

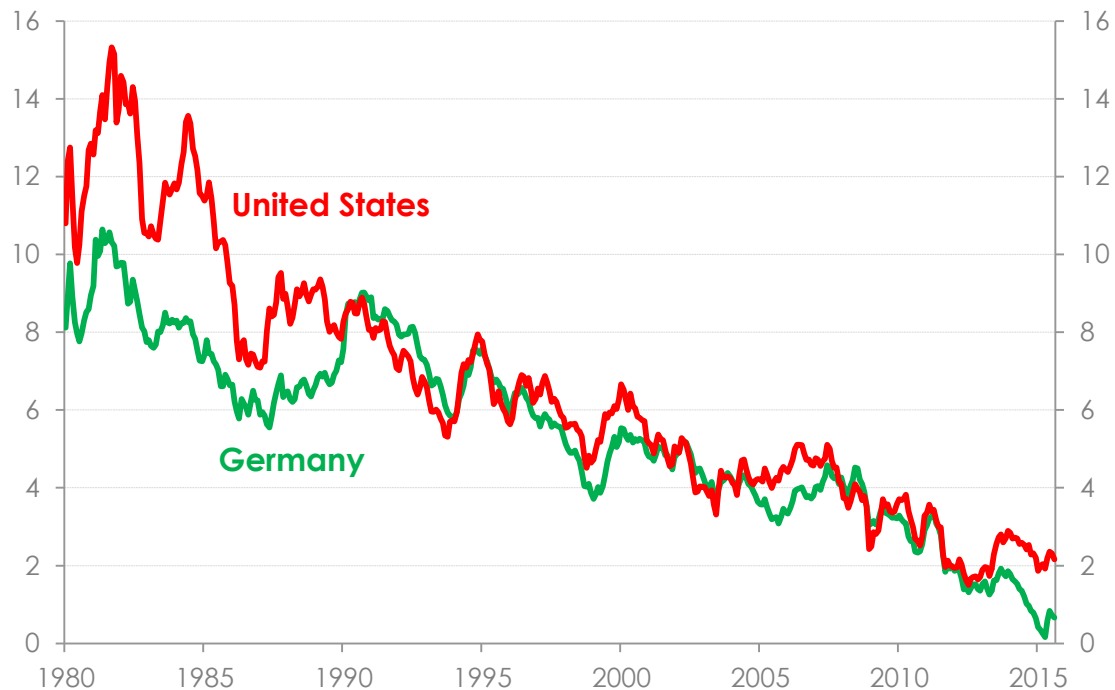
Peter Praet

The low interest rate environment in the euro area

Geneva, 21 September 2015

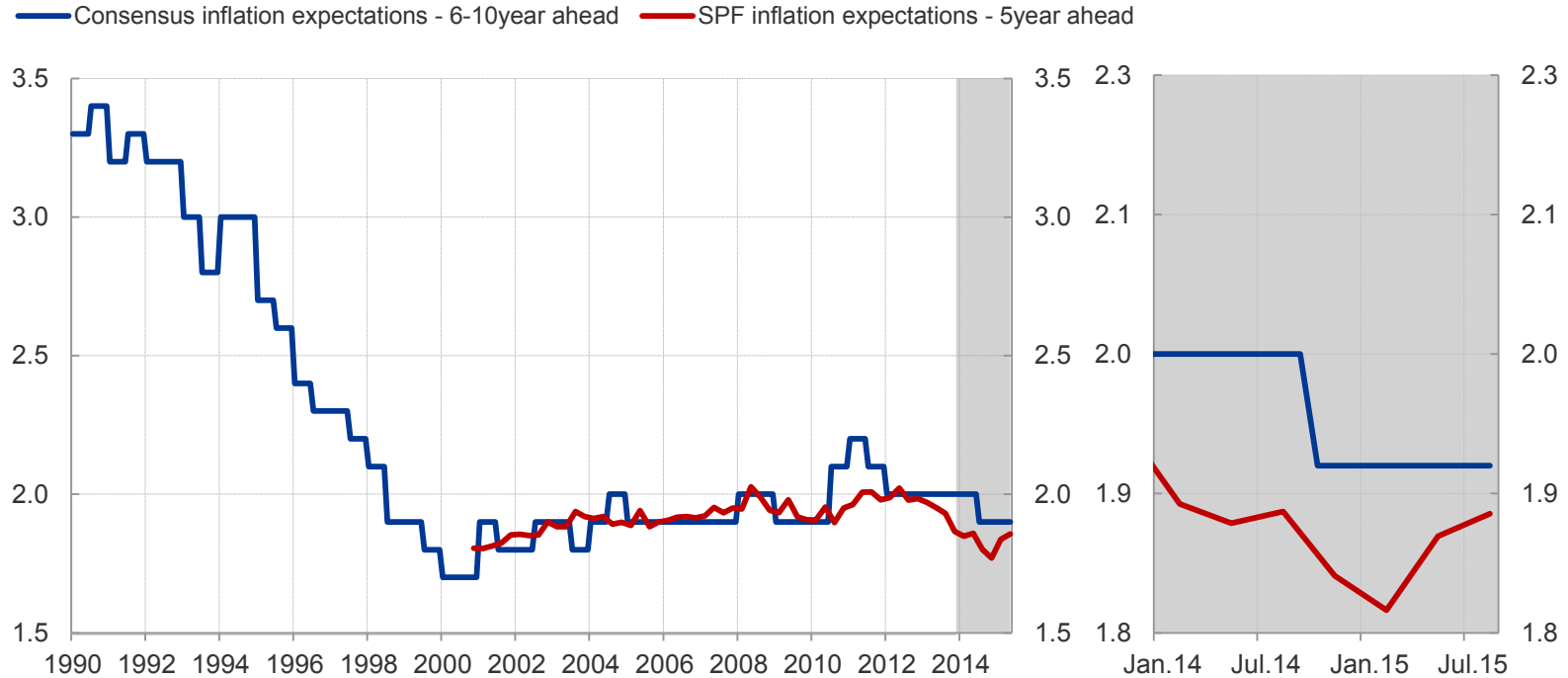
Long-term government bond yields

10-year yields; % p.a.



Source: ECB.

Long-term inflation expectations % p.a.



Sources: Consensus Economics and Survey of Professional Forecasters.

Note: Consensus expectations are in monthly frequency until Aug-2015 and SPF expectations are in quarterly frequency until Q3 2015.

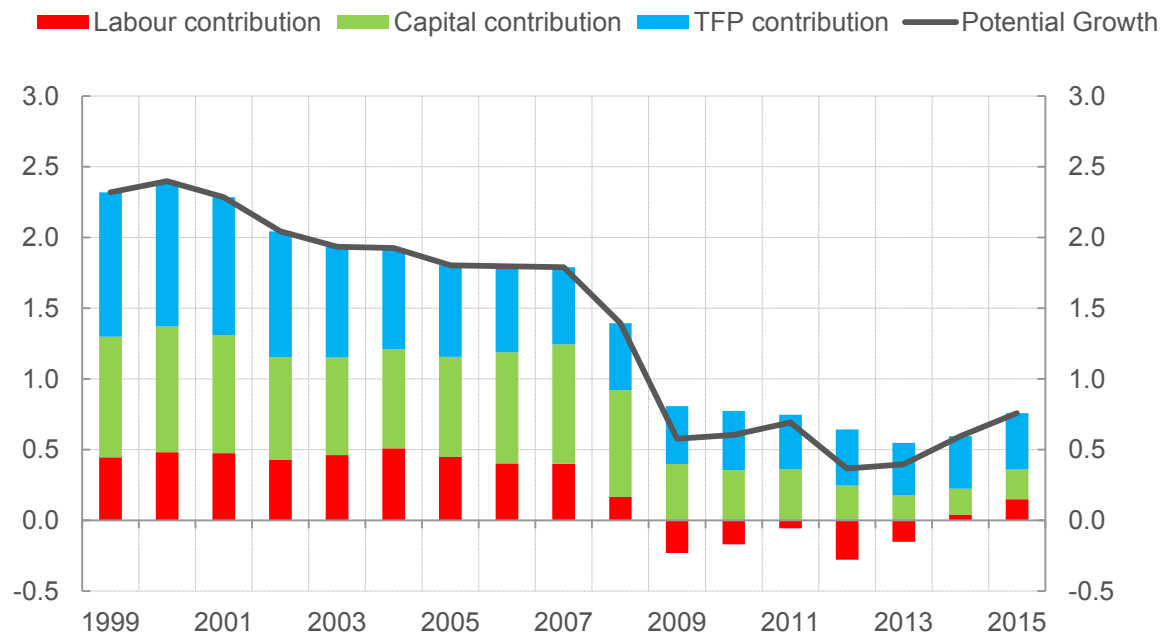
5 years ahead growth expectations for the euro area
% p.a.



Source: Consensus.

Breakdown of potential output growth

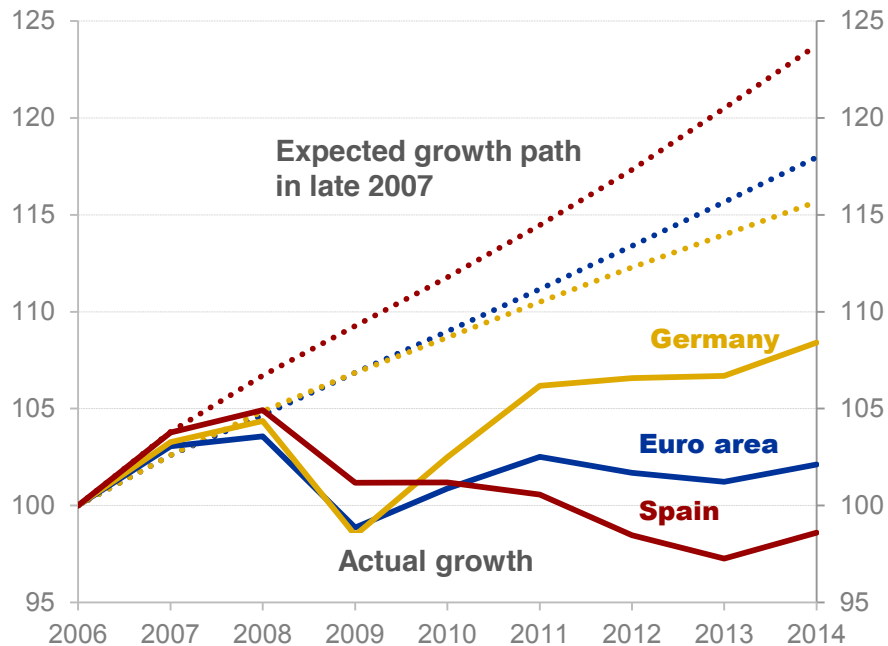
% p.a.



Source: European Commission Spring 2015 forecast.

Conditions for a balance sheet recession

Real GDP & pre-crisis expected path index, 2006 = 100

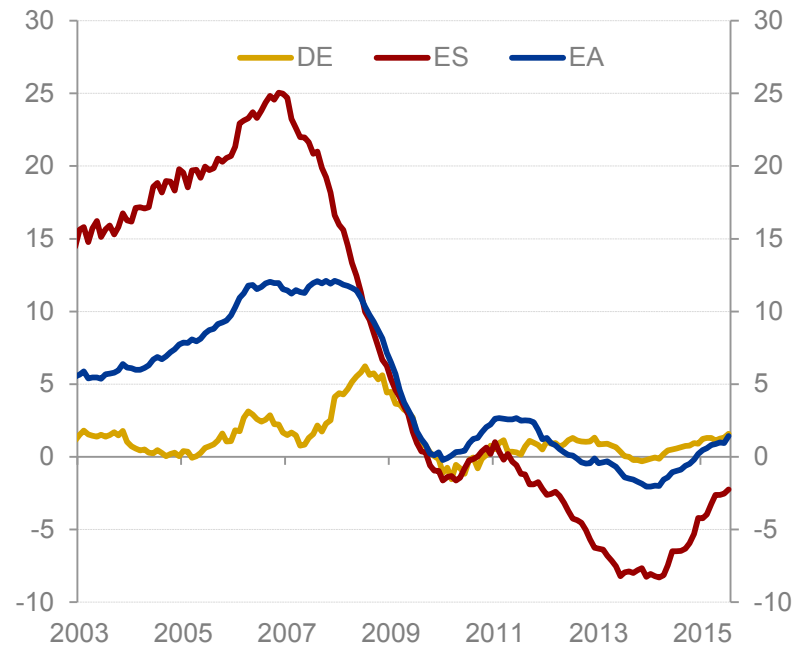


Source: Consensus and ECB calculations.

Note: Expected growth path as in Consensus October 2007.

Latest observation: February 2015.

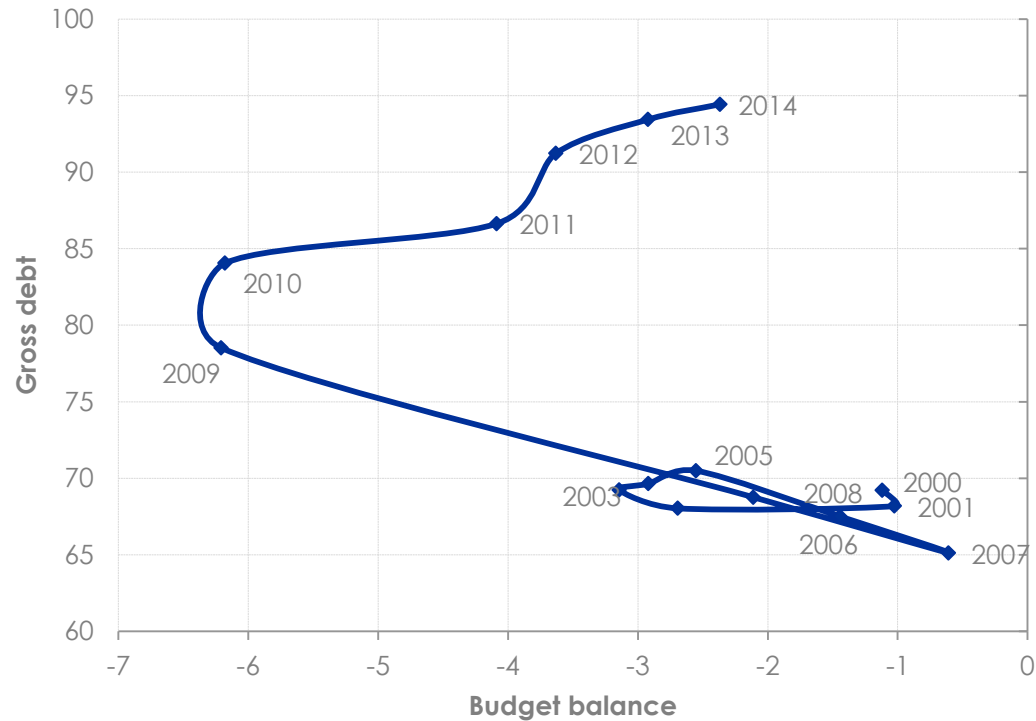
Bank loans to private sector annual percentage changes, euro area and selected countries



Source: ECB.

Latest observation: June 2015.

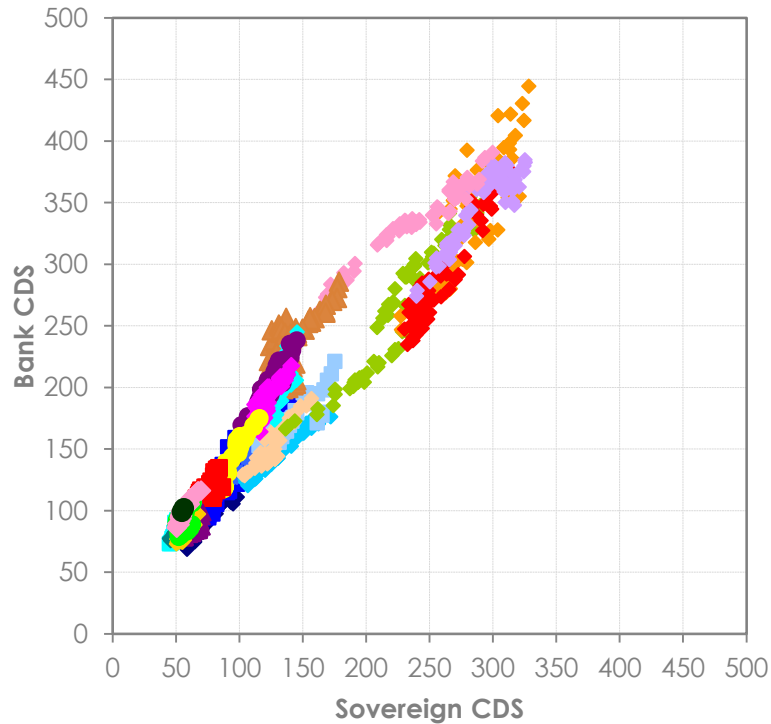
Euro area government debt and deficit *% of GDP*



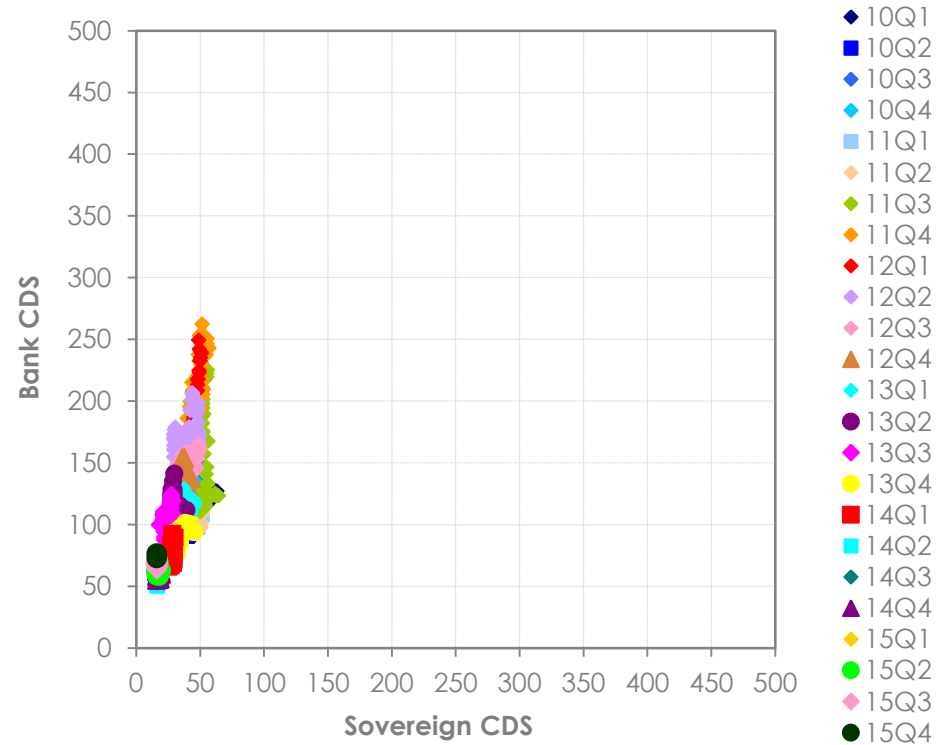
Sources: European Commission's spring 2015 economic forecast, ESA95 data before 2006.
Note: Budget balance excludes UMTS proceeds.

Banks - sovereign nexus

Euro area
basis points; Q1 2010 – Q3 2015



United States
basis points; Q1 2010 – Q3 2015

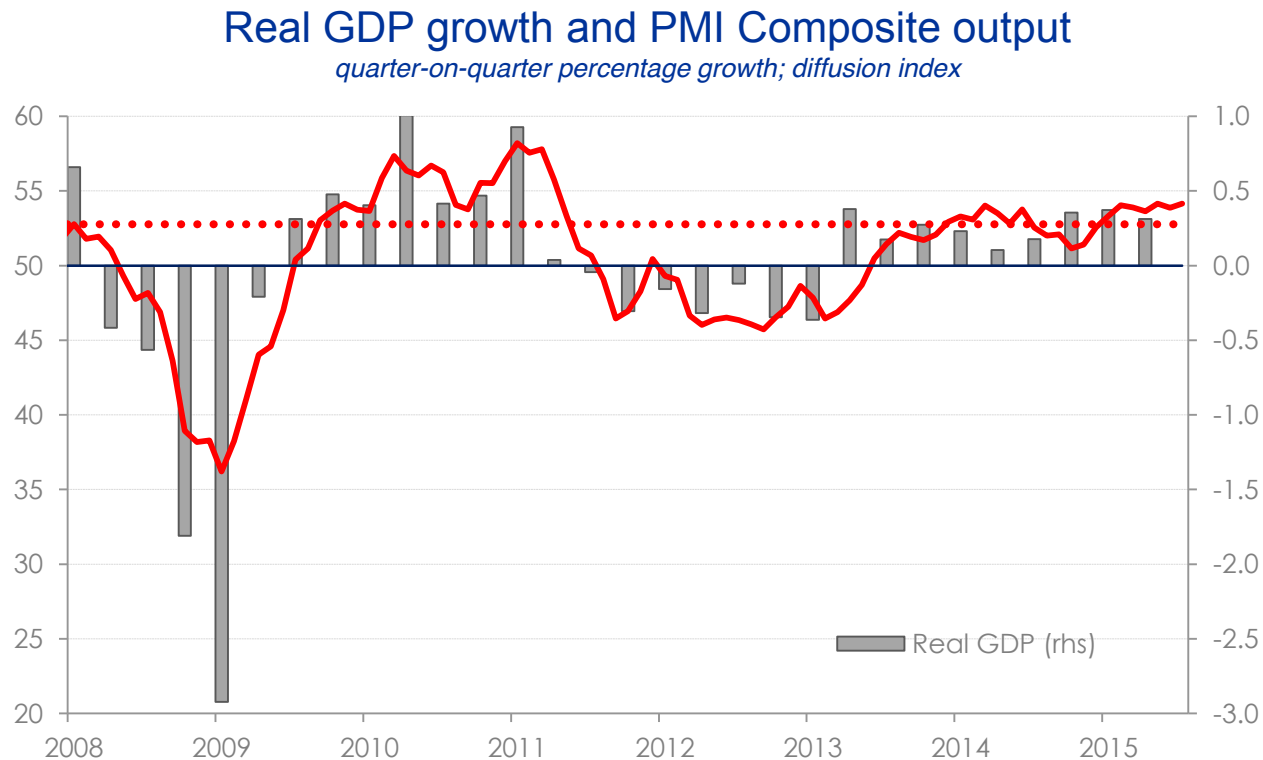


Sources: Thomson Reuters and ECB calculations.

Latest observation: 1 September 2015.

2015-09-21 Geneva

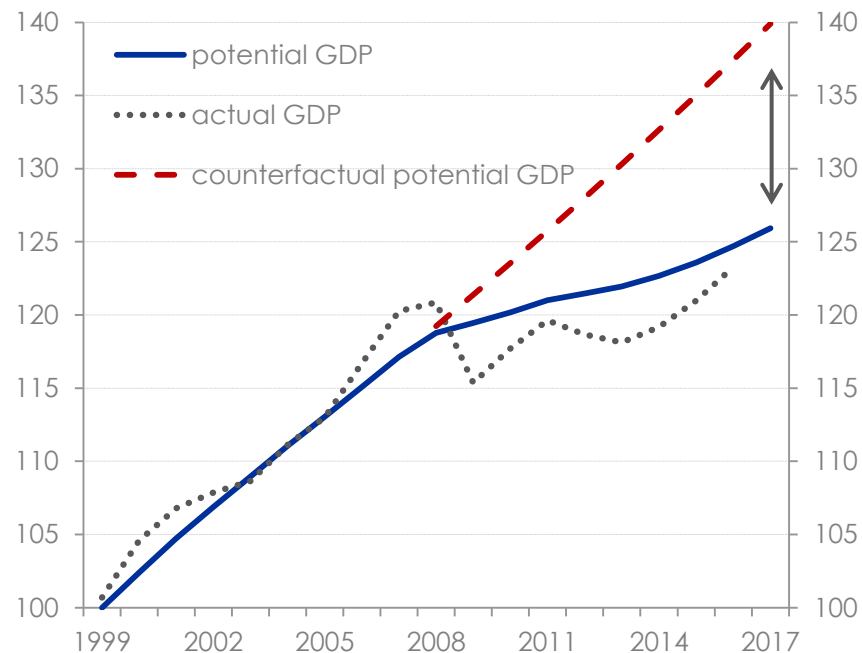
Real GDP growth and PMI Composite output



Sources: Eurostat, Markit and ECB staff calculations.
Latest observation: 2015Q2 for GDP growth, August 2015 for PMI.

Declining expectations of long-term growth

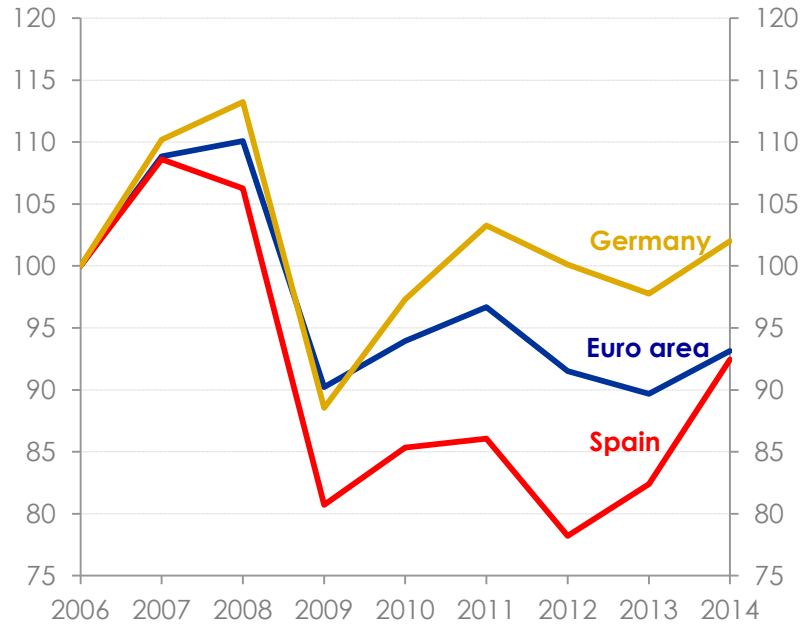
Potential output reduction due to the crisis - euro area
index, potential GDP in 1999=100



Source: European Commission Spring 2015 forecast and Output Gap Working Group.

Note: Counterfactual potential GDP assumes that potential GDP continued to grow at its 2007 growth rate, i.e. it reflects the observation that potential growth has already slowed down before the crisis.

Equipment investment 2006=100



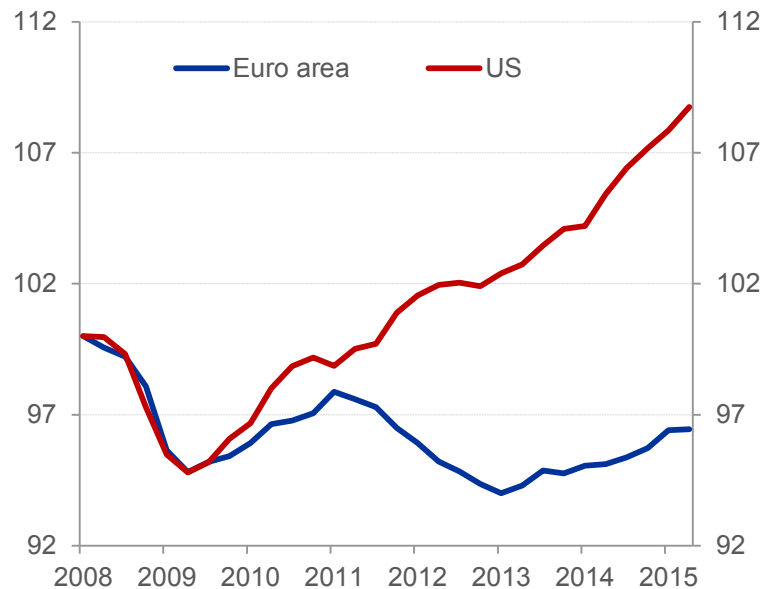
Sources: European Commission and ECB calculations.
Note: 2014 partially based on forecasts. Euro area refers to euro area 12.

Unemployment rate % of (extended) labor force

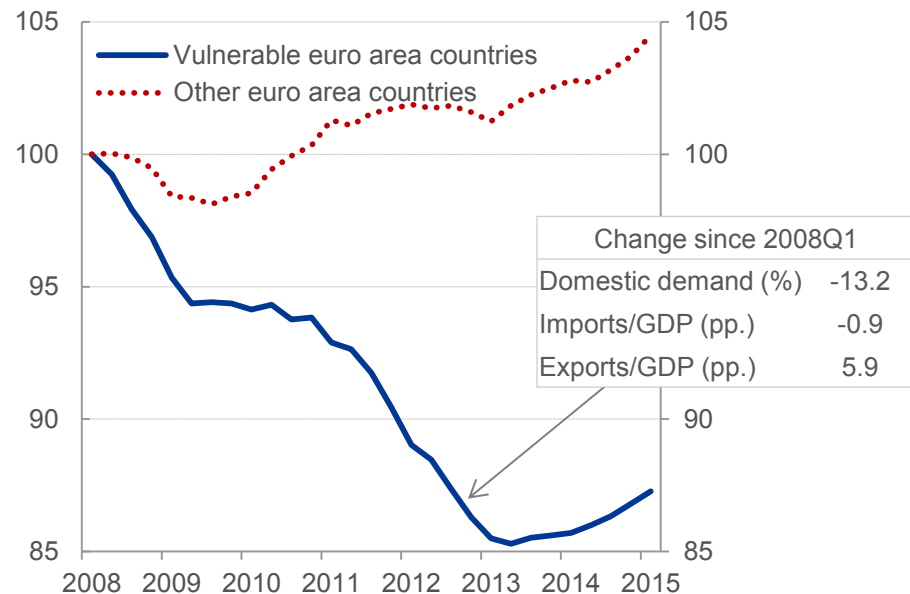


Sources: Labour Force Survey and ECB staff calculation.
Note: Discouraged workers are inactive people who are available but not searching a job. The extended labor force is the number of active persons extended with the number of discouraged workers.

Real domestic demand
2008q1 = 100



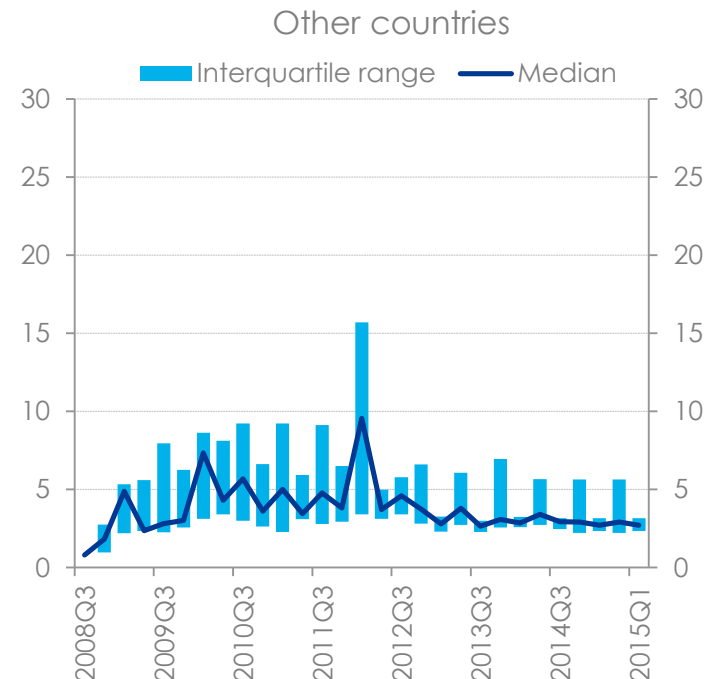
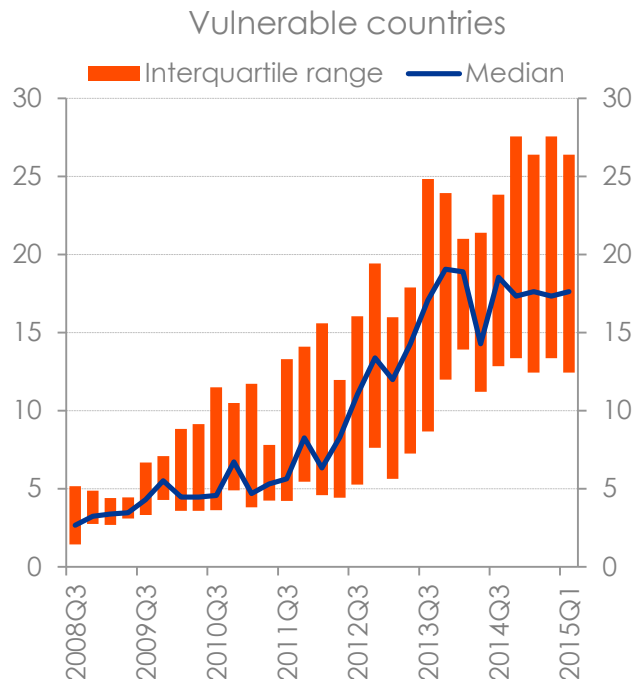
Sources: Bureau of Economic Analysis and Eurostat.



Sources: Eurostat and ECB calculations.

Note: "Vulnerable euro area countries" refers to CY, GR, IE, ES, IT, PT & SI.

Impaired loans of euro area banks *percentages of gross loans*



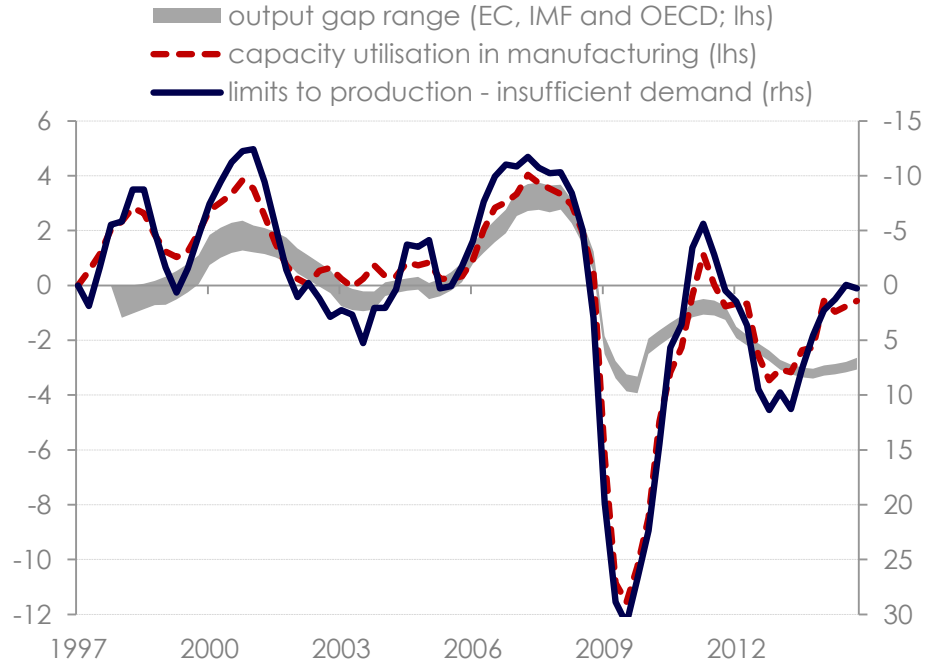
Sources: SNL and ECB calculations.

Notes: Based on an unbalanced sample of 32 euro area banks for vulnerable countries and 25 euro area banks for less vulnerable countries. The charts represents ratios of gross impaired customer and bank loans over gross loans.

The degree of slack in the economy

Output gap (INIs) and capacity utilisation

Output gap: in percent of potential output; survey indicators: deviation of balances from their historical mean

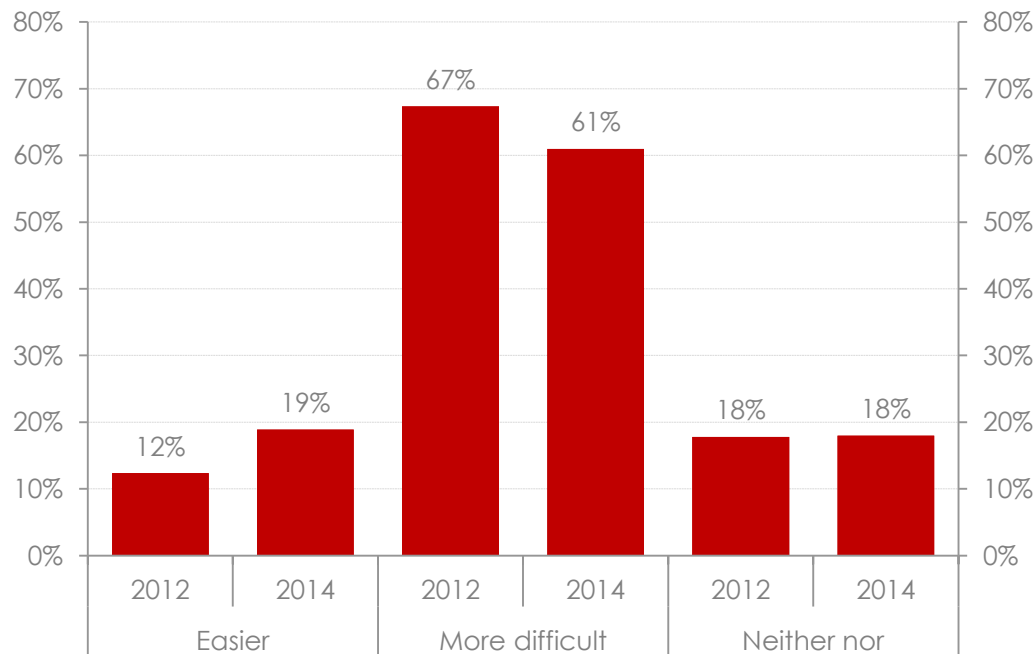


Sources: European Commission, IMF and OECD.

Pessimism over long-term outlook

“Generally speaking, do you think that the life of those in the EU who are children today will be easier, more difficult, or about the same as the life of those of your own generation?”

Share of respondents in the euro area

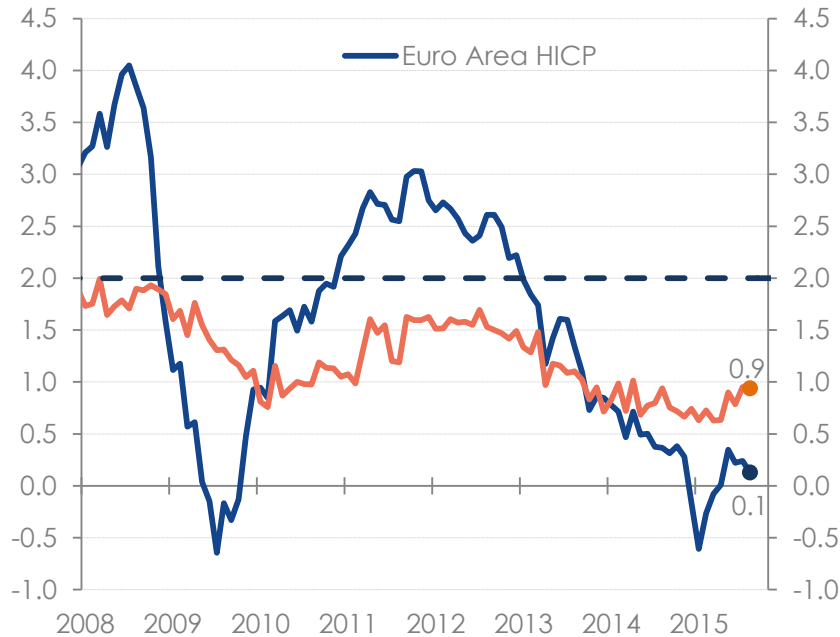


Source: Eurobarometer 's 70.1, 78.2 and 81.1.

Note: Excludes response “Don't know”.

Inflation and inflation expectations

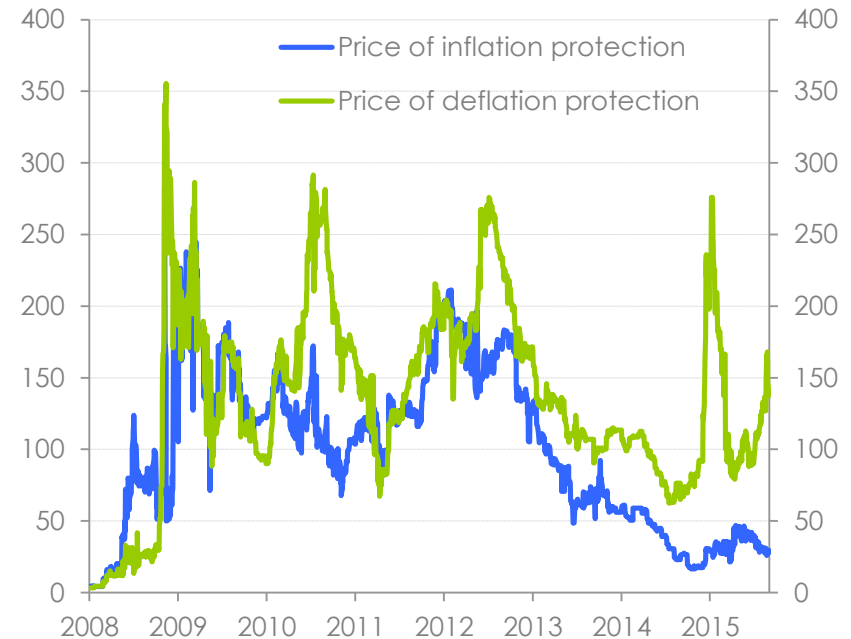
Euro area inflation % p.a.



Source: Eurostat.

Latest observation: August 2015

Price of inflation and deflation protection basis points per annum



Source: Bloomberg.

Note: Price of 0% floor and 4% cap options (year-on-year) on euro area HICP inflation – 5Y maturity. Developments should be interpreted with caution due to limited market liquidity. Latest observation: 2 September 2015.

Standard measures

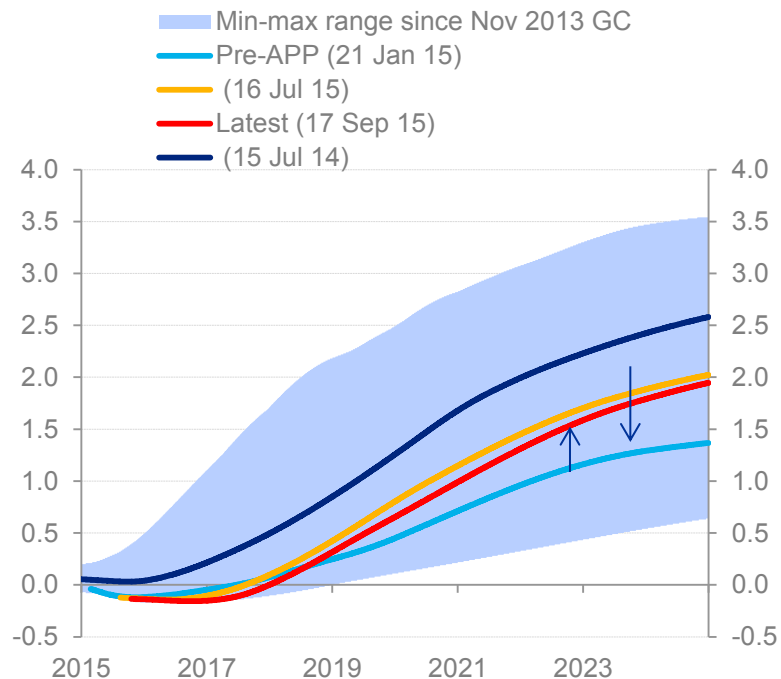
- **Interest rates** (Sept. 14: zero lower-bound)

Non-standard measures

- **Liquidity and funding measures**
 - Fixed-rate tender procedure with full allotment
 - Extension of the maturity of refinancing operations (3y LTRO in Nov. 11)
 - Expansion of the collateral pool
- **Outright purchases in malfunctioning market segments**
 - Securities Markets Programme
 - Covered Bond Purchase Programmes
 - Outright Monetary Transactions (Sept. 12)
- **Forward guidance** (July 13)
- **Credit easing and asset purchases** (June 14 to January15)
 - Targeted Long-Term Refinancing Operations (TLTRO)
 - ABS Purchase Programme
 - Covered Bond Purchase Programme
 - Expanded Asset Purchase Programme

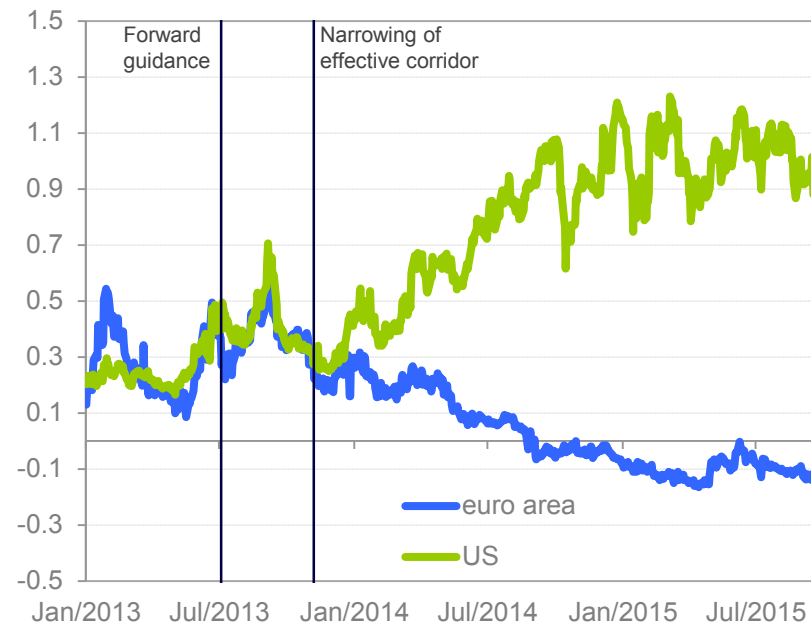
Shallow yield curve and declining cost of borrowing

EA: EONIA expectations based on the OIS yield curve
% p.a.



Sources: Reuters and ECB calculations.
Note: OIS = overnight index swap.

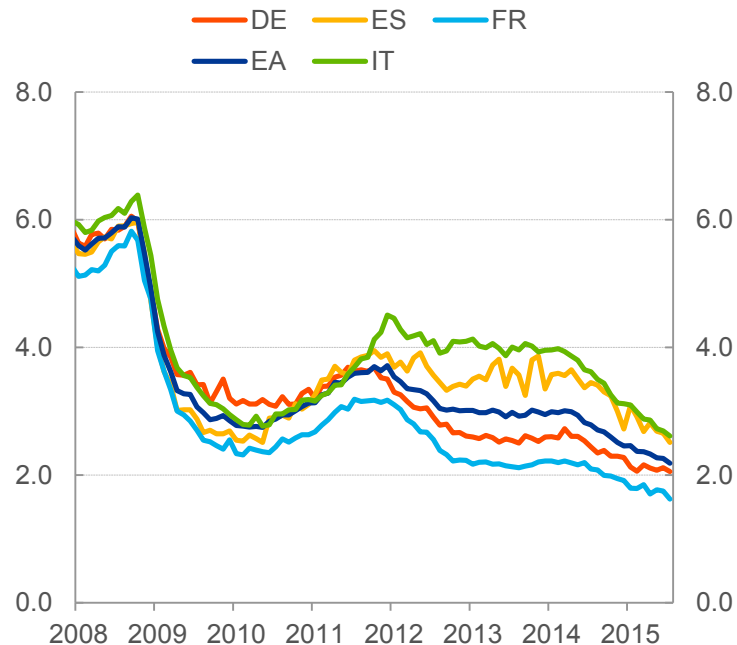
1y1y EUR and USD OIS
% p.a.



Source: Bloomberg.

Composite indicator of the nominal cost of bank borrowing for NFCs

% p.a.



Source: ECB.

Note: The indicator for the total cost of bank borrowing is calculated by aggregating short- and long-term rates using a 24-month moving average of new business volumes.