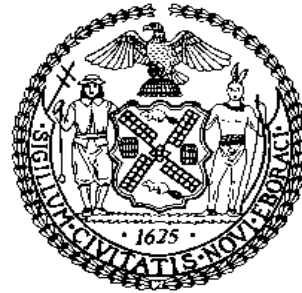




## Overview – Second Quarter 2016



THE CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER

September 26, 2016

# Market Returns: Q2-2016

Asset Class	Index	Second Quarter 2016	Fiscal YTD	3 Year	5 Year	Expected*
Equities - U.S.	Russell 3000	2.6%	2.1%	11.1%	11.6%	7.8%
Equities - Developed Intl	MSCI EAFE	-1.5%	-10.2%	2.1%	1.7%	8.9%
Equities - Emerging Intl	MSCI EMF	0.7%	-12.1%	-1.6%	-3.8%	11.0%
Debt - US Government	NYC Treas/Agency +5	4.0%	12.0%	6.6%	6.5%	2.8%
Debt - Investment Grade	NYC IG Credit	3.4%	7.3%	5.1%	5.1%	3.4%
Debt - High Yield	Citigroup BB & B	5.0%	0.8%	3.9%	5.6%	6.1%

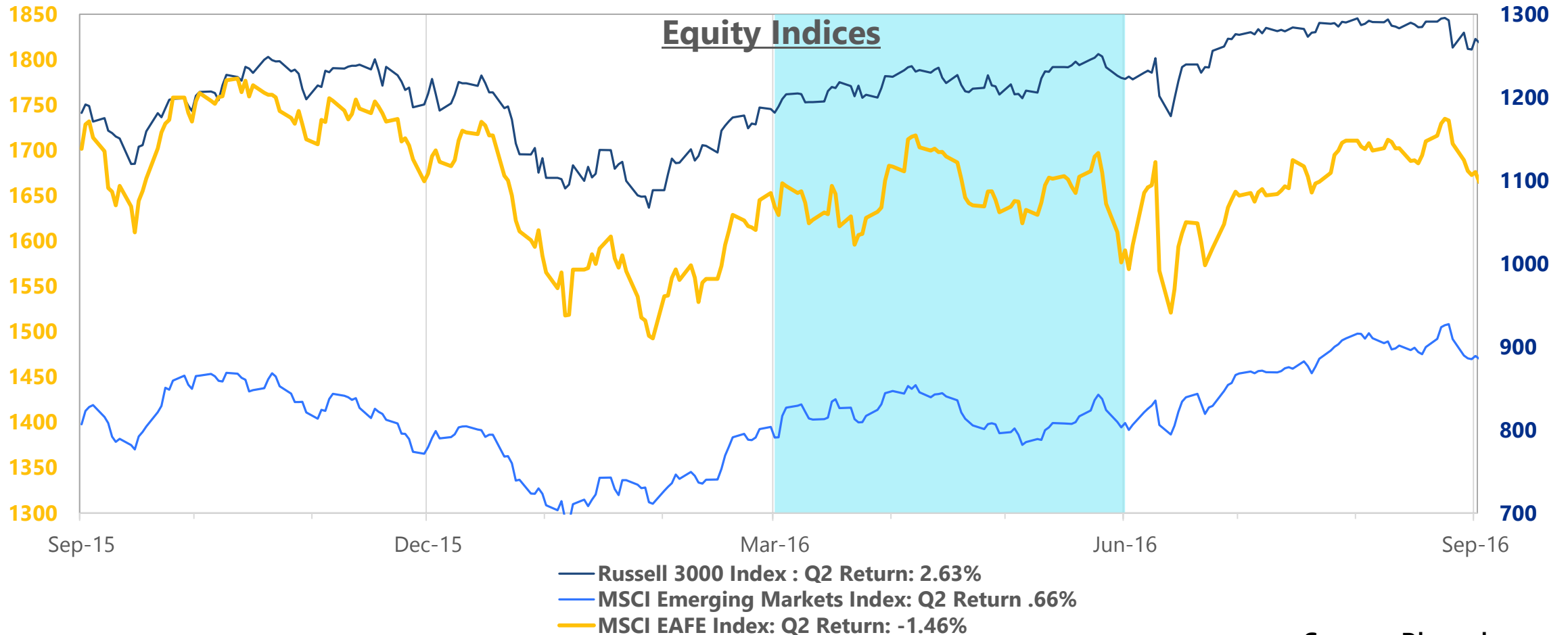
\*Average of consultant long-term arithmetic expected returns, as of 2016

Source: State Street



# Continuation of Rally

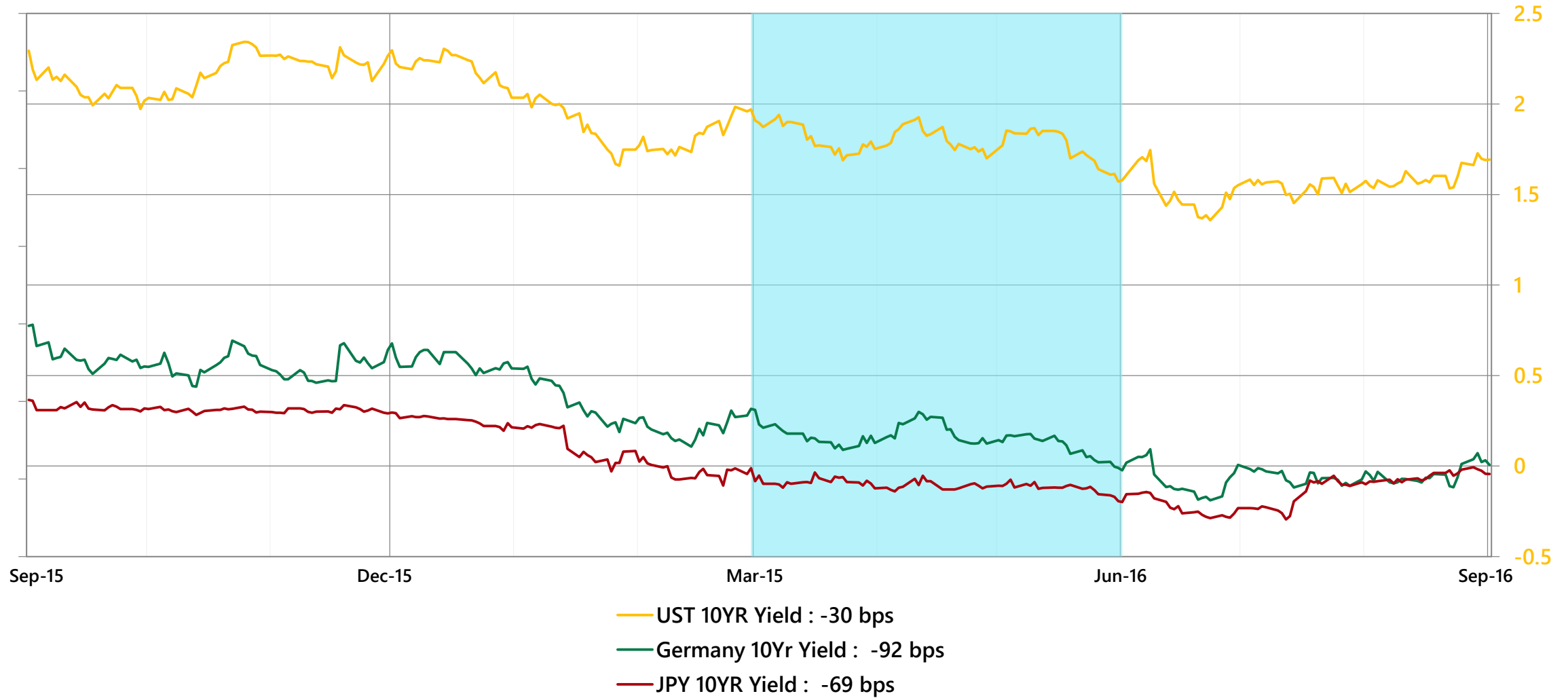
**Equities and fixed income positive.**



Source: Bloomberg



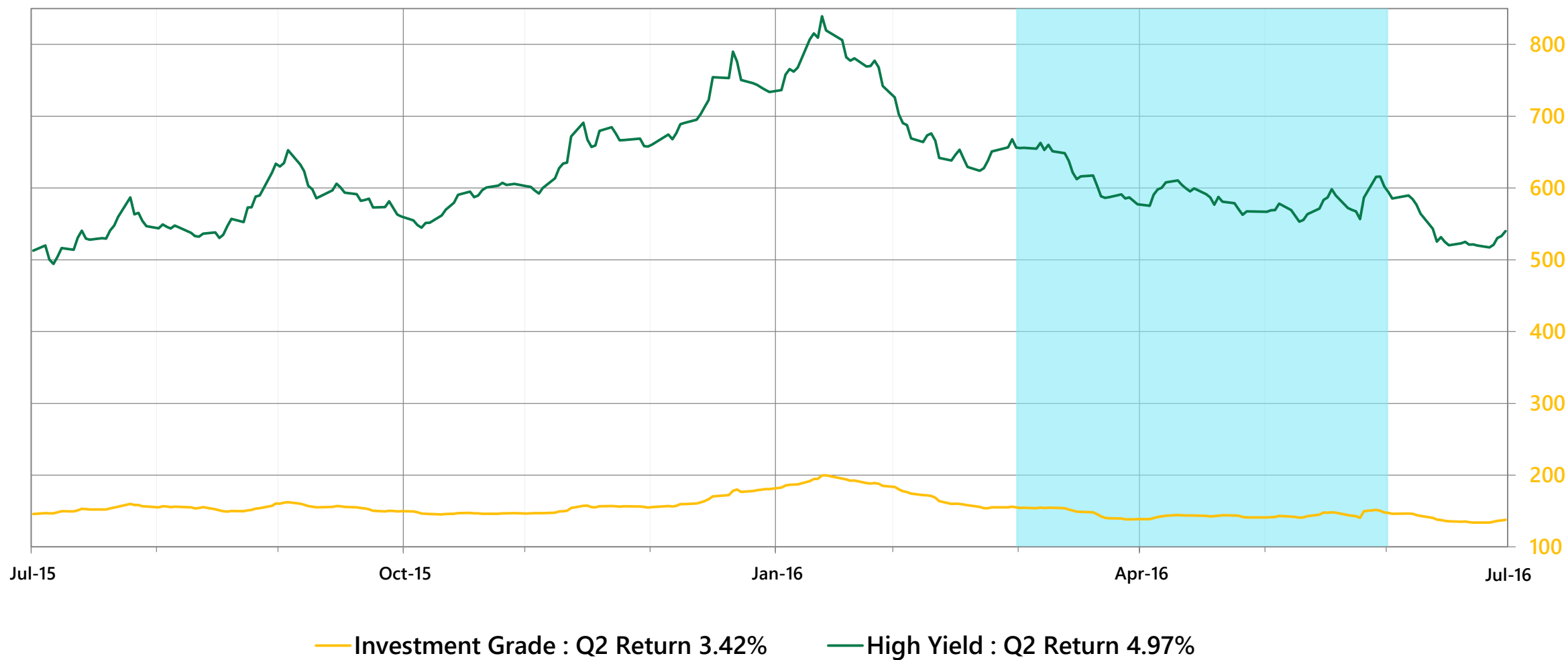
# Global Government Yields



Source: Bloomberg



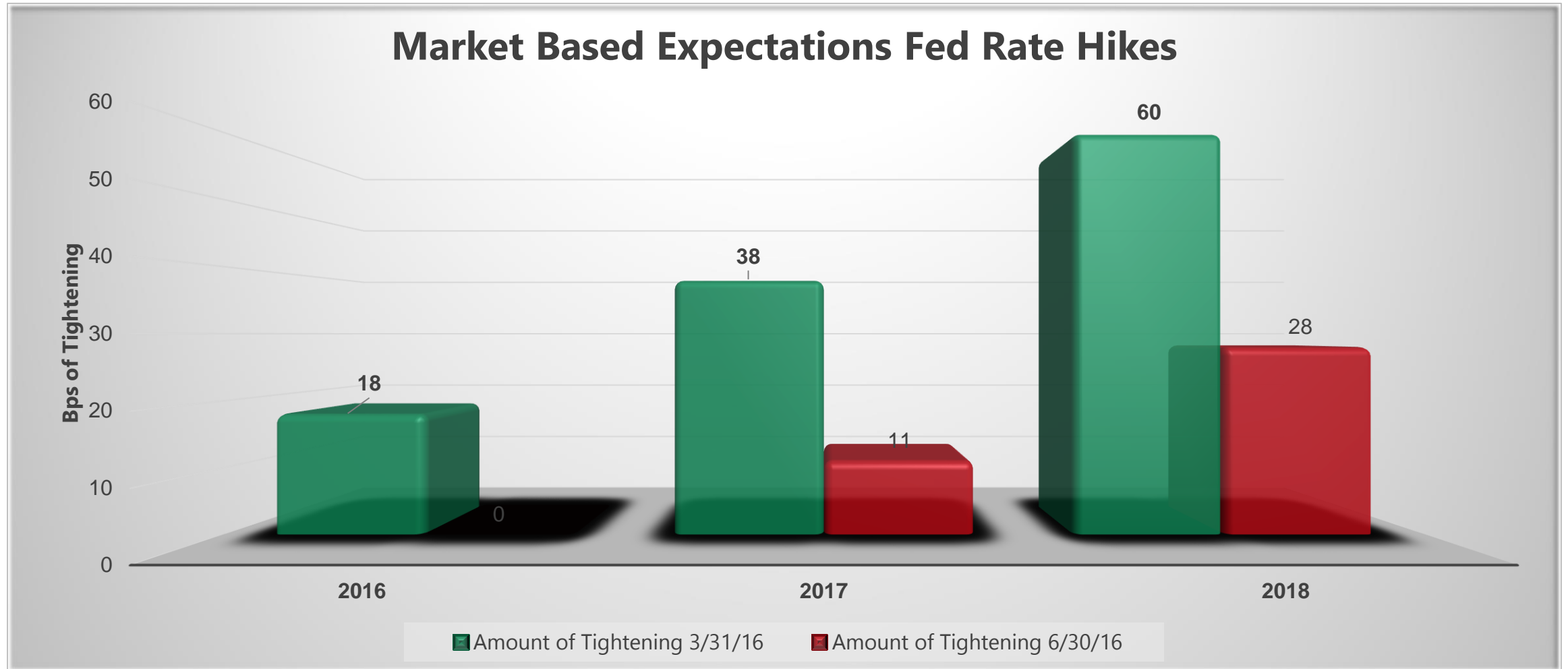
# Investment Grade & High Yield Spreads



Source: Bloomberg



# Accommodative Global Monetary Policy Continues



Source: Bloomberg



# Statement from The Bank of England



24 June 2016

- The Bank of England is monitoring developments closely. It has undertaken extensive contingency planning and is working closely with HM Treasury, other domestic authorities and overseas central banks. The Bank of England will take all necessary steps to meet its responsibilities for monetary and financial stability.

Source: Bank of England

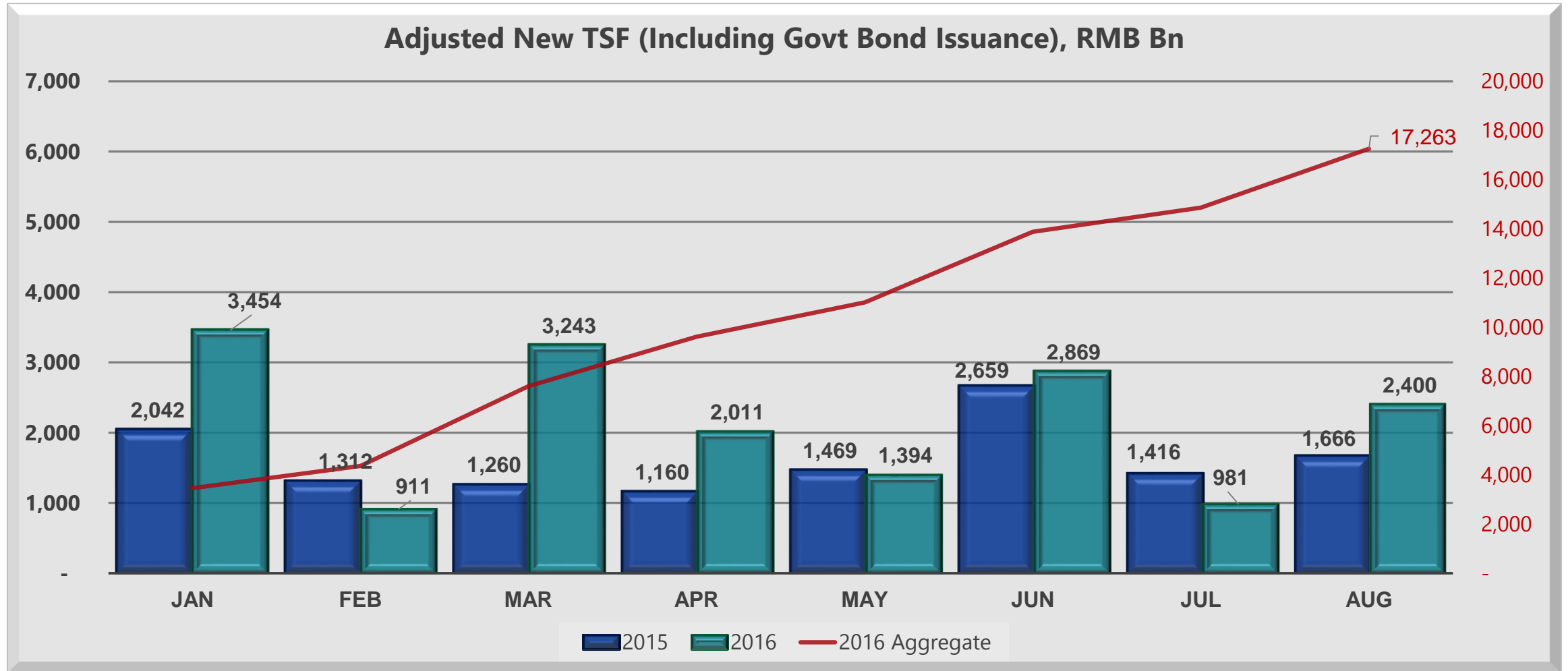


# China Hard Landing Concerns Abate

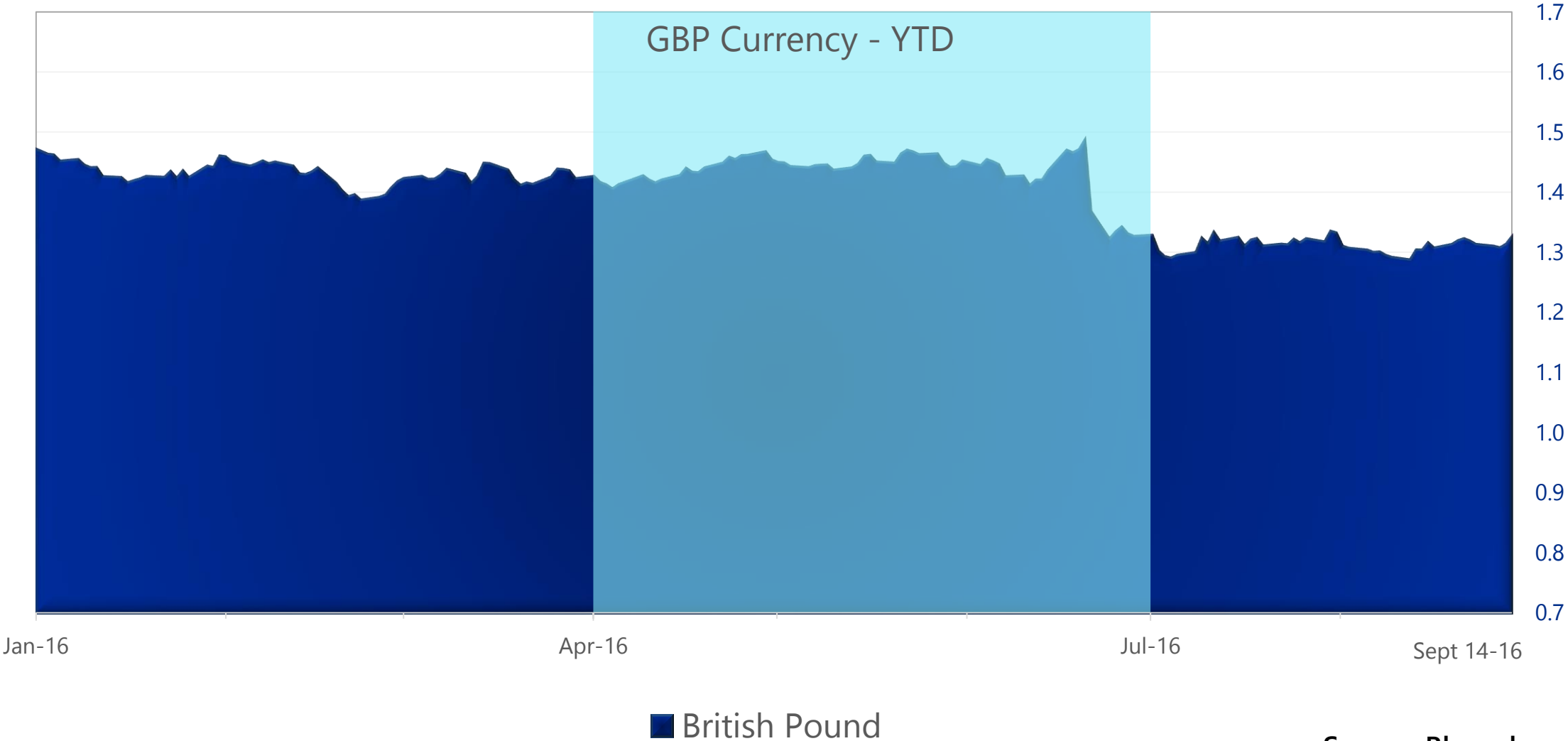


Source: <http://www.tradingeconomics.com/china/gdp-growth-annual>

# China Credit Growth

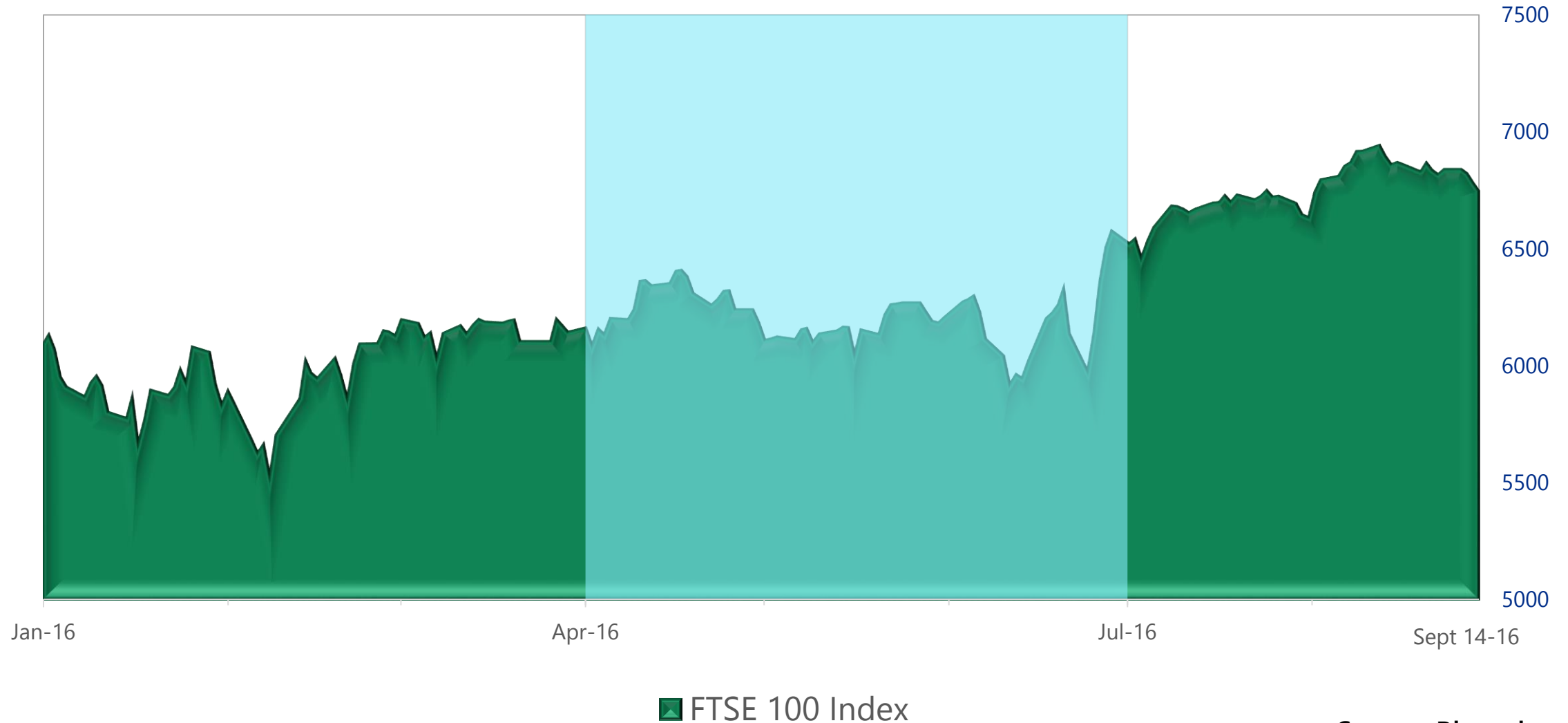


# Limited Brexit Impact



Source: Bloomberg

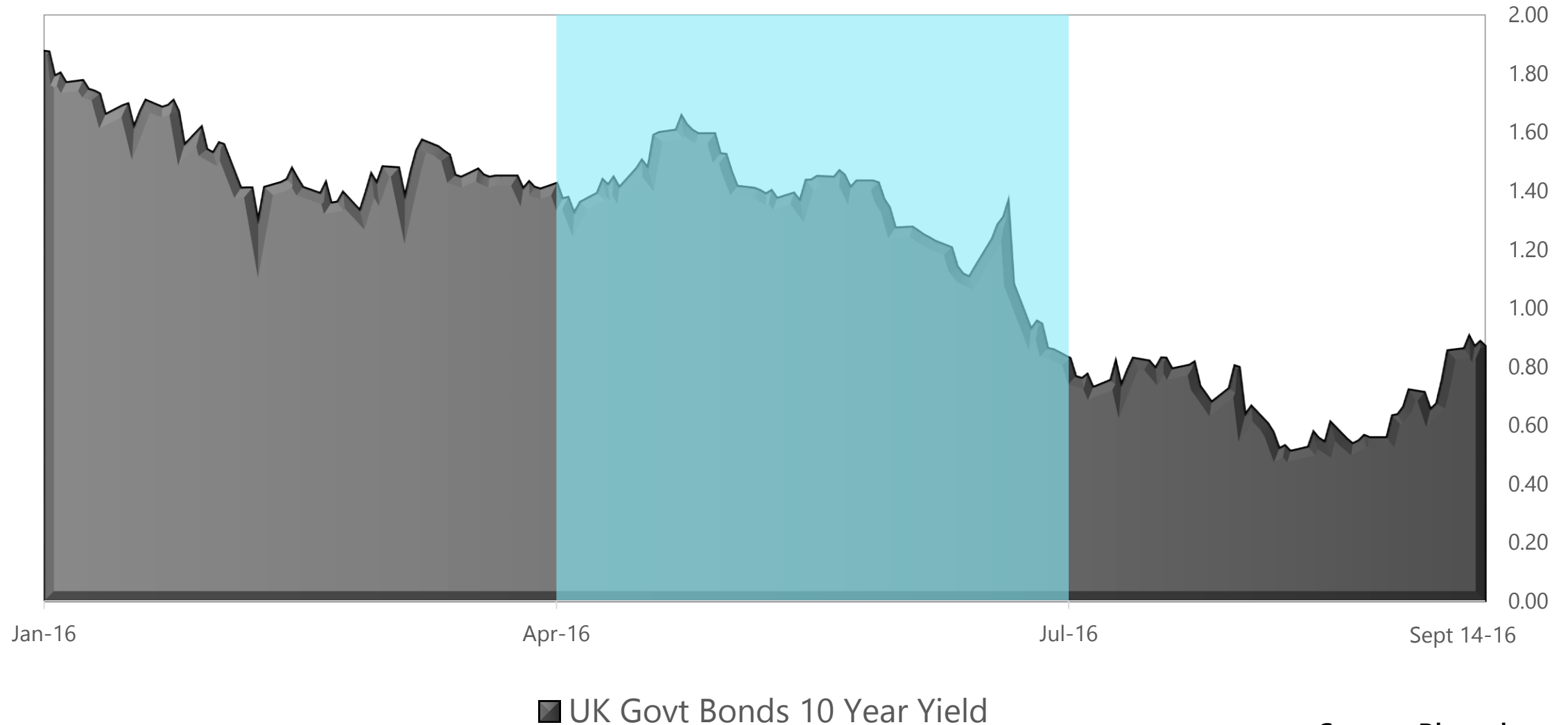
# FTSE 100 Index- YTD



Source: Bloomberg



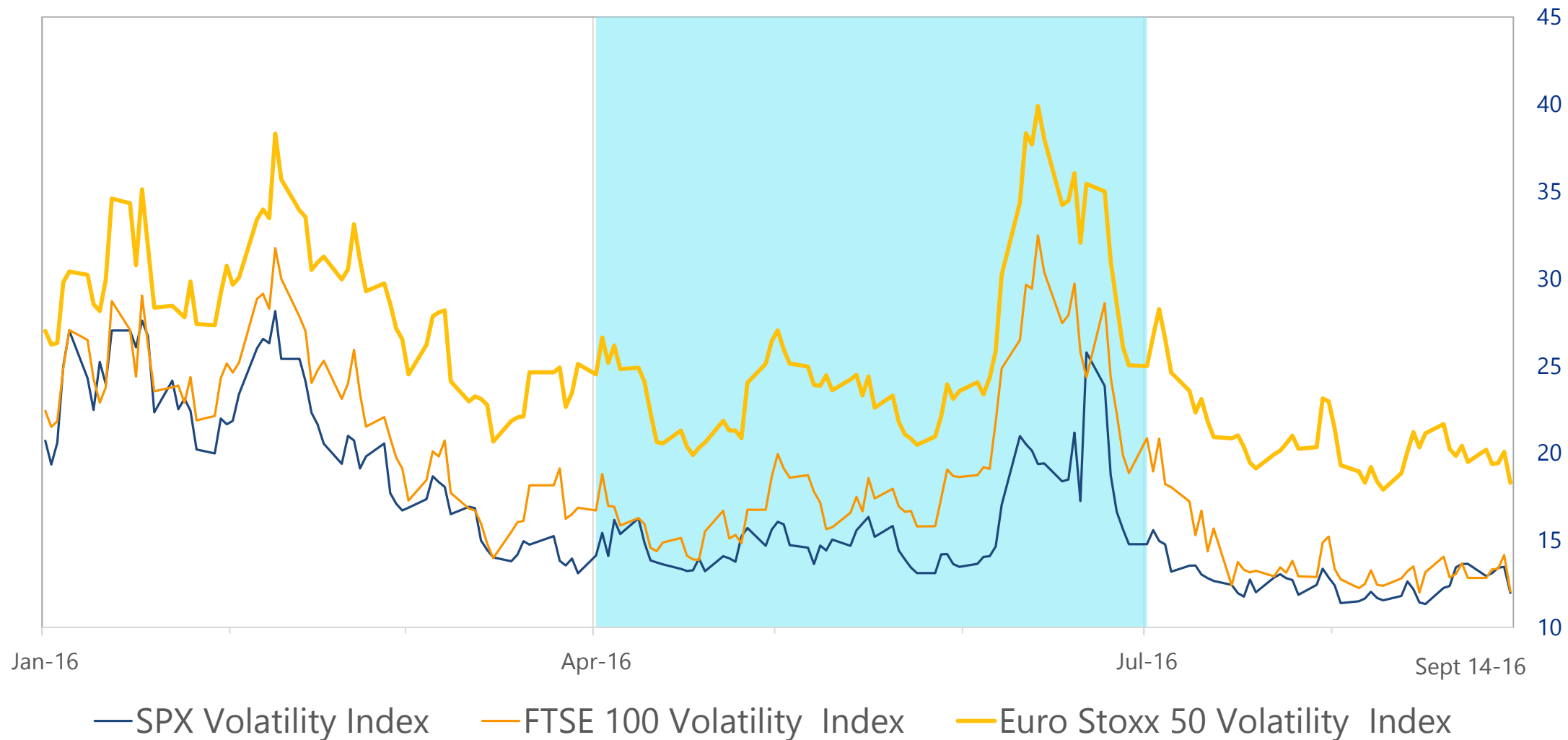
# UK Govt Bonds 10 Year Yield- YTD



Source: Bloomberg



# SPX VIX, FTSE 100 & Euro VIX - YTD



Source: Bloomberg



# Current Events

## Recent

- Bank of Japan (September 21) - shifted focus of Quantitative Easing from quantity of assets purchased to interest rate yield targeting, adding yield curve control.
- Federal Reserve (September 21)- signaled rate hike in December, while signaling slower pace and lower terminal rate.

## Future

- US election (November 8)
- Potential for increase in fiscal policy globally, and “coordination” with monetary policy.



# Total NYC Pension Fund Performance: 6/30/16

(SSB **N, T, F** p.17; **P** p.19; **B** p.21)

NYC Pension System	Portfolio Std Dev - 1 yr	Second Quarter	FYTD 2016	Three Year	Five Year
BERS	10.1%	2.1%	0.4%	7.5%	7.0%
TRS	8.9%	2.2%	1.9%	7.3%	7.1%
POLICE	8.4%	2.0%	1.4%	7.5%	7.1%
NYCERS	8.1%	2.1%	1.8%	7.2%	7.0%
FIRE	8.1%	2.0%	1.7%	7.3%	6.9%
Median Fund - TUCS		1.8%	1.3%	7.2%	7.1%

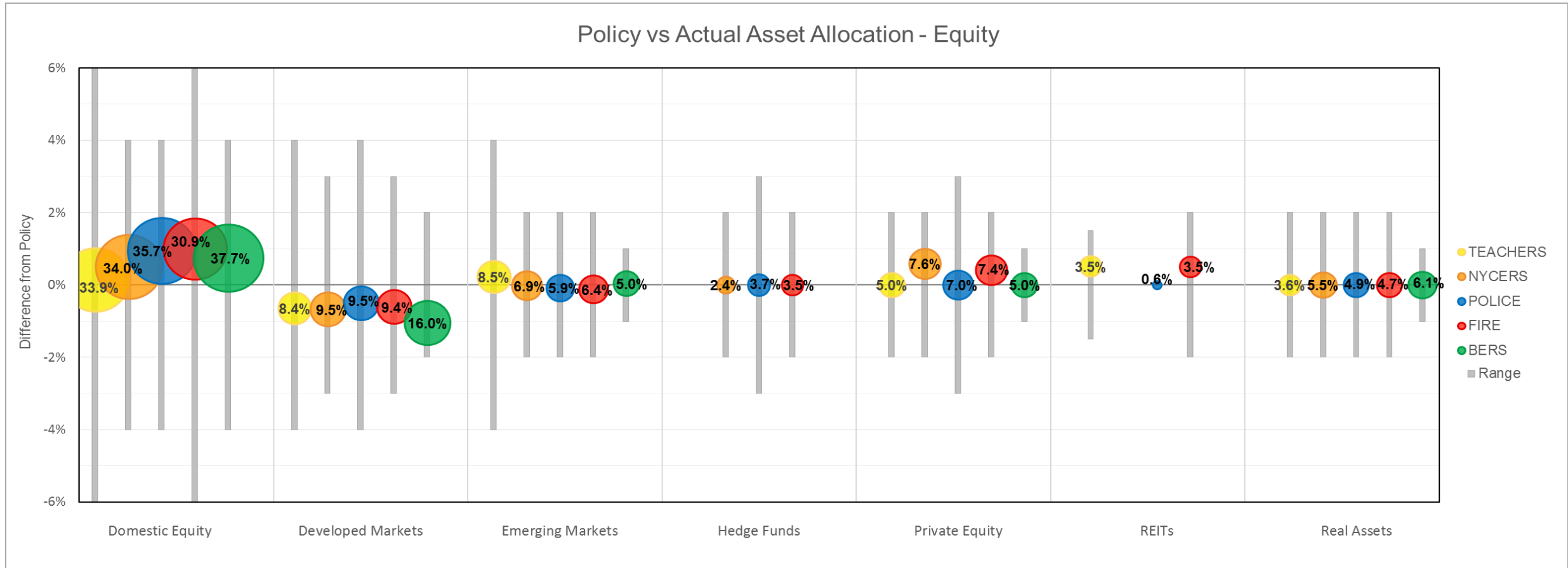
Gross of fees in public asset classes

Source: State Street



# Asset Allocation Second Quarter 2016 - Equity

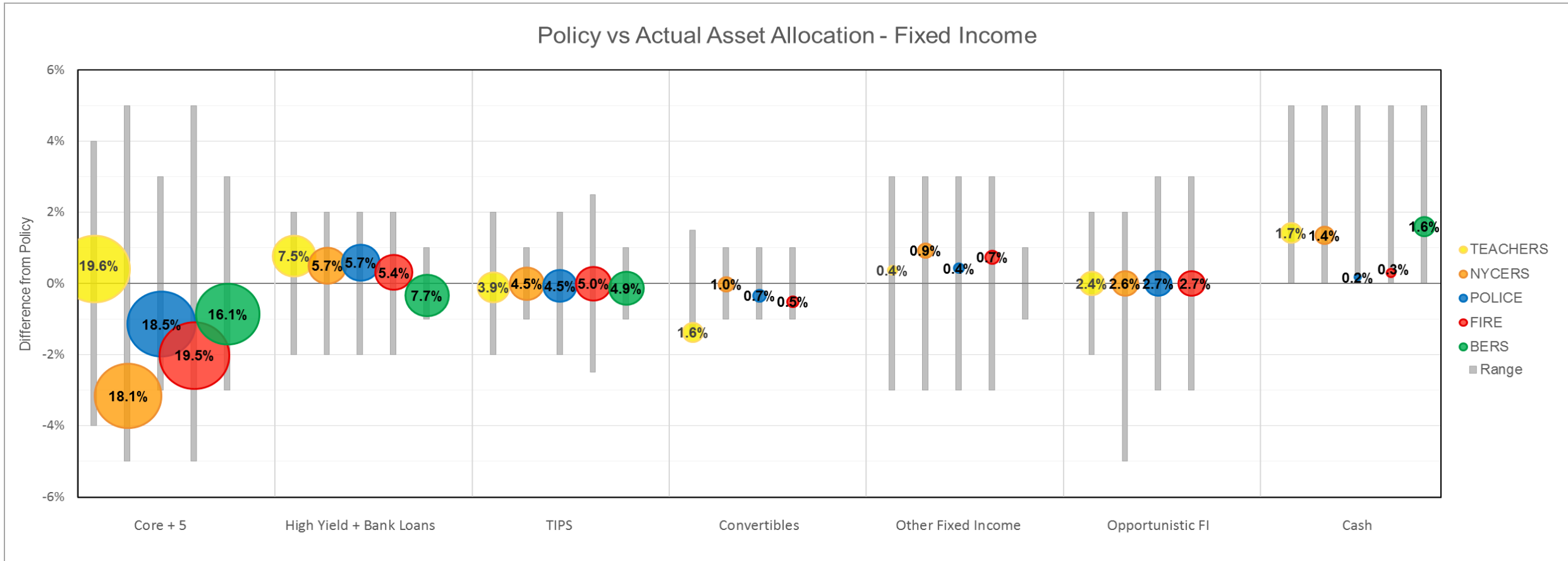
Relative Mix to Adjusted New Policy Weights (SSB **F**, **T**, **N** p.9; **P**, p.11; **B** p.13 )



Source: State Street

# Asset Allocation Second Quarter 2016 - Fixed Income

Relative Mix to Adjusted New Policy Weights (SSB **F, T, N** p.9; **P**, p.11; **B** p.13 )

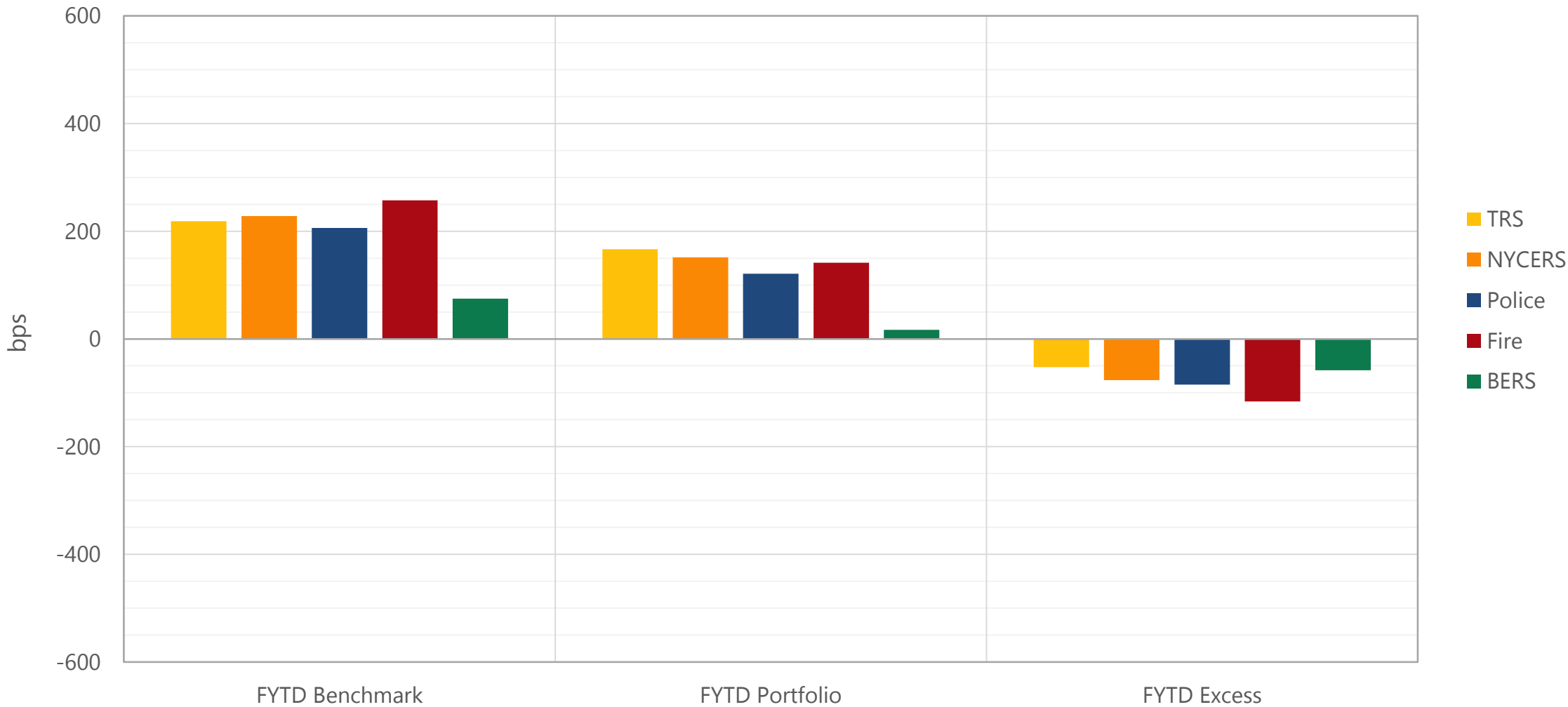


Source: State Street



# FY Return – Total Portfolio

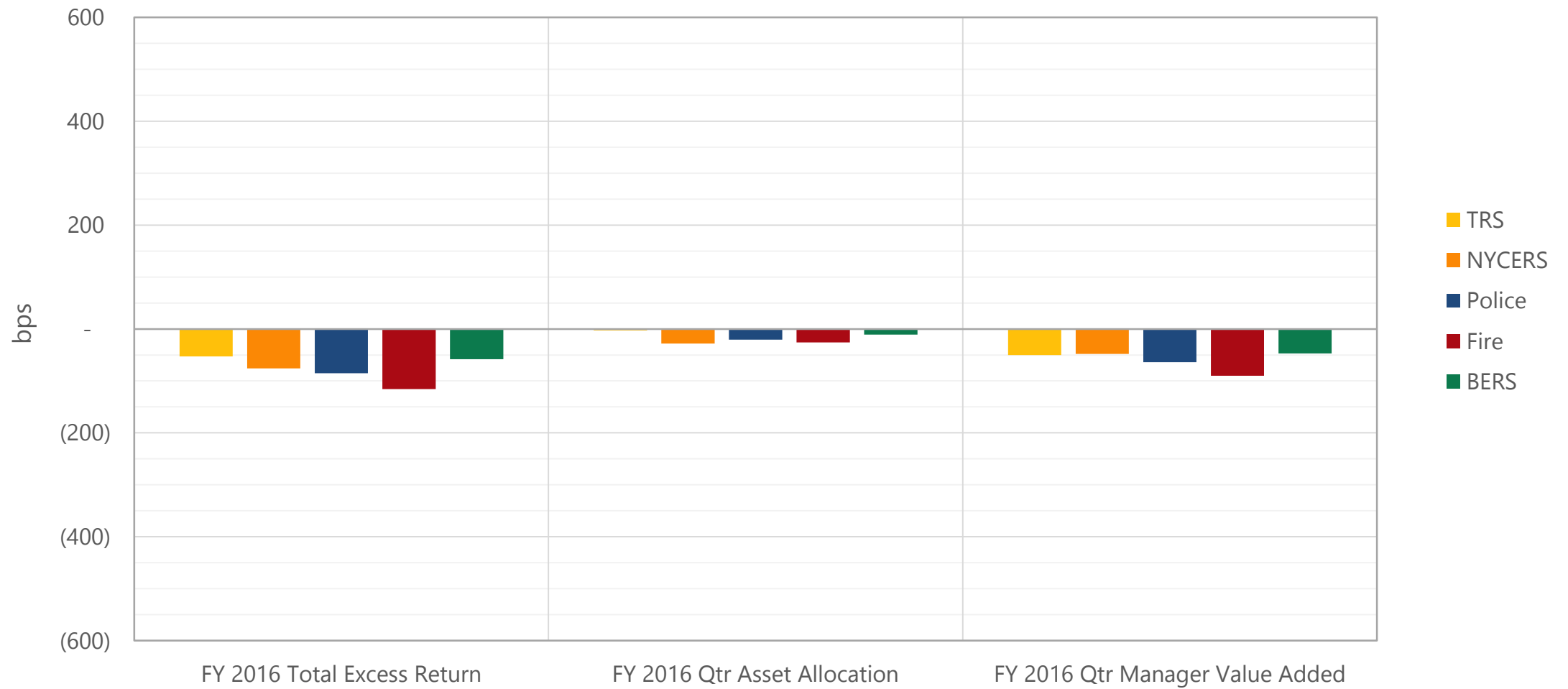
FISCAL YEAR TO DATE June 30, 2016 (SSB T, F, N p.23; P p.25; B p.27)



Source: State Street

# Excess Return – Total Portfolio

FY 2016 Basis Points of Excess Return (SSB **T**, **N**, **F** p. 11; **P**, p. 13; p. 10; **B** p.15)

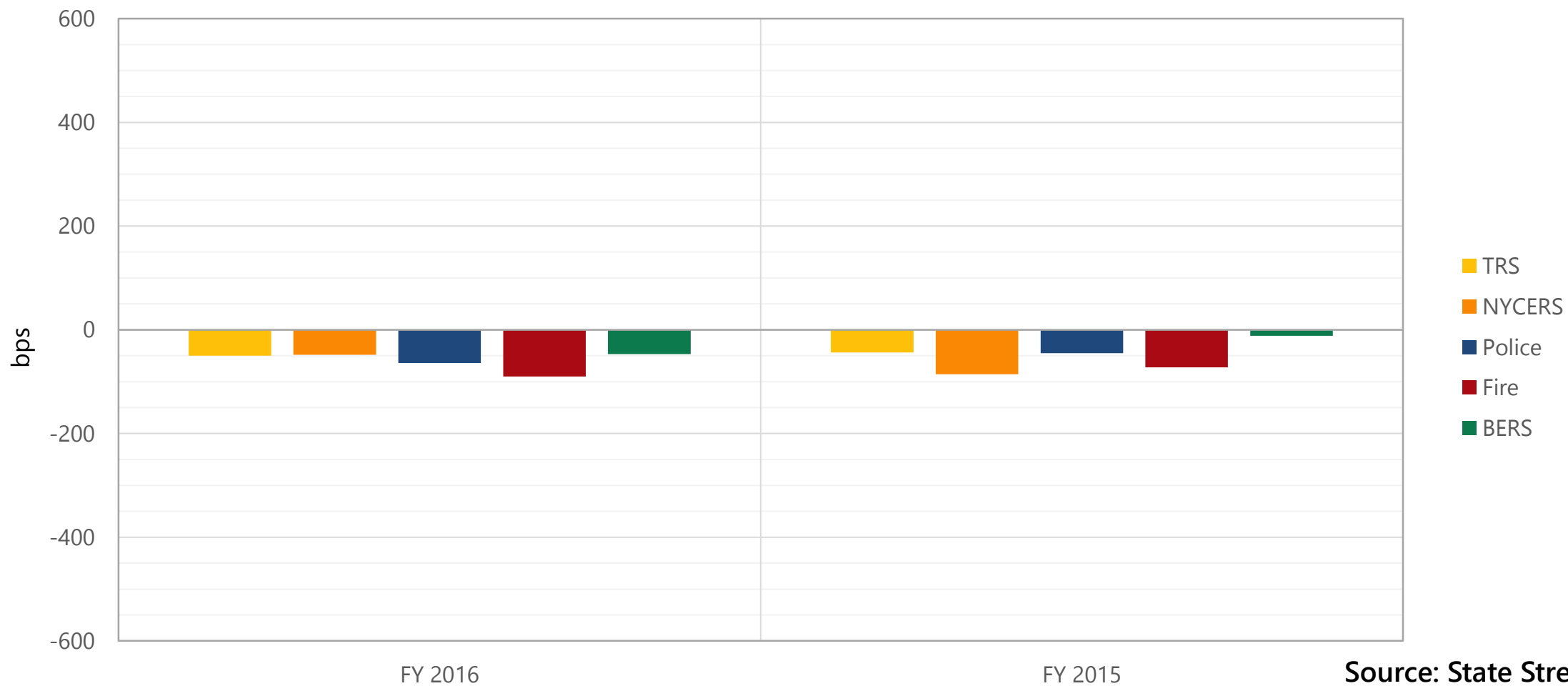


Source: State Street



# Manager Value Added- Total Portfolio

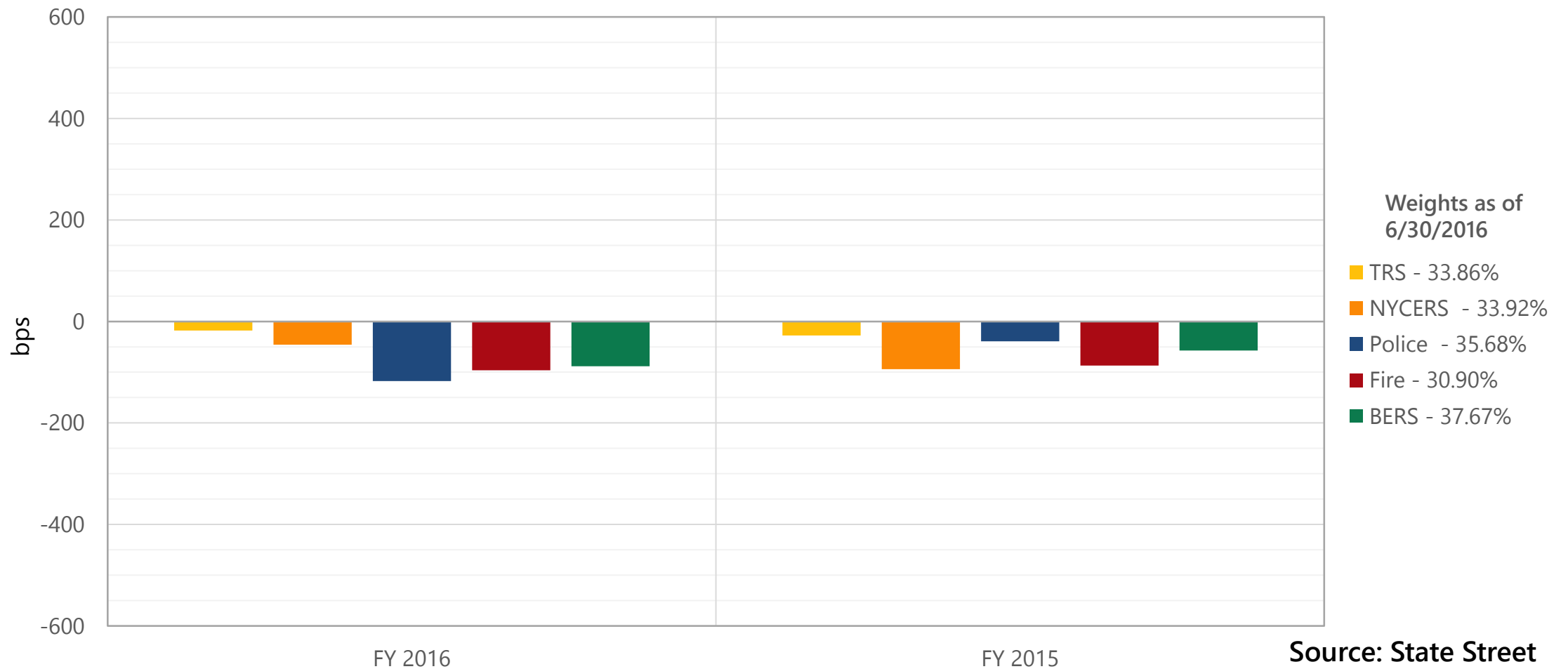
Basis Points of Excess Return (SSB **T** , **N** p. 11; **P** , p. 13; **F** p. 10; **B** p.15)



Source: State Street

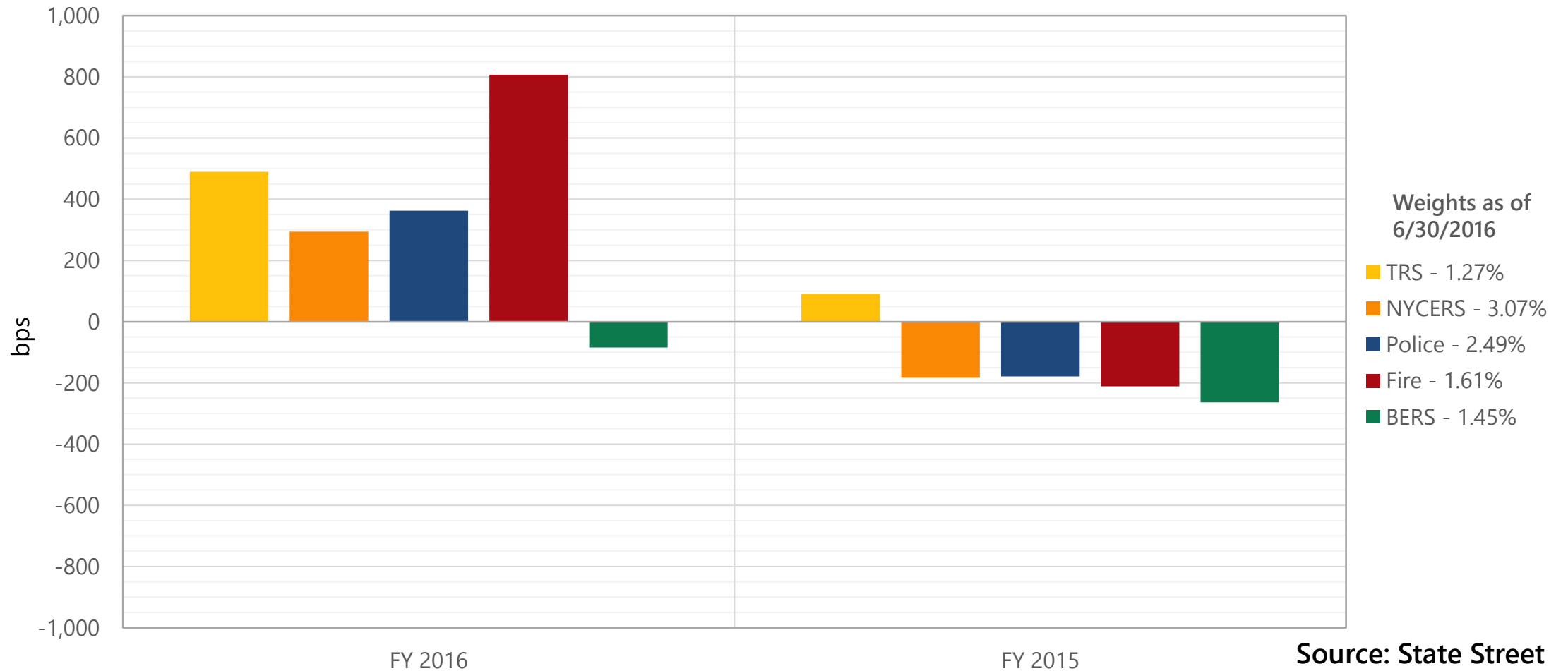
# Value Added – Total U.S. Equities

Basis Points of Excess Return (SSB **T**, **F**, **N** p.23; **P** p.25; **B** p.27)



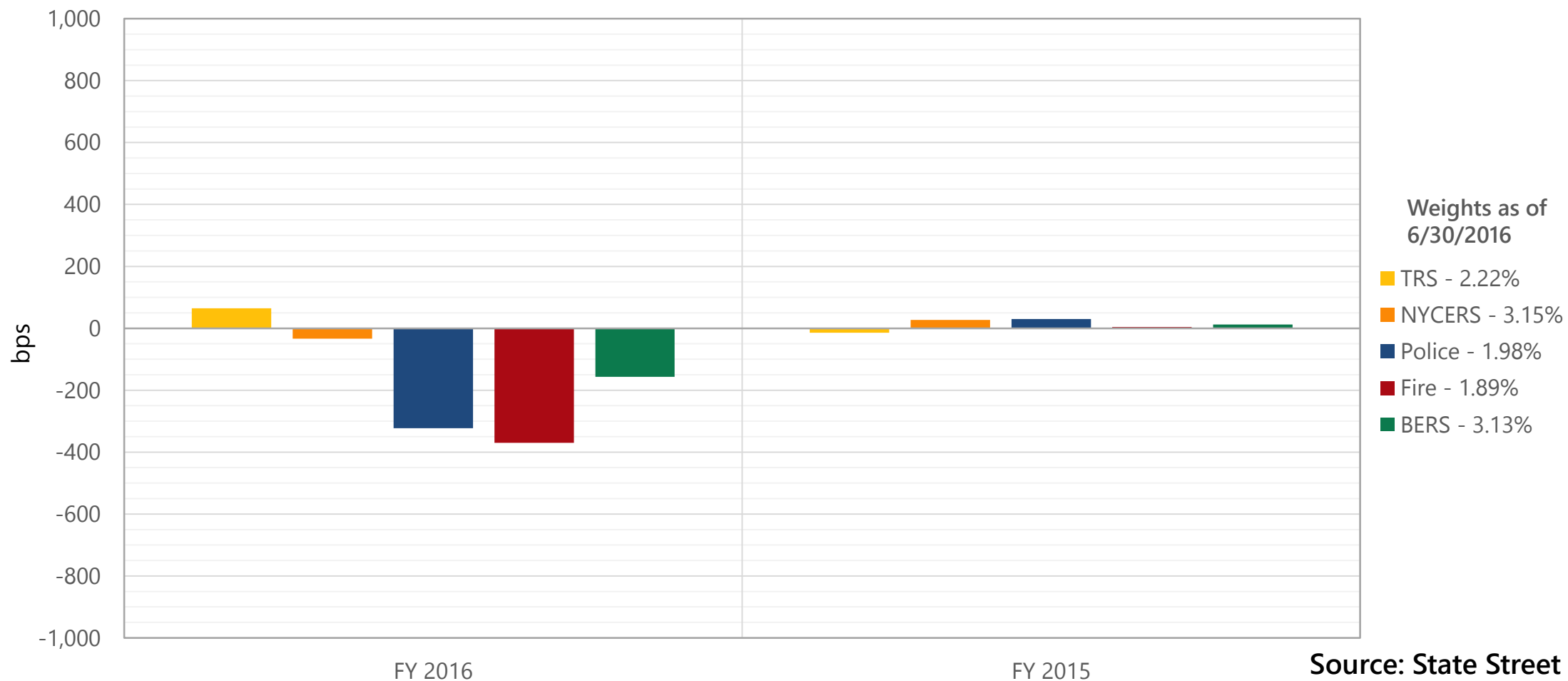
# Value Added – U.S. Equities – Small Cap

Basis Points of Excess Return (SSB T, F, N p.23; P p.25; B p.27)



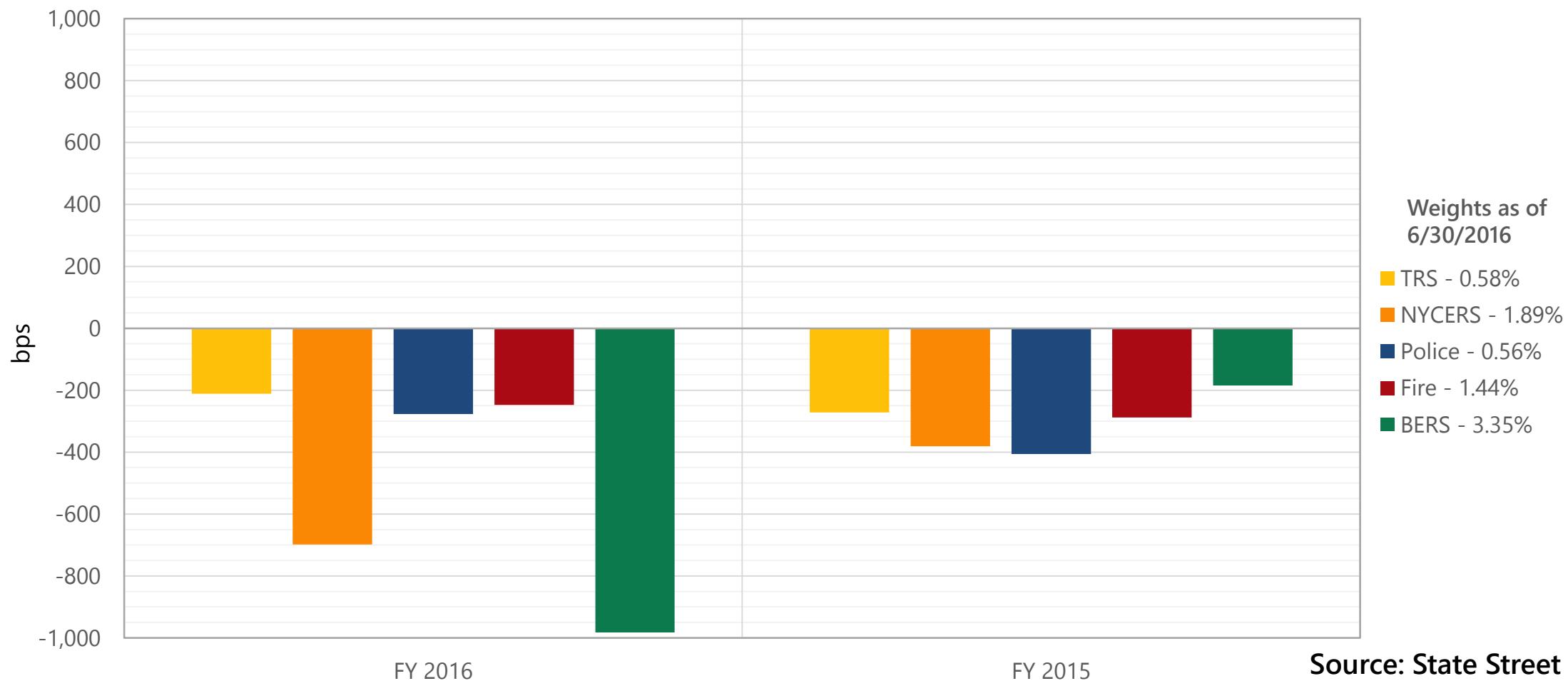
# Value Added – U.S. Equities – Mid Cap

Basis Points of Excess Return (SSB **T**, **F**, **N** p.23; **P** p.26; **B** p.27)



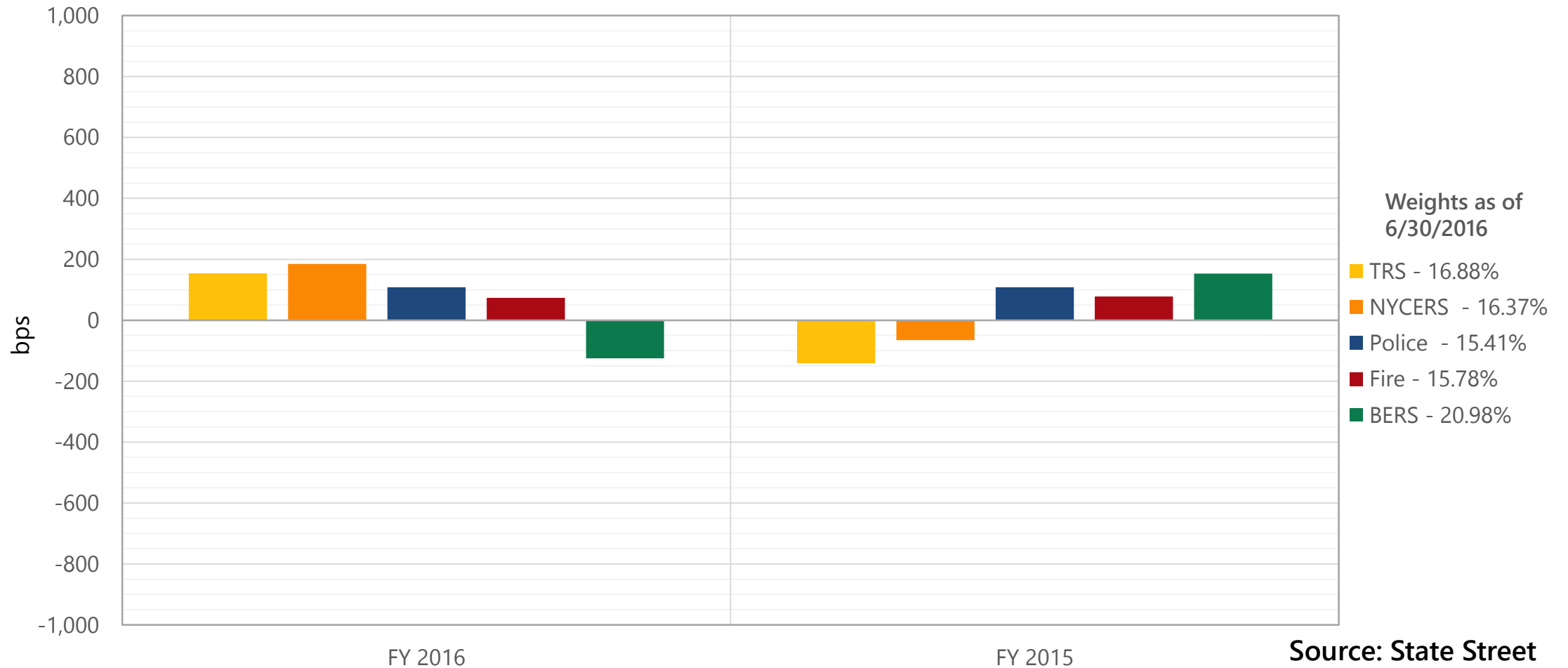
# Value Added – Emerging Manager Program

Basis Points of Excess Return (SSB **T**, **F**, **N** p.24; **P** p.26; **B** p.28)



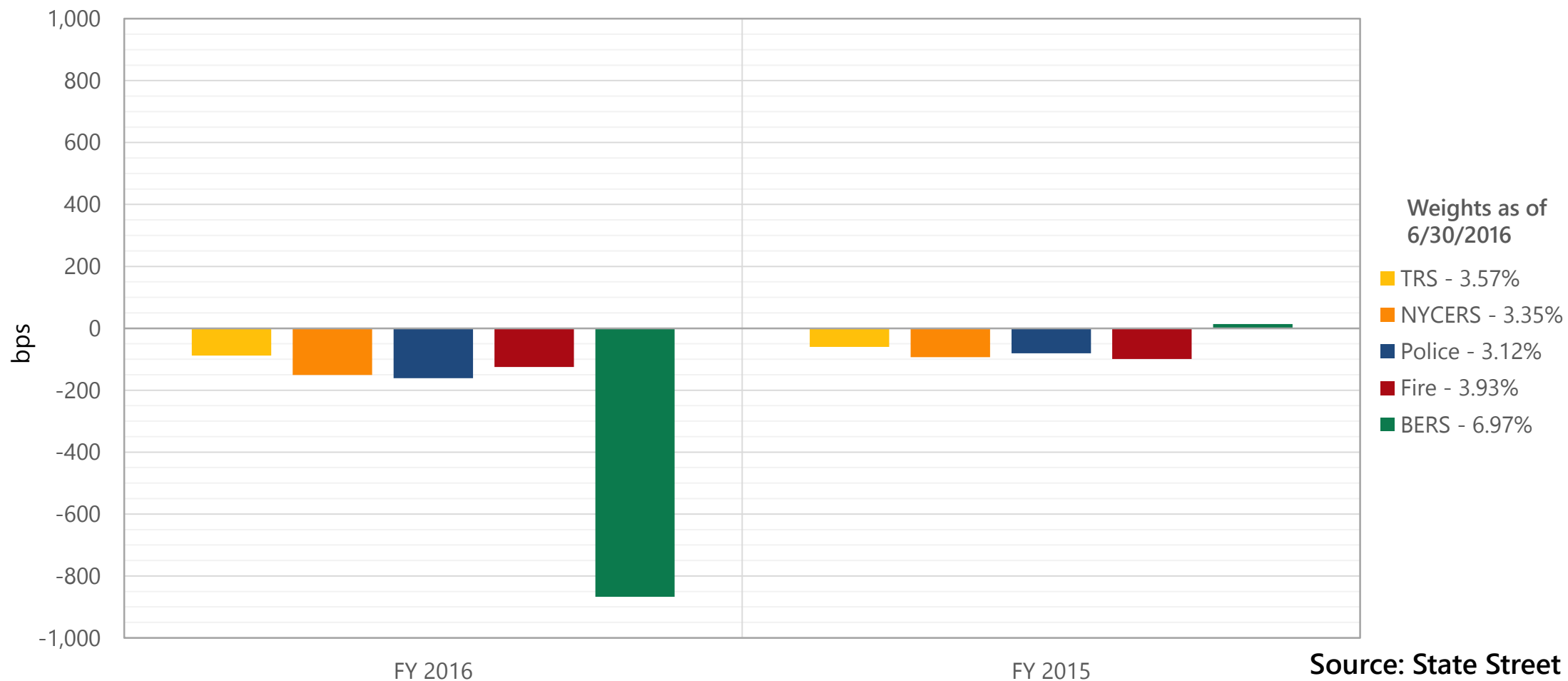
# Value Added – Total International Equities

Basis Points of Excess Return (SSB T, F, N p.25; P p.27; B p.29)



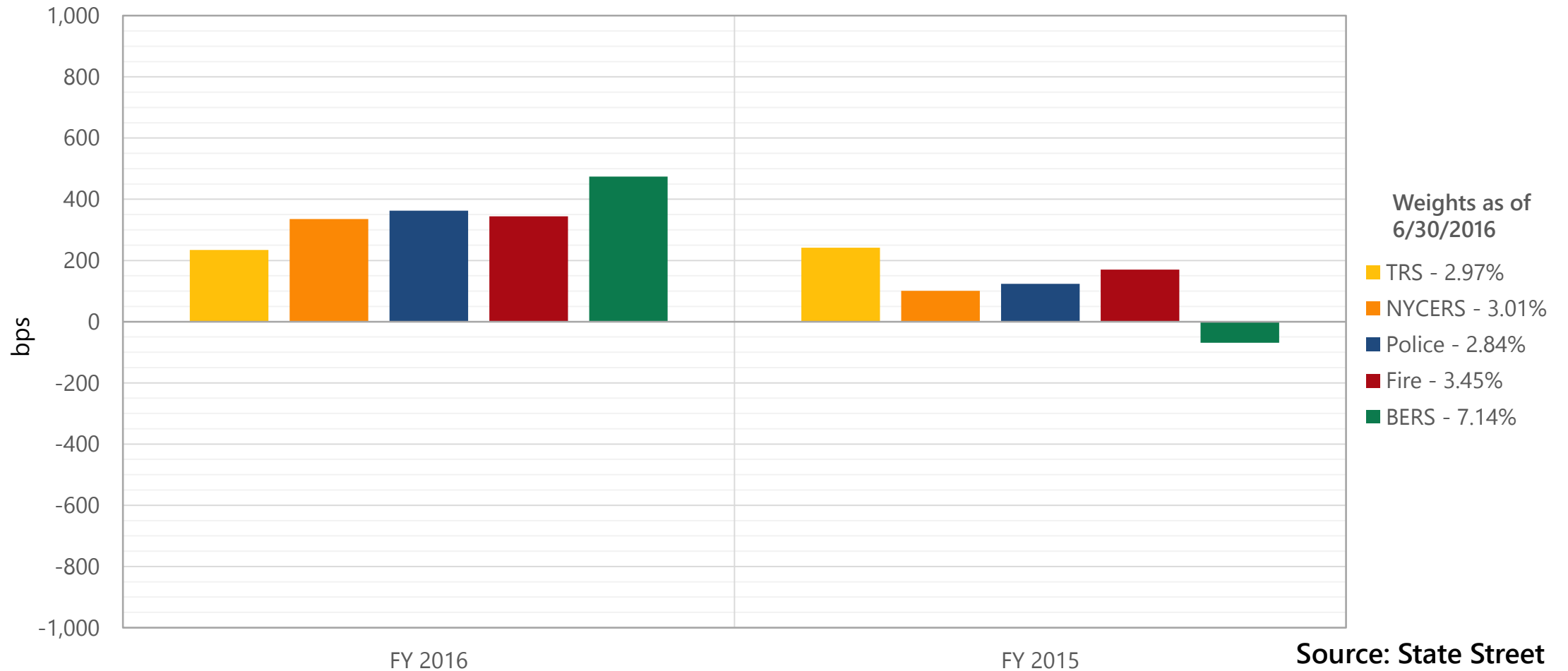
# Value Added – Developed Growth

Basis Points of Excess Return (SSB T, F, N p.25; P p.27; B p.29)



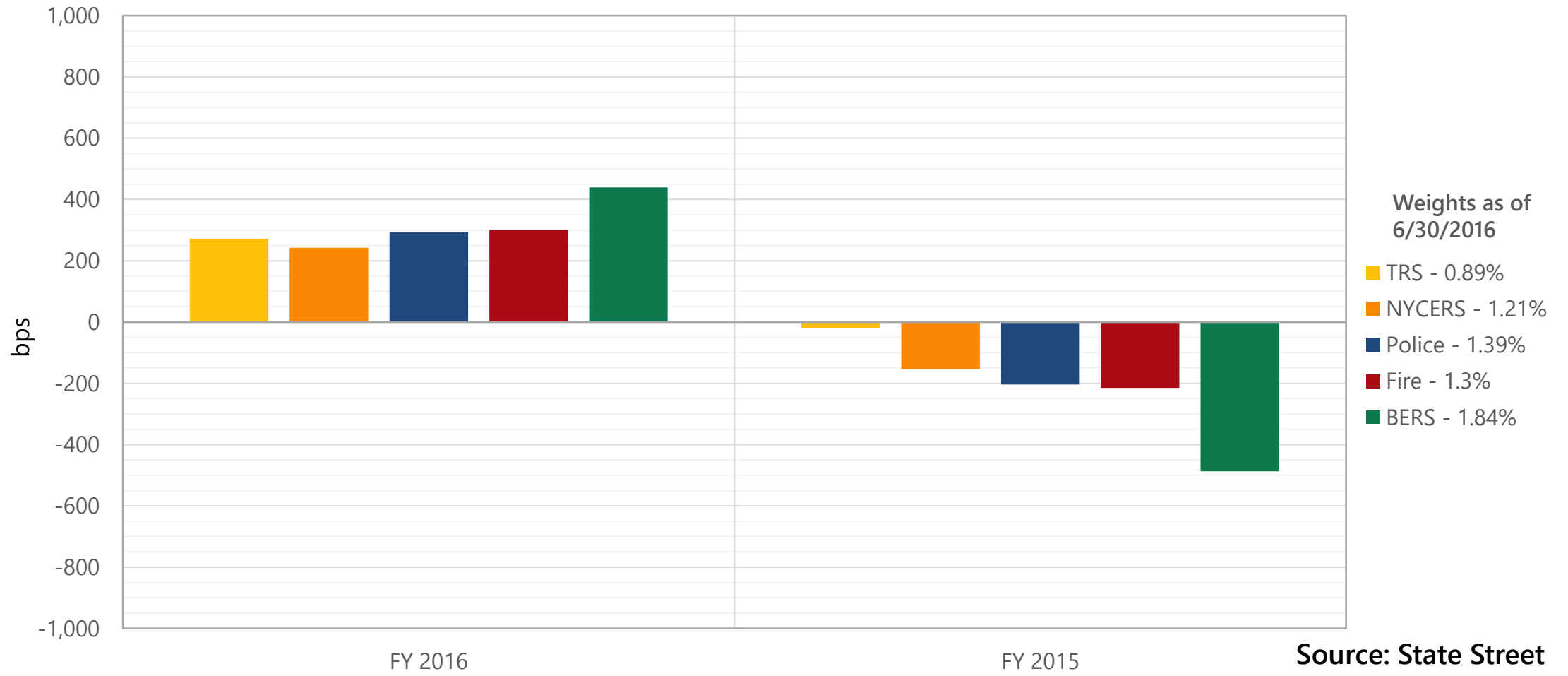
# Value Added – Developed Value

Basis Points of Excess Return (SSB T, F, N p.25; P p.27; B p.29)



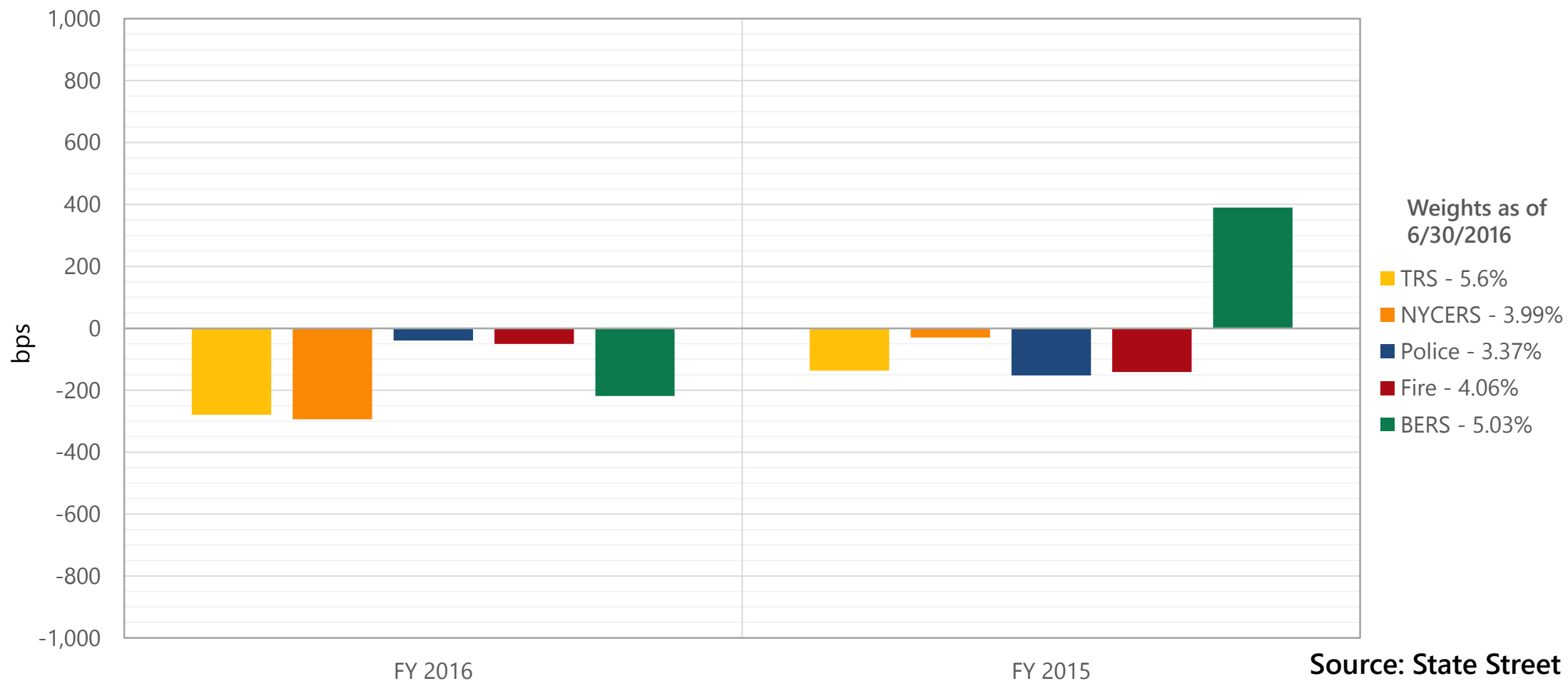
# Value Added – Developed Small Cap

Basis Points of Excess Return (SSB T, F, N p.25; P p.27; B p.29)



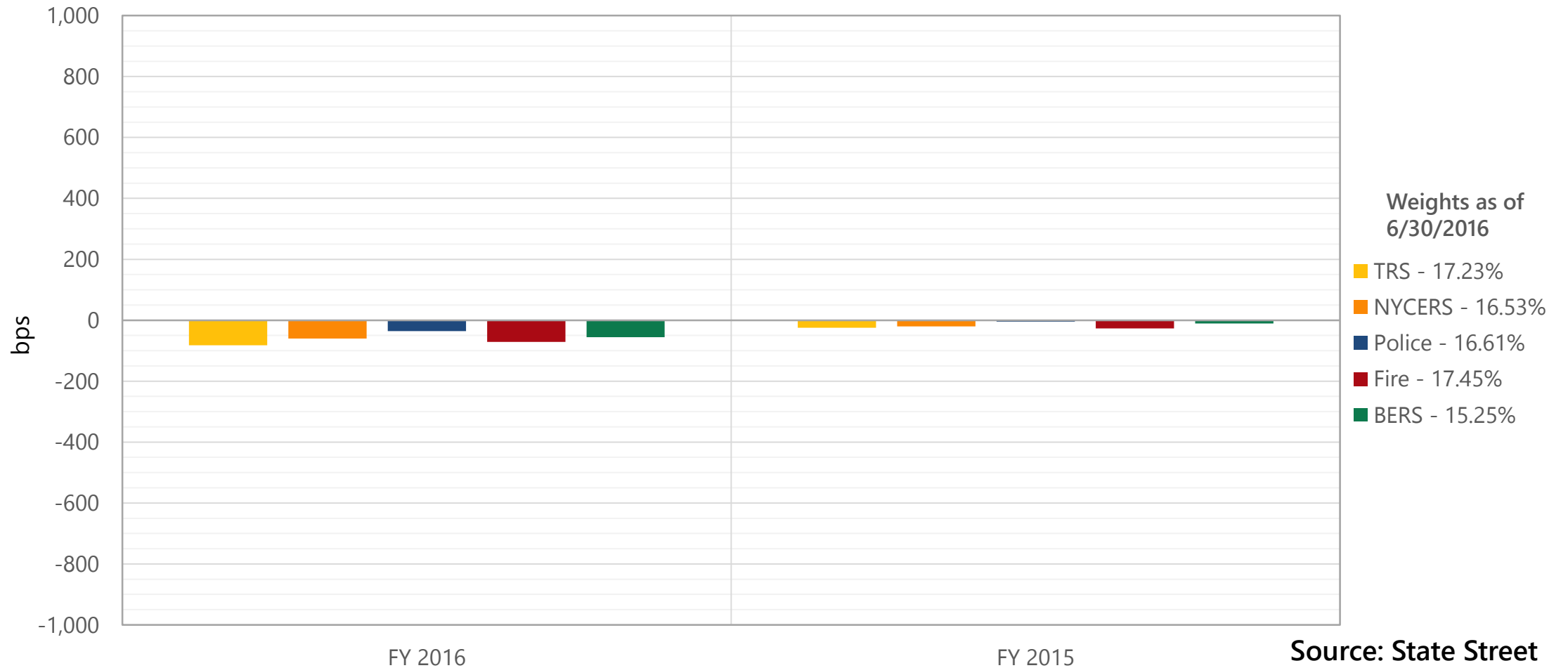
# Value Added – Active Emerging Markets

Basis Points of Excess Return (SSB T, F, N p.26; P p.28; B p.29)



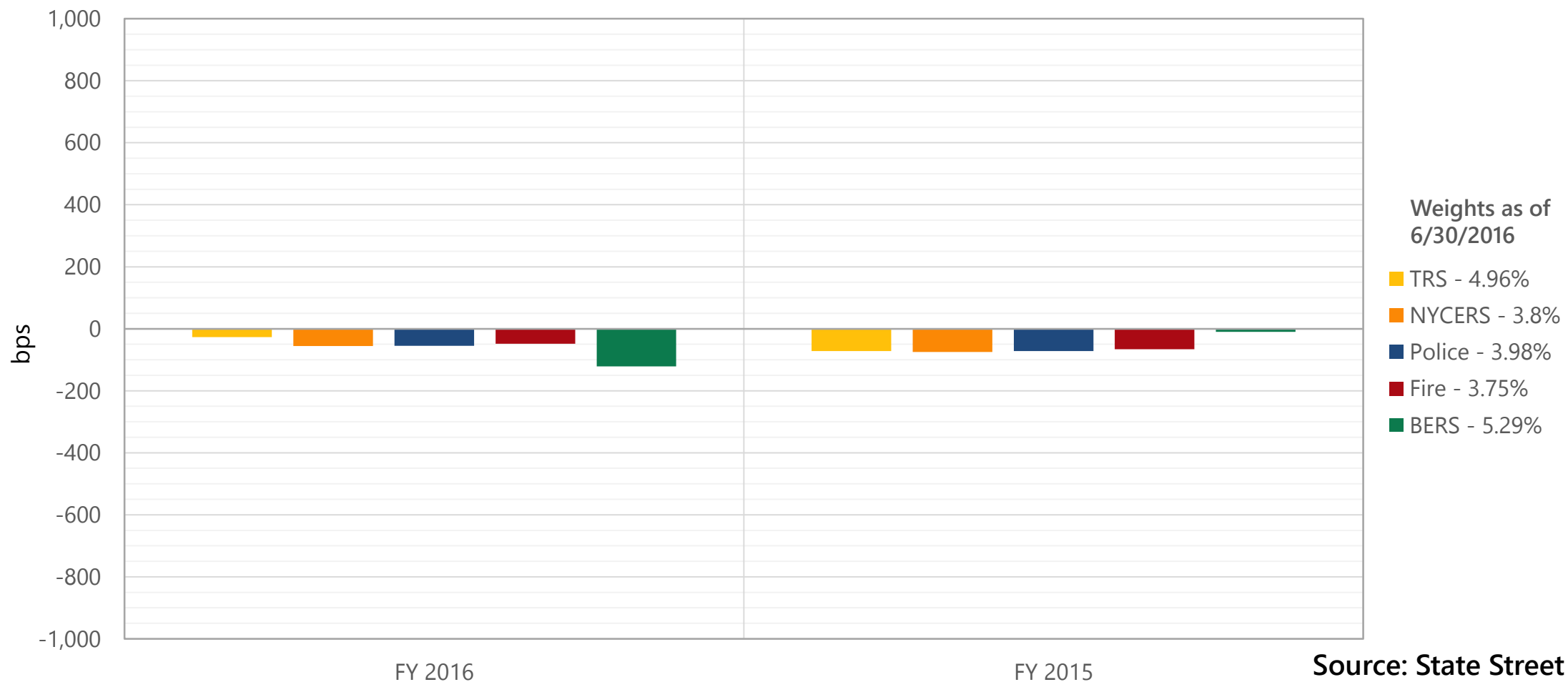
# Value Added – Structured Fixed Income

Basis Points of Excess Return (SSB **T** p.28; **F**, **N** p.29; **P**, **B** p.31)



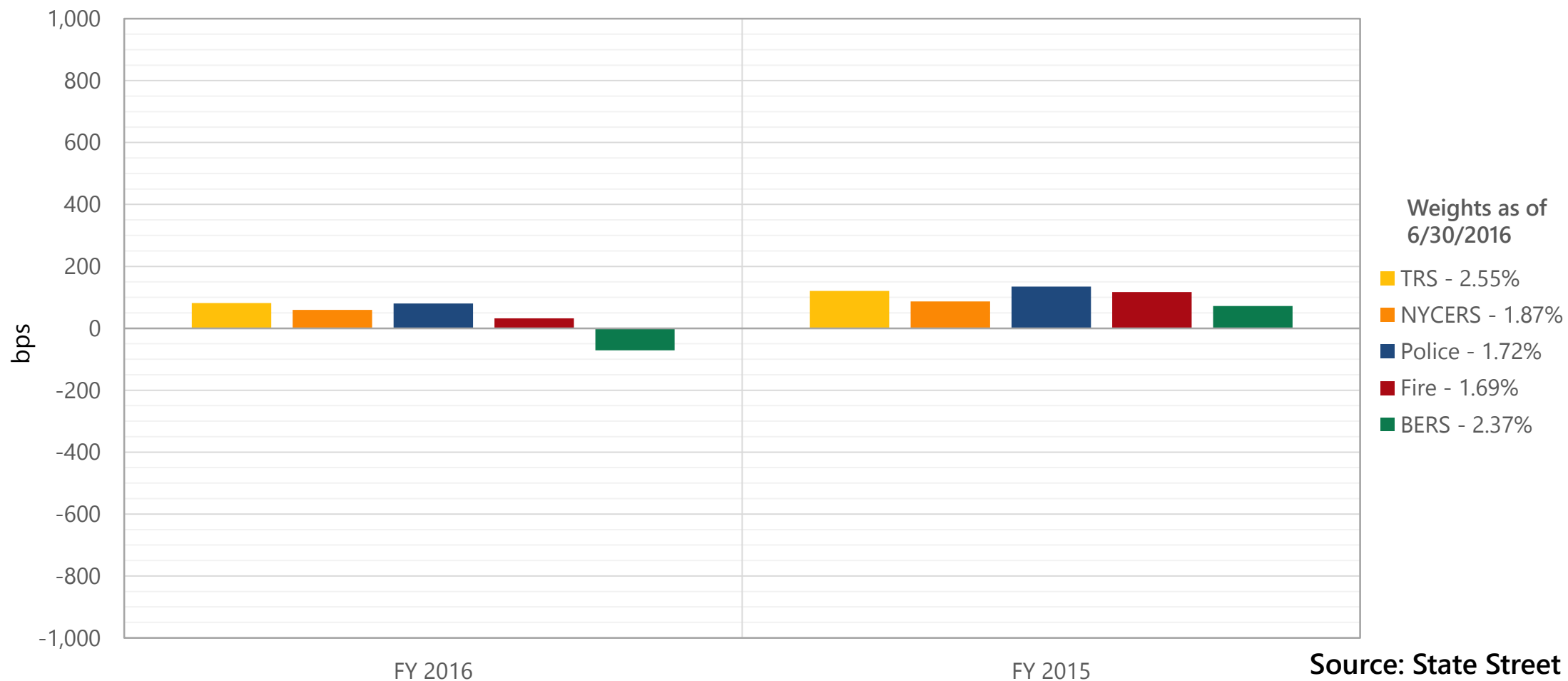
# Value Added – Enhanced Yield

Basis Points of Excess Return (SSB **T** p.28; **F**, **N** p.29; **P**, **B** p.31)



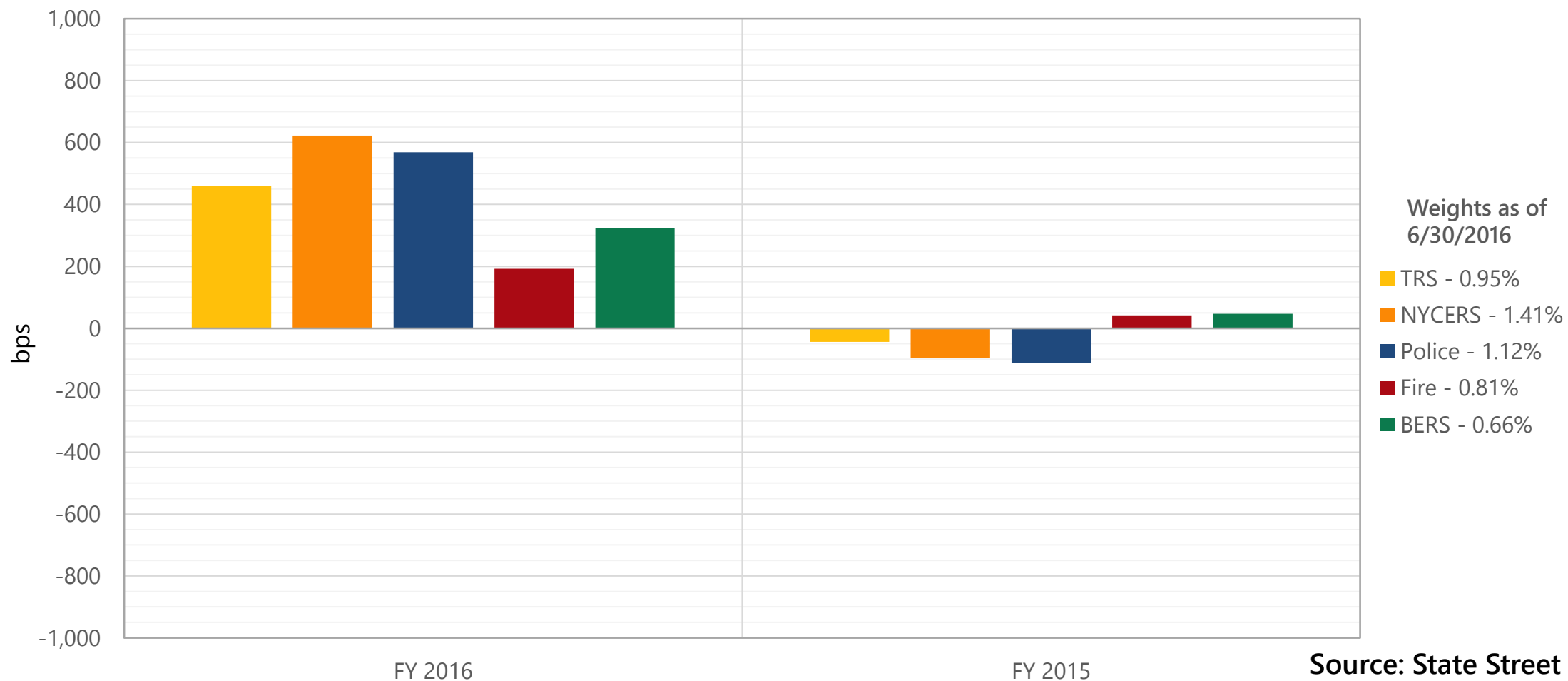
# Value Added – Bank Loans

Basis Points of Excess Return (SSB **T** p.28; **N** p.29; **F** p.30; **B** p.31 **P** p.32)



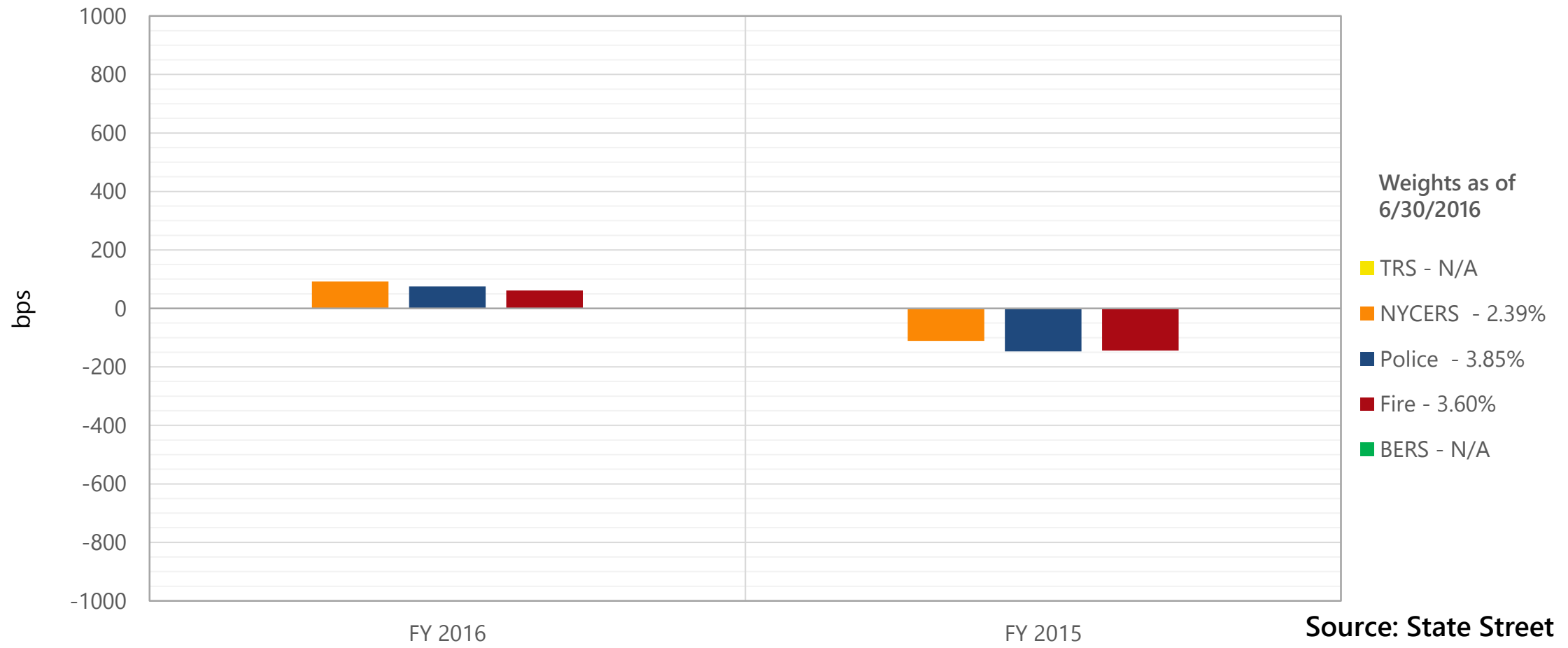
# Value Added – Economically Targeted Investments

Basis Points of Excess Return (SSB **T** p.29; **N**, **F** p30; **B** p.31 **P** p.32)



# Value Added - Hedge Funds

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

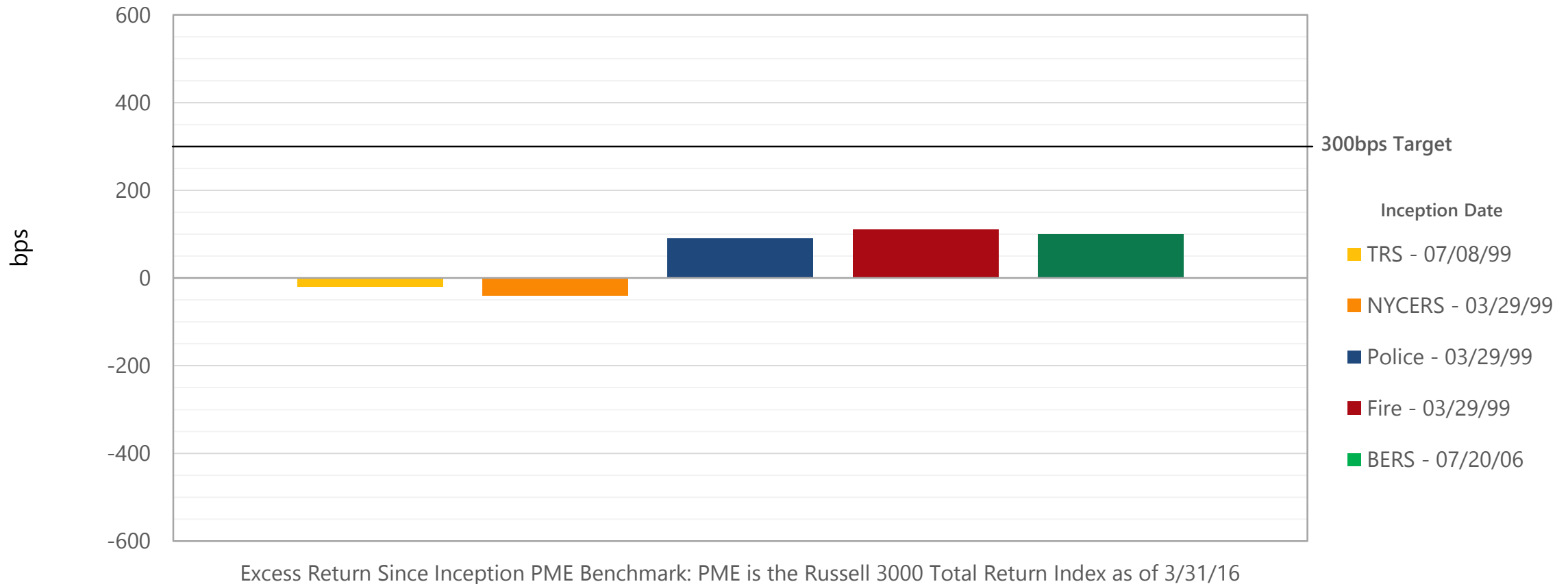


# PRIVATE MARKET DATA



# Value Added – Private Equity

## Basis Points of Cumulative IRR above Public Market Equivalent

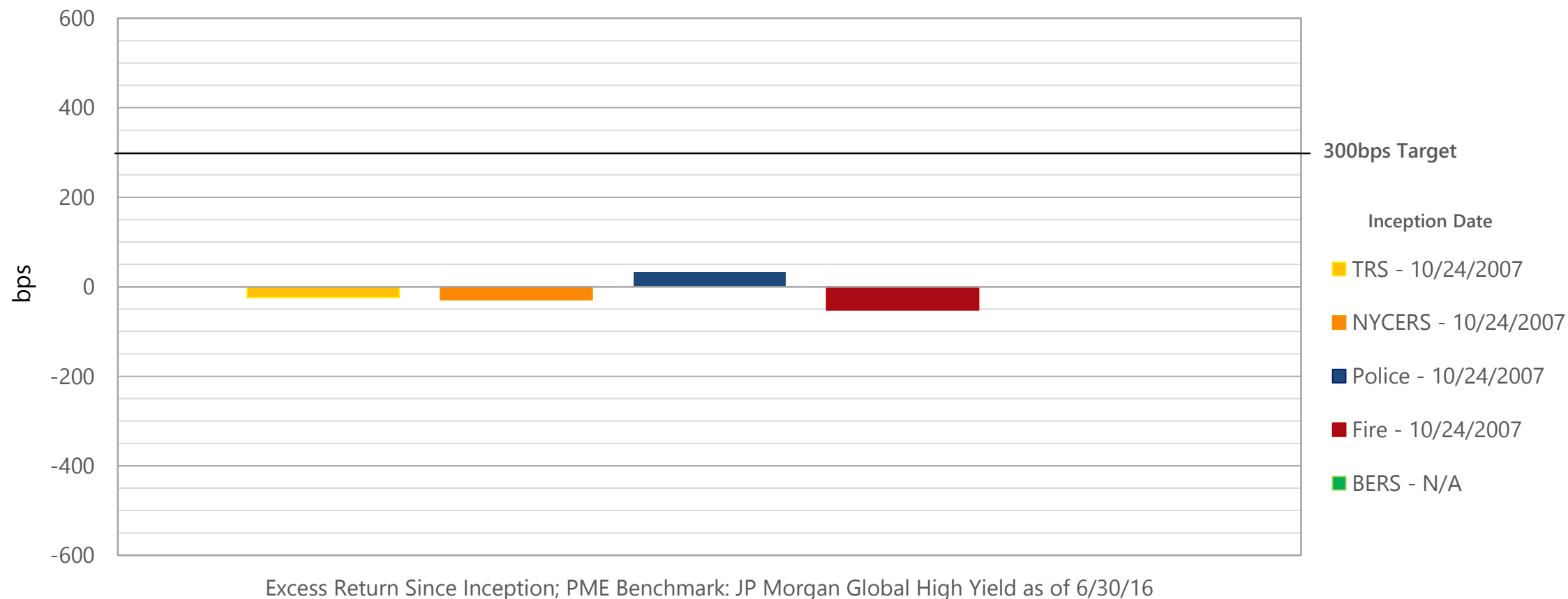


The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.



# Value Added – Opportunistic Fixed Income (OFI)

## Basis Points of Cumulative IRR above Public Market Equivalent

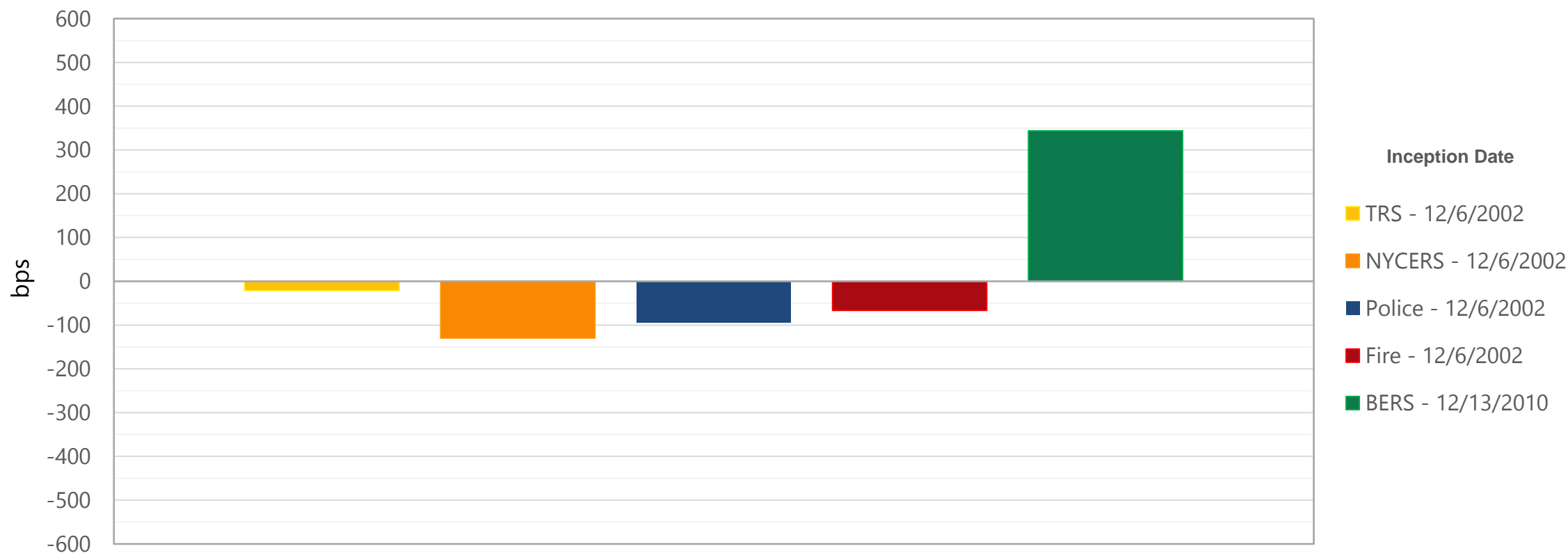


The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.



# Value Added – Private Real Estate - Core

## Basis Points of Cumulative IRR above Public Market Equivalent



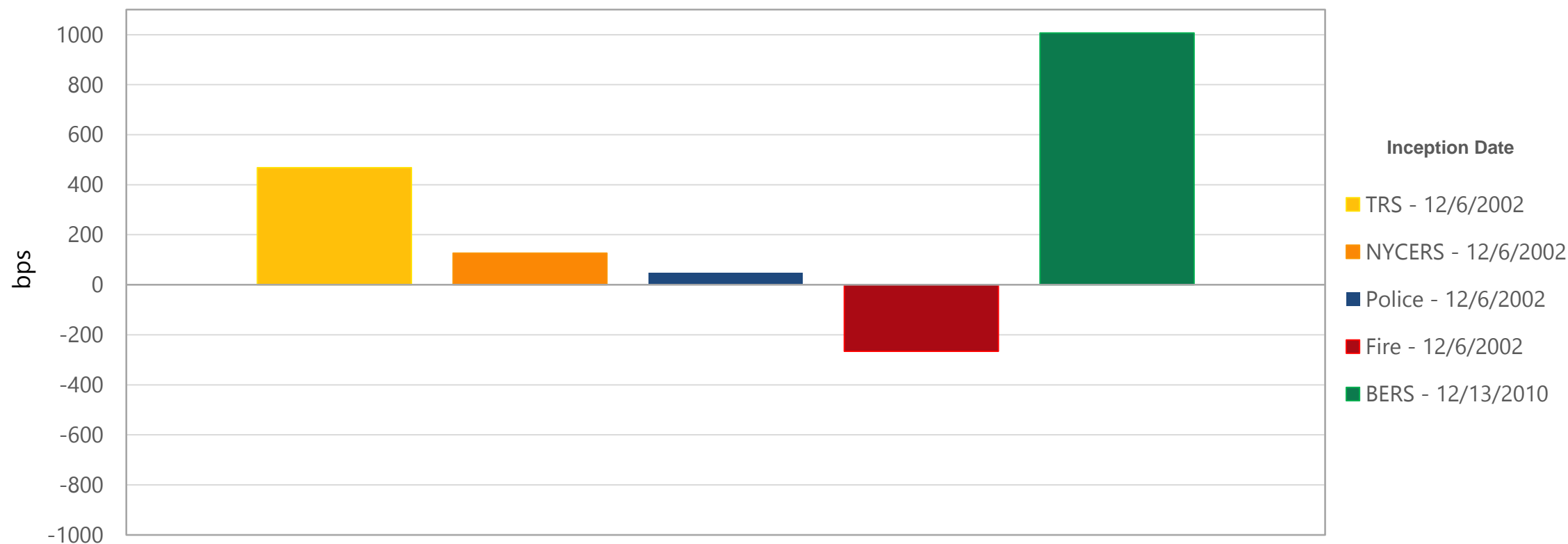
Excess Return Since Inception; Core = 40% Equities- Russell 3000 /60% BarcAgg as of 3/31/16

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



# Value Added – Private Real Estate – Non-Core

## Basis Points of Cumulative IRR above Public Market Equivalent



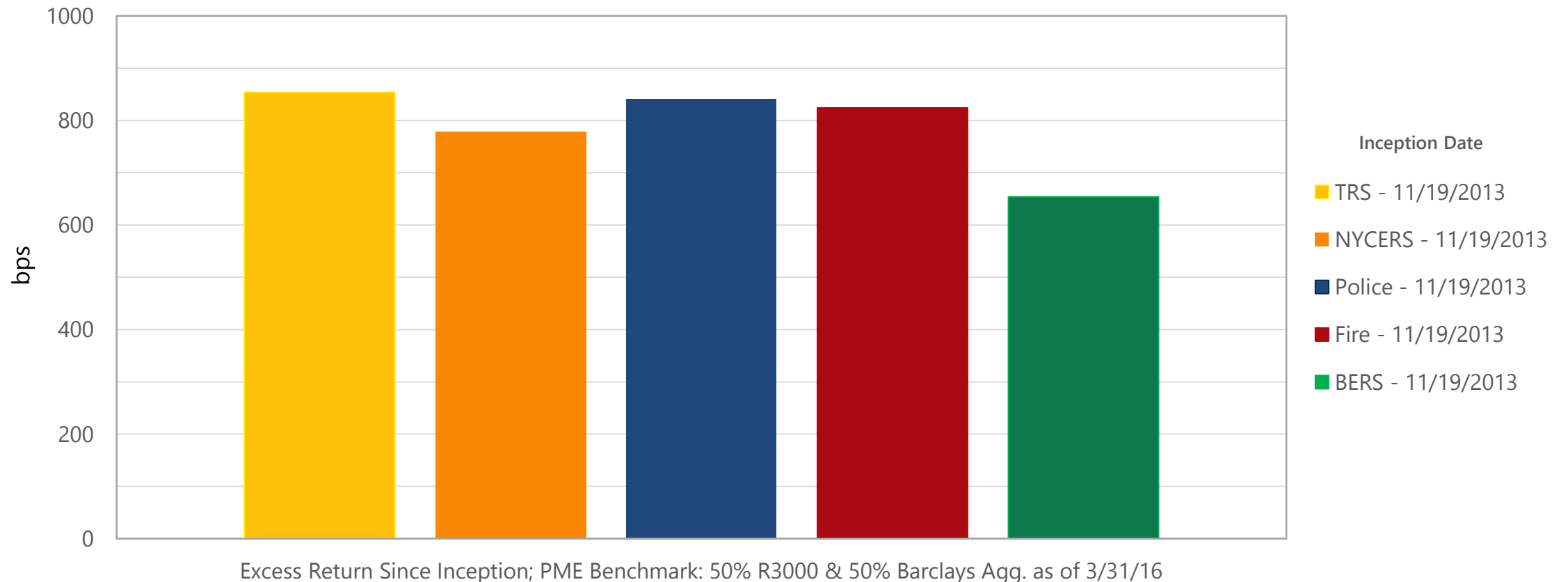
Excess Return Since Inception; Non-core = 60% Equities- Russell 3000/40% BarcAgg as of 3/31/16

**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

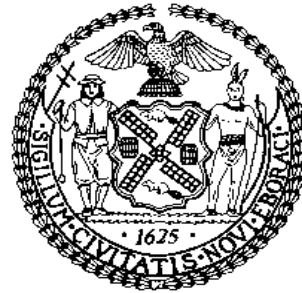


**The PME Spread is the difference between the IRR and the PME Benchmark for each respective partnership.**





# Statement of Investment Principles



THE CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER

September 26, 2016

# Statement of Investment Principles

## Purpose

Establish principles to appropriately execute the 2016 Implementation Plans, guidelines to ensure thorough management of investment decisions and best practices standards for evaluating/ monitoring investment results.

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## Roadmap

Presents a framework for achieving the investment strategy approved by the Boards based on the 2016 Asset Allocation Study



# Objective

Growth of contributed assets utilizing prudent investment practices that is sufficient to meet current and future benefit obligations net of fund expenses.

Limit the severity of potential asset drawdowns to minimize market driven increases in the required annual contribution to the funds.



# Philosophy

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Target asset allocation should be chosen that balances the twin objectives of adequate return and minimal asset drawdowns, consistent with the assumed investment return adopted by the Pension Board. Diversification of asset classes, geographic exposure and other relevant factors should be pursued as a means of controlling drawdown risk.

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Variations from target allocations should be minimized through regular re-balancing; Purposeful tactical bets should be rare and fully disclosed to the Board.

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All securities held in the portfolio should be included in the relevant Board approved investable universe. This is designed to ensure that portfolio holdings are consistent with the Board's values as expressed in ESG guidelines and responsible contracting policies.

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Investment Manager contracts should be designed with the objective of returning a large majority of excess return to fund participants.

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Every effort should be made to employ managers who practice diversity in their staffing. This includes all minority and women owned businesses.

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# Asset Allocation

Reference Allocation chosen that is consistent with long term passive execution of investment objectives, subject to New York State Laws.



Strategic Allocation chosen that is expected to best achieve objectives over the next five to ten years.



The Board will re-evaluate the strategic asset allocation at least every three years in order to ensure that the fund objectives are being properly served.



# Reporting

- Investment results will be reported to the Board quarterly at the Common Investment Meeting. Additionally, the Bureau of Asset Management will provide the Board with annual updates on risk management, compliance, and operations during the quarterly Common Investment Meeting BAM reports.
- 
- Reporting Responsibilities
    - Report will include attribution analysis separating excess return into Strategic, Implementation, and manager effects.
    - Purposeful variances from the approved strategic asset allocation should be reviewed with the Board at every CIM.
    - Manager value added analysis will seek to identify the percentage of manager gross excess return that is absorbed by manager fees and charges of all types.
    - Bureau of Asset Management staff will highlight unusual investment results among sectors or managers to inform Board discussion.
- 
- At the Common Investment Meeting (CIM), the Board will review manager recommendations from the Bureau of Asset Management and appropriate external consultants.
    - First time managers outside of BAM discretionary programs will present to the Boards during the CIM. Managers being presented for mandate renewal will make a presentation if specifically requested to do so by the Board.



# Questions?