

# Quantitative and Qualitative Monetary Easing and Economic Theory

*Speech at the University of Zurich in Switzerland*

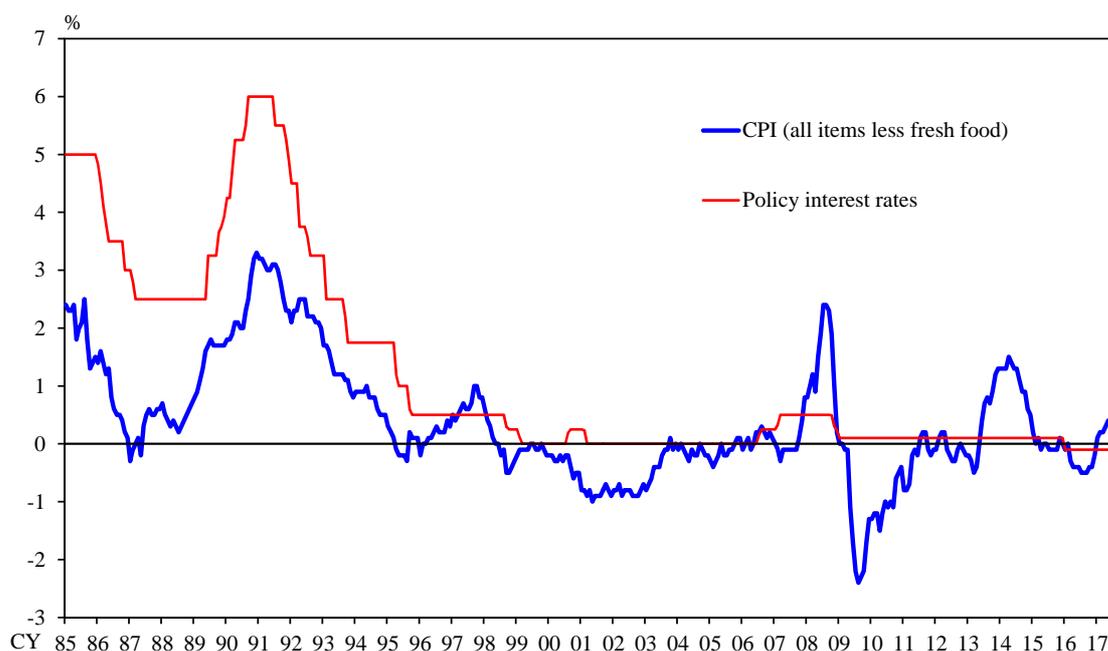
November 13, 2017

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*Governor of the Bank of Japan*

Chart 1

## Consumer Prices and Policy Interest Rates

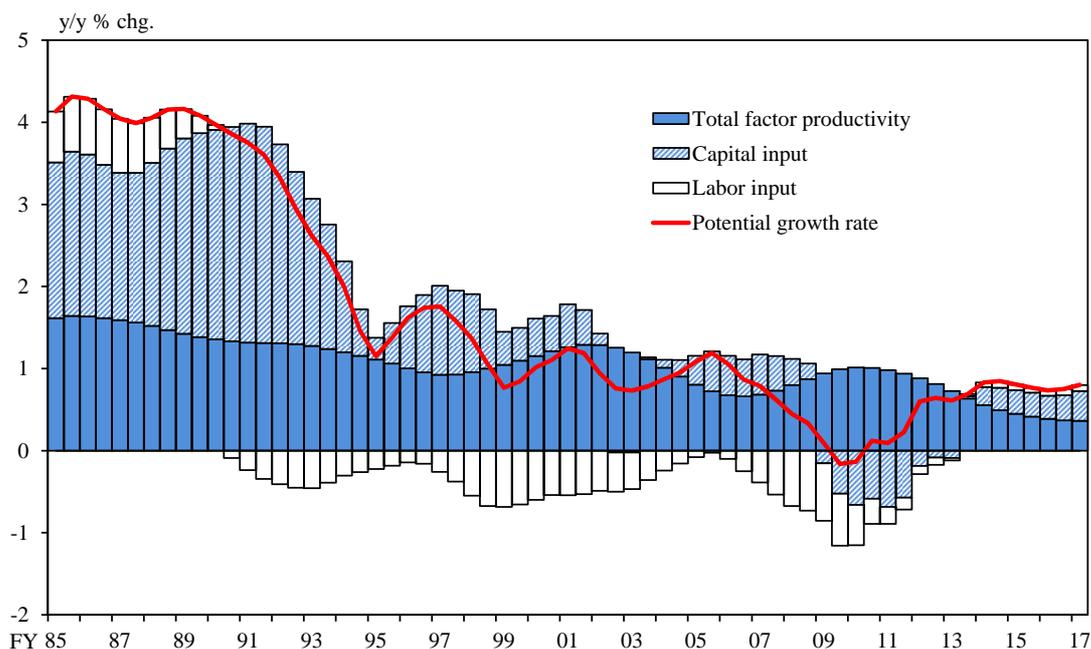


Notes: 1. The CPI figures (y/y % chg.) are adjusted for changes in the consumption tax rate.

2. For the period when no target interest rate was adopted, figures for the policy rate are the interest rate applied on excess reserves.

Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

# Potential Growth Rate

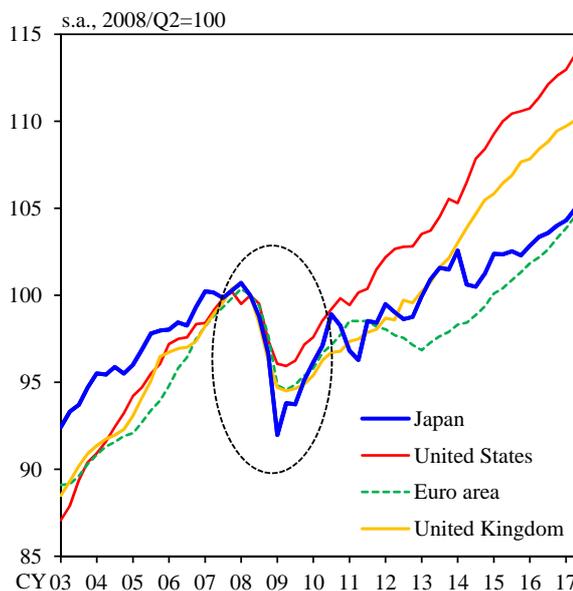
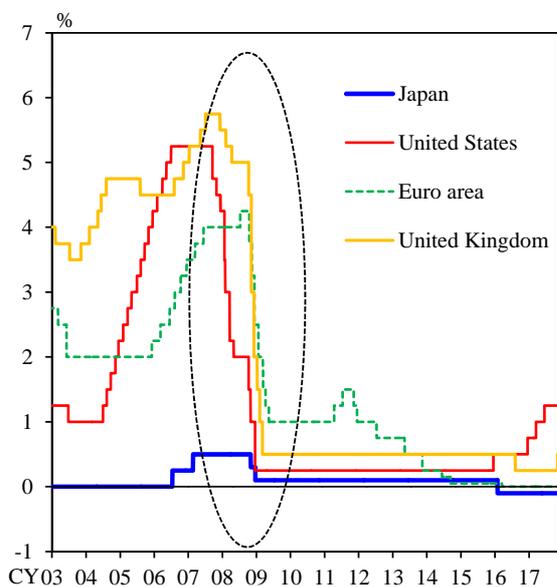


Note: Based on BOJ staff estimations. Figures for the first half of fiscal 2017 are those for 2017/Q2.  
Source: Bank of Japan.

# Monetary Policy Responses and Developments in Real GDP after the Global Financial Crisis

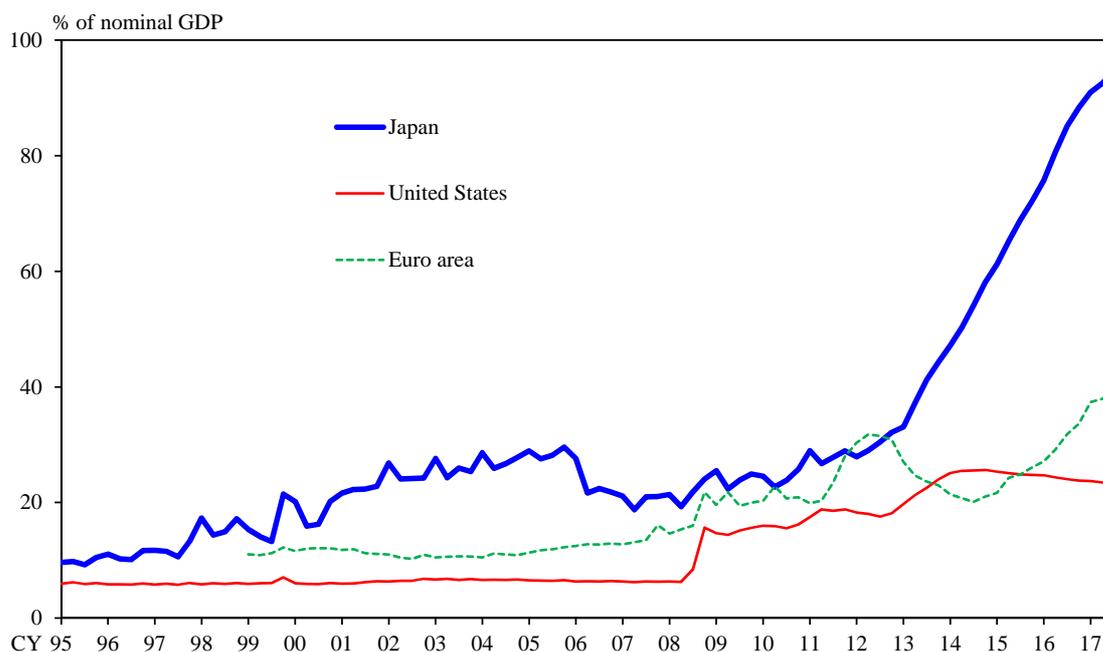
*Policy Interest Rates*

*Real GDP*



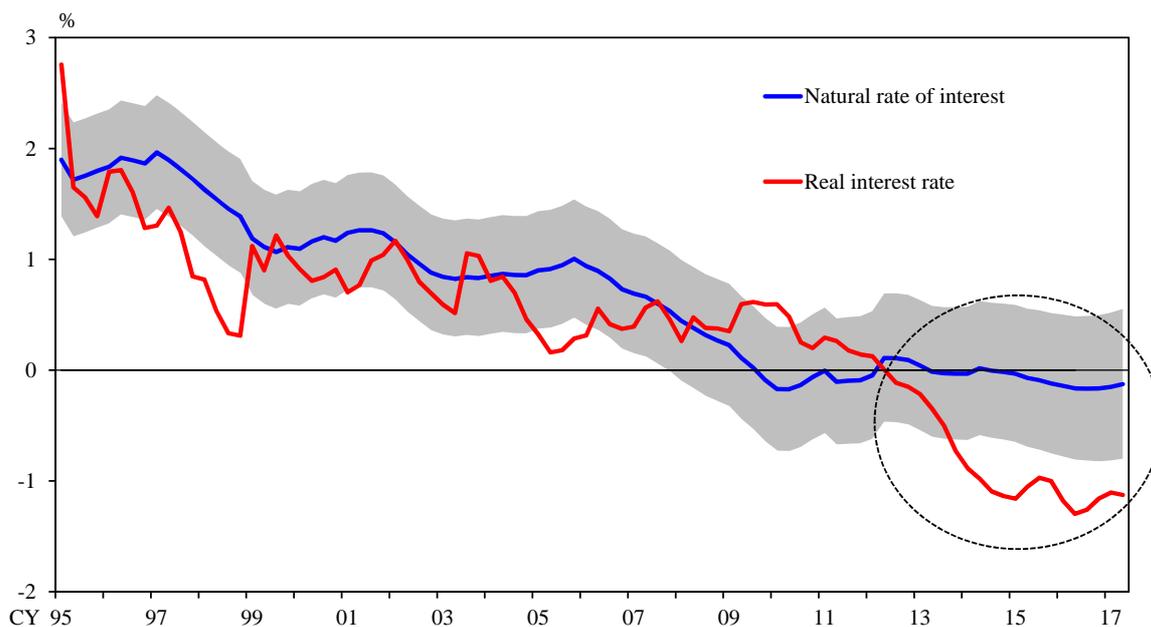
Note: For Japan, for the period when no target interest rate was adopted, figures for the policy rate are the interest rate applied on excess reserves.  
Sources: Bank of Japan; Federal Reserve; European Central Bank; Bank of England; Cabinet Office; Haver.

# Central Bank Assets



Note: Figures for Japan and the euro area for 2017/Q3 are calculated using their nominal GDP figures for 2017/Q2.  
Sources: Bank of Japan; Federal Reserve; European Central Bank, etc.

# Natural Rate of Interest and Real Interest Rate



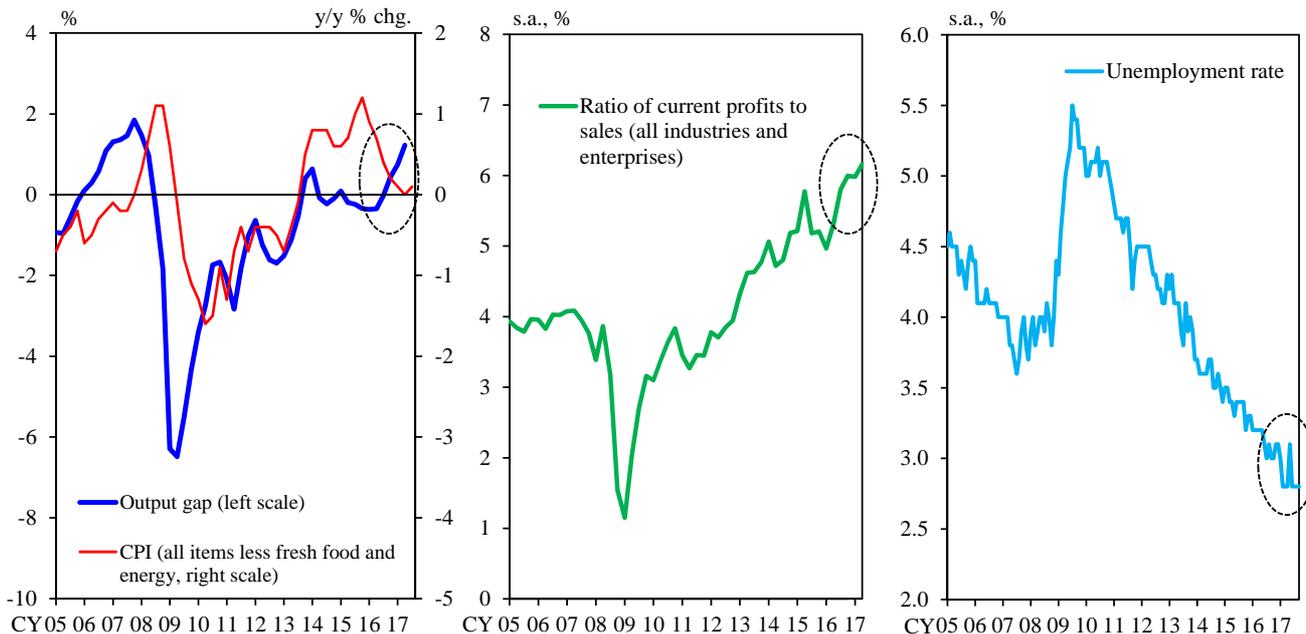
Note: Based on BOJ staff estimations using 10-year JGB yields, etc. For details of the estimation procedures of the natural rate of interest, see Kei Imakubo *et al.*, "The Natural Yield Curve: Its Concept and Measurement," *Bank of Japan Working Paper Series*, no.15-E-5 (2015). The shaded area indicates the 95 percent confidence interval for the natural rate of interest.  
Sources: Consensus Economics Inc., "Consensus Forecasts"; Bloomberg; Bank of Japan, etc.

# Japan's Economy

*Output Gap and Prices*

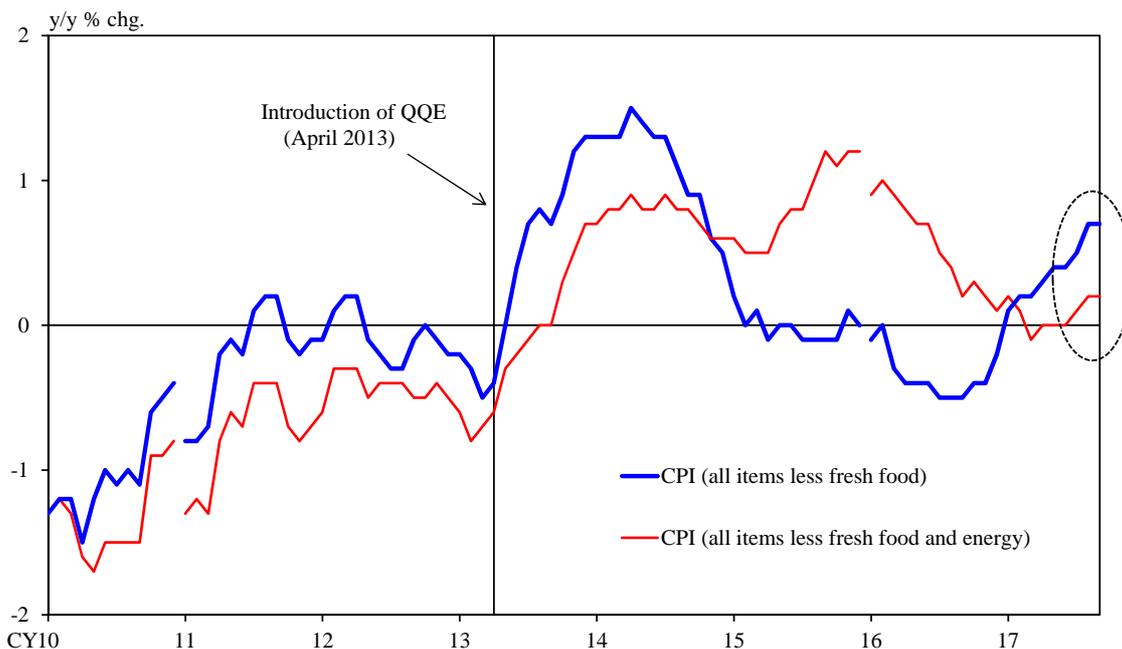
*Corporate Profits*

*Unemployment Rate*



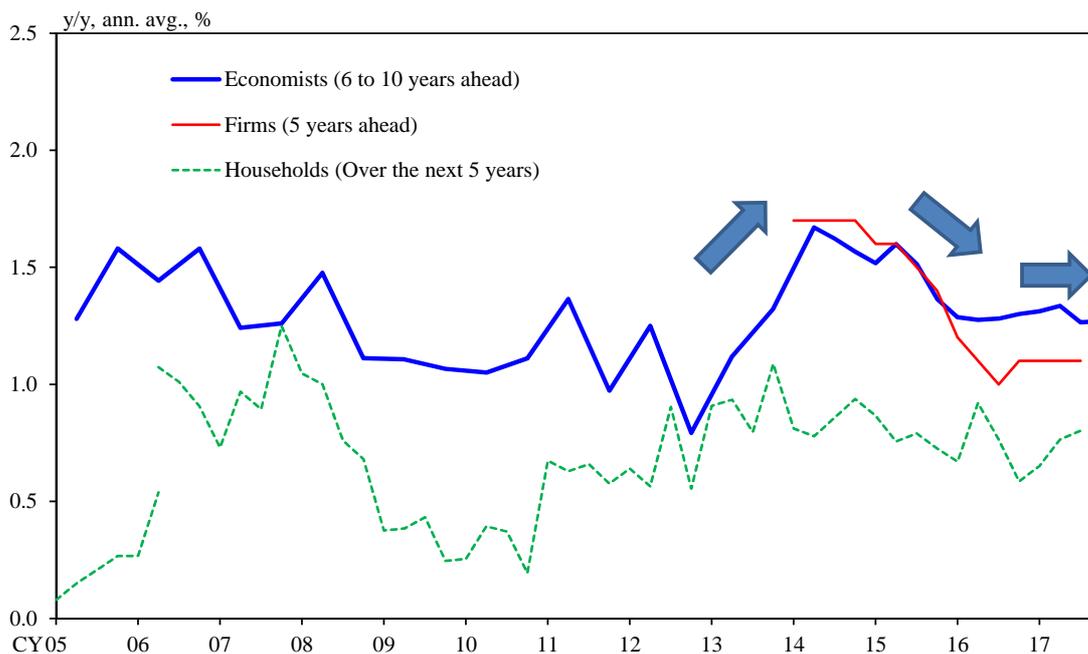
Notes: 1. The output gap is based on BOJ staff estimations.  
 2. The CPI figures are adjusted for changes in the consumption tax rate.  
 3. Figures for corporate profits are based on the *Financial Statements Statistics of Corporations by Industry, Quarterly*. Excluding "finance and insurance."  
 Sources: Bank of Japan; Ministry of Internal Affairs and Communications; Ministry of Finance.

# Consumer Prices



Note: Figures are adjusted for changes in the consumption tax rate.  
 Source: Ministry of Internal Affairs and Communications.

# Inflation Expectations



Notes: 1. Figures for firms are those for "Outlook for General Prices" in the *Tankan* survey (all industries and enterprises, average).  
 2. Figures for households are from the *Opinion Survey on the General Public's Views and Behavior*, estimated using the modified Carlson-Parkin method.  
 Sources: Bank of Japan; Consensus Economics Inc., "Consensus Forecasts."