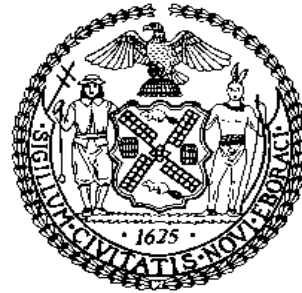


## Overview – First Quarter 2016



THE CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER

June 15, 2016

# Market Returns: Q1-2016

Asset Class	Index	First Quarter 2016	Fourth Quarter 2015	Three Year	Five Year	Expected*
Equities - U.S.	Russell 3000	0.97%	6.27%	11.15%	11.01%	7.83%
Equities - Developed Intl	MSCI EAFE	-3.01%	4.71%	2.23%	2.29%	8.94%
Equities - Emerging Intl	MSCI EMF	5.71%	0.66%	-4.50%	-4.13%	11.00%
Debt - US Government	NYC Treas/Agency +5	5.55%	-1.29%	3.66%	6.41%	2.82%
Debt - Investment Grade	NYC IG Credit	3.85%	-0.44%	2.85%	4.89%	3.42%
Debt - High Yield	Citigroup BB & B	3.04%	-1.70%	1.71%	4.83%	6.08%

\*Average of consultant long-term arithmetic expected returns, as of 2016

Source: State Street

# Market Returns: Q1-2016

Asset Class	Index	Q1 - 1st Half (1/1/16-2/11/16)	Q1 - 2nd Half (2/12/16-3/31/16)
Equities - U.S.	Russell 3000	-11.29%	13.82%
Equities - Developed Intl	MSCI EAFE	-12.78%	11.21%
Equities - Emerging Intl	MSCI EMF	-10.15%	17.65%
Debt - US Government	NYC Treas/Agency +5	6.63%	-1.01%
Debt - Investment Grade	NYC IG Credit	0.80%	3.04%
Debt - High Yield	Citigroup BB & B	-5.25%	8.74%

Source: State Street



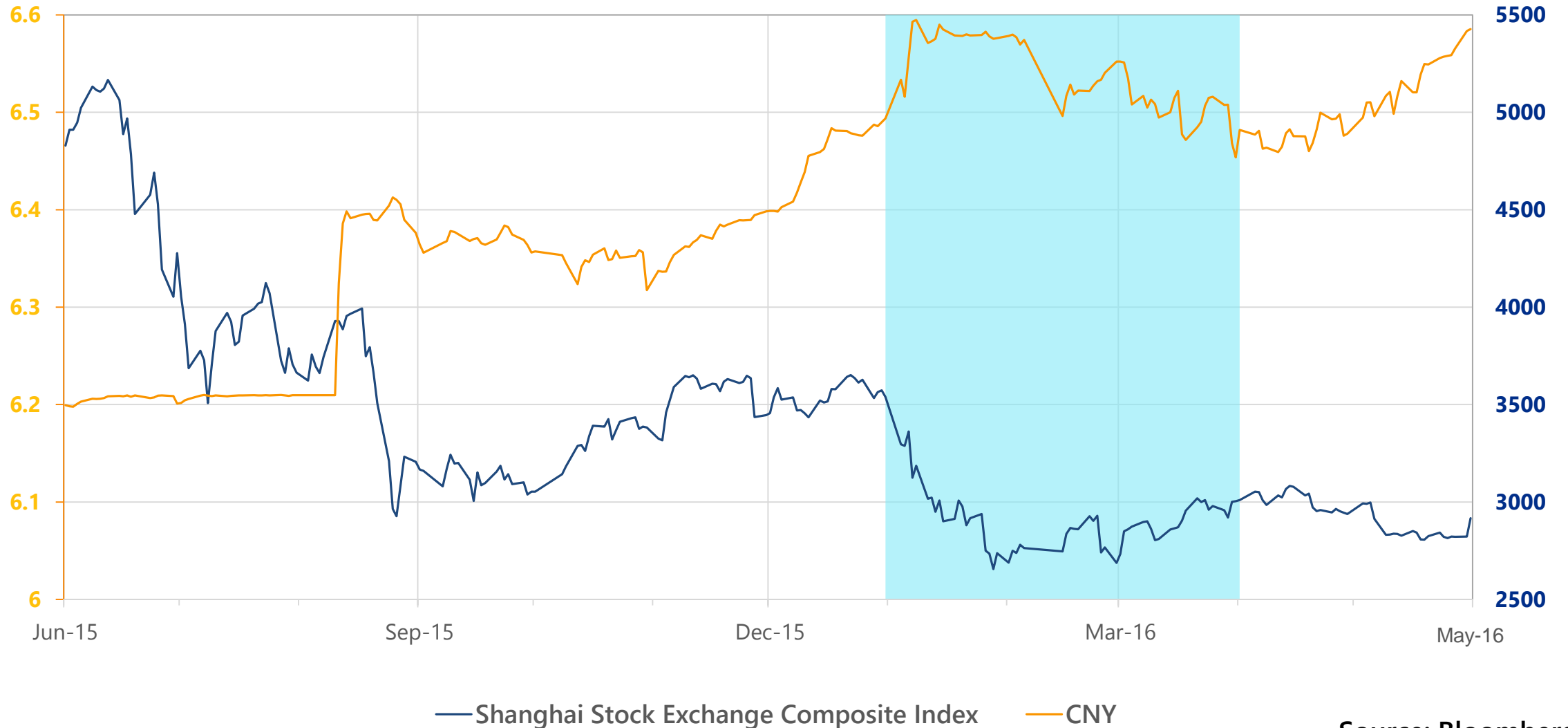
# A Tale of Two Quarters

## 1<sup>st</sup> Half Q1 (1/1 to 2/11)

- China economic and FX concerns
- US recession fears and profit margin concerns
- Lack of confidence in central banks



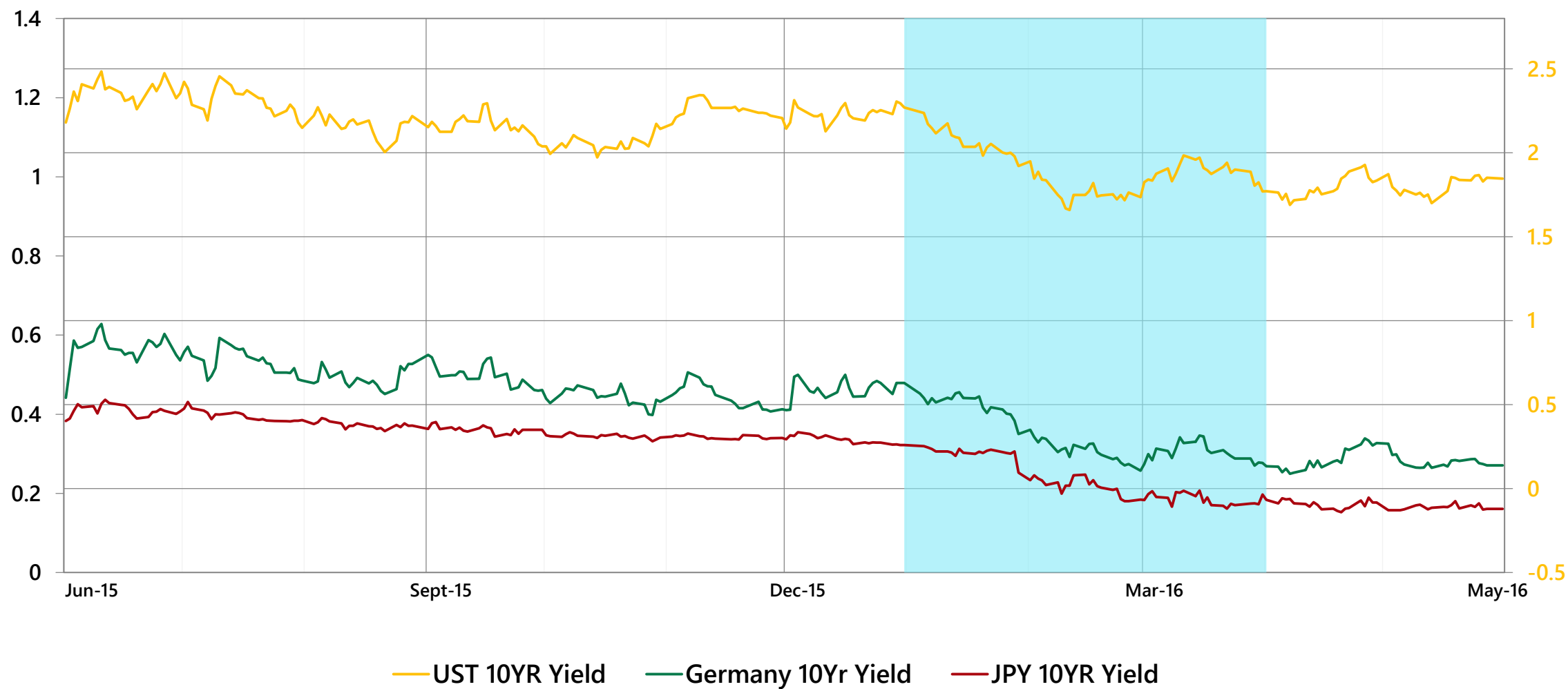
# Shanghai Stock Exchange Composite Index, CNY Currency



Source: Bloomberg



# Global Yield Decline



Source: Bloomberg



# Excerpts from Key Central Bank Meetings and Speeches

## Losing Confidence:

*"The Committee is closely monitoring global economic and financial developments and is assessing their implications for the labor market and inflation, and for the balance of risks to the outlook"*

*- FOMC Meeting, Press Release Date: January 27, 2016*

*"Quantitative and Qualitative Monetary Easing  
with a Negative Interest Rate"*

*-Bank of Japan meeting, Press Release Date: January 29, 2016*

Source: Board of Governors of the Federal Reserves System, Bank of Japan Meeting



# A Tale of Two Quarters

## 2<sup>nd</sup> Half (2/12 to 3/31)

- G20 Shanghai meeting – Currency Détente
- Central Bank response (Pboc, Fed, ECB)
- Recession fears fade



# Excerpts from Key Central Bank Meetings and Speeches

## Regaining Confidence:

*"Increased volatility in global financial markets have exacerbated concerns about the outlook for growth"*

*- Janet Yellen testimony at Monetary Policy Testimony, Press Release Date: February 10, 2016*

*"ECB is ready to do its part" .. and.. If factors entail downward risks to price stability, we will not hesitate to act.*

*-Mario Draghi speech, Press Release Date : February 15, 2016*

*"We will refrain from the competitive devaluation..." and.. "We will carefully calibrate and clearly communicate our macroeconomic and structural policy actions to reduce policy uncertainty..."*

*-Joint Communiqué from G20 Meeting in Shanghai Press Release Date : February 27, 2016*

Source: Board of Governors of the Federal Reserves System, Mario Draghi Speech, G20 Meeting Shanghai.



# Excerpts from Key Central Bank Meetings and Speeches

## Regaining Confidence (continued):

*"...Balance of risks to my growth and inflation outlook may be starting to tilt slightly to the downside"*

*- Bill Dudley, speech following G20 meetings, Press Release Date: March 1, 2016*

*"Risk of CNY currency devaluation has been "greatly, greatly reduced"*

*-Jack Lew, speech following G20 meetings, Press Release Date : March 1, 2016*

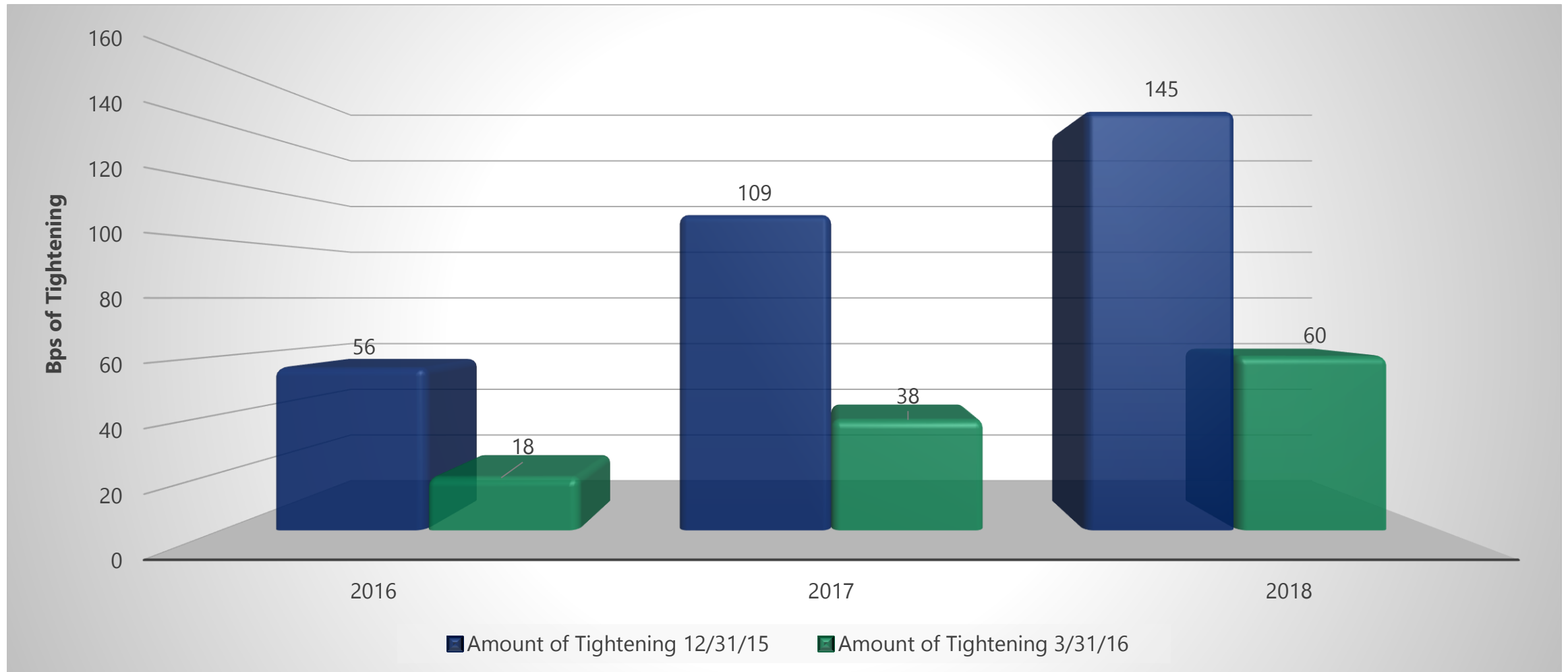
*ECB announced significant monetary policy easing, including... 1) Rate cut from -30bp to -40bp 2) Increased monthly purchases from Euro 60B/Month to Euro 80B/month 3) Broadened asset purchases to include non-financial corporate bonds 4) Launched a new series of four long term refinancing operations, with a maturity of four years, with fixed interest rate of -40bp*

*-ECB meeting, Press Release Date: March 10, 2016*

Source: Board of Governors of the Federal Reserves System, Bill Dudley G20 Meeting, ECB Meeting.



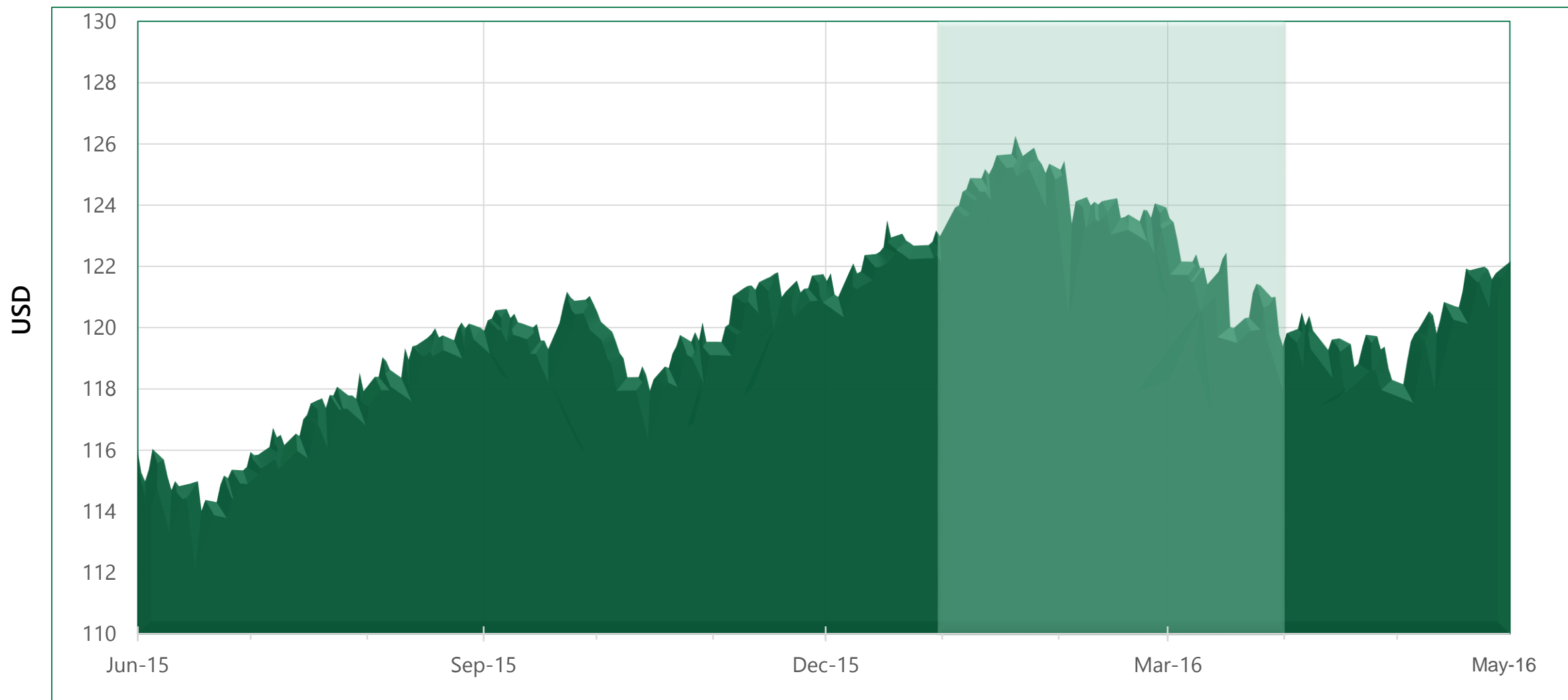
# Market Based Expectations Fed Rate Hikes



Source: Bloomberg



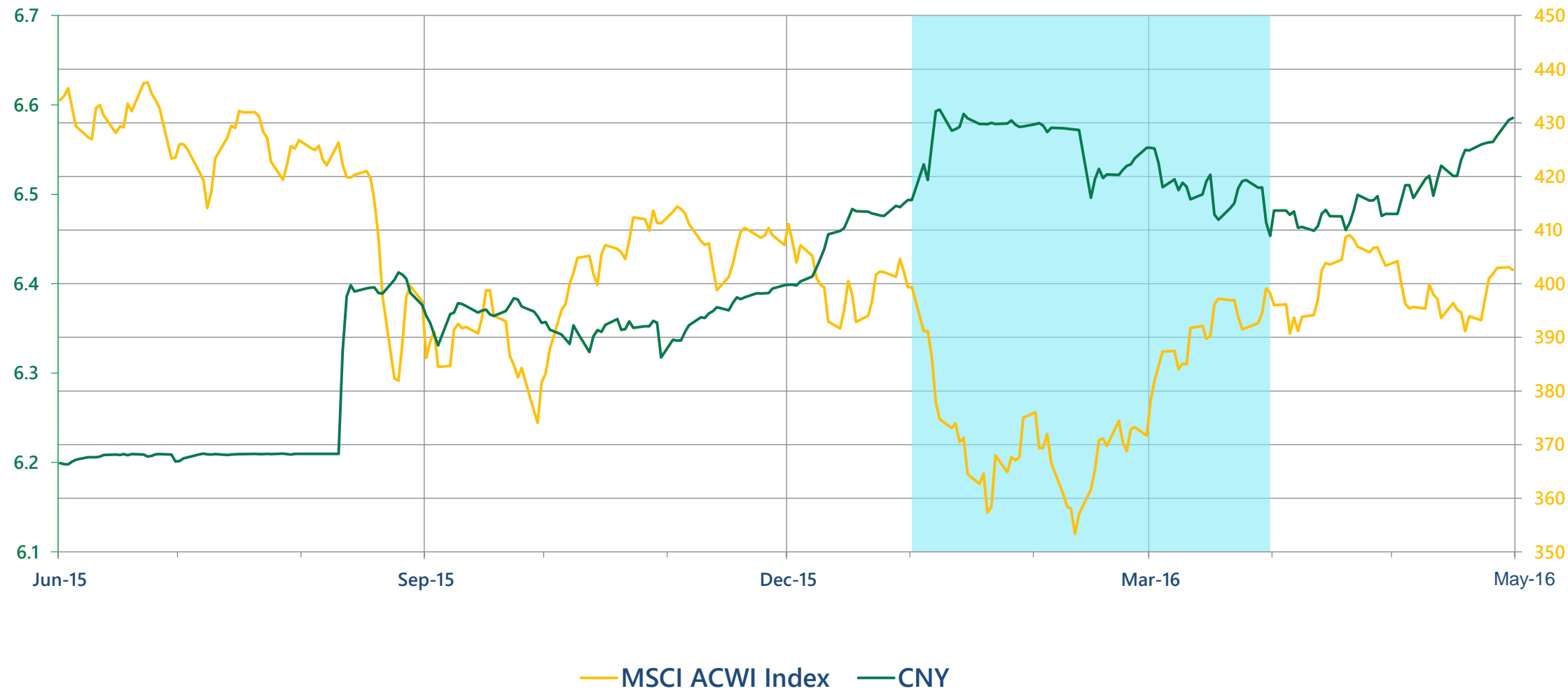
# US Trade Weighted Dollar



Source: Bloomberg

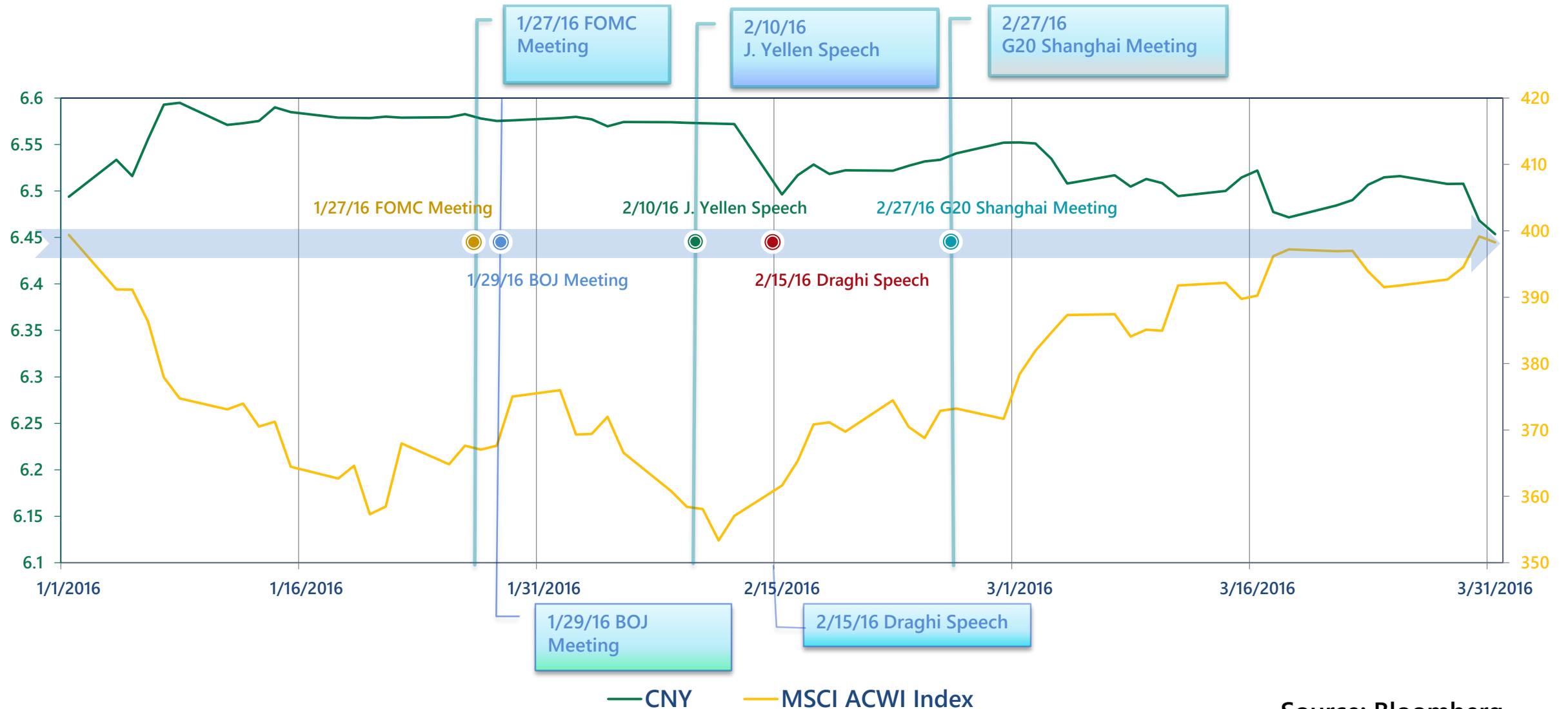


# MSCI AC World Index, Chinese Yuan



Source: Bloomberg

# MSCI AC World Index, Chinese Yuan 1<sup>st</sup> Quarter 2016



Source: Bloomberg



# Brexit

***Vote on June 23, remain or leave "Should the United Kingdom remain a member of the European Union or leave the European Union?"***

- Polls Vs. Betting Markets
- Implications



# Total NYC Pension Fund Performance: 3/31/16

(SSB **N**, **F** p.17; **T**, **P** p.18; **B** p.21)

NYC Pension System	Portfolio Std Dev - 1 yr	First Quarter	Three Year*	Five Year*
BERS	10.2%	1.3%	6.6%	6.8%
TRS	9.0%	2.1%	6.3%	6.9%
POLICE	8.5%	1.7%	6.8%	6.9%
FIRE	8.2%	1.7%	6.6%	6.7%
NYCERS	8.2%	2.2%	6.4%	6.8%
Median Fund - TUCS		1.1%	6.7%	6.9%

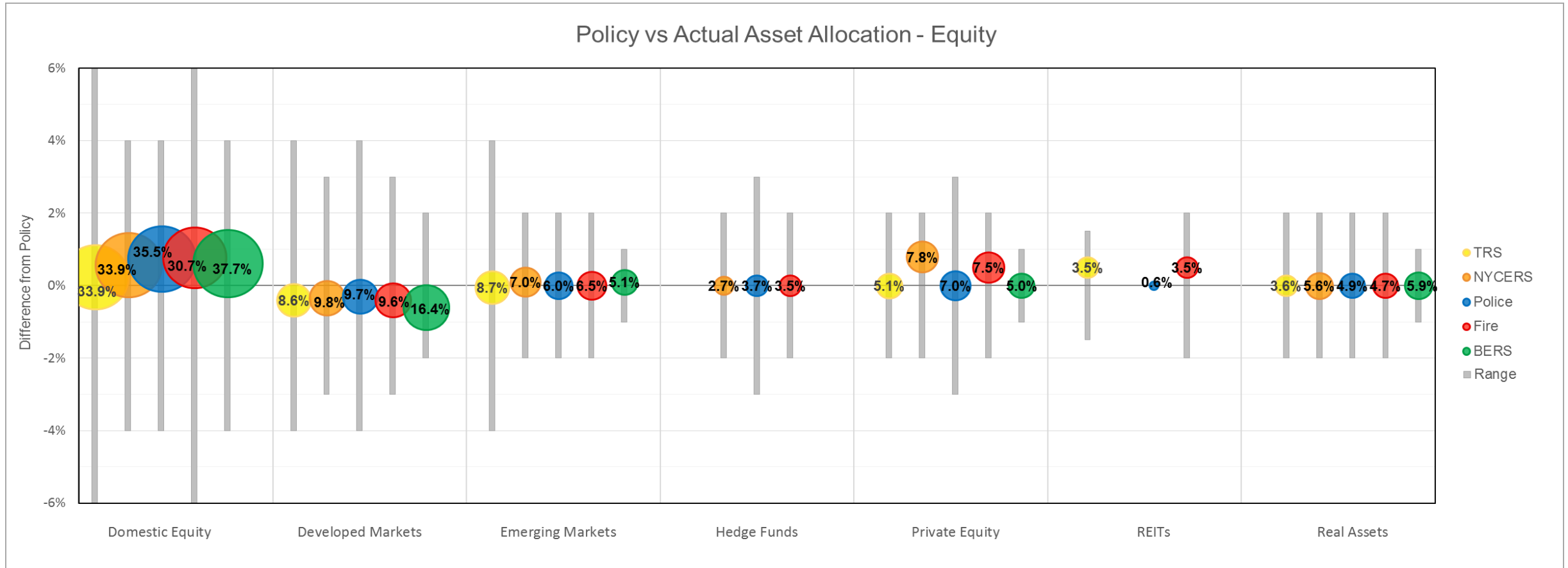
\* Gross of fees in public asset classes

Source: State Street



# Asset Allocation First Quarter 2016 - Equity

Relative Mix to Adjusted New Policy Weights (SSB **F**, **N** p.8; **P**, **T** p.9; **B** p.12 )

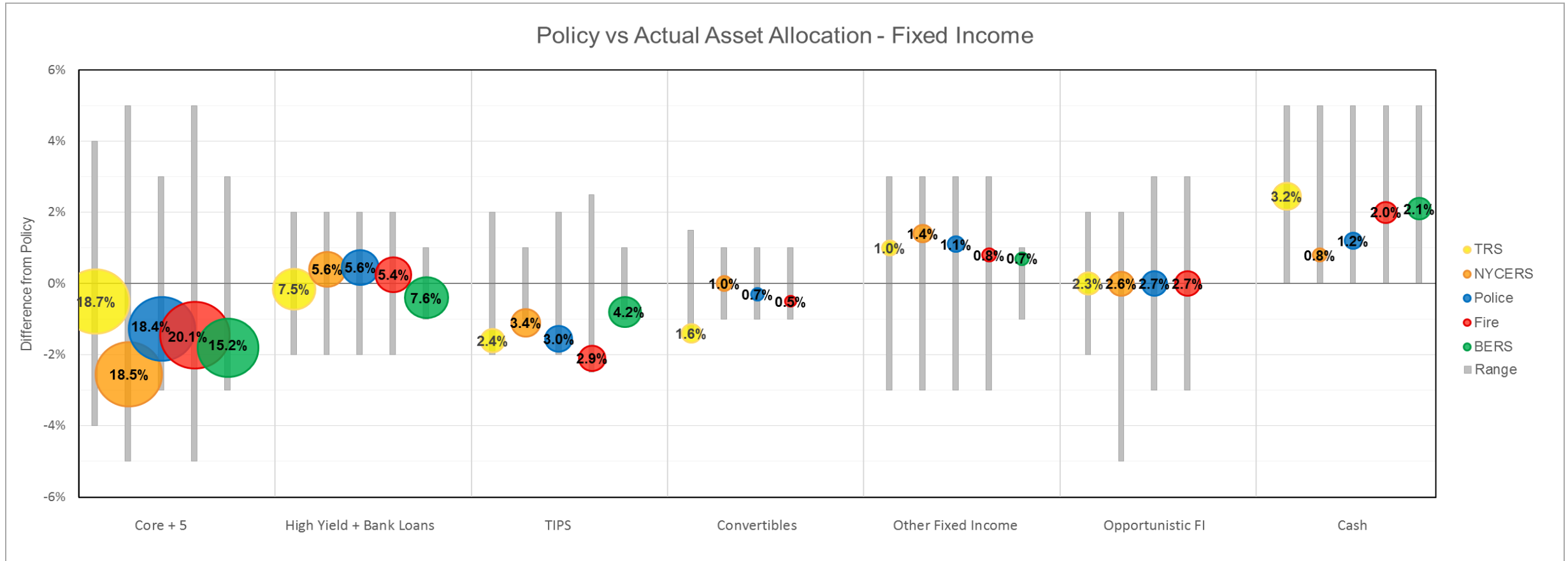


Source: State Street



# Asset Allocation First Quarter 2016 - Fixed Income

Relative Mix to Adjusted New Policy Weights (SSB **F, N** p.8; **P, T** p.9; **B** p.12 )

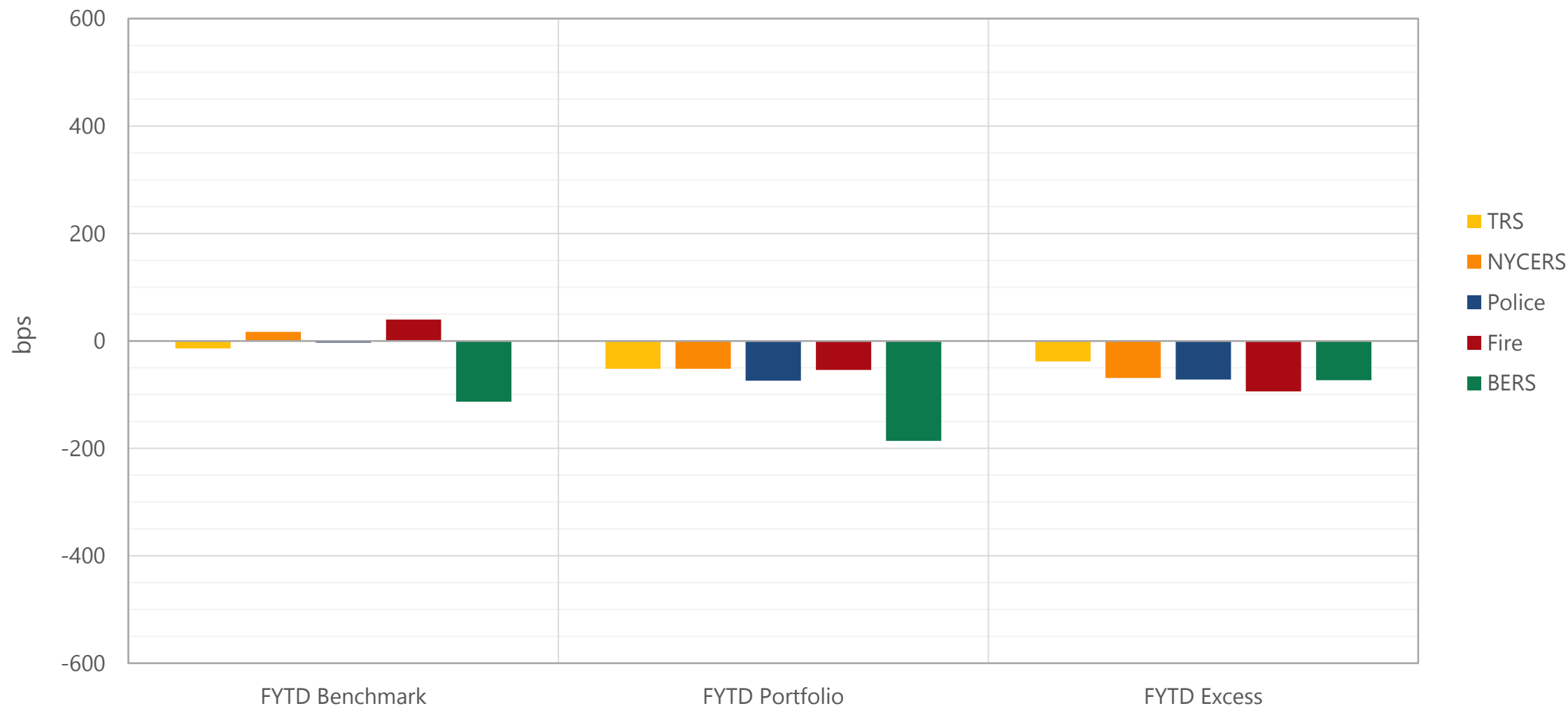


Source: State Street



# FY Return – Total Portfolio

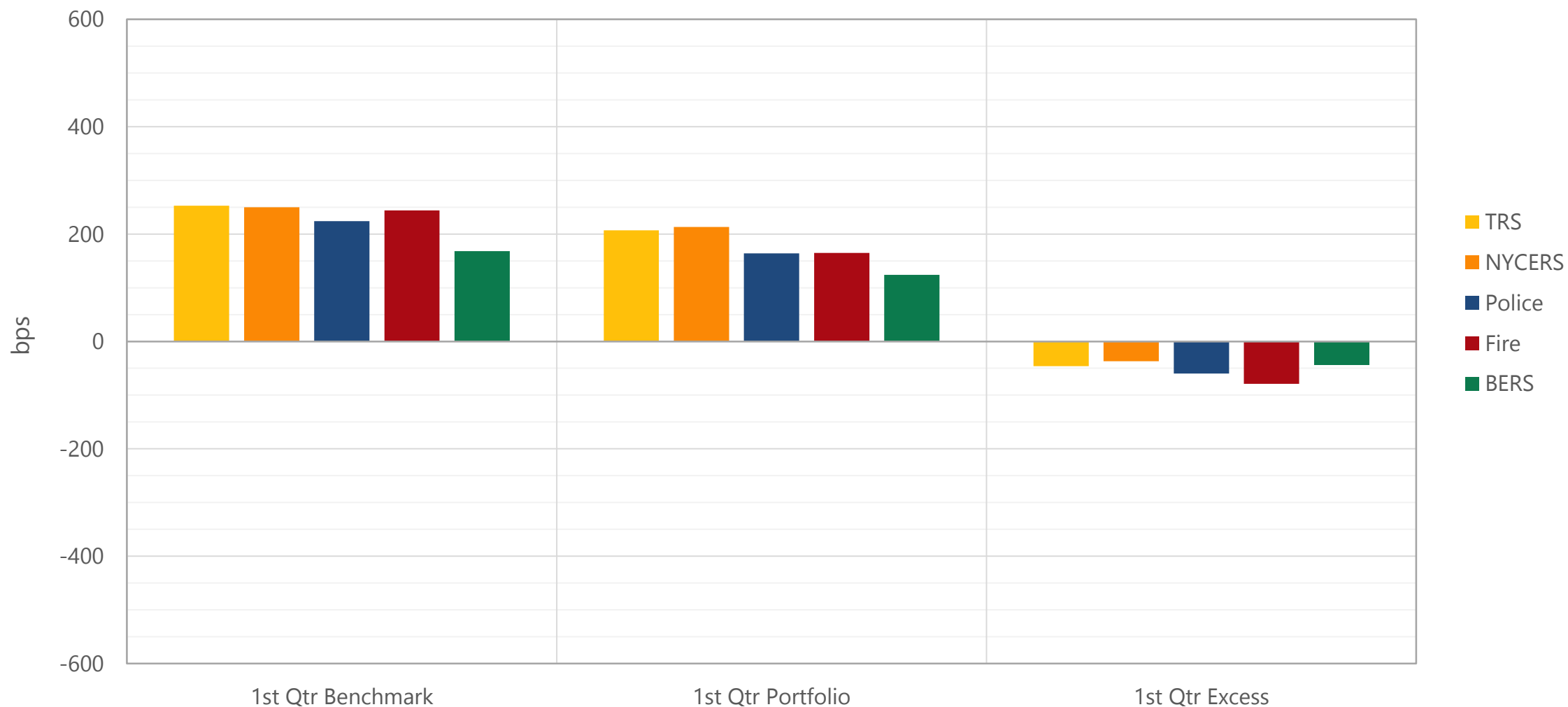
FISCAL YEAR TO DATE First Quarter 2016 (SSB **F**, **N** p.23; **T**, **P** p.24; **B** p.27)



Source: State Street

# Return – Total Portfolio

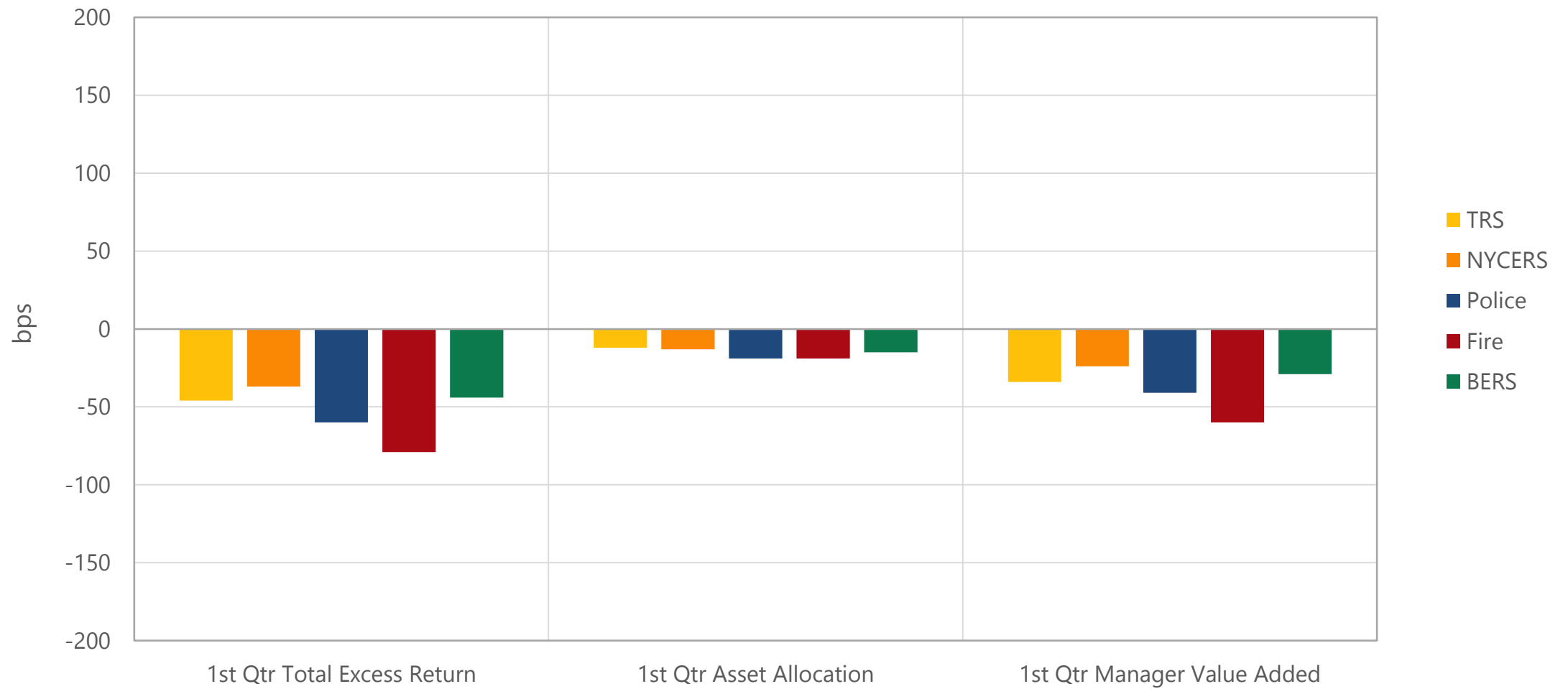
First Quarter CY2016 (SSB F, N p.23; T, P p.24; B p.27)



Source: State Street

# Excess Return – Total Portfolio

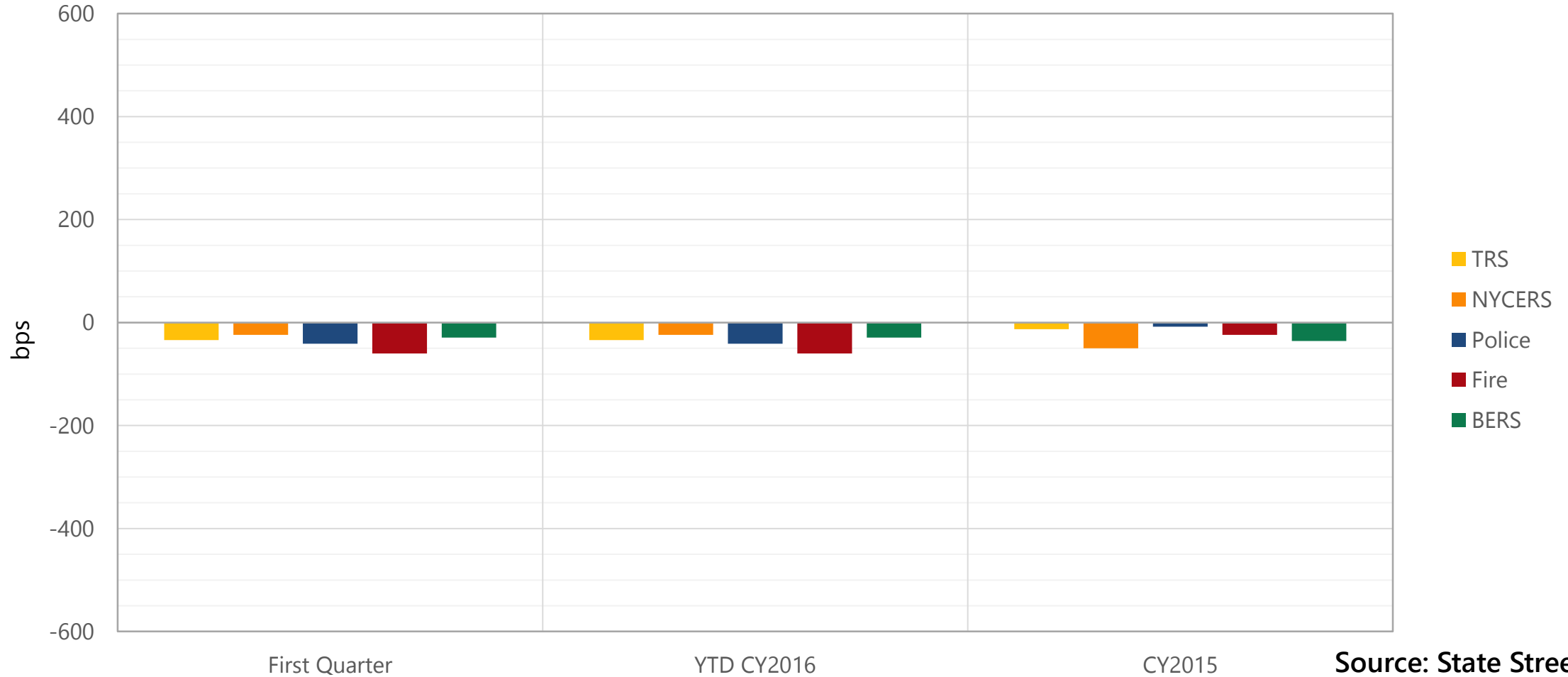
First Quarter CY 2016 Basis Points of Excess Return (SSB **N**, **F** p.10; **P**, **T** p.11; **B** p.14)



Source: State Street

# Manager Value Added- Total Portfolio

Basis Points of Excess Return (SSB **N**, **F** p.13; **P**, **T** p.14; **B** p.17)

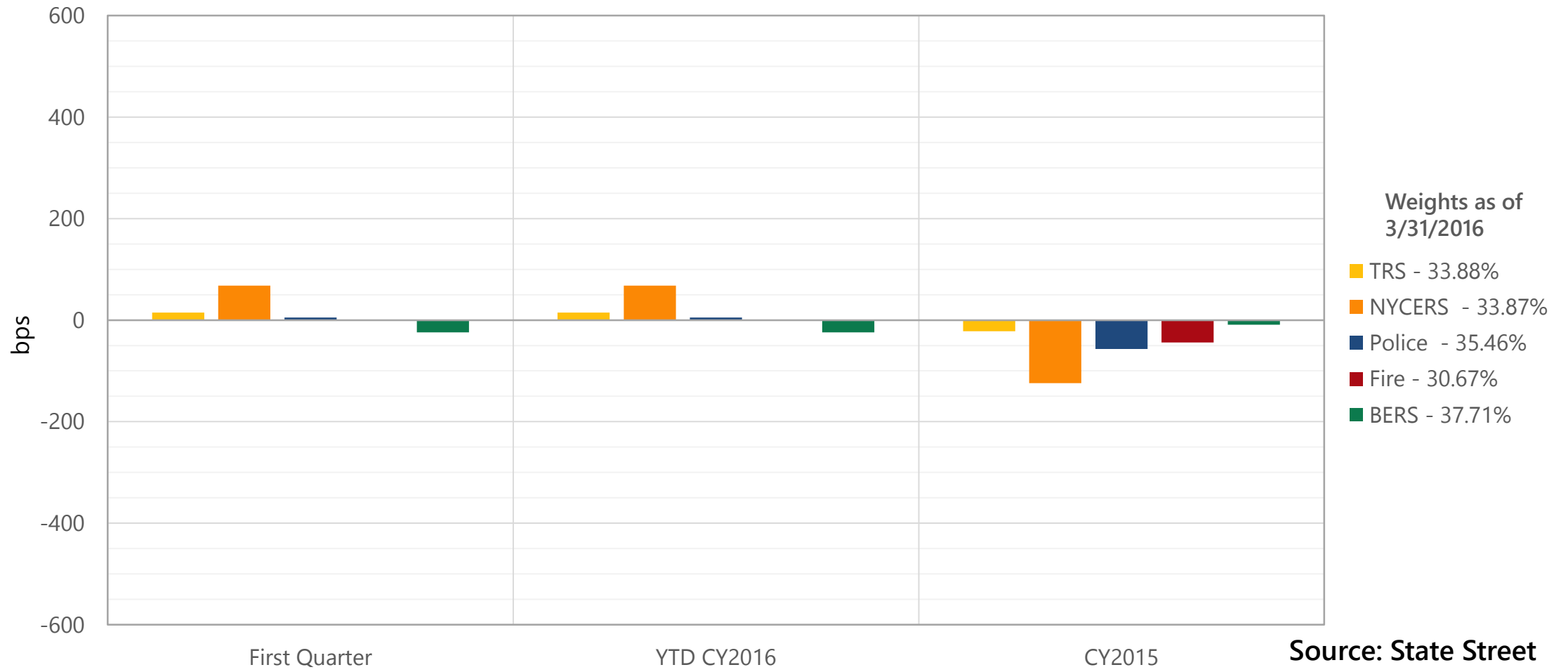


Source: State Street



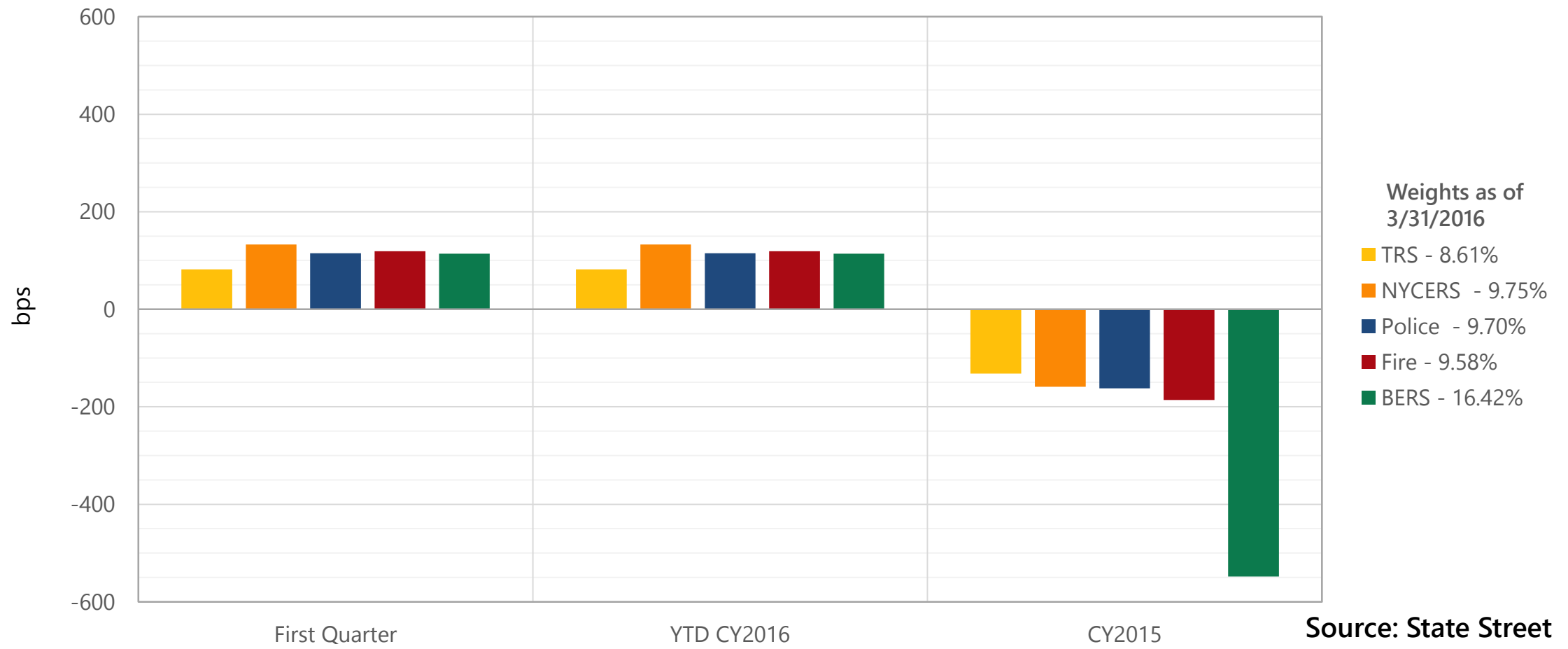
# Value Added – U.S. Equities

Basis Points of Excess Return (SSB **F**, **N** p.23; **T**, **P** p.24; **B** p.27)



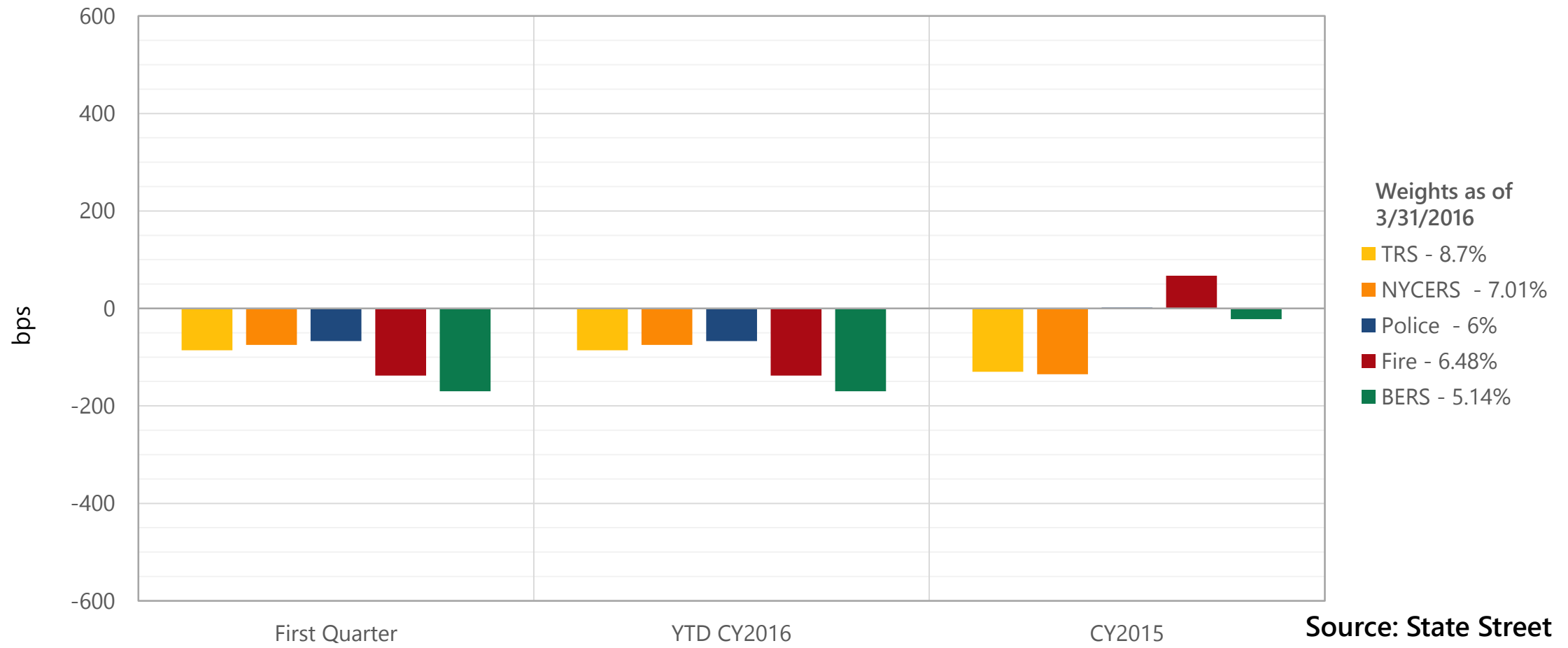
# Value Added - Developed Equities

Basis Points of Excess Return (SSB **F**, **N** p.25 **T**, **P** p.26 **B** p.29)



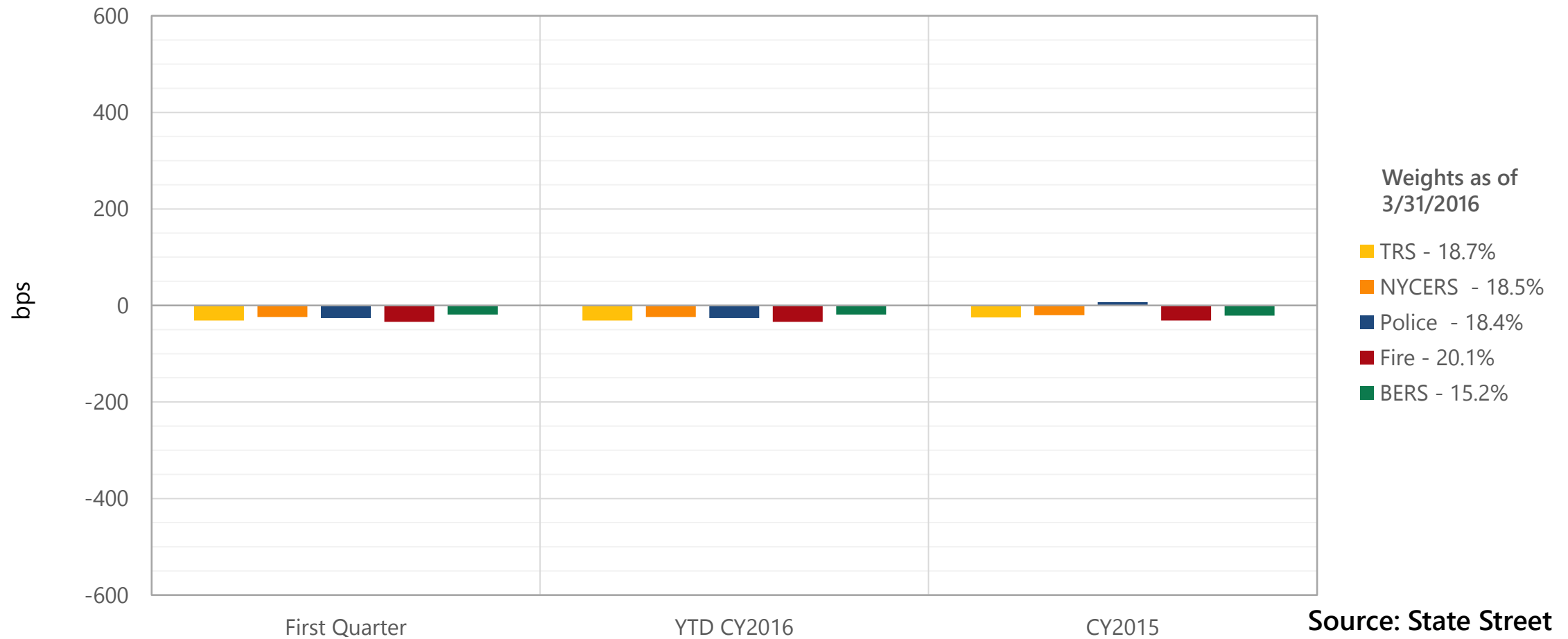
# Value Added - Emerging Equities

Basis Points of Excess Return (SSB **F**, **N** p.26 **P**, **T** p.27 **B** p.29)



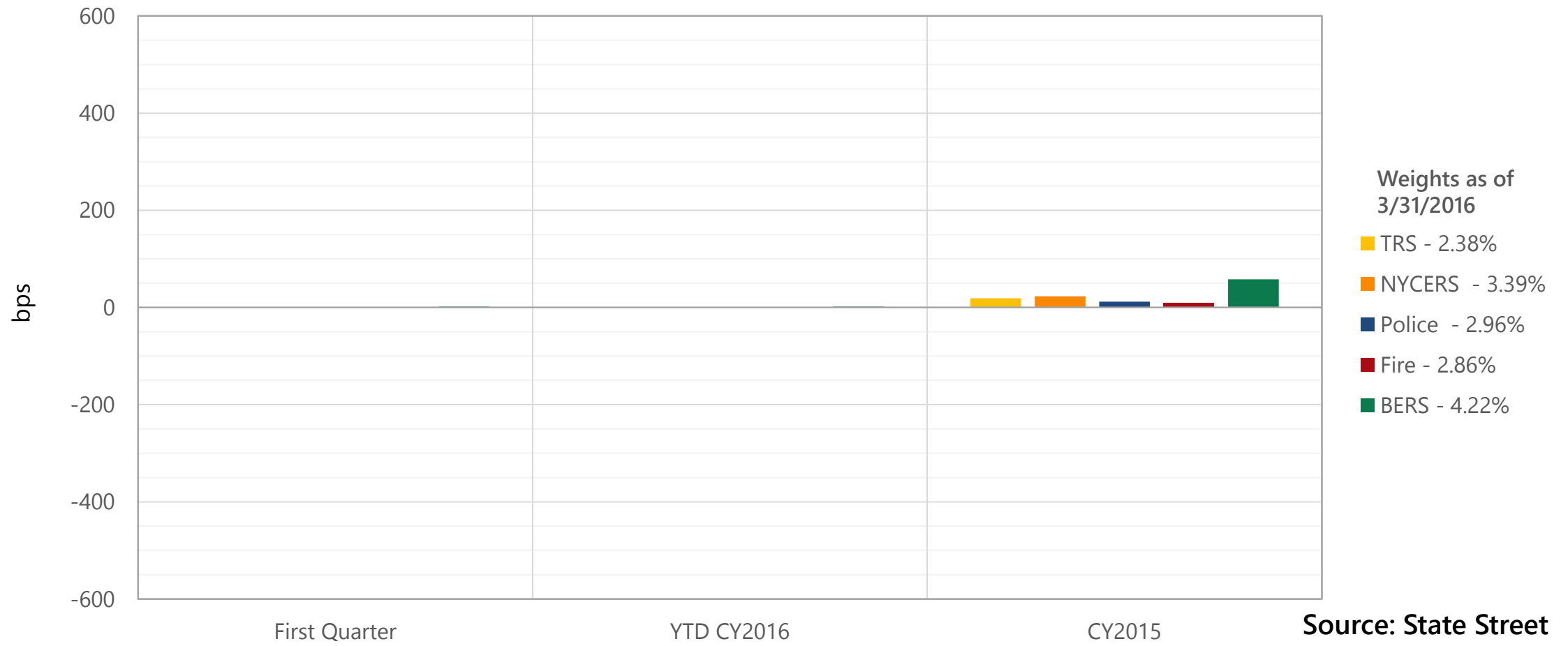
# Value Added – Core 5+ Fixed Income

Basis Points of Excess Return (SSB **T, N, F** p.29; **P** p.30; **B** p.31)



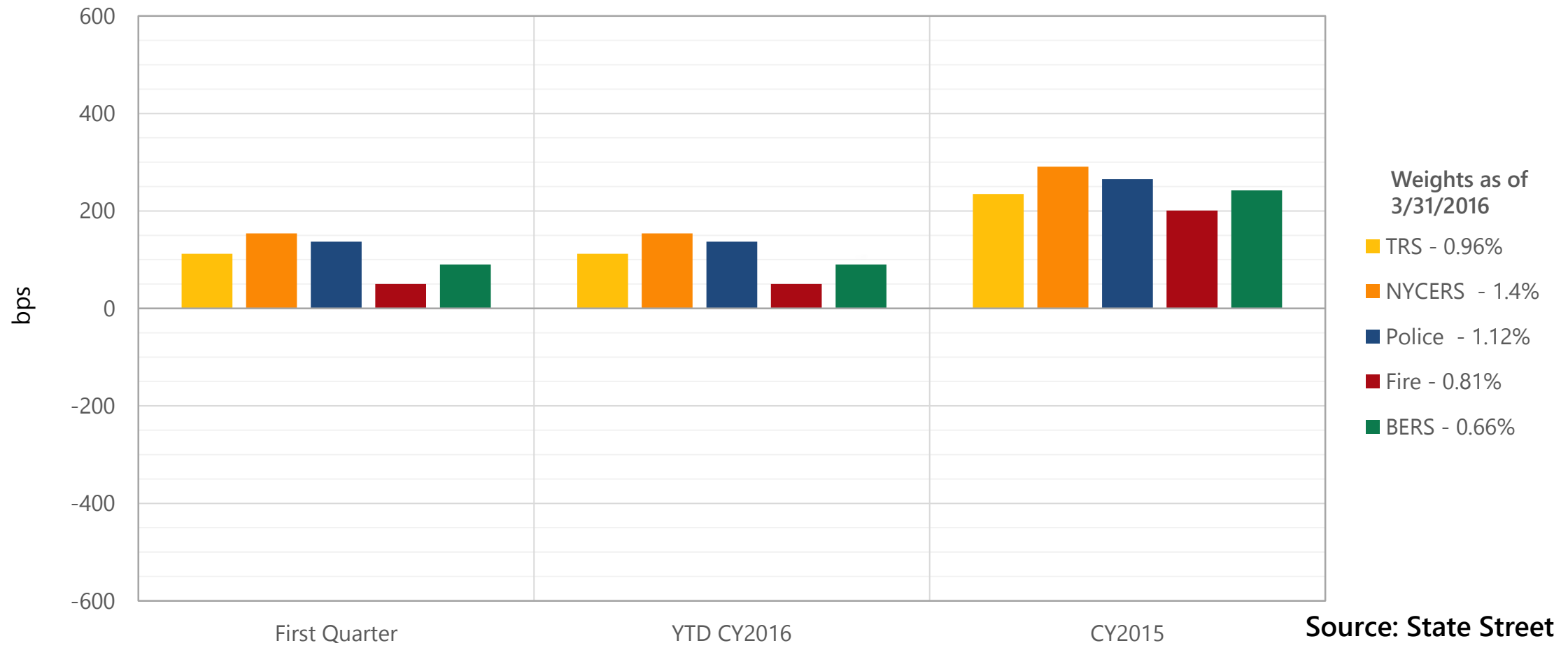
# Value Added - TIPS

Basis Points of Excess Return (SSB **T, N, F** p.29; **P** p.30; **B** p.31)



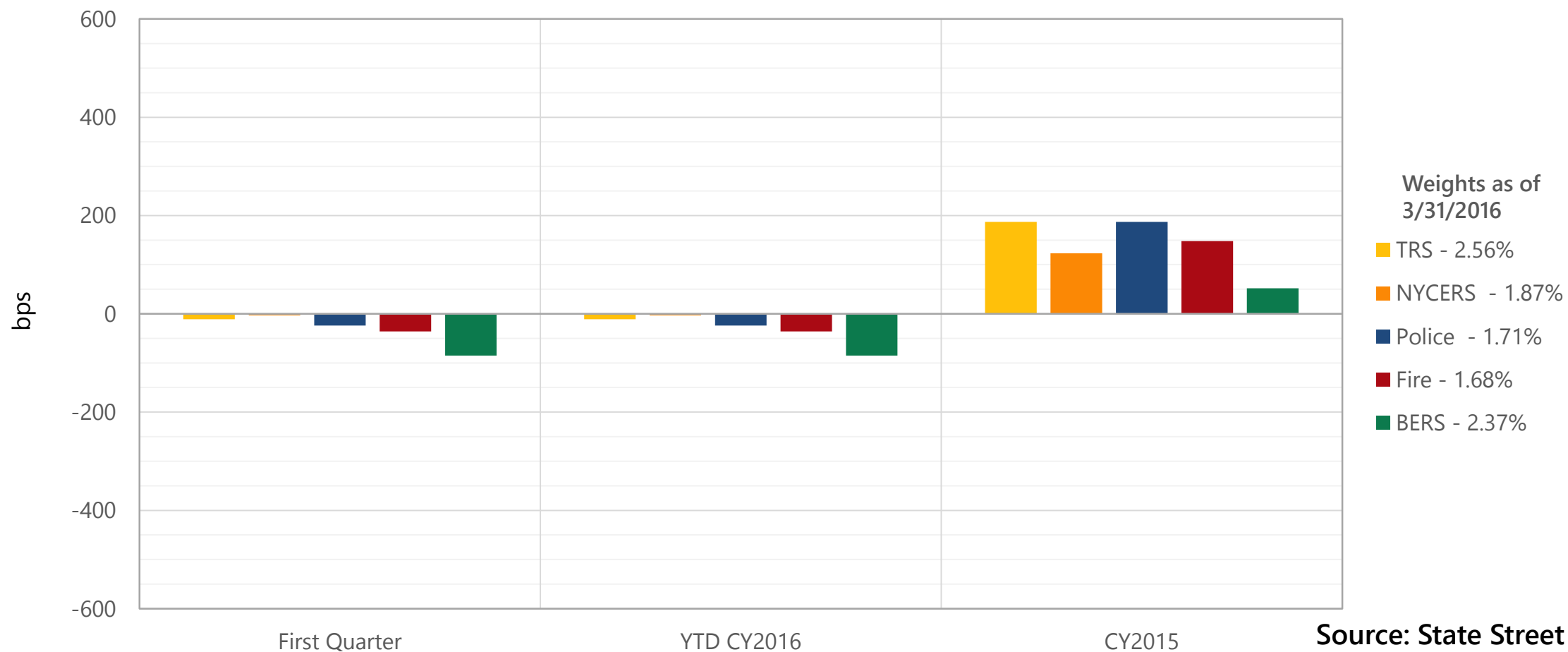
# Value Added – Economically Targeted Investments

Basis Points of Excess Return (SSB T, N, F p.30; P, B p.31)



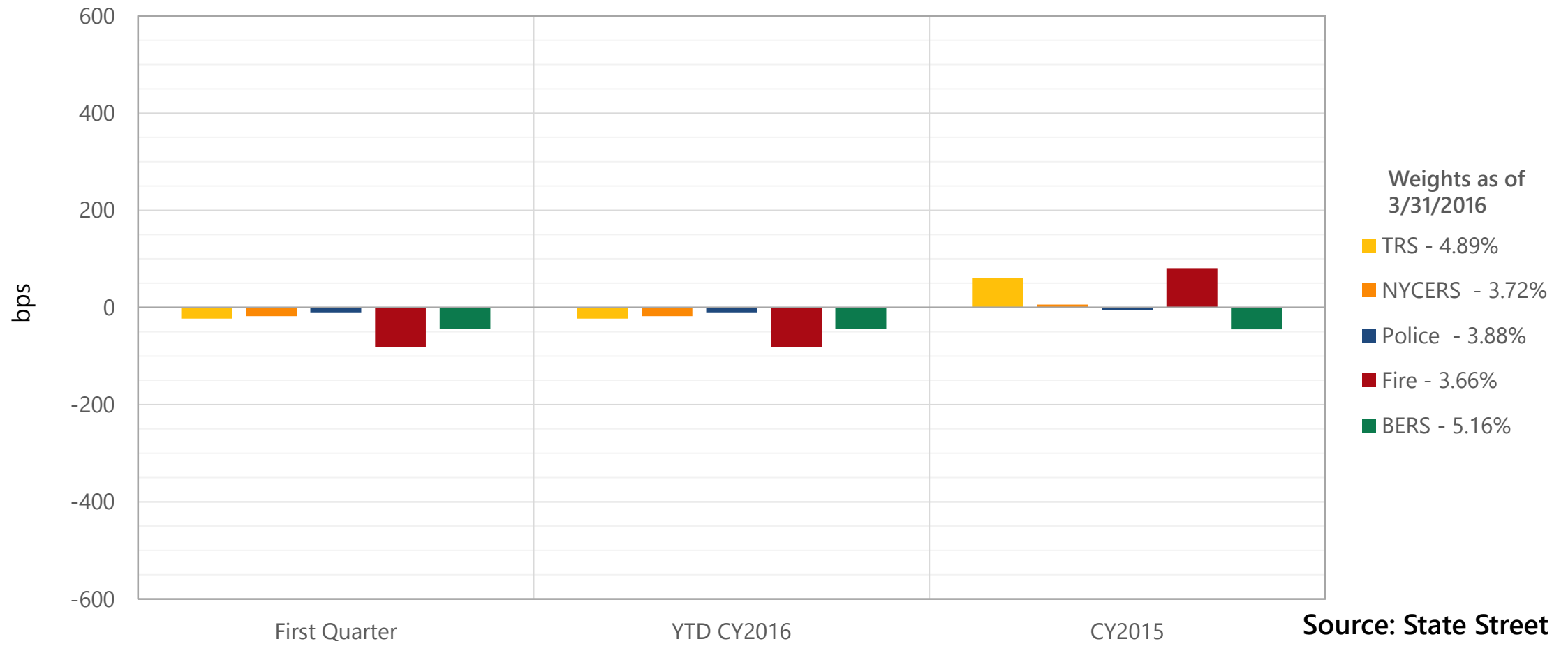
# Value Added – Bank Loans

Basis Points of Excess Return (SSB T, N p.29; F p.30; P, B p.31)



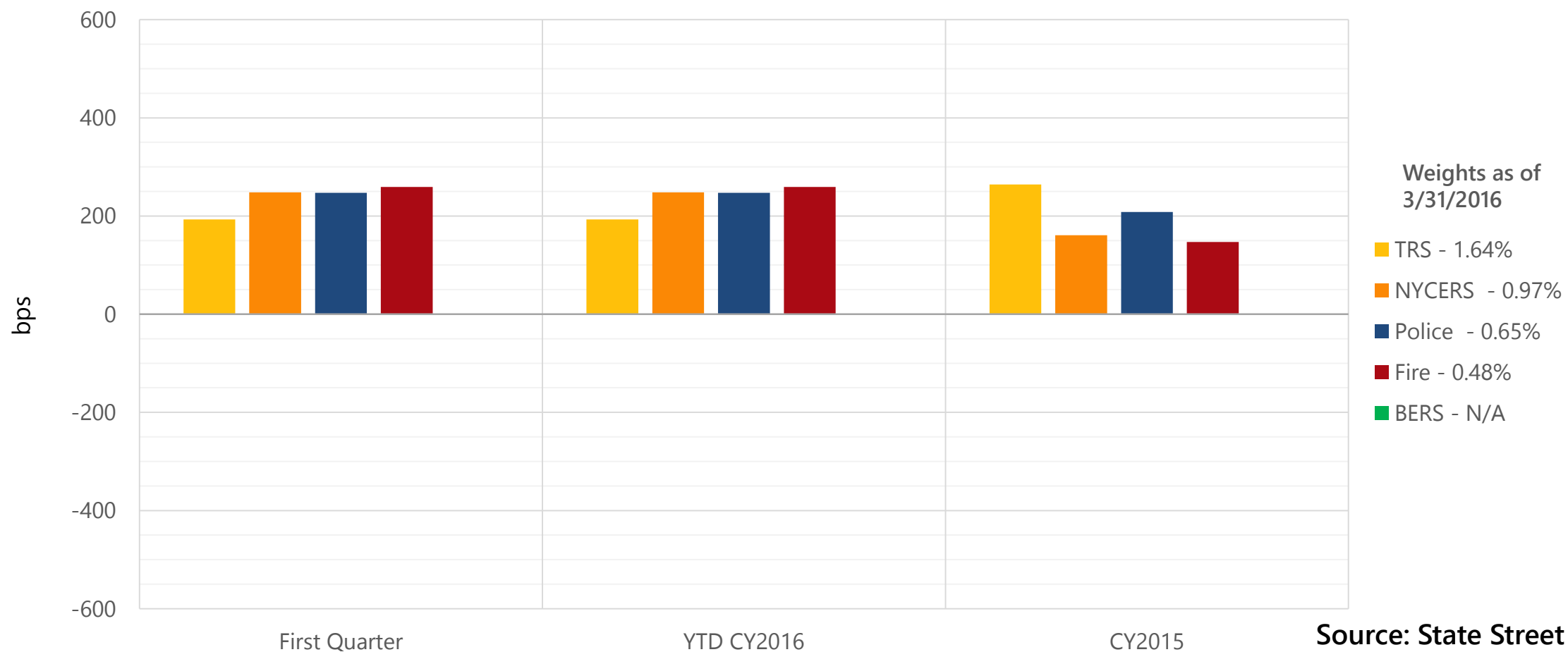
# Value Added – Fixed Income – High Yield

Basis Points of Excess Return (SSB **T, N, F** p.29; **P** p.30; **B** p.31)



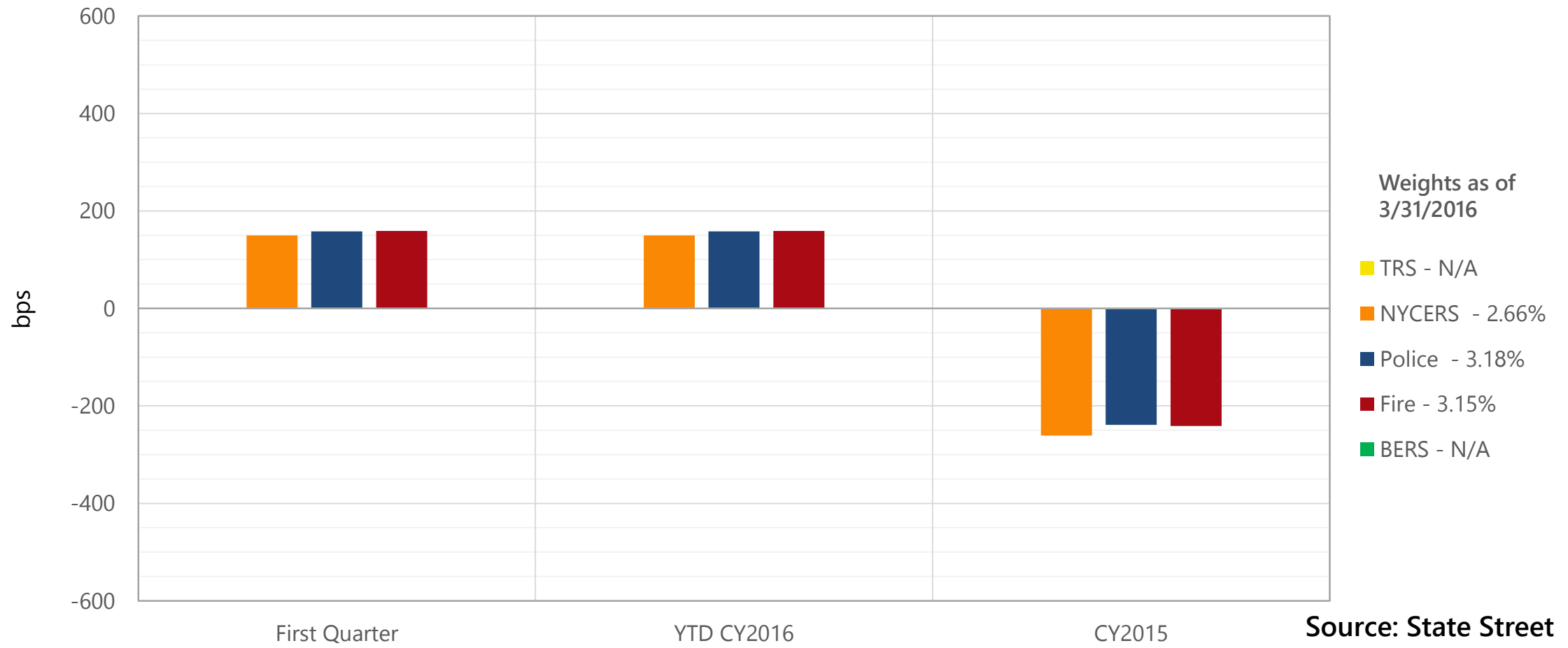
# Value Added – Convertible Bonds

Basis Points of Excess Return (SSB T, N, F p.30; P p.31)



# Value Added - Hedge Funds

Basis Points of Excess Return (SSB **N**, **F** p.27; **P** p.28)

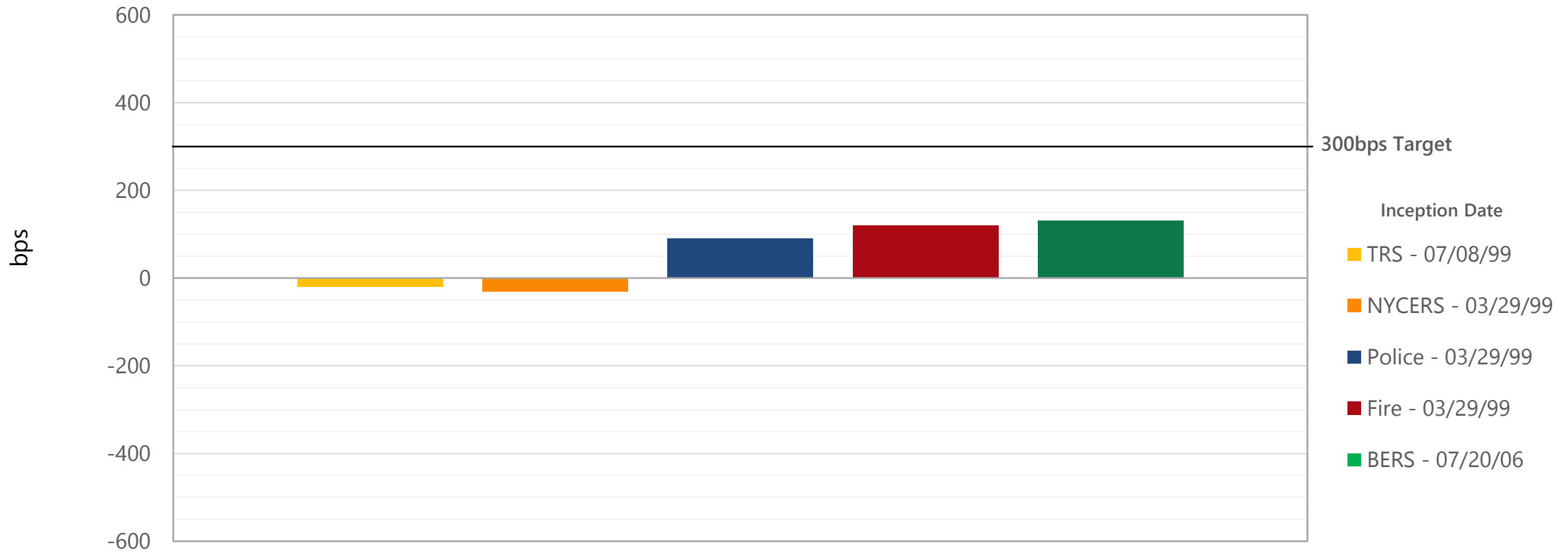


# PRIVATE MARKET DATA



# Value Added – Private Equity

## Basis Points of Cumulative IRR above Public Market Equivalent

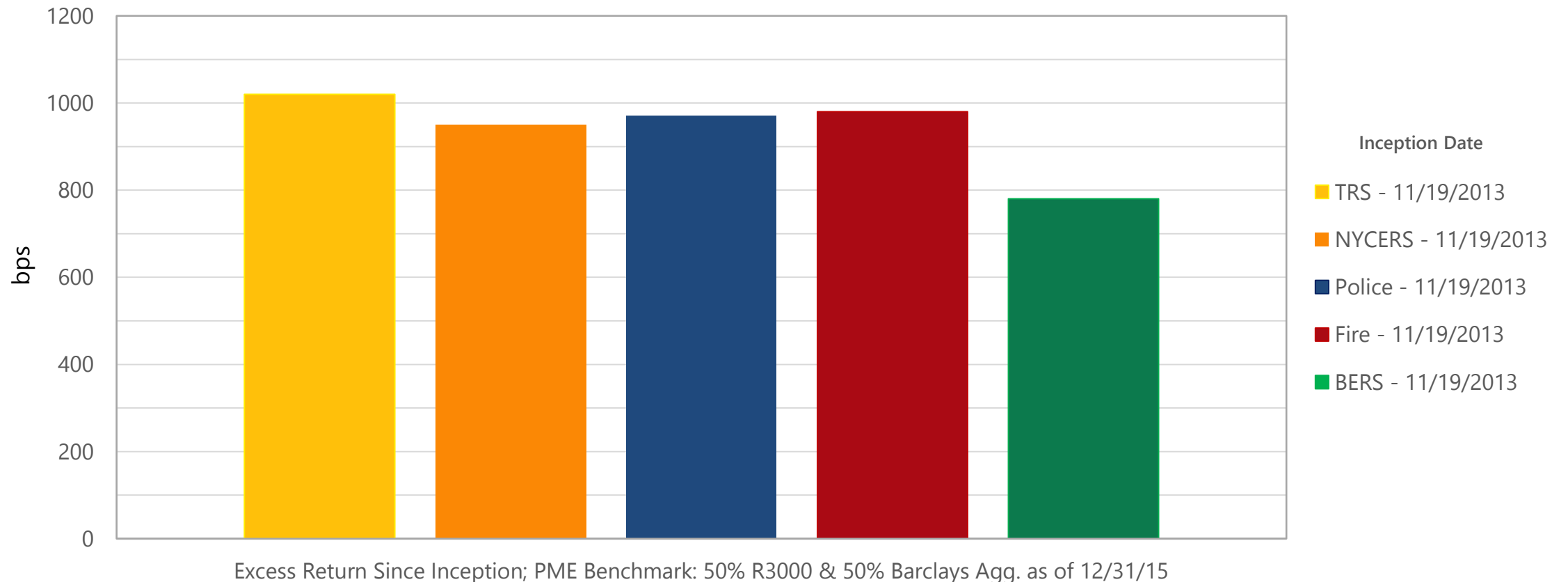


Excess Return Since Inception PME Benchmark: PME is the Russell 3000 Total Return Index as of 12/31/15

**The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.**

# Value Added - Infrastructure

## Basis Points of Cumulative IRR above Public Market Equivalent

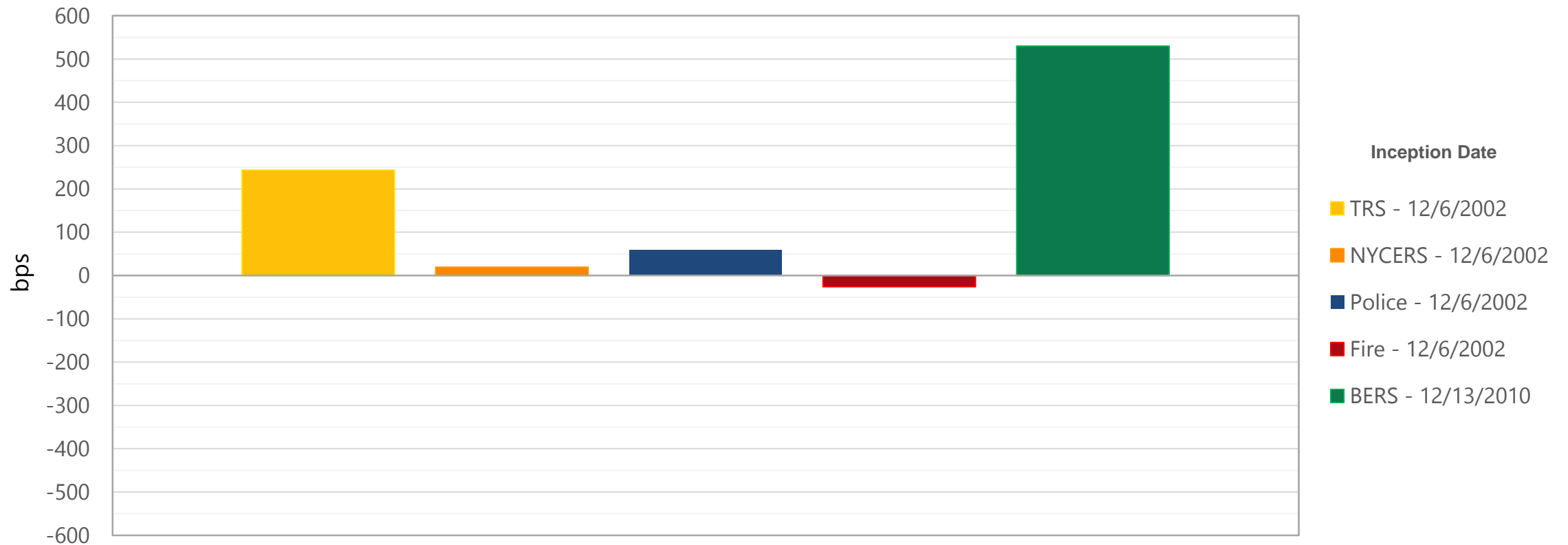


**The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.**



# Value Added – Private Real Estate

## Basis Points of Cumulative IRR above Public Market Equivalent



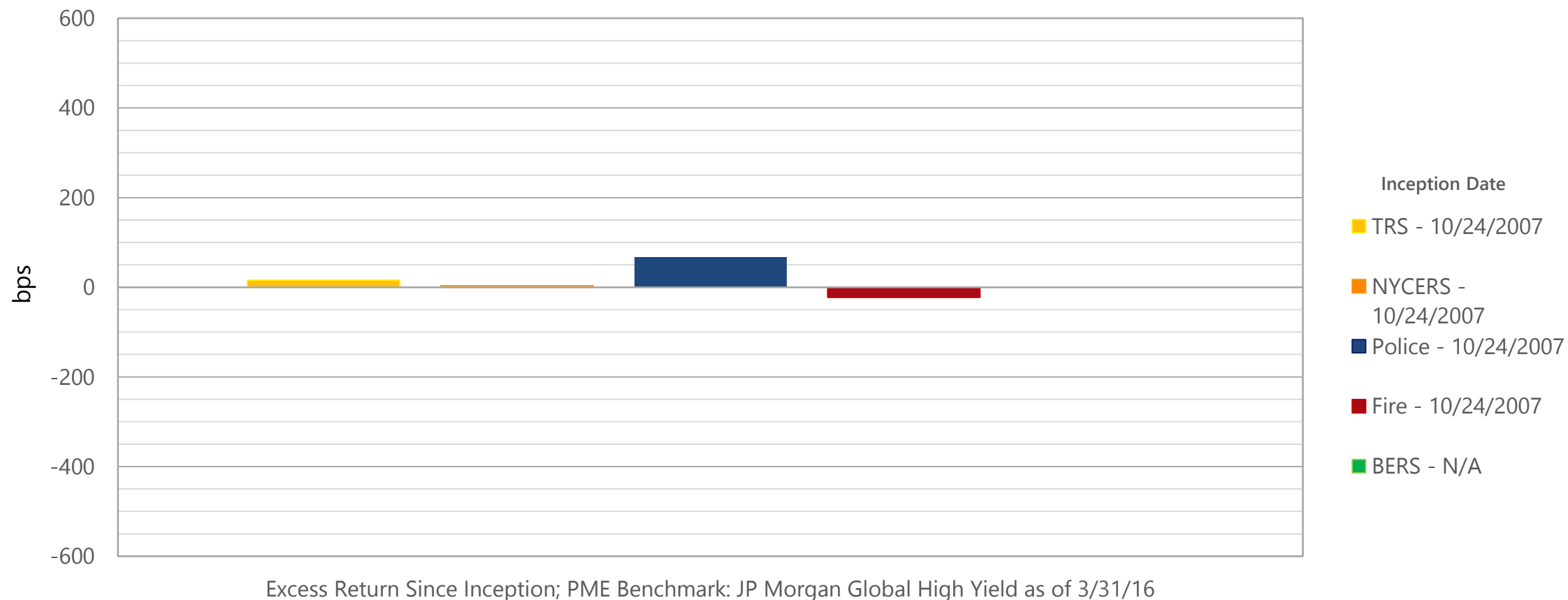
Excess Return Since Inception; PME Benchmark: 50% R3000 & 50% Barclays Agg. as of 12/31/15

**The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.**



# Value Added – Opportunistic Fixed Income (OFI)

## Basis Points of Cumulative IRR above Public Market Equivalent



The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.

