



# City of Colorado Springs Review of Investment Performance

Quarter-ended September 30, 2017

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PFM Asset Management LLC

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# **Economic and Market Update**

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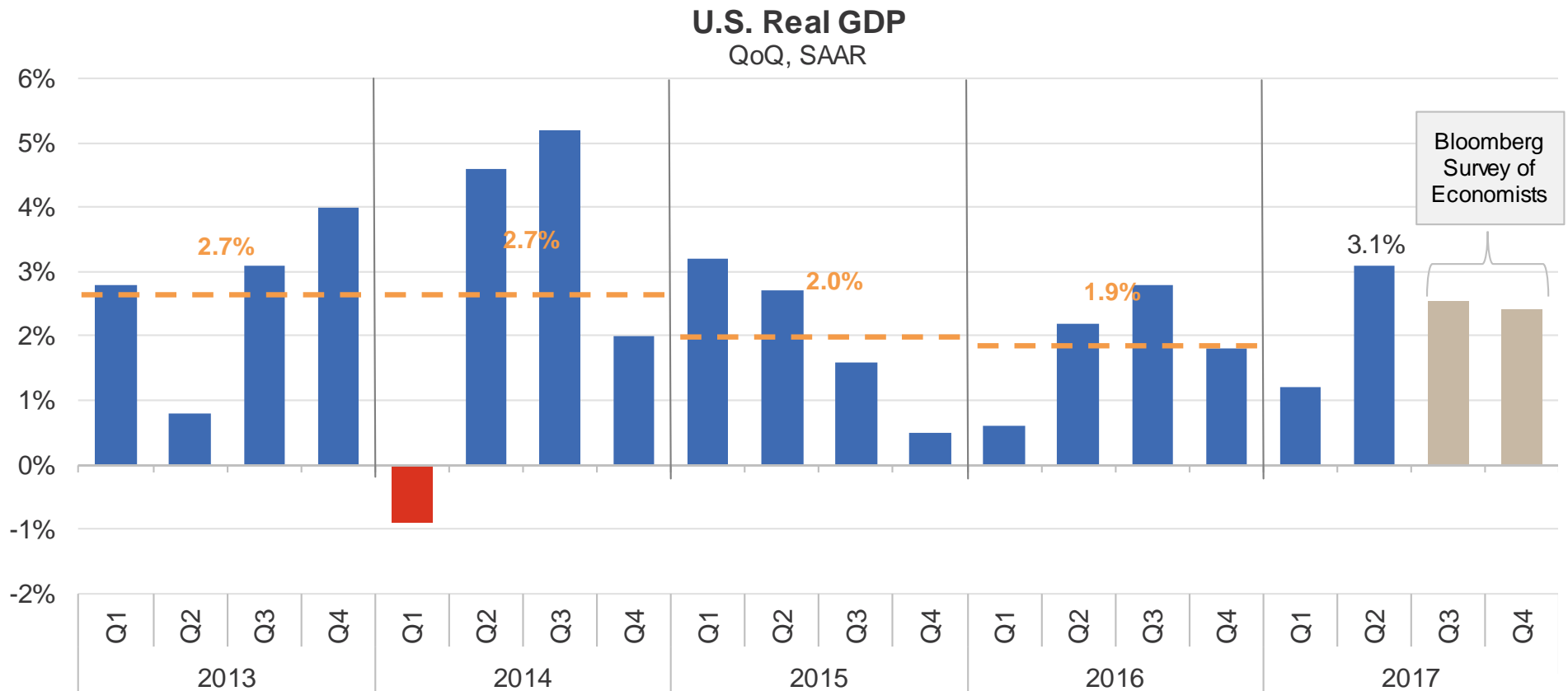
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## Current Market Themes

- ◆ U.S. economic conditions are characterized by:
  - Moderate economic growth
  - Disruptions due to Hurricanes Harvey and Irma such that economic data will likely experience a lot of “noise” over the next few months
  - Muted inflation pressures
- ◆ Treasury yields rose in the 3<sup>rd</sup> quarter and appear headed gradually higher
  - 2-year Treasury note yields reached the highest level since October, 2008
  - Fed officials still forecast one more rate hike in 2017, with market-based probabilities above 75% by year end
  - Fed announced balance sheet normalization will begin in October based on the previously released plan
- ◆ Stock markets around the globe continue to march ever higher, even as volatility is close to an all-time low
- ◆ The global growth outlook continues to brighten, led by the Euro-area
- ◆ Geopolitical risks continue to linger, with potential hot spots in several parts of the globe

## Economic Growth

- Gross domestic product (GDP) increased at an annualized rate of 3.1% in the second quarter of 2017.
- The acceleration in second quarter GDP reflected positive contributions from personal consumption, nonresidential private investments, exports, and federal government spending, offset by negative contributions from residential fixed investments, imports, and state and local government spending.

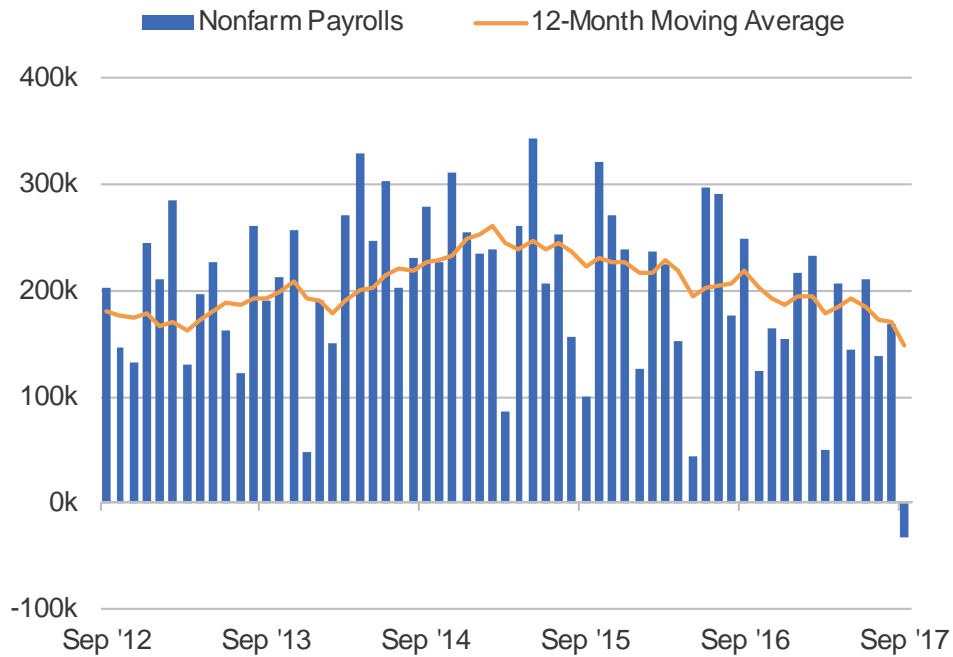


Source: Bloomberg, as of 9/30/17. SAAR is seasonally adjusted annualized rate. Orange dashes denotes four-quarter averages.

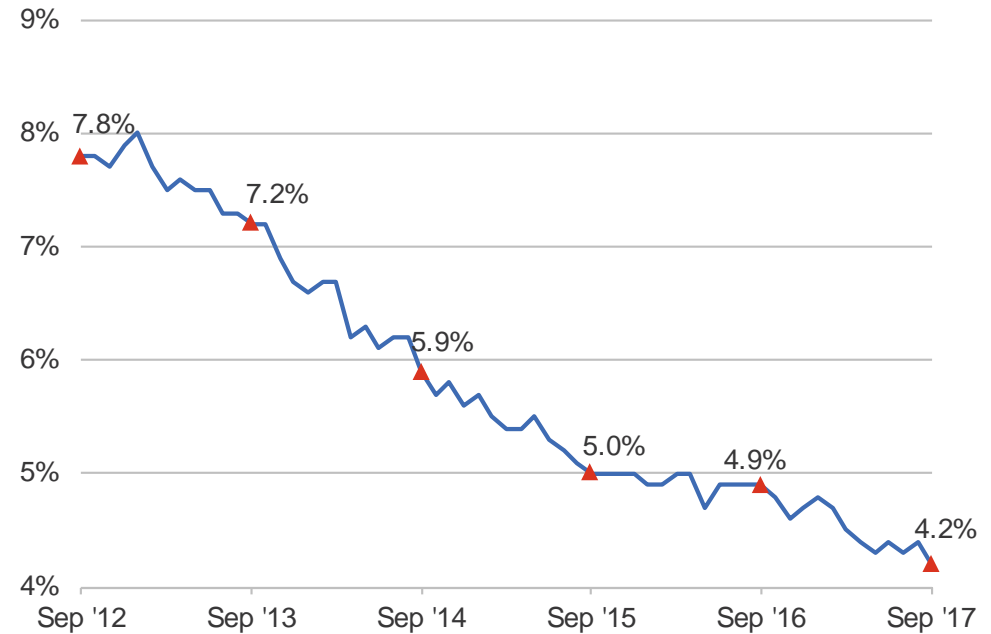
## Labor Market Remains Strong Despite the Impact of Hurricanes

- The U.S. labor market lost 33,000 jobs in September. The first decline in U.S. nonfarm payrolls in seven years.
- Despite the impact of the hurricanes on the September job numbers, the headline unemployment rate ticked down to 4.2%, hitting the lowest level in more than 16 years. The U6 unemployment rate also decreased slightly from 8.6% in June to 8.3% in September, while the labor force participation rate ticked up from 62.8% in June to 63.1% in September.
- Average hourly earnings—an important gauge of wage growth—grew 2.9% over the past 12 months.

### Monthly Change in Nonfarm Payrolls



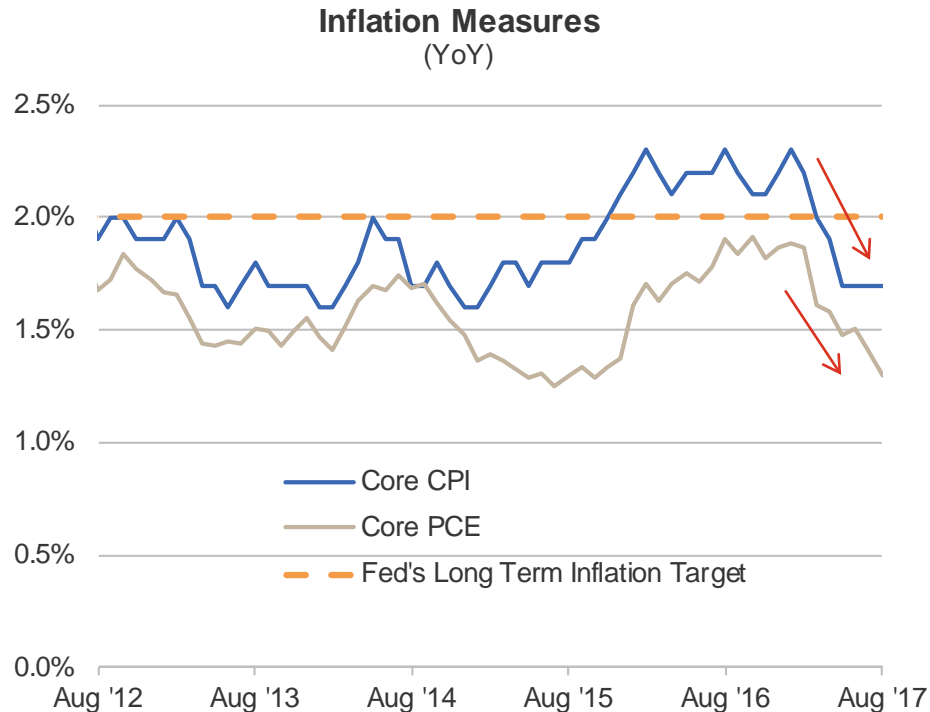
### Unemployment Rate



Source: Bloomberg, as of 9/30/17.

## Inflation Steadies but Outlook Remains Weak

- Inflation pressures have declined from levels at the beginning of the year. The core personal consumption expenditures (PCE) price index, the Fed's preferred measure of inflation, slipped to 1.3% year-over-year in August. While some Fed officials expect this weakness to be transitory, the prospect for another rate hike in 2017 may be diminished should this trend continue.
- Although inflation expectations jumped following the U.S. election, the outlook has since softened, reflecting doubts in the administration's ability to implement its agenda.



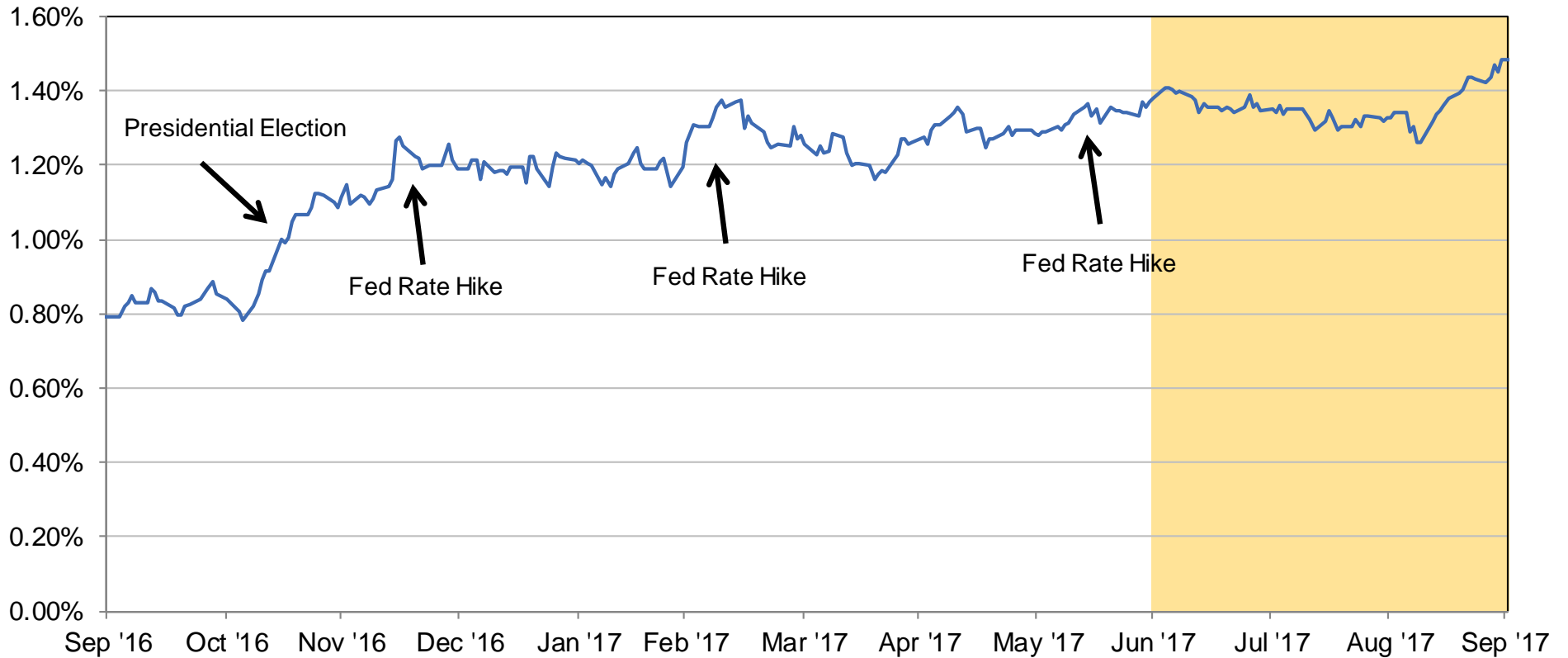
Source: Bloomberg, as of 9/30/17. Inflation expectations based on yield difference between 5-year Treasury note and 5-year Treasury Inflation Protected Securities (TIPS).

## Interest Rate Update

- Two-year treasury yields moved modestly higher towards the end of the quarter, possibly due to heightened expectations of another rate hike and a tax overhaul that could increase government borrowing.

### 2-Year Treasury Yields

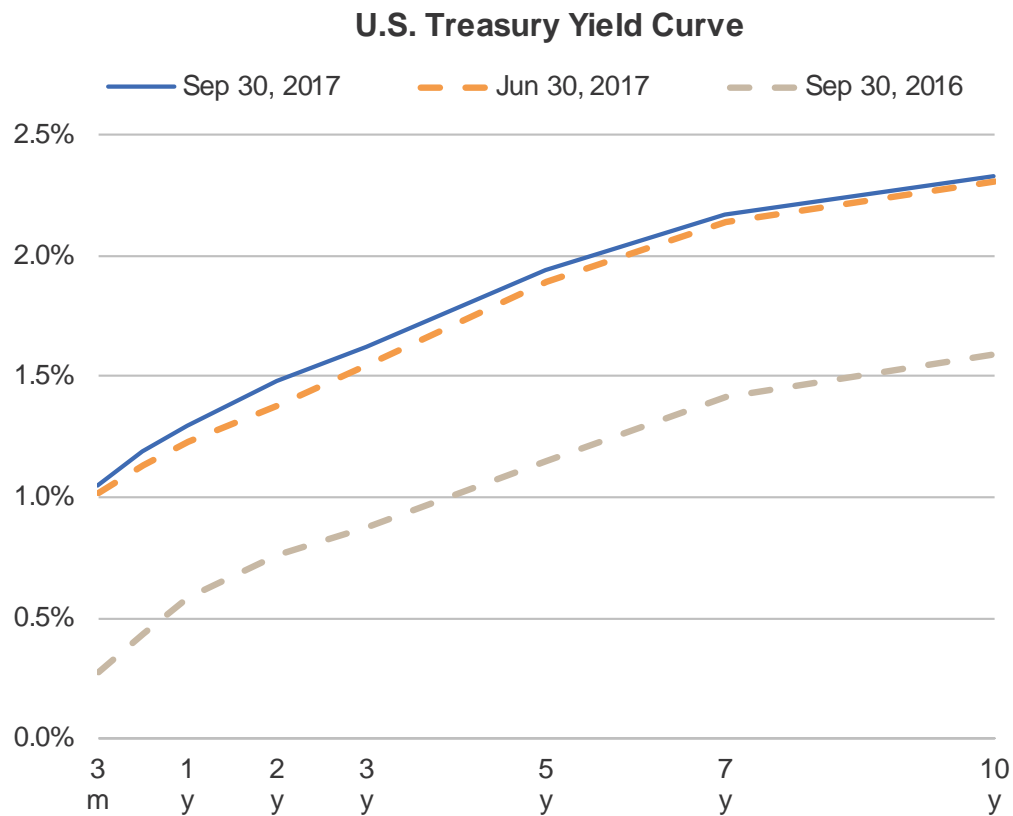
September 30, 2016 – September 30, 2017



Source: Bloomberg, as of 9/30/17.

## Short-Term Yields Higher but Curve Flatter in Third Quarter

- Treasury yields are substantially higher compared to a year ago. Short-term yields continue to rise in response to the Fed raising rates in their efforts to normalize policy. Longer-term yields still remain relatively low in response to lower inflation and growth expectations.



**Yield Curve History**

Maturity	6/30/17	9/30/17	Change
3-Mo.	1.01	1.05	0.04
6-Mo.	1.13	1.19	0.06
1-Yr.	1.23	1.29	0.06
2-Yr.	1.38	1.49	0.11
3-Yr.	1.55	1.62	0.07
5-Yr.	1.89	1.94	0.05
10-Yr.	2.31	2.33	0.02
20-Yr.	2.61	2.60	0.01
30-Yr.	2.84	2.86	0.02

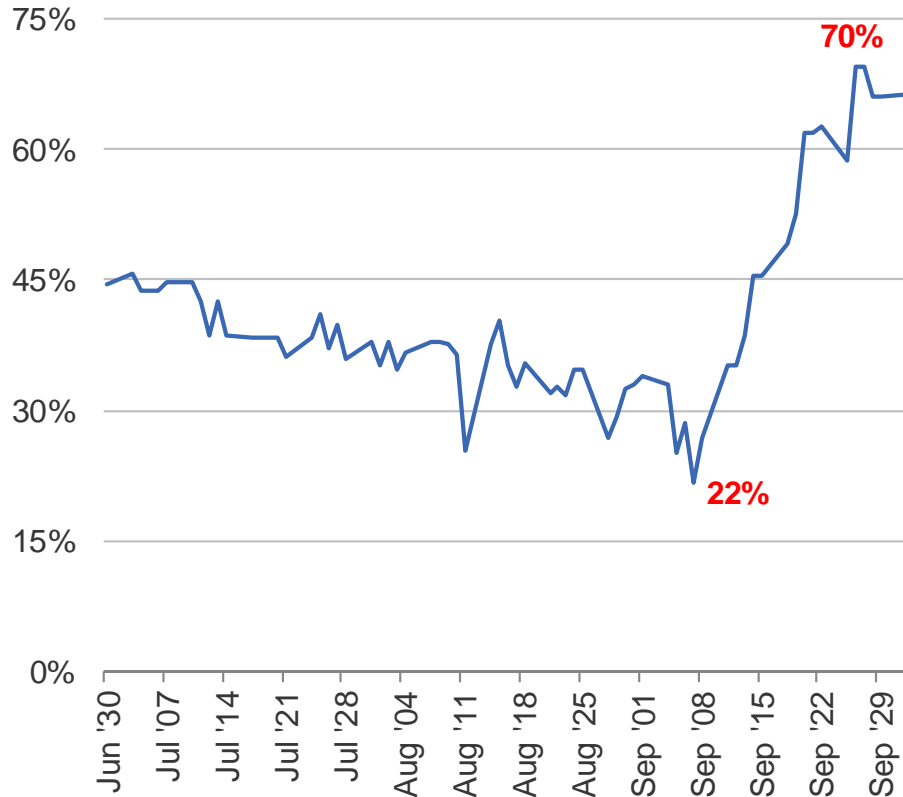
Source: Bloomberg, as of 9/30/17.



## Probability of Fed Rate Hike at the December Meeting

- The probability of a third rate hike in 2017 at the FOMC's December meeting increased following their September meeting.
- The FOMC will initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans in October.

### Historical Probability of December Rate Hike



### Probability of Fed Rate Hike

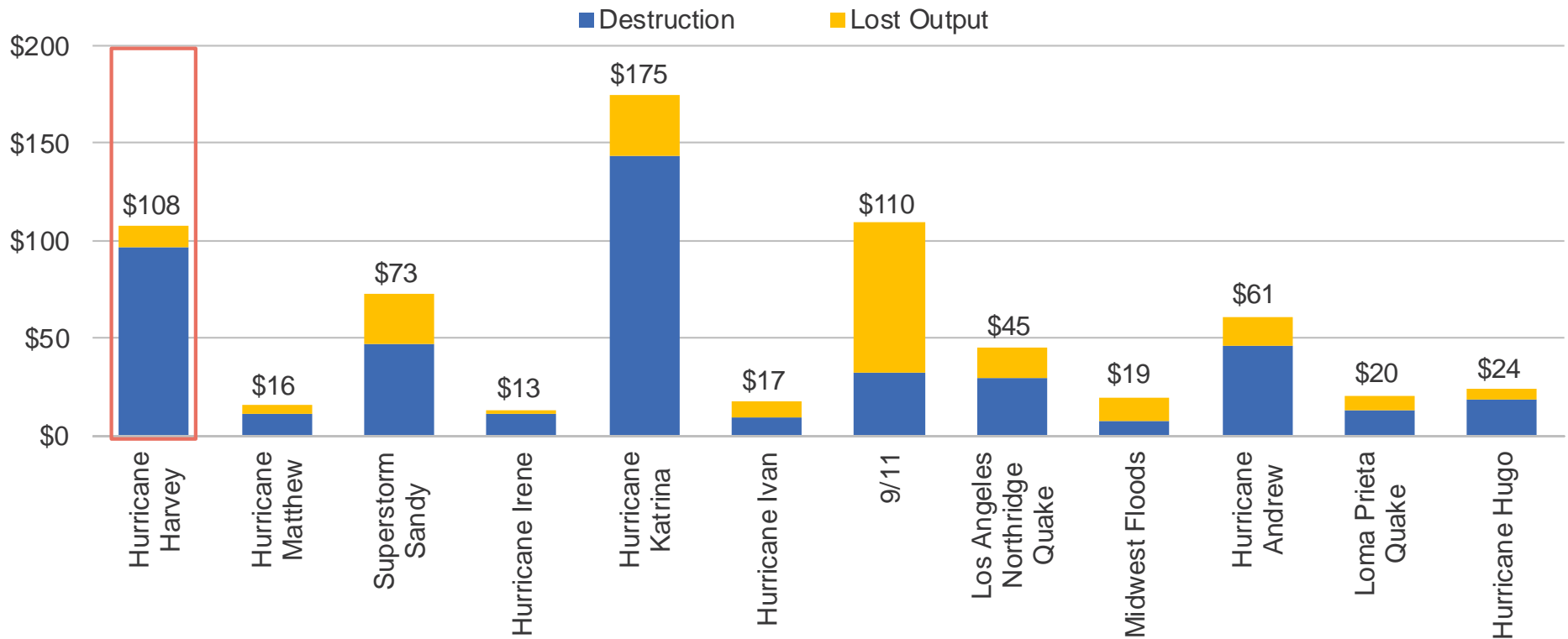
Meeting	Probability (25bps)
12/13/2017	70%
1/31/2018	68%
3/21/2018	54%
5/2/2018	54%
6/13/2018	43%

Source: Bloomberg, as of 9/30/2017.

## Hurricane Disruption

- ◆ Hurricane Harvey is expected to be the second most destructive natural disaster over the last three decades.
- ◆ Destruction to property caused by Hurricane Harvey is estimated to range from \$77 to \$97 billion. The lost economic output is forecasted to be \$9 – \$11 billion.

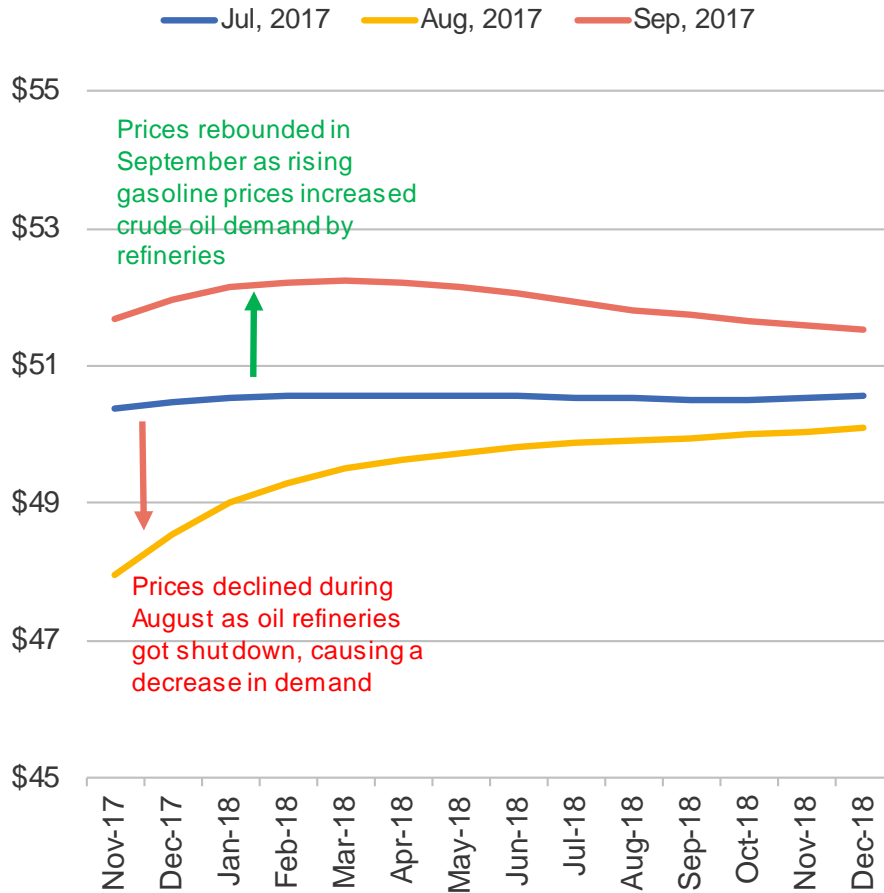
**Total Economic Loss Due to Disasters**  
(Billions of Today's Dollars)



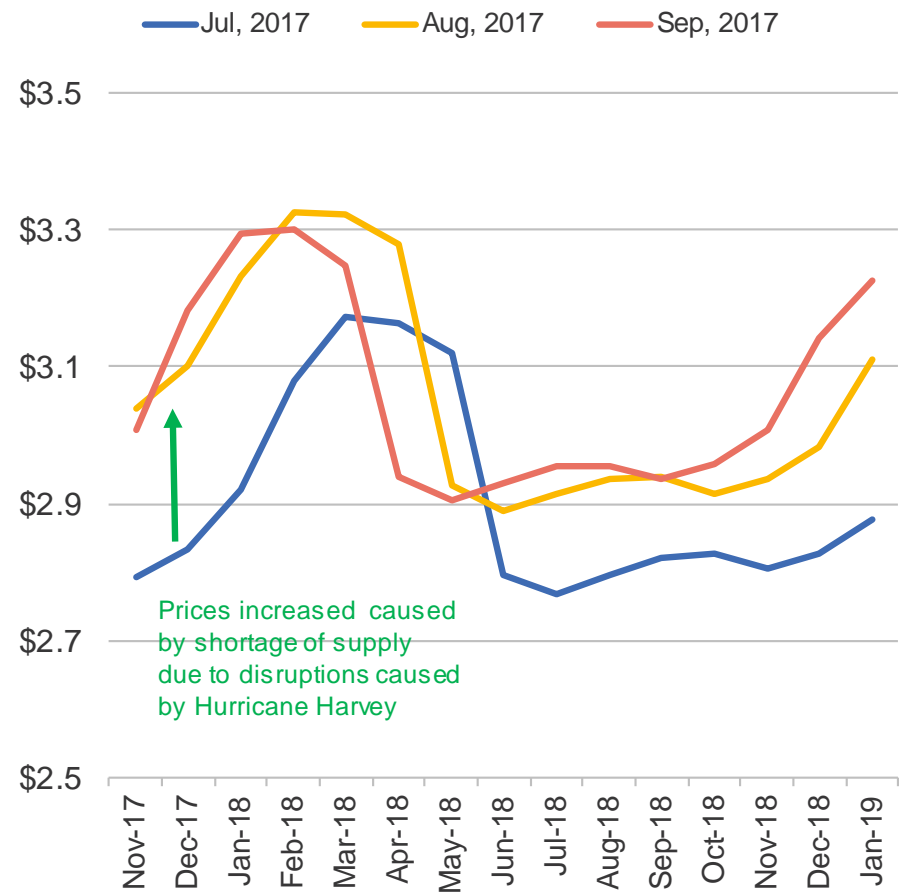
Hurricane Harvey estimates are preliminary and shown in the chart at the high end of the estimated range. Source: The Economic Impact of Hurricane Harvey, Moody's Analytics, 9/5/17.

## Impact of Hurricane Harvey on Energy Prices

**WTI Crude Oil Futures Curve Widening**  
(Dollars per Barrel)



**Natural Gas Futures Curve Widening**  
(Dollars per MMBtu)



Source: Bloomberg, as of 9/30/2017

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# **Portfolio Characteristics and Investment Strategy**

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## Portfolio Recap

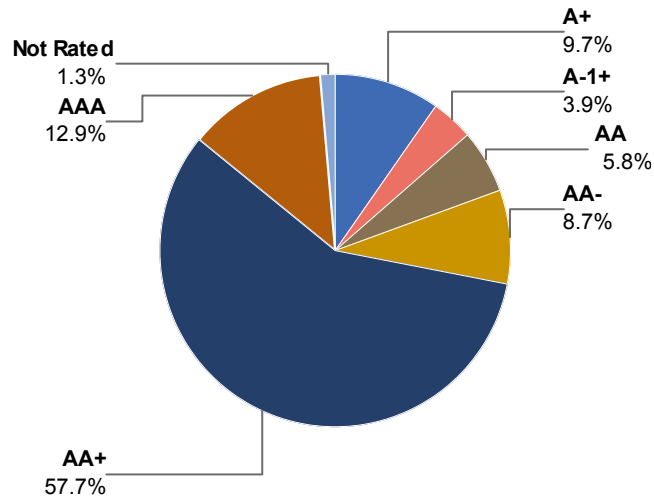
- Policy challenges in the U.S., combined with escalating tensions on the geopolitical front, led to bouts of uncertainty which triggered periods of “risk-off” and ”risk-on” during the third quarter. Nonetheless, volatility remained low and equities continued to book new record highs, reflective of investor complacency.
- After three rate hikes since December 2016, the Federal Reserve (Fed) shifted gears and announced the beginning of their program to reduce the central bank’s enormous balance sheet. The plan is to gradually reduce the Fed's securities holdings by decreasing its reinvestment of the principal payments on its large holdings of Treasury and agency mortgage-backed securities. This had little impact on our strategy as the process was telegraphed well in advance and will be gradual and predictable.
- Strong investor appetite for high-quality bonds generally caused the yield spreads on investment-grade fixed income sectors (relative to U.S. Treasuries) to tighten over the quarter, resulting in strong relative performance for corporate, mortgage-backed (MBS), asset-backed (ABS), municipal, and supranational securities.
  - The yield spreads on federal agency securities vs. comparable-maturity Treasuries narrowed to historic lows, in some cases near zero, leading to diminished value of the agency sector.
  - Supranationals carried more yield spread and offered an attractive alternative in the high-quality government agency space.
  - Corporate yield spreads also tightened to multi-year lows as investors reaching for yield piled into a limited market supply of investment-grade securities.
  - Following three straight quarters of underperformance, the MBS sector generated solid excess returns during the third quarter and is now in positive excess return territory year-to-date.
  - Despite weakening collateral metrics in some higher risk areas of the ABS sector (e.g., subprime auto loans which PFM does not purchase), higher quality prime auto loan and credit-card-backed tranches performed well, benefitting from higher initial yields.
- Without a clear trend in the direction of interest rates, we maintained the portfolio duration in line with the benchmark to minimize return volatility.

**Portfolio Statistics**

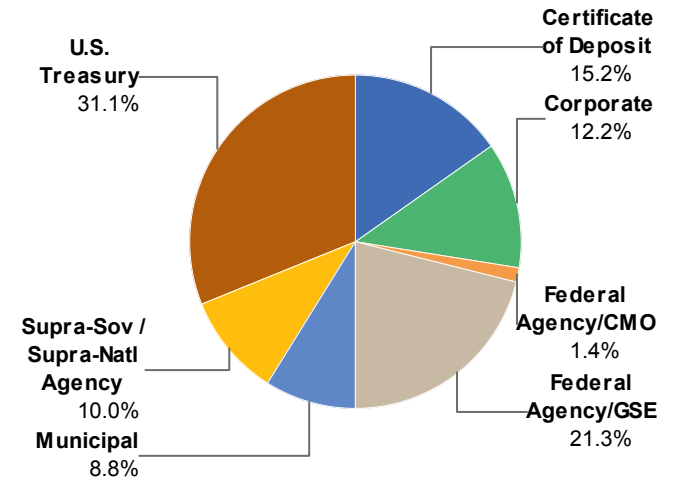
As of September 30, 2017

<b>Par Value:</b>	\$74,864,728
<b>Total Market Value:</b>	\$75,872,896
<b>Security Market Value:</b>	\$74,895,415
<b>Accrued Interest:</b>	\$306,793
<b>Cash:</b>	\$670,687
<b>Amortized Cost:</b>	\$75,284,002
<b>Yield at Market:</b>	1.69%
<b>Yield at Cost:</b>	1.55%
<b>Effective Duration:</b>	2.58 Years
<b>Duration to Worst:</b>	2.59 Years
<b>Average Maturity:</b>	2.68 Years
<b>Average Credit: *</b>	AA

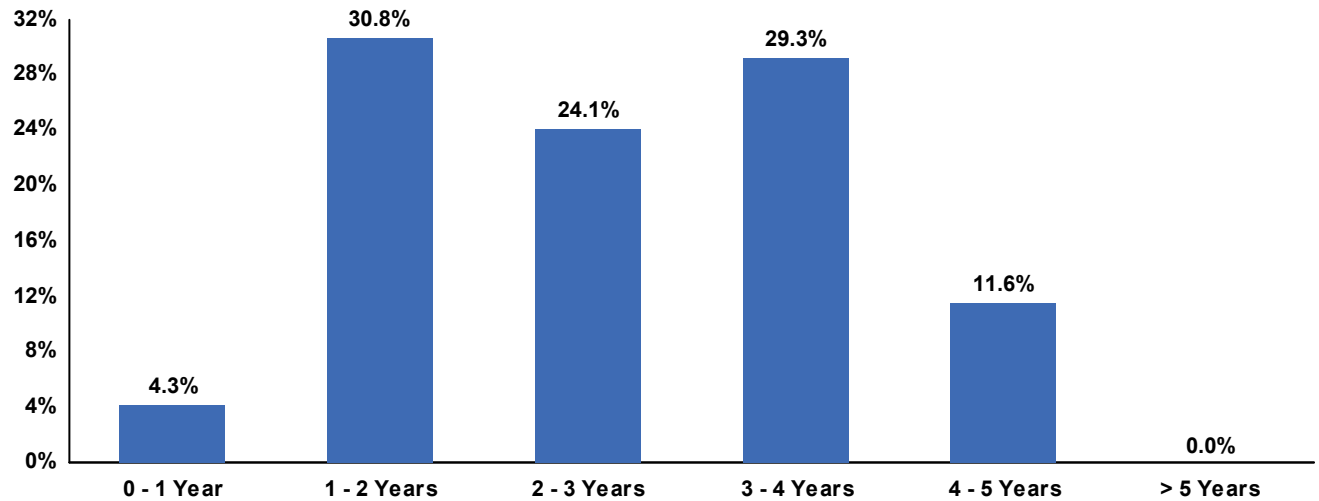
**Credit Quality (S&P Ratings)**



**Sector Allocation**



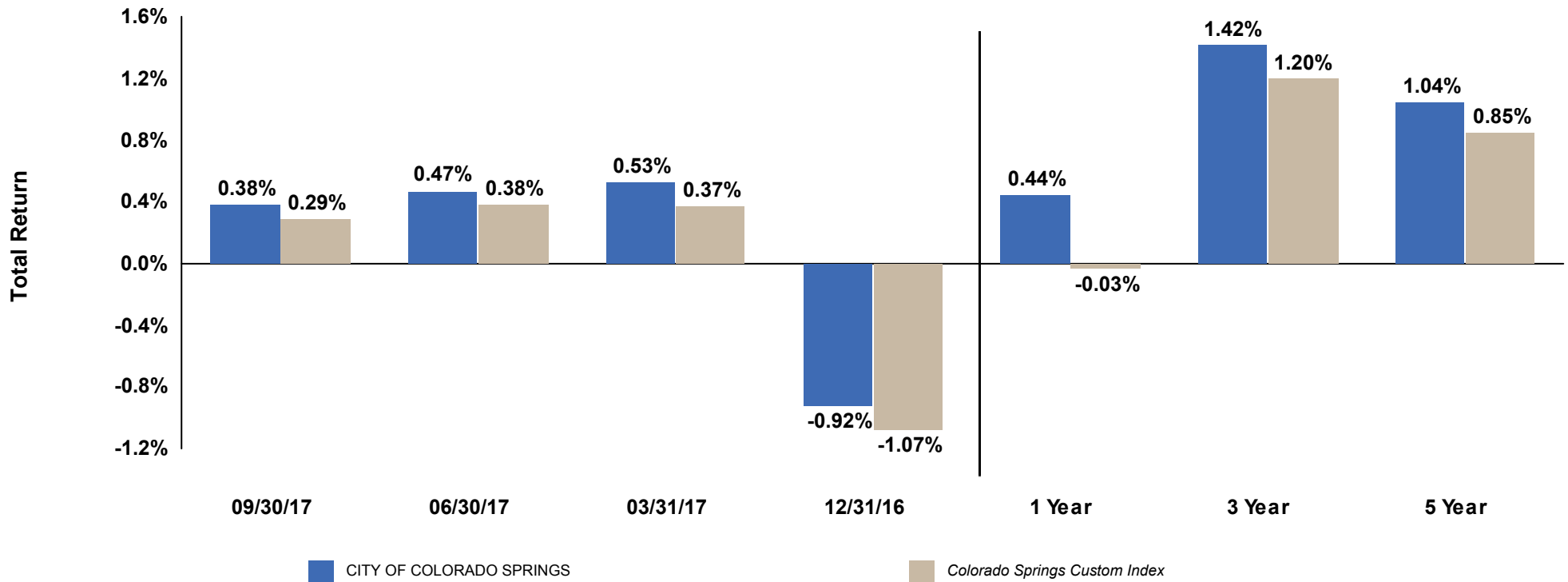
**Maturity Distribution**



\* An average of each security's credit rating assigned a numeric value and adjusted for its relative weighting in the portfolio.

**Portfolio Performance (Total Return)**

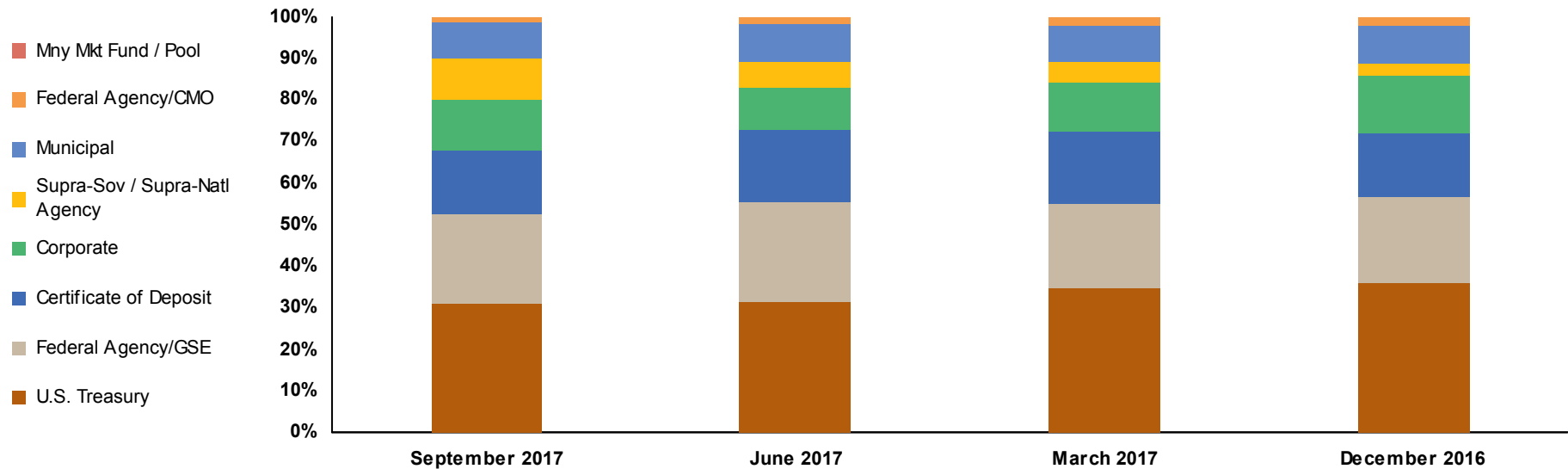
Portfolio/Benchmark	Effective Duration	Quarter Ended				1 Year	Annualized Return	
		09/30/17	06/30/17	03/31/17	12/31/16		3 Year	5 Year
<b>CITY OF COLORADO SPRINGS</b>	2.58	0.38%	0.47%	0.53%	-0.92%	0.44%	1.42%	1.04%
<i>Colorado Springs Custom Index</i>	2.59	0.29%	0.38%	0.37%	-1.07%	-0.03%	1.20%	0.85%
<b>Difference</b>		0.09%	0.09%	0.16%	0.15%	0.47%	0.22%	0.19%



Portfolio performance is gross of fees unless otherwise indicated.

### Sector Allocation

Sector	September 30, 2017		June 30, 2017		March 31, 2017		December 31, 2016	
	MV (\$MM)	% of Total	MV (\$MM)	% of Total	MV (\$MM)	% of Total	MV (\$MM)	% of Total
U.S. Treasury	23.3	31.1%	23.4	31.1%	26.1	34.8%	26.6	35.8%
Federal Agency/GSE	16.0	21.3%	18.0	24.0%	15.0	20.0%	15.3	20.6%
Certificate of Deposit	11.4	15.2%	13.1	17.5%	13.1	17.5%	11.6	15.6%
Corporate	9.2	12.2%	7.7	10.3%	8.7	11.6%	10.3	13.9%
Supra-Sov / Supra-Natl Agency	7.5	10.0%	4.7	6.3%	3.8	5.1%	2.3	3.0%
Municipal	6.6	8.8%	6.6	8.8%	6.6	8.8%	6.6	8.8%
Federal Agency/CMO	1.0	1.4%	1.5	2.0%	1.6	2.2%	1.7	2.3%
<b>Total</b>	<b>\$74.9</b>	<b>100.0%</b>	<b>\$75.1</b>	<b>100.0%</b>	<b>\$74.9</b>	<b>100.0%</b>	<b>\$74.5</b>	<b>100.0%</b>



Detail may not add to total due to rounding.



## Sector/Issuer Distribution

As of September 30, 2017

Sector / Issuer	Market Value (\$)	% of Sector	% of Total Portfolio
<b>Certificate of Deposit</b>			
BANK OF MONTREAL	1,506,086	13.3%	2.0%
BANK OF NOVA SCOTIA	1,448,114	12.8%	1.9%
CANADIAN IMPERIAL BANK OF COMMERCE	1,453,655	12.8%	1.9%
NORDEA BANK AB	1,453,655	12.8%	1.9%
ROYAL BANK OF CANADA	1,452,001	12.8%	1.9%
SKANDINAVISKA ENSKILDA BANKEN AB	1,448,681	12.8%	1.9%
TORONTO-DOMINION BANK	1,452,219	12.8%	1.9%
WESTPAC BANKING CORP	1,140,498	10.0%	1.5%
<b>Sector Total</b>	<b>11,354,908</b>	<b>100.0%</b>	<b>15.2%</b>
<b>Corporate</b>			
APPLE INC	1,437,472	15.7%	1.9%
BERKSHIRE HATHAWAY INC	622,486	6.8%	0.8%
CHEVRON CORPORATION	1,360,718	14.8%	1.8%
COCA-COLA COMPANY	772,490	8.4%	1.0%
EXXON MOBIL CORP	1,453,931	15.9%	1.9%
JOHNSON & JOHNSON	397,146	4.3%	0.5%
MICROSOFT CORP	1,351,117	14.7%	1.8%
TOYOTA MOTOR CORP	1,270,846	13.9%	1.7%
WELLS FARGO & COMPANY	502,639	5.5%	0.7%

Sector / Issuer	Market Value (\$)	% of Sector	% of Total Portfolio
<b>Sector Total</b>	<b>9,168,845</b>	<b>100.0%</b>	<b>12.2%</b>
<b>Federal Agency/CMO</b>			
FANNIE MAE	1,014,431	100.0%	1.4%
<b>Sector Total</b>	<b>1,014,431</b>	<b>100.0%</b>	<b>1.4%</b>
<b>Federal Agency/GSE</b>			
FANNIE MAE	8,044,910	50.3%	10.7%
FEDERAL HOME LOAN BANKS	5,093,132	31.9%	6.8%
FREDDIE MAC	2,851,715	17.8%	3.8%
<b>Sector Total</b>	<b>15,989,756</b>	<b>100.0%</b>	<b>21.3%</b>
<b>Municipal</b>			
CITY OF NEW YORK CITY, NY	1,417,074	21.5%	1.9%
FLORIDA ST HURRICAN CAT FUND	1,456,206	22.1%	1.9%
MISSISSIPPI STATE	884,382	13.4%	1.2%
NEW YORK CITY NY TRANSITIONAL	1,451,530	22.1%	1.9%
STATE OF CONNECTICUT	1,373,554	20.9%	1.8%
<b>Sector Total</b>	<b>6,582,745</b>	<b>100.0%</b>	<b>8.8%</b>
<b>Supra-Sov / Supra-Natl Agency</b>			
AFRICAN DEVELOPMENT BANK	2,064,165	27.7%	2.8%
ASIAN DEVELOPMENT BANK	1,698,720	22.8%	2.3%
INTER-AMERICAN DEVELOPMENT BANK	1,987,541	26.7%	2.7%

Sector / Issuer	Market Value (\$)	% of Sector	% of Total Portfolio
INTL BANK OF RECONSTRUCTION AND DEV	1,703,407	22.9%	2.3%
<b>Sector Total</b>	<b>7,453,833</b>	<b>100.0%</b>	<b>10.0%</b>
<b>U.S. Treasury</b>			
UNITED STATES TREASURY	23,330,897	100.0%	31.2%
<b>Sector Total</b>	<b>23,330,897</b>	<b>100.0%</b>	<b>31.2%</b>
<b>Portfolio Total</b>	<b>74,895,415</b>	<b>100.0%</b>	<b>100.0%</b>

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## Outlook and Strategy

- Although current low inflation is a conundrum, recent signaling from Fed officials boosted expectations for another rate hike this year, raising the market-implied probability of a December hike from 30% mid-third quarter to over 70%.
- With 2-year Treasury yields at the highest level since 2008, we plan to maintain the portfolio duration generally in line with the benchmark. However, the significant flattening of the yield curve since the beginning of the year has reduced the benefit of some maturity extensions, so we will carefully assess value along the yield curve.
- As we near the end of Janet Yellen's term as Chair of the Federal Reserve, which will expire early next year, we will assess the market implications of all new appointees to the Fed (there will be a total of 4 openings on the Fed's 7-member Board of Governors).
- Our prevailing economic theme includes moderate growth expectations in the U.S. and abroad, further improvements in the tightening U.S. labor market, healthy consumer demand, and a stable corporate backdrop.
- The impact from the recent Gulf Coast hurricanes will likely manifest itself in weaker economic data for September and early fourth quarter. However, history shows that the effects of weather-related events are typically short lived and may be smoothed over by the subsequent recovery and rebuilding activity.
- On the policy front, the potential for tax reform is worth watching, as will be the debt ceiling debate, which will resurface in December.
- Our outlook on each of the major investment-grade fixed income sectors is as follows:
  - Limited supply and robust demand are likely to keep yield spreads on federal agencies tight. Generally, we favor U.S. Treasuries over agencies, except for new issues that offer a fair yield concession. Supranationals remain an attractive alternative.
  - Corporate fundamentals remain stable, and we continue to view the sector positively. However, recent richness in the sector warrants being more selective with industries, issuers, and individual issues.
  - In the credit space, we find that negotiable certificates of deposit (CDs) offer the best value, especially in the 2-year and under maturity range.
  - Taxable municipal security yields spreads are low and offer limited value. New issue volume is also down relative to last year, constraining supply.
  - ABS continue to offer opportunity for modest incremental yield. We continue to closely monitor developments in the underlying collateral.
  - Our view is less optimistic on the MBS sector as the Fed's balance sheet reduction in this area should put upward pressure on yields. Shorter, more stable structures may offer opportunities, but supply is very limited.

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## IMPORTANT DISCLOSURES

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- Market values that include accrued interest are derived from closing bid prices as of the last business day of the month as supplied by Interactive Data, Bloomberg, or Telerate. Where prices are not available from generally recognized sources, the securities are priced using a yield based matrix system to arrive at an estimated market value.
- In accordance with generally accepted accounting principles, information is presented on a trade date basis; forward settling purchases are included in the monthly balances, and forward settling sales are excluded.
- Performance is presented in accordance with the CFA Institute's Global Investment Performance Standards (GIPS). Unless otherwise noted, performance is shown gross of fees. Quarterly returns are presented on an unannualized basis. Returns for periods greater than one year are presented on an annualized basis. Past performance is not indicative of future returns.
- Bank of America/Merrill Lynch Indices provided by Bloomberg Financial Markets.
- Money market fund/cash balances are included in performance and duration computations.
- Standard & Poor's is the source of the credit ratings. Distribution of credit rating is exclusive of money market fund/LGIP holdings.
- Callable securities in the portfolio are included in the maturity distribution analysis to their stated maturity date, although, they may be called prior to maturity.
- MBS maturities are represented by expected average life.

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## GLOSSARY

- **ACCRUED INTEREST:** Interest that is due on a bond or other fixed income security since the last interest payment was made.
- **AGENCIES:** Federal agency securities and/or Government-sponsored enterprises.
- **AMORTIZED COST:** The original cost of the principal of the security is adjusted for the amount of the periodic reduction of any discount or premium from the purchase date until the date of the report. Discount or premium with respect to short-term securities (those with less than one year to maturity at time of issuance) is amortized on a straight line basis. Such discount or premium with respect to longer-term securities is amortized using the constant yield basis.
- **BANKERS' ACCEPTANCE:** A draft or bill of exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill as well as the insurer.
- **COMMERCIAL PAPER:** An unsecured obligation issued by a corporation or bank to finance its short-term credit needs, such as accounts receivable and inventory.
- **CONTRIBUTION TO DURATION:** Represents each sector or maturity range's relative contribution to the overall duration of the portfolio measured as a percentage weighting. Since duration is a key measure of interest rate sensitivity, the contribution to duration measures the relative amount or contribution of that sector or maturity range to the total rate sensitivity of the portfolio.
- **DURATION TO WORST:** A measure of the sensitivity of a security's price to a change in interest rates, stated in years, computed from cash flows to the maturity date or to the put date, whichever results in the highest yield to the investor.
- **EFFECTIVE DURATION:** A measure of the sensitivity of a security's price to a change in interest rates, stated in years.
- **EFFECTIVE YIELD:** The total yield an investor receives in relation to the nominal yield or coupon of a bond. Effective yield takes into account the power of compounding on investment returns, while nominal yield does not.
- **FDIC:** Federal Deposit Insurance Corporation. A federal agency that insures bank deposits to a specified amount.
- **INTEREST RATE:** Interest per year divided by principal amount and expressed as a percentage.
- **MARKET VALUE:** The value that would be received or paid for an investment in an orderly transaction between market participants at the measurement date.
- **MATURITY:** The date upon which the principal or stated value of an investment becomes due and payable.
- **NEGOTIABLE CERTIFICATES OF DEPOSIT:** A CD with a very large denomination, usually \$1 million or more, that can be traded in secondary markets.
- **PAR VALUE:** The nominal dollar face amount of a security.

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## GLOSSARY

- **PASS THROUGH SECURITY:** A security representing pooled debt obligations that passes income from debtors to its shareholders. The most common type is the mortgage-backed security.
- **REPURCHASE AGREEMENTS:** A holder of securities sells these securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.
- **SETTLE DATE:** The date on which the transaction is settled and monies/securities are exchanged. If the settle date of the transaction (i.e., coupon payments and maturity proceeds) occurs on a non-business day, the funds are exchanged on the next business day.
- **TRADE DATE:** The date on which the transaction occurred; however, the final consummation of the security transaction and payment has not yet taken place.
- **UNSETTLED TRADE:** A trade which has been executed; however, the final consummation of the security transaction and payment has not yet taken place.
- **U.S. TREASURY:** The department of the U.S. government that issues Treasury securities.
- **YIELD:** The rate of return based on the current market value, the annual interest receipts, maturity value, and the time period remaining until maturity, stated as a percentage on an annualized basis.
- **YTM AT COST:** The yield to maturity at cost is the expected rate of return based on the original cost, the annual interest receipts, maturity value, and the time period from purchase date to maturity, stated as a percentage on an annualized basis.
- **YTM AT MARKET:** The yield to maturity at market is the rate of return based on the current market value, the annual interest receipts, maturity value, and the time period remaining until maturity, stated as a percentage on an annualized basis.