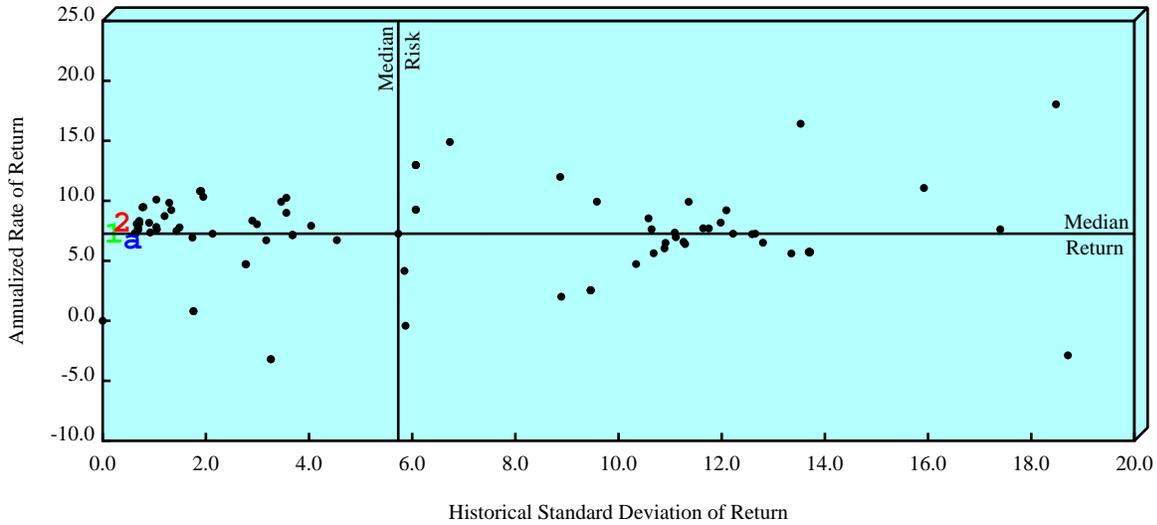
## City of Fort Lauderdale Police and Fire Calendar Year Performance Comparison Total Returns of Real Estate Portfolios Years Ending December



	3/31/19	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
<b>High</b>	17.28	18.75	25.03	21.35	32.10	34.44	29.82	37.33	34.55	30.87	37.81
<b>1st Qt</b>	6.96	8.73	9.97	10.24	15.70	20.70	14.80	17.60	17.73	18.55	-3.07
<b>Median</b>	1.96	1.84	7.21	8.30	11.41	13.21	10.43	11.68	12.62	13.91	-28.24
<b>3rd Qt</b>	0.88	-5.93	3.92	3.54	2.82	8.84	3.59	5.97	4.08	2.37	-34.24
<b>Low</b>	-4.24	-21.63	-11.49	-14.98	-16.05	-9.64	-3.83	-6.46	-15.08	-25.08	-59.76
<b>a Core Realty Fund</b>											
Net Ret	1.50	7.68	7.04	6.07	14.25	10.54	11.28	10.22	13.85	10.99	-30.19
Rank	62	38	52	65	35	69	45	59	42	61	65
<b>1 NCREIF Prop Index</b>											
Net Ret	1.80	6.71	6.98	7.97	13.33	11.81	10.99	10.54	14.26	13.11	-16.86
Rank	52	41	52	53	40	58	47	58	39	54	31
<b>2 NCREIF ODCE Fund Index</b>											
Net Ret	1.42	8.35	7.62	8.76	15.01	12.49	13.94	10.94	15.99	16.36	-29.76
Rank	64	28	46	42	31	55	30	55	29	36	62

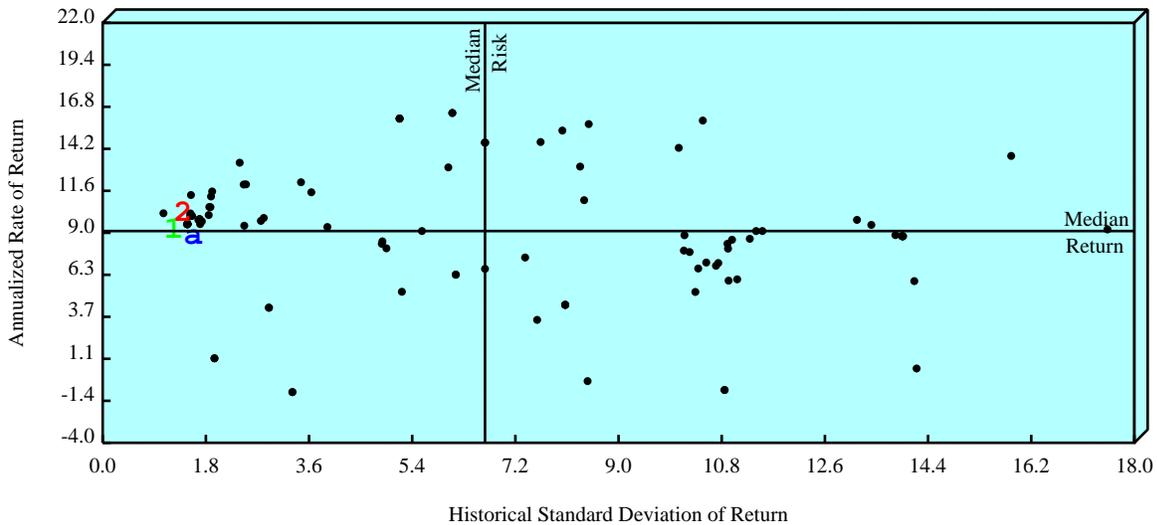
# City of Fort Lauderdale Police and Fire Return vs Risk Total Returns of Real Estate Portfolios

3 Years Ending 3/31/19



	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
a Core Realty Fund	6.62	58	0.69	7
1 NCREIF Prop Index	7.07	53	0.32	2
2 NCREIF ODCE Fund Index	7.97	36	0.47	2
Median	7.26		5.73	

5 Years Ending 3/31/19



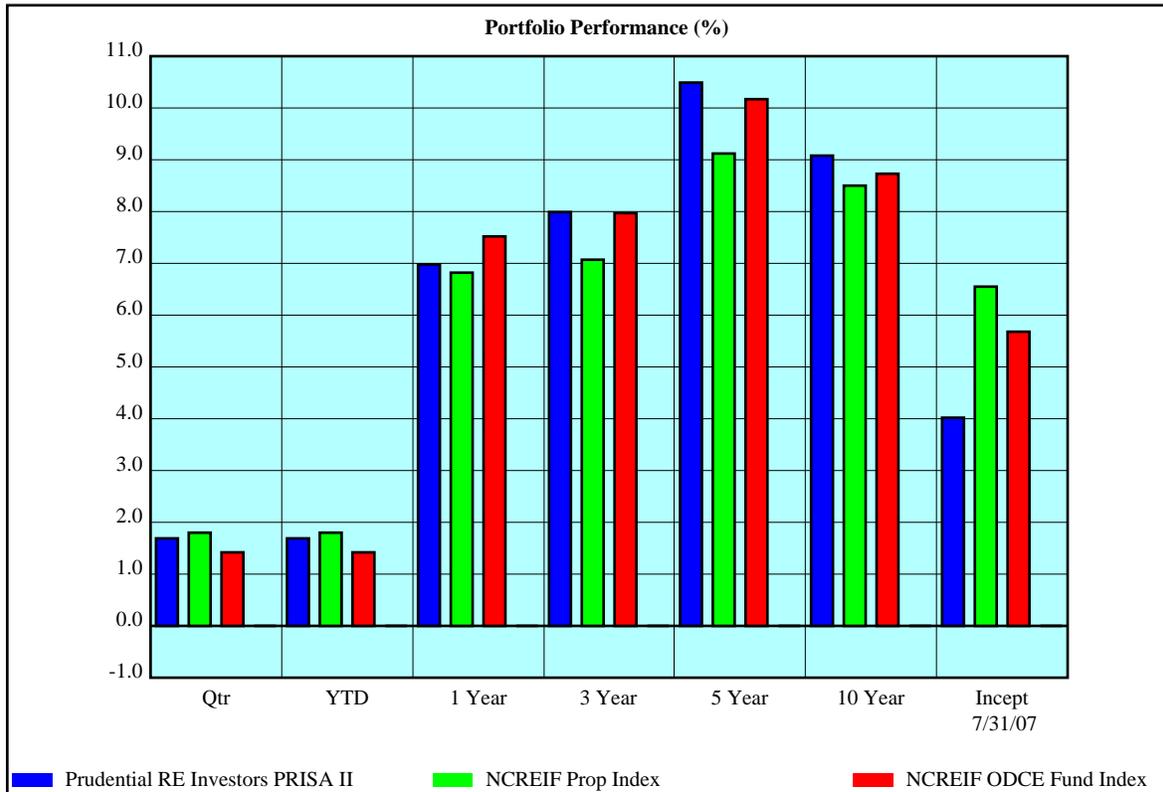
	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
a Core Realty Fund	8.76	57	1.68	12
1 NCREIF Prop Index	9.12	49	1.33	2
2 NCREIF ODCE Fund Index	10.17	29	1.48	4
Median	9.11		6.67	



City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Core Realty Fund  
Quarterly Periods Ending 3/31/19

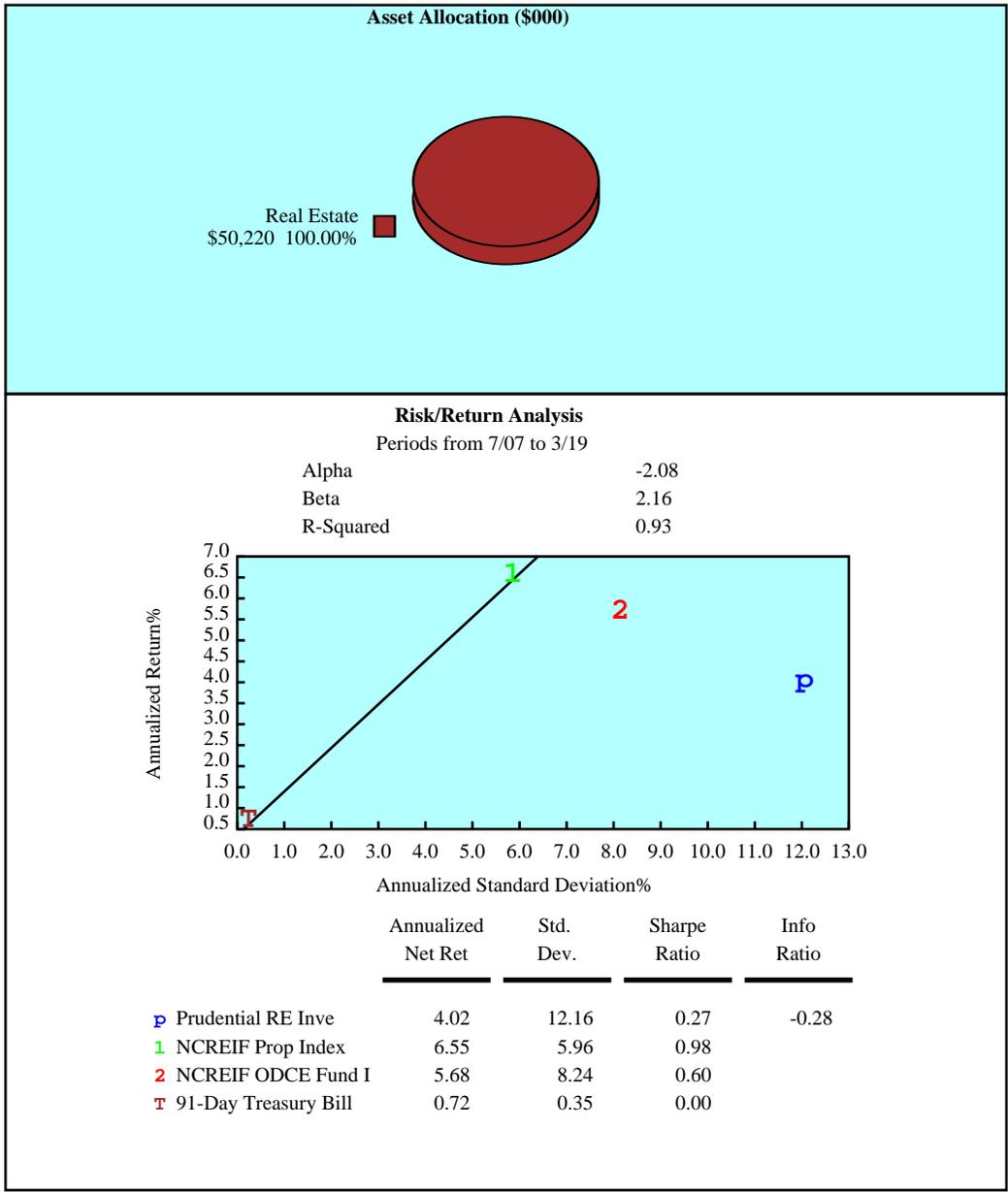
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	0	0	0	0	0	7	6
Positive Periods	4	4	12	12	20	20	40	41
Up Market Capture	1.20		1.02		1.01		1.00	
Down Market Capture							1.54	
Batting Average	0.75		0.50		0.55		0.43	
Worst Quarter	1.74	1.37	0.96	1.37	0.96	1.37	-12.88	-8.29
Best Quarter	2.19	1.81	2.22	2.03	4.20	3.57	4.68	4.62
Worst 4 Quarters	8.18	6.82	5.69	6.71	5.69	6.71	-32.60	-22.11
Best 4 Quarters	8.18	6.82	8.70	7.27	14.52	13.47	17.00	16.73
Standard Deviation	0.39	0.41	0.82	0.32	1.64	1.33	7.30	5.35
Beta	1.18		0.58		0.91		1.28	
Alpha	0.12		0.63		0.20		-0.75	
R-Squared	0.87		0.30		0.70		0.90	
Sharpe Ratio	15.57	11.43	7.33	18.59	5.15	6.28	0.57	1.08
Treynor Ratio	5.14		10.32		9.29		3.25	
Tracking Error	0.57		1.02		1.12		2.78	
Information Ratio	2.26		0.12		0.04		-0.51	

## City of Fort Lauderdale Police and Fire Prudential RE Investors PRISA II as of 3/31/19

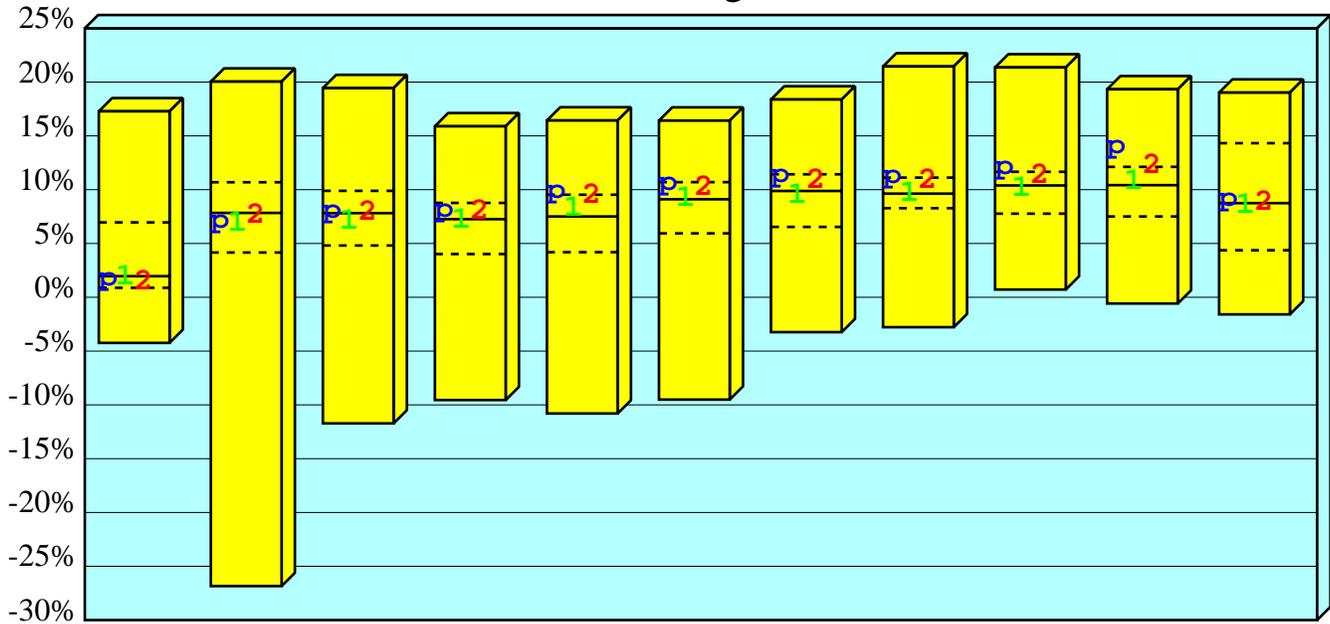


<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 7/31/07</b>
Prudential RE Investors PRISA II	1.69	1.69	6.98	7.99	10.49	9.08	4.02
NCREIF Prop Index	1.80	1.80	6.82	7.07	9.12	8.50	6.55
NCREIF ODCE Fund Index	1.42	1.42	7.52	7.97	10.17	8.73	5.68
<b>Asset Growth (\$000)</b>							
Beginning Market Value	49,808	49,808	48,531	41,122	27,477	8,527	3,000
Net Contributions & Withdrawals	-574	-574	-2,237	-3,174	1,356	13,262	22,429
Gain/Loss + Income	987	987	3,926	12,273	21,388	28,432	24,791
Ending Market Value	50,220	50,220	50,220	50,220	50,220	50,220	50,220

# City of Fort Lauderdale Police and Fire Prudential RE Investors PRISA II as of 3/31/19



## City of Fort Lauderdale Police and Fire Cumulative Performance Comparison Total Returns of Real Estate Portfolios Periods Ending 3/19



	Last Qtr	Last Year	Last 2 Years	Last 3 Years	Last 4 Years	Last 5 Years	Last 6 Years	Last 7 Years	Last 8 Years	Last 9 Years	Last 10 Years
High	17.28	20.04	19.44	15.89	16.43	16.42	18.38	21.45	21.36	19.33	19.02
1st Qt	6.96	10.69	9.89	8.77	9.53	10.70	11.43	11.12	11.66	12.12	14.32
Median	1.96	7.84	7.82	7.26	7.51	9.11	9.88	9.63	10.39	10.42	8.75
3rd Qt	0.88	4.16	4.81	4.02	4.19	5.94	6.54	8.28	7.77	7.51	4.37
Low	-4.24	-26.84	-11.72	-9.55	-10.80	-9.51	-3.24	-2.78	0.72	-0.58	-1.59

**p** Prudential RE Investors PRISA II

Net Ret	1.69	6.98	7.90	7.99	9.77	10.49	11.28	11.15	12.01	13.90	9.08
Rank	57	63	47	36	23	26	26	24	22	13	45

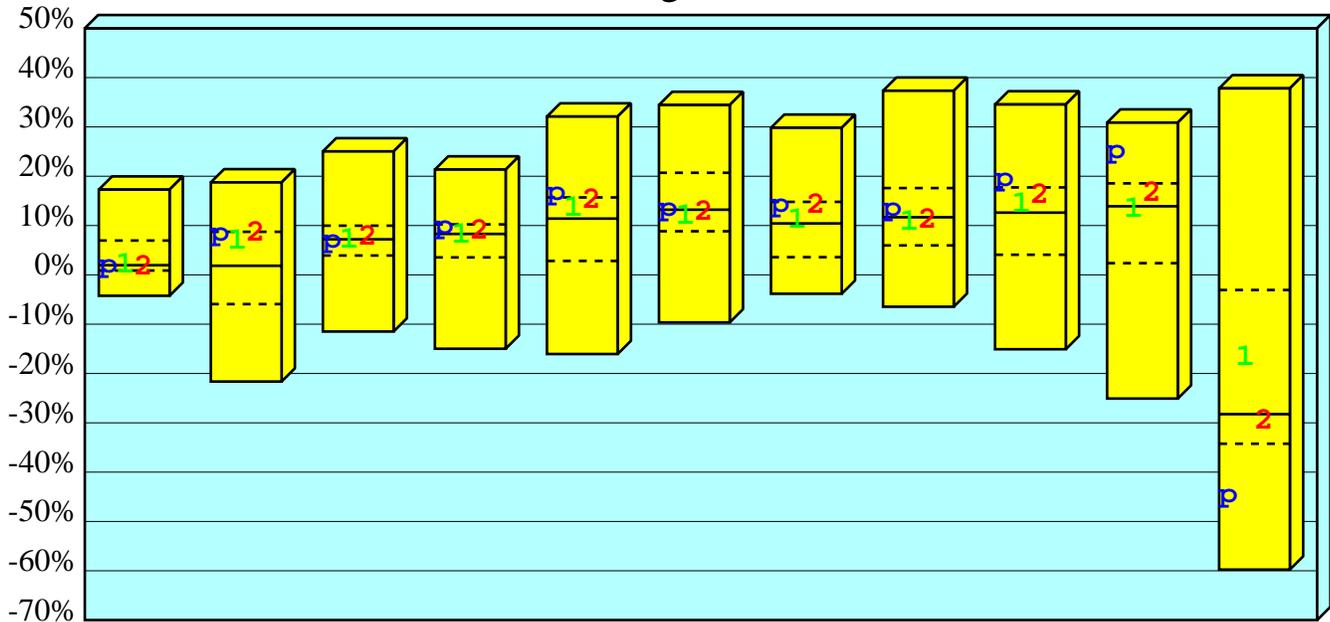
**1** NCREIF Prop Index

Net Ret	1.80	6.82	6.97	7.07	8.25	9.12	9.46	9.61	10.08	10.73	8.50
Rank	52	64	64	53	47	49	53	57	53	47	51

**2** NCREIF ODCE Fund Index

Net Ret	1.42	7.52	7.80	7.97	9.37	10.17	10.76	10.77	11.25	12.20	8.73
Rank	64	55	50	36	27	29	31	31	34	21	50

# City of Fort Lauderdale Police and Fire Calendar Year Performance Comparison Total Returns of Real Estate Portfolios Years Ending December



3/31/19

	YTD	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
High	17.28	18.75	25.03	21.35	32.10	34.44	29.82	37.33	34.55	30.87	37.81
1st Qt	6.96	8.73	9.97	10.24	15.70	20.70	14.80	17.60	17.73	18.55	-3.07
Median	1.96	1.84	7.21	8.30	11.41	13.21	10.43	11.68	12.62	13.91	-28.24
3rd Qt	0.88	-5.93	3.92	3.54	2.82	8.84	3.59	5.97	4.08	2.37	-34.24
Low	-4.24	-21.63	-11.49	-14.98	-16.05	-9.64	-3.83	-6.46	-15.08	-25.08	-59.76

**p** Prudential RE Investors PRISA II

Net Ret	1.69	8.20	6.81	9.60	16.45	13.12	13.90	13.09	19.23	24.79	-44.82
Rank	57	30	53	31	22	51	30	39	19	14	87

**1** NCREIF Prop Index

Net Ret	1.80	6.71	6.98	7.97	13.33	11.81	10.99	10.54	14.26	13.11	-16.86
Rank	52	41	52	53	40	58	47	58	39	54	31

**2** NCREIF ODCE Fund Index

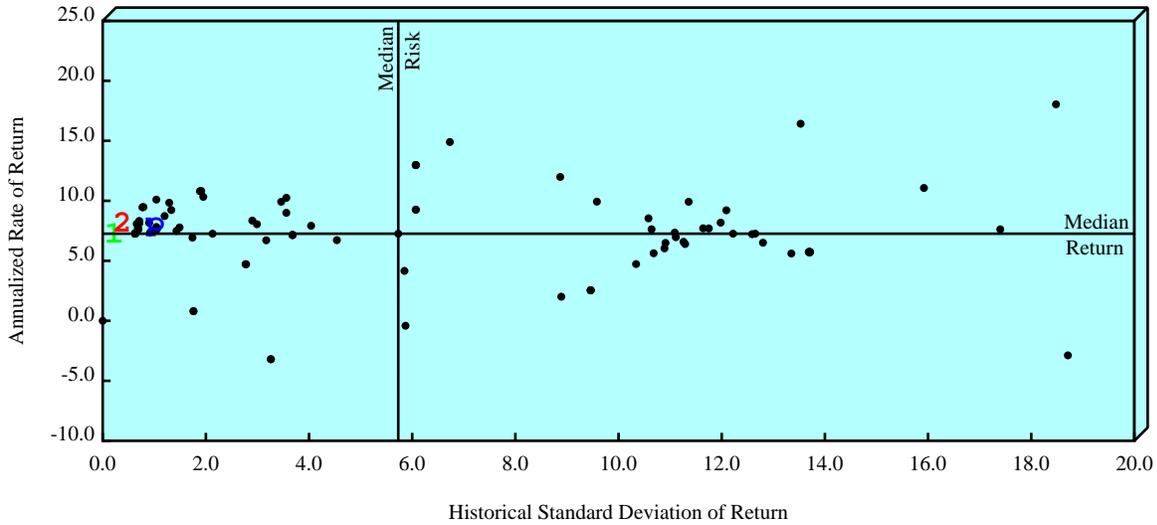
Net Ret	1.42	8.35	7.62	8.76	15.01	12.49	13.94	10.94	15.99	16.36	-29.76
Rank	64	28	46	42	31	55	30	55	29	36	62

# City of Fort Lauderdale Police and Fire

## Return vs Risk

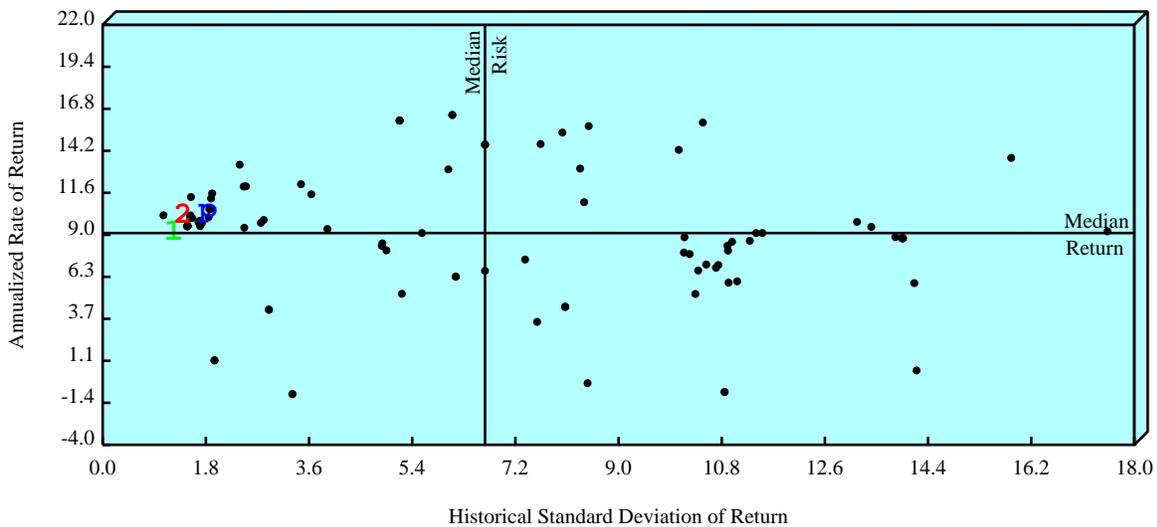
### Total Returns of Real Estate Portfolios

3 Years Ending 3/31/19



	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
p Prudential RE Investors PRISA II	7.99	36	1.11	20
1 NCREIF Prop Index	7.07	53	0.32	2
2 NCREIF ODCE Fund Index	7.97	36	0.47	2
Median	7.26		5.73	

5 Years Ending 3/31/19

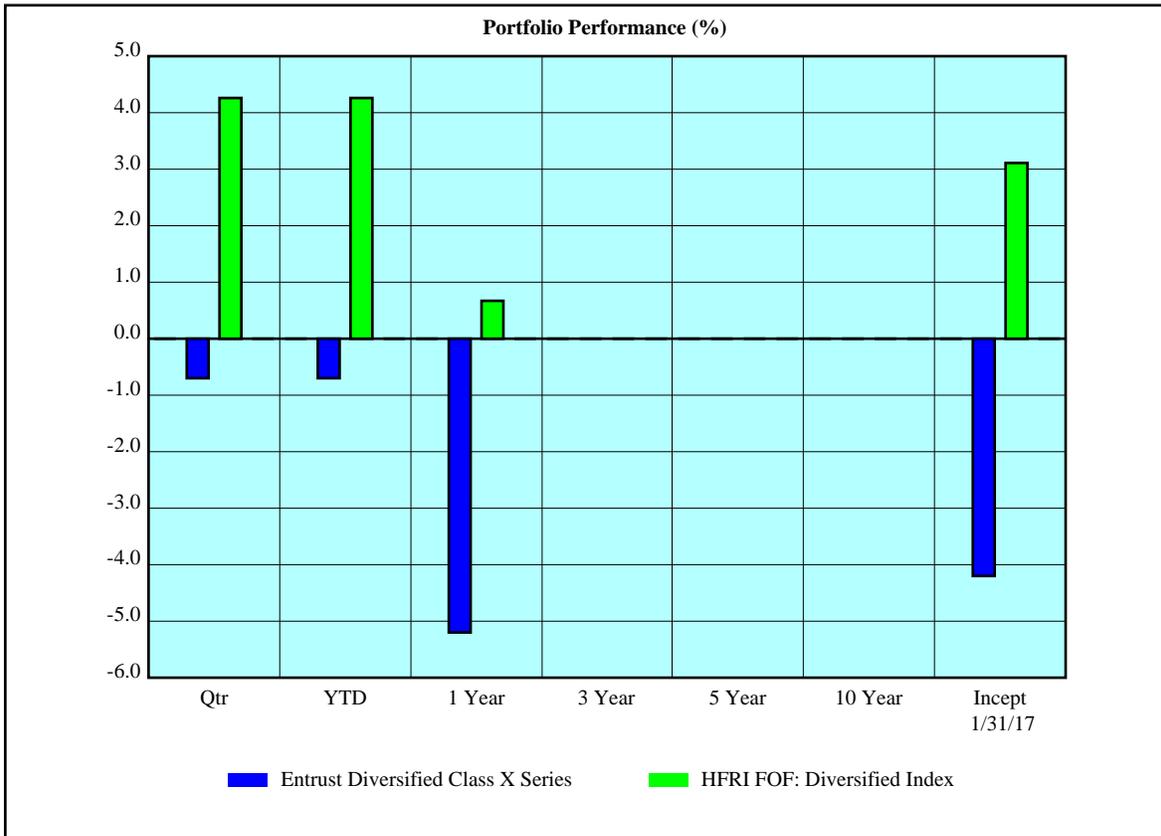


	Annualized Net of Fee Return		Standard Deviation	
	Value	Rank	Value	Rank
p Prudential RE Investors PRISA II	10.49	26	1.92	22
1 NCREIF Prop Index	9.12	49	1.33	2
2 NCREIF ODCE Fund Index	10.17	29	1.48	4
Median	9.11		6.67	

City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Prudential RE Investors PRISA II  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	0	0	0	0	0	5	6
Positive Periods	4	4	12	12	20	20	42	41
Up Market Capture	1.21		1.29		1.23		1.28	
Down Market Capture							2.45	
Batting Average	1.00		0.92		0.90		0.72	
Worst Quarter	1.45	1.37	1.23	1.37	1.23	1.37	-24.78	-8.29
Best Quarter	2.30	1.81	3.14	2.03	4.70	3.57	8.23	4.62
Worst 4 Quarters	8.22	6.82	8.06	6.71	8.06	6.71	-51.17	-22.11
Best 4 Quarters	8.22	6.82	10.62	7.27	16.45	13.47	30.17	16.73
Standard Deviation	0.78	0.41	1.08	0.32	1.71	1.33	12.07	5.35
Beta	1.34		1.35		1.06		2.15	
Alpha	-0.05		-0.01		0.35		-2.03	
R-Squared	0.95		0.70		0.78		0.92	
Sharpe Ratio	7.84	11.43	7.38	18.59	6.11	6.28	0.29	1.08
Treynor Ratio	4.56		5.88		9.82		1.64	
Tracking Error	0.50		0.94		1.06		7.07	
Information Ratio	2.70		2.10		1.82		-0.25	

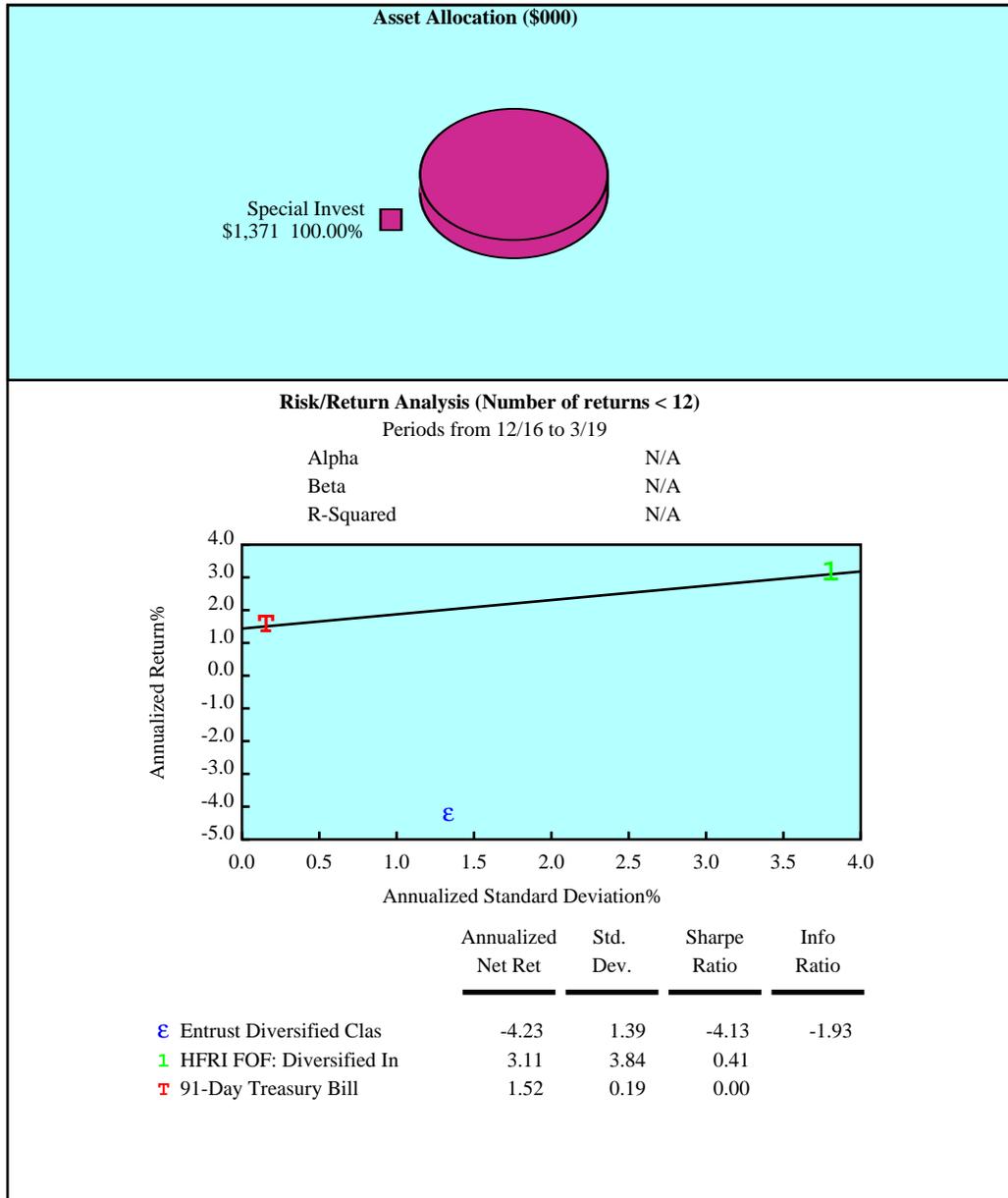
## City of Fort Lauderdale Police and Fire Entrust Diversified Class X Series as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 1/31/17</b>
Entrust Diversified Class X Series	-0.71	-0.71	-5.21				-4.23
HFRI FOF: Diversified Index	4.26	4.26	0.67				3.11
<b>Asset Growth (\$000)</b>							
Beginning Market Value	1,381	1,381	1,447				753
Net Contributions & Withdrawals	-2	-2	-7				734
Gain/Loss + Income	-8	-8	-68				-116
Ending Market Value	1,371	1,371	1,371				1,371



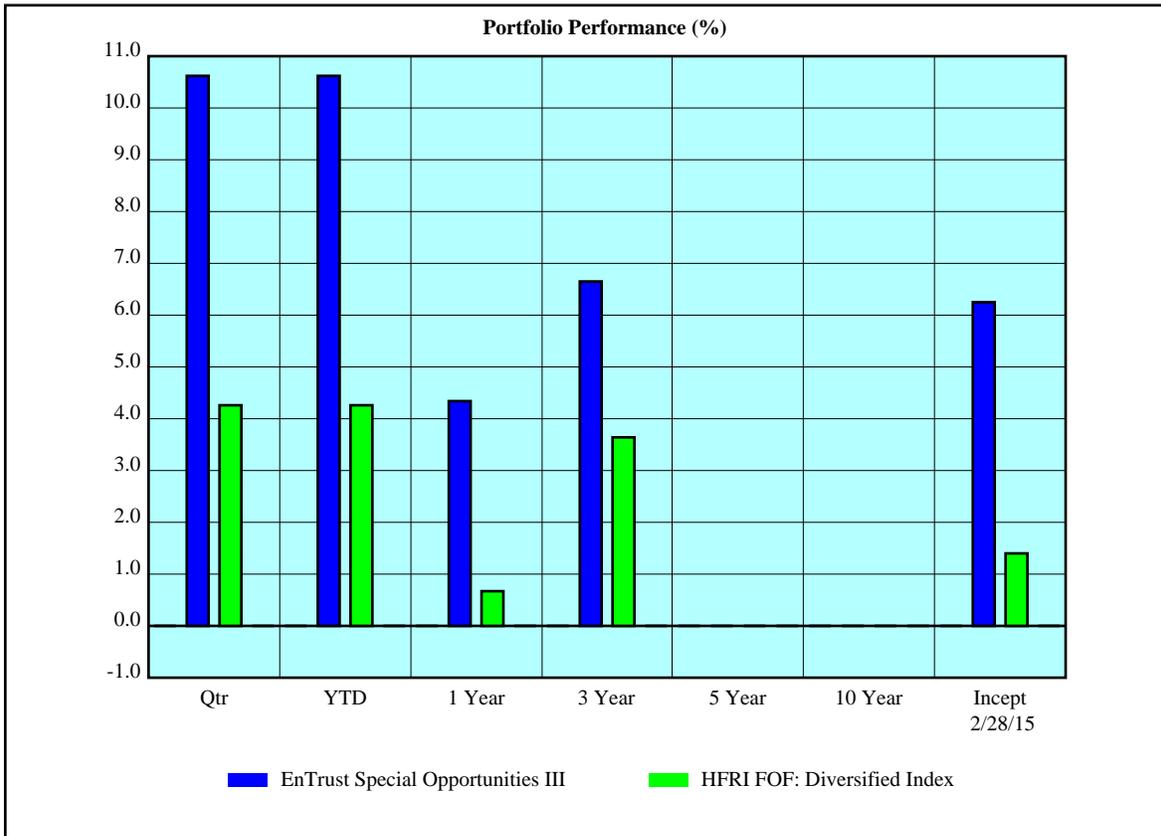
# City of Fort Lauderdale Police and Fire Entrust Diversified Class X Series as of 3/31/19



City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Entrust Diversified Class X Series  
Quarterly Periods Ending 3/31/19

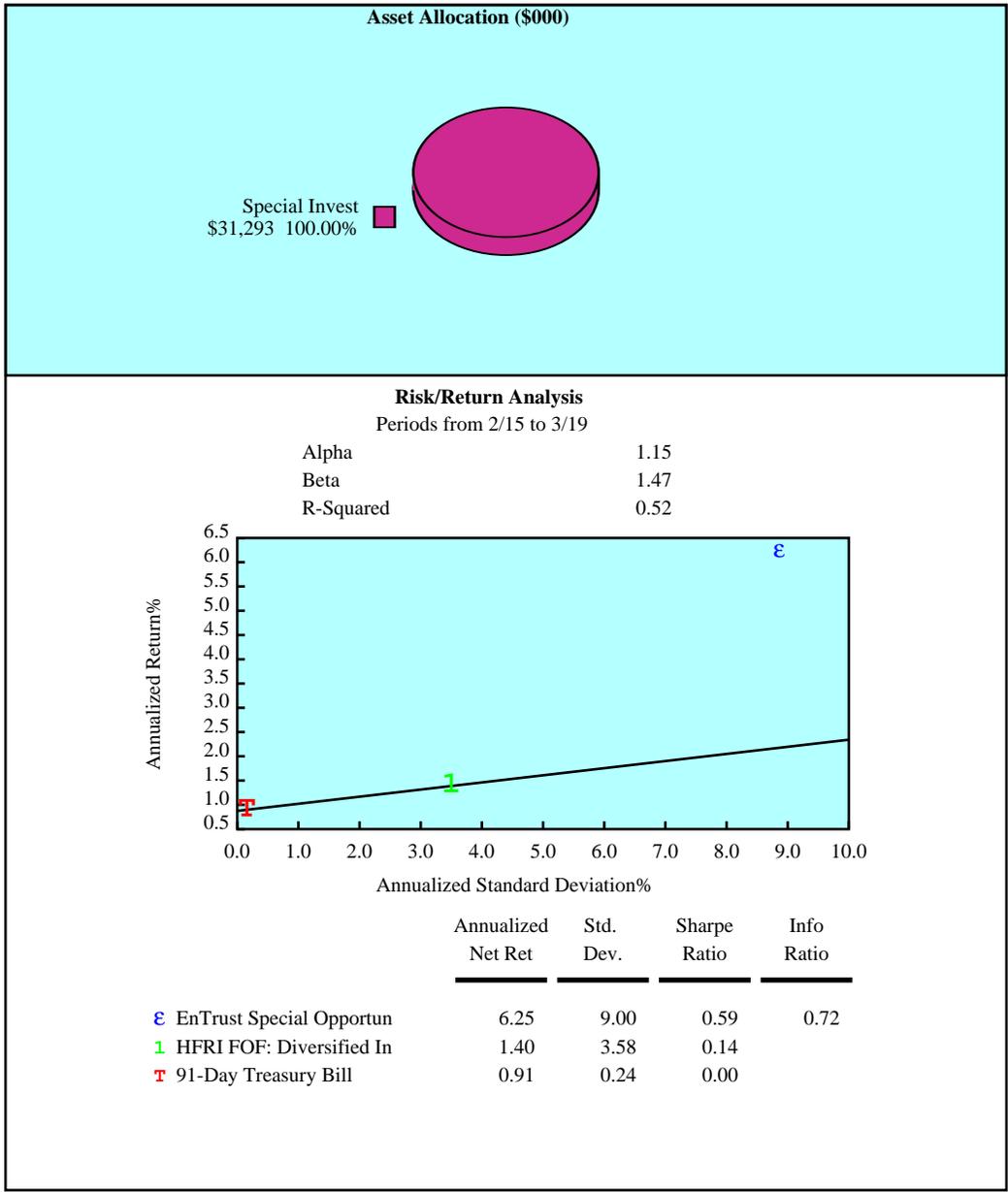
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	4	1					9	1
Positive Periods	0	3					0	8
Up Market Capture	-0.36						-0.46	
Down Market Capture	0.59						0.59	
Batting Average	0.25						0.11	
Worst Quarter	-2.75	-4.70					-2.75	-4.70
Best Quarter	-0.59	4.26					-0.52	4.26
Worst 4 Quarters	-4.74	0.67					-4.74	-3.38
Best 4 Quarters	-4.74	0.67					-2.70	6.87
Standard Deviation	2.07	7.38					1.39	4.91
Beta	0.27						0.23	
Alpha	-1.65						-1.43	
R-Squared	0.47						0.41	
Sharpe Ratio	-3.32	-0.20					-3.79	0.38
Treynor Ratio	-25.36						-22.75	
Tracking Error	5.55						3.89	
Information Ratio	-1.02						-1.82	

## City of Fort Lauderdale Police and Fire EnTrust Special Opportunities III as of 3/31/19



Net of Fee Returns	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Incept 2/28/15
EnTrust Special Opportunities III	10.62	10.62	4.34	6.65			6.25
HFRI FOF: Diversified Index	4.26	4.26	0.67	3.64			1.40
<b>Asset Growth (\$000)</b>							
Beginning Market Value	30,358	30,358	38,529	15,141			2,031
Net Contributions & Withdrawals	-2,102	-2,102	-8,891	10,584			22,862
Gain/Loss + Income	3,036	3,036	1,655	5,568			6,400
Ending Market Value	31,293	31,293	31,293	31,293			31,293

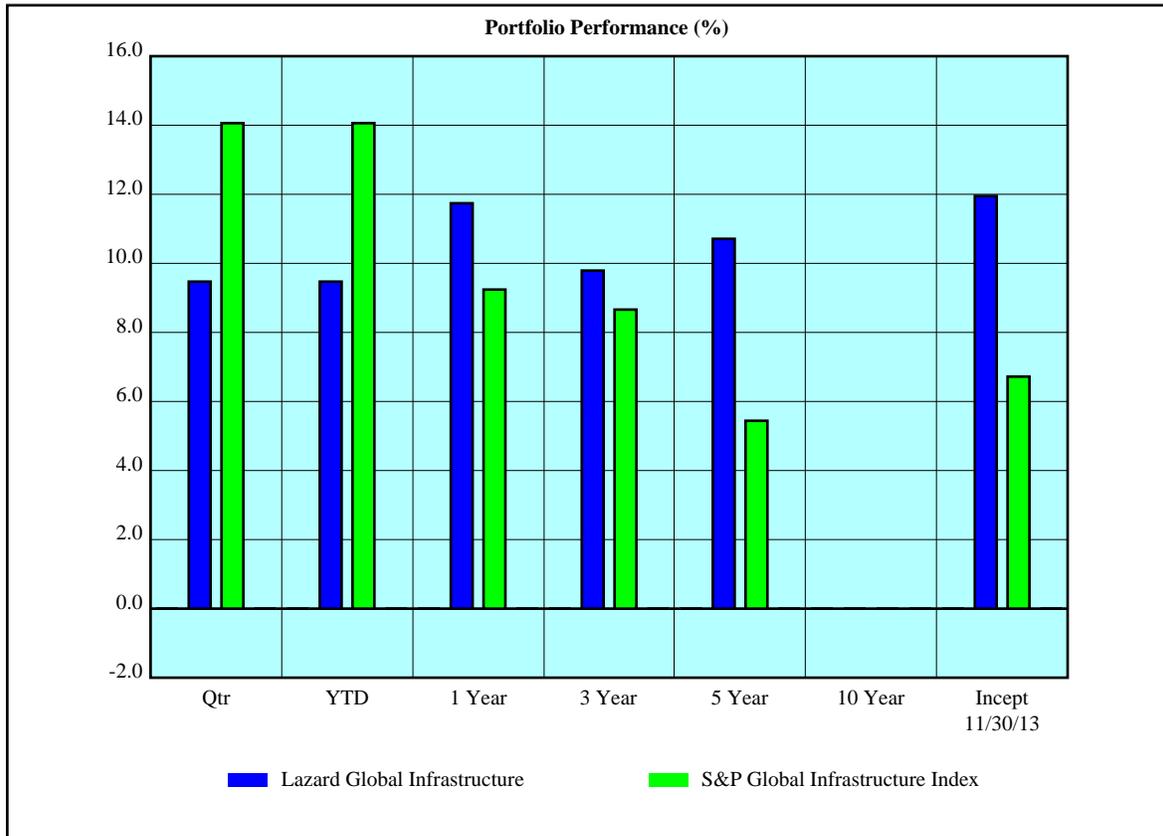
# City of Fort Lauderdale Police and Fire EnTrust Special Opportunities III as of 3/31/19



City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
EnTrust Special Opportunities III  
Quarterly Periods Ending 3/31/19

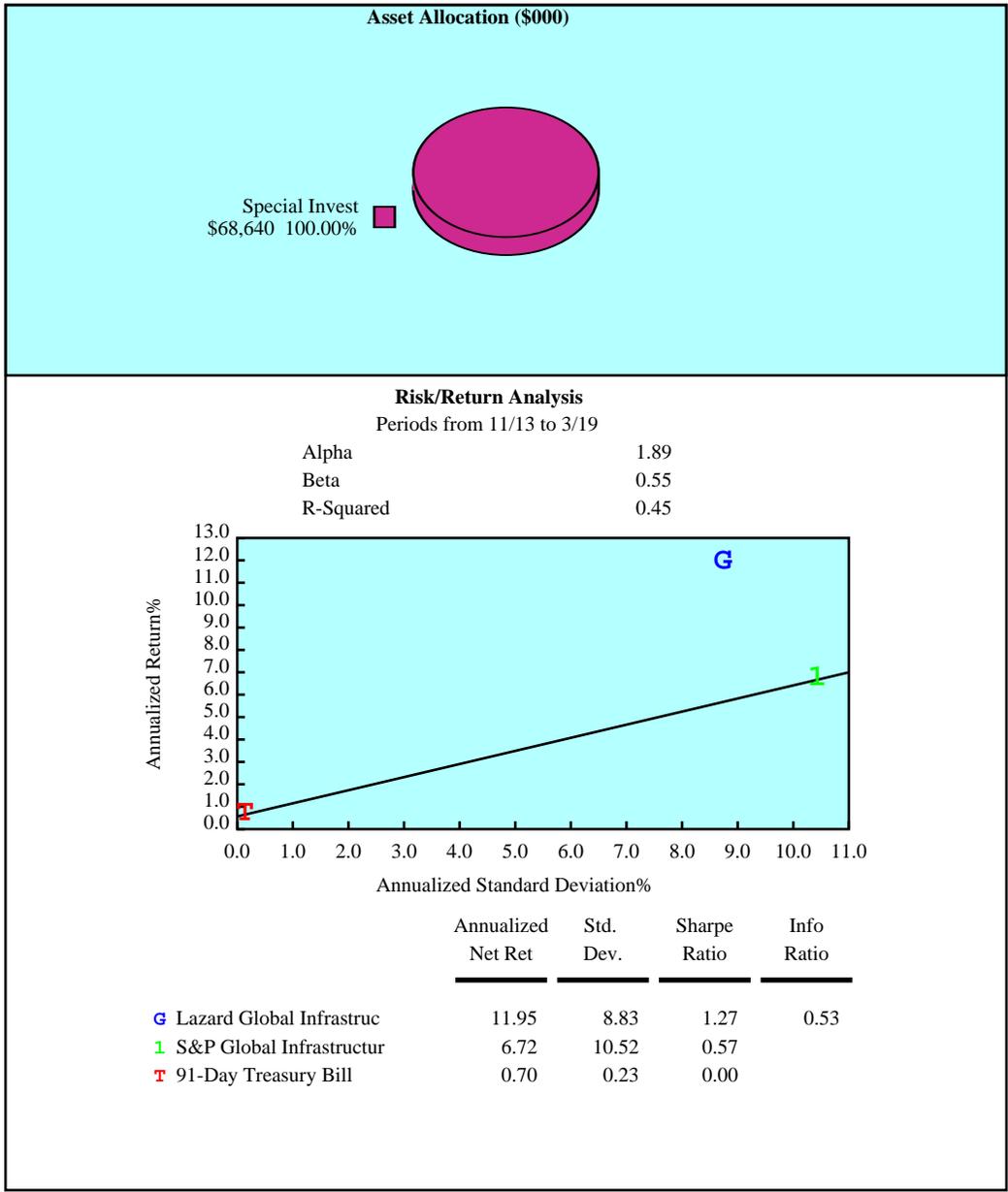
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	1	1	2	1			3	4
Positive Periods	3	3	10	11			13	12
Up Market Capture	3.14		2.37				2.54	
Down Market Capture	2.22		2.22				0.87	
Batting Average	0.75		0.67				0.69	
Worst Quarter	-10.42	-4.70	-10.42	-4.70			-10.42	-4.70
Best Quarter	10.73	4.26	10.73	4.26			10.73	4.26
Worst 4 Quarters	5.41	0.67	-7.07	-3.38			-7.07	-5.49
Best 4 Quarters	5.41	0.67	17.69	6.87			19.22	6.87
Standard Deviation	17.60	7.38	10.15	4.23			9.02	4.45
Beta	2.37		2.04				1.47	
Alpha	1.83		0.62				1.57	
R-Squared	0.98		0.74				0.51	
Sharpe Ratio	0.19	-0.20	0.72	0.58			0.75	0.08
Treynor Ratio	1.39		3.58				4.60	
Tracking Error	10.24		6.90				6.68	
Information Ratio	0.52		0.71				0.96	

## City of Fort Lauderdale Police and Fire Lazard Global Infrastructure as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 11/30/13</b>
Lazard Global Infrastructure	9.47	9.47	11.74	9.79	10.71		11.95
S&P Global Infrastructure Index	14.06	14.06	9.24	8.66	5.44		6.72
<b>Asset Growth (\$000)</b>							
Beginning Market Value	62,701	62,701	61,429	49,214	39,157		21,984
Net Contributions & Withdrawals	0	0	0	3,200	3,197		18,197
Gain/Loss + Income	5,940	5,940	7,211	16,227	26,286		28,459
Ending Market Value	68,640	68,640	68,640	68,640	68,640		68,640

# City of Fort Lauderdale Police and Fire Lazard Global Infrastructure as of 3/31/19

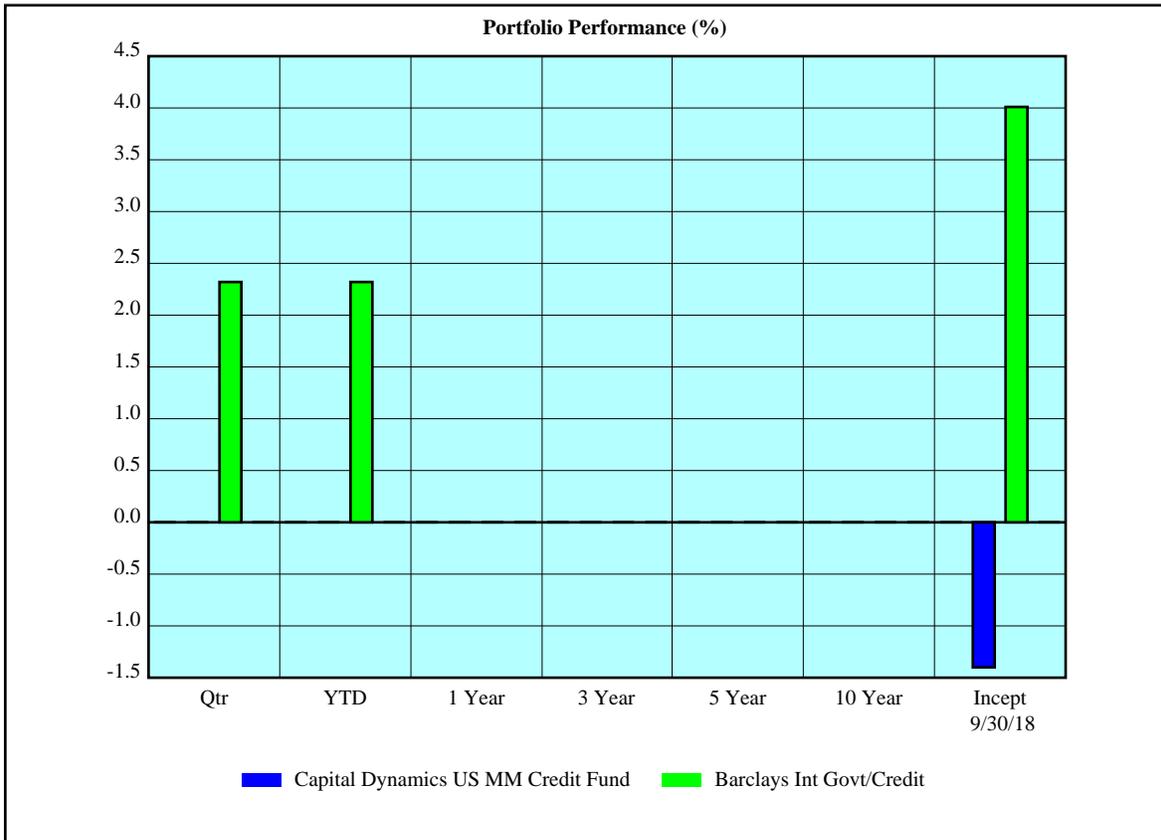


City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Lazard Global Infrastructure  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	2	2	4	4	6	9	6	9
Positive Periods	2	2	8	8	14	11	15	12
Up Market Capture	0.97		0.84		0.83		0.86	
Down Market Capture	0.62		0.47		-0.03		-0.03	
Batting Average	0.75		0.58		0.60		0.62	
Worst Quarter	-4.09	-5.12	-5.69	-5.51	-5.69	-7.05	-5.69	-7.05
Best Quarter	9.47	14.06	10.52	14.06	10.52	14.06	10.52	14.06
Worst 4 Quarters	11.74	9.24	-3.73	-9.50	-3.73	-11.46	-3.73	-11.46
Best 4 Quarters	11.74	9.24	23.82	20.13	23.82	20.13	23.82	20.13
Standard Deviation	12.28	16.67	10.02	11.50	9.03	11.24	9.11	11.22
Beta	0.69		0.70		0.53		0.55	
Alpha	1.08		0.82		1.80		1.89	
R-Squared	0.84		0.63		0.42		0.45	
Sharpe Ratio	0.78	0.43	0.86	0.65	1.10	0.42	1.22	0.52
Treynor Ratio	13.92		12.35		18.77		20.04	
Tracking Error	7.16		7.10		8.69		8.47	
Information Ratio	0.24		0.10		0.52		0.53	

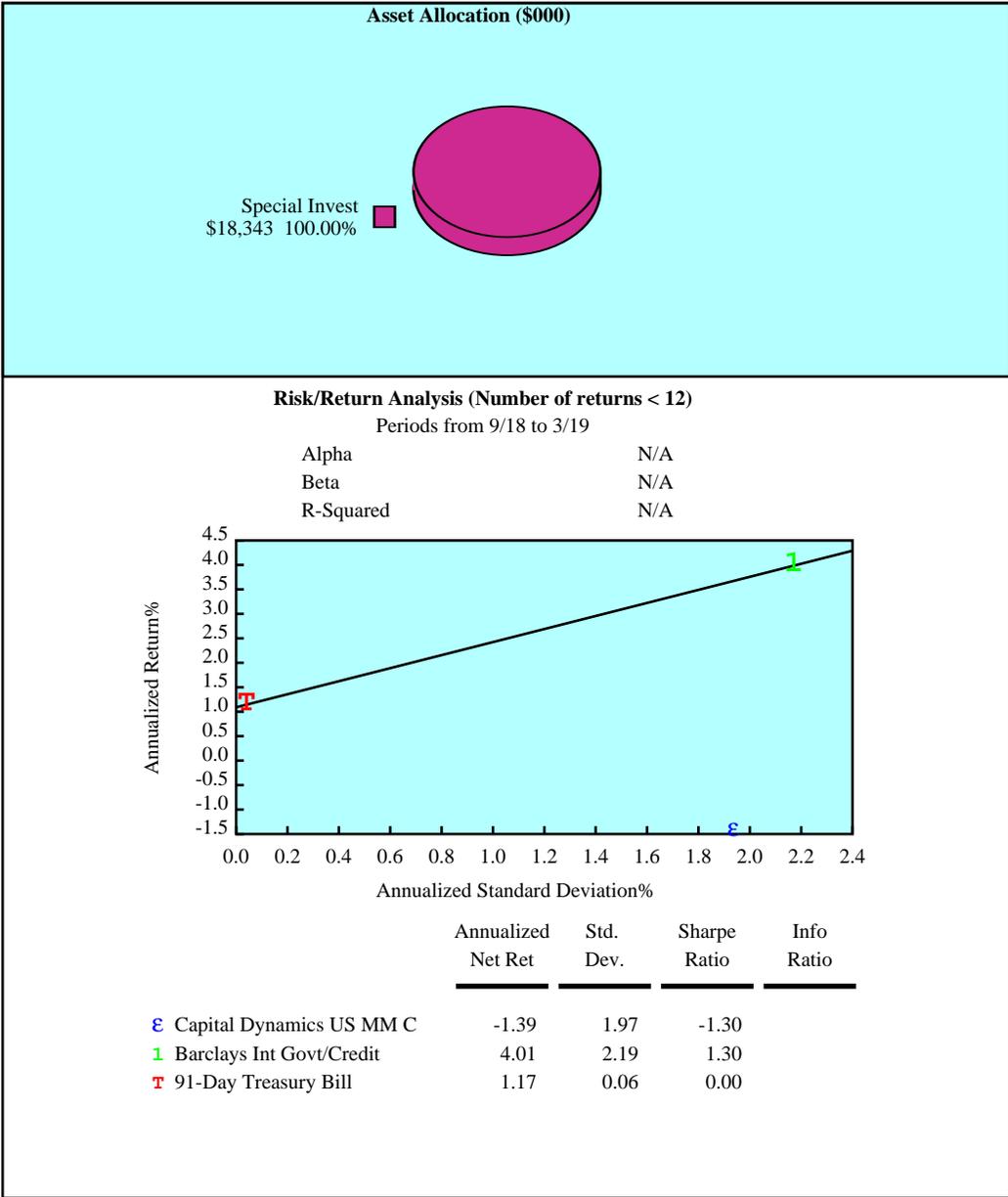


## City of Fort Lauderdale Police and Fire Capital Dynamics US MM Credit Fund as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 9/30/18</b>
Capital Dynamics US MM Credit Fund	0.00	0.00					-1.39
Barclays Int Govt/Credit	2.32	2.32					4.01
<b>Asset Growth (\$000)</b>							
Beginning Market Value	13,867	13,867					2,703
Net Contributions & Withdrawals	4,476	4,476					15,786
Gain/Loss + Income	0	0					-147
Ending Market Value	18,343	18,343					18,343

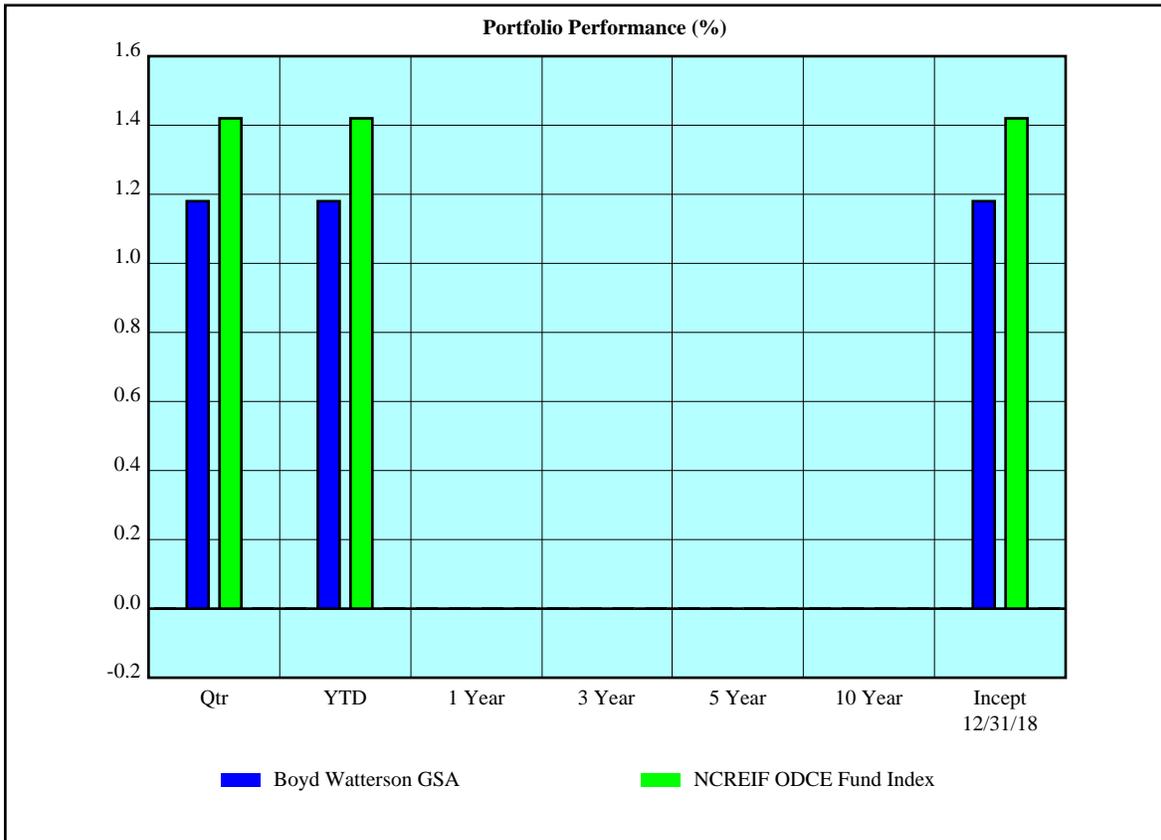
# City of Fort Lauderdale Police and Fire Capital Dynamics US MM Credit Fund as of 3/31/19



City of Fort Lauderdale Police and Fire  
 Risk Measure Summary  
 Capital Dynamics US MM Credit Fund  
 Quarterly Periods Ending 3/31/19

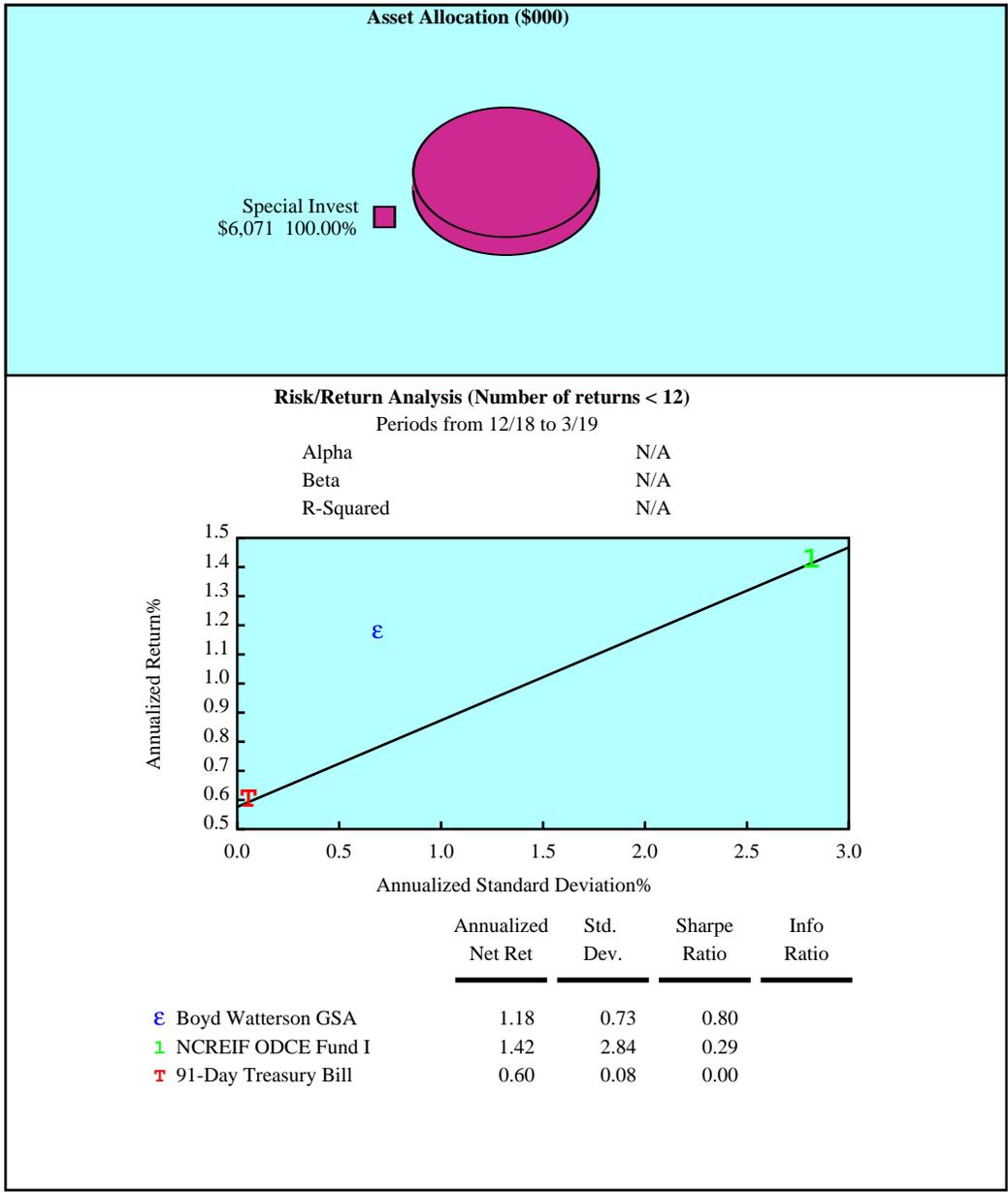
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods							1	0
Positive Periods							1	2
Up Market Capture							-0.30	
Down Market Capture								
Batting Average							0.00	
Worst Quarter							-1.20	1.65
Best Quarter							0.00	2.32
Worst 4 Quarters								
Best 4 Quarters								
Standard Deviation								
Beta								
Alpha								
R-Squared								
Sharpe Ratio								
Treynor Ratio								
Tracking Error								
Information Ratio								

## City of Fort Lauderdale Police and Fire Boyd Watterson GSA as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 12/31/18</b>
Boyd Watterson GSA	1.18	1.18					1.18
NCREIF ODCE Fund Index	1.42	1.42					1.42
<b>Asset Growth (\$000)</b>							
Beginning Market Value	6,000	6,000					6,000
Net Contributions & Withdrawals	0	0					0
Gain/Loss + Income	71	71					71
Ending Market Value	6,071	6,071					6,071

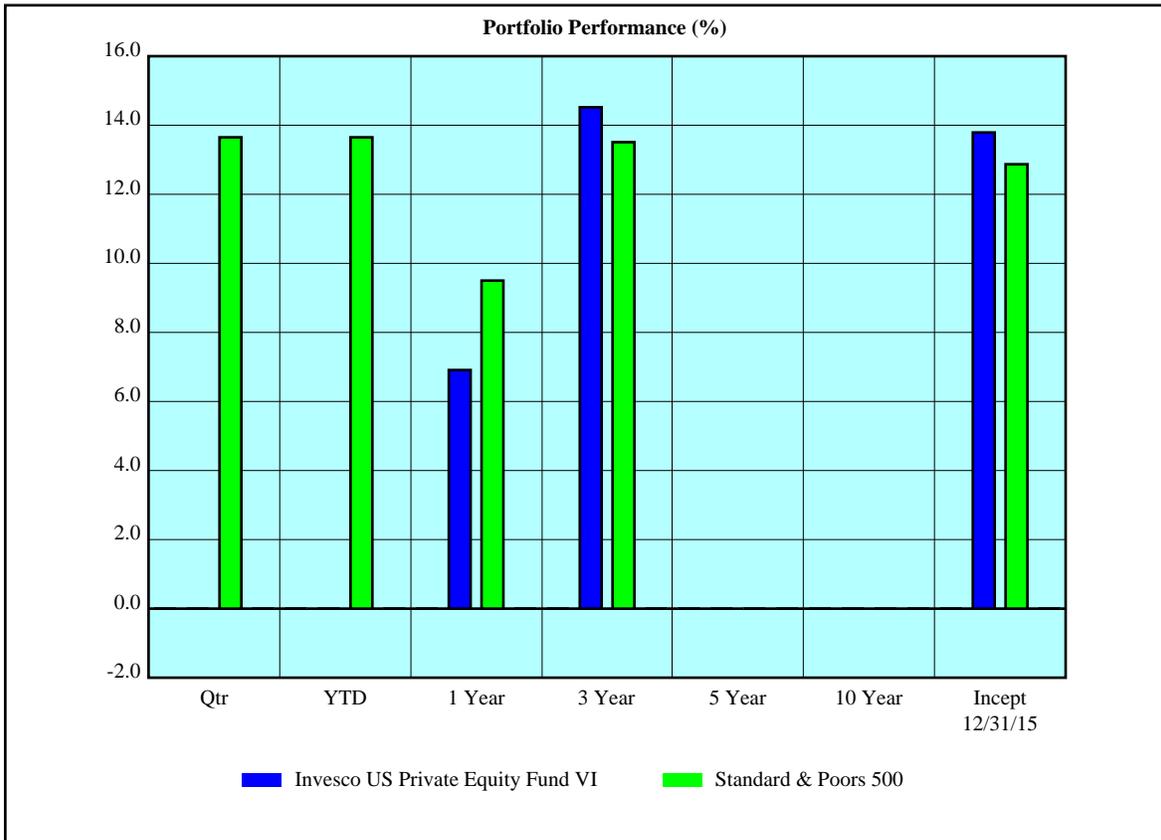
# City of Fort Lauderdale Police and Fire Boyd Watterson GSA as of 3/31/19



**City of Fort Lauderdale Police and Fire**  
**Risk Measure Summary**  
**Boyd Watterson GSA**  
**Quarterly Periods Ending 3/31/19**

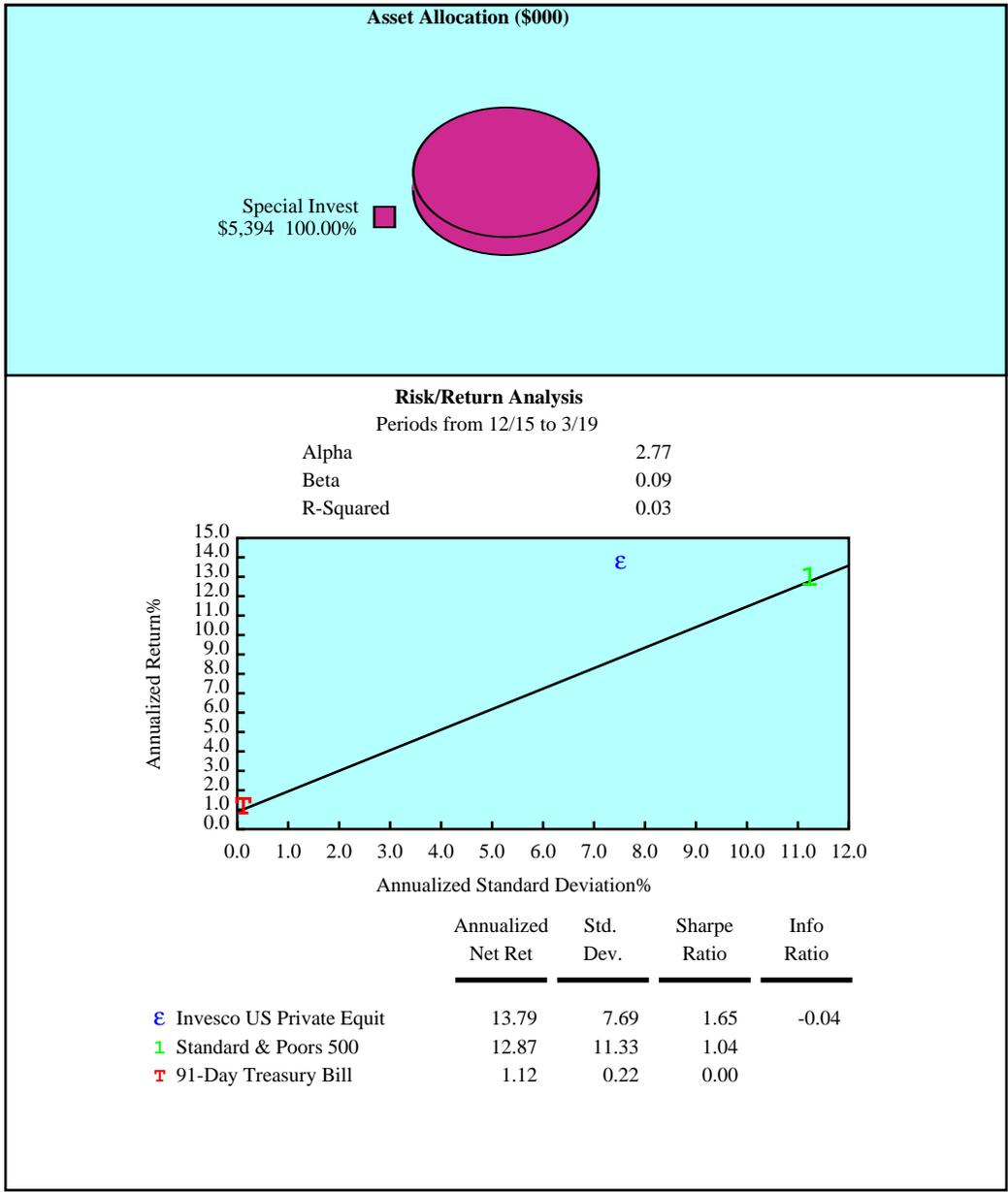
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods							0	0
Positive Periods							1	1
Up Market Capture							0.83	
Down Market Capture								
Batting Average							0.00	
Worst Quarter							1.18	1.42
Best Quarter							1.18	1.42
Worst 4 Quarters								
Best 4 Quarters								
Standard Deviation								
Beta								
Alpha								
R-Squared								
Sharpe Ratio								
Treynor Ratio								
Tracking Error								
Information Ratio								

## City of Fort Lauderdale Police and Fire Invesco US Private Equity Fund VI as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 12/31/15</b>
Invesco US Private Equity Fund VI	0.00	0.00	6.91	14.52			13.79
Standard & Poors 500	13.65	13.65	9.50	13.51			12.87
<b>Asset Growth (\$000)</b>							
Beginning Market Value	5,605	5,605	5,243	2,932			2,893
Net Contributions & Withdrawals	-211	-211	-211	633			633
Gain/Loss + Income	0	0	362	1,829			1,867
Ending Market Value	5,394	5,394	5,394	5,394			5,394

# City of Fort Lauderdale Police and Fire Invesco US Private Equity Fund VI as of 3/31/19

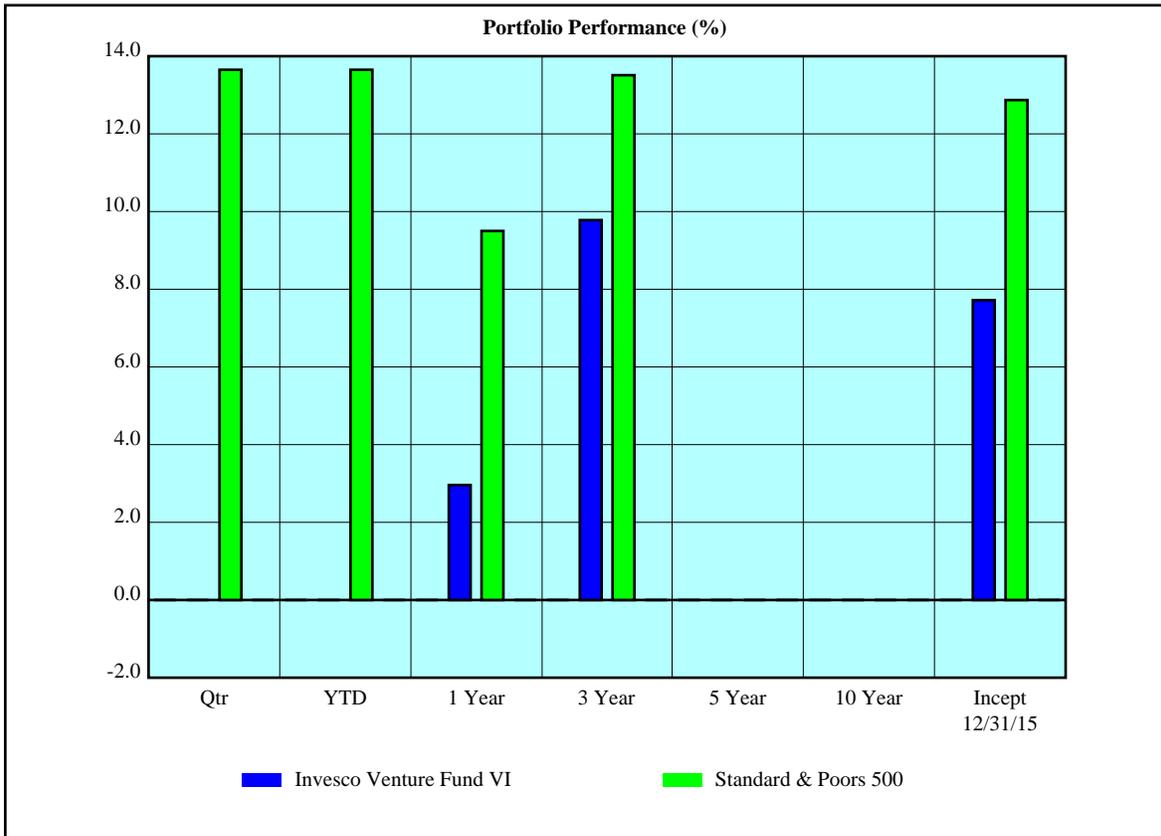




City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Invesco US Private Equity Fund VI  
Quarterly Periods Ending 3/31/19

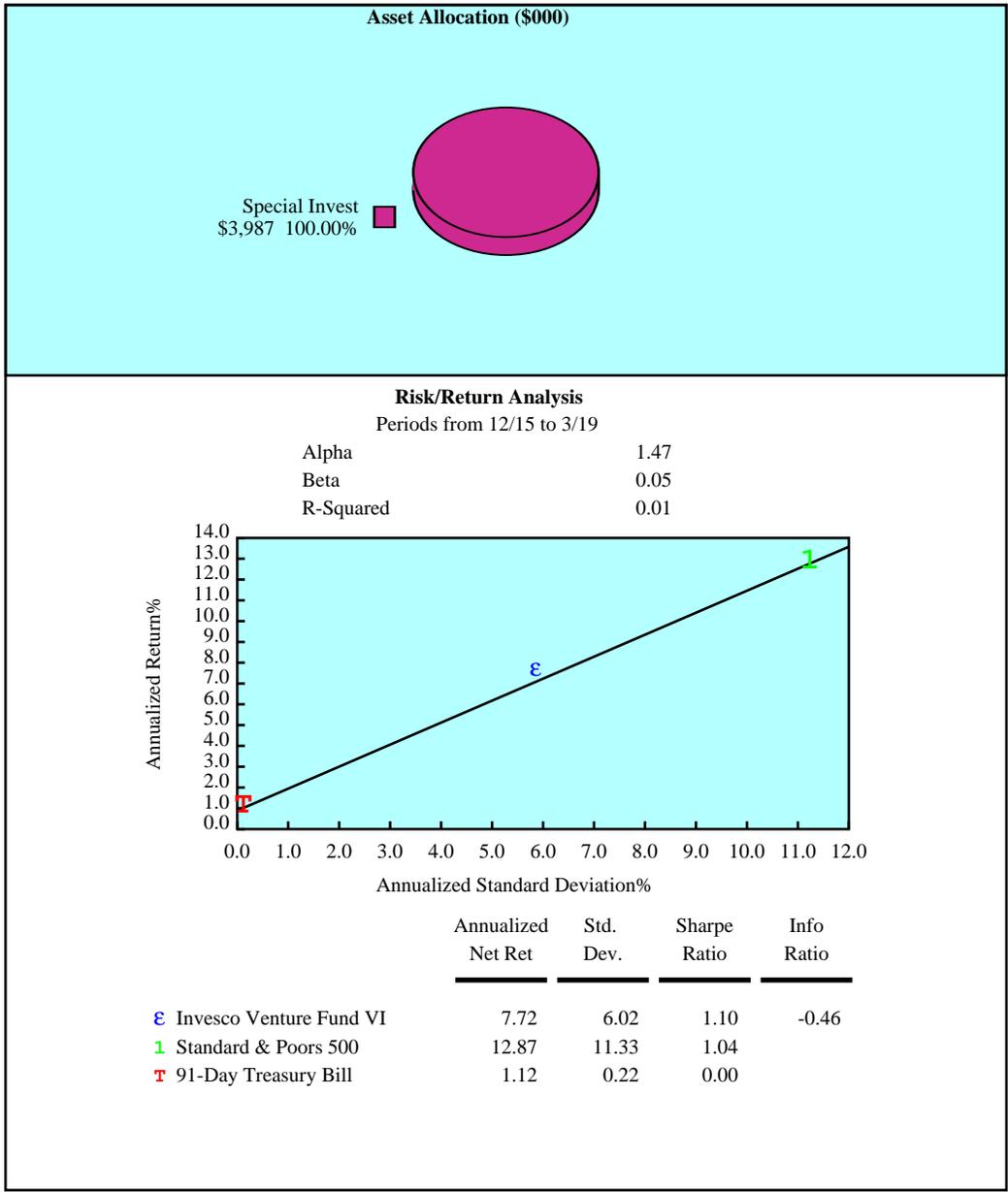
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	1	0	2			0	2
Positive Periods	4	3	12	10			13	11
Up Market Capture	0.26		0.68				0.69	
Down Market Capture	-0.00		-0.24				-0.24	
Batting Average	0.50		0.50				0.46	
Worst Quarter	0.00	-13.52	0.00	-13.52			0.00	-13.52
Best Quarter	5.24	13.65	8.36	13.65			8.36	13.65
Worst 4 Quarters	6.91	9.50	6.91	-4.38			6.91	-4.38
Best 4 Quarters	6.91	9.50	25.82	21.83			25.82	21.83
Standard Deviation	4.94	23.34	5.65	12.75			5.54	12.26
Beta	0.03		0.08				0.09	
Alpha	1.10		2.92				2.77	
R-Squared	0.02		0.03				0.03	
Sharpe Ratio	0.97	0.32	2.36	0.97			2.29	0.96
Treynor Ratio	138.28		158.75				142.75	
Tracking Error	23.23		13.29				12.72	
Information Ratio	-0.27		-0.04				-0.04	

## City of Fort Lauderdale Police and Fire Invesco Venture Fund VI as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 12/31/15</b>
Invesco Venture Fund VI	0.00	0.00	2.96	9.78			7.72
Standard & Poors 500	13.65	13.65	9.50	13.51			12.87
<b>Asset Growth (\$000)</b>							
Beginning Market Value	4,180	4,180	4,060	2,879			2,992
Net Contributions & Withdrawals	-193	-193	-193	96			96
Gain/Loss + Income	0	0	120	1,011			899
Ending Market Value	3,987	3,987	3,987	3,987			3,987

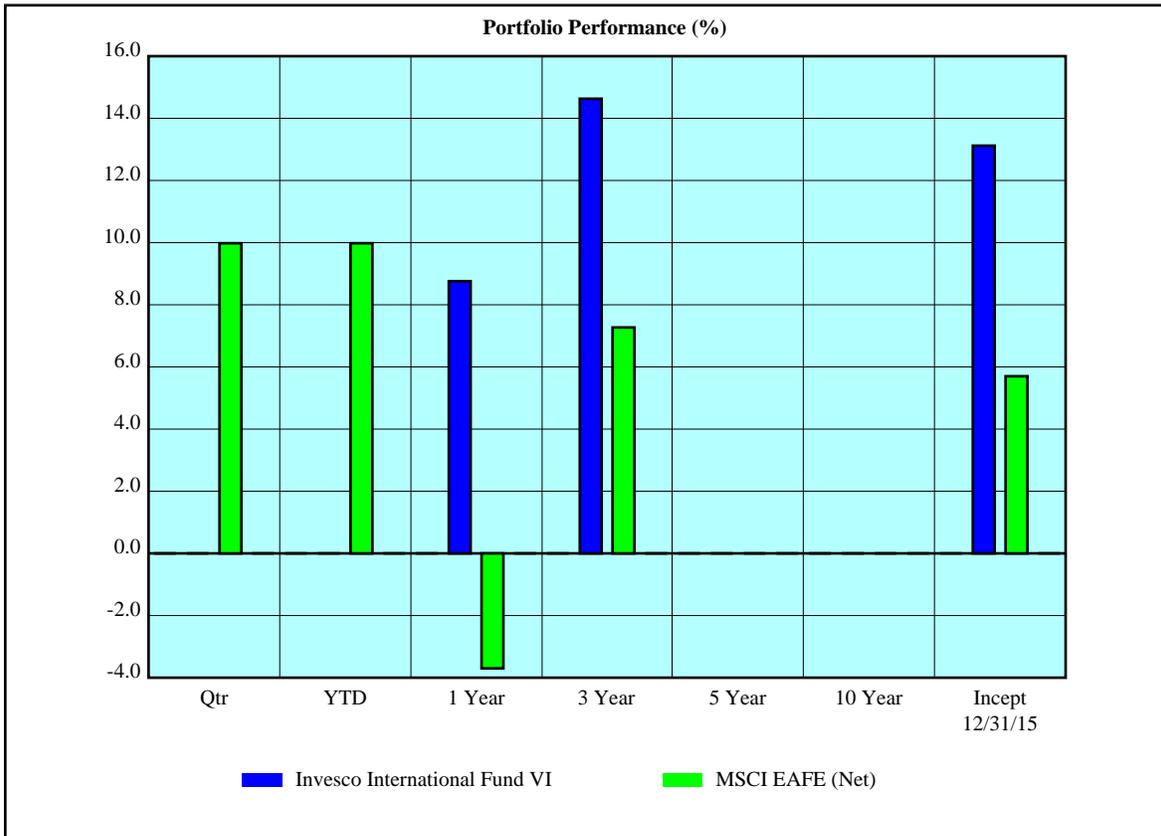
# City of Fort Lauderdale Police and Fire Invesco Venture Fund VI as of 3/31/19



City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Invesco Venture Fund VI  
Quarterly Periods Ending 3/31/19

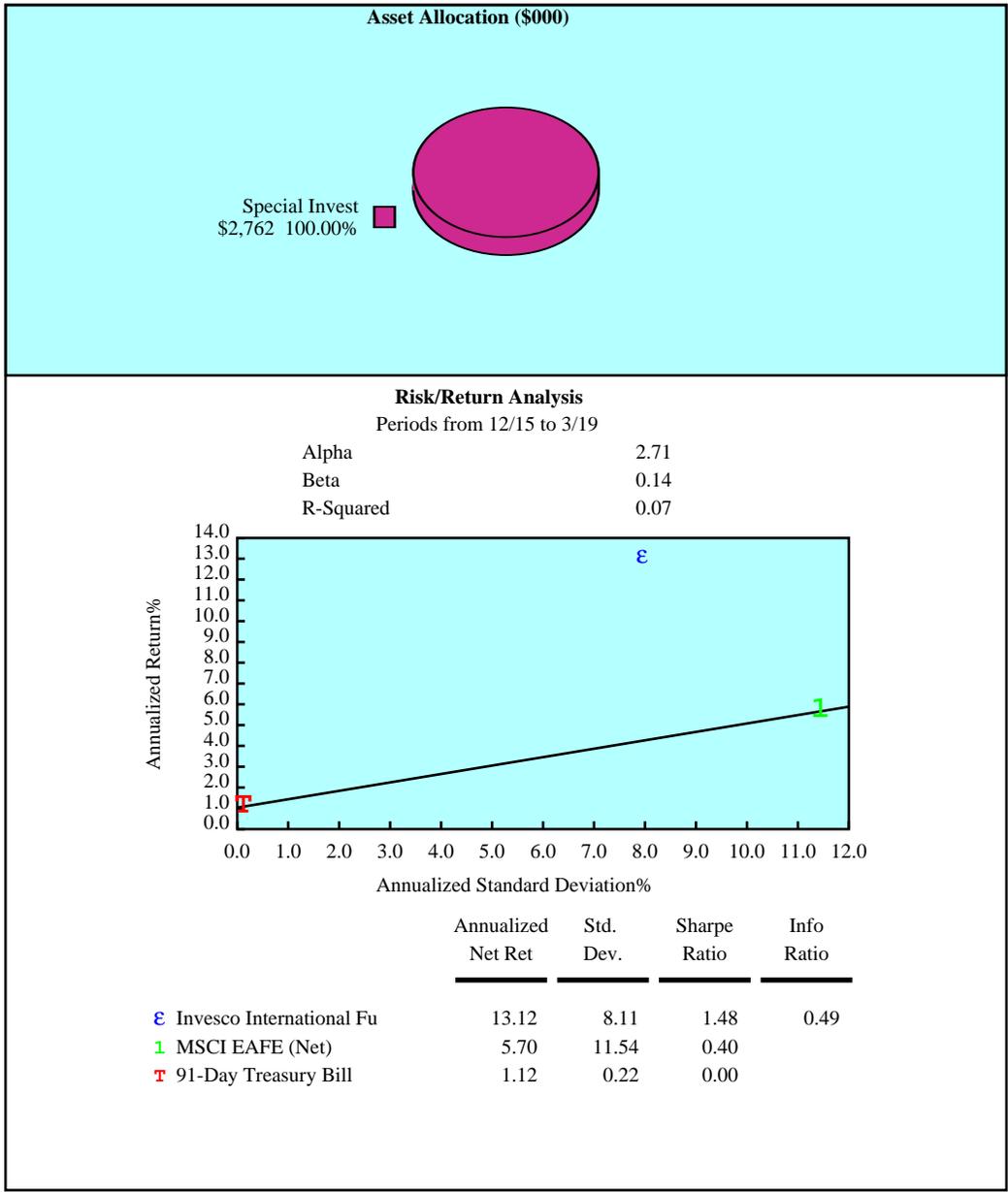
Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	1	0	2			1	2
Positive Periods	4	3	12	10			12	11
Up Market Capture	0.11		0.39				0.32	
Down Market Capture	-0.00		-0.41				-0.41	
Batting Average	0.25		0.33				0.31	
Worst Quarter	0.00	-13.52	0.00	-13.52			-3.76	-13.52
Best Quarter	1.61	13.65	5.94	13.65			5.94	13.65
Worst 4 Quarters	2.96	9.50	2.96	-4.38			2.96	-4.38
Best 4 Quarters	2.96	9.50	18.10	21.83			18.10	21.83
Standard Deviation	1.71	23.34	4.45	12.75			5.46	12.26
Beta	0.02		0.04				0.05	
Alpha	0.15		1.97				1.47	
R-Squared	0.08		0.01				0.01	
Sharpe Ratio	0.48	0.32	1.93	0.97			1.21	0.96
Treynor Ratio	36.14		237.51				121.84	
Tracking Error	22.90		13.32				12.95	
Information Ratio	-0.43		-0.36				-0.46	

## City of Fort Lauderdale Police and Fire Invesco International Fund VI as of 3/31/19



<b>Net of Fee Returns</b>	<b>Qtr</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Incept 12/31/15</b>
Invesco International Fund VI	0.00	0.00	8.76	14.63			13.12
MSCI EAFE (Net)	9.98	9.98	-3.71	7.27			5.70
<b>Asset Growth (\$000)</b>							
Beginning Market Value	3,196	3,196	2,939	1,806			1,822
Net Contributions & Withdrawals	-434	-434	-434	-100			-100
Gain/Loss + Income	0	0	257	1,056			1,040
Ending Market Value	2,762	2,762	2,762	2,762			2,762

# City of Fort Lauderdale Police and Fire Invesco International Fund VI as of 3/31/19



City of Fort Lauderdale Police and Fire  
Risk Measure Summary  
Invesco International Fund VI  
Quarterly Periods Ending 3/31/19

Risk Measures	1 Year		3 Years		5 Years		Inception	
	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench	Portfolio	Bench
Negative Periods	0	2	0	5			1	6
Positive Periods	4	2	12	7			12	7
Up Market Capture	0.16		0.61				0.61	
Down Market Capture	-0.50		-0.99				-0.79	
Batting Average	0.75		0.75				0.77	
Worst Quarter	0.00	-12.54	0.00	-12.54			-0.90	-12.54
Best Quarter	6.84	9.98	8.57	9.98			8.57	9.98
Worst 4 Quarters	8.76	-3.71	7.08	-13.79			4.68	-13.79
Best 4 Quarters	8.76	-3.71	29.35	25.03			29.35	25.03
Standard Deviation	6.46	18.57	6.13	12.03			6.36	11.84
Beta	-0.01		0.11				0.14	
Alpha	1.62		3.04				2.71	
R-Squared	0.00		0.04				0.07	
Sharpe Ratio	1.03	-0.31	2.19	0.50			1.89	0.39
Treynor Ratio	-764.42		122.91				83.70	
Tracking Error	19.71		12.54				12.01	
Information Ratio	0.51		0.45				0.49	





# Investment Policy Statement

The Trustees of the Police & Fire Retirement System Pension Fund, in adopting the following Investment Policy Statement, intend its provisions to act as guidelines for the investment managers employed by the Fund. It shall be the responsibility of the investment managers to bring to the attention of the Trustees any term of the Statement, which the investment managers believe to inhibit or in any way affect their exercise of management discretion.

## I. PURPOSE OF STATEMENT

The Trustees are charged by law with the responsibility for the investment of assets of the Trust Fund. To discharge this function, the Trustees are authorized by law to engage the services of Investment Managers who possess the necessary specialized research facilities and skilled personnel to provide expertise with respect to investment of assets entrusted to them.

In performing its investment duties, the Trustee shall comply with the fiduciary standards set forth in the Employee Retirement Income Security Act of 1974, 29 U.S.C. §1104(a)(1)(A)-(C), meaning that the Trustee must discharge all duties with respect to the Plan solely in the interest of participants and beneficiaries and for the exclusive purpose of: (a) providing benefits to participants and their beneficiaries and (b) defraying reasonable expenses of administering the Plan; with the care, skill, prudence and diligence under circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims; by diversifying investments of the Plan so as to minimize risk of large losses, unless under the circumstances it is clearly prudent not to do so. In the event of conflict with other provisions of law authorizing investments, the investment and fiduciary standards set forth in this section shall prevail.

In keeping with the duties of Chapter 20 of Fort Lauderdale Ordinances, this statement of investment goals and objectives is set forth.

Its purpose is to:

Determine the Trust's projected financial needs.

Express the Trustees' position with respect to the funds risk-volatility posture.

Formulate an appropriate set of goals and objectives for the Fund's assets.

## II. INVESTMENT OBJECTIVES

- A. Assets of the Fund shall be invested in a manner consistent with the fiduciary's acceptable standards of Chapter 112, Florida Statutes, namely:

1. The safeguards and diversity that a professional, prudent investment manager would adhere to must be present.
  2. All transactions undertaken on behalf of the Trust must be for the sole interest of Plan participants and their beneficiaries.
- B. The Fund shall be invested in a manner consistent with the primary emphasis upon consistency of performance to protect the Fund from excessive volatility in current market value.
- C. The Fund shall be invested with emphasis upon capital protection, i.e., the achievement of adequate investment growth so that the purchasing power of the principal amount of these assets is at least maintained and preferably increased.
- D. The Plan's total return will be expected to provide equal or superior results based on a five year investment horizon, relative to the objectives enumerated below. It is anticipated that achievement of this rate of return will raise the funded status of the plan and lower the contribution rate as a percent of payroll.
1. The Retirement System's annualized total return should equal or exceed the Retirement System's actuarial interest rate assumption, which is currently 7.50%. The Board will file with the City, the Department of Management Services, and the actuary the expected annual rate of return for the current year, for each of the next several years, and for the long term for each annual actuarial valuation.
  2. The Retirement System's total return should exceed the total return of an index composed as follows:
    - 26.25% S&P 500
    - 12.5% Russell 2500
    - 15% MSCI EAFE
    - 31.25% Barclays Capital Intermediate Government/Credit Bond Index
    - 15% NCREIF Index

Please note that the 12.5% target weight to Global Infrastructure and Multi-Strategy alternatives in the Total Plan performance benchmark has been split 70% to the S&P 500 Index and 30% to the Barclays Intermediate Government/Credit Bond Index, while the Alternative Income strategies are benchmarked against the Barclays Intermediate Government/Credit Bond Index.
  3. The Retirement System's total return should exceed the total return of the median plan in the consultant's peer group universe.

### III. INVESTMENT GUIDELINES

A. It shall be the policy of the Fund to invest the assets in accordance with the following asset allocation levels outlined below:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Minimum</u>	<u>Maximum</u>
Domestic Equity:			
<b>Large Cap Equity</b>	<b>17.5%</b>	<b>10%</b>	<b>30%</b>
<i>Large Cap Equity is further defined as:</i>			
Large Cap Core	8.5%	5.0%	12%
Large Cap Value	4.5%	2.5%	7.5%
Large Cap Growth	4.5%	2.5%	7.5%
<b>Mid/Small Cap Equity</b>	<b>12.5%</b>	<b>5%</b>	<b>20%</b>
<i>Mid/Small Cap Equity is further defined as:</i>			
Mid Cap Equity	5%	2.5%	7.5%
Small Cap Value	3.75%	0%	7.5%
Small Cap Growth	3.75%	0%	7.5%
International Equity	15%	10%	20%
Alternative Investments:			
Global Infrastructure	7%	4%	10%
Real Estate	15%	7.5%	22.5%
Multi-Strategy	5.5%	2.5%	12.5%
Alternative Income	7.5%	2.5%	12.5%
Fixed Income (incl. Cash)	20%	10%	30%

The Board of Trustees has adopted the asset allocation policy set forth above, which is expressed in terms of target levels and allocation ranges, as measured by market value of assets. Percentage allocations are intended to serve as guidelines; the Board will not be required to remain strictly within the designated ranges. Market conditions or an investment transition (asset class or manager) may require an interim investment strategy, and, therefore, a temporary imbalance in asset mix. At each quarterly meeting of the Fund's Board of Trustees, Staff and Consultant will review with the Board the asset allocation structure of the plan relative to the policy target allocations and acceptable ranges. Staff and Consultant are responsible for providing the Board with a recommendation relative to rebalancing the overall investment

portfolio based on predetermined target allocations, and the Fund's current allocation relative to those targets. The large cap, small/mid cap and international allocations are implemented through multiple managers utilizing both value and growth styles. It is intended that these allocations maintain relative style neutrality; therefore rebalancing reviews and recommendation shall also attempt to maintain a balance between growth and value.

This investment policy has been chosen to provide a high likelihood of meeting the objectives outlined above. The asset allocation established by this investment policy represents a long term perspective. As such rapid unanticipated shifts may cause the assets to temporarily fall outside the policy range. Any divergence should be of a short term nature. The Board demands that any such divergences shall be kept as brief as possible. The system administrator shall promptly notify the Board whenever divergences exist.

The Board shall periodically review the Investment Policy Statement and solicit the recommendations of the Investment Consultant with respect to any proposed changes. The Board may also solicit input from the investment managers during this process.

- B. Full discretion consistent with the guidelines described herein is granted to each investment manager in respect to the sector mix of the assets, the selection of securities and the timing of their transactions. Pooled funds or other commingled vehicles may be utilized that are invested in substantially the same manner and same investments as stated in this Investment Policy Statement. The manager of such pooled or commingled fund shall promptly advise the Board of any potential exceptions to or violations of the Investment Policy Statement which may arise for any reason.
- C. The investment managers shall not hold (without the Board's written consent) unsecured investments in a single company in a total amount exceeding 5% of the market value of the assets which they manage **(with the exception of the enhanced equity index and equity index manager, in which case investments in a single company are permitted to be +/-1% of that company's weight in the benchmark at time of rebalance)**, nor shall any investment manager hold investments in any one particular sector exceeding 40% of the equity portfolio or 130% of the S&P500 Sector Weighted, whichever is higher. Only securities issued by or guaranteed by the U.S. Government shall be considered "secured".

The market value basis of Foreign Securities shall not exceed 25% of the total market value of assets of the fund. A Foreign Security is defined as a security issued by a corporation or other issuer that is not organized under the laws of the United States Government, any U. S. state government, or the District of Columbia. Such Securities organized under the laws of foreign governments shall be considered foreign securities, regardless of whether they are traded on United States exchanges, regardless of the ownership of the foreign corporation and regardless of whether the security is denominated in United States dollars.

The Domestic Large Cap Value Equity manager is authorized to invest up to 15 % of its respective portfolio in ADR's or common stocks of non-U.S. companies listed on a major U.S exchange. Benefit-driven incorporations, such as a company headquartered outside the United States primarily for tax purposes, will not count toward the 15% maximum.

All other Domestic Equity managers are authorized to invest up to 7.5% of their respective portfolios in ADR's or common stocks of non-U.S. companies listed on a major U.S. exchange. Benefit-driven incorporations, such as a company headquartered outside the United States primarily for tax purposes, will not count toward the 7.5% maximum.

The specifically hired International Equity managers are expected to be invested primarily if not exclusively in non-U.S. securities.

The Global Infrastructure mutual fund in which the System is invested may invest in U.S. and Non-U.S. securities. The percentage of Non-U.S. securities will be monitored by the Investment Consultant and counted toward the 25% of the total funds market value limitation to Foreign Securities.

- E. The Board of Trustees will comply with the provisions of the Protecting Florida's Investment Act (PFIA) with respect to its investments. The Board shall not hold any direct securities of any scrutinized company appearing on the SBA website. The Board will review and monitor the SBA's quarterly update to the scrutinized company list to determine whether divestment of any direct holding is required. Each quarter the Board's Investment Consultant shall prepare a written report to the Board advising whether or not any divestment is required or whether any direct holding is on the scrutinized company list as defined by the SBA.
- F. In the event of a spin-off from a company currently held in the portfolio, which prior to the spin-off was a qualified investment, the manager should report on a quarterly basis with a recommendation as to whether we should continue to hold such spin-off. However, it is the intent for the spin-off to meet the Board's equity restrictions as soon as possible.
- G. The use of fixed income investments may include U.S. Government and agency obligations, marketable corporates, Ginny Mae's, U.S. Agency Collateralized Mortgage-backed securities, asset-backed securities, debentures, preferred stocks, commercial paper, certificates of deposit and other such instruments as deemed prudent by the investment manager. The bond manager (including any balanced fund manager with respect to the fixed-income segment of the portfolio) is authorized to invest up to 10% of their respective portfolios in issuers not domiciled in the U.S.
- H. Fixed-Income type securities shall be selected from among those rated within the top five major categories of any recognized bond rating service such as, (Moody's, Standard & Poors and Fitch's). In those cases in which the rating services give different ratings, the lowest rating shall apply. Notwithstanding anything herein to the contrary, **active bond managers are permitted to invest up to 15% of the market value of their portfolio in securities rated in the fifth major rating category by all recognized rating services, provided that such investments are consistent with the mandate of the manager. The overall portfolio quality of the active bond portfolios shall be maintained at A or higher.**
- I. Fixed-income type securities are to be selected and managed so as to assure appropriate balances in qualities and maturities consistent with current money market and economic conditions. Active bond management is encouraged **in instances of non-indexed management**, as deemed appropriate by the investment, although this is not intended to encourage excessive emphasis on short-term trading techniques.

- J. The real estate portfolio is designed as a core mandate with targeted value add exposures. Investments in real estate properties will be broadly diversified geographically, by property type, size of the property and number of properties. Income and appreciation are dual considerations; however more emphasis will be placed on high quality, and income-producing properties in the portfolio. It is expected that the income component will compromise the majority of the portfolio's total return. The manager should not assume excessive risk in terms of leverage utilized. The portfolio may be invested in commingled or partnership vehicles. The selection of properties/investments will be at the discretion of each manager.
- K. The dynamic, flexible management of the portfolio is both permitted and encouraged. Shifts of emphasis among equity, fixed income and cash equivalent sectors of the aggregate asset base are at the discretion of the investment manager. However, major restructuring would require prior consent of the Trustees.
- L. Cash equivalent securities should be viewed not only as avenues to meet the liquidity requirements of the Trust, but also as alternative investment vehicles. In either case, however, selection of particular investments should be determined primarily by the safety and liquidity of the investment and only secondarily by available yield.
- M. It is understood that the managers at any point in time may not be fully invested. While in fact the System's assets may be partially invested in cash equivalents, for asset allocation purposes these funds shall be considered invested in the asset classes of the respective managers. In turn, each manager's performance will be evaluated on the total amount of funds under their direct management.
- N. The Trustees recognize that market performance varies from period to period and that a 4.6% real rate of return may not be meaningful during some periods. Accordingly, relative performance benchmarks for the managers are set forth in Section V, Basis for Measurement.
- O. Certain Securities are deemed to be ineligible for inclusion among this Trust's asset base:

The following transactions would be prohibited:

1. A sale, exchange or lease of any property between the Plan and interested party (interested party being defined as a person rendering services to the Plan for which remuneration is received, i.e., stockbroker, real estate broker, etc.)
2. A direct loan or an extension of a line of credit between the Plan assets and any interested party.
3. A transfer of Plan assets to an interested party for the exclusive benefit or use of the interested party.
4. An acquisition of securities, which would exceed stated limitations, 5% in any one company. Any exceptions to the foregoing restrictions would require written Board approval with the specifics detailed.

5. Instrumentalities which are or may be deemed in violation of prohibitive transaction standards as may be specified in the Florida Statutes, specifically Chapters 112, 175 and 185.

P. Investments not classified as equities or fixed income will be designated as alternative investments. Alternative investments are typically (but not always) less liquid than traditional asset classes and will be expected to provide diversification from traditional capital market risk. Alternative investments that may be allocation to the Plan include real estate, tactical asset allocation mutual funds, global infrastructure, hedge funds (including fund-of-funds and long/short equity vehicles), private equities, commodities, and income-oriented alternatives (i.e. preferred stock, Master Limited Partnerships, multi-sector fixed income strategies).

#### **IV. MATURITY AND LIQUIDITY REQUIREMENTS**

The investment portfolio is structured in such a manner as to provide sufficient liquidity to pay obligations as they come due. The Plan will not be expected to maintain a significant cash balance but will rather raise cash to fund obligations on an as needed basis in accordance with the Plan's target asset allocation. Managers will be notified of any change in the foregoing circumstances.

#### **V. THIRD-PARTY CUSTODIAL AGREEMENTS**

All assets shall be held by a third party, and all securities purchased by, and all collateral obtained by, the Trustee shall be properly designated as an asset of the Plan. No withdrawal of assets, in whole or in part, shall be made except upon authorization by the Trustee. Securities transactions between a broker-dealer and the Custodian involving purchase or sale of securities by transfer of money or securities must be made on a "delivery vs. payment" basis to ensure that the Custodian will have the security or money, as appropriate, in hand at the conclusion of the transaction.

#### **VI. COMMUNICATIONS**

##### **A. Documentation**

Statements are to be supplied at least quarterly by each investment manager and/or bank custodian to the Trustees indicating:

1. The Fund composition, i.e., at book or original cost and at current market value (by sector, including equity, fixed income, cash equivalents, and "pure" cash balances);
2. Position, by individually named securities, showing their respective book and market values, the number of shares by date secured or sold;
3. All income cash transactions, including sources of all interest and dividends in sufficient descriptive detail. The investment manager is expected to provide written confirmation and documentation of all principal transactions, with the exception of cash equivalent trades, within one week of occurrence.

B. Meetings

Investment managers are expected to meet on a quarterly basis, or more often upon request, with the Trustees to review the portfolio and to discuss investment results in terms of these goals, objectives and policies.

**VII. BASIS FOR MEASUREMENT**

Performance of this Fund is to be measured, both currently and historically, in context with these goals and objectives. In order to ensure that investment opportunities available over a specific time period are fairly evaluated, the Trustees will use comparative performance statistics to evaluate investment results.

The Fund's investment performance results will be compared, on a time-weighted basis, with that of unmanaged market indices as well as with a universe of managed funds. Such comparative performance statistics shall be used for evaluation purposes.

In that context, then, the Fund's equity performance will be compared with the Standard & Poor's 500 and with a universe of managed equity funds. The performance of each investment manager, in turn, will be compared to the relevant index and a universe of peers categorized by investment style.

The Fund's fixed income performance will be compared with the total return of recognized bond indexes, e.g., Barclays Intermediate Government/Credit Bond Index or the Barclays Capital Aggregate Bond Index, as well as with a universe of similarly managed fixed income funds.

The Fund's real estate performance will be compared with the total return of the NCREIF Index as well as with a universe of core real estate funds.

The Fund's alternative investments will be compared against a performance benchmark consistent with their specific asset class, and will also generally be expected to outperform an absolute performance benchmark (i.e. CPI + 5%).

In addition, it is also recommended that a total Fund's investment performance be compared with a "composite" market consisting of the above unmanaged indices weighted in proportion to the Fund's actual per cent investment in each of these equivalent security classes. The total Fund will also be compared to a universe of local government funds. The fund's performance should also be compared with the annual percent change in the Consumer Price Index.



Consistency of performance results is to be given high priority and the degree will be determined by computing the mean absolute deviation of the total fund and the respective money managers' total rate of return from quarter to quarter and comparing this data with the same statistics measured for the "composite" market described above, with a goal of near or below market volatility.

### **VIII. VALUATION OF ILLIQUID INVESTMENTS**

Investments and assets for which a generally recognized market is not available or for which there is no consistent or generally accepted pricing mechanism are prohibited.

### **IX. MASTER REPURCHASE AGREEMENT**

All approved institutions and dealers transacting repurchase agreements shall execute and perform as stated in the Master Repurchase Agreement. All repurchase agreement transactions shall adhere to requirements of the Master Repurchase Agreement. This provision does not restrict or limit the terms of any such Master Repurchase Agreement.

### **X. BID REQUIREMENT**

All securities shall be competitively bid where feasible and appropriate. Except as otherwise required by law, the most economically advantageous bid must be selected. Executions must be made on a best-execution basis.

### **XI. INTERNAL CONTROLS**

As part of the City's annual financial audit the external CPA firm will review the internal controls of the Fund. The hiring or termination of all money managers, consultants or safekeeping custodians must be made by the Trustees. No individual associated with the Fund may authorize any movement of monies or securities without the approval of the Trustees. Trustee approval is not required for rebalancing of the portfolio. Internal controls will be designed to prevent losses of funds which might arise from fraud, error, and misrepresentation by third parties or imprudent actions by the Trustees or City employees.

### **XII. OTHER CONSIDERATIONS**

It is the intent of the Board of Trustees of the Police & Fire Retirement System Trust to revise this statement of goals and objectives to reflect modifications and revisions to the Trust, which may develop from time to time. It is also the policy of the Trustees to review these goals and objectives at least once per year and to communicate any material changes thereto to the Investment Managers and the Fund's custodian.

**XIII. CONTINUING EDUCATION**

All trustees are encouraged and expected to attend continuing education seminars concerning matters related to investments and responsibilities of Board members. Attendance at two public pension fund seminars during each term of office is suggested.

**XIV. REPORTING**

The Trustees shall submit periodic reports to the City of Fort Lauderdale, at least on an annual basis or more frequently if available. The report shall include investments in the portfolio by class or type, income earned and market value. The periodic report shall be available to the public.

**XV. FILING OF INVESTMENT POLICY**

Upon adoption by the Trustee, this Investment Policy shall be promptly filed with the Florida Department of Management Services, the City of Fort Lauderdale, Florida, and the Actuary. The effective date of this Investment Policy, and any amendment hereto, shall be the 31st calendar day following the filing date with the City of Fort Lauderdale.

Approved November 2018

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## REPORT EXPLANATIONS

### Executive Summary

The Executive Summary provides an overview of the fund's performance. It shows the performance in dollars, percent, and relative to the investment policy. These statistics are provided over different time periods including up and down markets. All rates of return are annualized if the period for which they are calculated exceeds one year.

**Account Reconciliation:** This section shows the performance of the account in dollars, during the most recent quarter, the calendar year, and since the inception date. The Beginning Value is the value at the start of each period. The Ending Value shows the value as of the date of the report. Net contributions are the total contributions less the total withdrawals during the period. The Investment G/L is the gain or loss resulting from the investments. It is the difference between the beginning and ending values that cannot be explained by the net contributions. Positive investment G/L figures represent a profit, and negative values represent a loss.

**Investment Policy:** This section defines the benchmark against which the fund is being compared. Generally, this is the most important objective for a fund to achieve. The performance of the fund relative to this measure over longer periods of time, such as market cycles, is the strongest indicator of the success or failure of the investment strategy. This objective should be reasonable, and the performance of the fund should be measured against the investment policy after adjusting for risk.

**Trailing Returns:** This section shows the cumulative time weighted returns over the last 1 year, 2 years, and so on up through 10 years if available, as well as since the inception date. A positive difference indicates the fund has exceeded the policy's returns. The investor would prefer that this difference be positive for all time periods; however, it is more important for it to be positive for the longer periods rather than the shorter periods.

**Calendar Year Returns:** This section gauges the consistency of performance over one year time periods. Each calendar year of performance represents the return from January 1st through December 31st. Watch out for a trend of declining relative performance in recent periods.

**Time Weighted Return:** This statistic demonstrates a measure of the compound rate of growth in a portfolio. Because this method eliminates the distorting effects created by the size and timing of cash flows, it is used to compare the returns of investment managers.

**Dollar Weighted Return:** This demonstrates the rate of return for an asset or portfolio of assets. It is calculated by finding the rate of return that will set the present values of all cash flows and terminal values equal to the value of the initial investment. The dollar weighted rate of return incorporates the size and timing of cash flows and is equivalent to the internal rate of return (IRR).

**Returns In Up/Down Markets:** This section shows how the fund performed in both up and down markets. The methodology utilized segregates the performance for each time period into the quarters in which the market, as defined by the policy, was positive and negative. Quarters with negative policy returns are treated as down markets, and quarters with positive policy returns are treated as up markets. Thus, in a 3 year or 12 quarter period, there might be 4 down quarters and 8 up quarters. Up market returns are calculated for the fund and the policy based on the up quarters. Down market returns are calculated for the fund and the policy based on the down quarters. The ratio of the fund's return in up markets to that of the policy is the up market capture ratio. The ratio of the fund's return in down markets to that of the policy is the down market capture ratio. Ideally, the fund would have a greater up market capture ratio and a smaller down market capture ratio.

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## **Risk Measures**

The evaluation of a fund's performance should extend beyond return to encompass measures of risk. The next two pages illustrate the level of risk to which the fund has been exposed, and whether the return has been commensurate with the risk taken. All measures are calculated for the fund and the policy as well as the difference between the two. Up to four time periods are evaluated depending on the age of the fund.

**# Of Negative Qtrs/# Of Positive Qtrs:** Number of negative quarters shows the number of quarters in which the return was less than zero. The number of positive quarters is the number of quarterly returns which were greater or equal to zero.

**Batting Average:** The batting average is a measure of consistency. It shows the percent of the quarters the fund has beaten the policy and the percent of the quarters the policy has outperformed the fund. A high average for the fund (e.g. over 50) is desirable, indicating the fund has beaten the policy frequently.

**Worst Quarter/Best Quarter/Range:** The worst quarter is the lowest quarterly return experienced during the period, a measure of downside risk. The best quarter is the highest quarterly return, and the range is the difference of the high and low, and indicates dispersion.

**Standard Deviation:** Standard deviation measures the total volatility of the fund, by measuring dispersion. Higher standard deviation indicates higher risk. If the quarterly or monthly returns are all the same the standard deviation will be zero. The more they vary from one another, the higher the standard deviation. Thus, it measures uncertainty, which is a measure of risk.

**Alpha/Beta/R-Squared:** If the policy is appropriate, then the alpha should be positive, the beta close to one, and the r-squared should be high. Beta measures risk relative to the policy. A beta of 1 suggests risk equivalent to the policy. Higher betas indicate higher relative risk. A beta of 1.2 indicates 20% more risk than the policy. The alpha measures the return adjusted for beta. A higher alpha indicates a higher risk adjusted return. R-squared measures the relationship between the policy and the fund. A high r squared means the returns of the fund can largely be explained by movements of the policy. A higher r-squared indicates a more reliable alpha and beta. R-squared may range from 0 to 100. Beta, alpha and r-squared are derived from regression analysis using the fund and policy returns as the dependent and independent variables respectively. Roughly, one would expect the fund's performance to equal the return of the policy multiplied by the beta plus the alpha.

**Sharpe Ratio/Treynor Ratio:** The Sharpe and Treynor ratios are similar. The Sharpe ratio is the excess return per unit of total risk as measured by standard deviation. The Treynor ratio is the excess return per unit of market risk as measured by beta. Both of these should be compared against the corresponding value for the policy. Higher numbers are better, indicating more return for the level of risk that was experienced.

**Tracking Error/Information Ratio:** Tracking error is a measure of how closely a portfolio follows the index to which it is benchmarked, or a measure of the deviation from the benchmark. Dividing portfolio return by portfolio tracking error gives the information ratio, which is a risk adjusted performance metric.

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### **Quarterly Comparison Analysis (\$)**

This report shows the performance, in dollars, of the fund relative to the objectives. The purpose is to show a hypothetical value that reflects what the account would be worth if it had instead invested in each objective.

The column titled "Portfolio" shows the actual values in the portfolio at the end of the quarter. The amount shown for the first date is the same for each objective as that of the fund. This is the amount assumed to be invested in each objective. All other values for the objectives are based on reinvesting the preceding amount, earning the return of the objective, and adjusting for contributions or withdrawals to the fund.

A positive difference between the fund and an objective represents the additional dollars that are in the fund that would not be available if the fund had actually experienced the return of the objective. A negative difference may be thought of as the cost incurred in experiencing the actual performance instead of the objective performance.

The report will show results since the inception of the fund, or quarterly results over the last five years, whichever is less.

### **Quarterly Comparison Analysis (%)**

This page compares the returns of the portfolio to the returns of the investment policy and to the other investment objectives quarter by quarter for the last five years. The last row shows the returns since inception.

The purpose of this page is to indicate how closely the portfolio has tracked its objectives, particularly the investment policy. If the quarterly differences are small, then the portfolio has tracked the objectives closely. Wide discrepancies suggest that the portfolio is being invested in a fashion which does not resemble the underlying objective. It is not likely a portfolio invested in stocks and/or bonds will track a fixed (e.g. 10%) rate of return, or inflation very closely. However, a portfolio invested in securities should be able to track an index comprised of similar securities.

This page also provides a measure of the portfolio's ability to meet its objectives frequently. If the portfolio often outperforms the objective, then the difference column will have a preponderance of positive values.

If the investment policy or the objectives have changed over time, the heading at the top of each column will only reflect the current policy and objectives, even though the quarterly returns include the alterations.

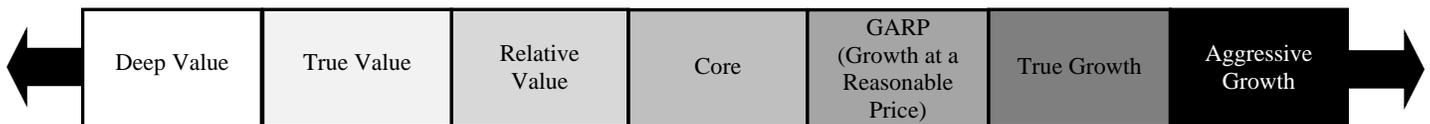
### **Market Values and Cash Flows**

This page summarizes the market values, cash flows, unrealized net gain or loss and returns for the fund. Net flows refer to the contributions less the withdrawals from the fund. This page illustrates the change in market value through time, and suggests whether changes were due to contributions, withdrawals, or unrealized investment profits.

## EQUITY INVESTMENT STYLES

In an attempt to achieve diversification, investors may invest in a variety of asset classes. Different asset classes, such as small, mid, large and all capitalization, offer vastly different levels of risk and potential rewards, but so does investment style diversification. Growth and Value investments tend to go in and out of favor in a cyclical pattern. Dividing your portfolio among asset classes that do not respond to the same market environments the same way at the same time has the potential to help minimize the effects of market volatility, as well as help to maximize the chances of increased returns over time. Ideally, when investments in one class are performing poorly, the assets in another class are doing well. The gains in the latter would potentially offset the losses in the former, minimizing the overall effect on your portfolio. Note that one can diversify away much of the risks of holding a single investment, but one cannot diversify away the risks of simply being invested in the market.

Equity investment managers will typically fall into a particular "Style" category, purchasing stocks with either growth or value characteristics. Understanding the intricacies of the particular equity styles allows you to combine investment managers with complementary styles more efficiently. Or, if you select a single investment style, knowledge of the style categories may help you plan for the ups and downs associated with a particular style. Below are descriptions of the different investment styles.



### The Core Style

The philosophy behind a core investment style is to have no bias towards growth or value, only the quality of the position. Typically a core portfolio searches to buy shares in companies that an investment manager believes would perform well in all market environments. As a result, they tend to contain a mixture of both growth and value shares.

### The Value Style

A simple way to describe value investing is that it is an approach that seeks to buy companies that offer the best value for the money. Value managers look for companies with prices that are believed to be undervalued relative to the market. Undiscovered companies or stocks that have price movements that do not correspond to the company's long-term fundamentals are generally considered to be value investments.

**Relative value:** investment will employ a value-oriented strategy that is "diluted" in nature in comparison with the true value style. Relative value managers tend to outperform their deeper value peers during periods when growth is outperforming value, however tend to trail during market conditions that favor a deeper value posture. Relative value managers have a definite value emphasis, but often have some growth overlays in security selection.

**True value:** investment style exhibits characteristics similar to those of the Russell 1000 Value Index. We often times refer to true value as a "plain vanilla" value investment approach. This type of portfolio will hold many of the same positions as the Russell 1000 Value Index, or positions whose characteristics in aggregate are similar to the overall characteristics of the Index.

**Deep value:** investing is the extreme of the value-oriented styles. A deep value strategy will avoid stocks that are the latest market fad. A deep value manager will typically invest in companies or industries that are out of favor, with the anticipation that the tides will turn and the investment will pay off. Deep value managers tend to demonstrate performance volatility, as they usually outperform their less value -biased peers during periods when value is outperforming growth. The reverse takes place when growth is outperforming, the deeper value styles will generally underperform their relative and true value peers.

## **The Growth Style**

Investment managers who chose to implement a growth style search for companies that are growing their earnings at a rapid pace. The companies are expected to grow faster than the stock market average. A growth investor tends to aim for big gains over the long term and must be willing to withstand the ups and downs of the growth oriented market.

**Growth at a Reasonable Price ("GARP")** investing combines the search for sustainable earnings growth with an emphasis on valuation. GARP investing reflects the desire to find companies that could be undervalued, but have solid sustainable growth potential. A GARP investment has historically been favored when the economy begins to slow because the consistent earnings of high quality companies become increasingly attractive. GARP investment managers maintain, generally speaking, that over long periods of time, stocks go up for one reason - underlying earnings growth.

**True Growth:** A true growth portfolio will typically display characteristics similar to those of the Russell 1000 Growth Index. A manager who employs a true growth management style will purchase many of the same companies that are in the Russell 1000 Growth Index, or a portfolio of holdings whose characteristics are similar to those of the Index. They seek to purchase only companies that remain faithful to the category of a "growth" investment style.

**Aggressive Growth:** Investment managers that seek the highest of earnings growth, regardless of valuation, are considered aggressive growth managers. They seek aggressive and sometimes emerging growth stocks, and are often dramatically overweight traditional growth-oriented sectors like Technology, for example.

Which is the best style? Many investors buy into a particular investment style that experienced above- average performance results after those performance results were achieved, only to sell out of that particular style when it begins to suffer a more difficult performance run. We maintain that it is prudent for investors not only to seek out investment managers who have demonstrated consistency as it relates to people, philosophy/process and performance, but also to choose managers in whom they can maintain conviction over the long term, so as to avoid the untimely cost of switching styles. We believe that understanding the uniqueness of each investment style is key to staying the course.

*Source: Wells Fargo Advisors, LLC*





## **IMPORTANT DISCLOSURES**

This report has been compiled from sources believed to be reliable but are not guaranteed to be accurate or complete.

This material has been prepared solely for information purposes and is not a solicitation. Performance reports contain returns that are net of investment management fees but gross of CAPTRUST Advisory fees. Any depiction of account value/performance is not warranted to be accurate or complete. Please refer to your official monthly/quarterly custodial statements for verification. Past performance does not guarantee future results. CAPTRUST Financial Advisors does not render legal, accounting, or tax advice.

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