

Presentation

by

A. Gary Shilling, Ph.D.

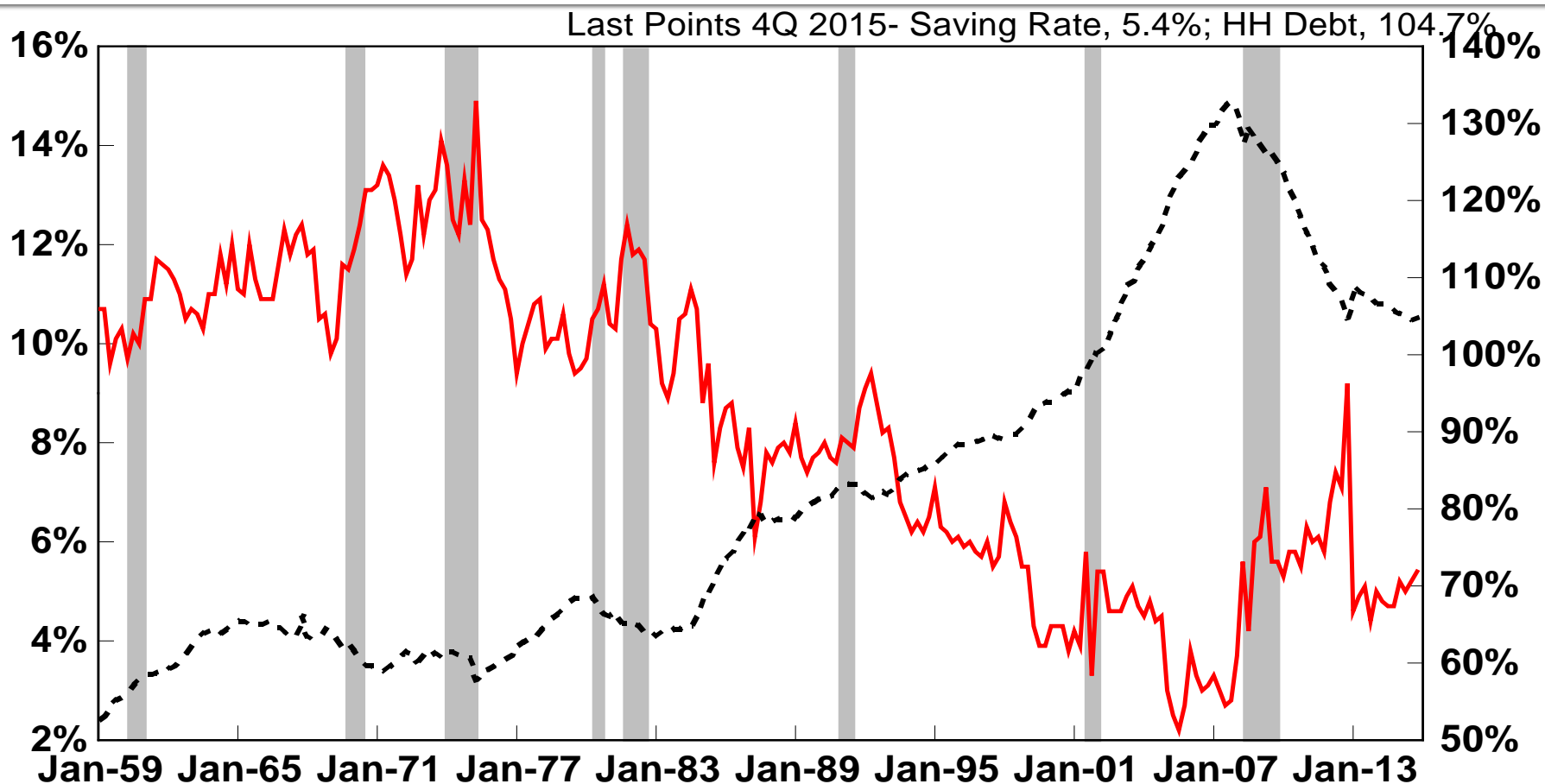
to

The Texas Municipal Retirement System

Presented by: A. Gary Shilling, Ph.D.



U.S. Personal Saving Rate and Household Debt (consumer plus mortgage) as a % of Disposable Personal Income



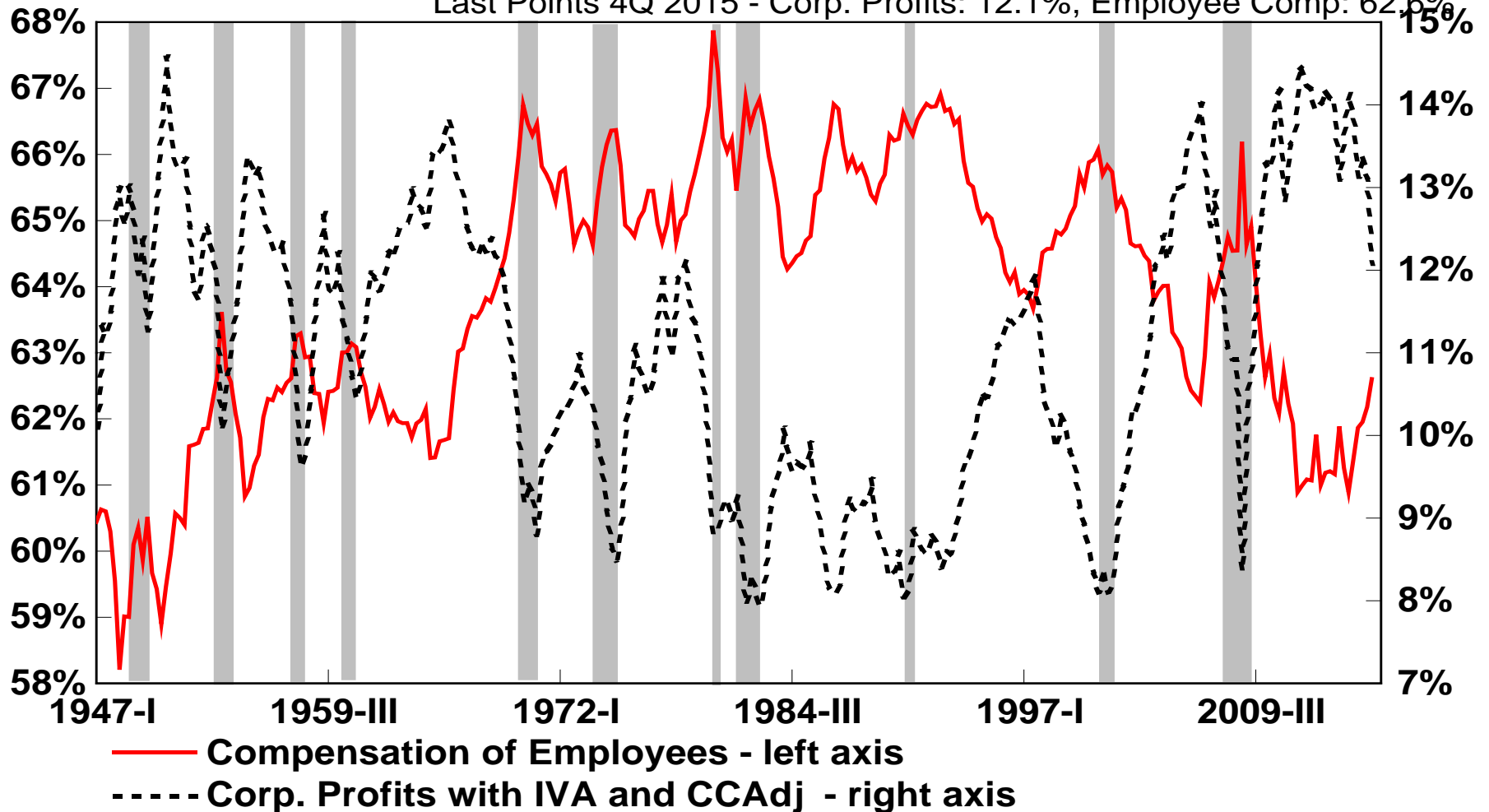
— Saving Rate (SAAR) - left axis

- - - Household Debt as a % of Disposable Personal Income - right axis

Source: Bureau of Economic Analysis; Federal Reserve

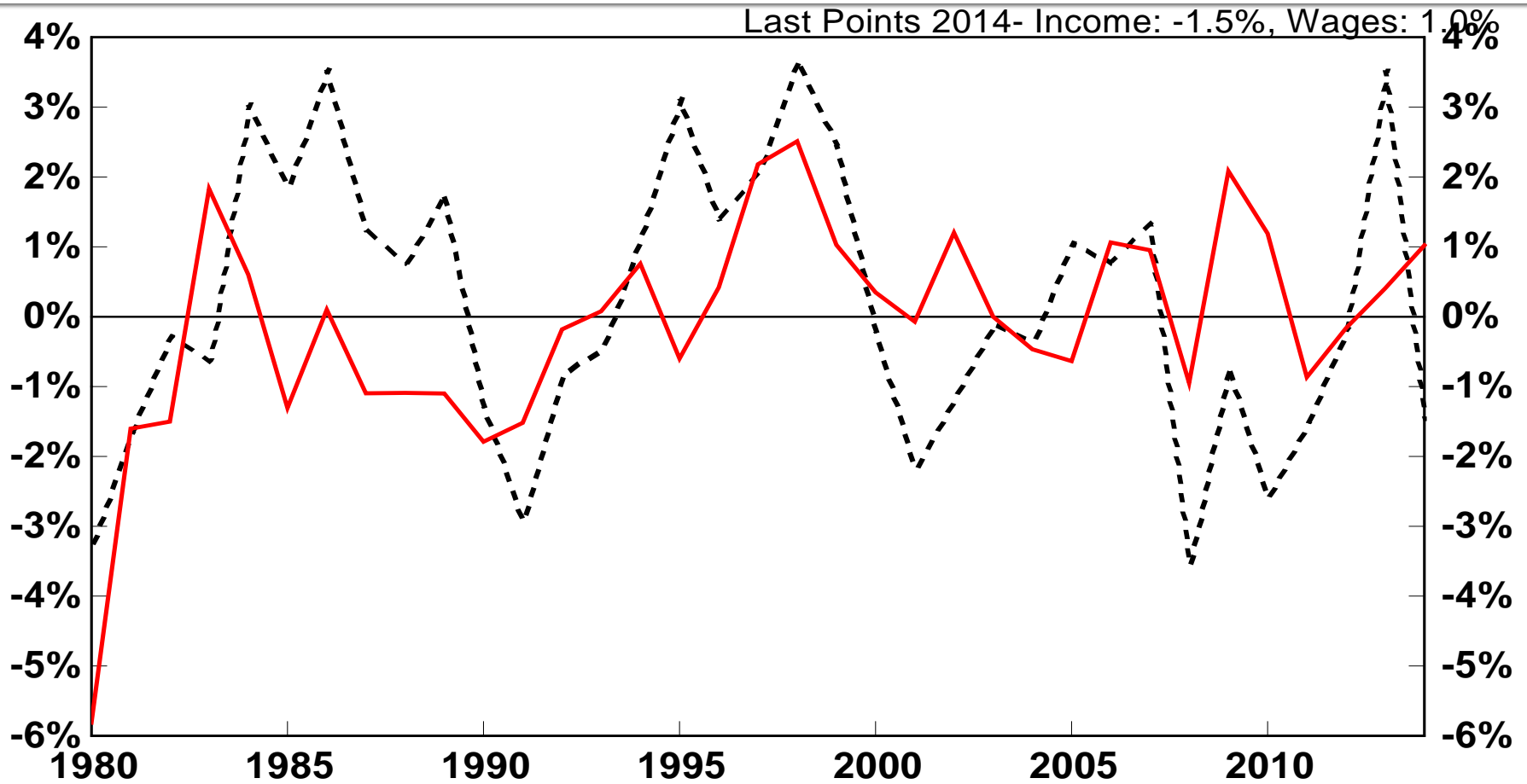
Corporate Profits and Employee Compensation as a percentage of National Income

Last Points 4Q 2015 - Corp. Profits: 12.1%, Employee Comp: 62.6%



Real Weekly Wages and Household Incomes

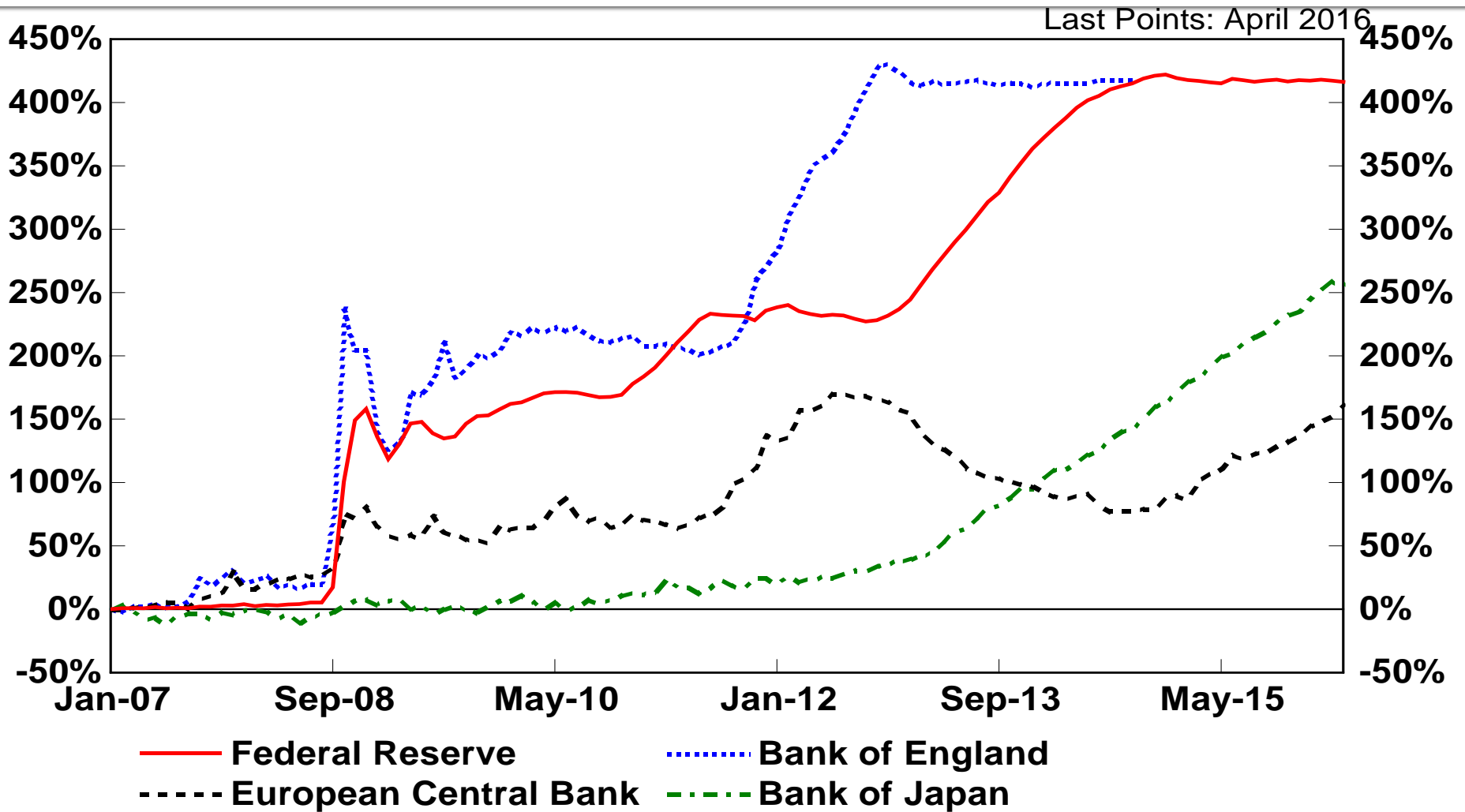
year/year percent changes



— Avg. Real Weekly Wages of Production and Supervisory Employees
- - - Real Median Household Income

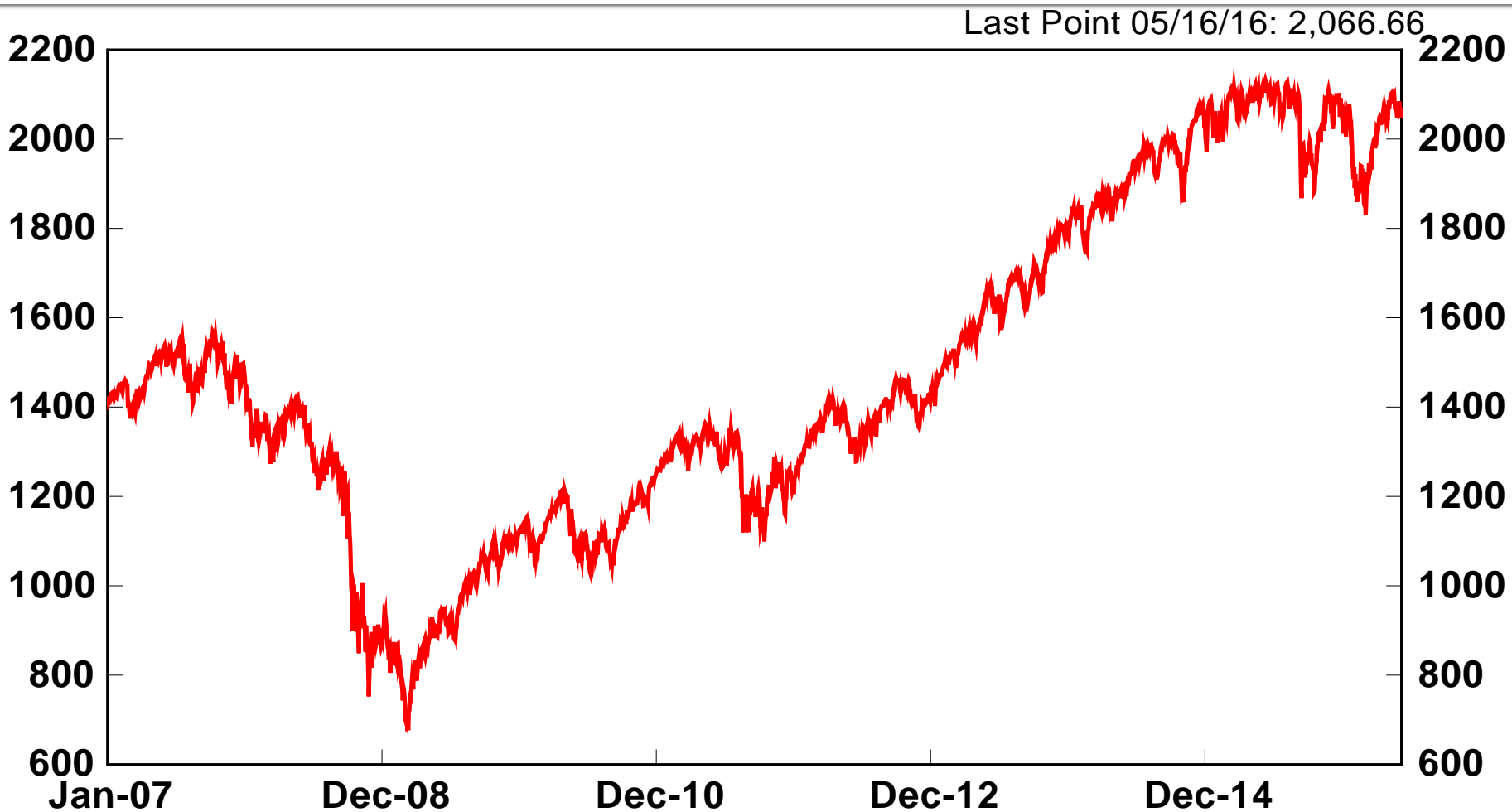
Source: Bureau of Labor Statistics; Census Bureau

Central Bank Assets change since January 2007



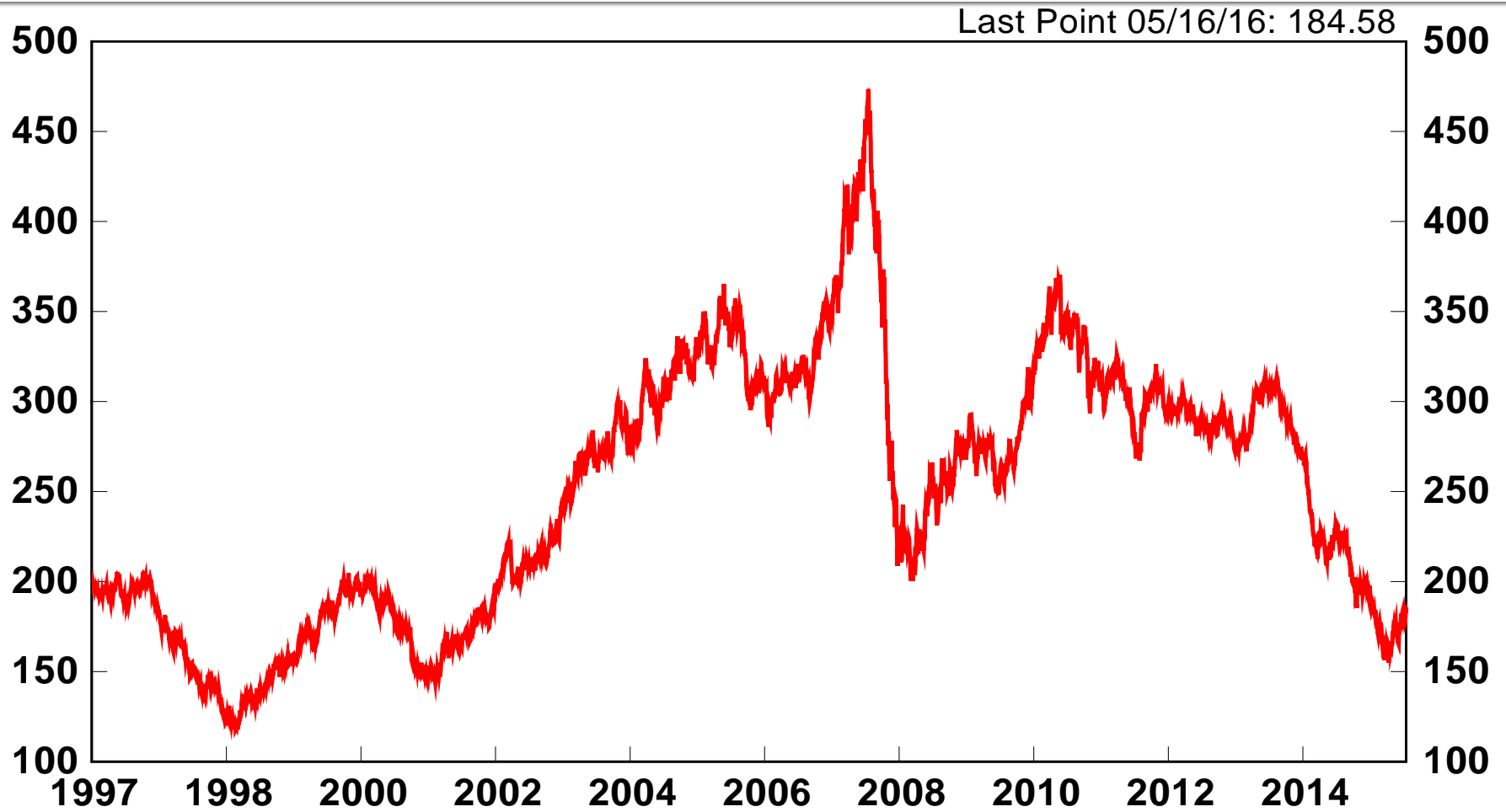
Source: Bloomberg; The Central Banks

S&P 500 Index



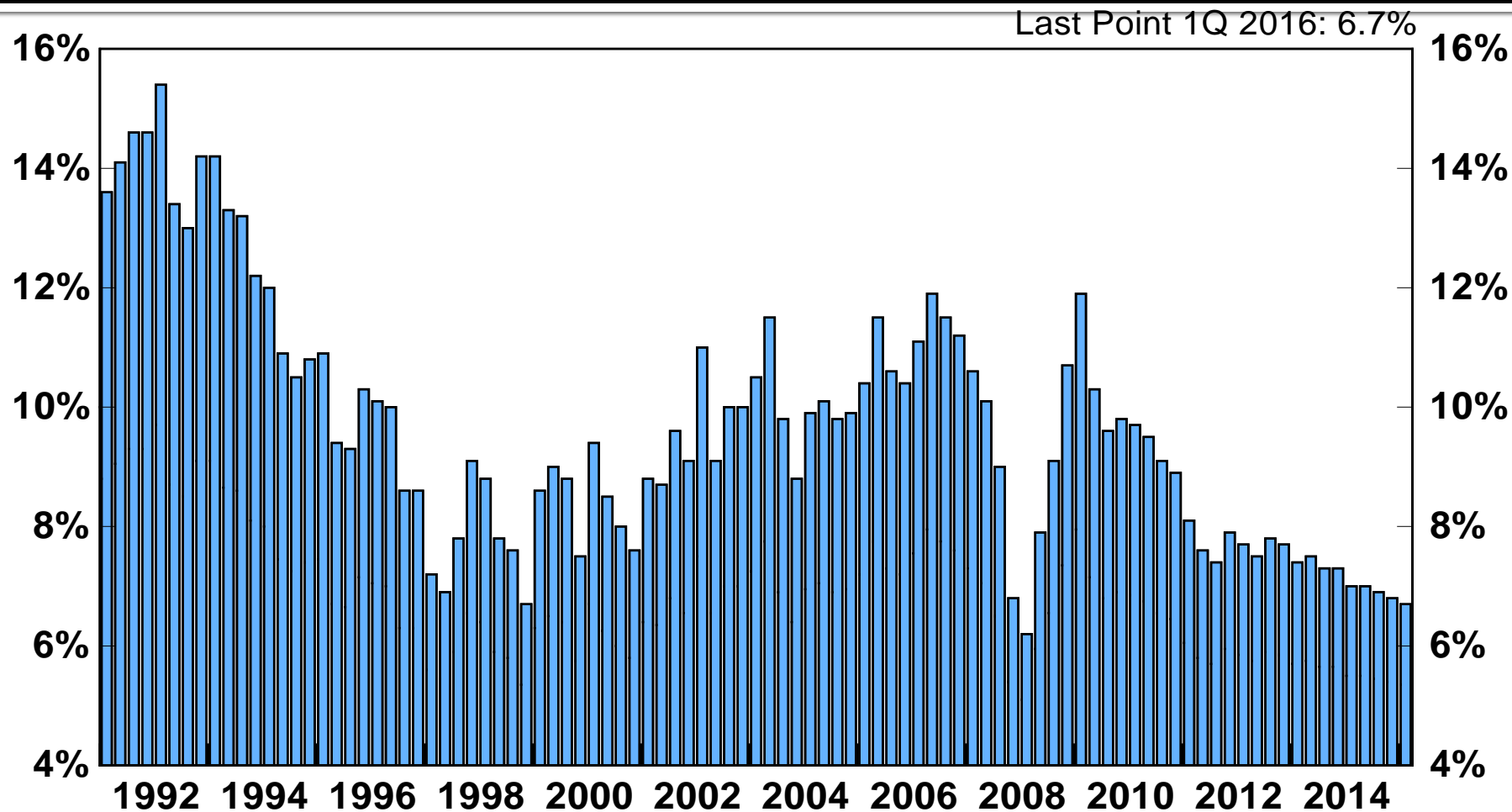
Source: Thomson Reuters

Reuters/Jefferies CRB Index



Source: Haver Analytics, Thomson Reuters

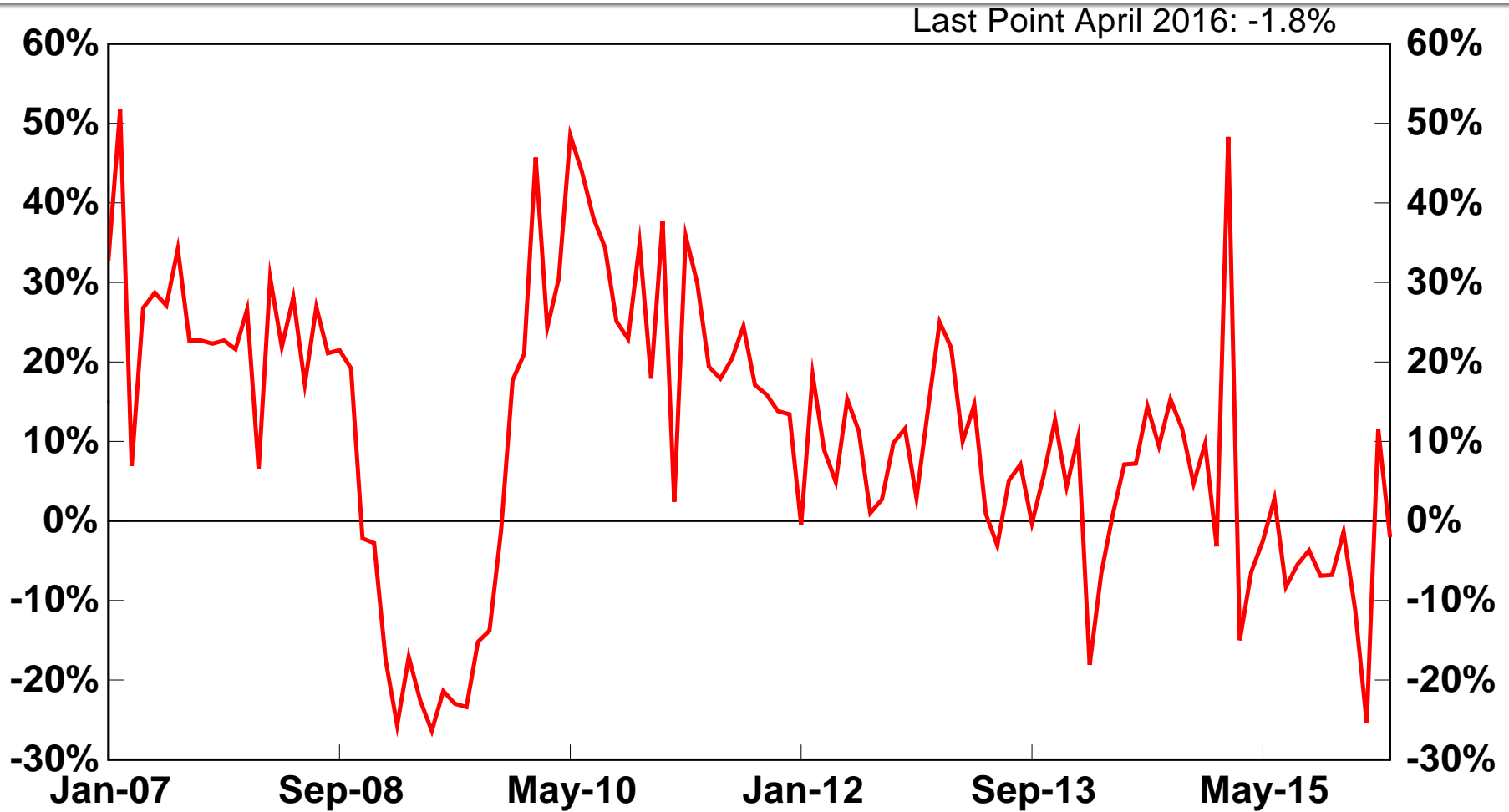
Chinese Real Gross Domestic Product year/year percent change



Source: Bloomberg; Chinese National Bureau of Statistics

Chinese Exports

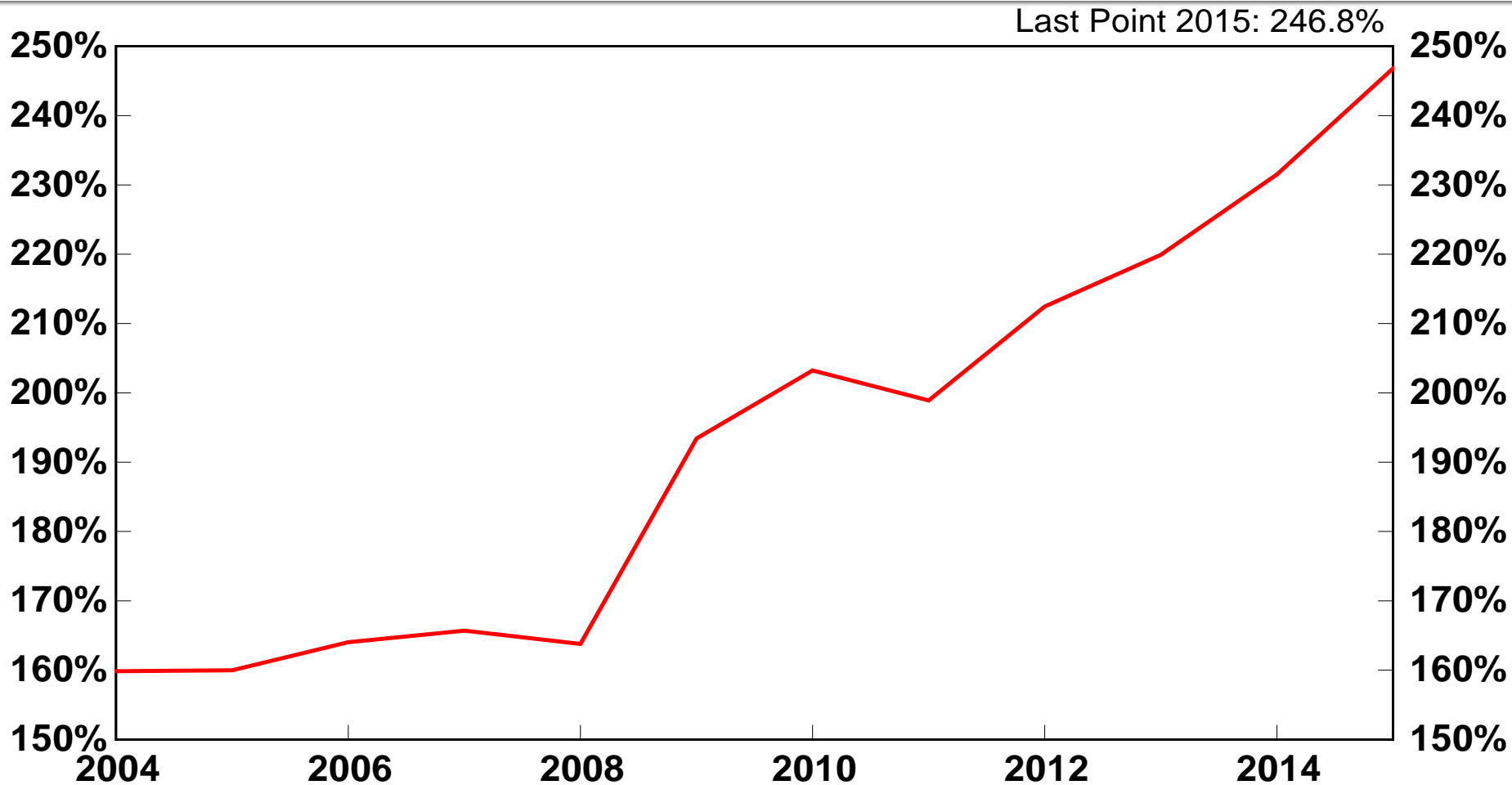
year/year percent change



Source: China General Administration of Customs

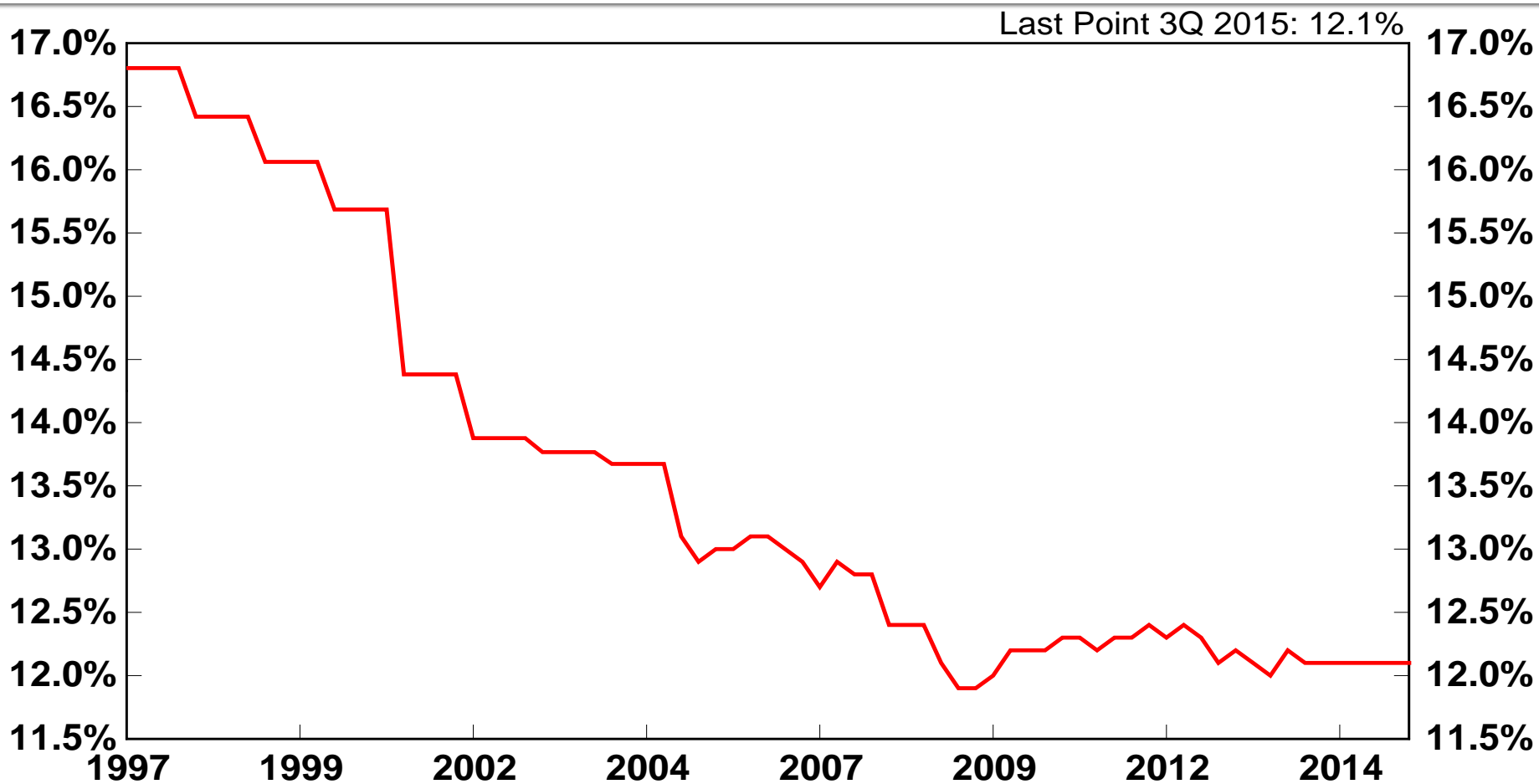
Chinese Total Debt as a Share of GDP

includes corporate, household, government and bank debt



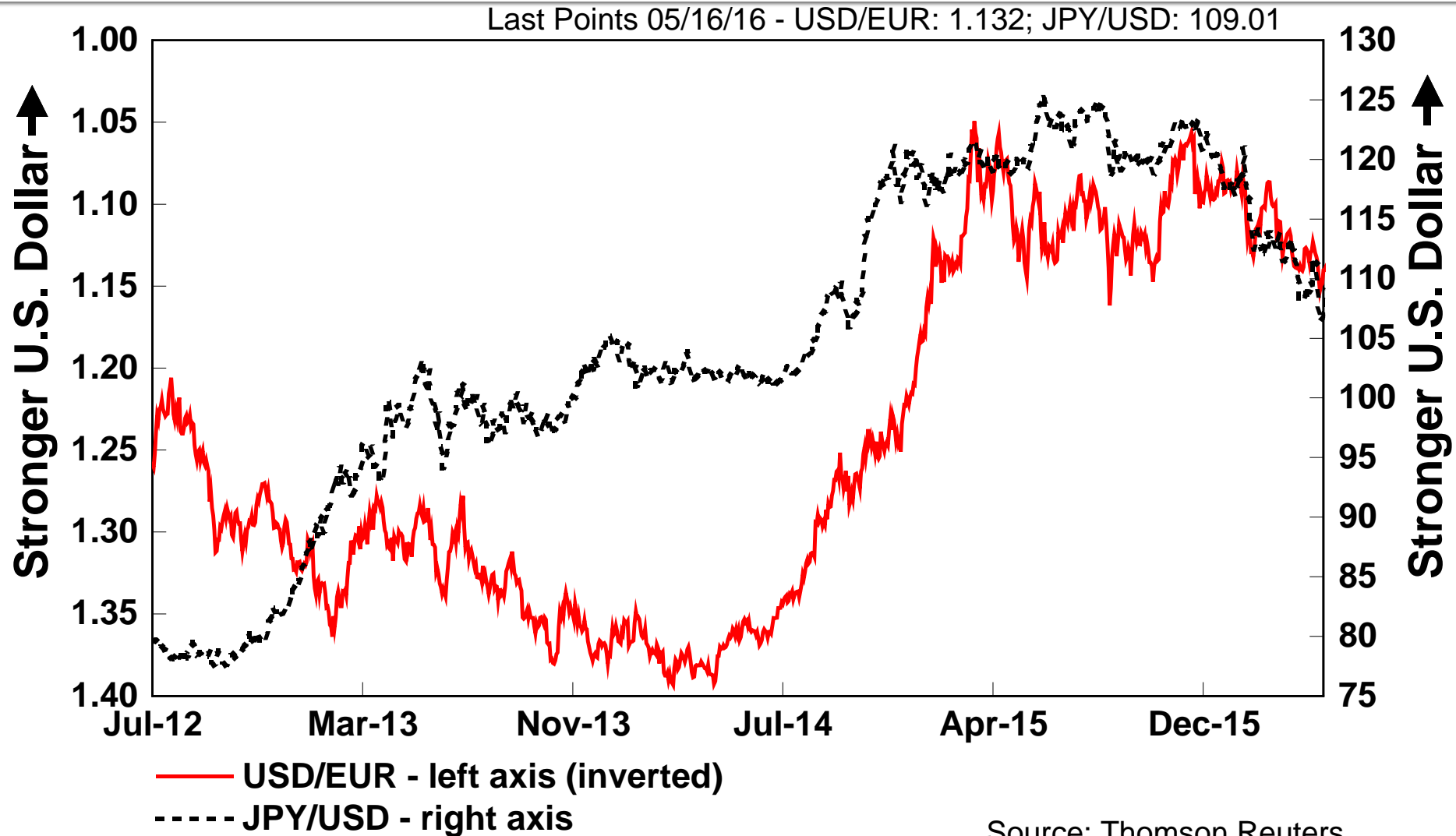
Source: Bloomberg

United States Manufacturing Value Added as % share of GDP



Source: Bureau of Economic Analysis; The World Bank

Euro and Yen Exchange Rates

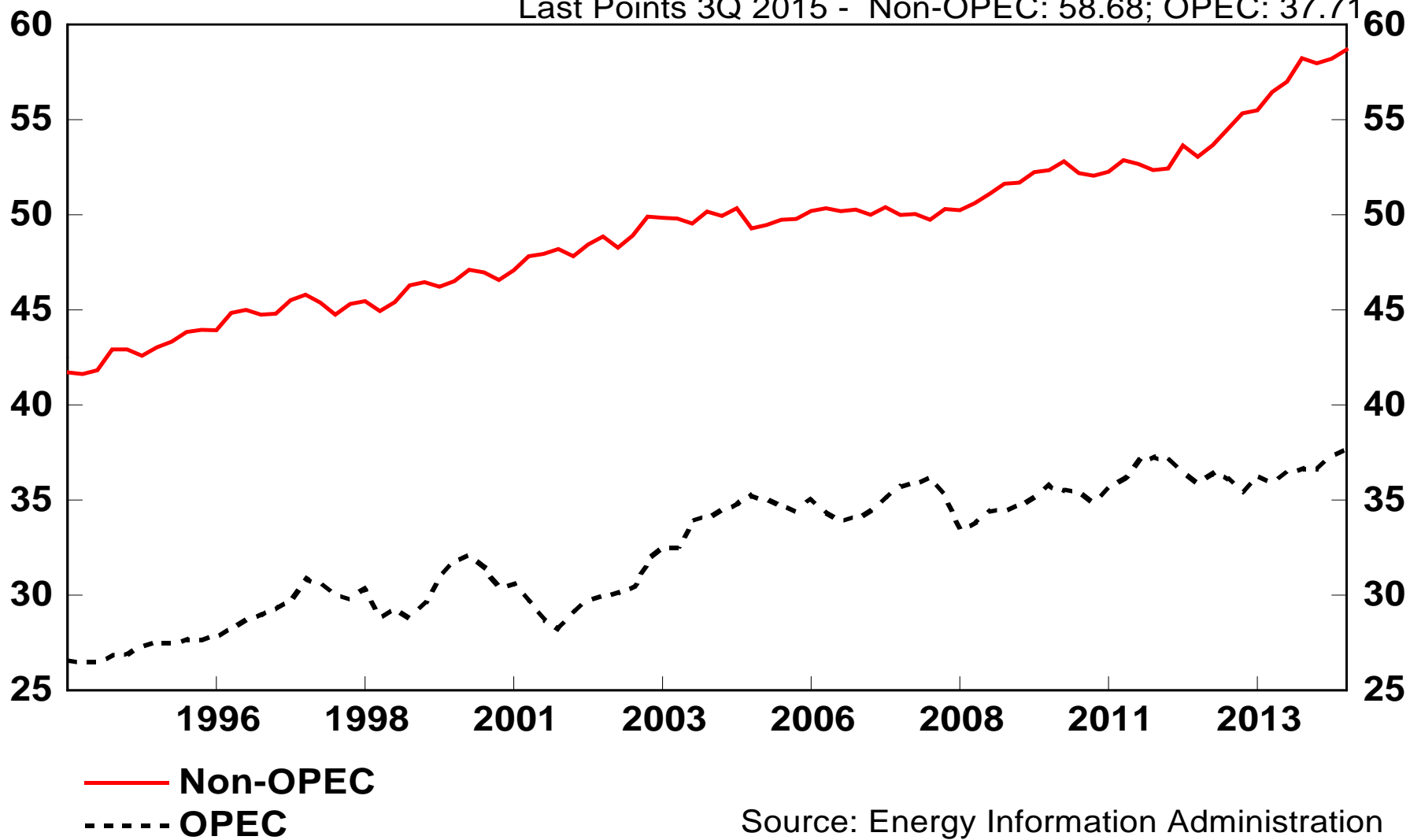


Source: Thomson Reuters

Total Oil Output for Non-OPEC and OPEC Countries

million barrels per day

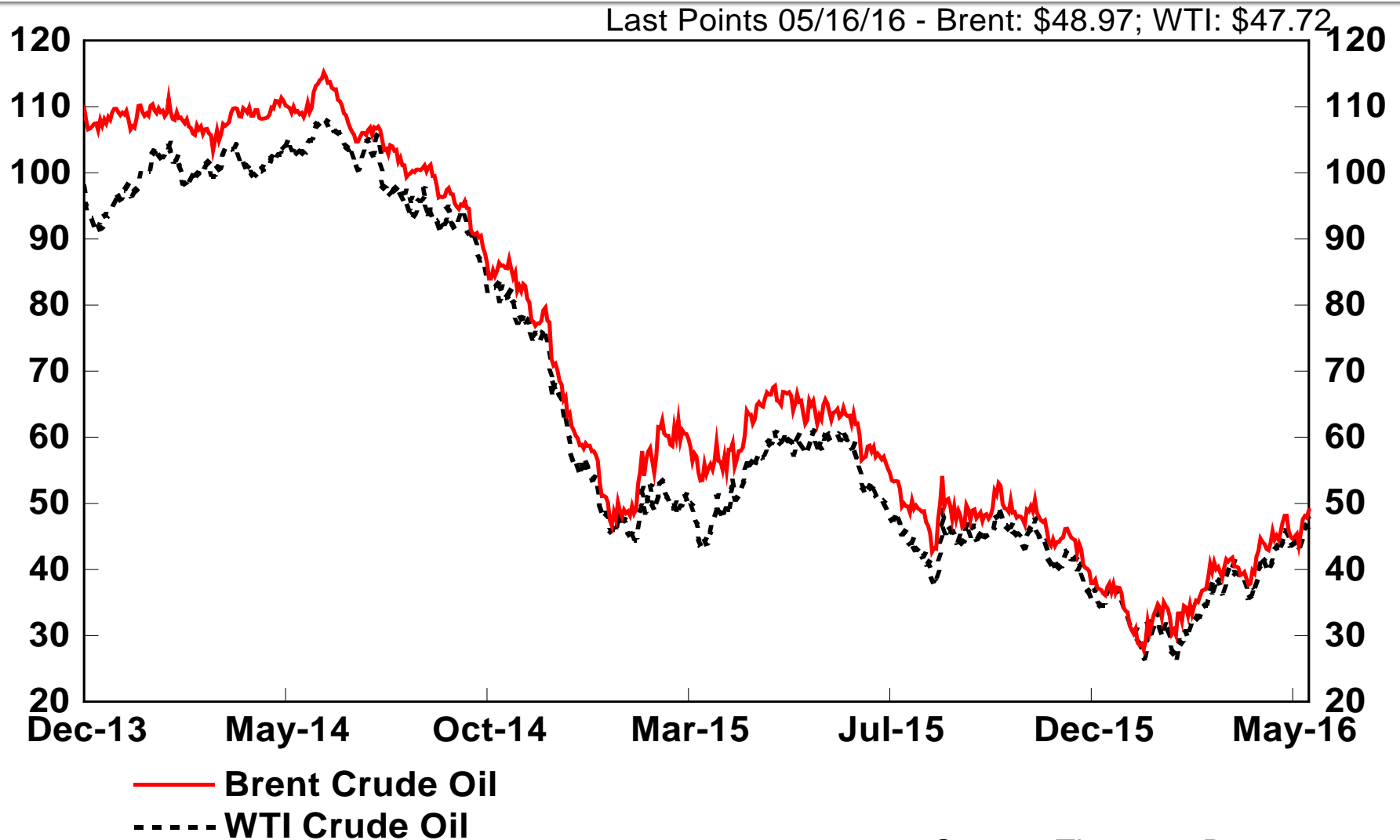
Last Points 3Q 2015 - Non-OPEC: 58.68; OPEC: 37.71



Source: Energy Information Administration

Brent and WTI Crude Oil Prices

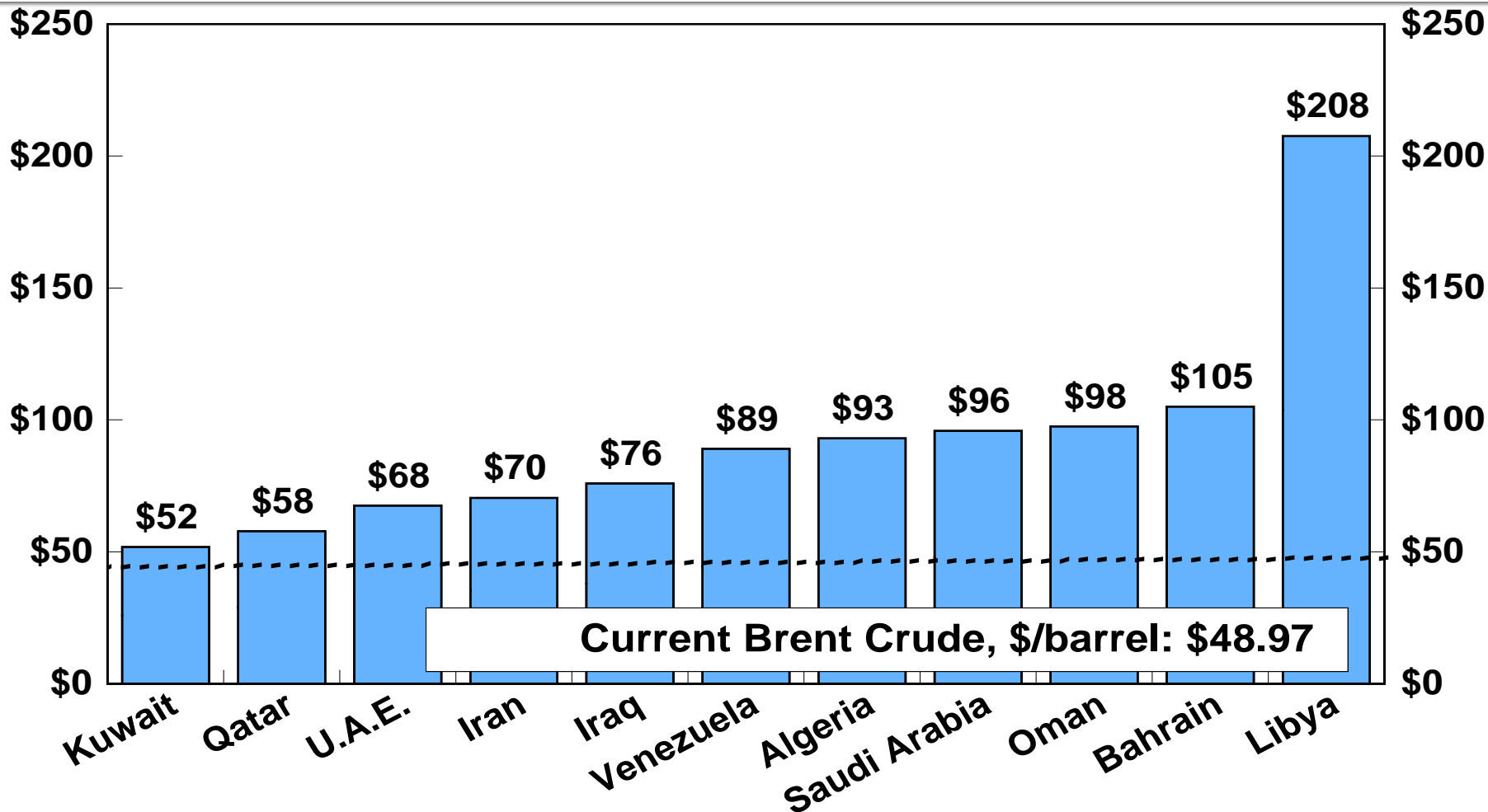
dollars per barrel; nearest futures contracts



Source: Thomson Reuters

Oil Breakeven Price for Major Petrostates

\$ per barrel

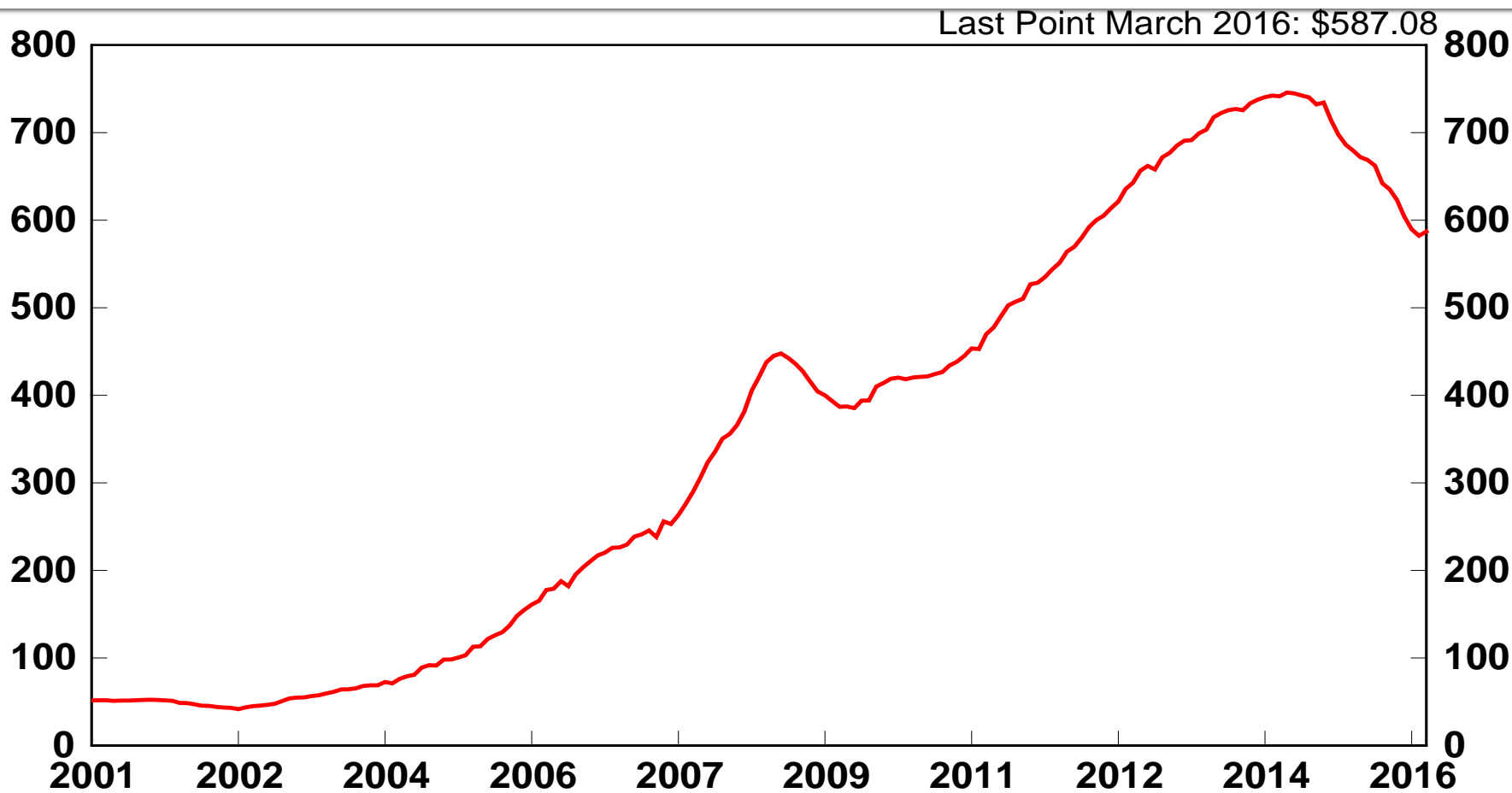


*Breakeven price needed in order to balance the national budget.

Source: Bloomberg; The Wall Street Journal

Saudi Arabia Foreign Exchange Reserves

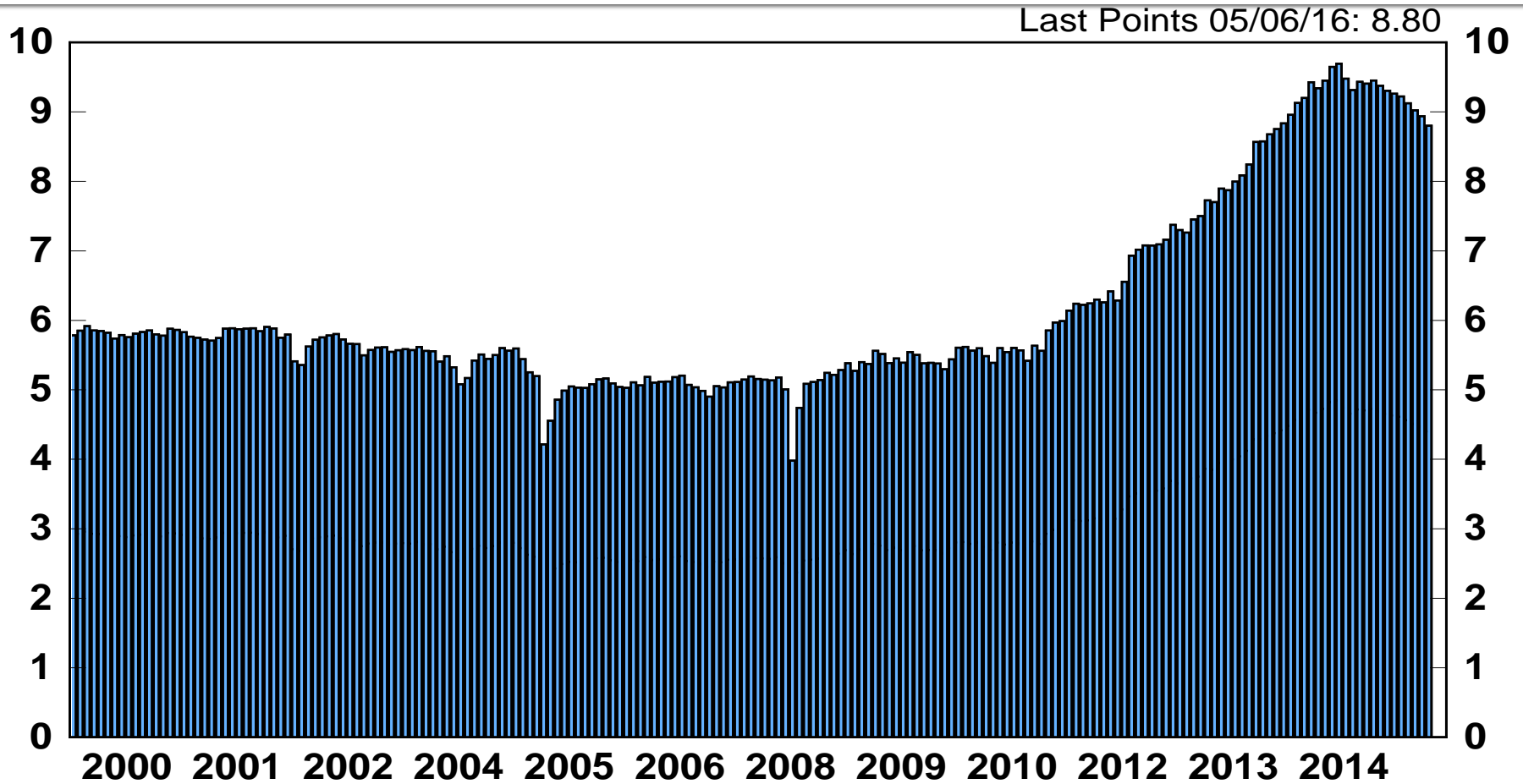
billion USD



Source: Bloomberg; International Monetary Fund

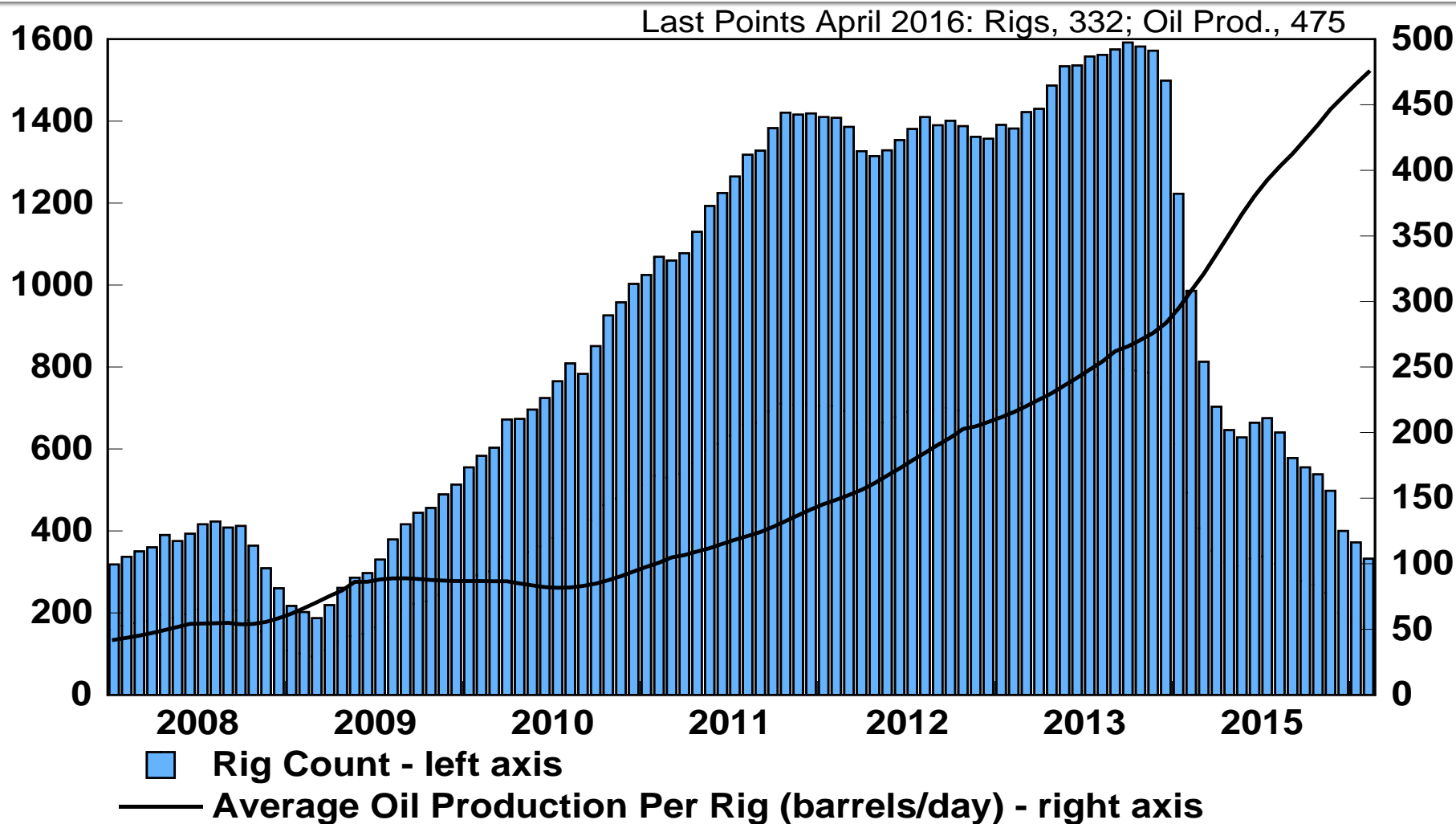
United States Crude Oil Production

million barrels per day



Source: Energy Information Administration

Crude Oil Rotary Rig Count and Average Oil Production Per Rig



Source: Bloomberg; Baker Hughes

A Successful Cartel

1. Involves a commodity that can otherwise be left in the ground, avoiding production and inventory costs until it's needed.
2. Its product is so much in demand that buyers are relatively insensitive to price.
3. The commodity has few if any close substitutes.
4. It includes most of the low-cost suppliers and has few meaningful non-cartel competitors.
5. It involves relatively few cartel members, thereby promoting discipline.
6. It's sponsored by governments and even religious authorities that benefit from the cartel and protect it.
7. It operates in a period of strong economic growth and robust demand for the product.
8. It faces few technological improvements in the industry.

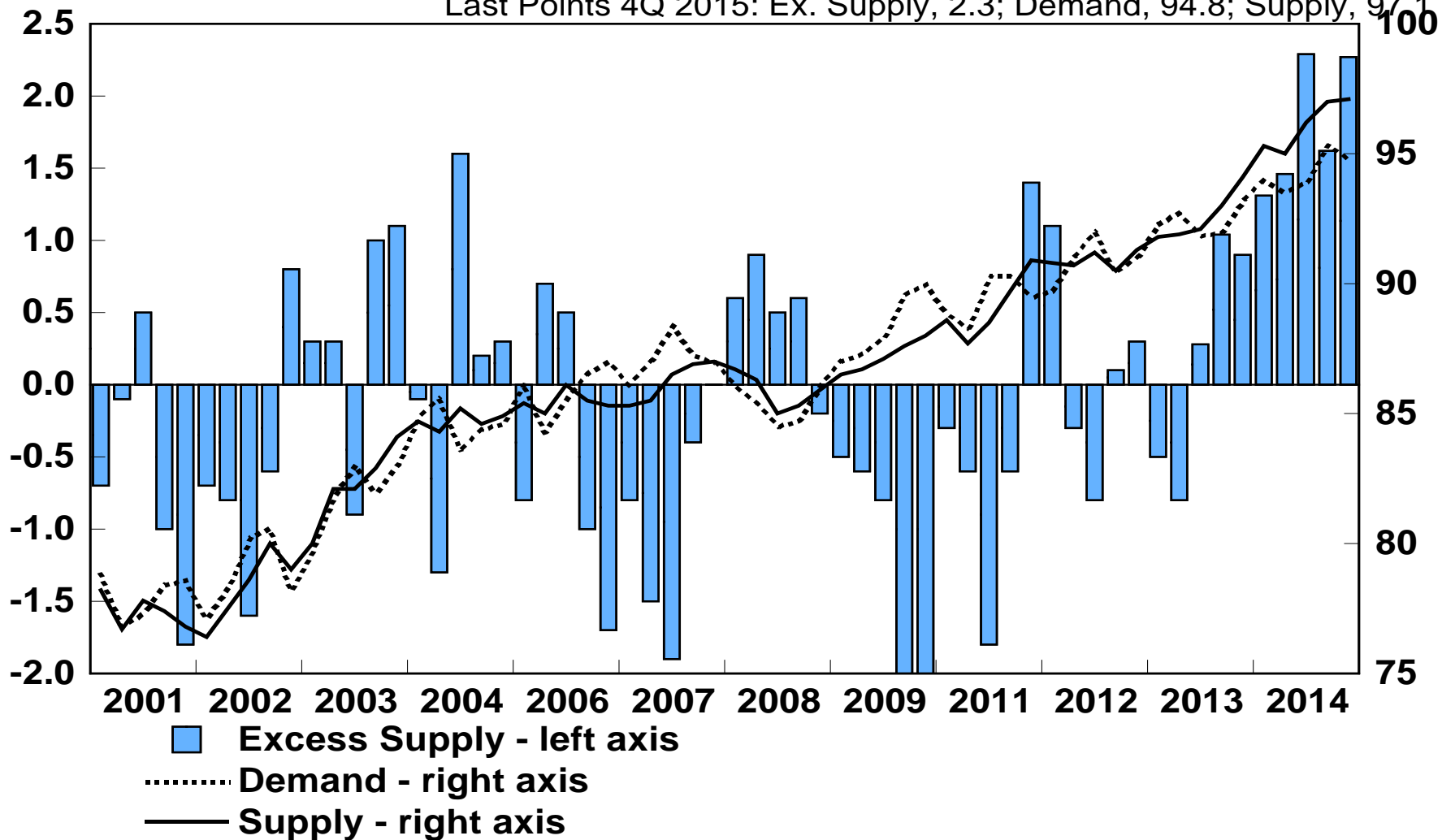
Unfavorable Climate for OPEC

1. Alternatives to oil, especially natural gas but also government-subsidized renewables, are growing.
2. Non-OPEC supplies are leaping, notably from Russia and especially American frackers.
3. Infighting among OPEC members has destroyed discipline.
4. Global economic growth is weak, and the ongoing shift from goods production to services in China and elsewhere is curbing oil demand.
5. Conservation is limiting oil demand.
6. Rapid technological advances in fracking, horizontal drilling, deep-water and Arctic drilling, etc. are mushrooming non-OPEC supplies at low and declining costs.

World Crude Oil Supply and Demand

million barrels per day

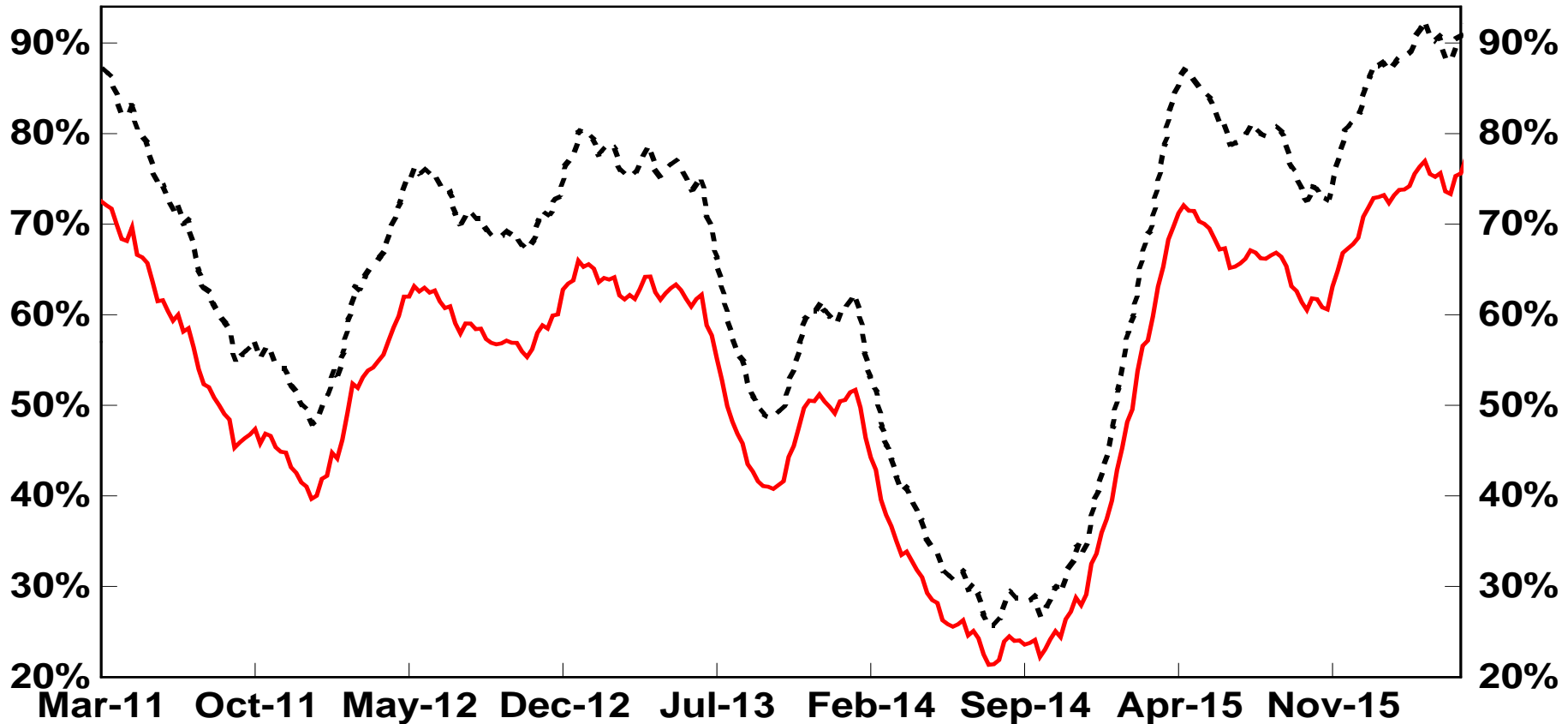
Last Points 4Q 2015: Ex. Supply, 2.3; Demand, 94.8; Supply, 97.1



Source: Bloomberg; International Energy Agency

Crude Oil Storage Capacity Utilization Cushing, OK

Last Points 05/06/16: Shell, 77.3%; Working, 92.9%



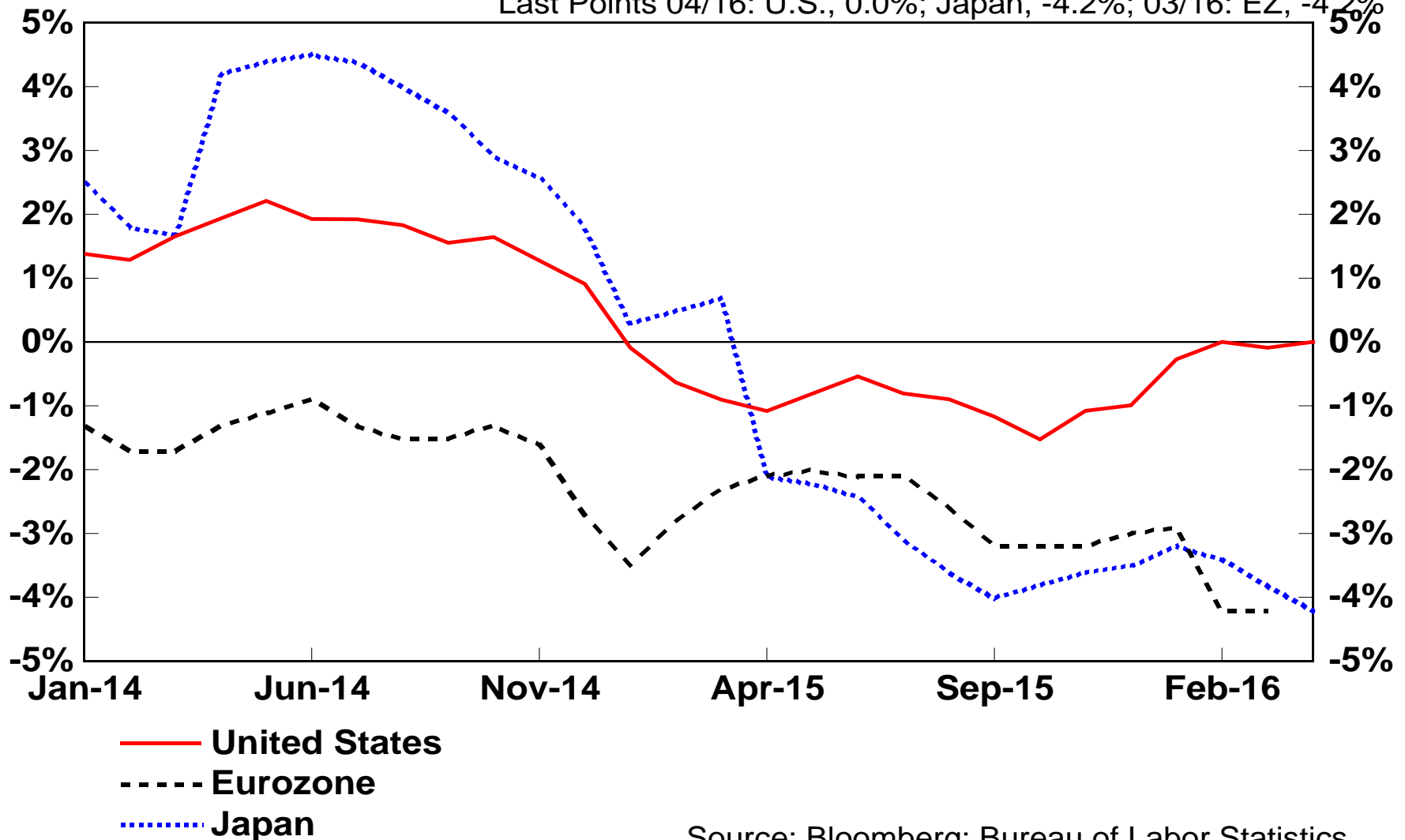
— Tank Net Available Shell Storage Capacity Utilization
- - - - Tank Working Storage Capacity Utilization

Note: Net available shell includes idle (not working) capacity.

Source: Energy Information Administration

Producer Price Index year/year percent change

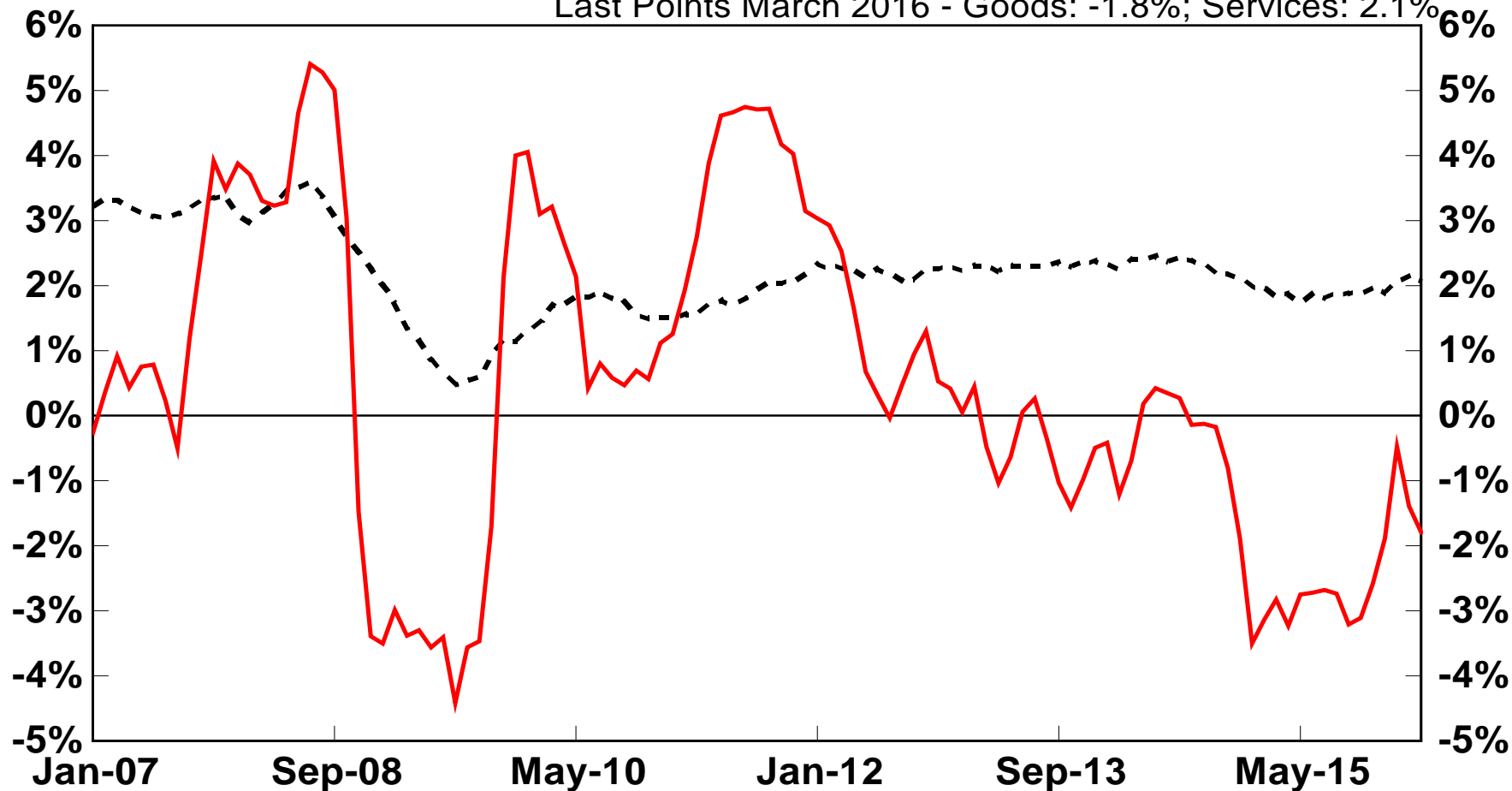
Last Points 04/16: U.S., 0.0%; Japan, -4.2%; 03/16: EZ, -4.2%



Source: Bloomberg; Bureau of Labor Statistics

U.S. Personal Consumption Expenditures Implicit Price Deflator year/year percent change

Last Points March 2016 - Goods: -1.8%; Services: 2.1%

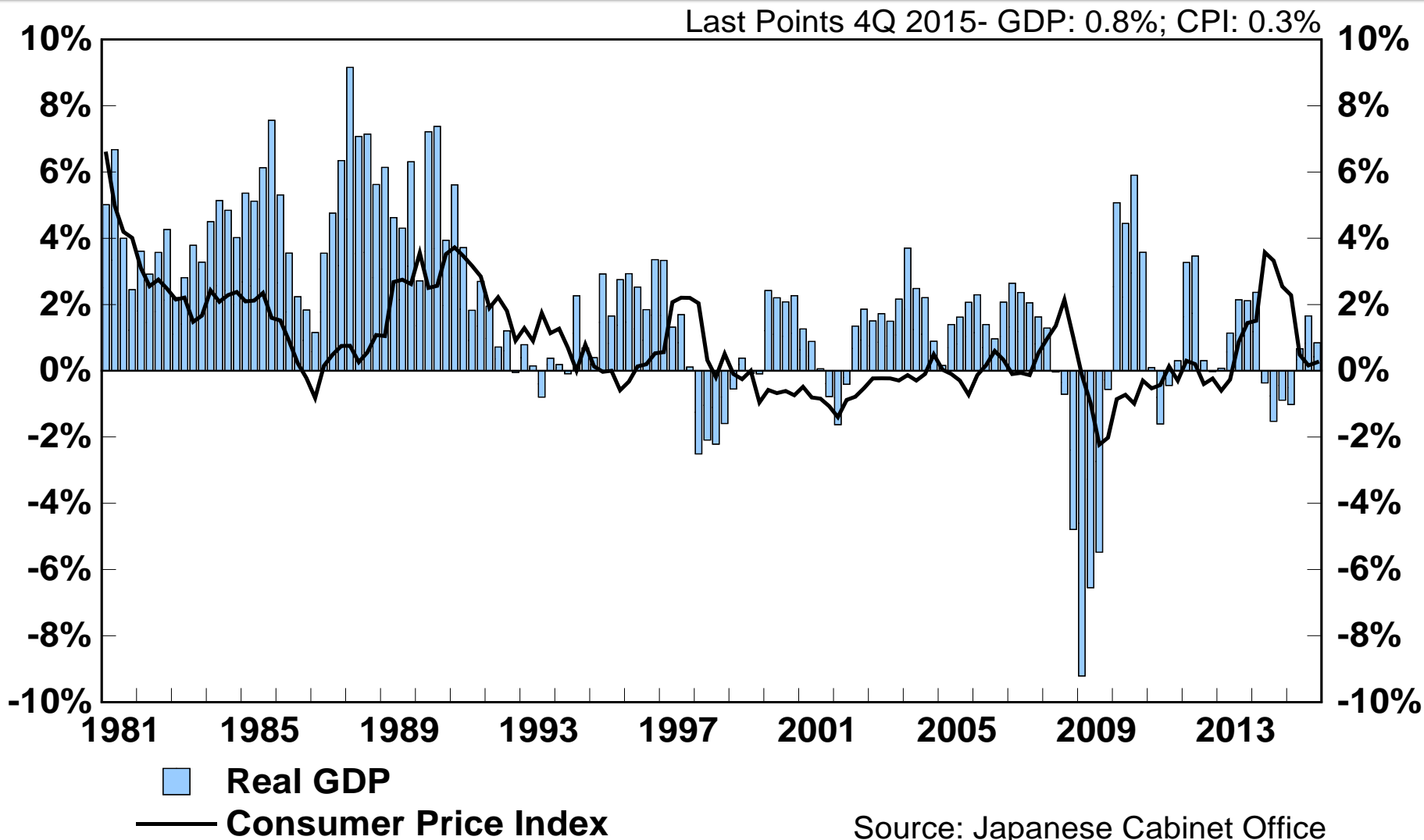


— Goods
- - - Services

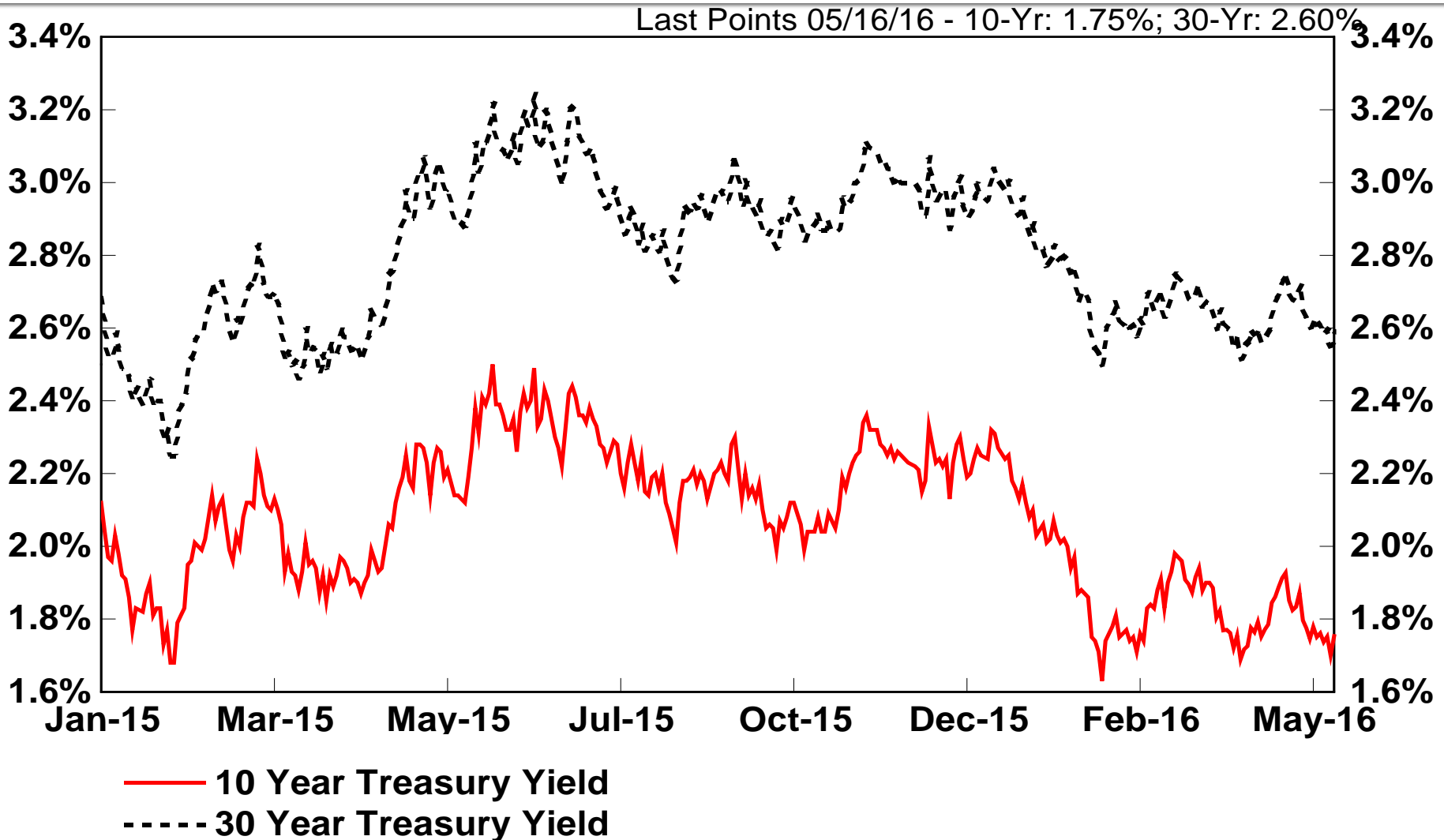
Source: Bureau of Economic Analysis

Japanese CPI and Real GDP

year/year percent change



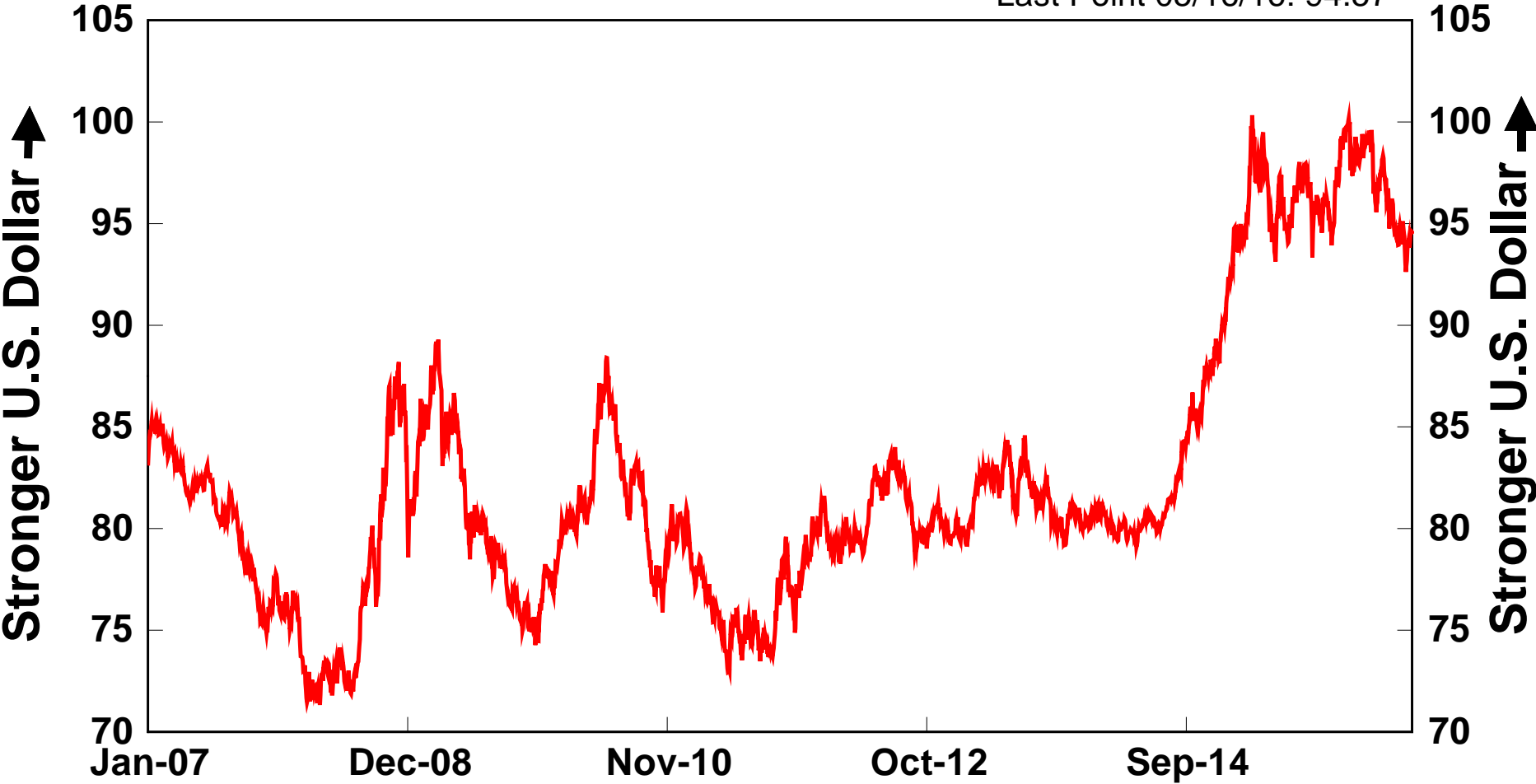
10 and 30 Year Treasury Yields



Source: Federal Reserve

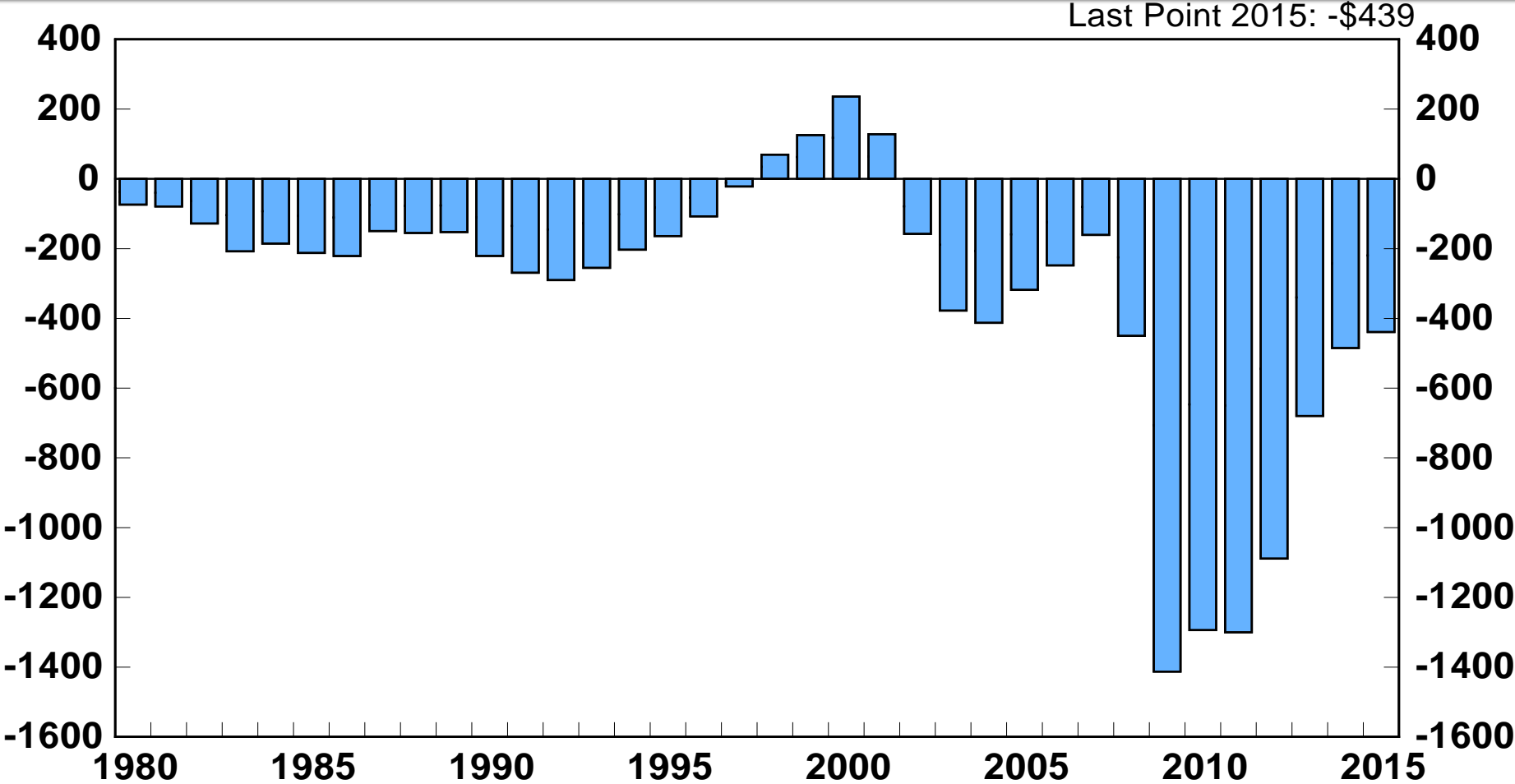
U.S. Dollar Index spot price

Last Point 05/16/16: 94.57



Source: Bloomberg

Federal Budget Balance \$ Bil.



Last Point 2015: -\$439

Source: Congressional Budget Office

Questions and Discussion

