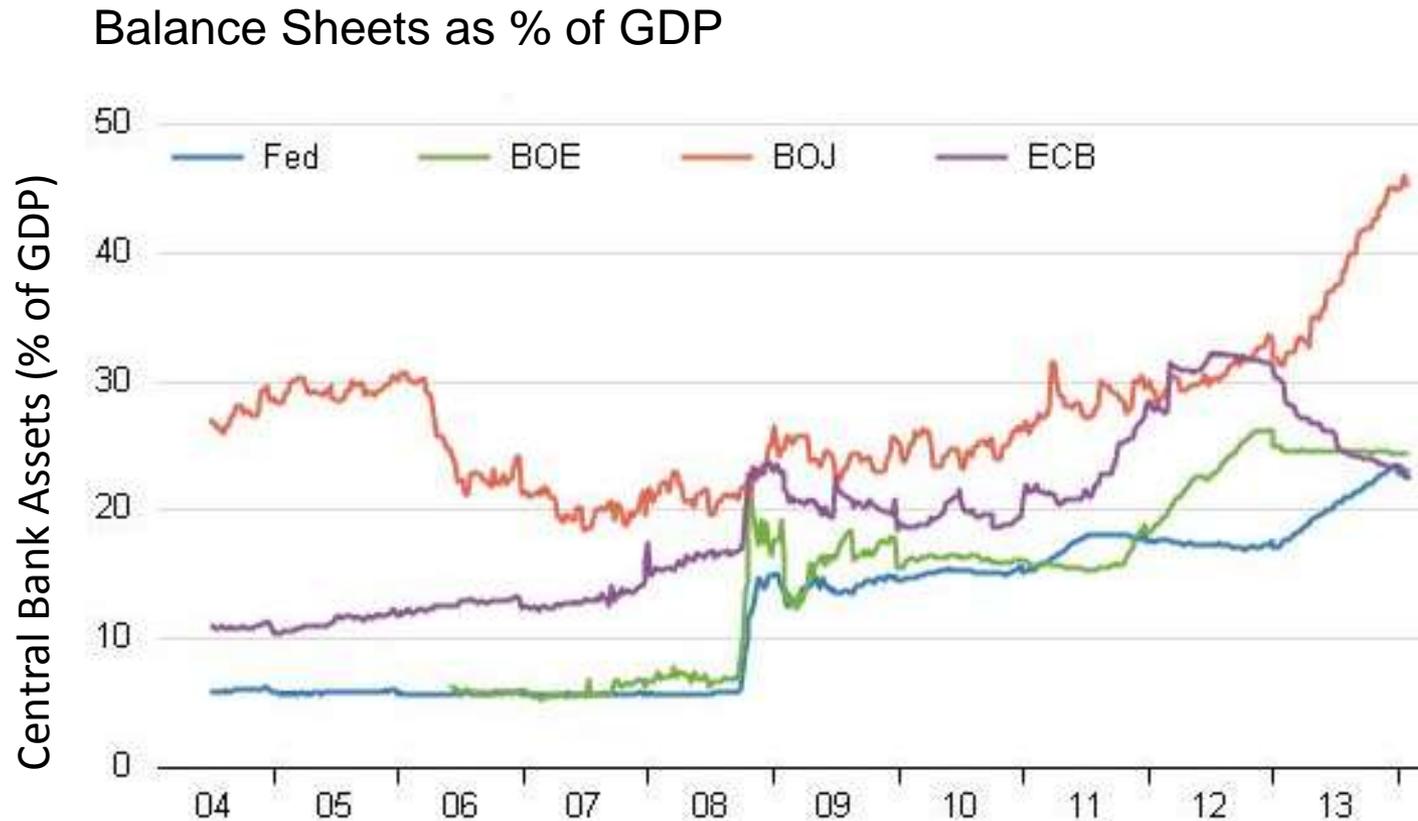


Unprecedented Expansion of Central Bank Balance Sheets – Implications for India

Dr. Jaimini Bhagwati

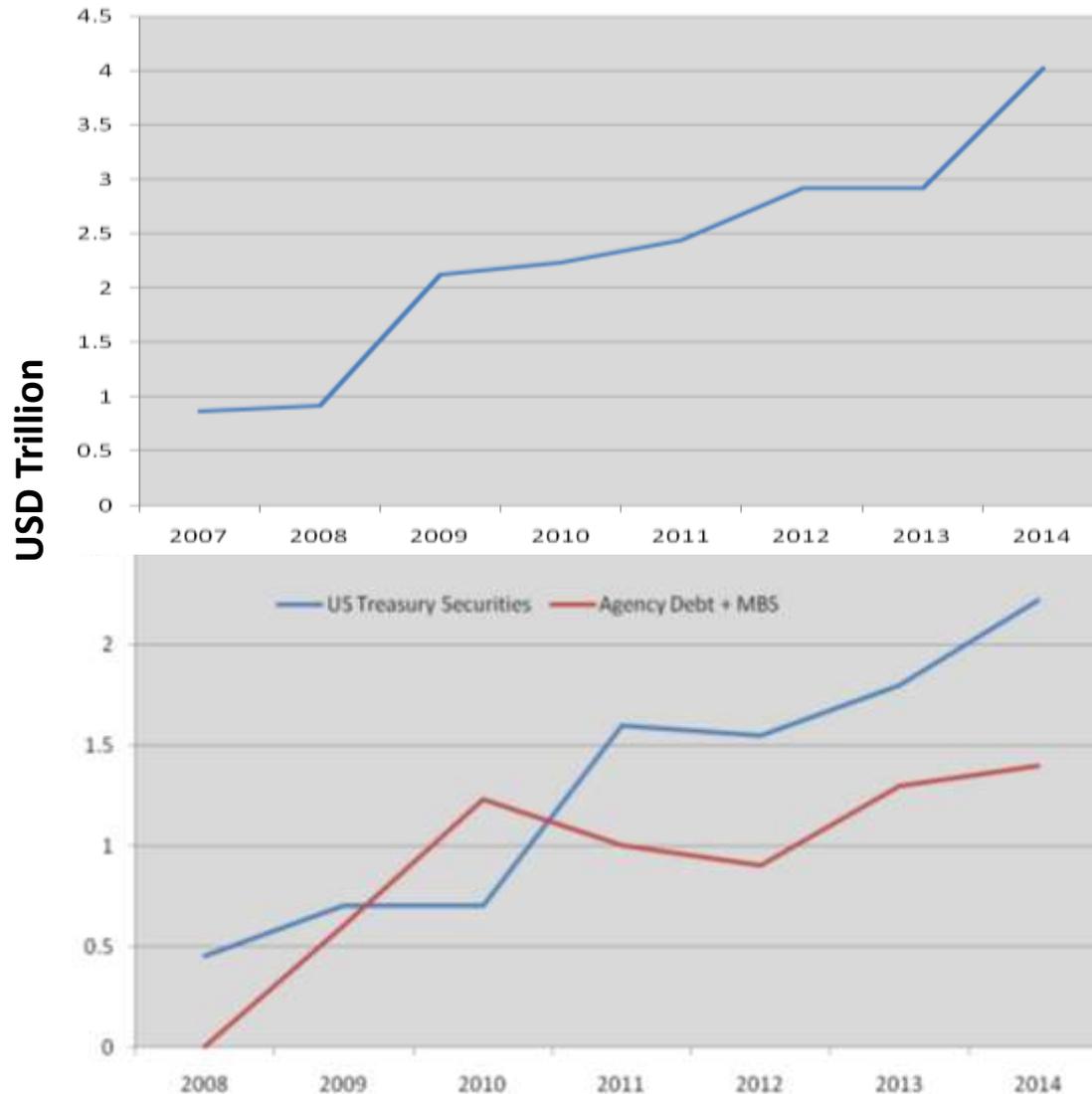
RBI Chair Professor, ICRIER, New Delhi

Expansion of balance sheets of major central banks in the wake of global financial crisis



Note: GDP used is the IMF nominal GDP forecast
Source: Thomson Reuters Datastream

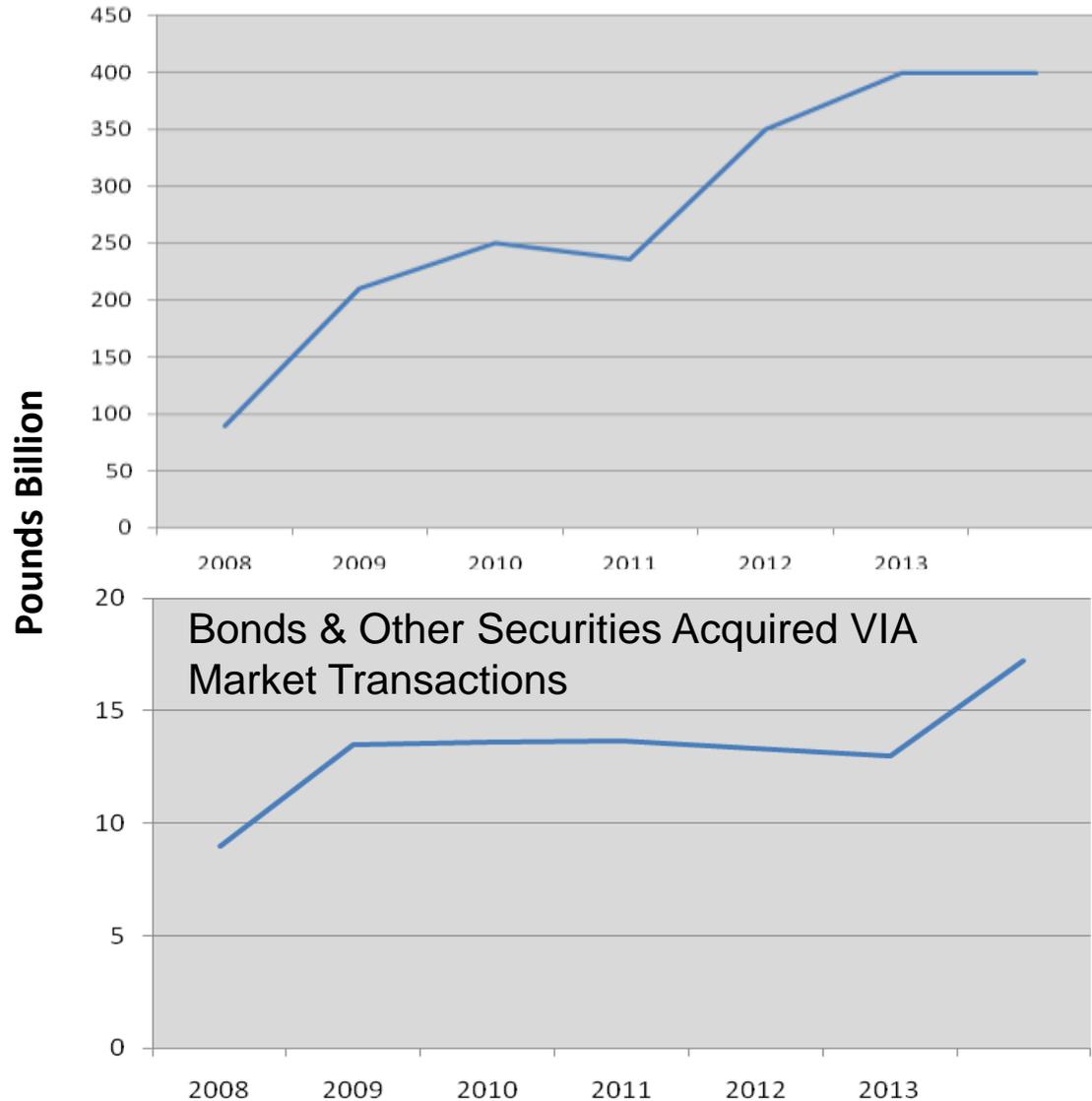
Total Assets of the Federal Reserve



Note: MBS stands for Mortgage Backed Securities

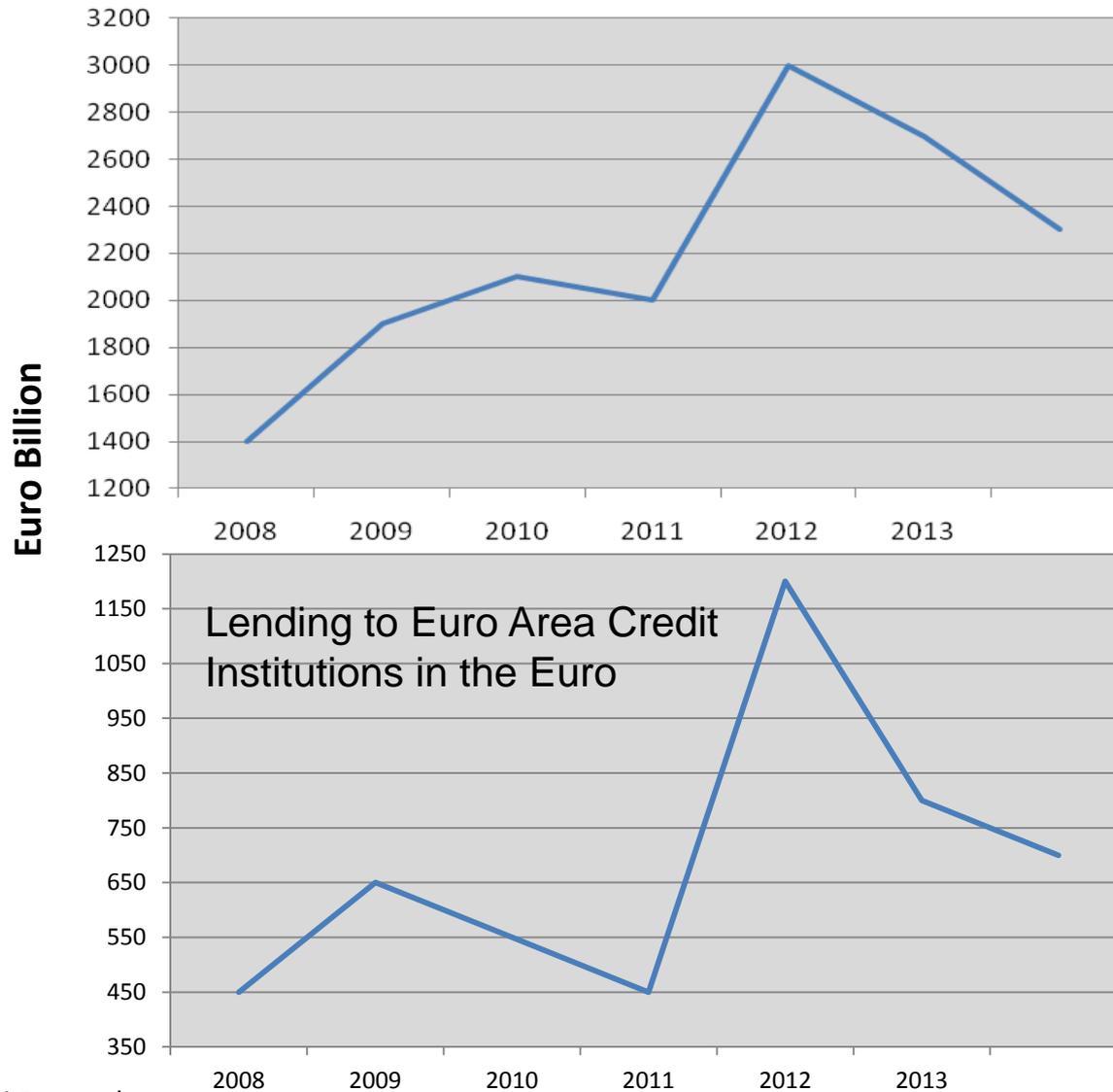
Source: Federal Reserve, Yardeni Research

Total Assets of the Bank of England



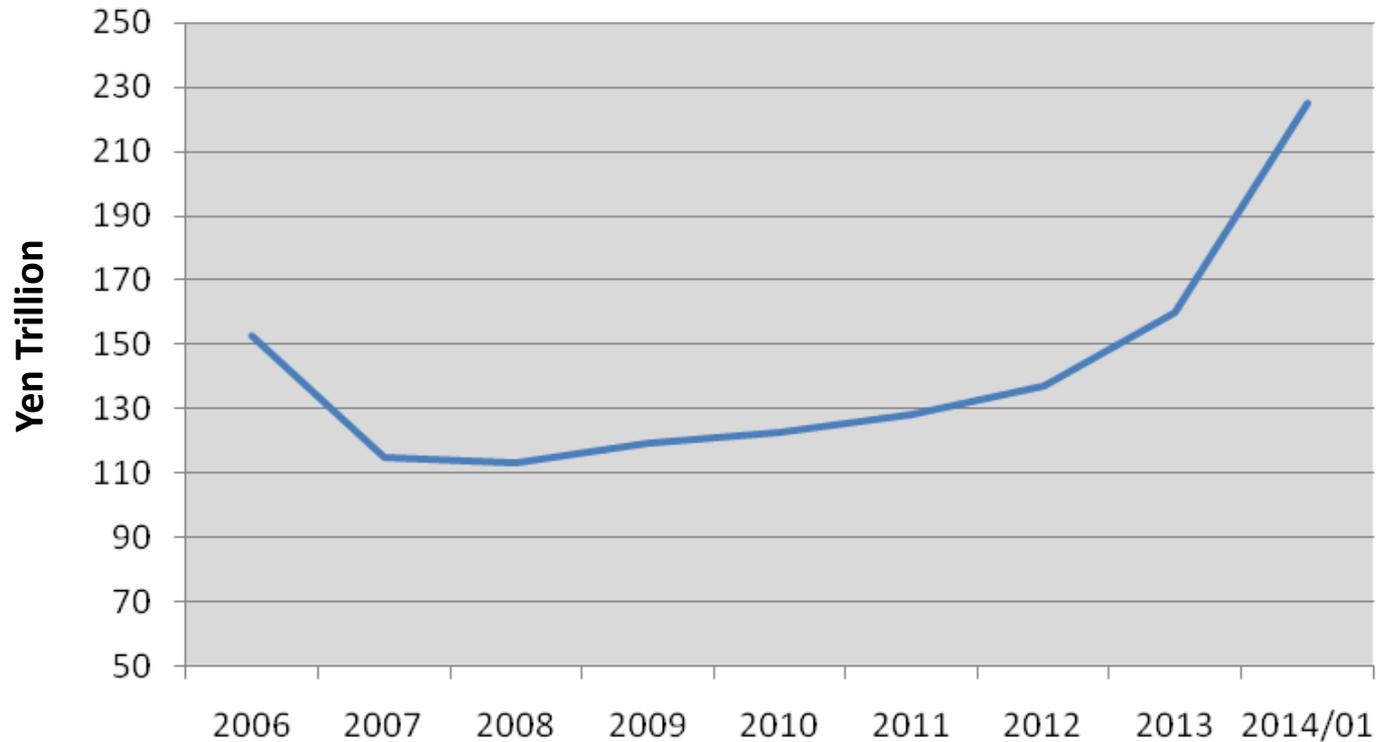
Source: Bank of England, Yardeni Research

Total Assets of the ECB



Source: ECB, Yardeni Research

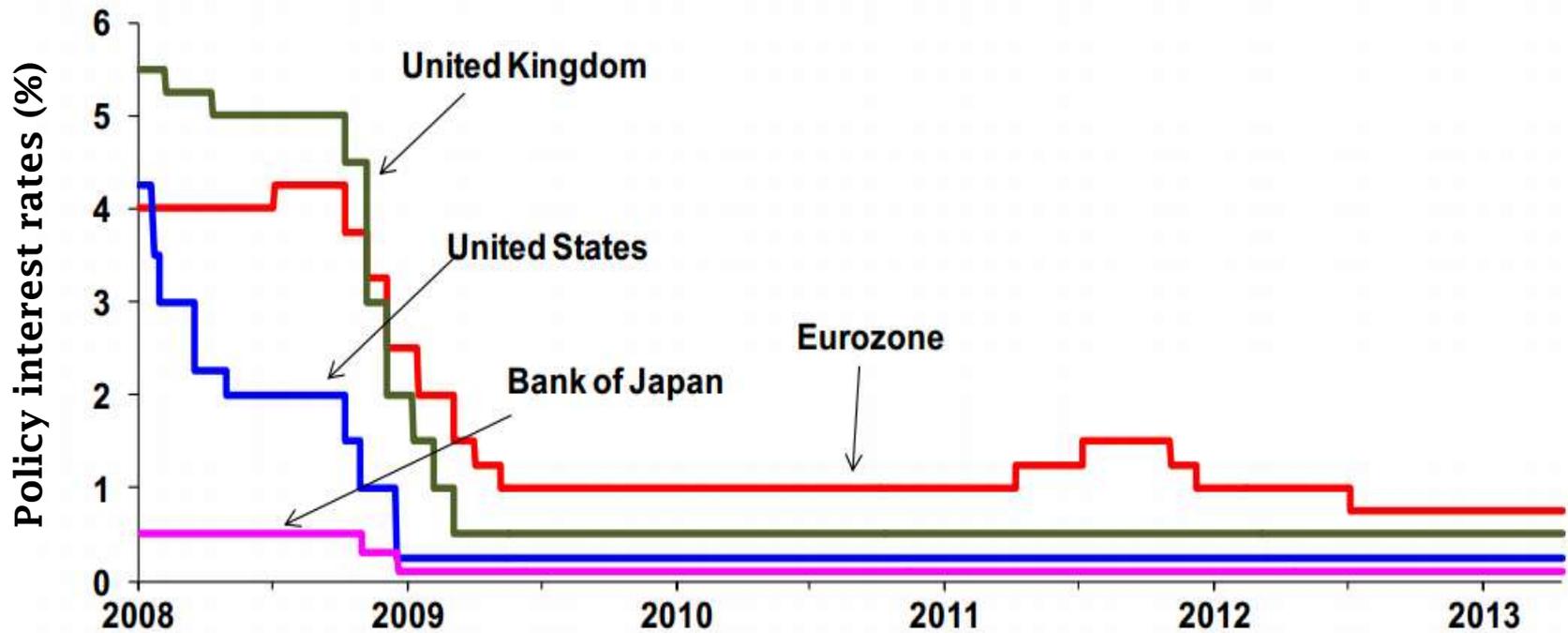
Total Assets of the Bank of Japan



Note: 102.42 Yen = 1 USD as of 31 January, 2014

Source: Bank of Japan & Japan Macro Advisors

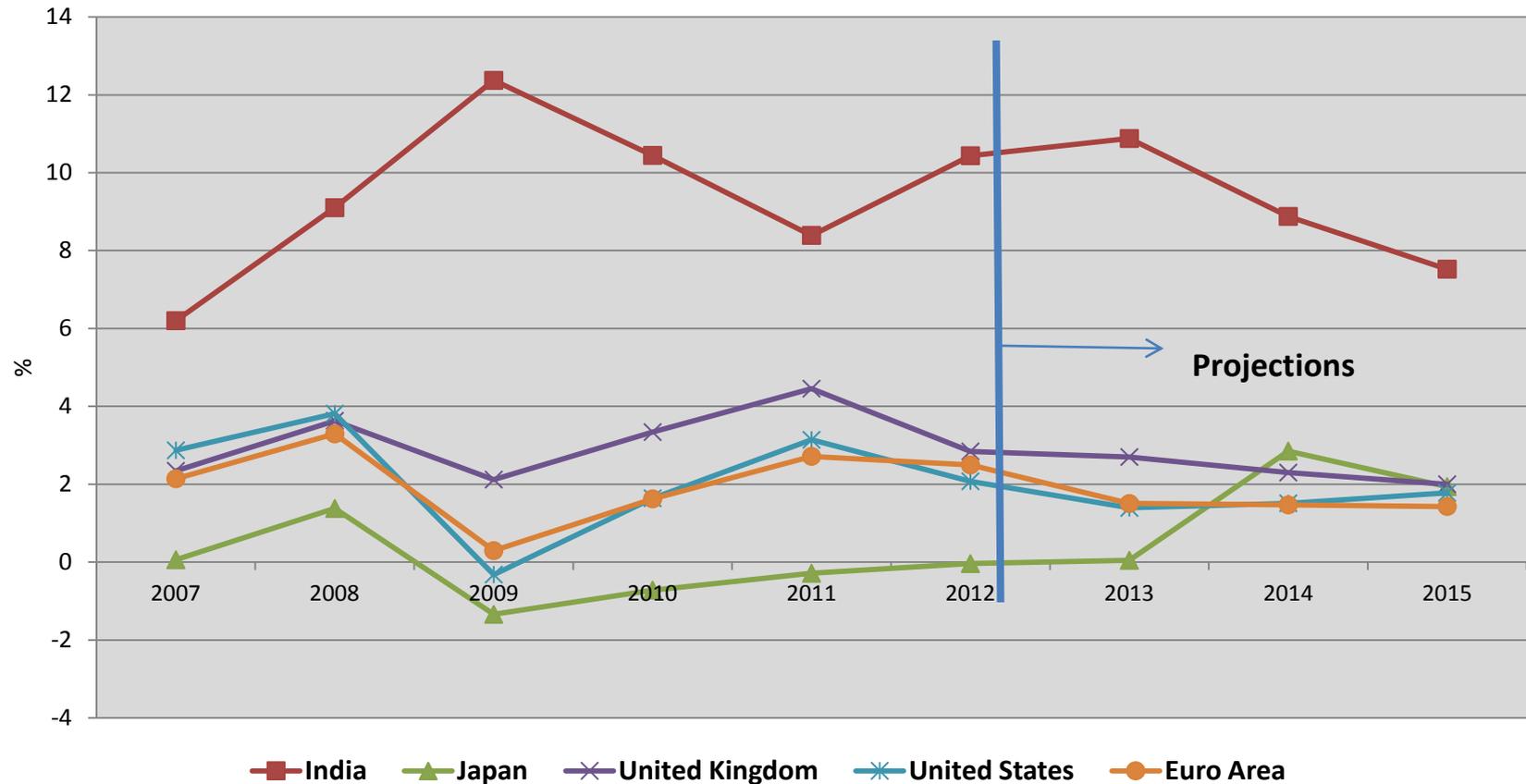
Central bank target interest rates remain low



Note: Interest rates shown are nominal rates

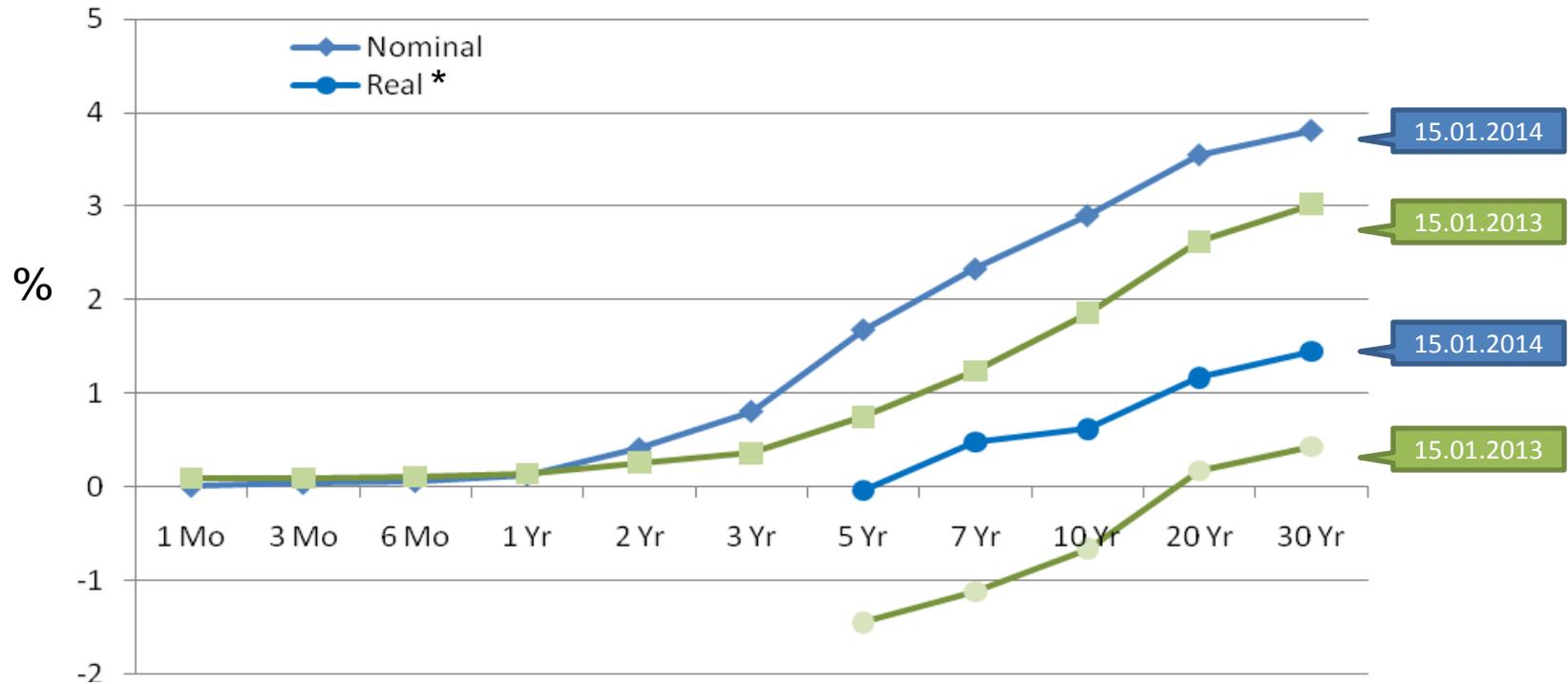
Source: Bloomberg; Milken Institute 2013 Global Conference

Inflation (annual average consumer prices) remains subdued for developed countries



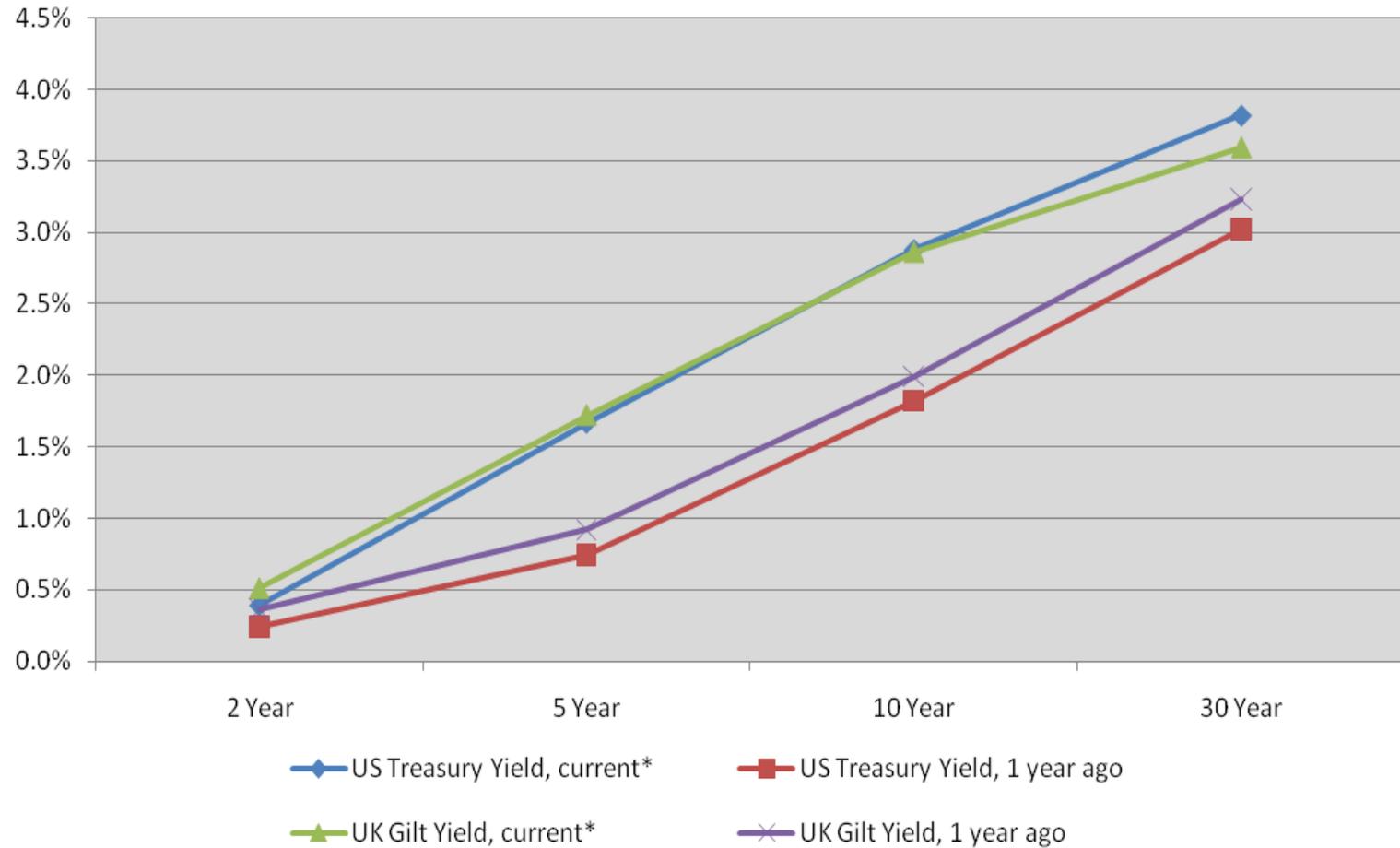
Source: WEO, IMF

US Treasury Yield Curve



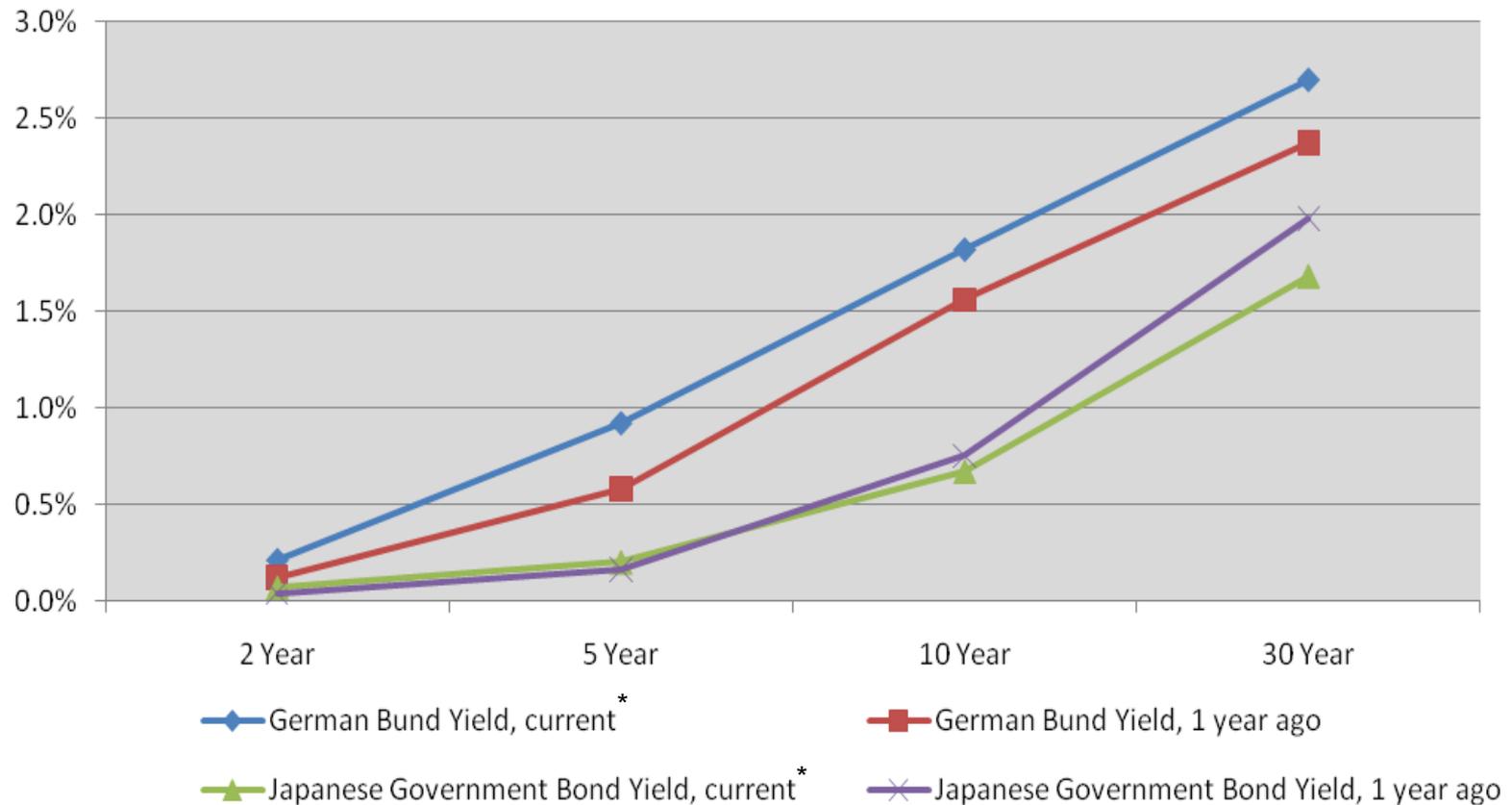
Note: X-Axis (Maturity) is not to scale; * Real yield = Nominal yield - CPI
 Source: US Department of Treasury

US & UK Government Bond Yields



Note: *As on 16.01.2014
Source: Bloomberg

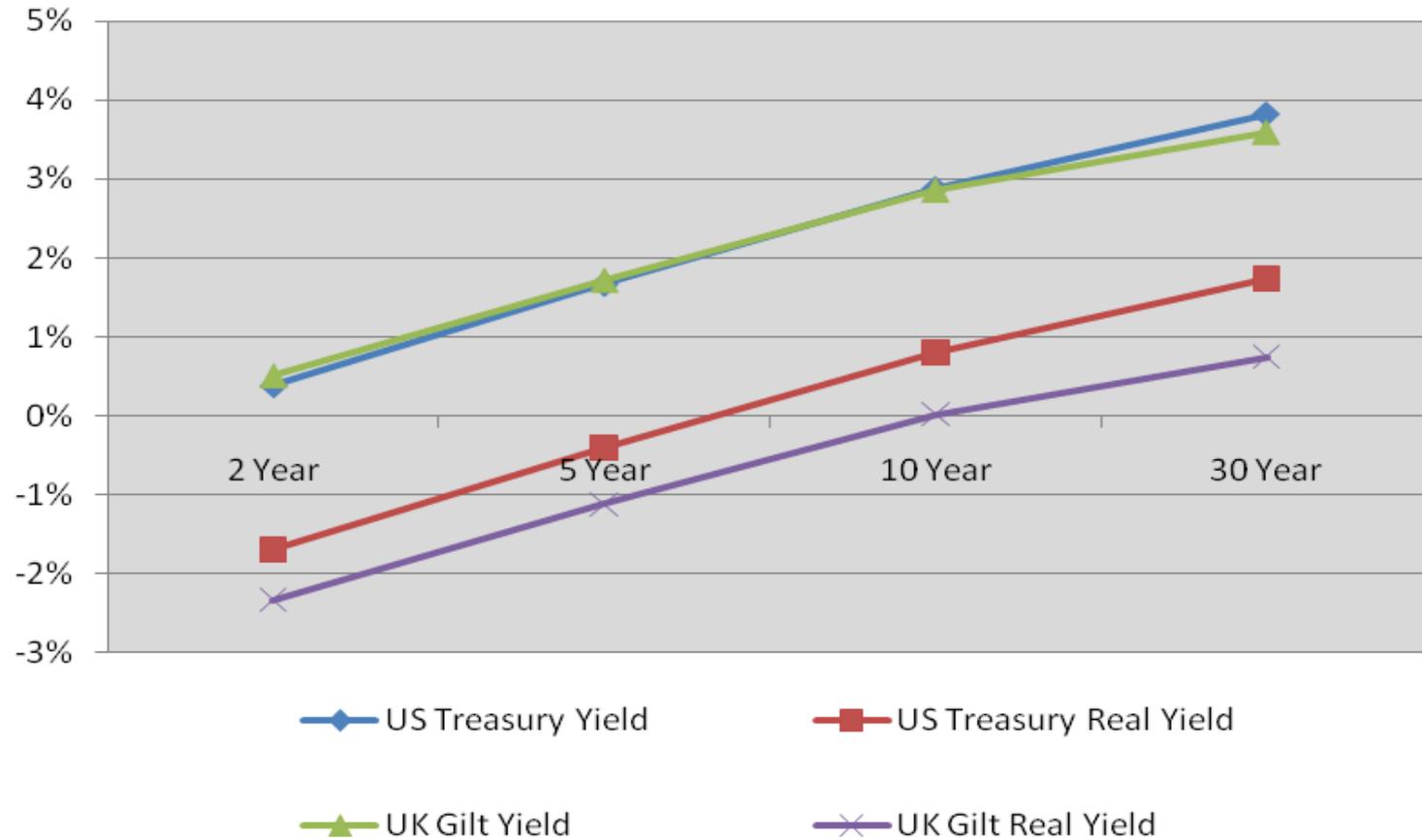
German and Japanese Government Bond Yields



Note: *As on 16.01.2014

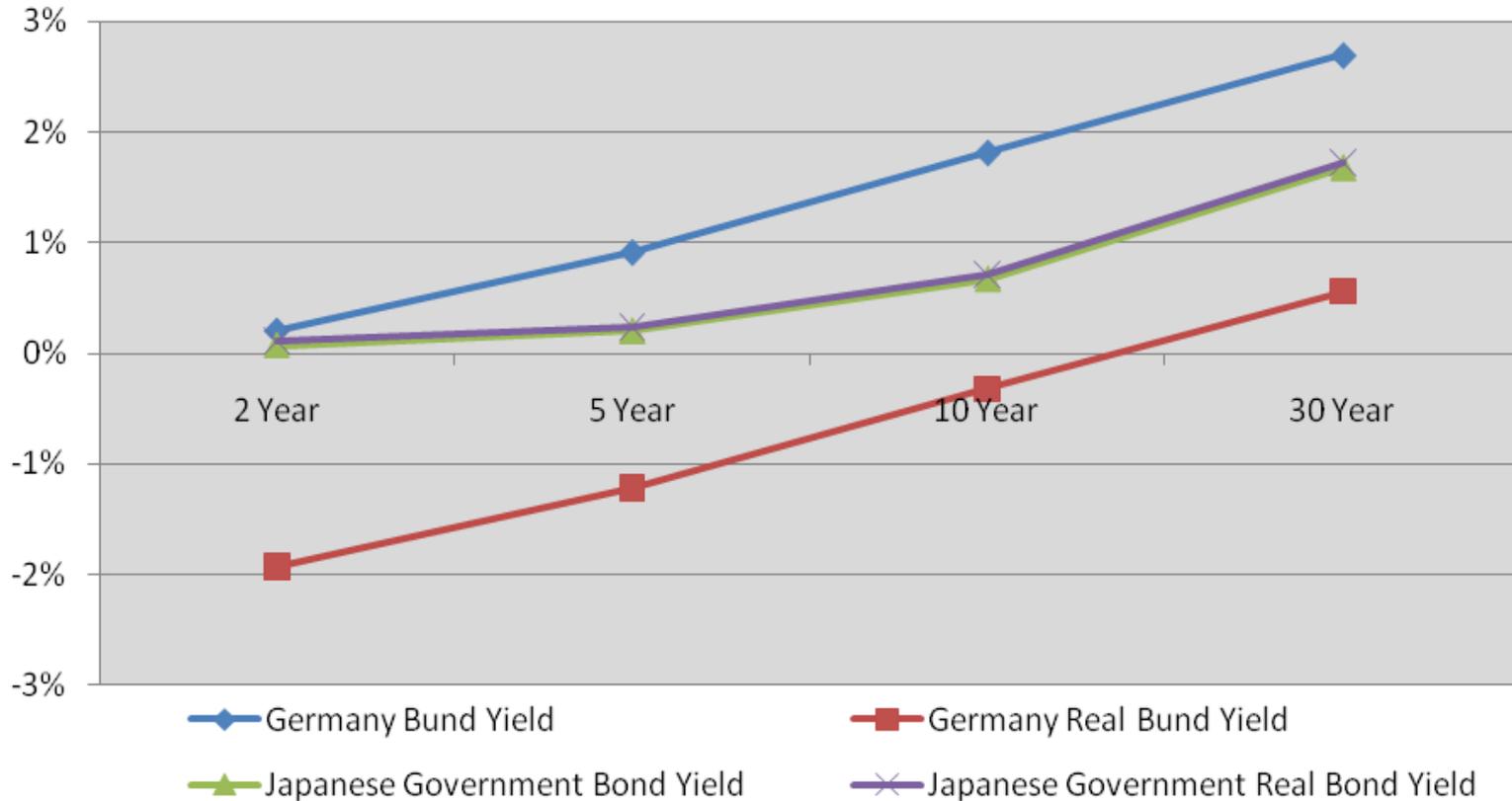
Source: Bloomberg

US & UK Nominal & Real Yields



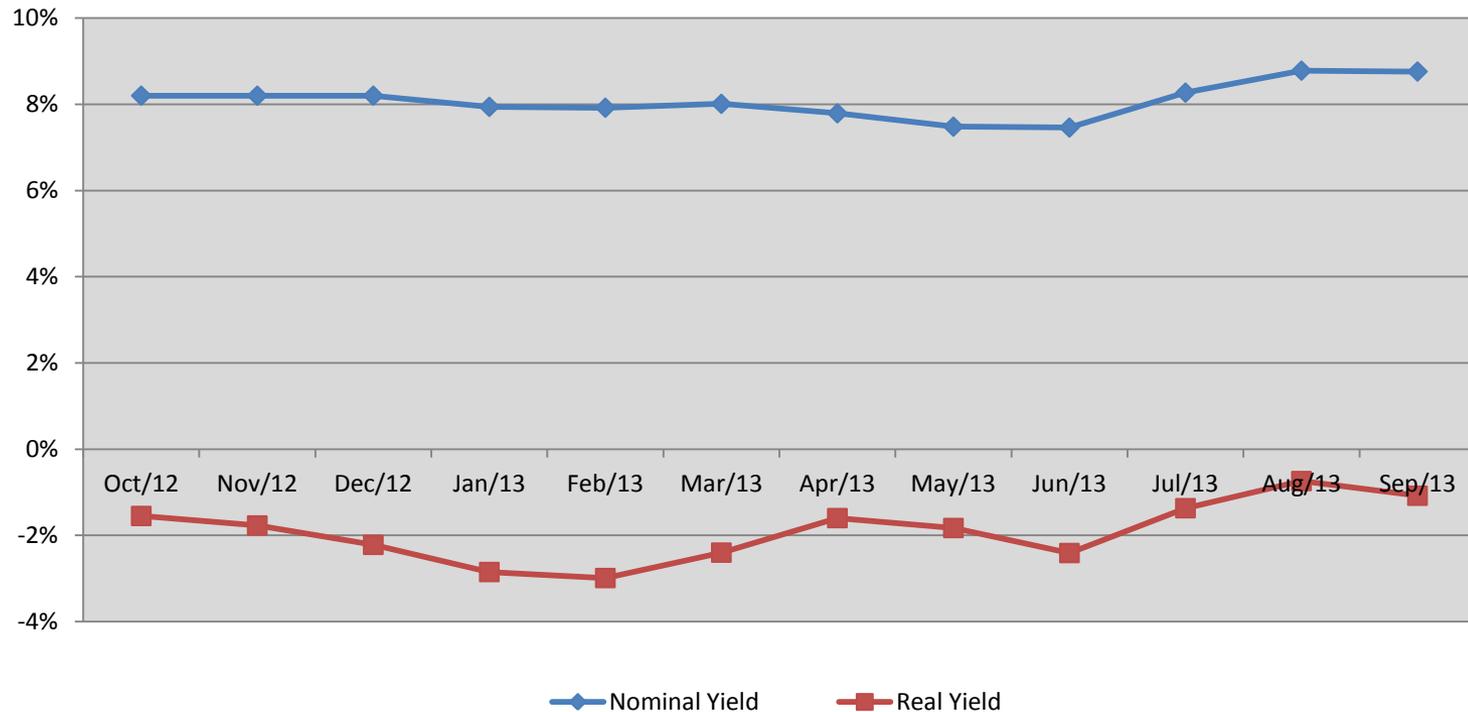
Note: Yields as of 16.01.2014: Annual average CPI numbers from WEO were used to estimate inflation adjusted yields
Source: Bloomberg and WEO, IMF

Germany & Japan Nominal & Real Yields



Note: Yields as of 16.01.2014 ; Annual average CPI numbers from WEO were used to estimate inflation adjusted yields
Source: Bloomberg and WEO, IMF

10-year Indian Government Security Benchmark Yield



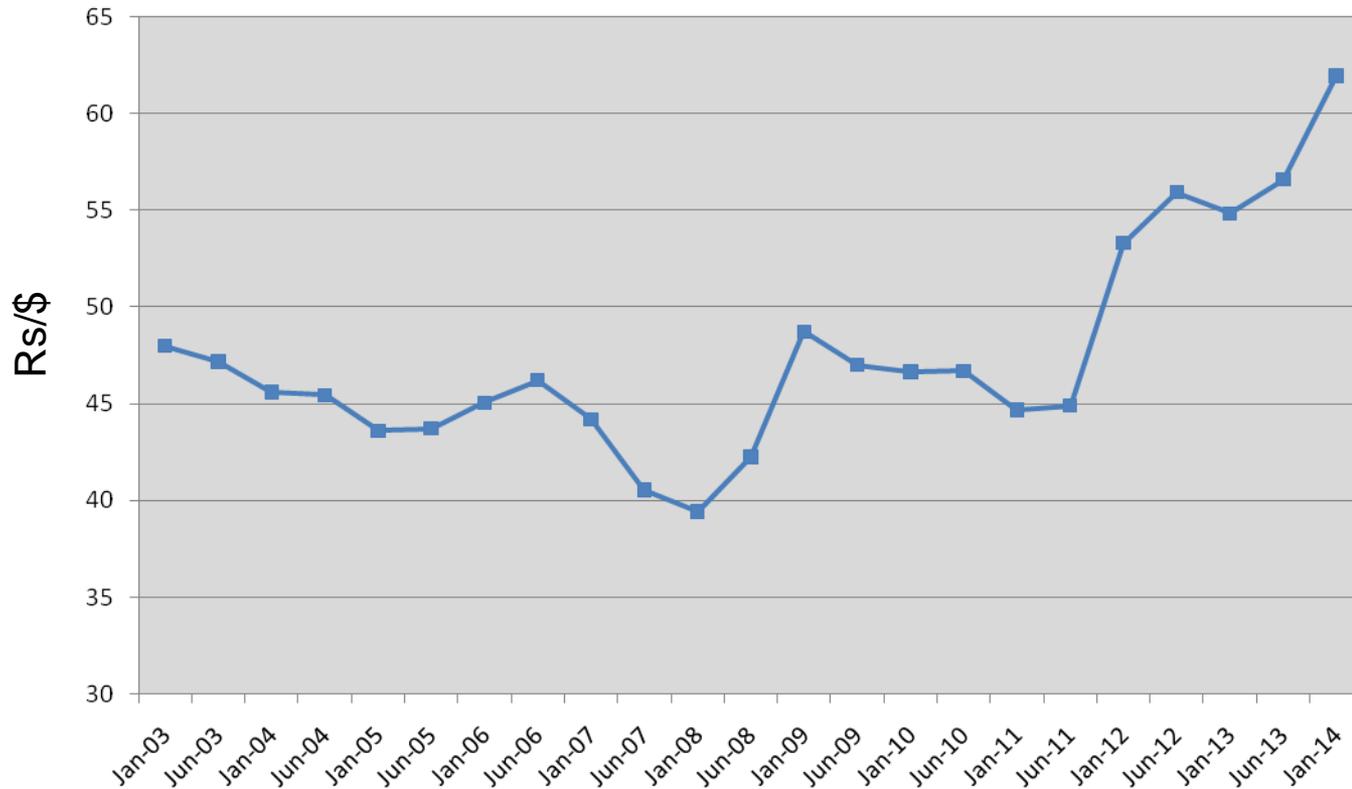
Note: Monthly All India CPI prices from the source mentioned below were used to calculate inflation adjusted yields

Source: RBI

Indian Government Security Benchmark Yield

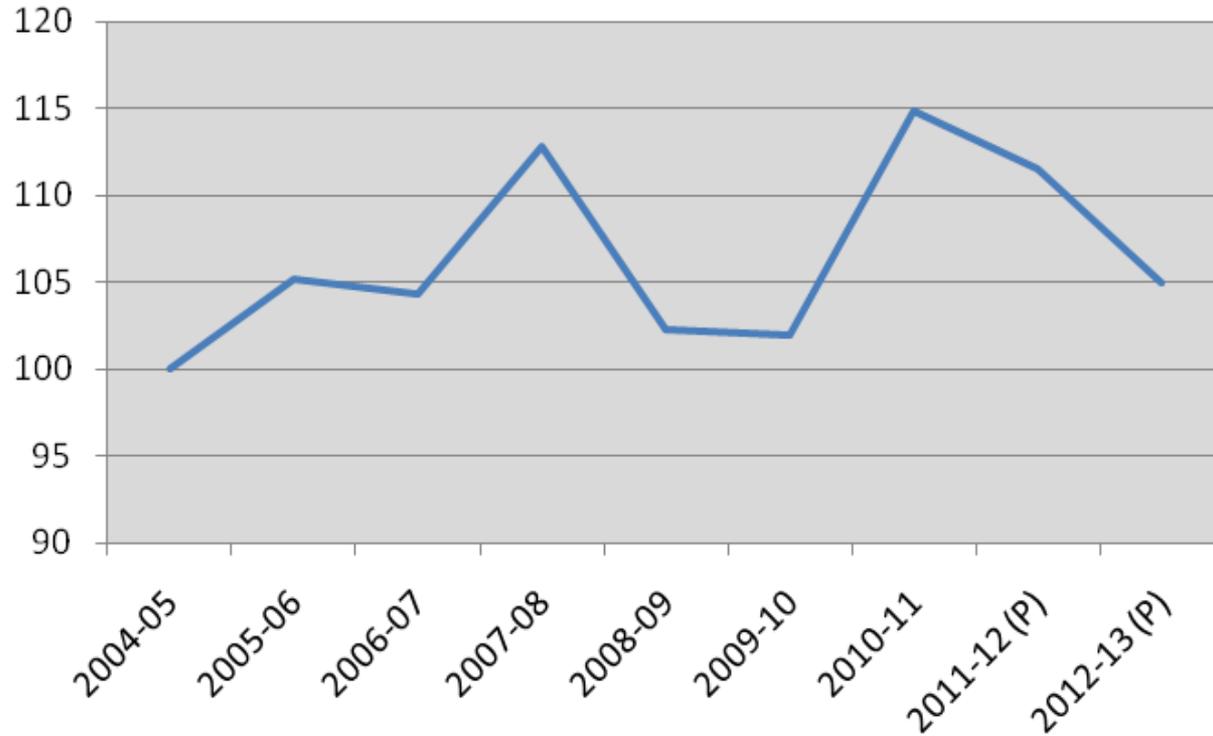
- Yield on inflation protected 10 year Rupees 500 crores Government bonds which were issued on 29 January 2014 was 1.44%
- In comparison, yield on regular 10 year Government bond as of 29 January was 8.74%
- Yield on 5 year Government bond as of 30 January was 8.09%
- CPI for December 2013 stood at 9.87%

Nominal Rupee/USD Exchange Rate



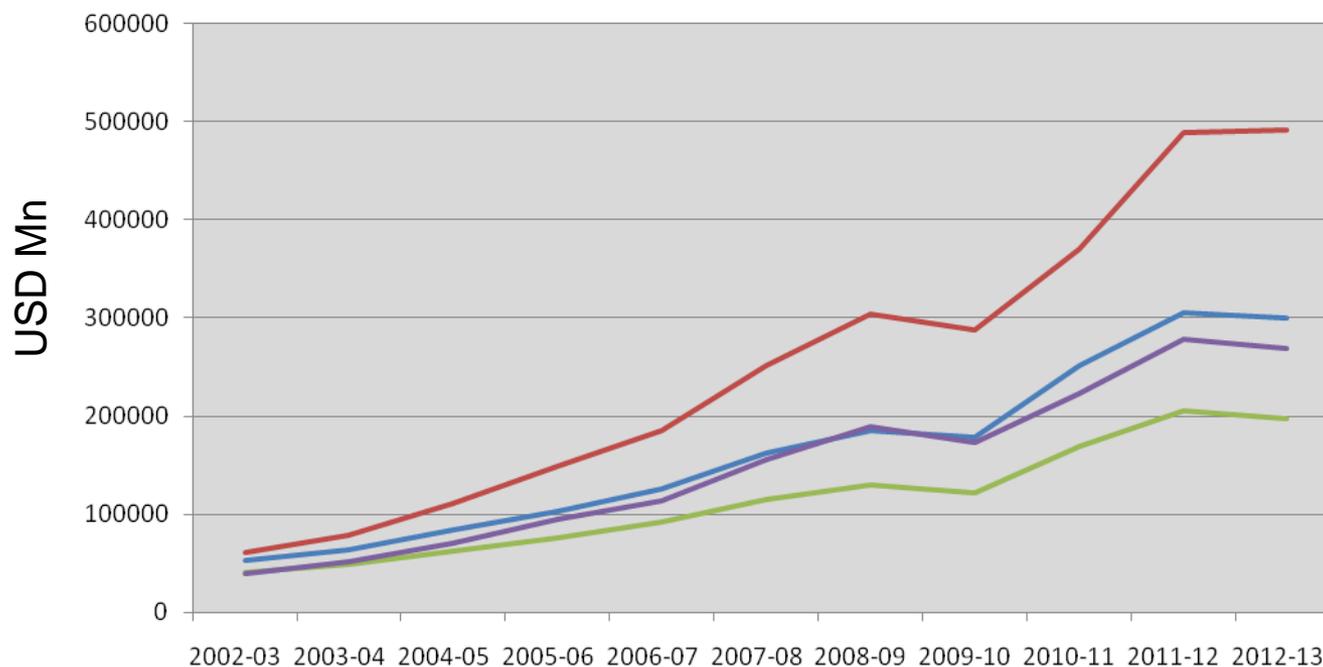
Source: RBI

Rupee/USD Real Effective Exchange Rate



Note: The graph depicts 6 - Currency Trade-based weights REER with Base 2004-05=100 ; P - Provisional
Source: RBI

Goods Trade - India's Exports & Imports (in US\$ Million)



— Total Exports/All Commodities — Total Imports/All Commodities
— Exports excluding Exports of Petroleum Products and Gems and Jewellery — Imports excluding Imports of Petroleum Crude and Products and Gold

Note: Monthly data may not add up to the total due to revisions in data for previous months
 Source: RBI

Price/Earning (P/E) on major indexes

Dow Index, as of Jan 30, 2014		
	30.01.2014	Year ago
Dow Industrial	15.25	15.29
Other Indexes, as of Jan 24, 2014		Year ago
Nasdaq 100	21.68	16.65
S&P 500	18.20	17.46
Sensex Index, as of Nov 29, 2013		Year ago
Sensex 30	17.6	17.5

Source: Wall Street Journal and BSE India

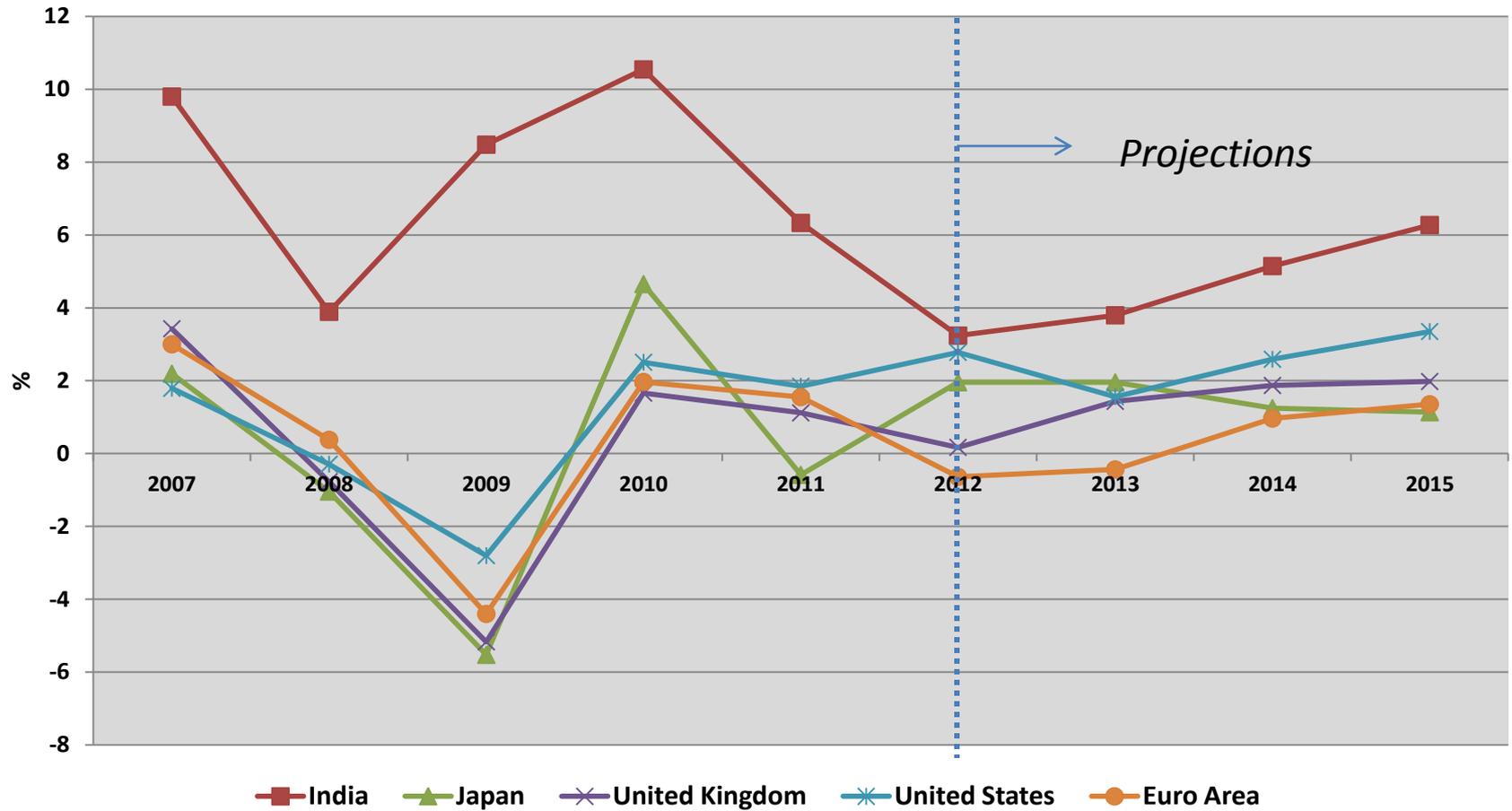
Subsidy for NRI Deposits (1/2)

- NRI deposits of US\$35 billion with maturities from 3-5 years (FCNR-B window from 06/09/2013 – 30/11/2013)
- Rupee cost of funds for banks is 3.5% (RBI's swap rate is equivalent to an exchange rate guarantee)
- These funds were probably lent at an average interest rate of around 9.5%

Subsidy for NRI Deposits (2/2)

- Modified duration (dP/dY) of loans around 2.5 years
- Present value of subsidy 15% $((9.5-3.5)*2.5)$
- 15% of \$35 billion is \$5.25 billion and at exchange rate of Rs 62.5 per dollar amounts to Rupees 32,800 crores

Real GDP Growth Rates



Source: WEO, IMF