

The Global Economy and Unconventional Policies

Dr. Jacob A. Frenkel

**Chairman, JPMorgan Chase International
Chairman of the Board of Trustees,
Group of Thirty (G30)**

**SIPA, Columbia University
New York, April 19, 2016**

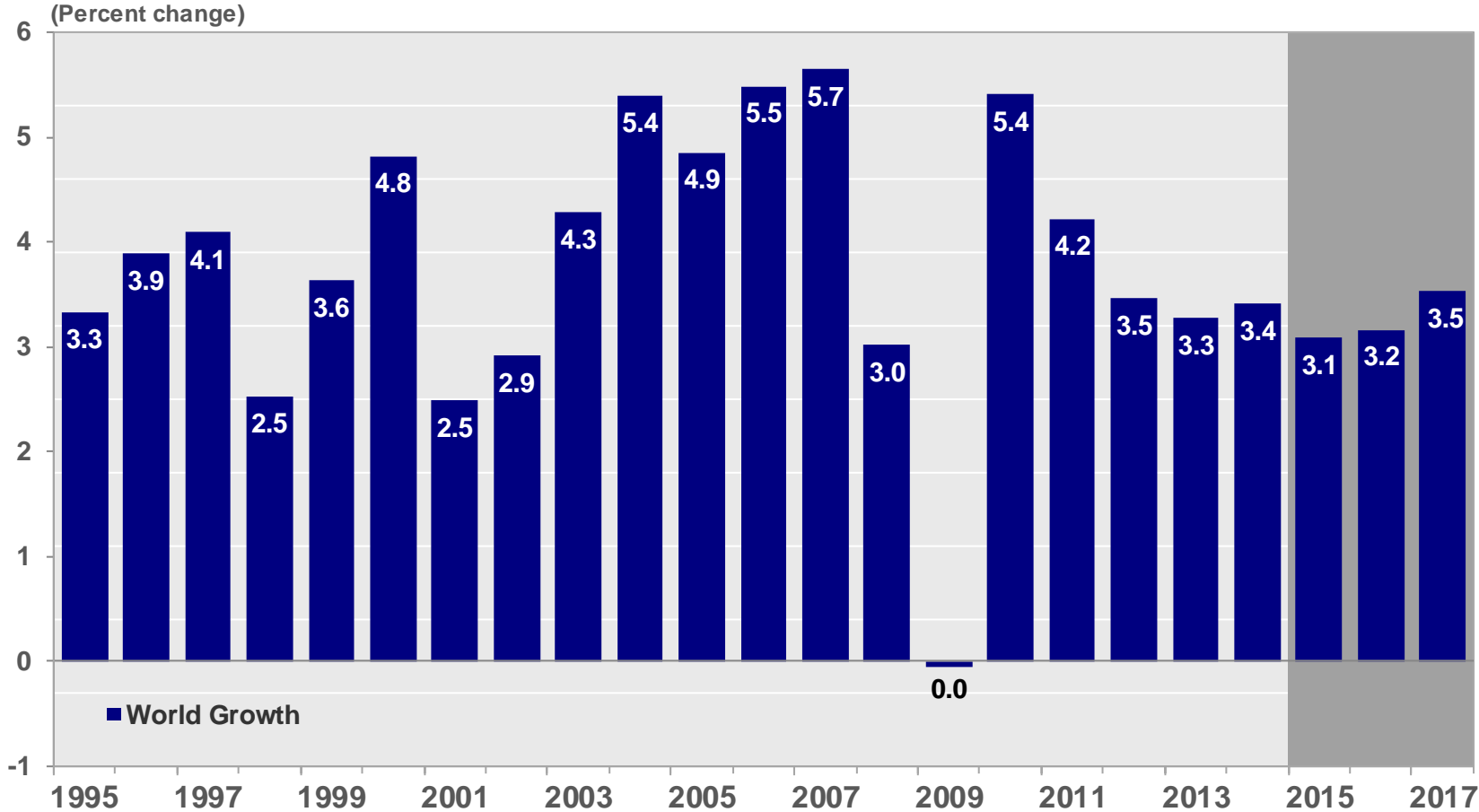
Global Economic and Financial Trends

- **Growth in the Global Economy**
- **Global Trade**
- **Monetary Policies & Financial Markets**
- **China: Adjustments & Spillovers**
- **Long-term Demographic Trends**

Growth in the Global Economy

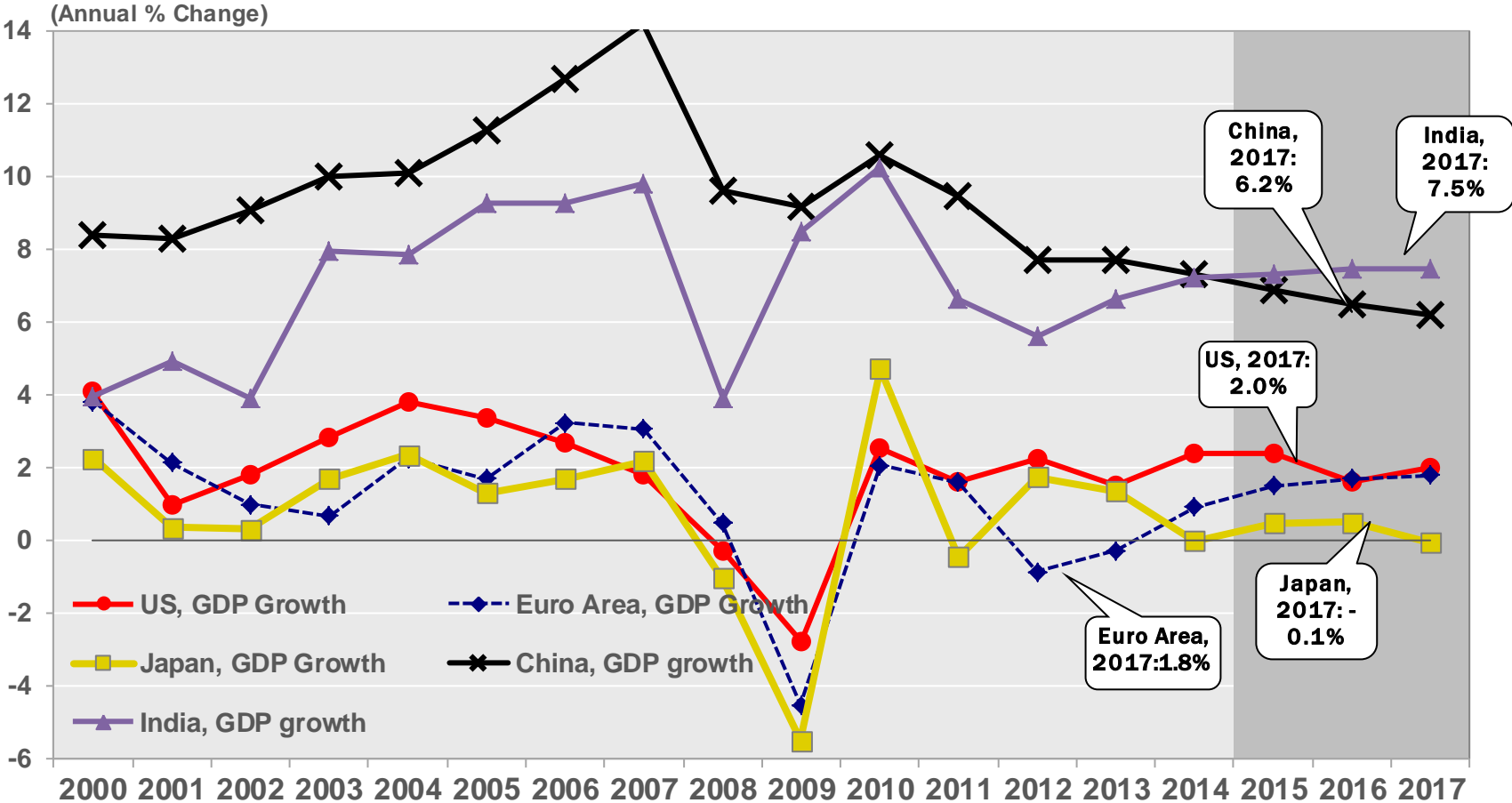
- **Global Growth Projections**
- **Developed and Emerging Markets**
- **Investment as a Share of GDP**
- **Corporate Profit Margins**

Global GDP Growth



Source: IMF, last update Apr 12 2016, WEO (2015, & 2016 Forecast)

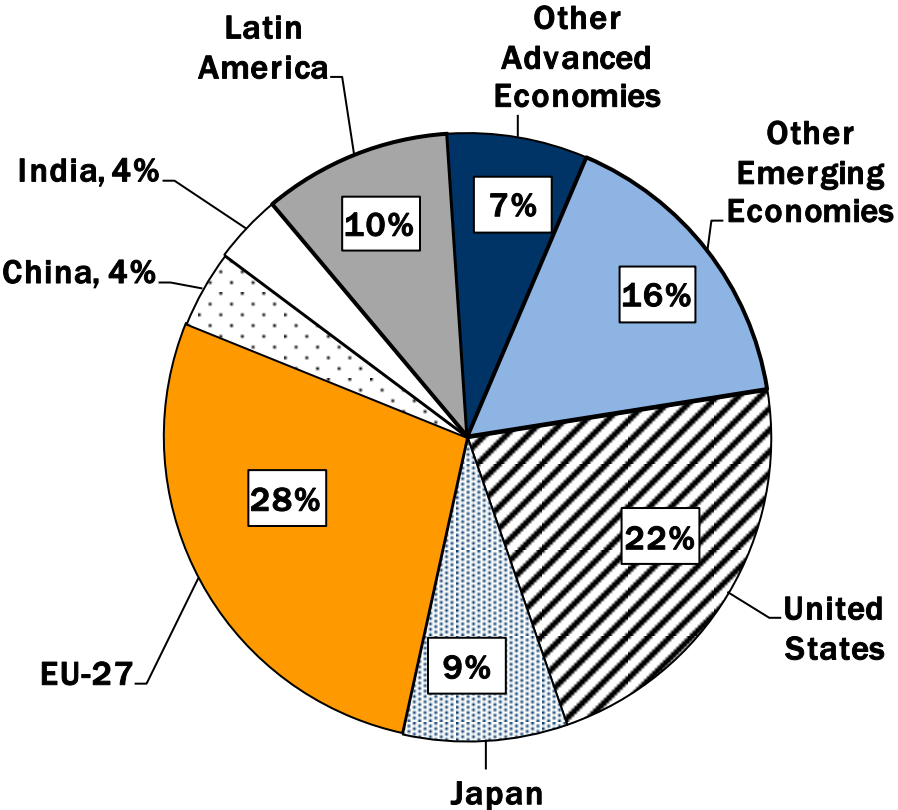
Real GDP Growth, Select Countries



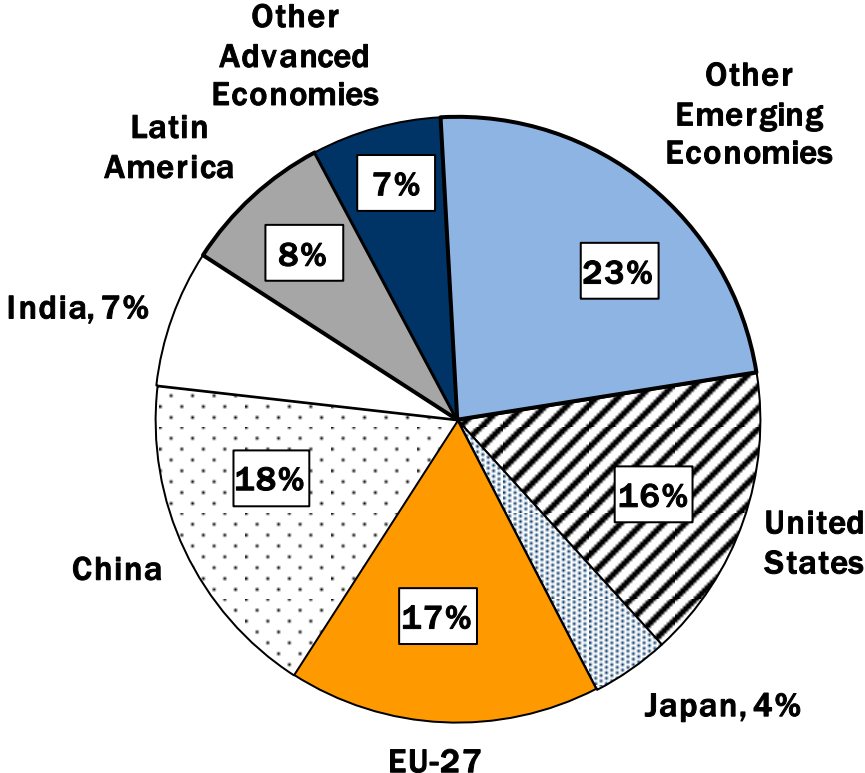
Source: IMF, last update Apr 12 2016, WEO (2015 & 2016 forecast); For US and Euro area, 2015 & 2016 are JPM forecast, last update April 8, 2016.

Global GDP Shares

1990



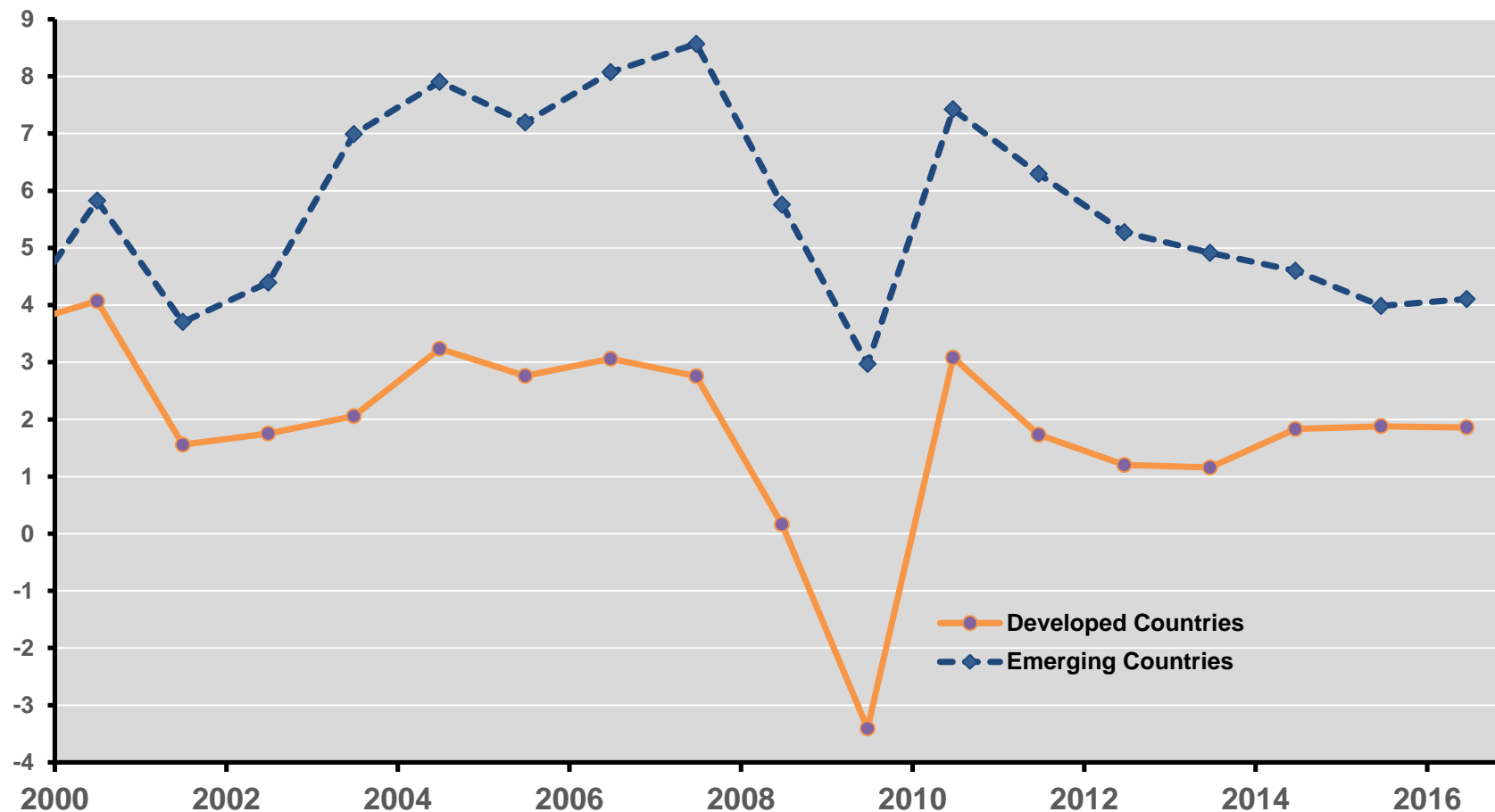
2016 IMF Forecast



Source: IMF, WEO Database, last update Apr 12 2016, WEO

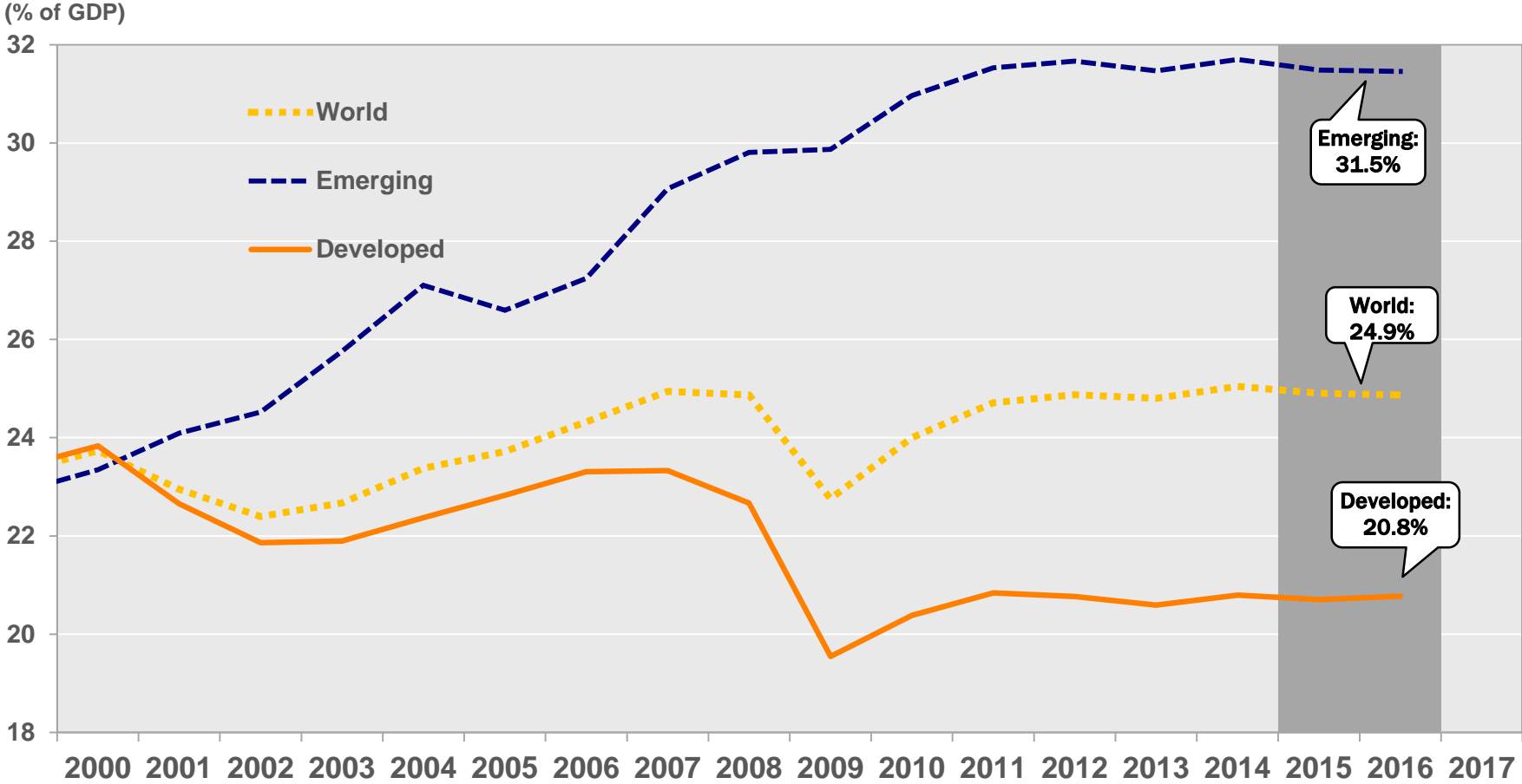
Real GDP Growth, Developed and Emerging countries

(Percent over a year ago)



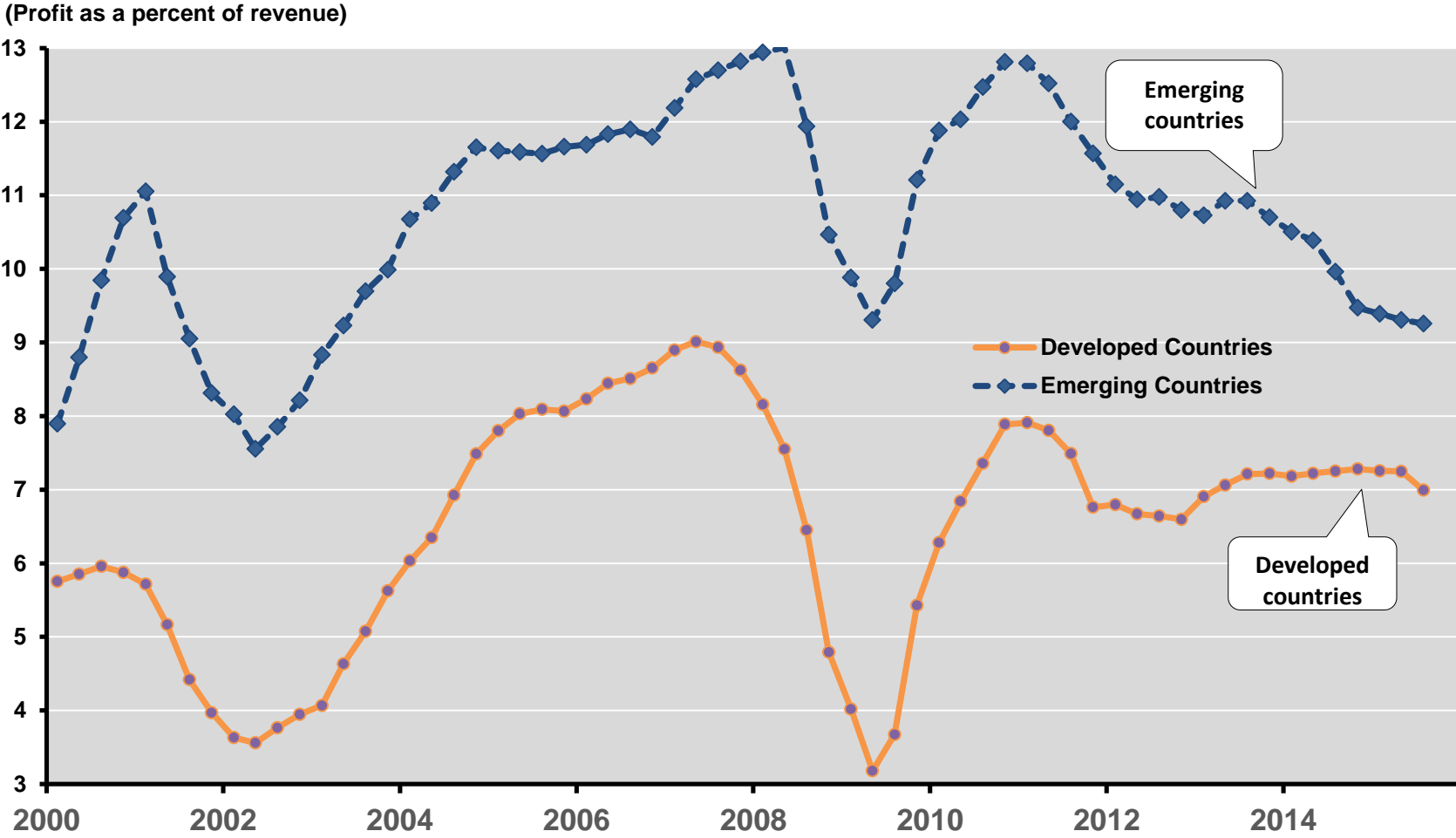
Source: IMF. 2016 is IMF forecast.

Investment as a Share of GDP



Source: IMF, last update Apr 12 2016, WEO (2015, & 2016 forecast).

Corporate Profit Margins, Developed and Emerging countries

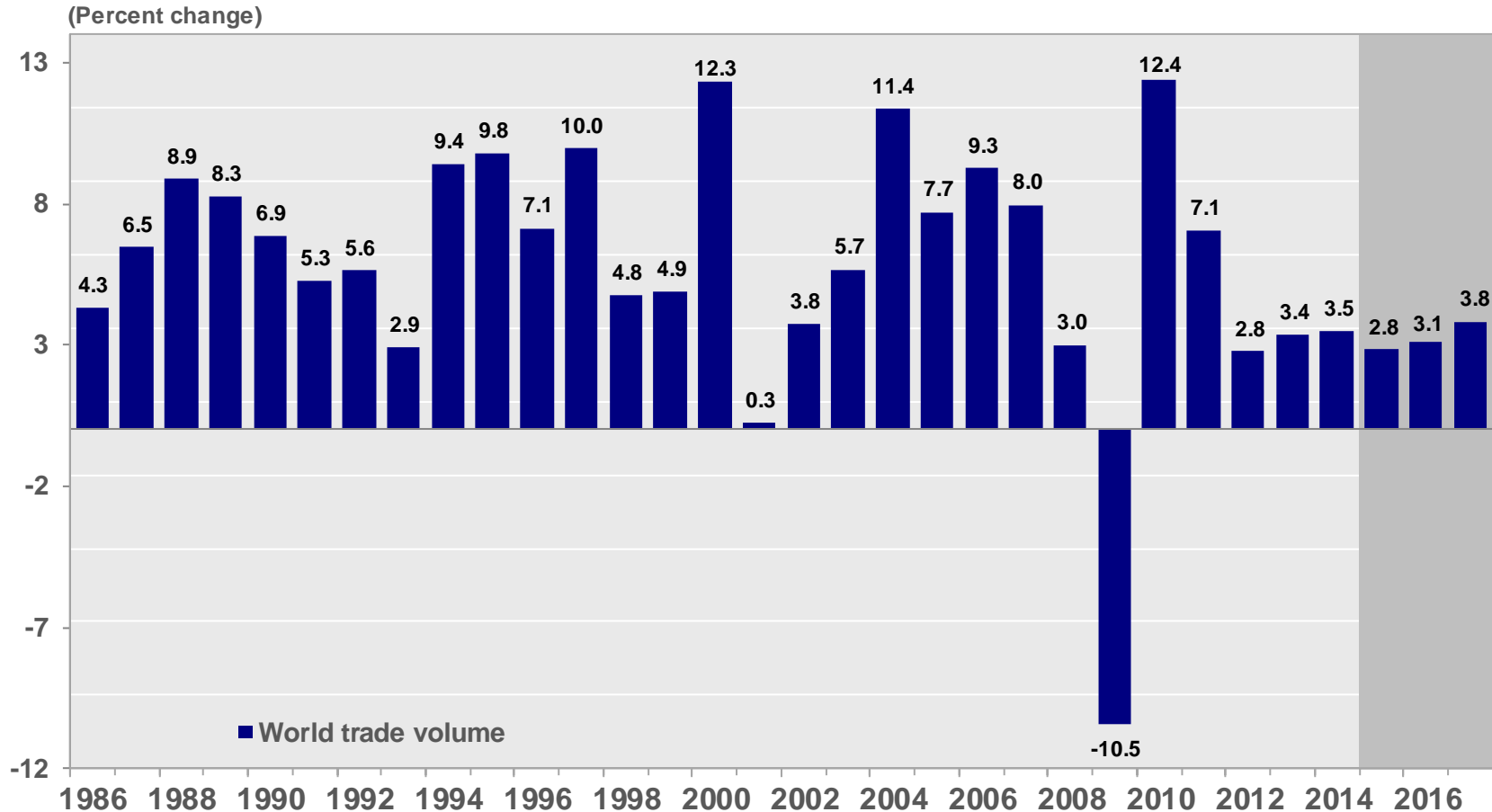


Source: J.P. Morgan. Last observation 2015 Q3.

Global Trade and Balance of Payments

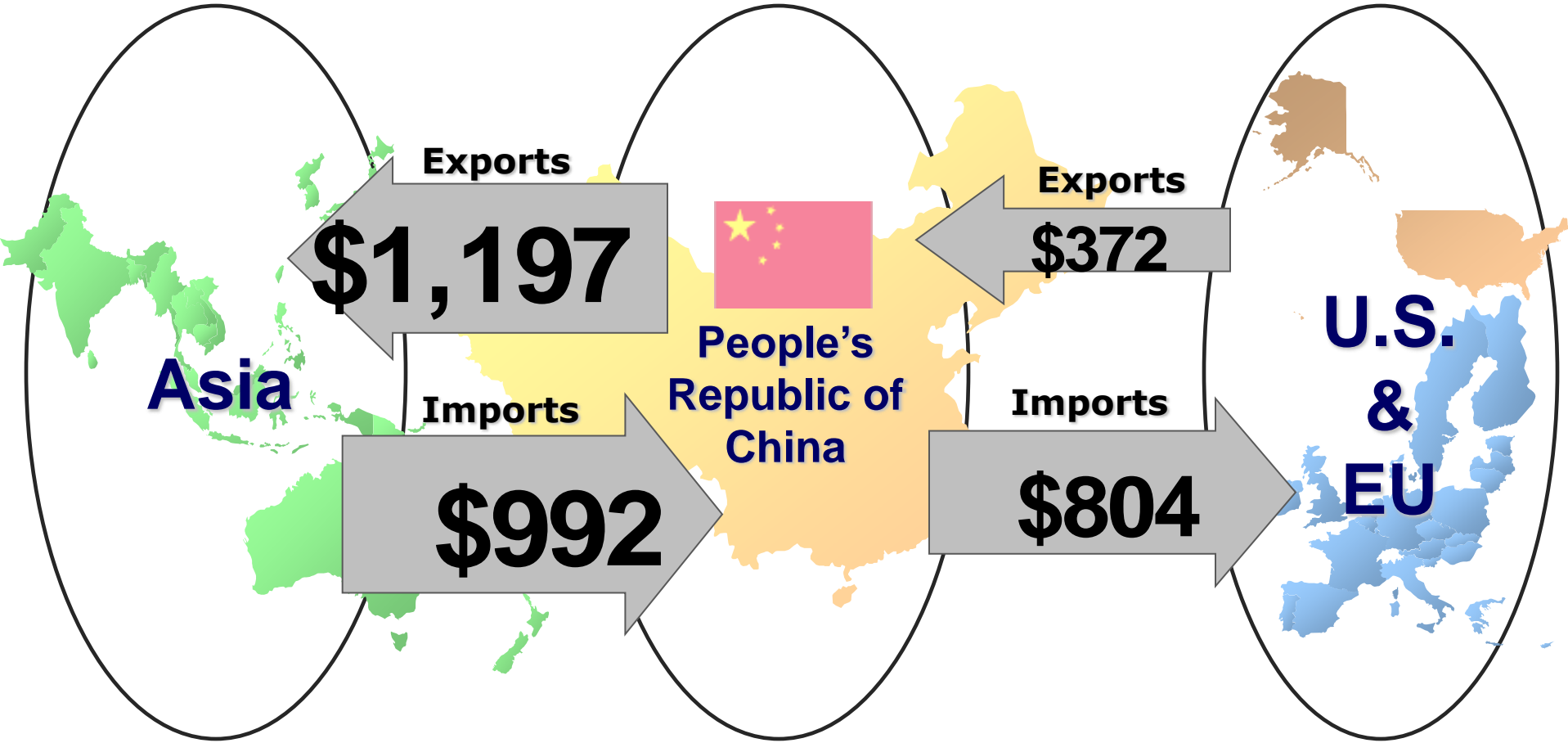
- **The Volume of World Trade**
- **China and the Trading System**
- **Current Accounts Imbalances**

World Trade Volume



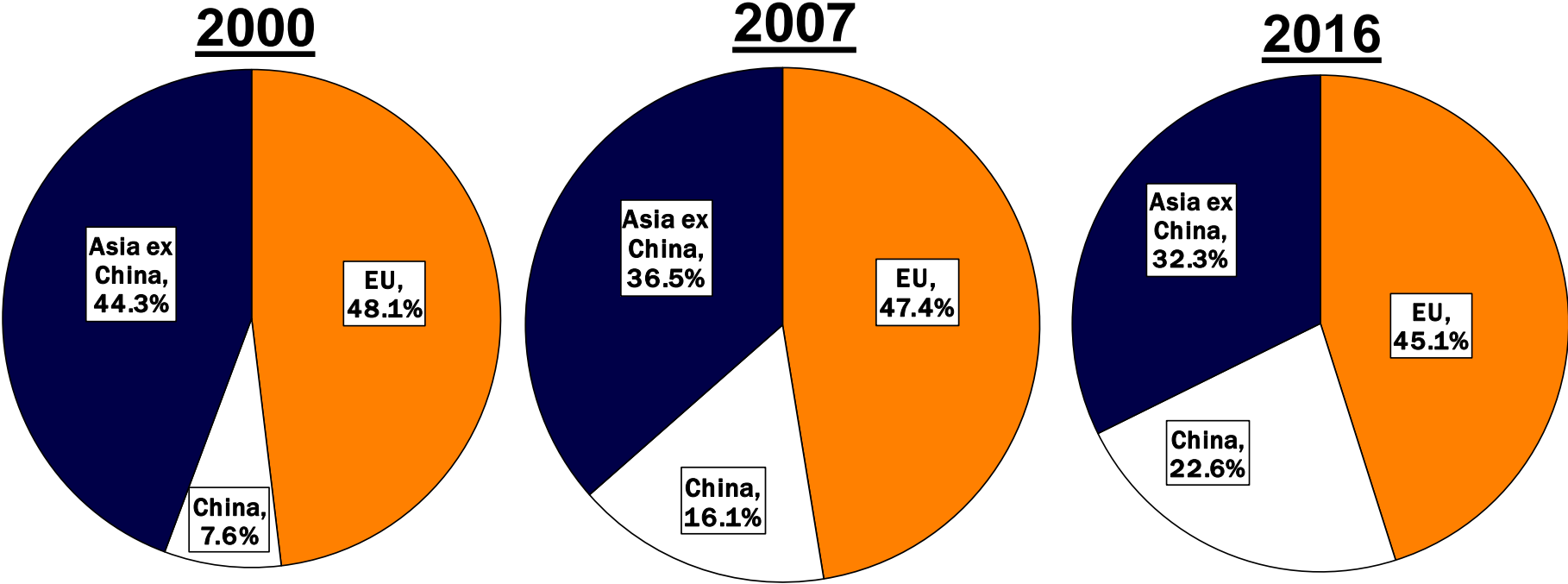
Source: IMF, av. Annual growth rates, last update Apr 12 2016, WEO (2015, & 2016 forecast).

China's Role in Global Trade (bill. Usd)



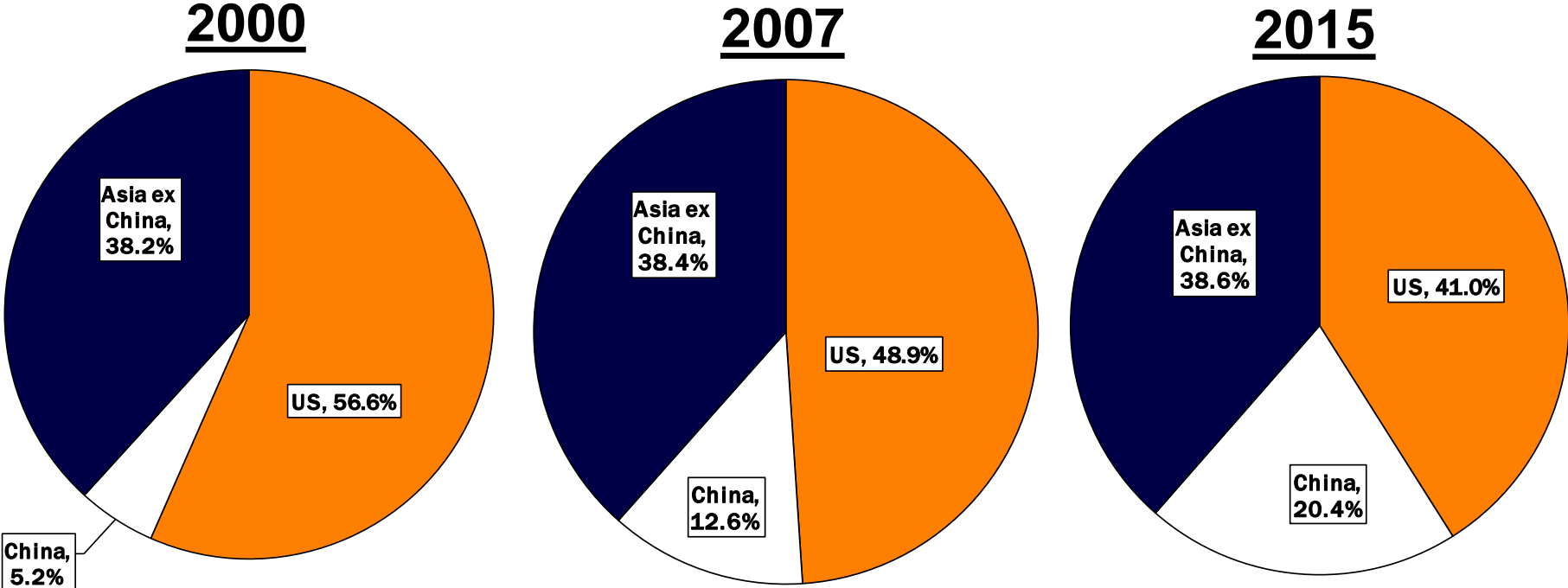
Source: National Bureau of Statistics of China, 12-months through February 2016

U.S. Exports by Destination



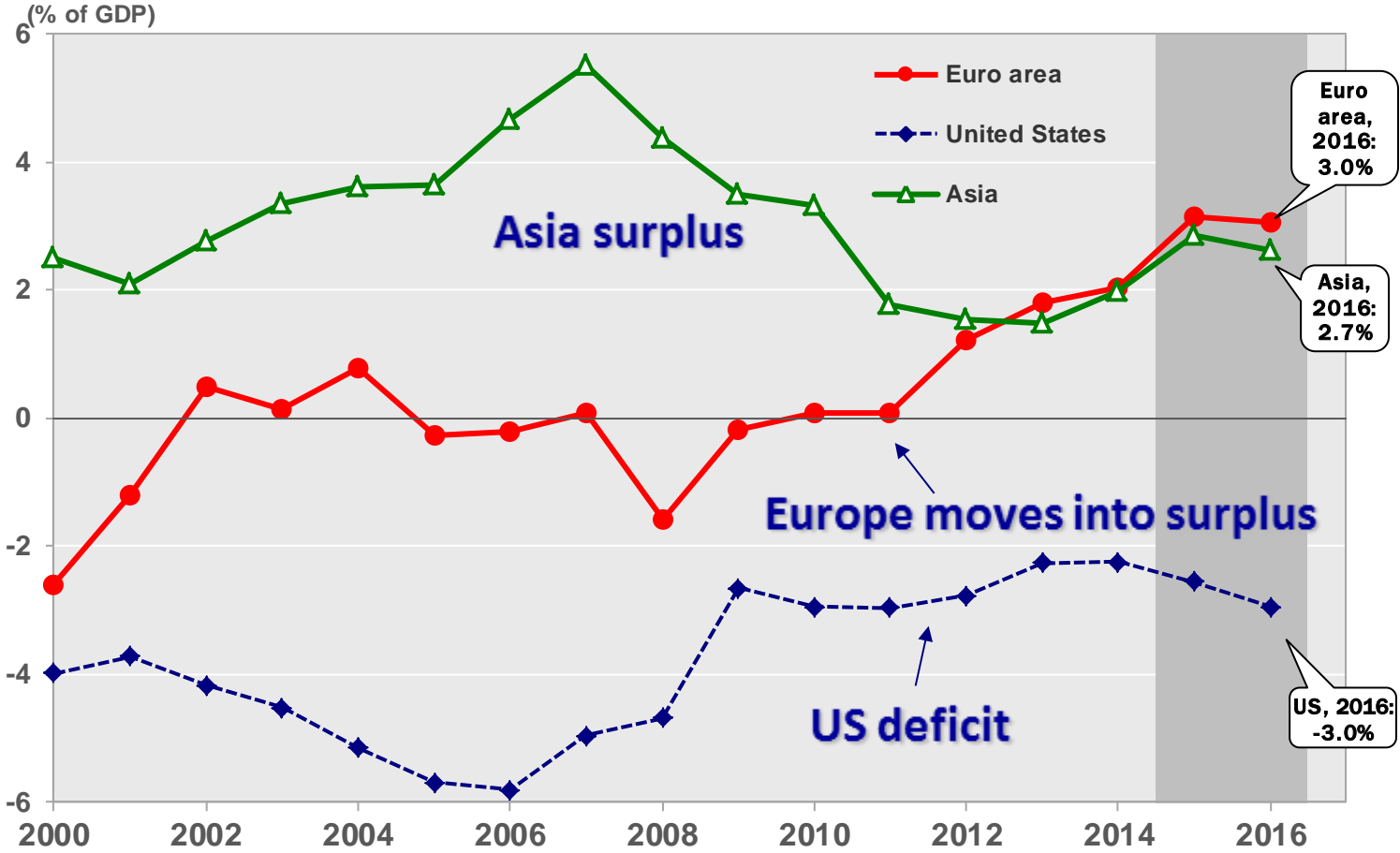
Source: US Department of Commerce, Last Observation: Feb 2016

European Union Exports by Destination



Source: Eurostat, Last Observation: Dec 2015

Current Account of Balance of Payments

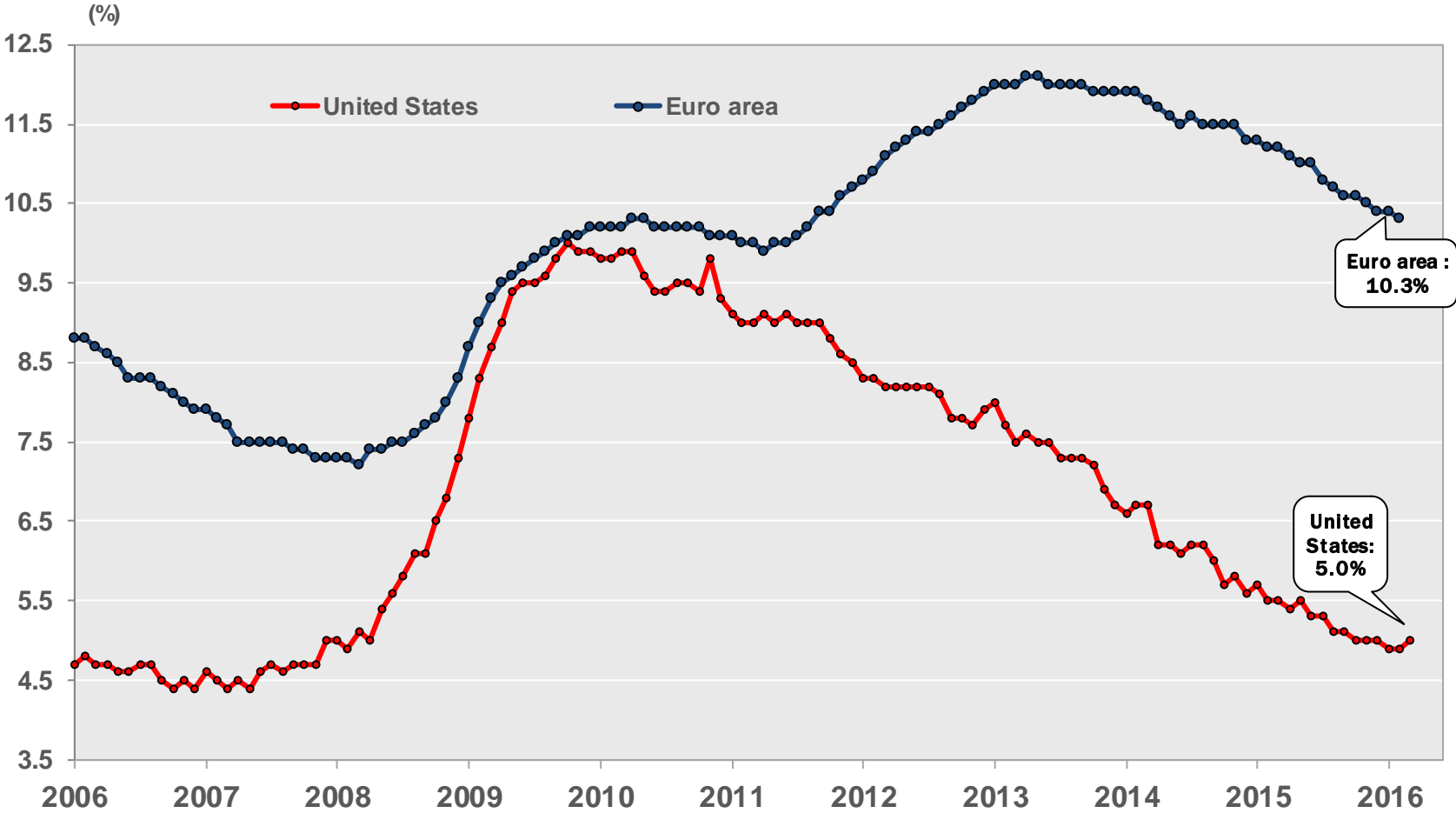


Source: IMF, last update Oct 07 2015, WEO (2015, & 2016 forecast)

Unemployment, Monetary Policies, and Financial Markets

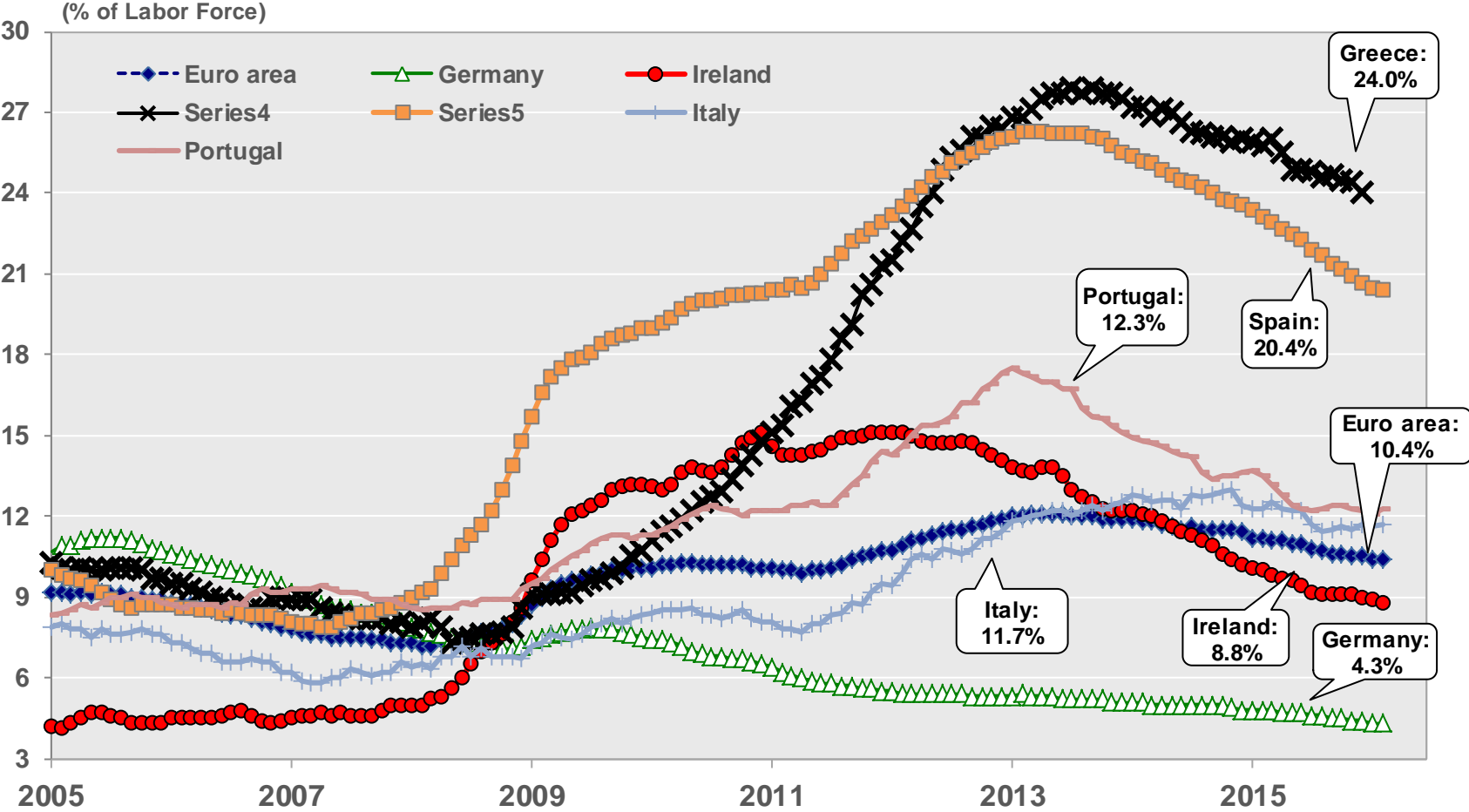
- **Unemployment: US & Euro area**
- **Central Bank Policy Rates**
- **Central Bank Balance Sheets**
- **Sectoral Leverage and Deleverage**
- **Forward Guidance**
- **Financial/Real Markets Disconnect**

Unemployment Rate: US and Euro Area



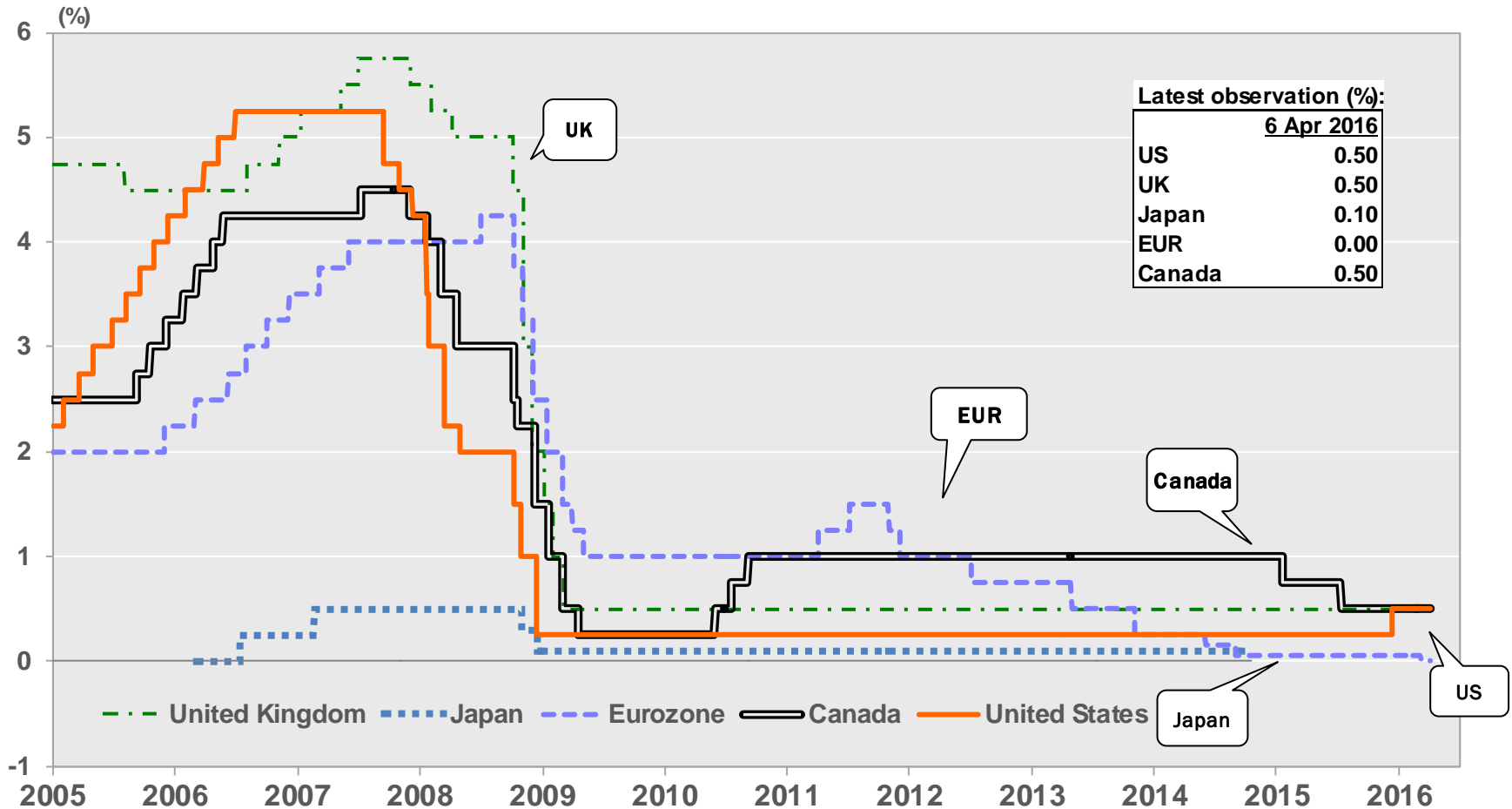
Source: Eurostat and BLS; Last observation for Euro area February 2016, For US, March 2016

Unemployment rates: Euro area



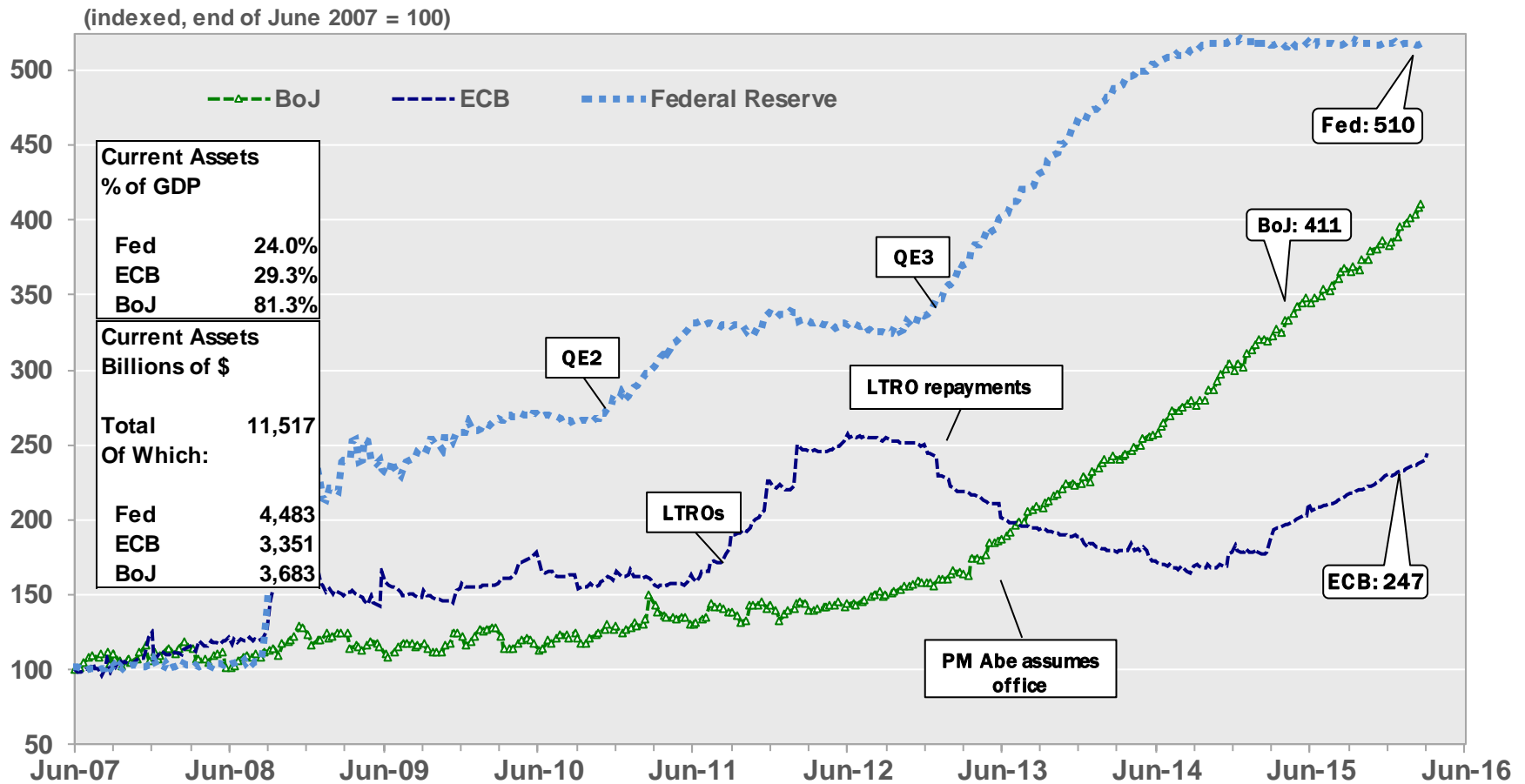
Source: Eurostat. *Latest for Greece is December 2015, for all others is February 2015.

Central Bank Policy Interest Rate



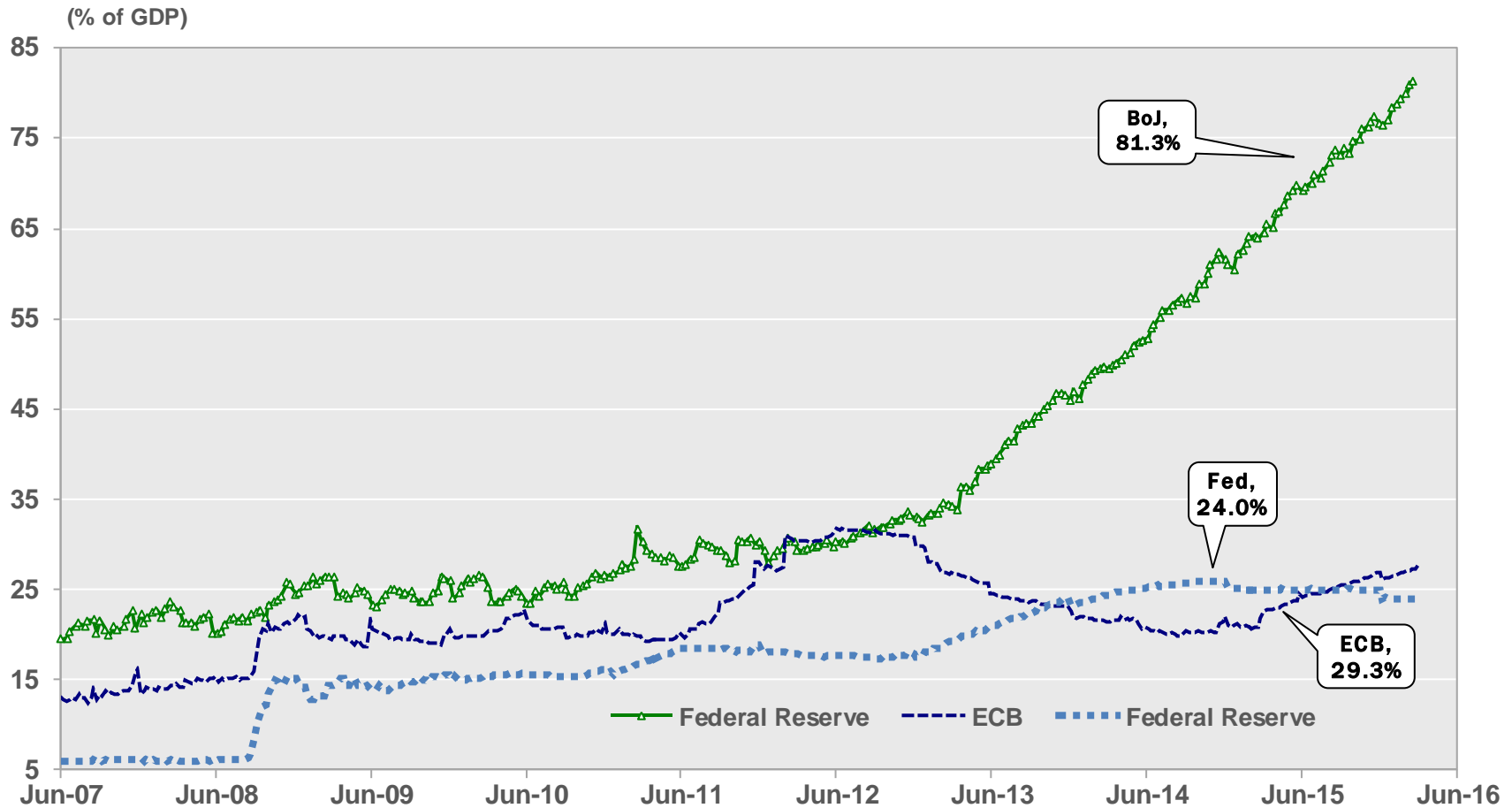
Source: Bloomberg Market Data, Last observation: 6 Apr, 2016

Total Assets of Key Central Banks (indexed levels)



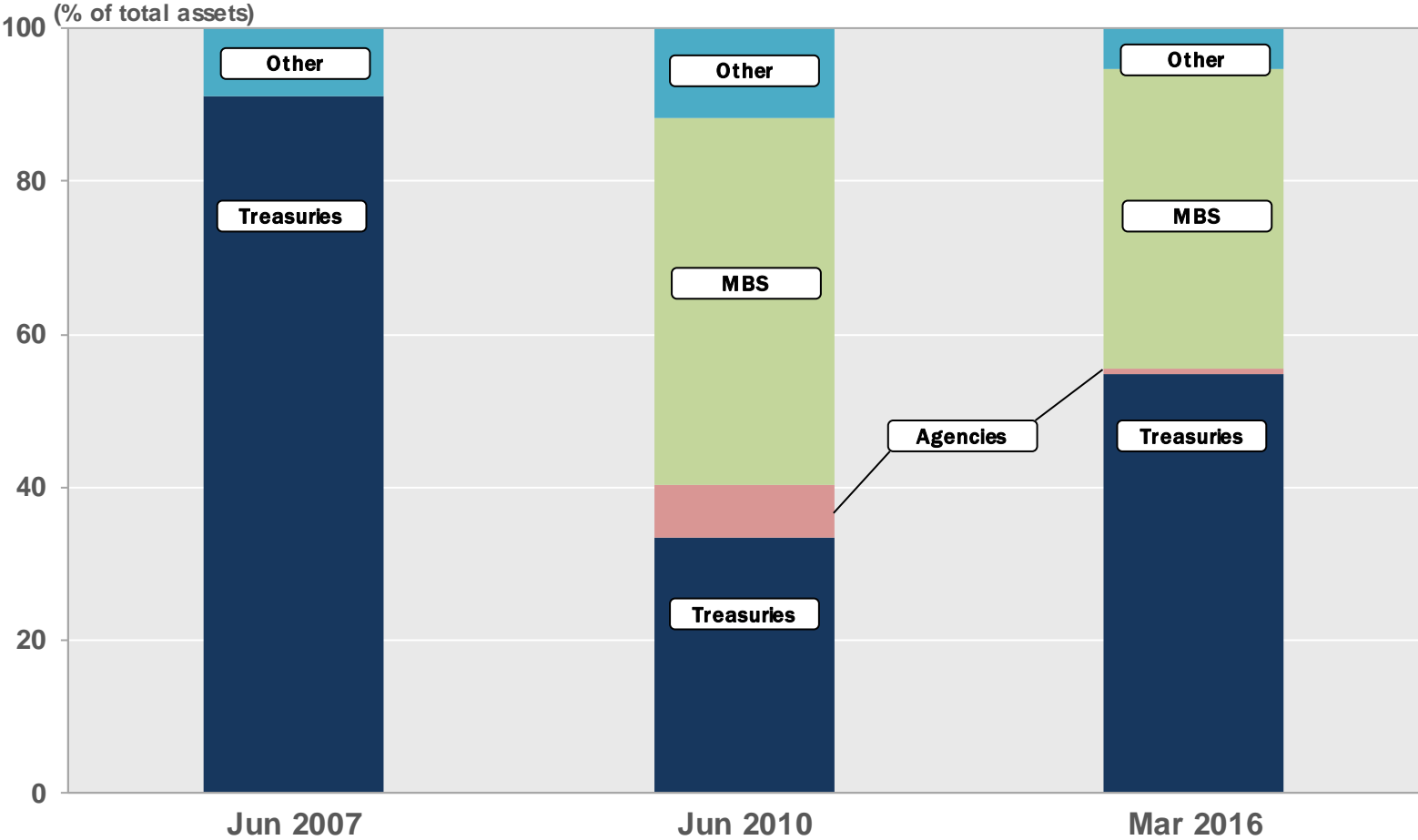
Source: Bloomberg; Last Observation: Fed: Mar 30, 2016; ECB: Apr 1, 2016; BoJ: Mar 20, 2016.

Total Assets of Key Central Banks as a Share of GDP



Source: Bloomberg; Last Observation: Fed: Mar 30, 2016; ECB: Apr 1, 2016; BoJ: Mar 20, 2016.

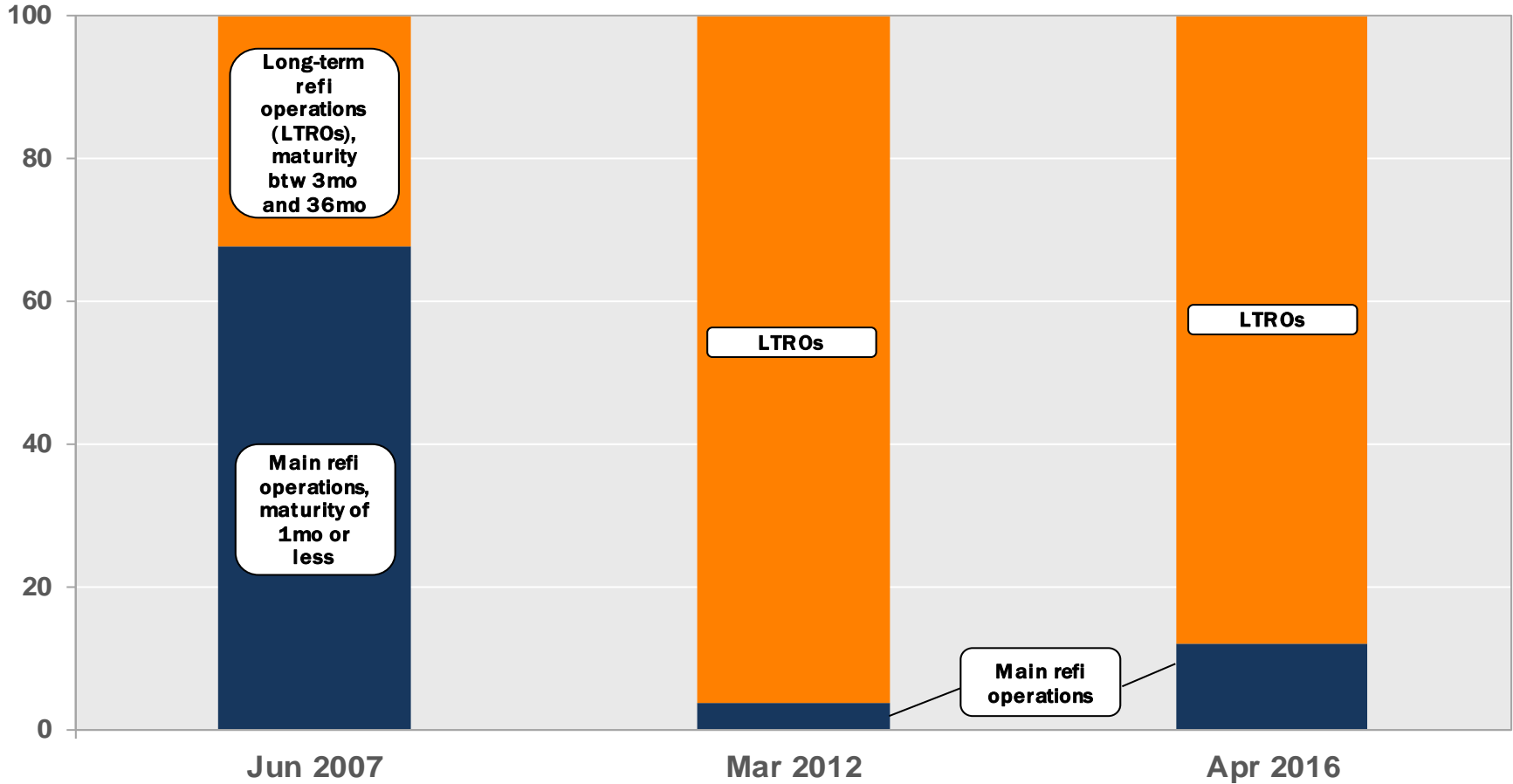
Composition of Federal Reserve Assets



Source: Federal Reserve, Bloomberg, Last Observation: March 30, 2016.

Composition of ECB Liquidity Facilities

(% of total liquidity measures)

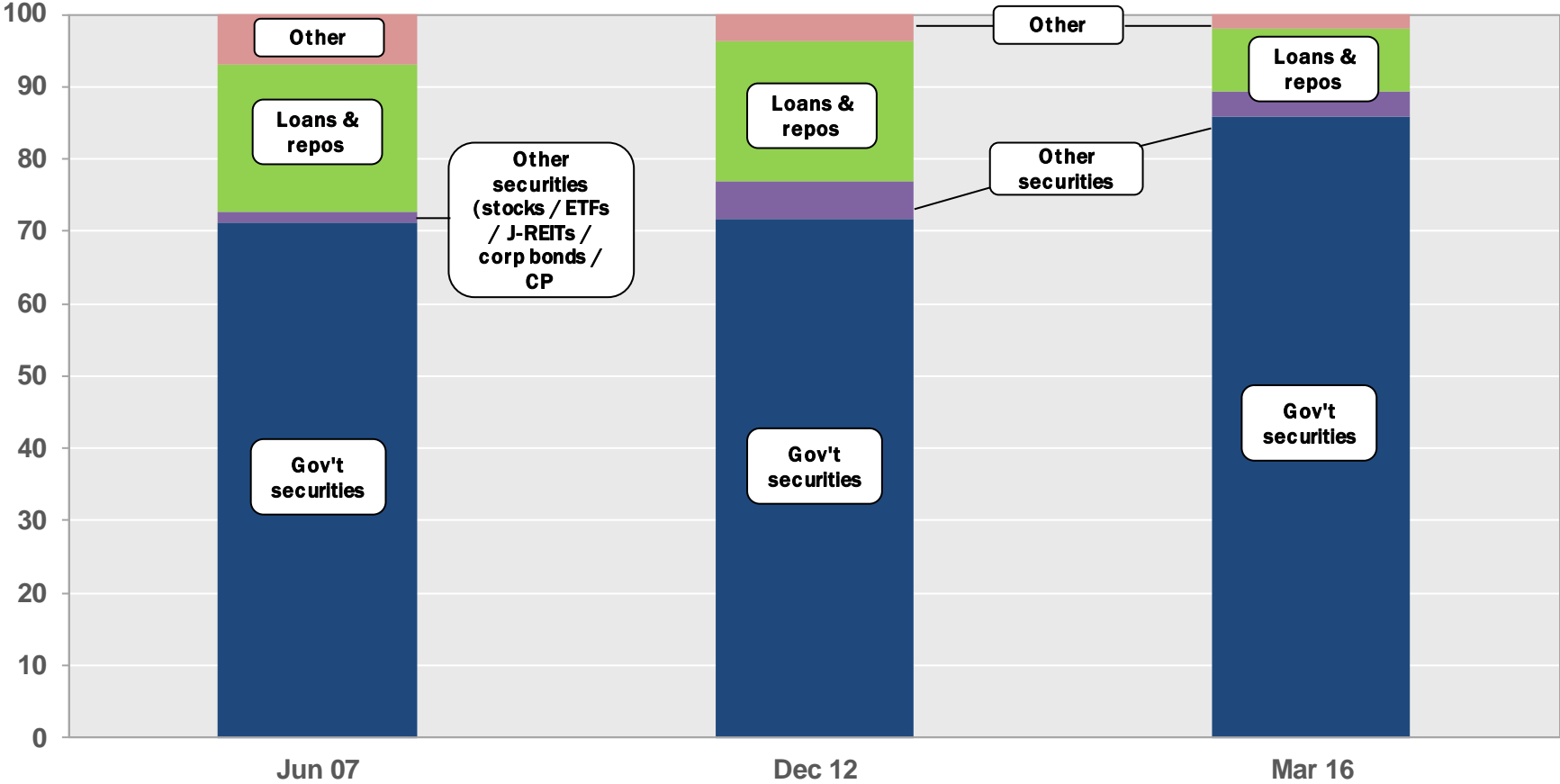


Note: March 2012 follows two rounds of 36-month LTRO auctions that occurred December 21, 2011 and February 29, 2012.

Source: ECB, Last Observation: April 1, 2016

Composition of BoJ Assets

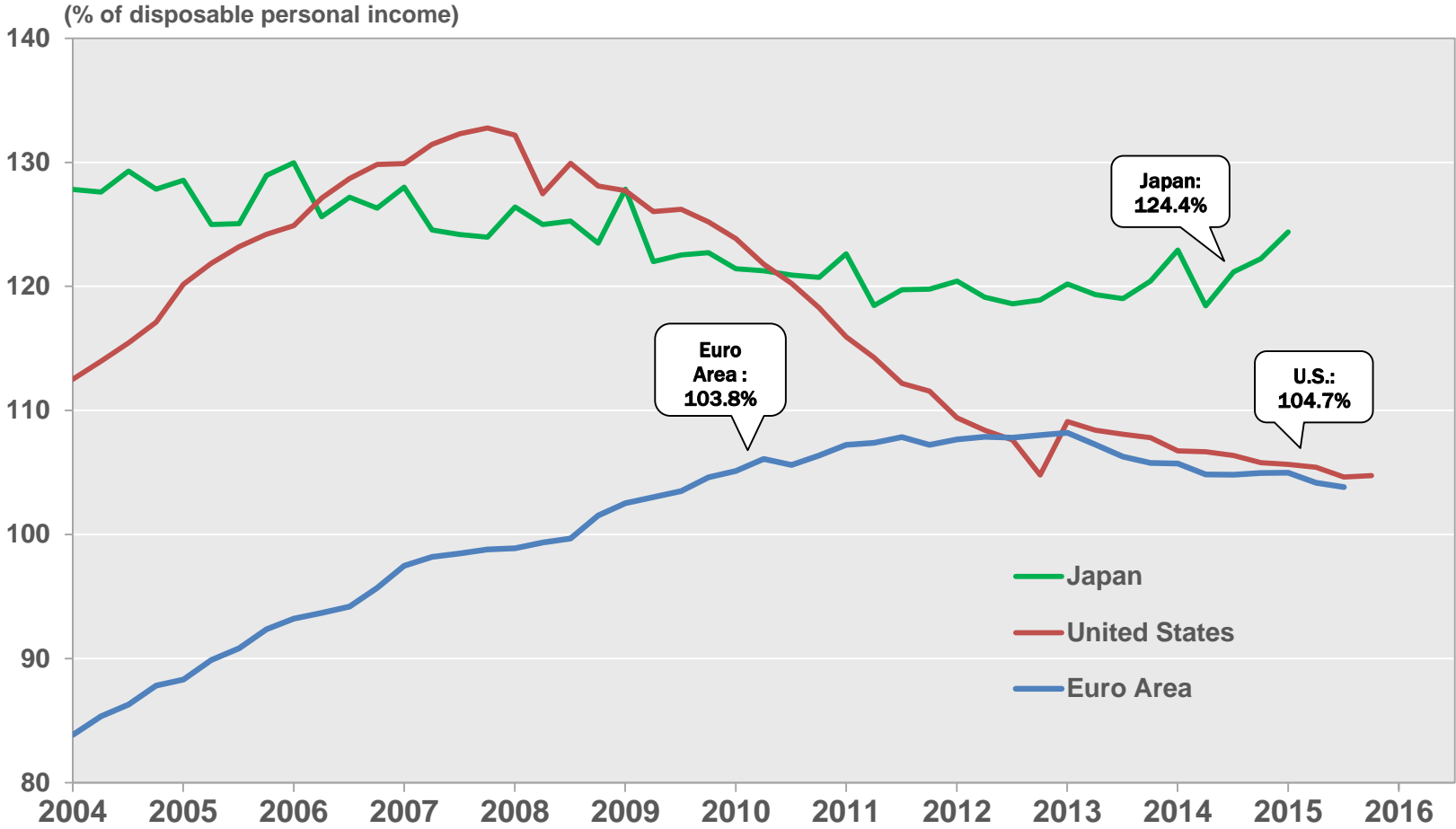
(% of total assets)



Note: Prime Minister Abe assumed office in December 2012

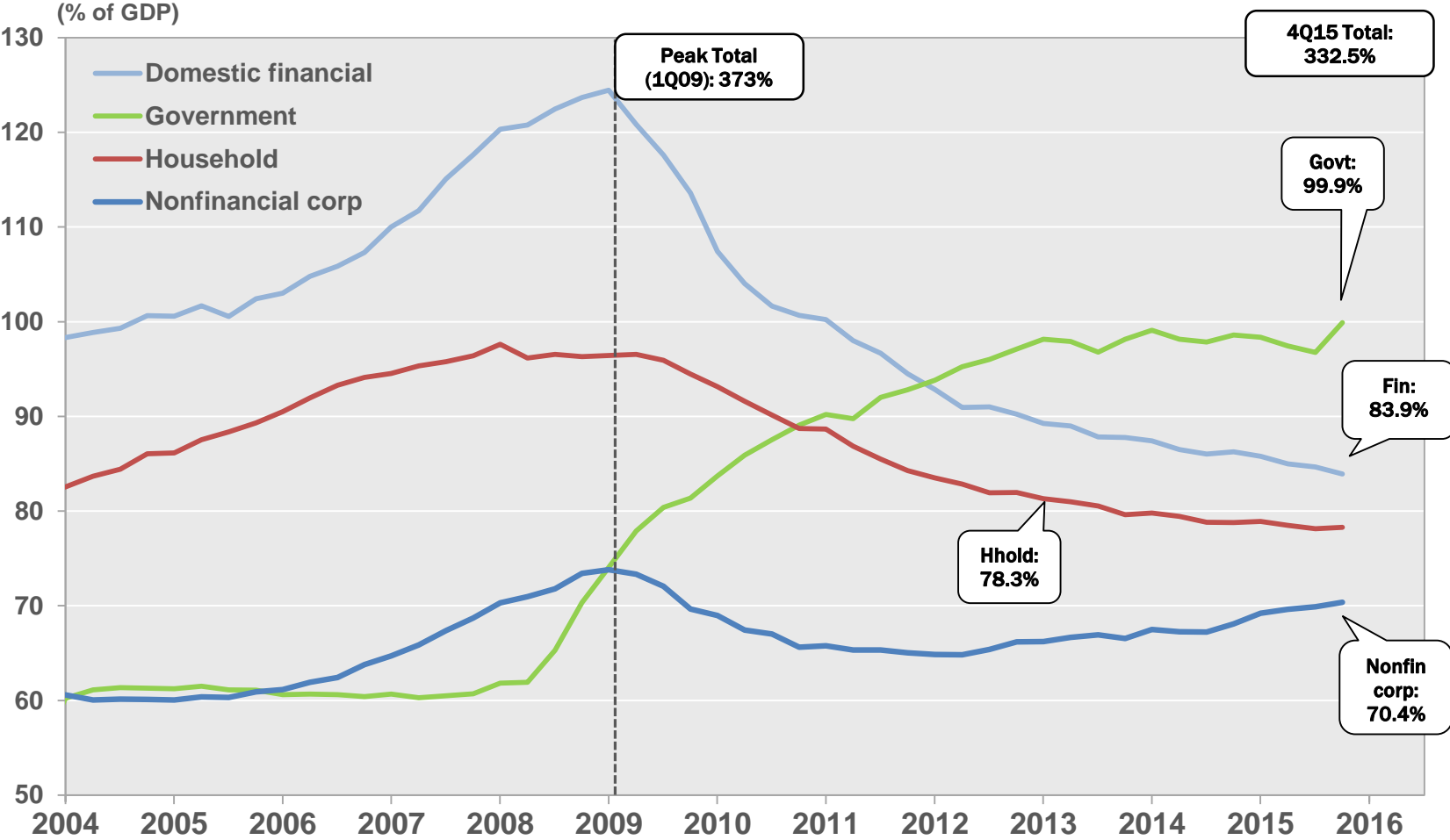
Source: BoJ, Last Observation: March 2016

Household Debt to Disposable Income



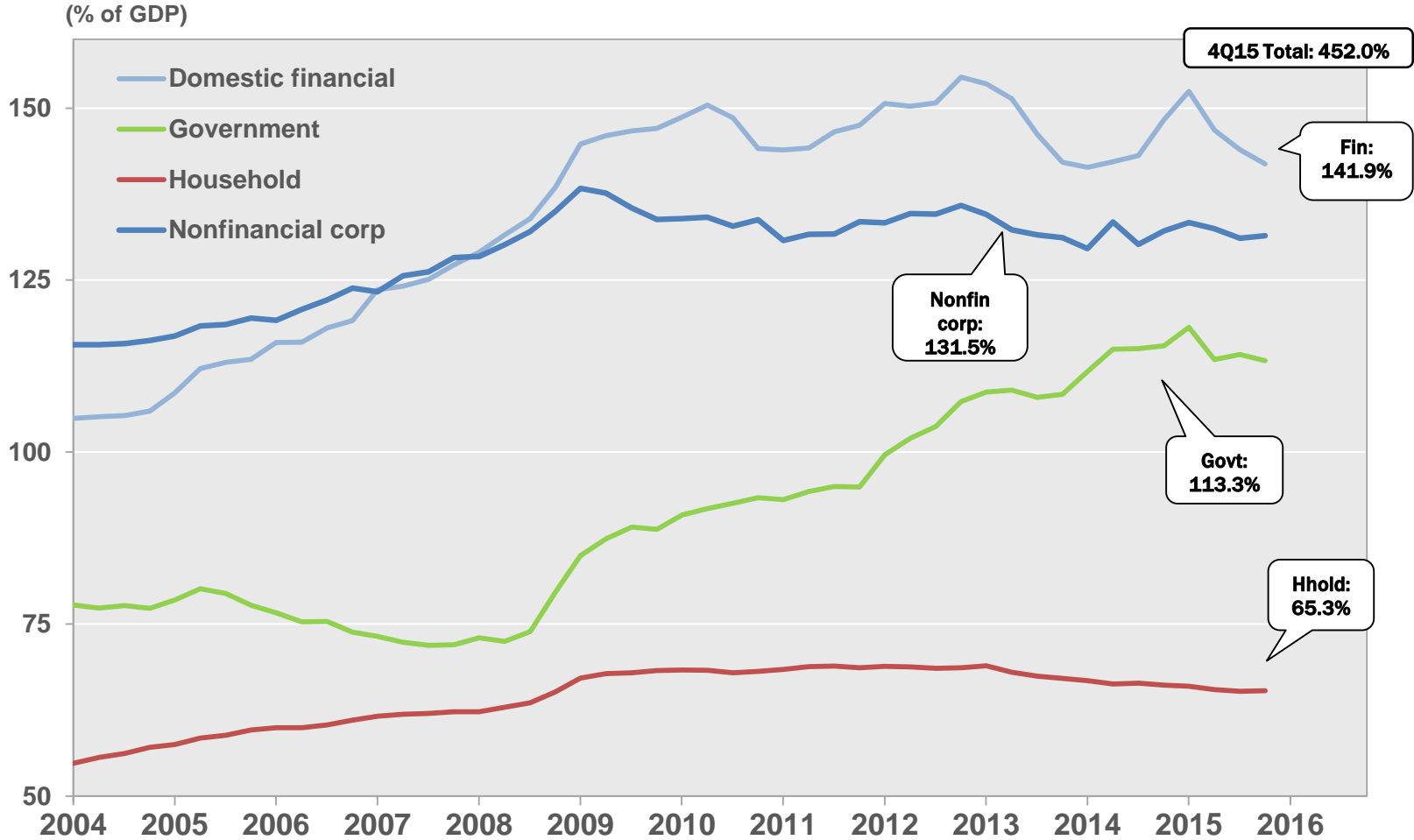
Source: Haver analytics; last observation Dec 15 (US), Sep 15 (Euro area), Mar 15 (Japan).

US: Gross Debt Outstanding by Sector



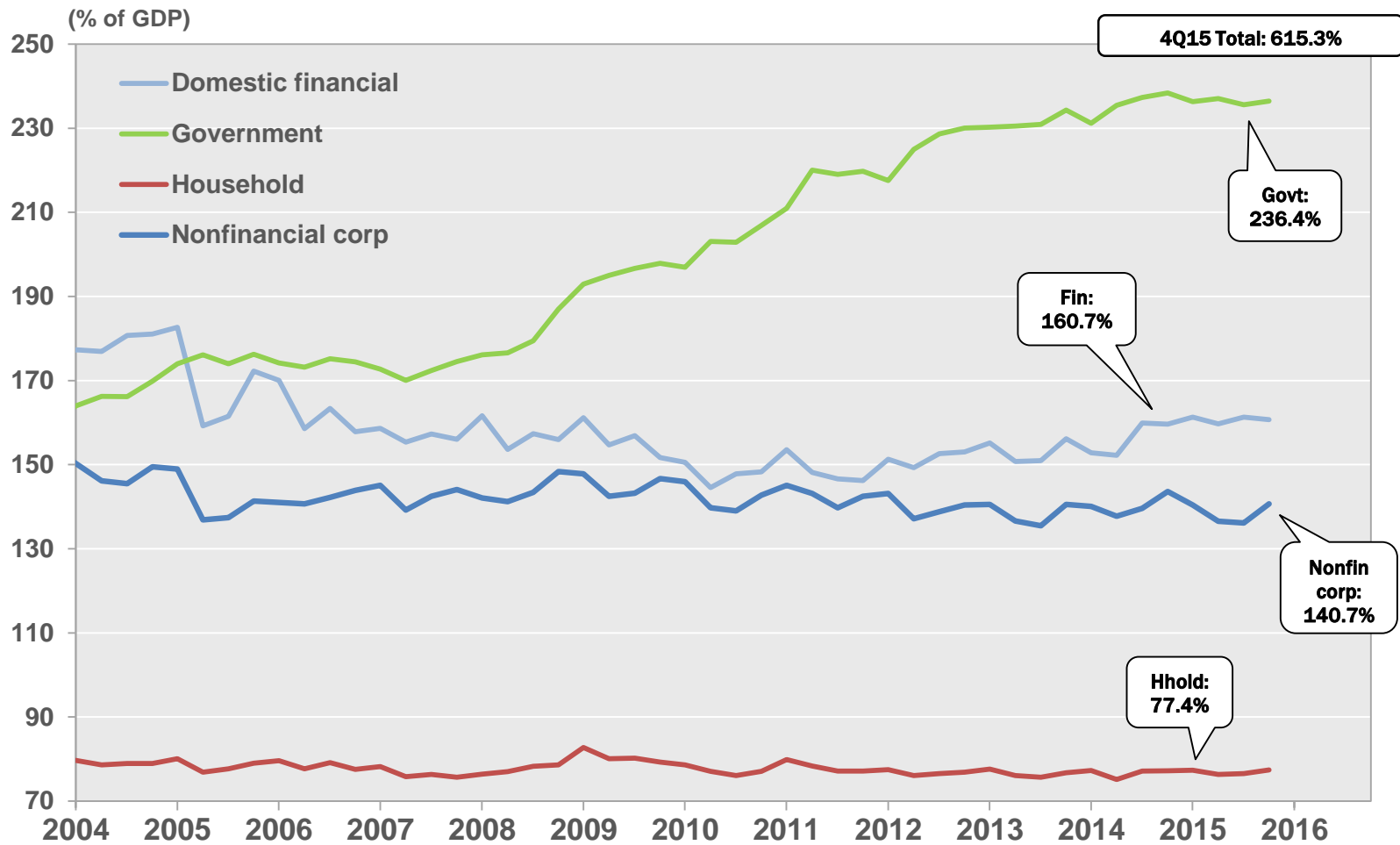
Source: Haver analytics; last observation Q4 2015.

Euro Area: Gross Debt Outstanding by Sector



Source: Eurostat; last observation Q3 2015.

Japan: Gross Debt Outstanding by Sector



Source: Haver analytics; last observation Q3 2015.

FEDERAL RESERVE's Forward Guidance

“In determining whether it will be appropriate to raise the target range at its next meeting, the Committee will assess progress--both realized and expected--toward its objectives of maximum employment and 2 percent inflation...The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.”

October 28, 2015

“In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its objectives of maximum employment and 2 percent inflation...In light of the current shortfall of inflation from 2 percent, the Committee will carefully monitor actual and expected progress toward its inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant only gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run.”

FOMC statement, March 16, 2016

Bank of England's Forward Guidance

“The MPC sets policy to achieve the 2% inflation target, and, subject to that, to support the Government’s economic policies, including those for growth and employment. Despite the sharp fall in unemployment, there remains scope to absorb spare capacity further before raising Bank Rate. When Bank Rate does begin to rise, the appropriate path so as to eliminate slack over the next two to three years and keep inflation close to the target is expected to be gradual.”

-Minutes of the MPC meeting 6 February 2016, released February 19, 2016

“...Returning inflation to the 2% target requires balancing the drag from external factors against increases in domestic cost growth. Fully offsetting that drag over the short run would, in the MPC’s judgement, involve too rapid an acceleration in domestic costs, one that would risk being unsustainable and would lead to undesirable volatility in output and employment. Given these considerations, the MPC intends to set monetary policy to ensure that growth is sufficient to return inflation to the target in around two years and keep it there in the absence of further shocks....”

-Minutes of the MPC meeting March 17, 2016

ECB's and BoJ's Forward Guidance

ECB

“...looking ahead, taking into account the current outlook for price stability, the Governing Council expects the key ECB interest rates to remain at present or lower levels for an extended period of time, and well past the horizon of our net asset purchases... Adding to the measures taken since June 2014, with today’s comprehensive package of monetary policy decisions we are providing substantial monetary stimulus to counteract heightened risks to the ECB’s price stability objective. While very low or even negative inflation rates are unavoidable over the next few months, as a result of movements in oil prices, it is crucial to avoid second-round effects by securing the return of inflation to levels below, but close to, 2% without undue delay.”

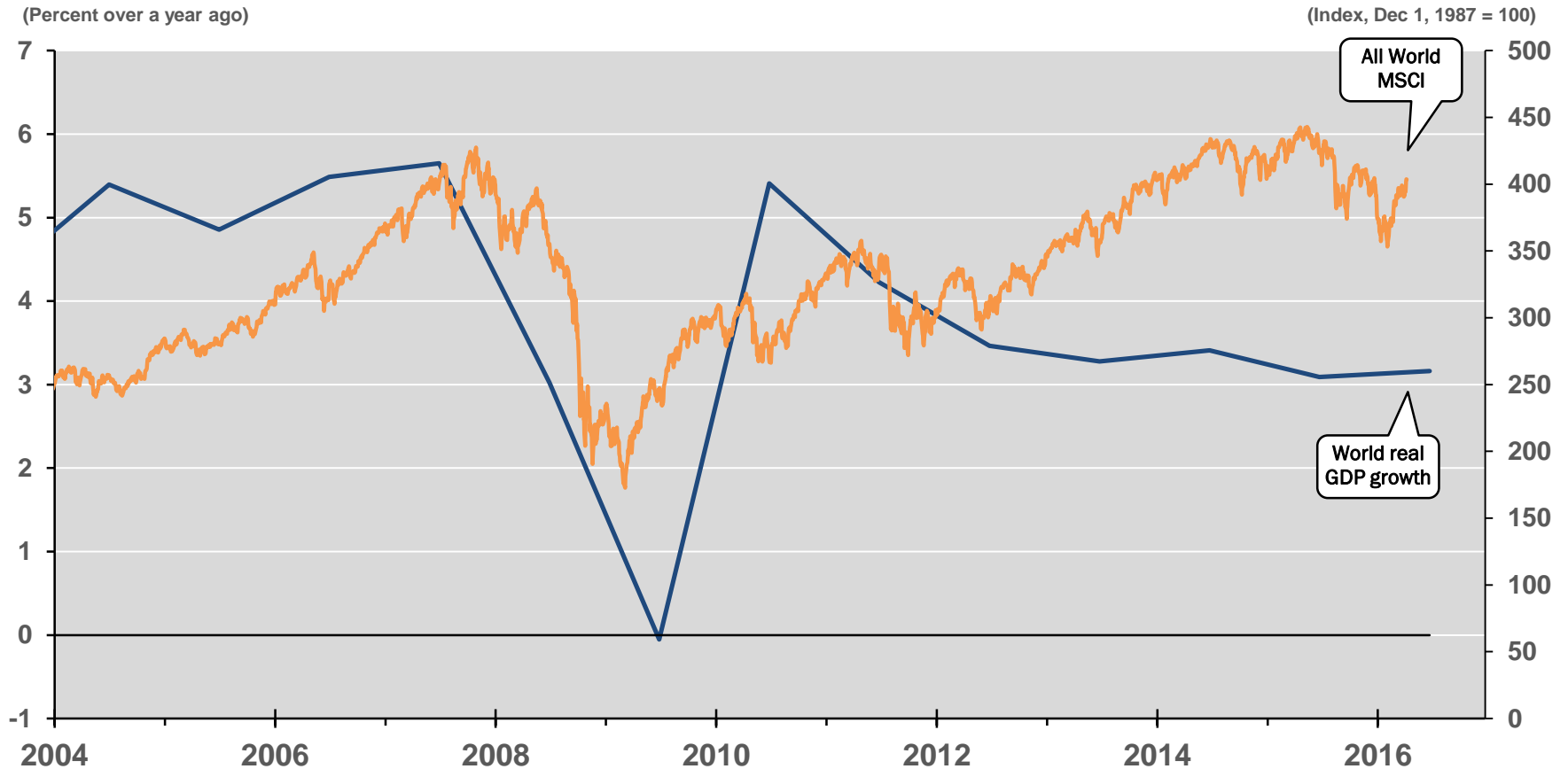
-ECB President Mario Draghi, Introductory statement, March 10, 2016

BOJ

“The Bank will continue with "Quantitative and Qualitative Monetary Easing (QQE) with a Negative Interest Rate," aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner. It will examine risks to economic activity and prices, and take additional easing measures in terms of three dimensions -- quantity, quality, and the interest rate -- if it is judged necessary for achieving the price stability target.”

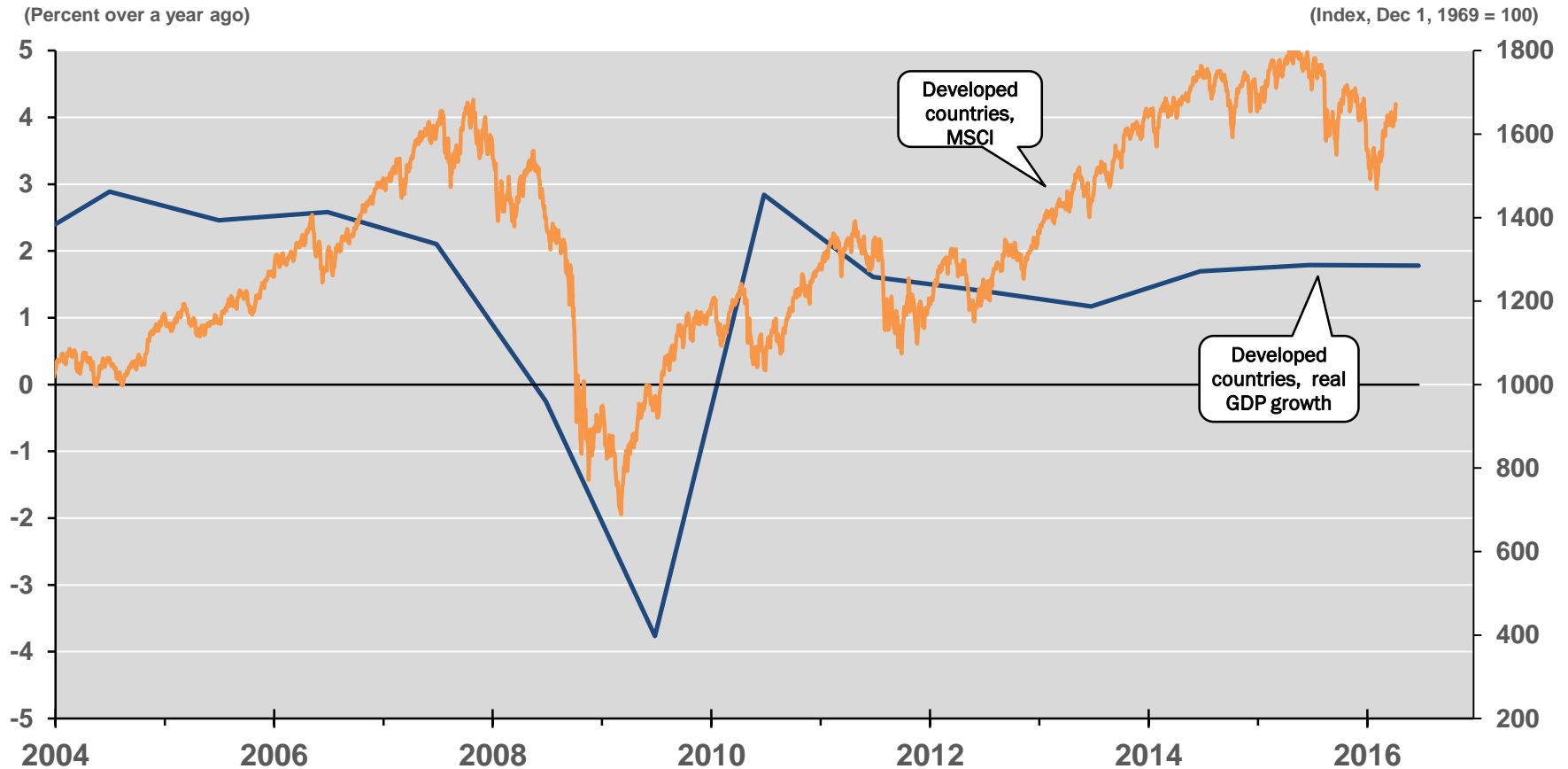
-Statement of Monetary Policy, March 15, 2016

World Real GDP Growth & Financial Markets



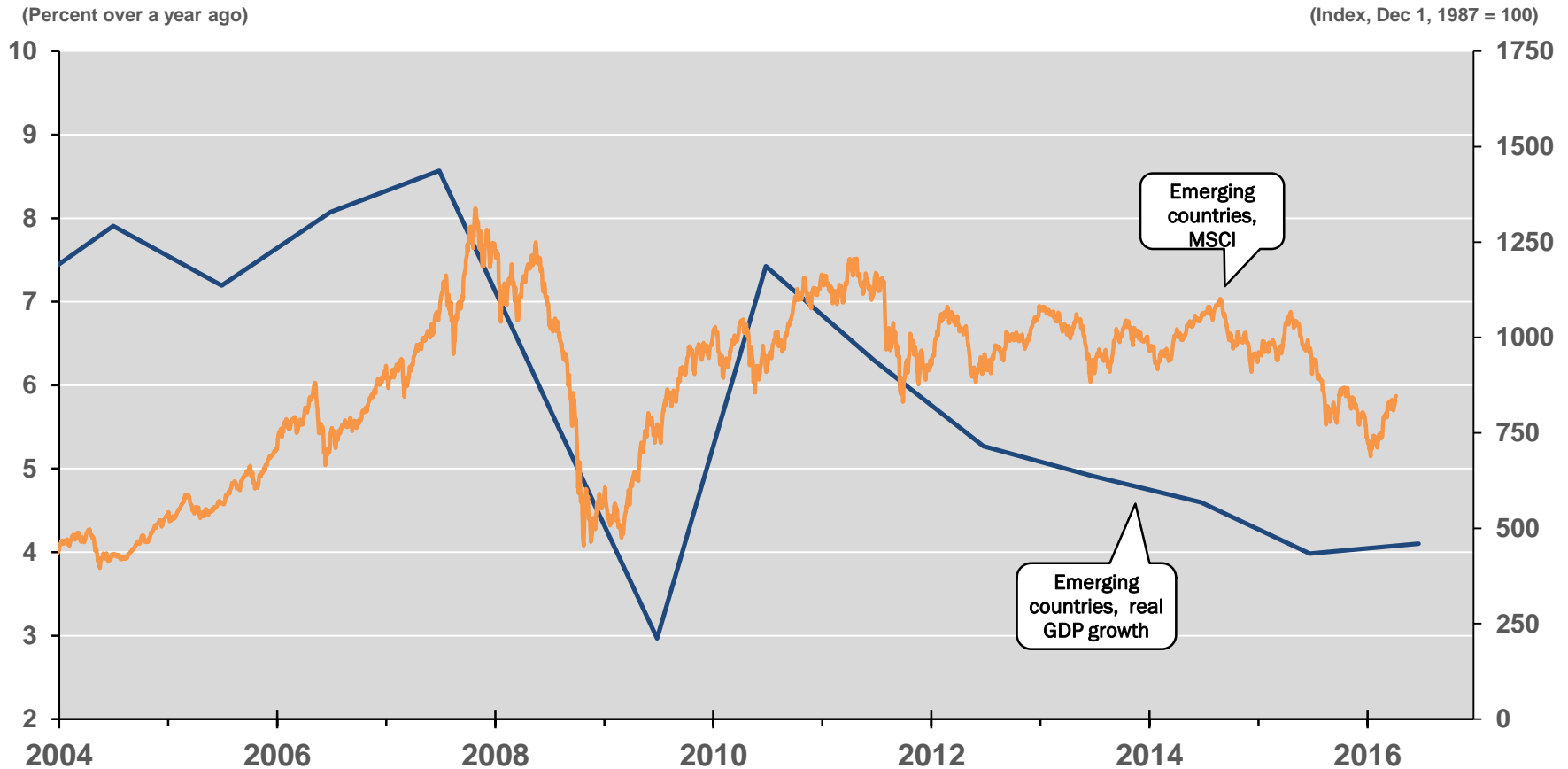
Source: Bloomberg and IMF. Real GDP growth: 2016 is IMF forecast. MSCI: Last observation April 18, 2016.

Developed Countries Real GDP Growth & Financial Markets



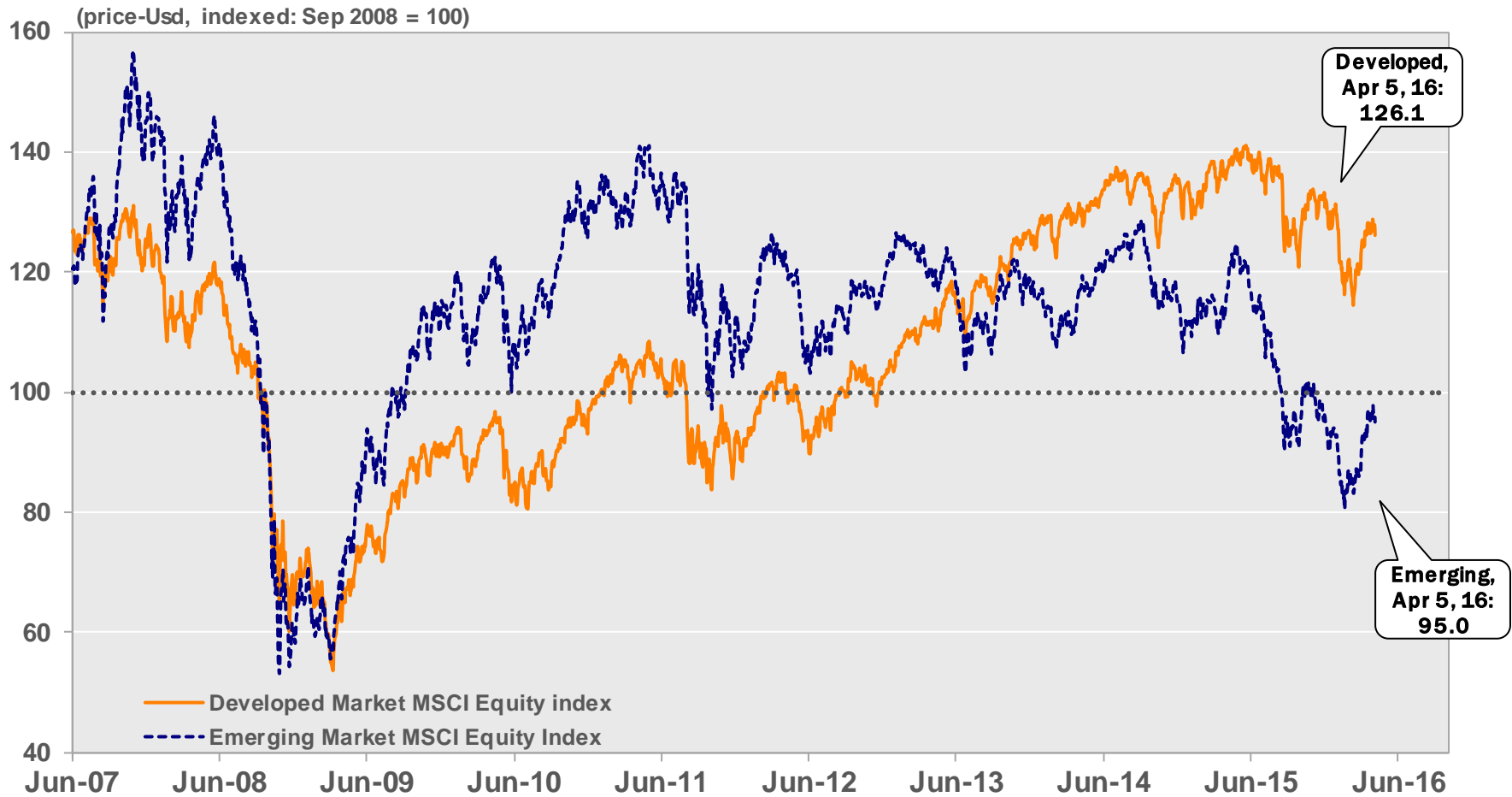
Source: Bloomberg and IMF. Real GDP growth: 2016 is IMF forecast. MSCI: Last observation April 18, 2016.

Emerging Countries Real GDP Growth & Financial Markets



Source: Bloomberg and IMF. Real GDP growth: 2016 is IMF forecast. MSCI: Last observation April 18, 2016.

Global Equity Markets



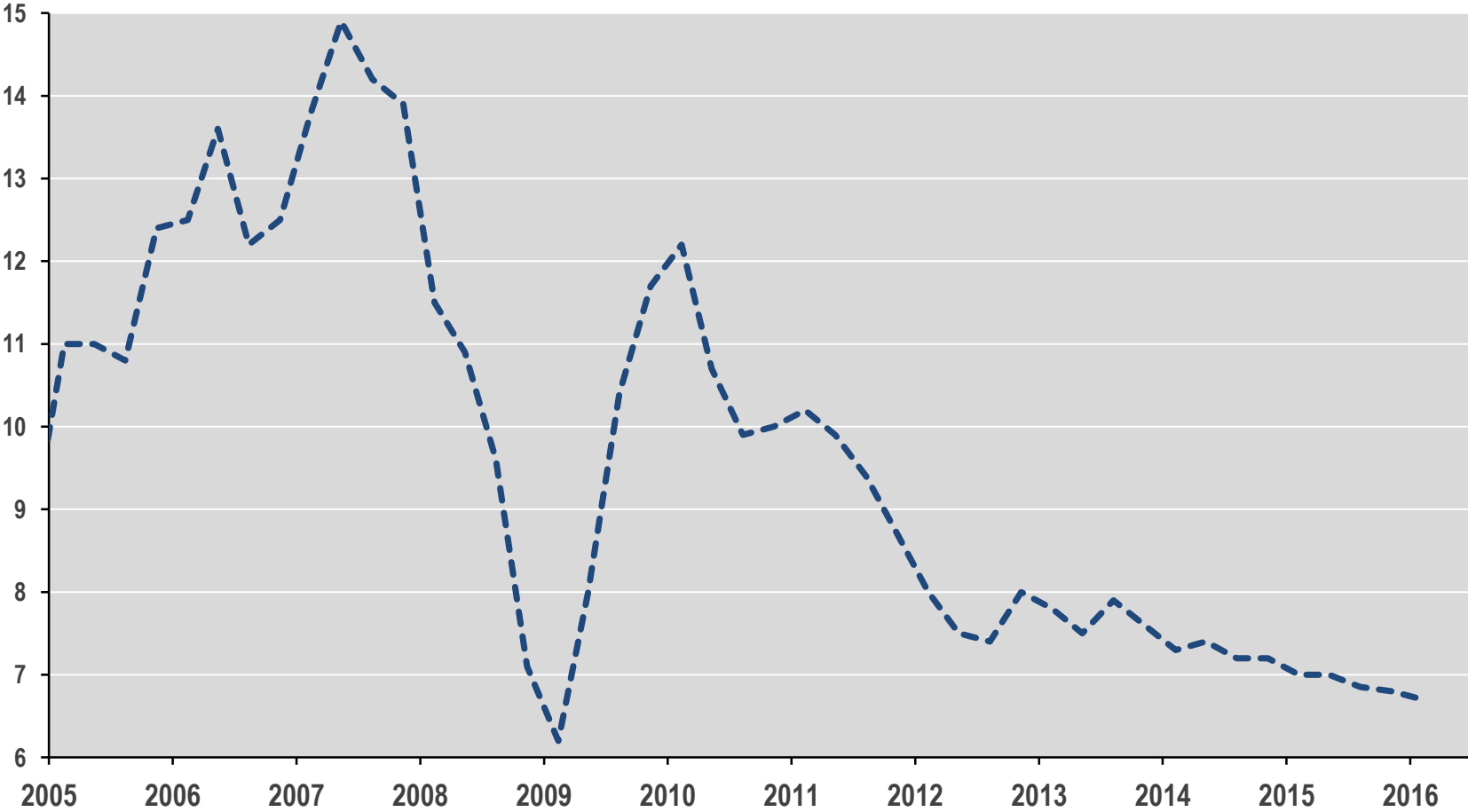
Source: Morgan Stanley Capital International, Last Observation: 5 Apr, 2016

China: Adjustments & Spillovers

- **Real GDP Growth**
- **Real Investment**
- **Commodity Prices**
- **Emerging Markets Growth, Profit Margins & Capital Flows**

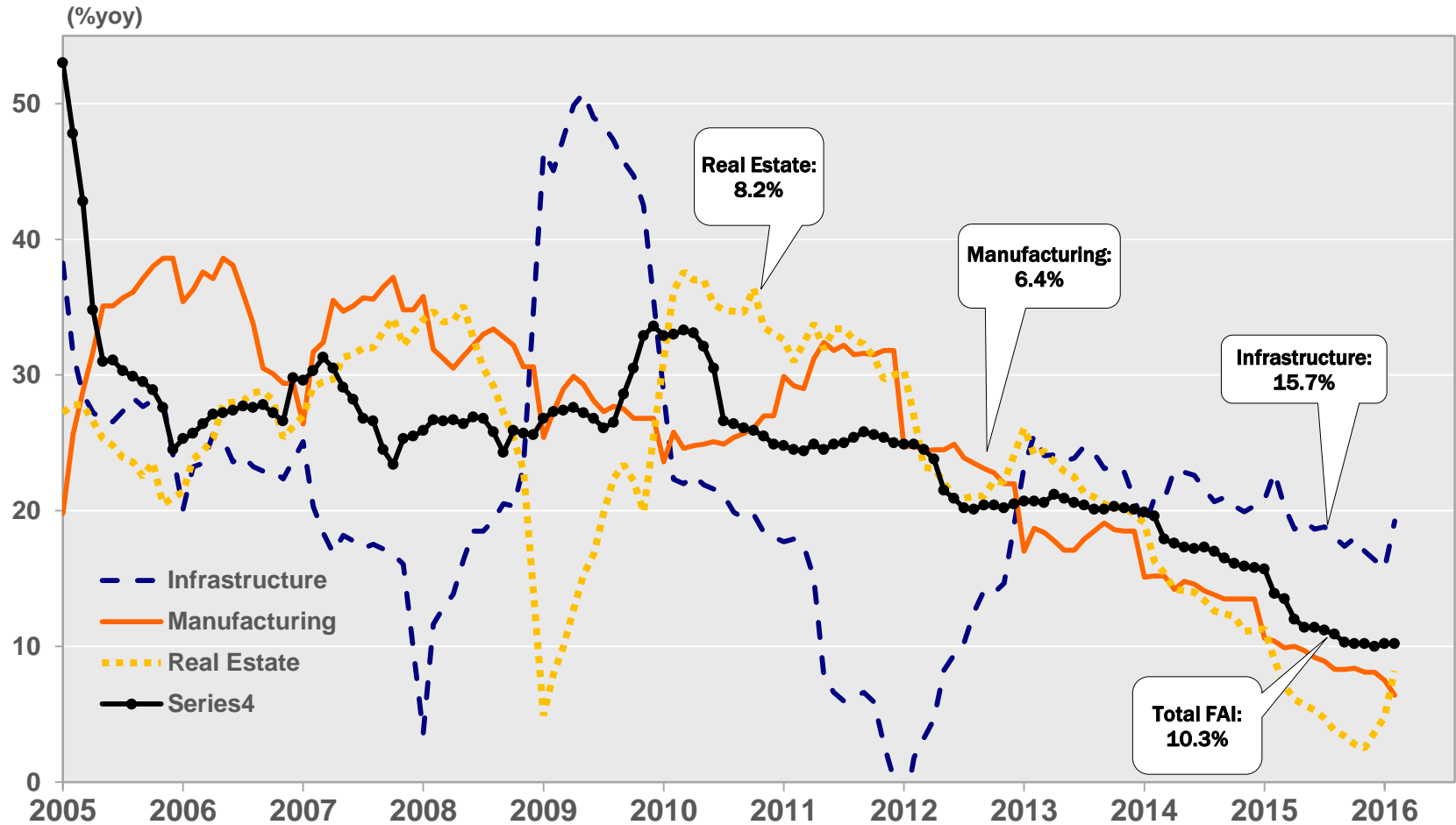
China: Real GDP Growth

Percent change over a year



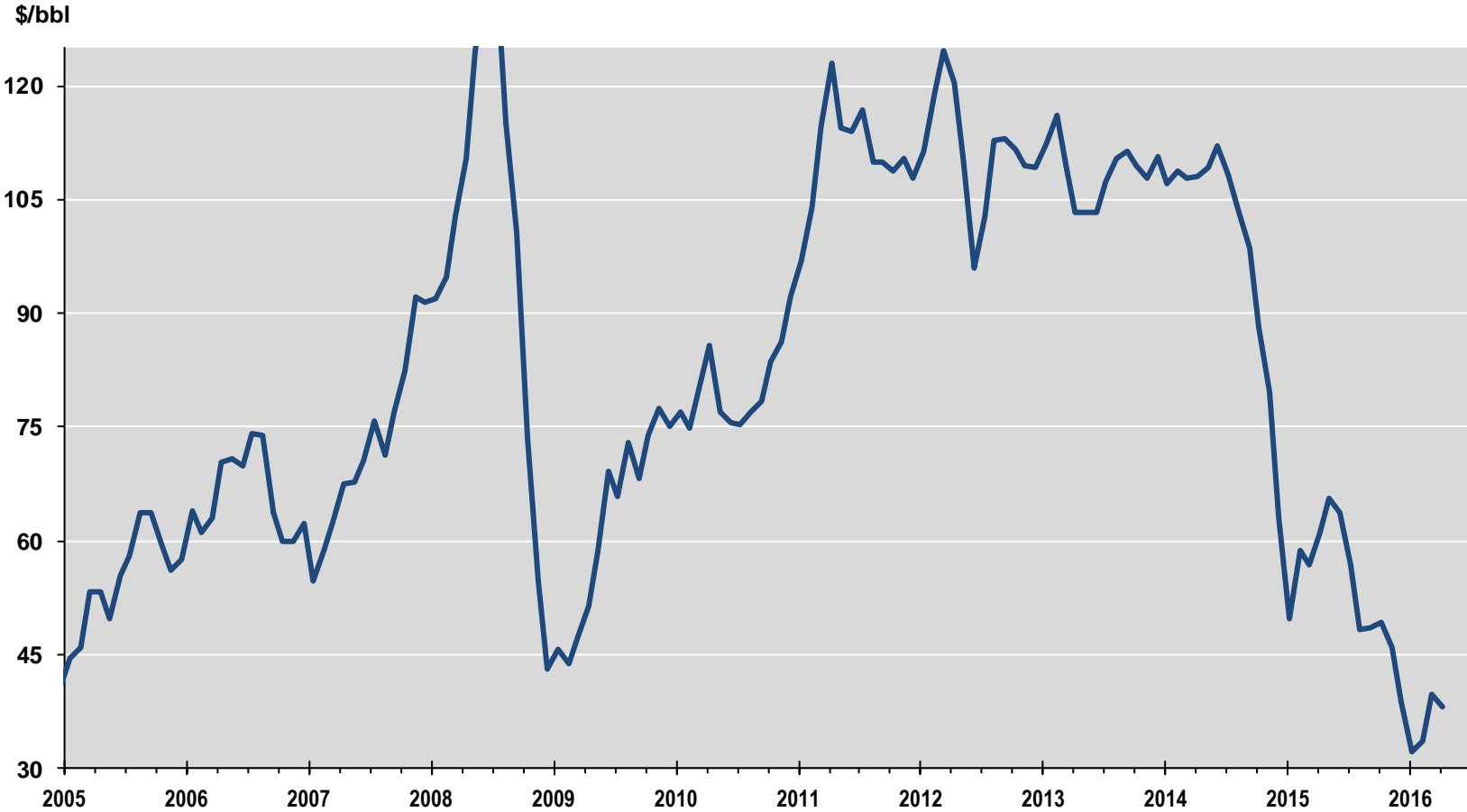
Source: SSB. Last observation: 2016 1Q.

China: Fixed investment by sector



Source: National Bureau of Statistics China, Last Observation: Mar 2016

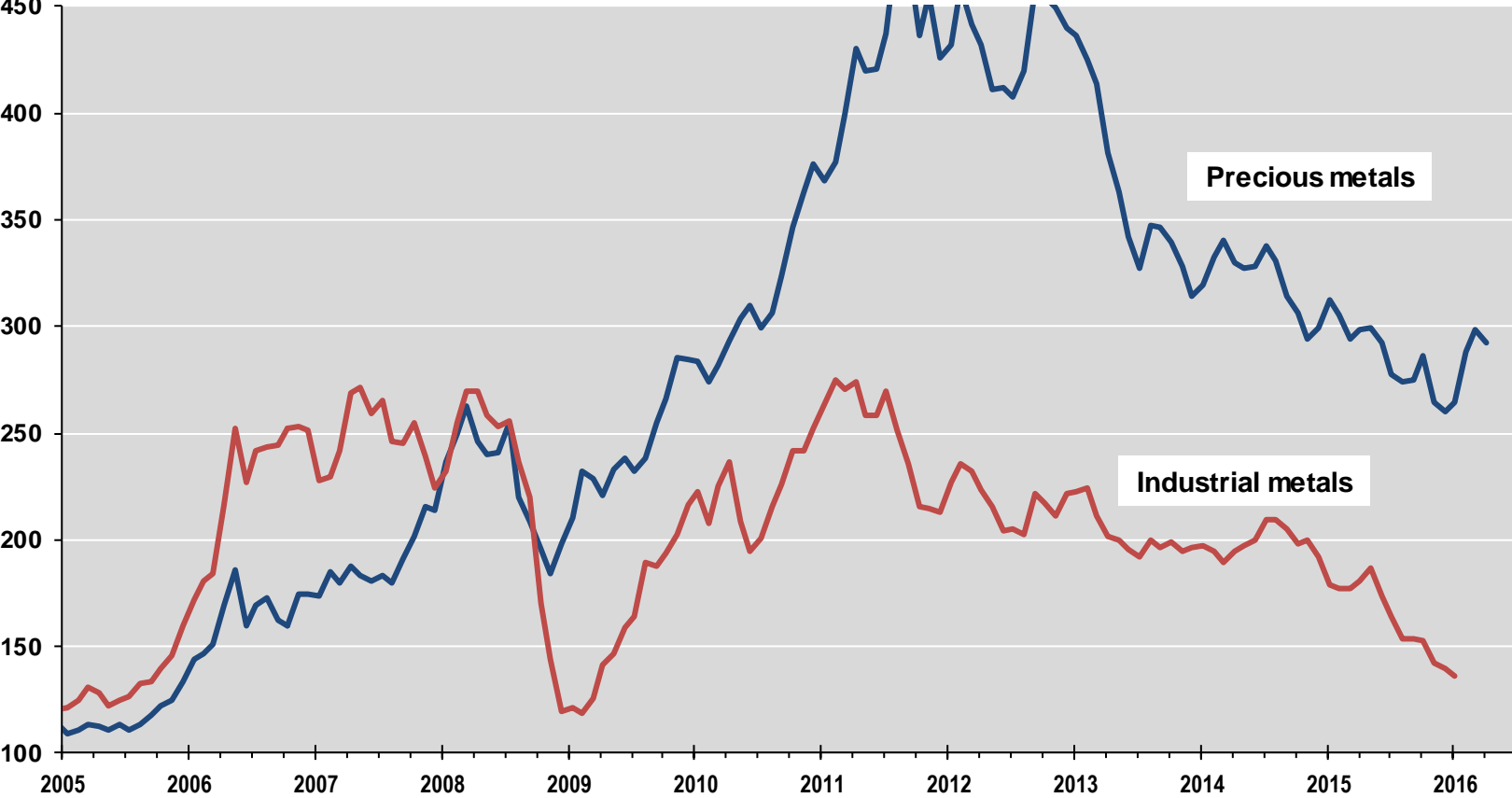
Price of Brent Oil



Source: Platts. Last observation March 2016.

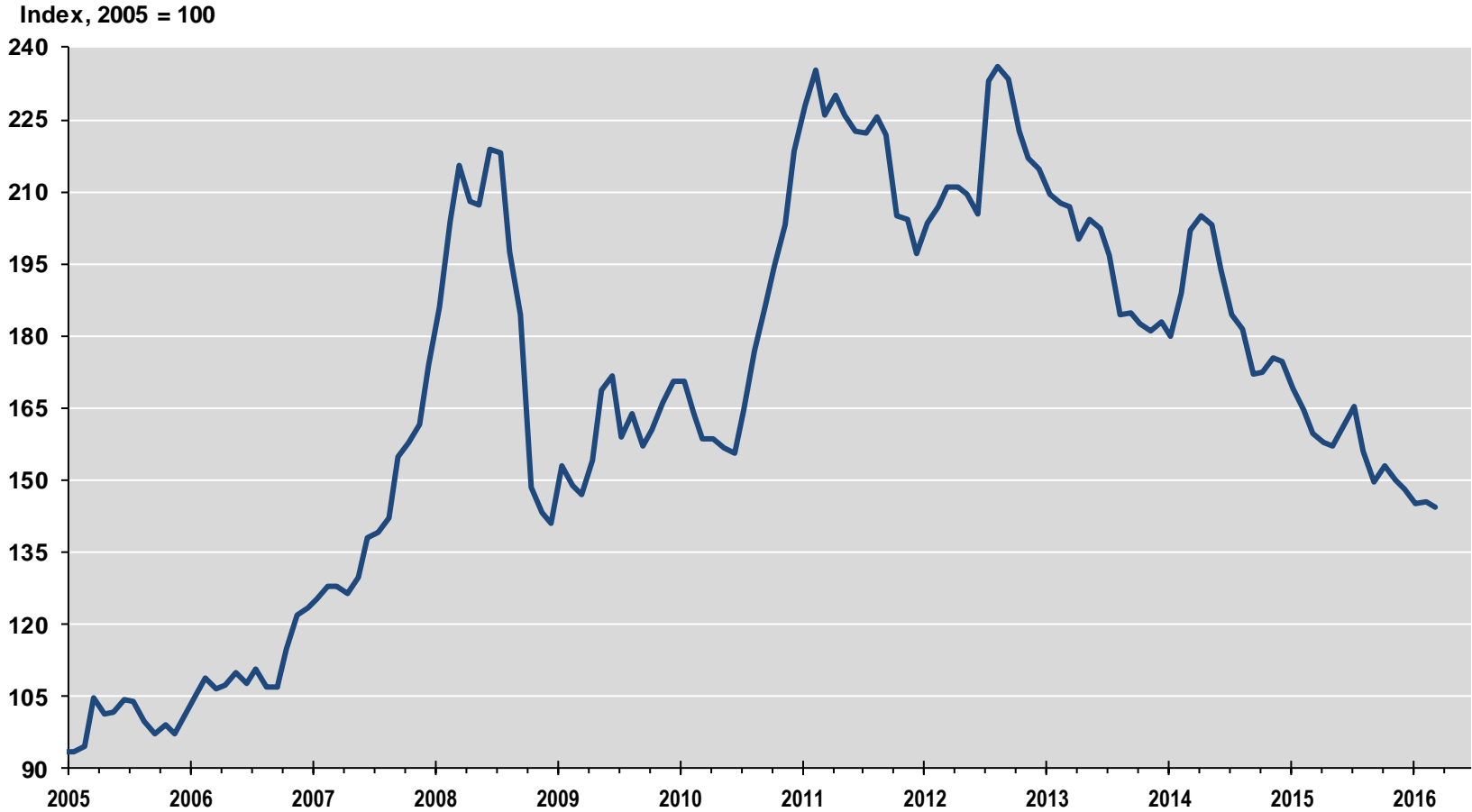
Metals prices

Index, December 1989 = 100



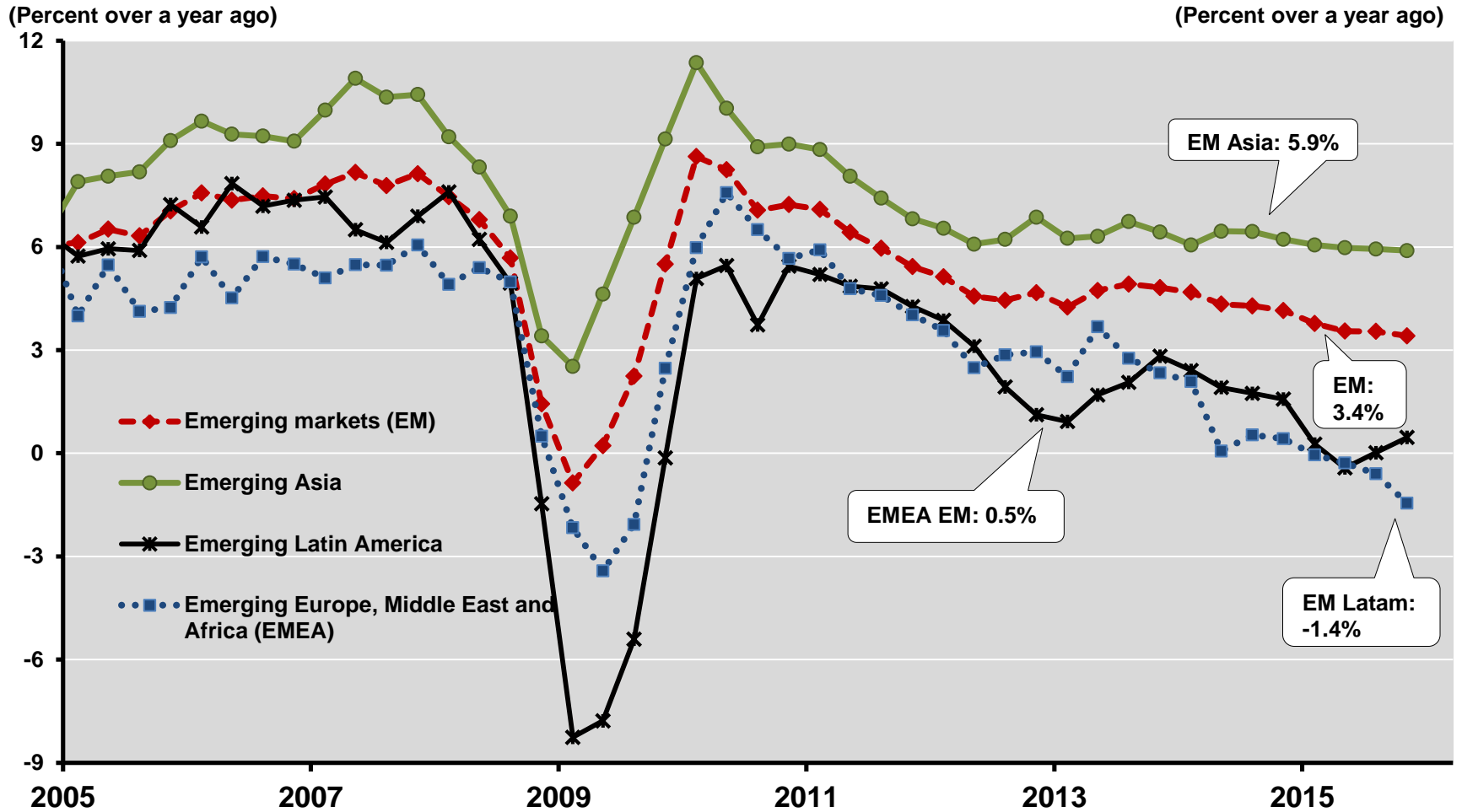
Source: J.P. Morgan. Last observation March 2016.

Food prices



Source: The Economist. Last observation March 2016.

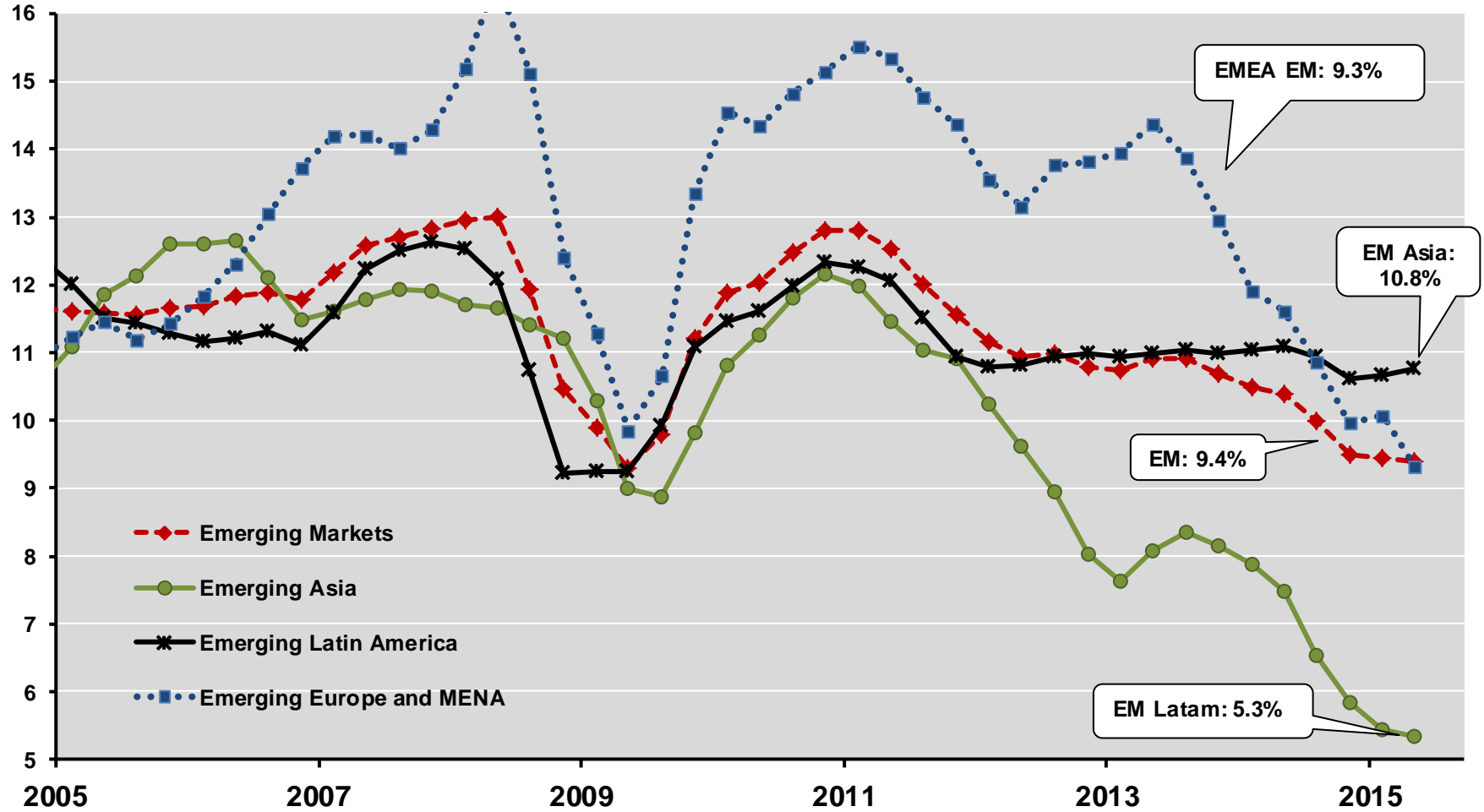
Emerging markets real GDP growth



Source: J.P. Morgan. Last observation: 2015Q4

Corporate profit margins, select regions

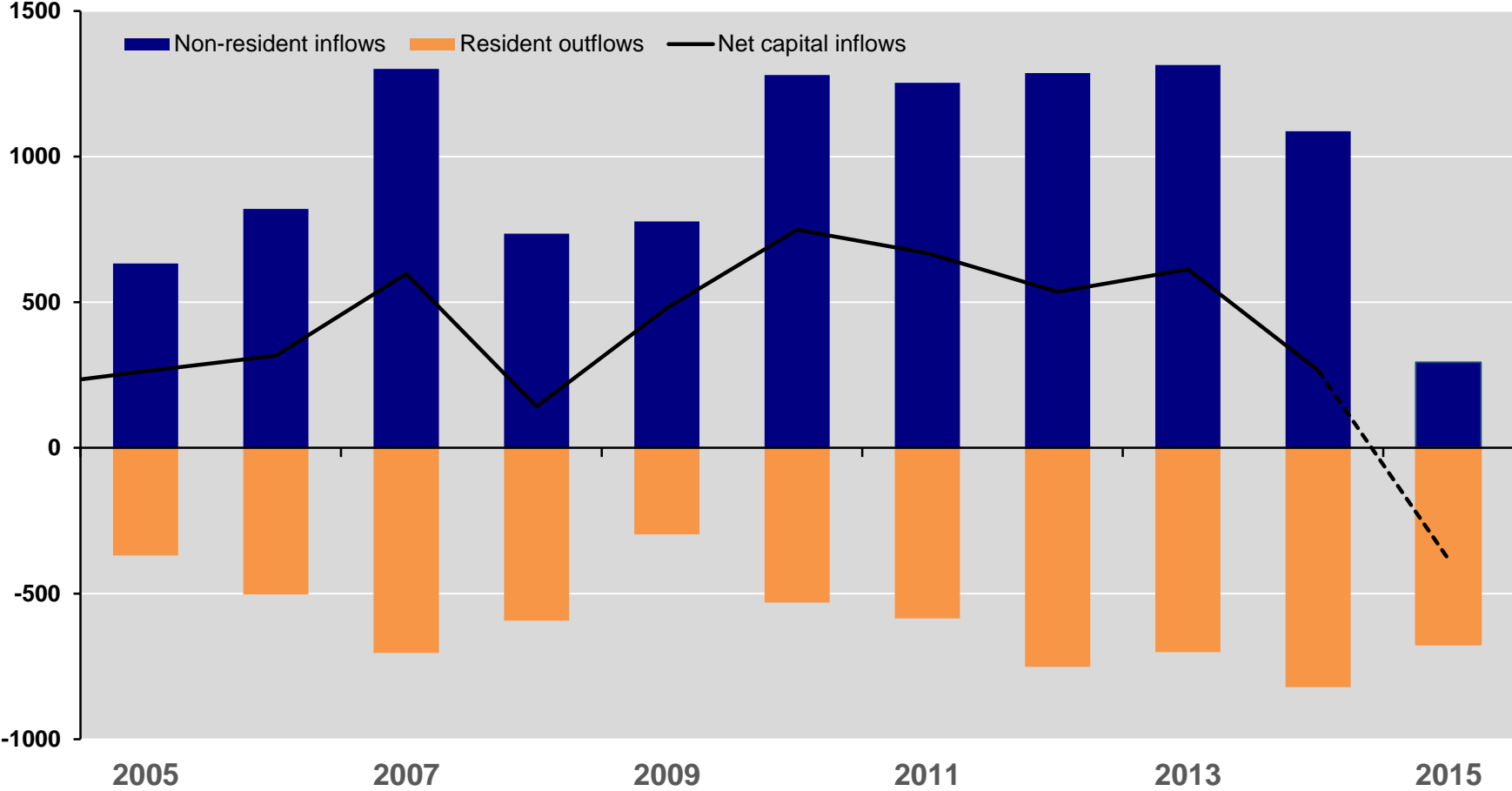
(Profit as a percent of revenue)



Source: J.P. Morgan. Last observation: 2015Q2

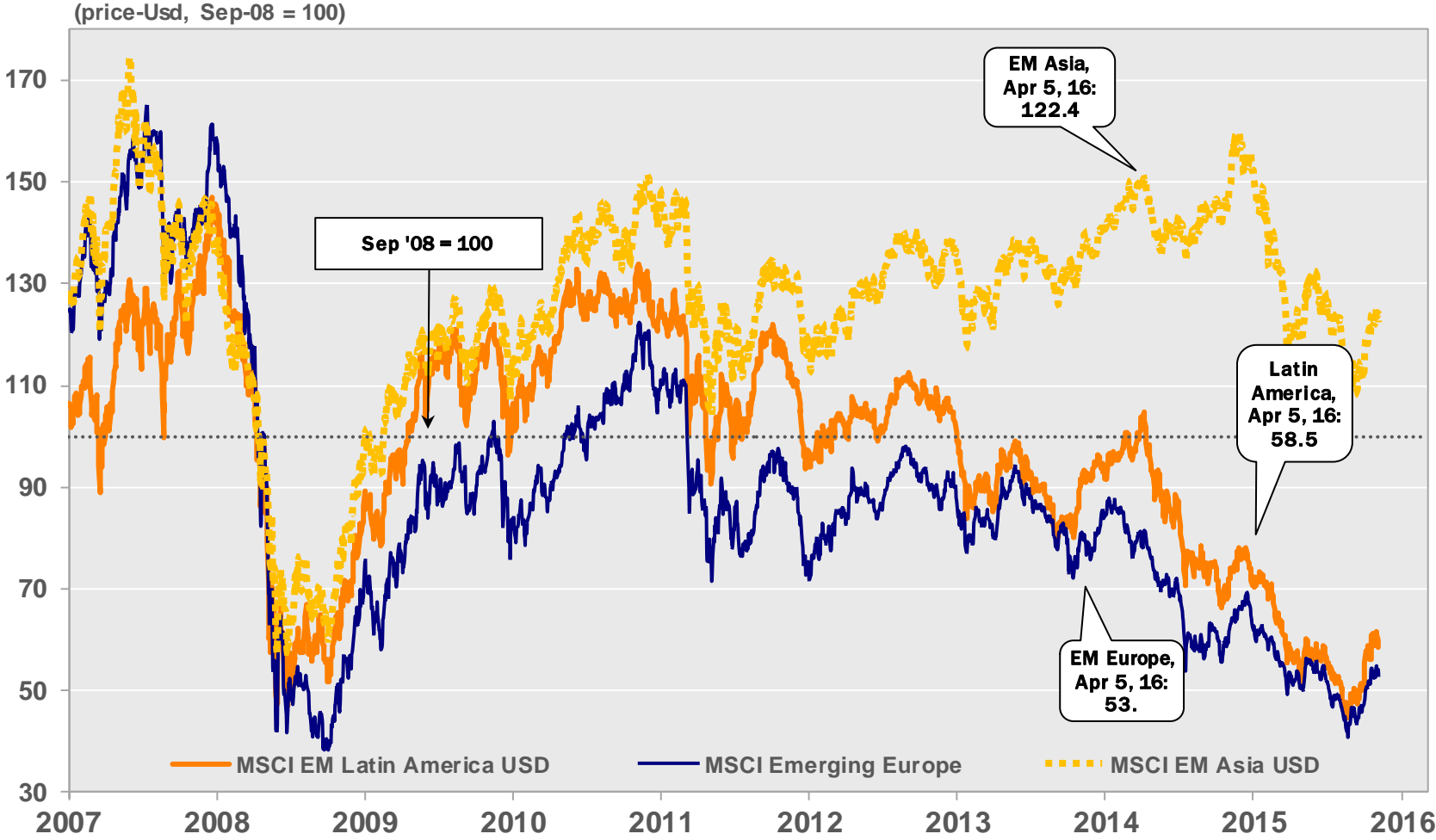
Emerging Markets: Net Capital Inflows

bn USD, resident outflows exclude reserves; 2015 is IIF estimate



Source: IIF, Last Update: Jan 2016 (2015 is IIF estimate)

Emerging Markets: Equity Markets



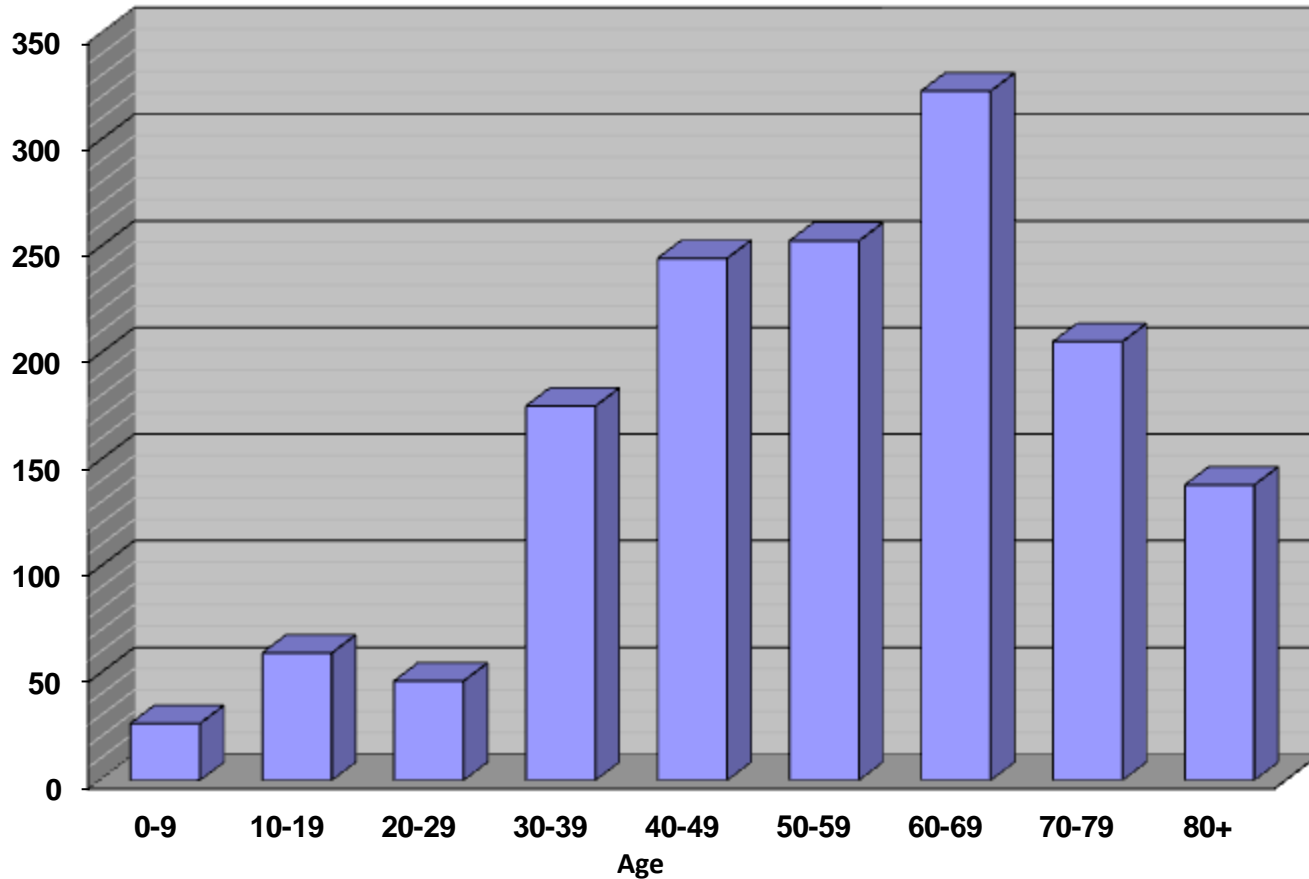
Source: Morgan Stanley Capital International, Last Observation: 5 Apr, 2016

Long-Term Demographic Trends

- **Growing Population in Developing Countries**
- **Aging Population in Developed Countries**

World Demographic Challenge

Change in population, 2010-2030 (millions)



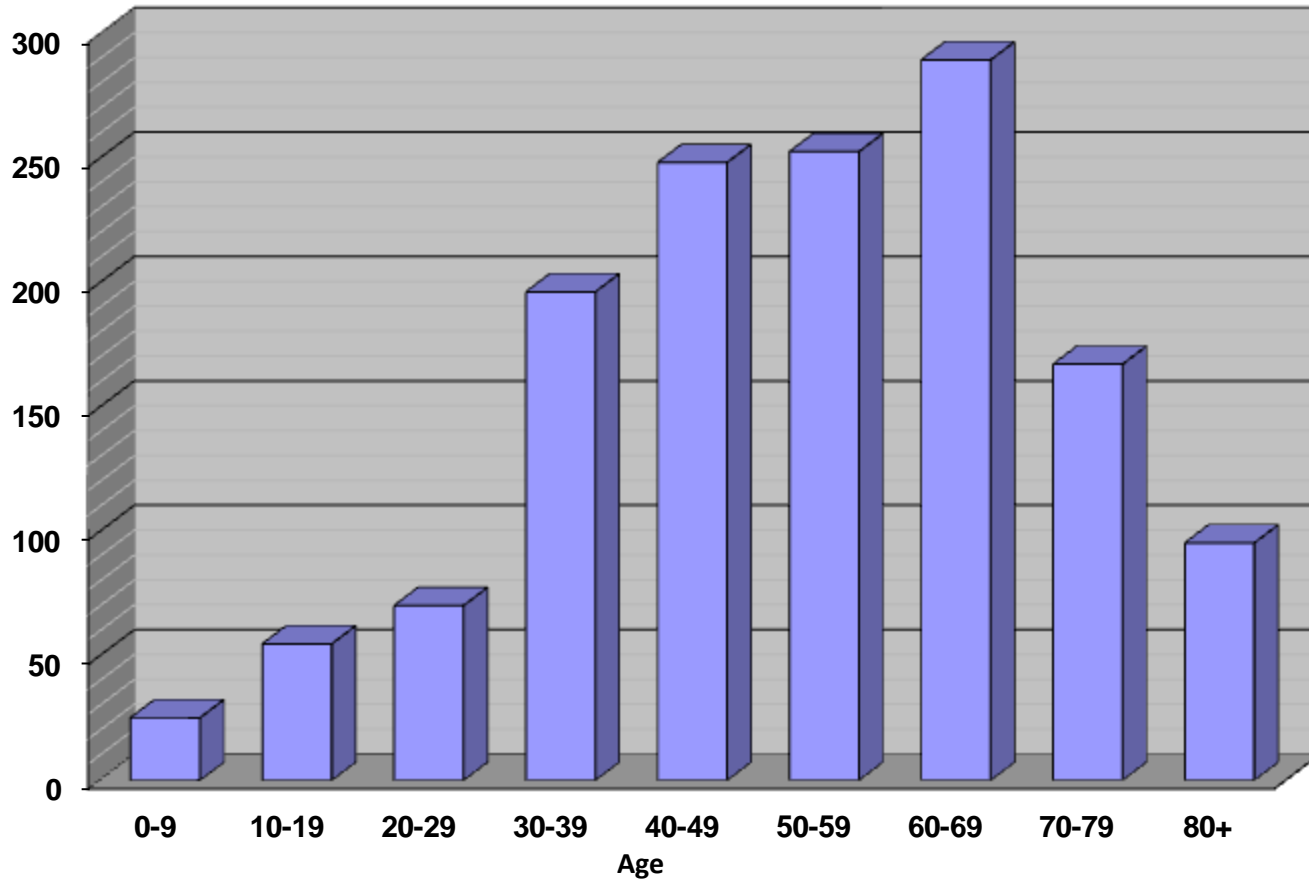
Source: UN Populations Division, last update 2010

Projected change in population
from 2010 - 2030: **1516M**

2010: **7001M**
2030: **8517M**

Developing Countries Demographic Challenge

Change in population, 2010-2030 (millions)

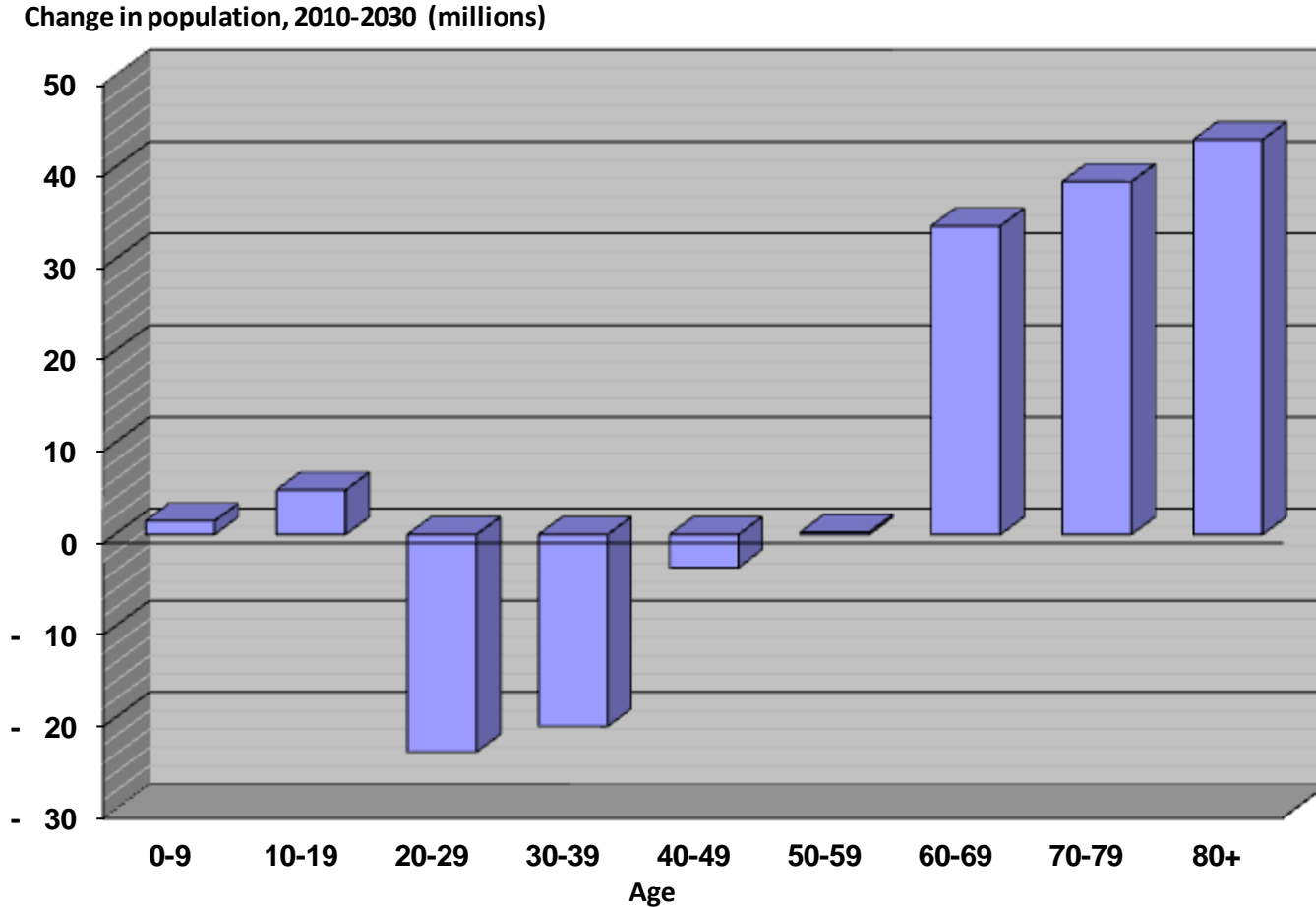


Source: UN Populations Division, last update 2010

Projected change in population
from 2010 - 2030: **1426M**

2010: **5712M**
2030: **7138M**

Developed Countries Demographic Challenge



Source: UN Populations Division, last update 2010

Projected change in population
from 2010 - 2030: **90M**

2010: **1289M**
2030: **1379M**