

Global Fixed Income Annual Program Review

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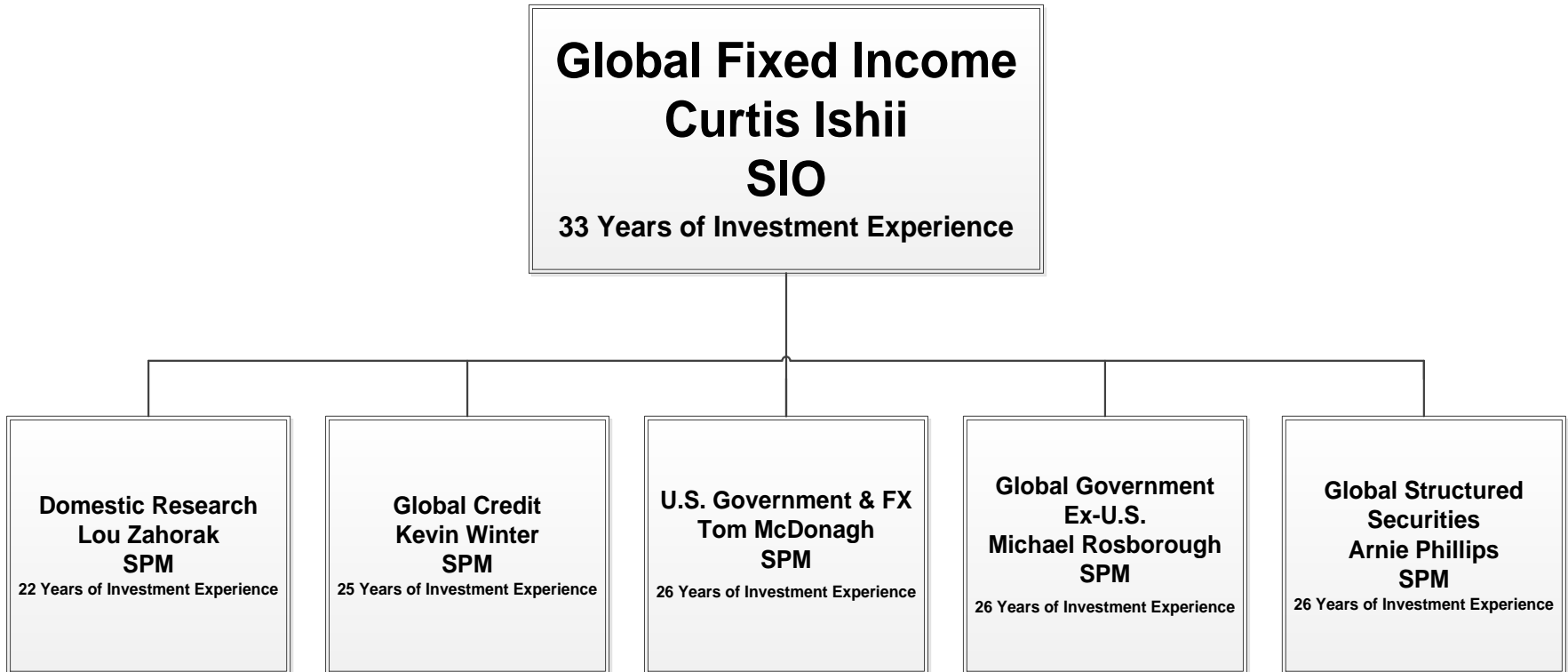
September 16, 2013

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Organization Chart and Program Responsibilities

Investment Professionals



- Average of 26 years of investment experience among senior staff.
- Total of 41 positions within Global Fixed Income.
- Hired 6 Investment Officers since the start of FY 2012-13.
- Vacancies: 3 vacancies being actively recruited.

Total Assets Under Management

as of 6/30/13

Fixed Income Securities Programs

| | Market Value (\$ bn) |
|--|----------------------|
| Global Fixed Income | \$41.1 |
| Inflation Assets | 9.2 |
| Liquidity | 8.7 |
| Low Duration | 23.3 |
| Barclays Aggregate ¹ | 0.6 |
| Treasury Inflation Protected Securities Portfolio ² | <u>0.3</u> |
| Sub-total | \$83.2 |

Fixed Income Other Programs

| | |
|-----------------------|----------------|
| Currency ³ | \$84.0 |
| Securities Lending | <u>17.3</u> |
| Sub-total | \$101.3 |
| Total | \$184.5 |

¹ To be outsourced late 2013

² To be partially outsourced late 2013

³ Currency consists of total outstanding currency exposure.

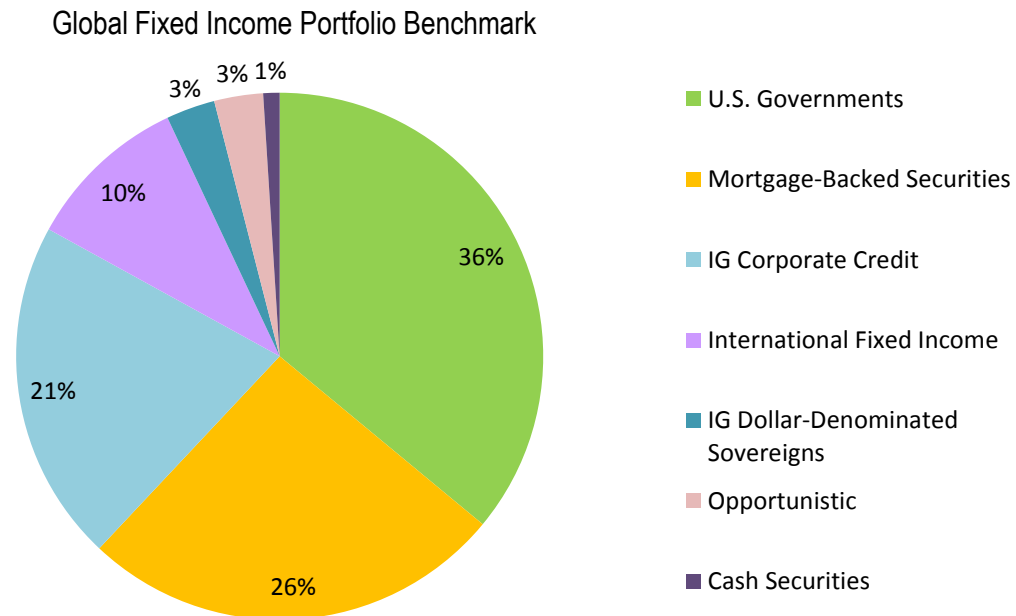
Global Fixed Income Cross Asset Investments



Global Fixed Income

- **Role:** Serve as a diversifier for the market risk entailed by equity exposures and to be a reliable source of income.

- **Description:**



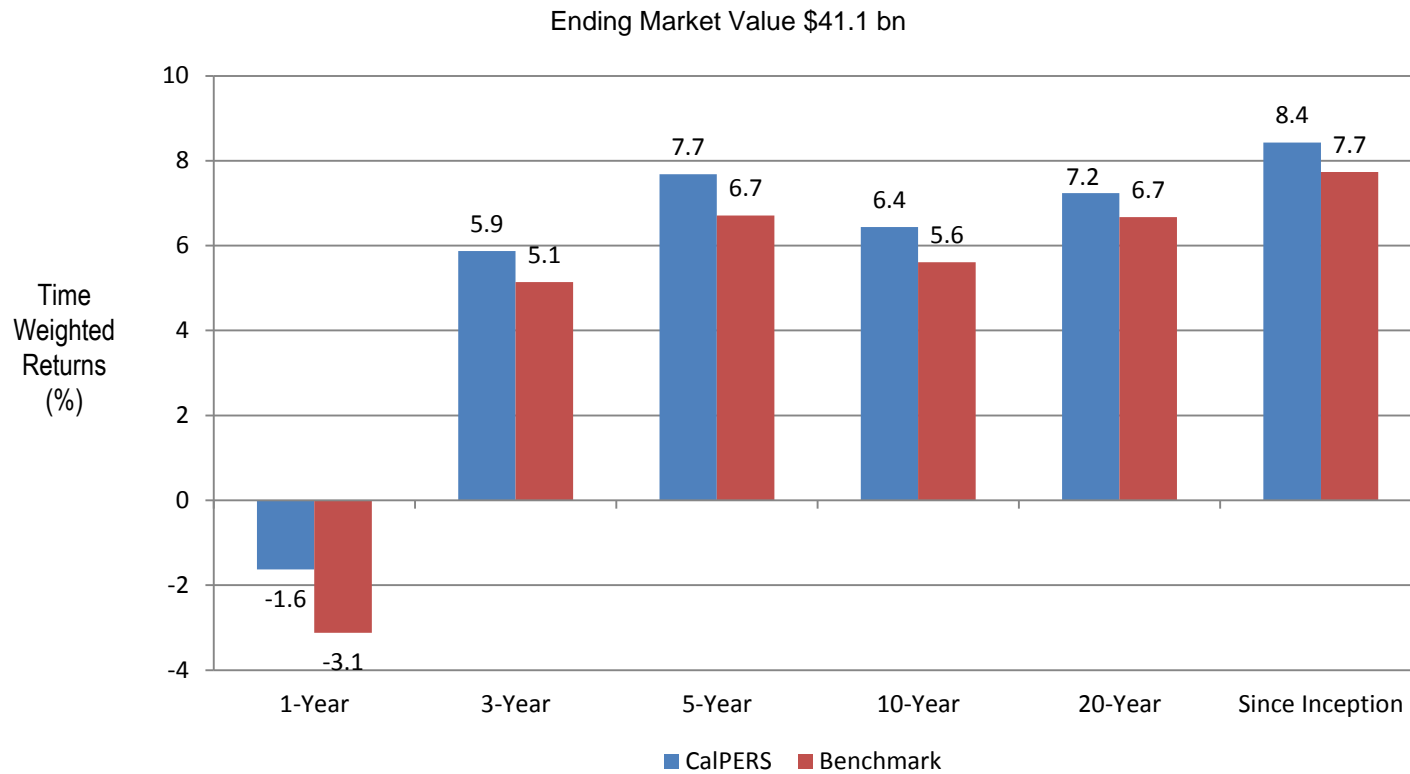
Fixed Income Investment Beliefs

- CalPERS long-term investment horizon allows staff to generate alpha by shifting sector risks during an economic cycle. This could cause short term under-performance.
- Active management adds value
- Costs matter
- Human capital intensive

Global Fixed Income Performance

U.S. and International as of 6/30/13

Good Long-Term Returns

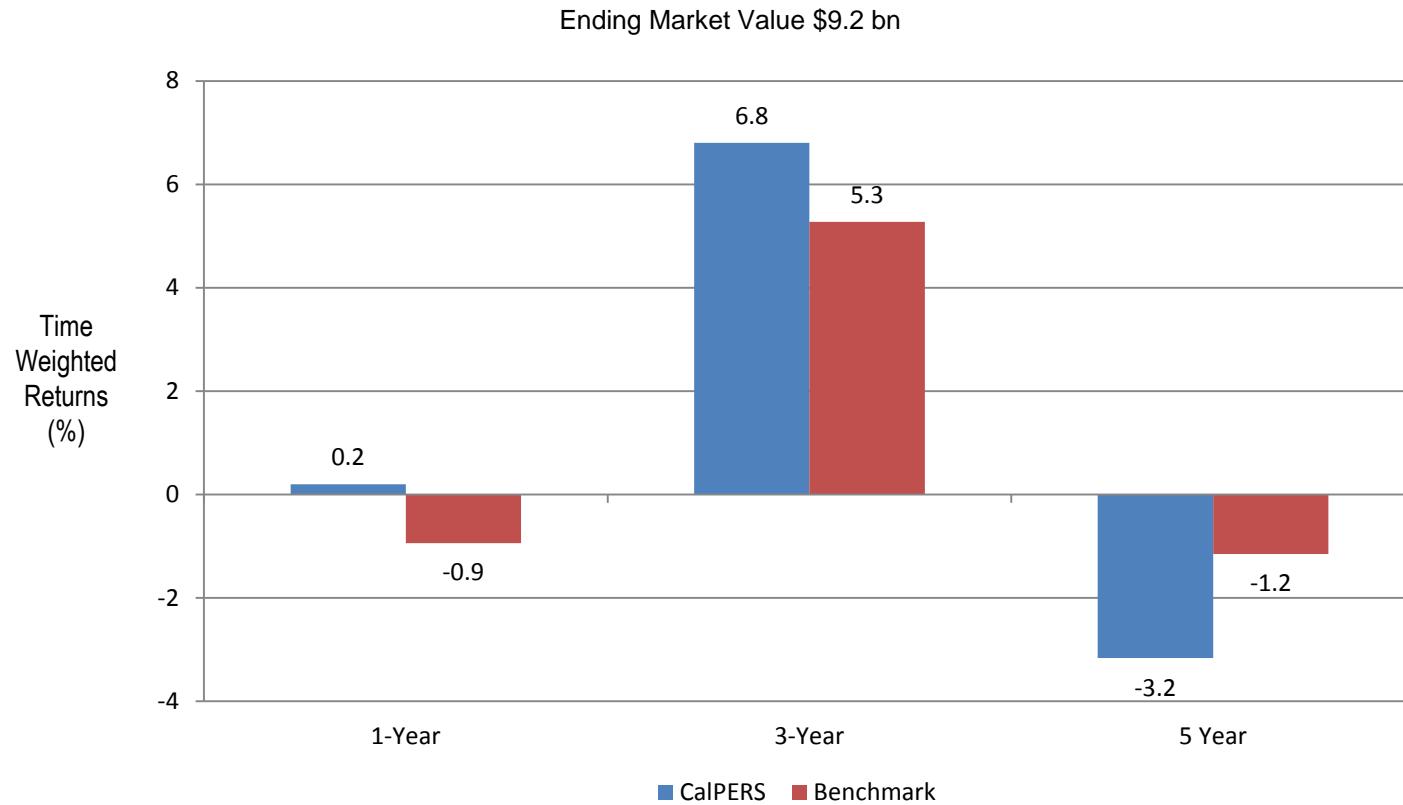


Inflation Assets

- **Role:** The role of Inflation-Linked Bonds is to provide a direct hedge against inflation using liquid securities and be a partial liability hedge with some income yield. The role of Commodities is primarily to be a hedge for inflation, with unlevered liquid securities.
- **Description:** This program was initiated in 2008 and is composed of two components: Inflation-Linked Bonds and Commodities. Inflation Assets is 3.6% of the Total Fund.

Inflation Assets Performance

Inflation-Linked Bonds and Commodities as of 6/30/13

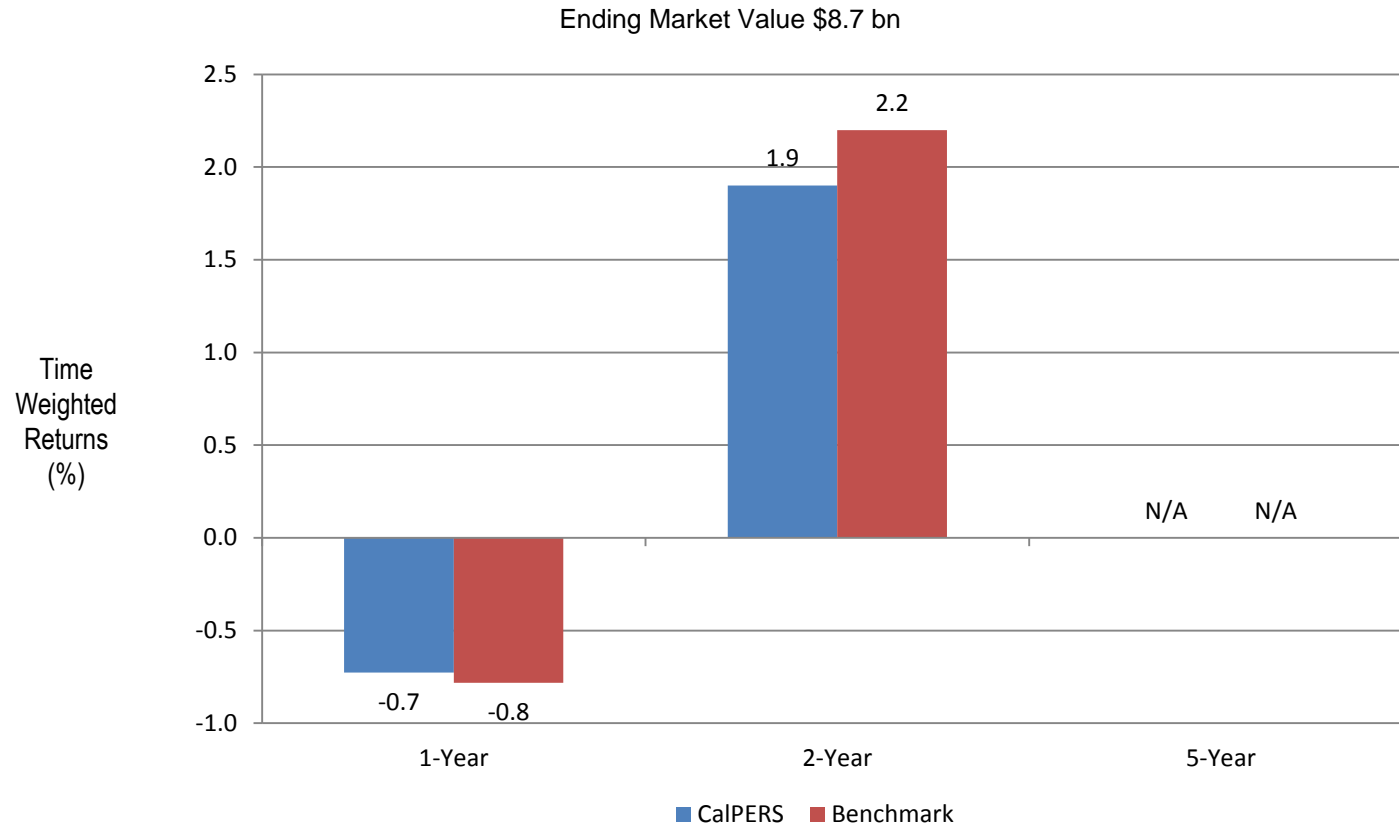


Liquidity

- **Role:** The role of Liquidity is to exhibit safety and capital preservation properties as well as to provide effective risk protection during a financial crisis.
- **Description:** This program was initiated in 2011 and is composed of two components: U.S. Treasury 2-10 Year Portfolio and a Short-Term Liquidity Portfolio. Liquidity is 3.4% of the Total Fund.

Liquidity Performance

U.S. Treasury 2-10 Year and Short-Term Liquidity Portfolio as of 6/30/13



Inception date: 07/01/2011.

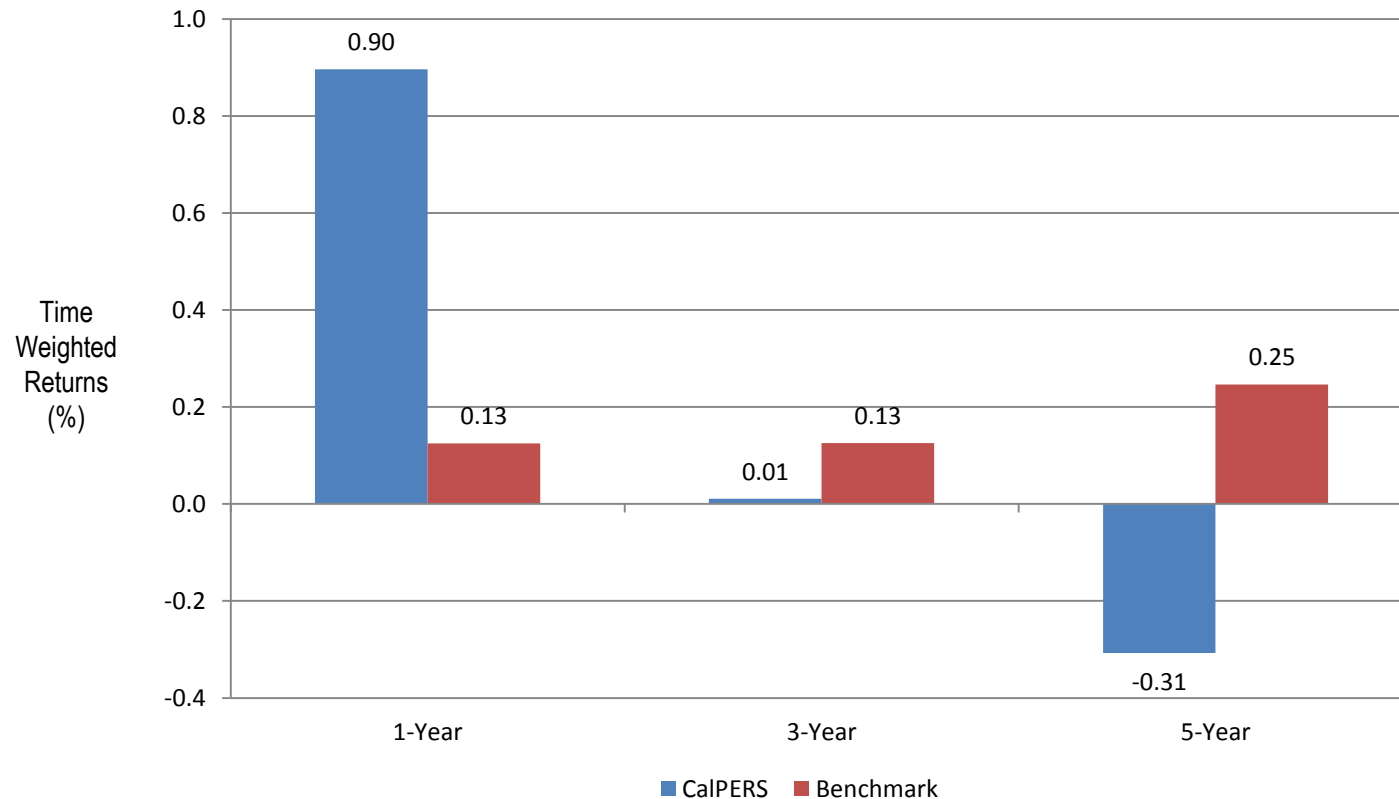
Low Duration

- **Role:** To provide a mechanism to increase returns of other sectors or strategies by investing available cash in short-term debt instruments.
- **Description:** The Low Duration portfolios are primarily used by Securities Lending and Synthetic Enhanced Equity.

Securities Lending Reinvest Performance

as of 6/30/13

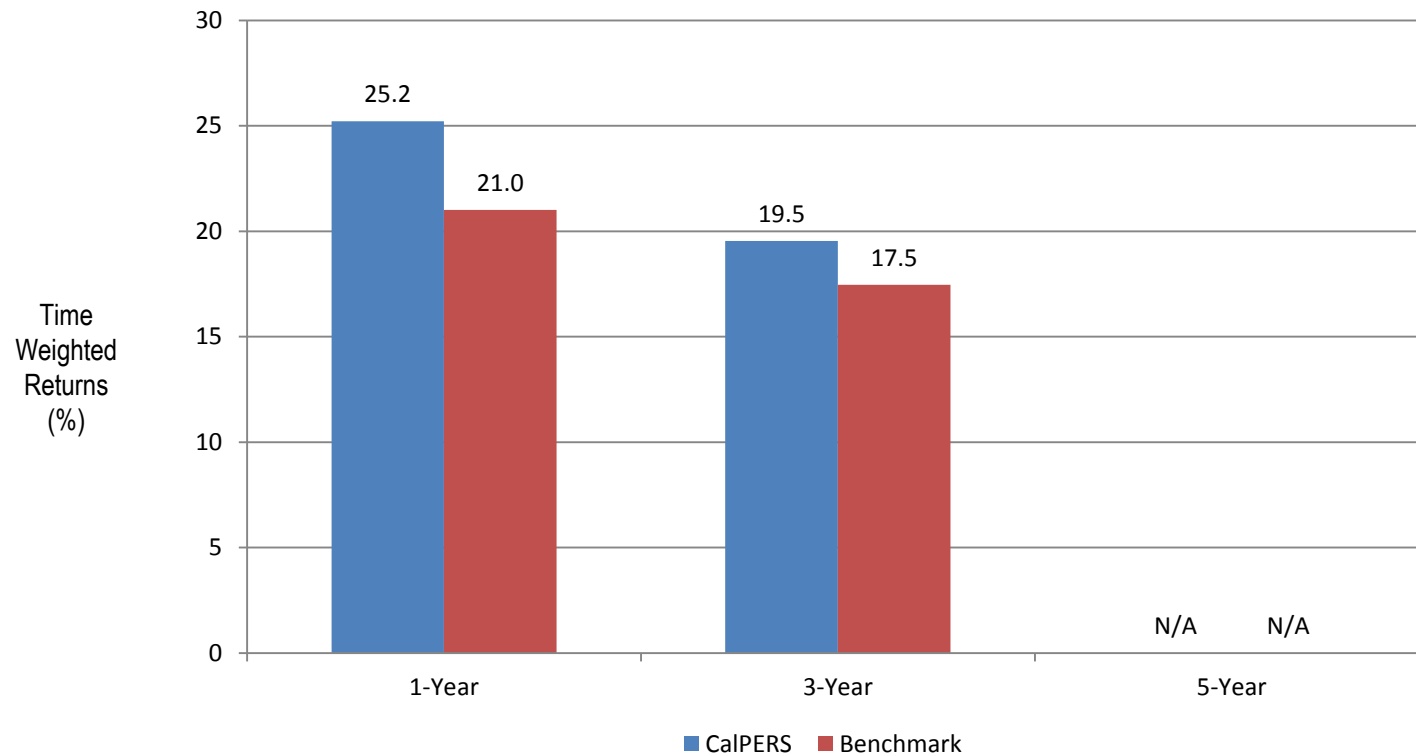
Ending Market Value \$17.3 bn



Synthetic Enhanced Equity Performance

as of 6/30/13

Ending Market Value \$6.0 bn



Inception date: 06/01/2009.

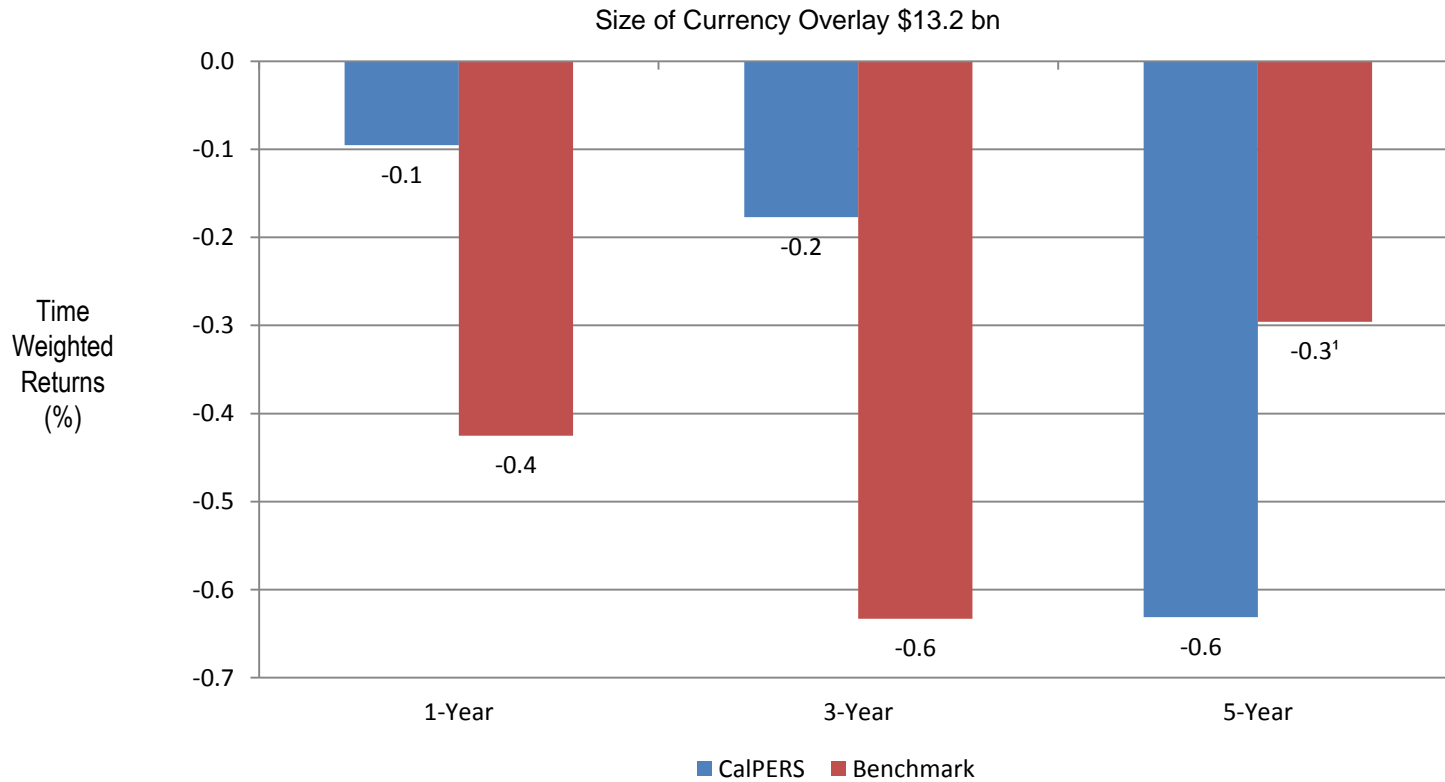
Currency

- **Role:** Risk reduction through hedging currency exposure and providing foreign currency to settle trades in various non-U.S. markets
- **Description:** Has three components:
 - Overlay: Currency hedging 15% of the Total Fund currency exposure.
 - Currency Translations: Currency hedges at the direction of the asset class to reduce specific currency exposure.
 - Currency Settlements: Currency trades to facilitate foreign asset transactions.

Currency Overlay Performance

as of 6/30/13

Program to be reviewed by IC in late 2013



¹Cost adjusted benchmark was not implemented until 07/01/2010.

Currency Hedging and Translating

as of 6/30/13

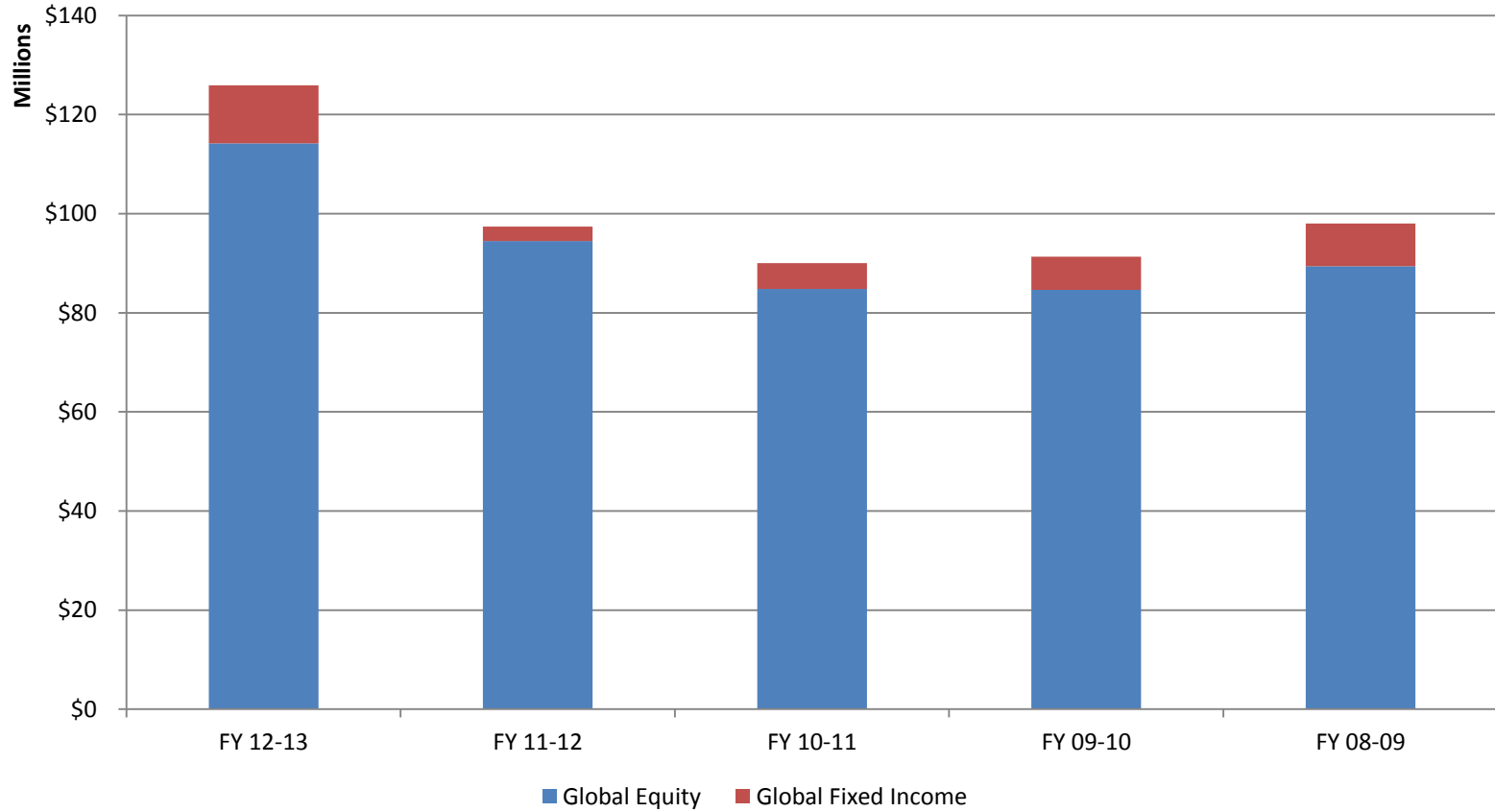
- Total Currency Volume FYTD – \$172.5 bn
- Total Outstanding Currency Exposure – \$84.0 bn

Securities Lending

- **Role:** Generate income by lending securities to qualified borrowers and through a low-risk collateral investment strategy while maintaining sufficient liquidity for the Total Fund.
- **Description:** Global Fixed Income administers the Securities Lending program which includes the lending and reinvesting all CalPERS securities. Global Equity is the primary beneficiary, earning approximately 93% of the last 5 fiscal years' earnings from lending activity.

Securities Lending Earnings

as of 6/30/13



Barclays Aggregate

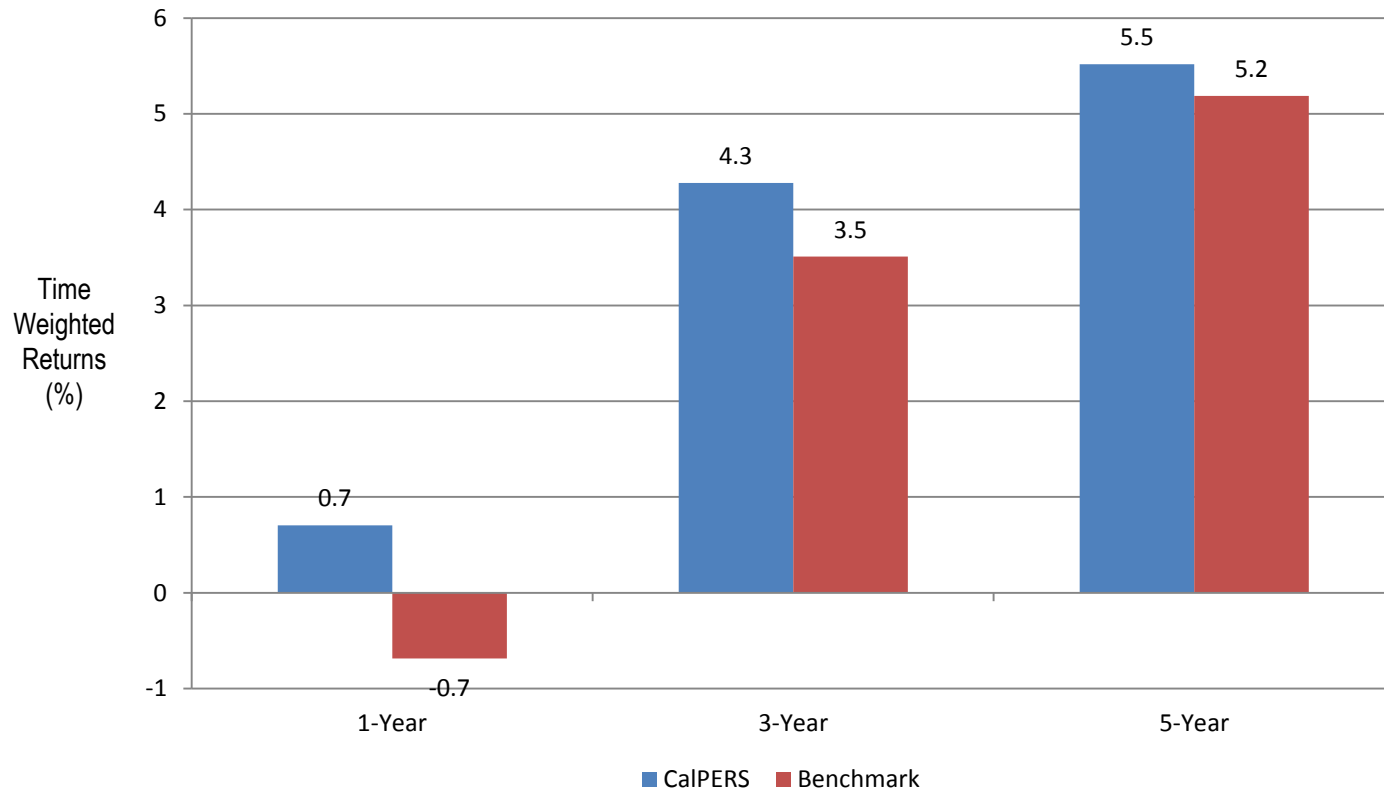
- **Role:** Provide a moderate interest rate sensitive fixed income product.
- **Description:** This program began in 1997 and there are two users of this program: Supplemental Income Plan and Self-Funded Health Care.

Barclays Aggregate Performance

as of 6/30/13

To be outsourced in 2013

Ending Market Value \$0.6 bn



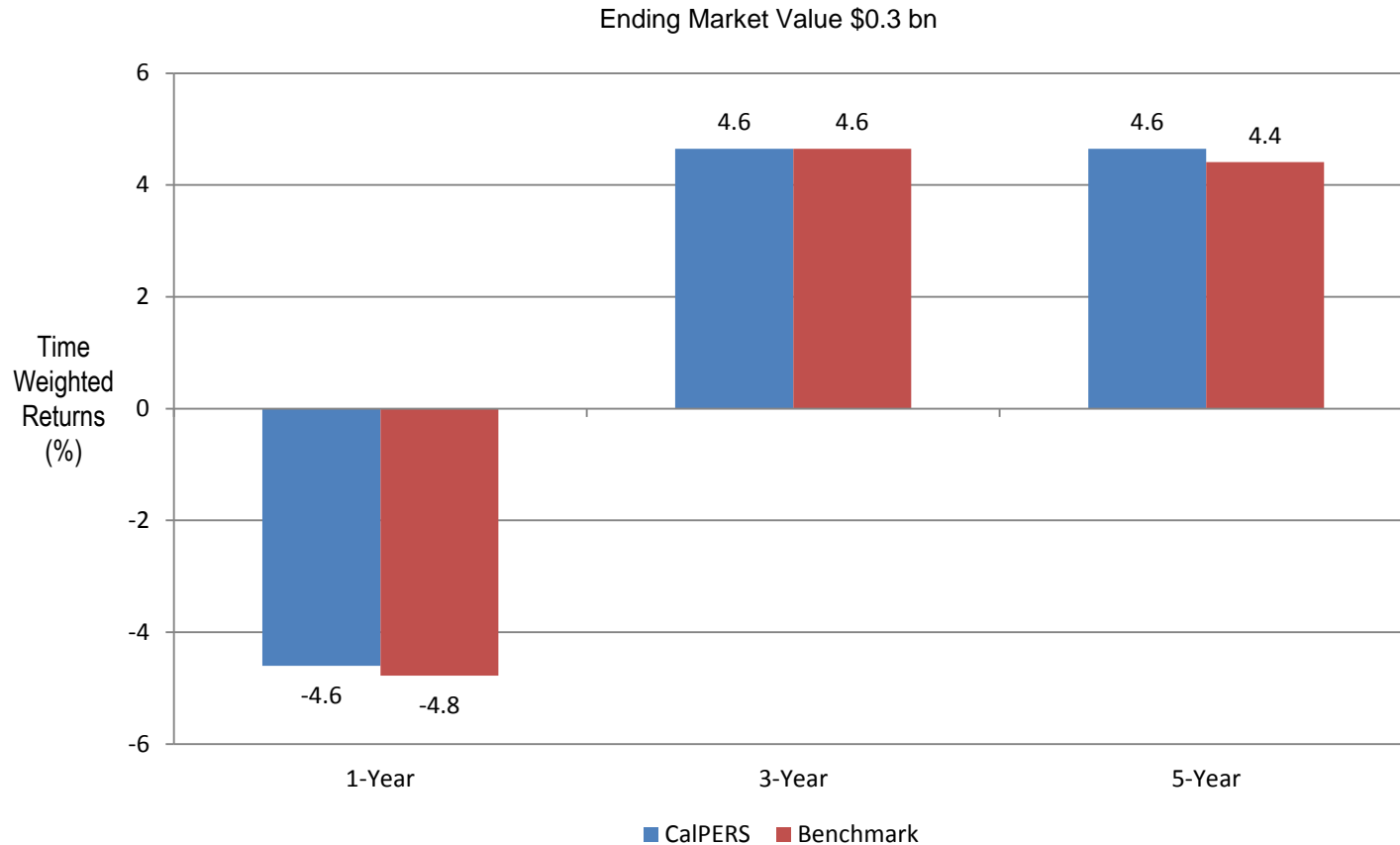
Treasury Inflation Protected Securities Portfolio

- **Role:** The role of Treasury Inflation Protected Securities is to provide a direct hedge against inflation using liquid securities and be a partial liability hedge with some income yield.
- **Description:** This program began in 2004.

Treasury Inflation Protected Securities Portfolio Performance

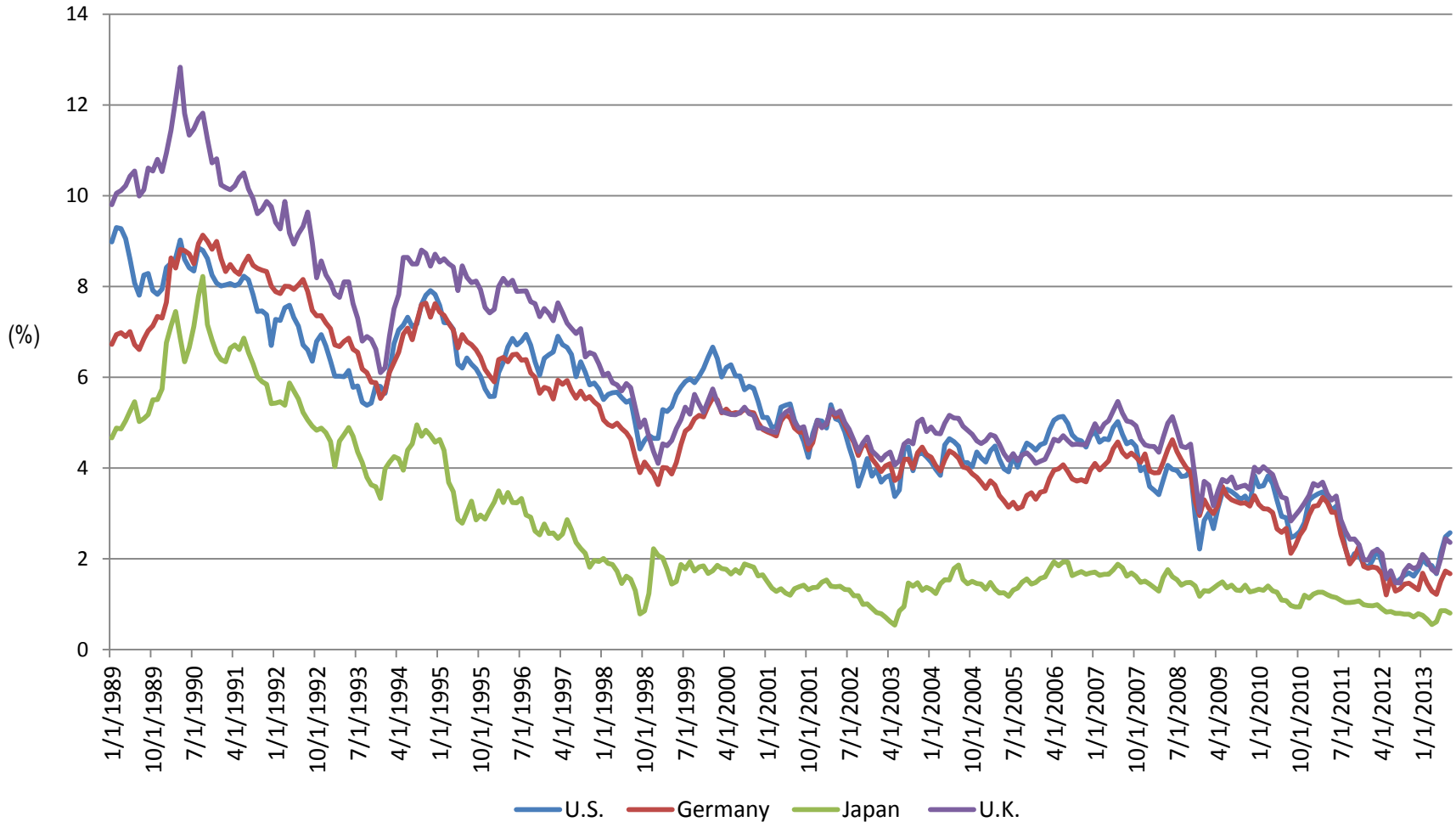
as of 6/30/13

To be partially outsourced in 2013

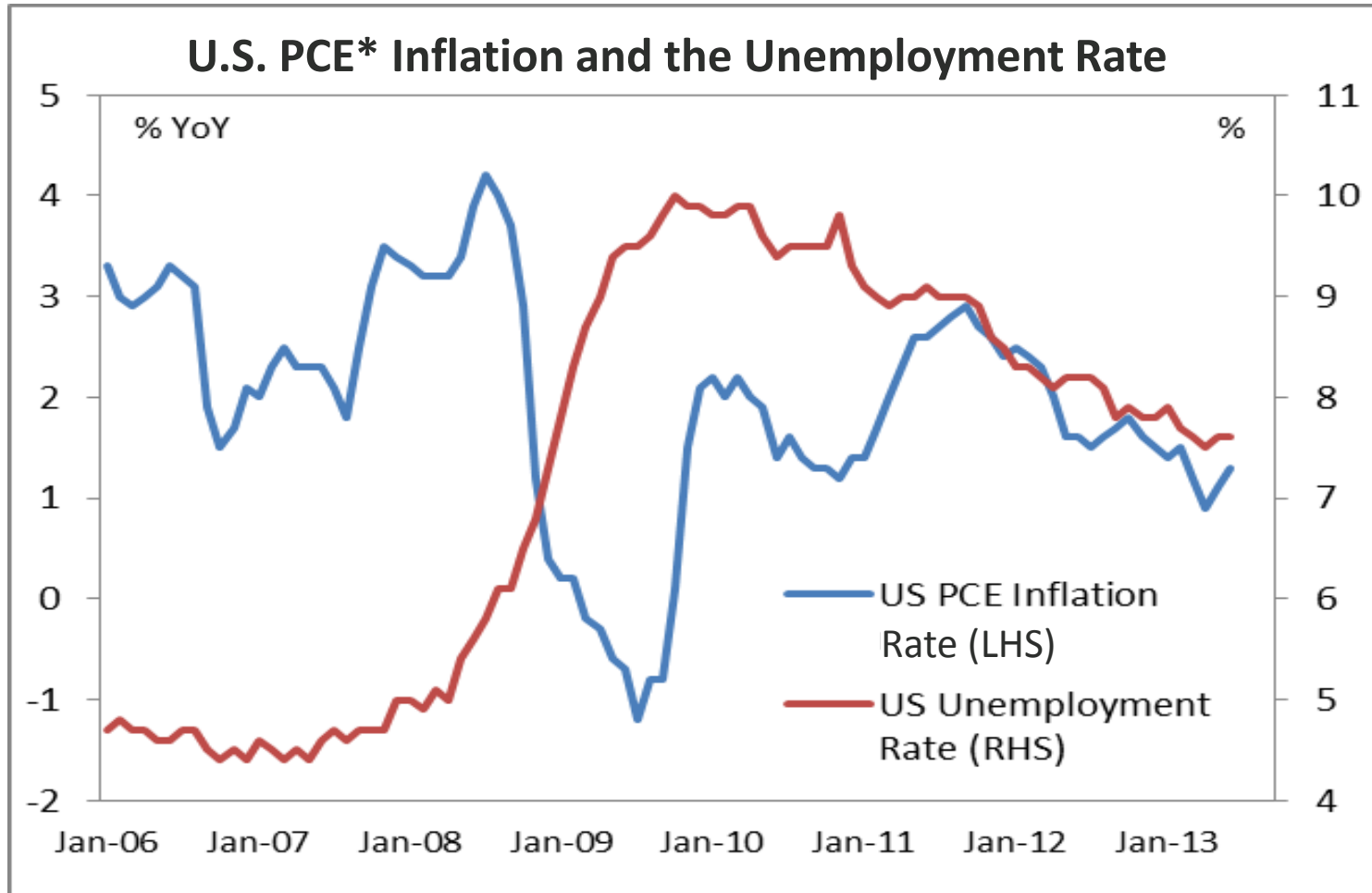


Market Update

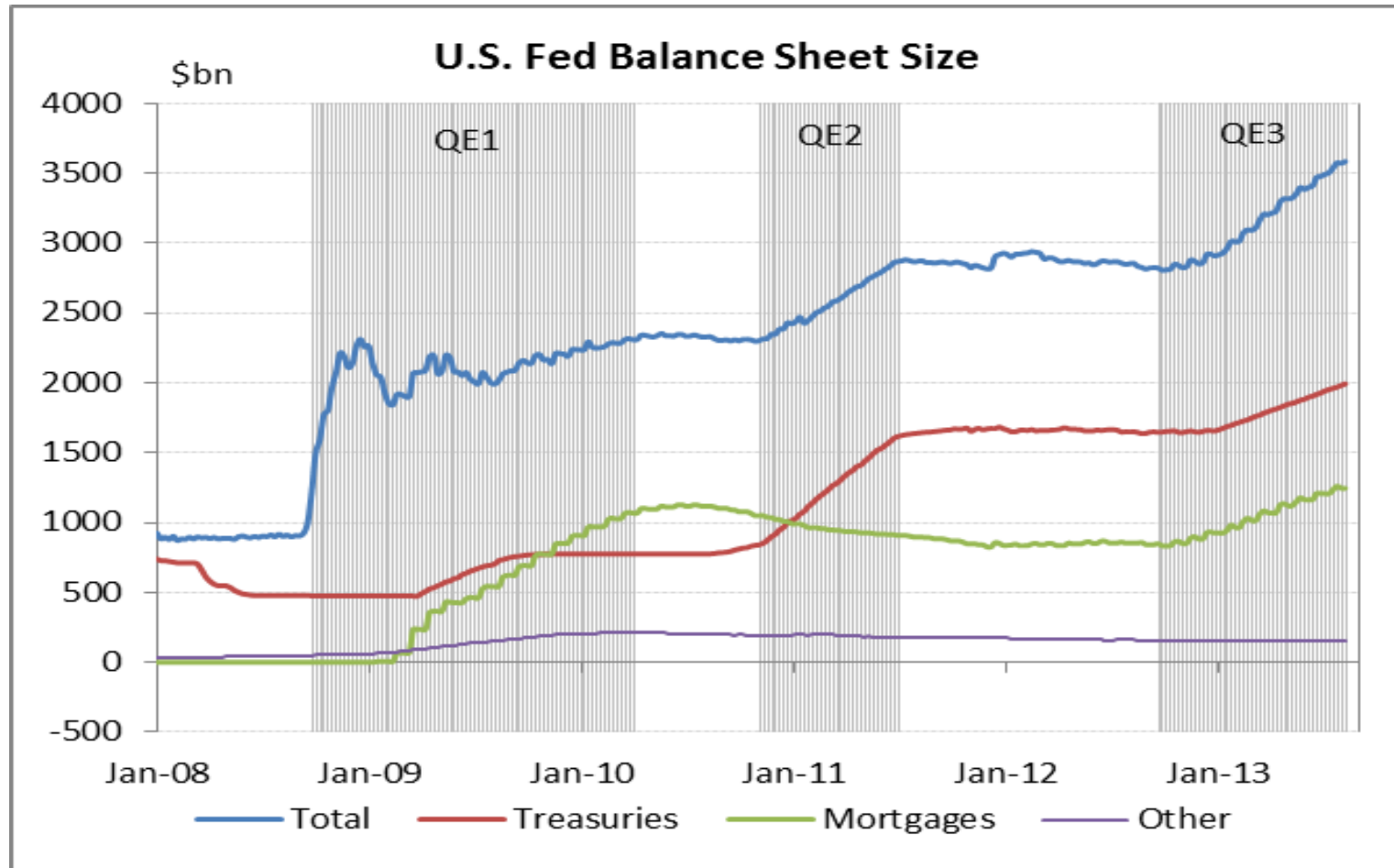
Government 10-YR Bond Yield Indexes



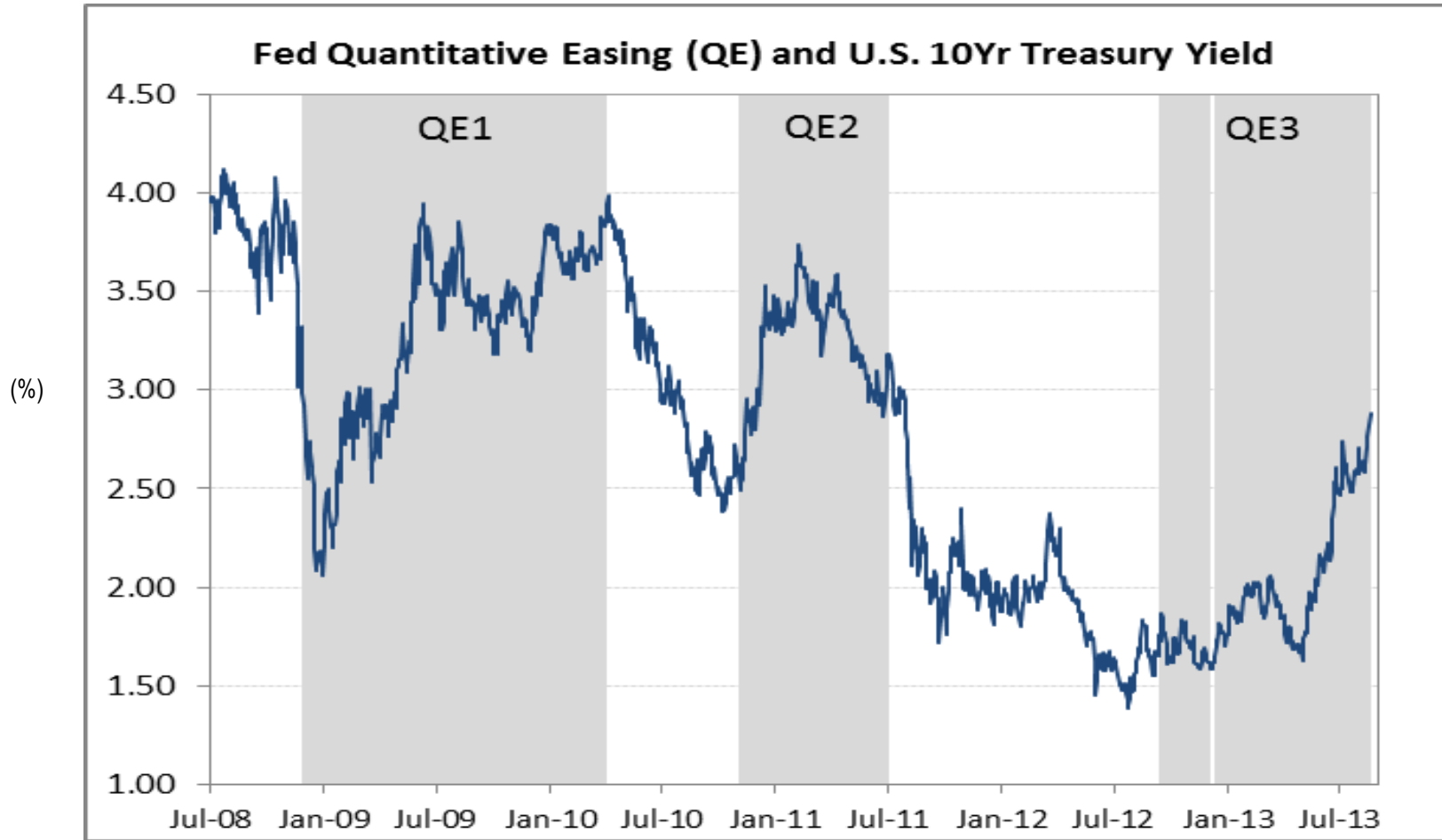
Inflation and Unemployment



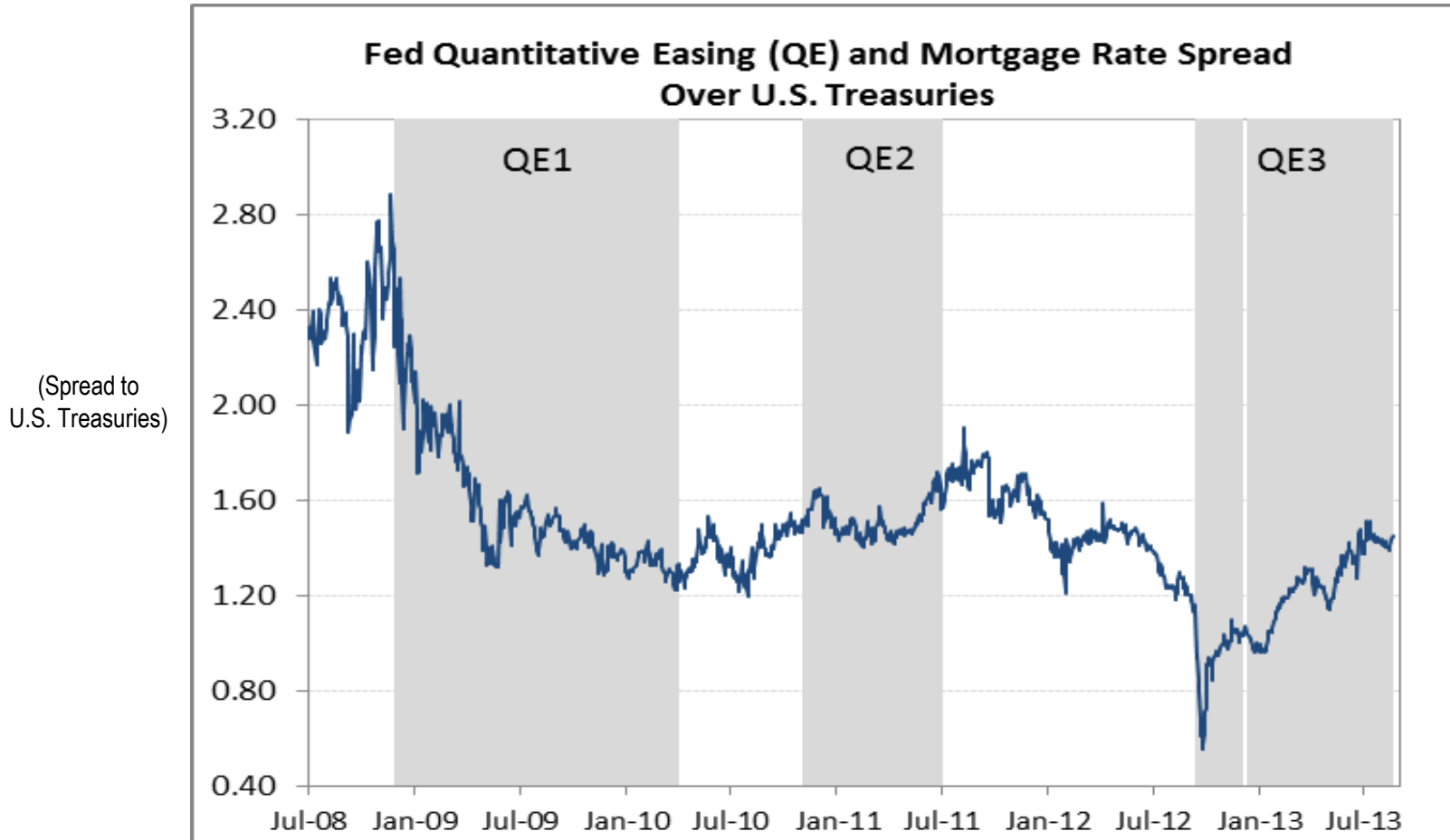
Federal Reserve Balance Sheet



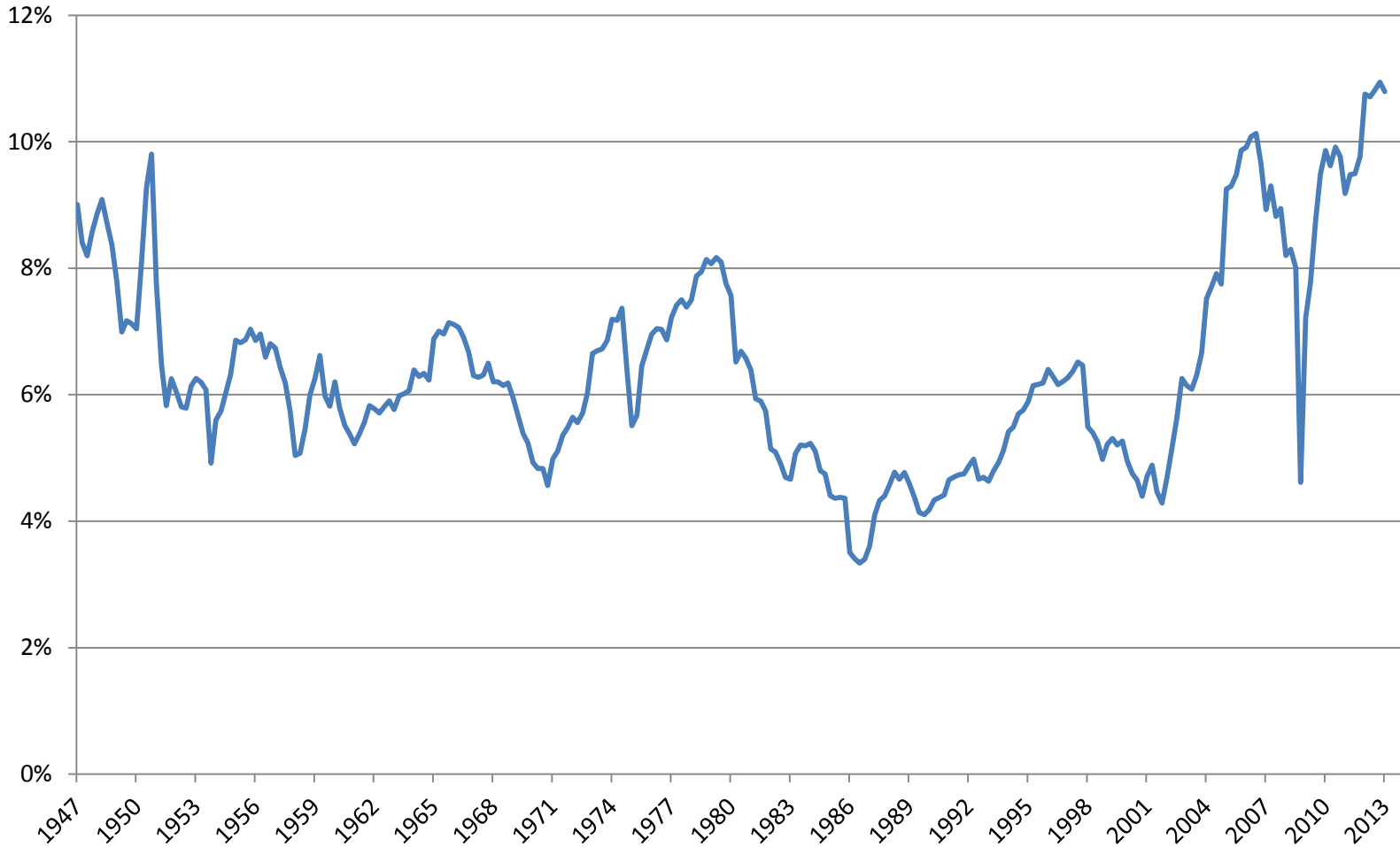
Quantitative Easing and Interest Rates



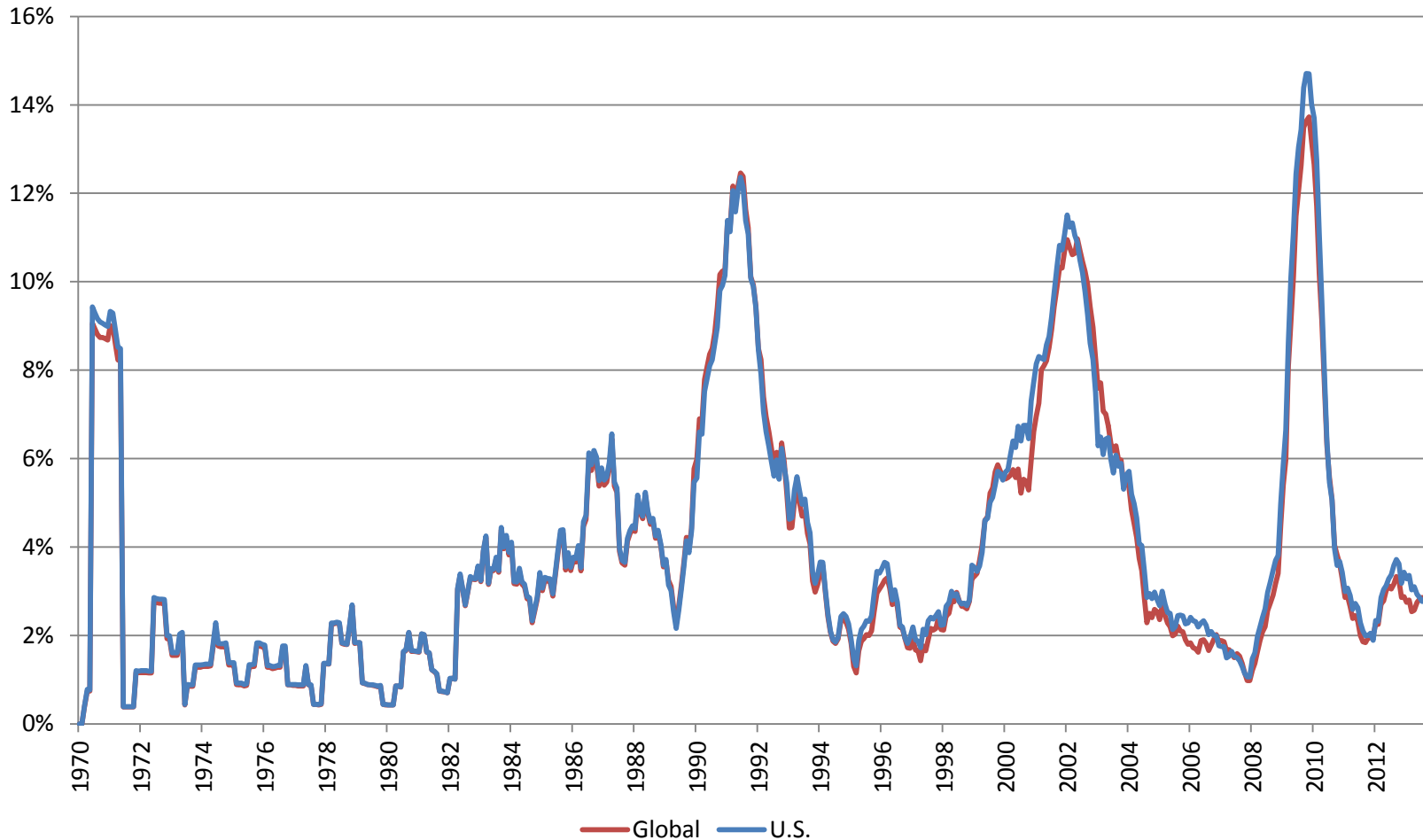
Quantitative Easing and Mortgage Spreads



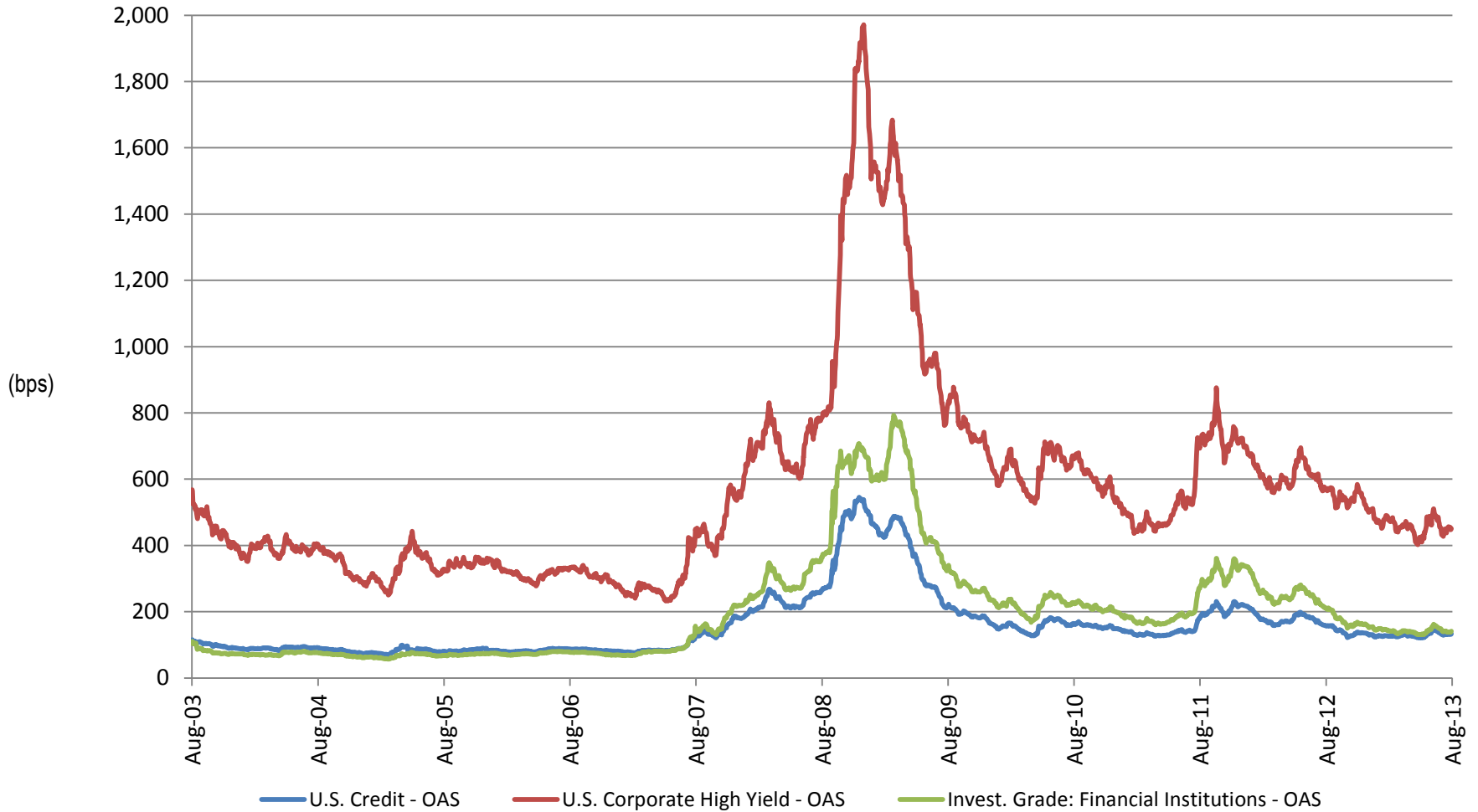
Corporate Profits as a % of GDP



Trailing 12 Month Default Rates



Credit Spread Levels Based on Our Customized IG and HY Indices

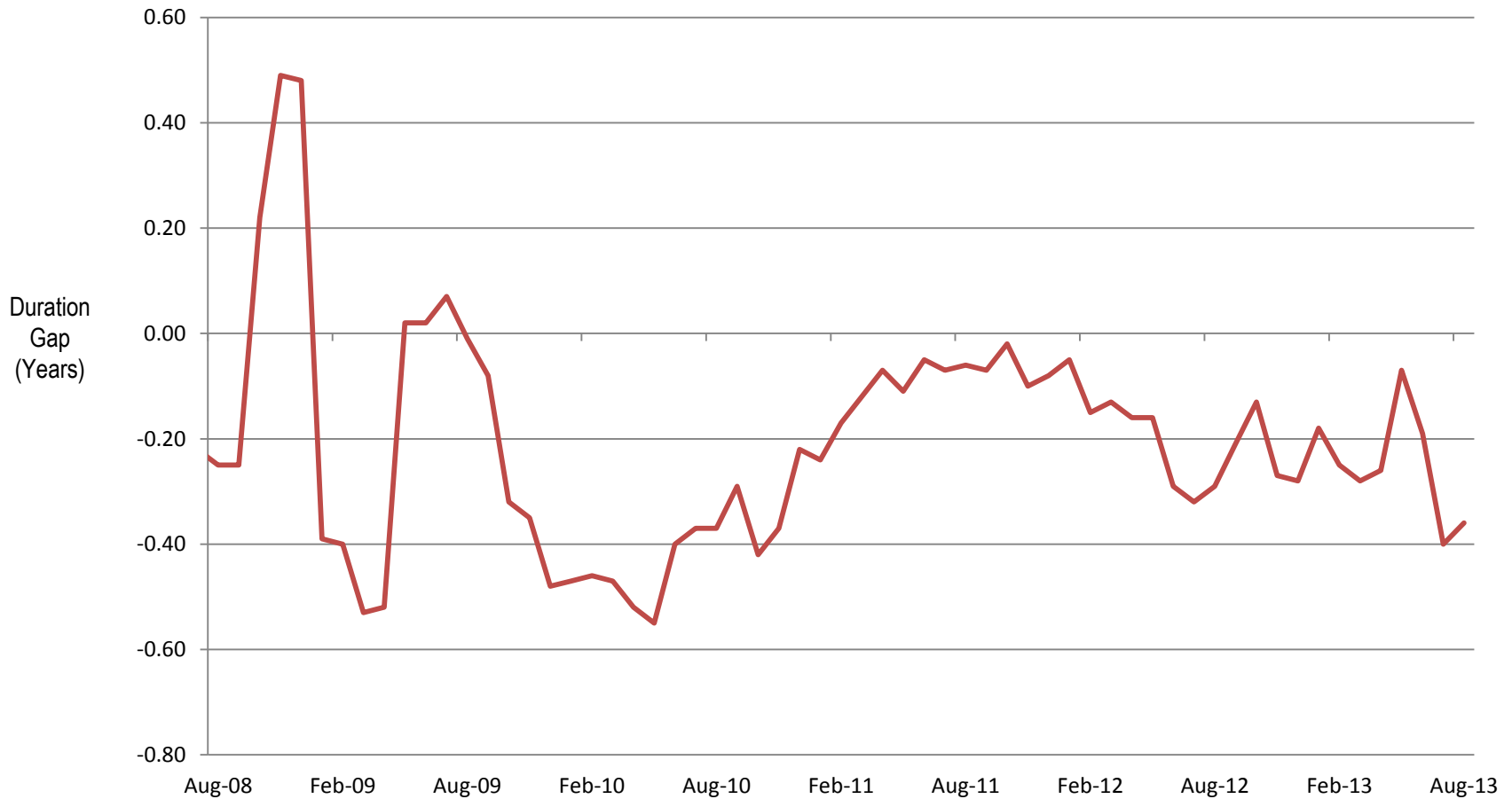


Global Fixed Income Detailed Composition

as of 8/20/13

| | MV (\$ bn) | %NAV | | | | Duration | | |
|-----------------------------------|---------------|-------------------|------------|------------|-----------|-------------|-------------|--------------|
| | | Permissible Range | Port | Bench | Active | Port | Bench | Active |
| Domestic Fixed Income | \$36.7 | 80% - 100% | 90% | 90% | 0% | 8.19 | 8.56 | -0.37 |
| U.S. Governments | 11.7 | 9 - 72 | 29 | 36 | -7 | | | |
| IG Corporate Credit | 8.7 | 9 - 36 | 21 | 21 | 0 | | | |
| Mortgage-Backed Securities | 11.3 | 14 - 41 | 28 | 26 | 2 | | | |
| IG Dollar-Denominated Sovereigns | 1.5 | 0 - 9 | 4 | 3 | 1 | | | |
| Opportunistic | 3.0 | 0 - 11 | 7 | 3 | 4 | | | |
| High Yield Credit | 2.4 | N/A | 6 | 3 | N/A | | | |
| Non-Credit Opportunistic | 0.6 | N/A | 1 | 0 | N/A | | | |
| Cash Securities | 0.5 | N/A | 1 | 1 | 0 | | | |
| International Fixed Income | 3.9 | 0 - 20 | 10 | 10 | 0 | 5.82 | 6.18 | -0.36 |
| Total Global Fixed Income | 40.6 | | | | | | | |

Domestic Fixed Income Duration Gap Relative to the Index as of 8/20/13



Roadmap Initiatives, Cost Savings, and Policy Review

Roadmap Accomplishments

- Insourced \$7.0 billion.
- Continued cross asset class initiatives.
- Conducted Fixed Income overview.
- Continued working with regulators, Congress, and White House Administration in regards to bond, mortgage markets, and derivatives governance.
- Initiated a tactical signaling model to enhance returns in Inflation Assets.

Future Roadmap Initiatives

- Hit annual alpha target return of 30 bps for GFI Program.
- Create in BlackRock Aladdin System a daily report to better monitor the risks of the internally managed International Fixed Income Program.
- Complete the hiring of 2 Portfolio Manager positions: one in Emerging Markets and one in Agency Pass-Through Mortgages.
- Improve the asset allocation metric for over/under weighting the International and Sovereign Portfolios within GFI.

External Management Costs and Savings

- Total Annual External Management Fees – \$20.5 mm.
 - International Fixed Income – \$8.2 mm.
 - High Yield Fixed Income – \$3.6 mm.
 - Currency Overlay – \$3.3 mm.
 - Cash Management – \$5.4 mm.

- Insourcing Cost Savings – Approximately \$7.1 mm.
 - Currency Overlay – \$3.3 mm
 - International Fixed Income – \$1.3 mm.
 - Currency Trades for Global Equity – \$2.5 mm.

- Additional Future Cost Savings – \$1.7 mm.
 - International Fixed Income – \$1.7 mm.

Policy Review

Staff have reviewed the Statements of Investment Policy for the GFI Programs and have found that the following policy needs to be amended:

- I. Internally Managed Dollar-Denominated Short-Term Program of the Liquidity Program
 - Staff will bring material amendments back to the IC for approval at a future date