



EUROPEAN CENTRAL BANK

EUROSYSTEM

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Executive Board of the ECB**

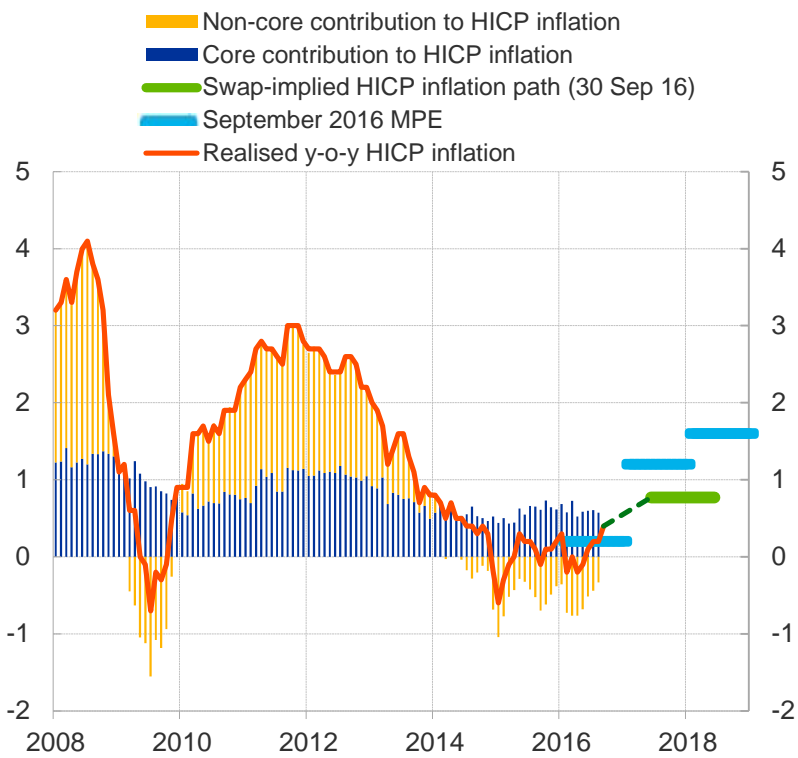
Monetary Policy Transmission in the Euro Area

New York, 6 October 2016

SUERF Conference “Global
Implications of Europe’s Redesign”

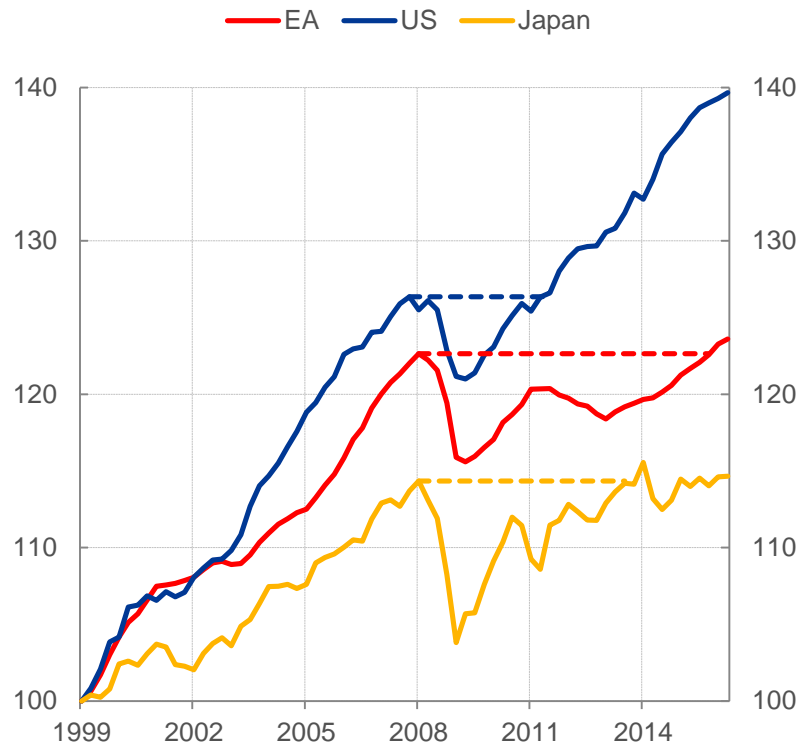
Inflation has been steadily below norm in protracted slump

Euro area HICP inflation (year-on-year percent change)



Sources: Thomson Reuters, Eurostat, ECB calculations.
 Latest observation: September 2016 for HICP with September 2016 as flash estimate of HICP and 30 September 2016 for swap-implied inflation path.

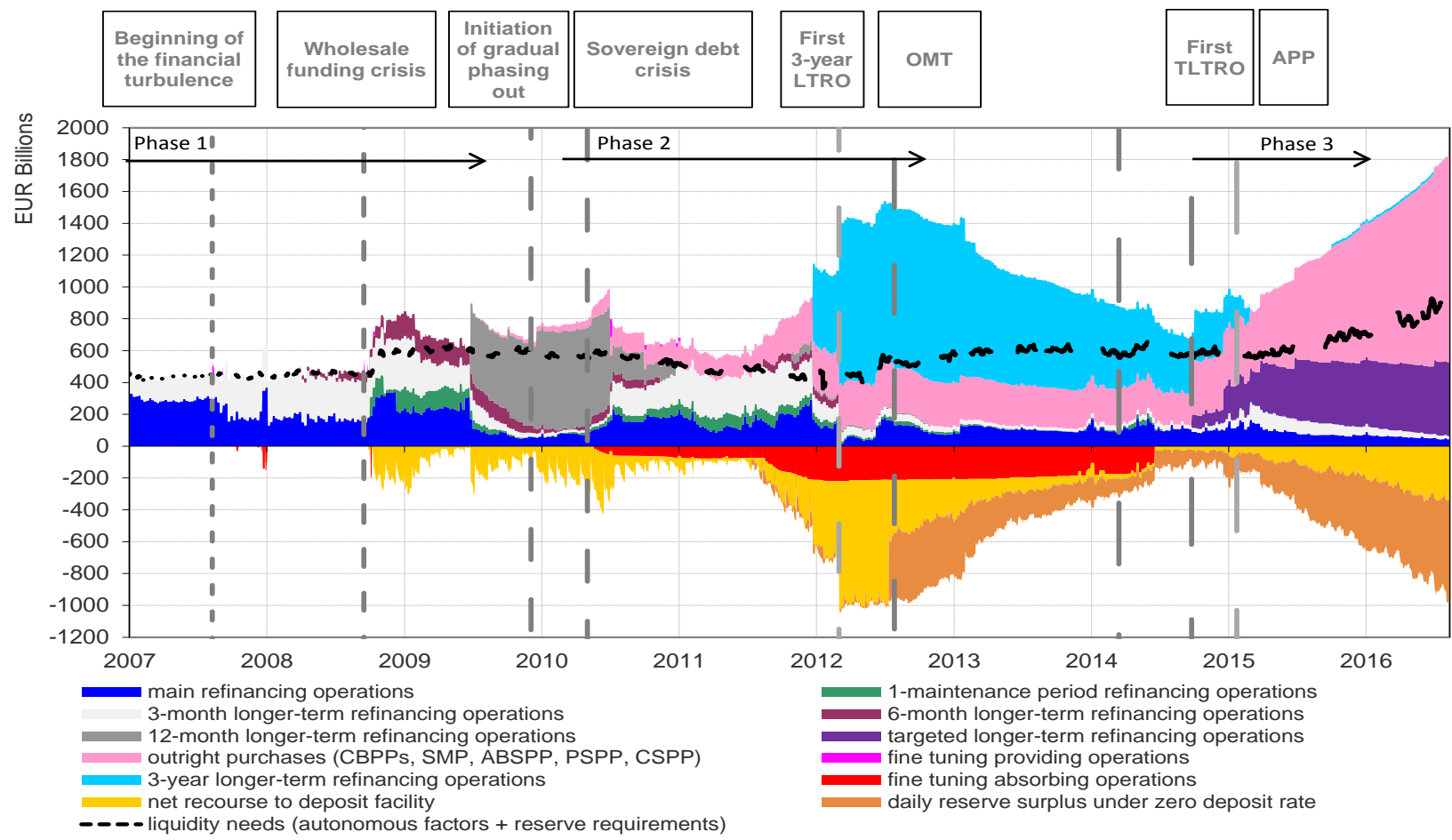
Real GDP (Index, 1999Q1=100)



Sources: Eurostat, BEA, Cabinet Office, ECB calculations.
 Notes: horizontal dotted lines represent pre-crisis peak real GDP level.
 Latest observation: 2016 Q2.

Eurosystem balance sheet developments

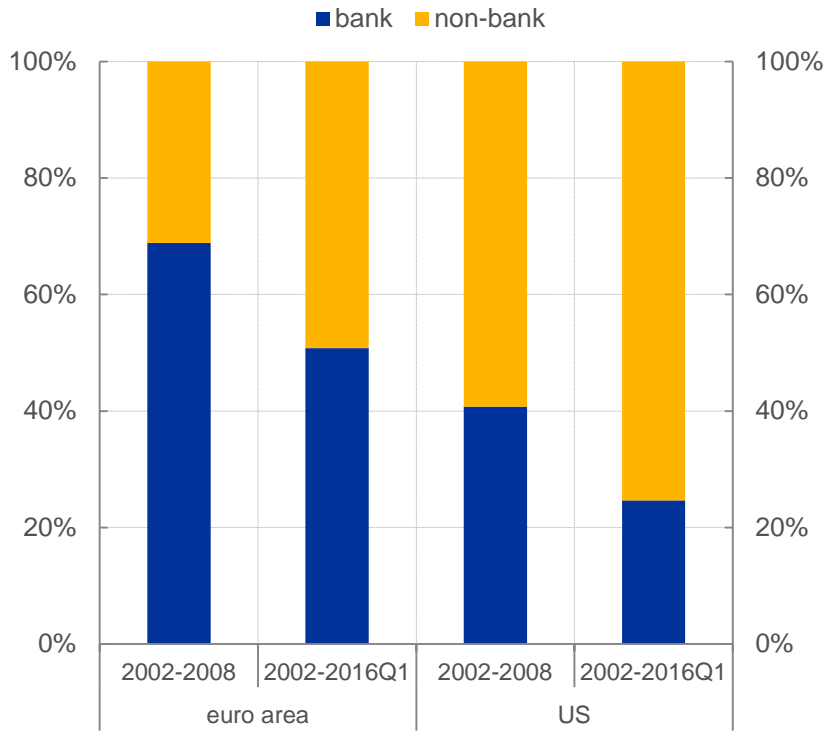
Eurosystem balance sheet composition (EUR billions)



Source: ECB
Latest observation: 23 September 2016.

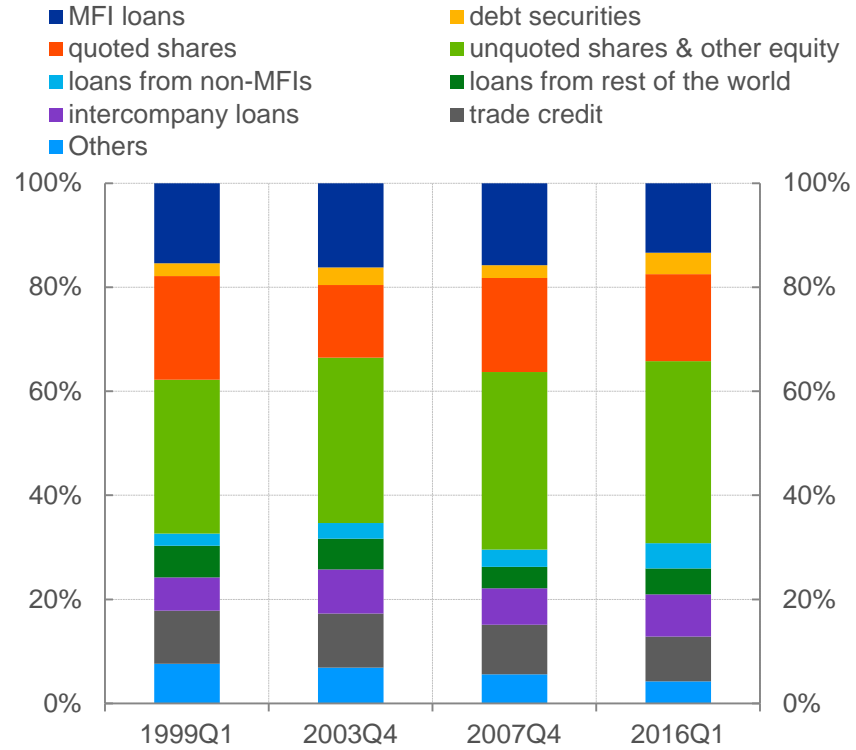
Source of NFCs' financing in the Euro Area and the US

Share of bank and non-bank financing in total non-financial corporation financing
(cumulated transactions, percentages)



Source: ECB, Federal Reserve System.
Notes: Calculations are based on cumulated transactions since 2002.
Latest observation: Q1 2016.

Shares in total external financing based on outstanding amounts
(percentages)

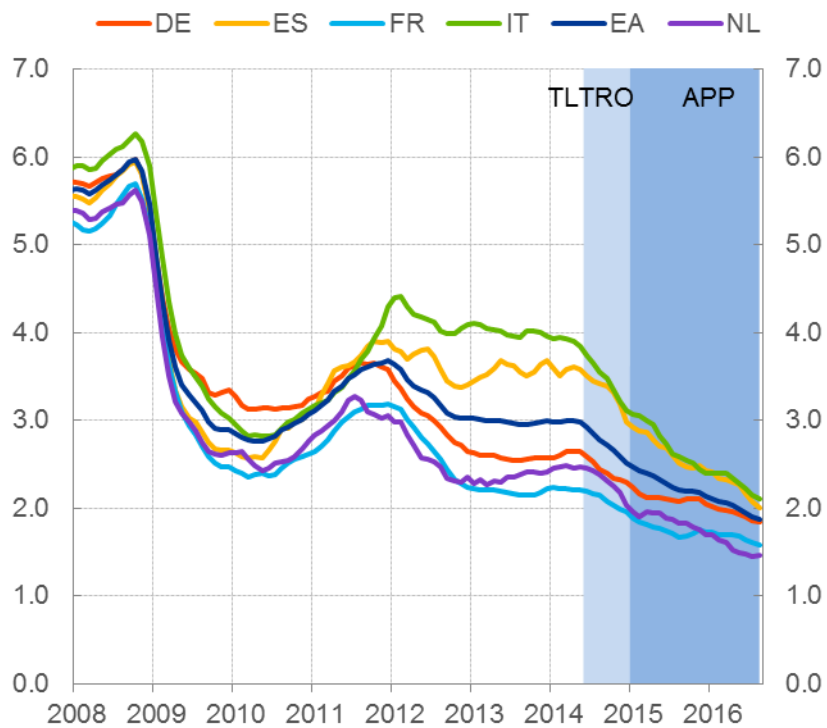


Sources: ECB.
Notes: The share of MFI loans is significantly higher than that of debt securities. The share of quoted equity is broadly the same as that of MFIs. This relatively high share is explained by valuation effects, due to increases in share prices. Unquoted shares and other equity has the highest share in total external financing. It includes retained earnings of NFCs.
Latest observation: Q1 2016.

Exceptional pass-through via the bank lending channel

Bank lending rates on loans for non-financial corporations

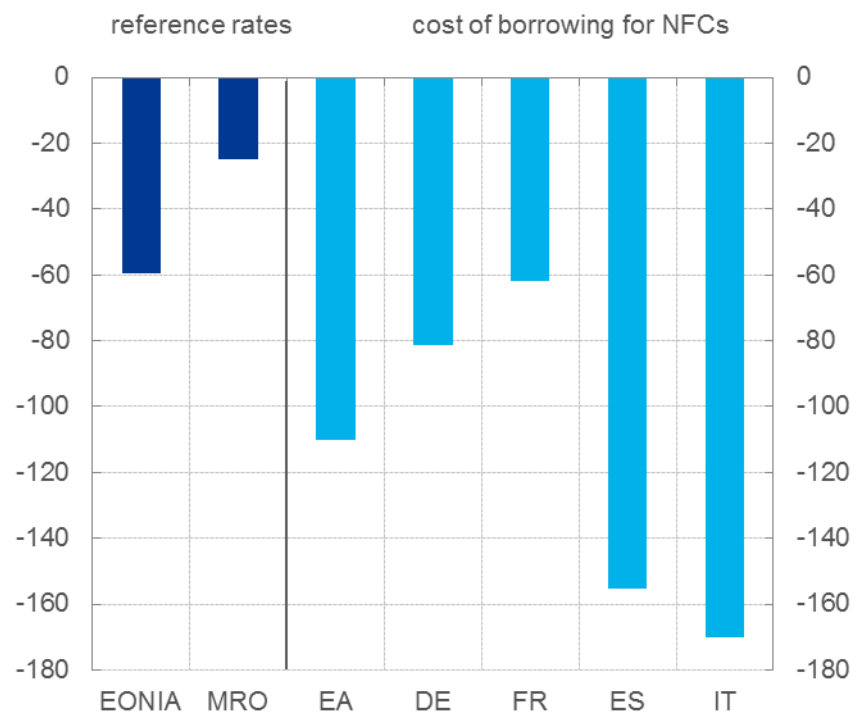
(percentages per annum; three-month moving averages)



Source: ECB.
 Notes: The indicator for the total cost of lending is calculated by aggregating short- and long-term rates using a 24-month moving average of new business volumes.
 Latest observation: August 2016.

Interest rate pass-through from reference rates to cost of borrowing for NFCs (May 2014 – August 2016)

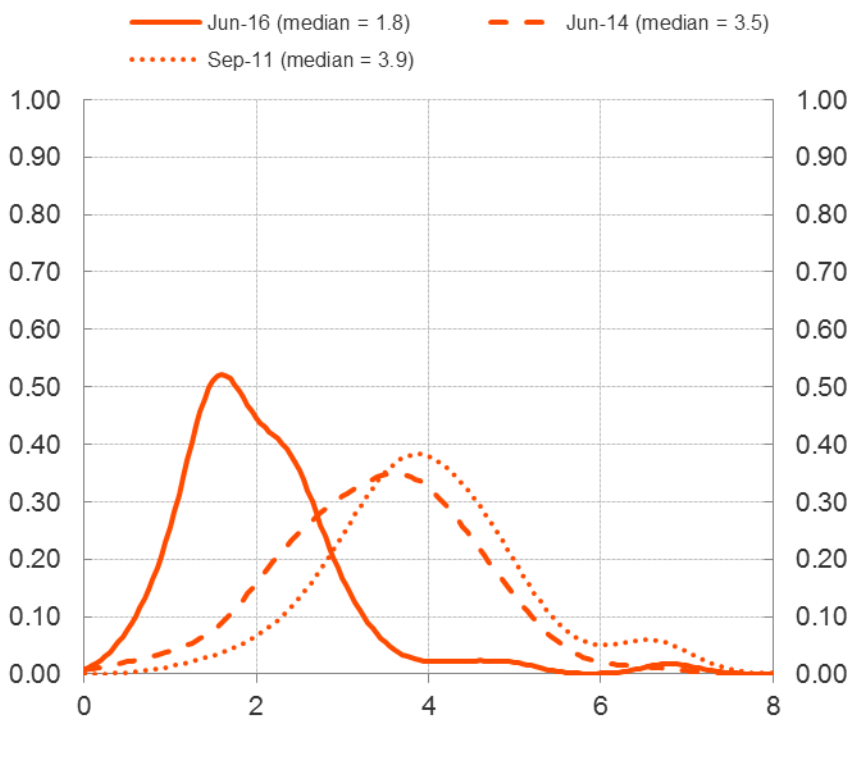
(basis points)



Sources: ECB.
 Notes: The date of May 2014 was selected as it immediately precedes the ECB's announcement of some monetary policy measures taken to enhance the functioning of the monetary policy transmission mechanism on 5 June 2014 (announcement of the modalities of TLTROs and intensification of preparatory work related to outright purchases of ABS). Reference rates are monthly averages.
 Latest observation: August 2016

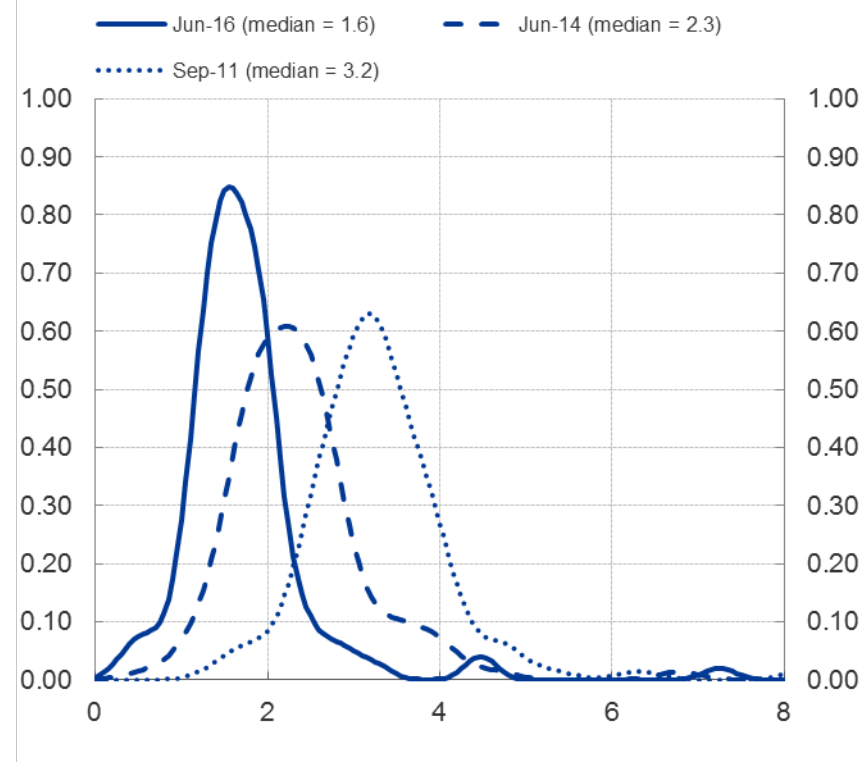
Impact on lending rates for NFCs

**Composite lending rates for NFCs:
distribution of
individual MFIs in vulnerable countries**
(percentages per annum)



Source: ECB (IMIR).
Notes: The figure reports the density approximation of the lending rate distributions in three different periods (September 2011, June 2014 and June 2016). Vulnerable countries: 92 MFIs from IT, ES, PT, IE.

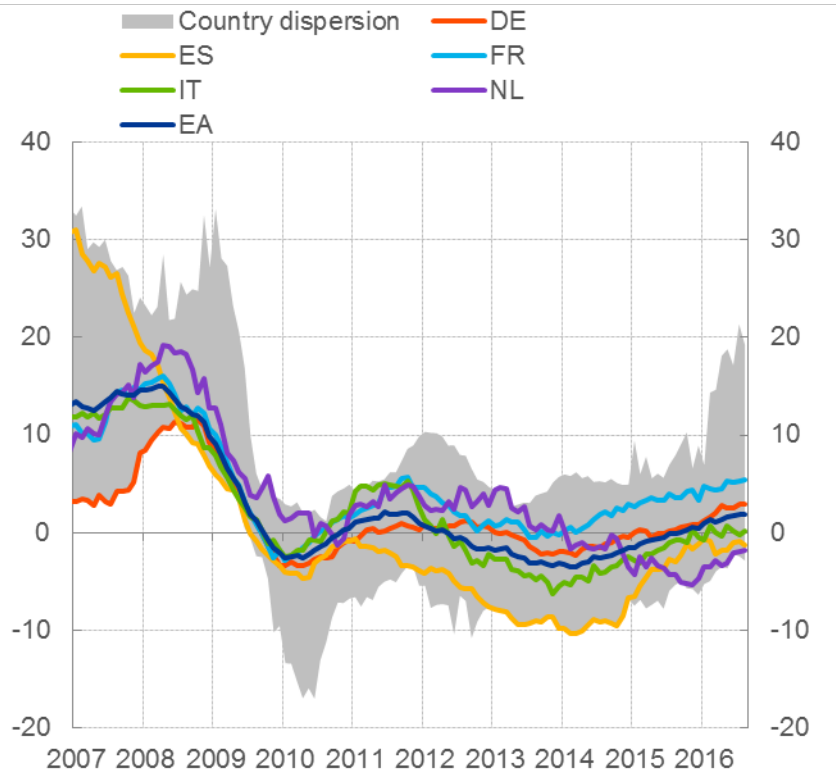
**Composite lending rates for NFCs:
distribution of
individual MFIs in less vulnerable countries**
(percentages per annum)



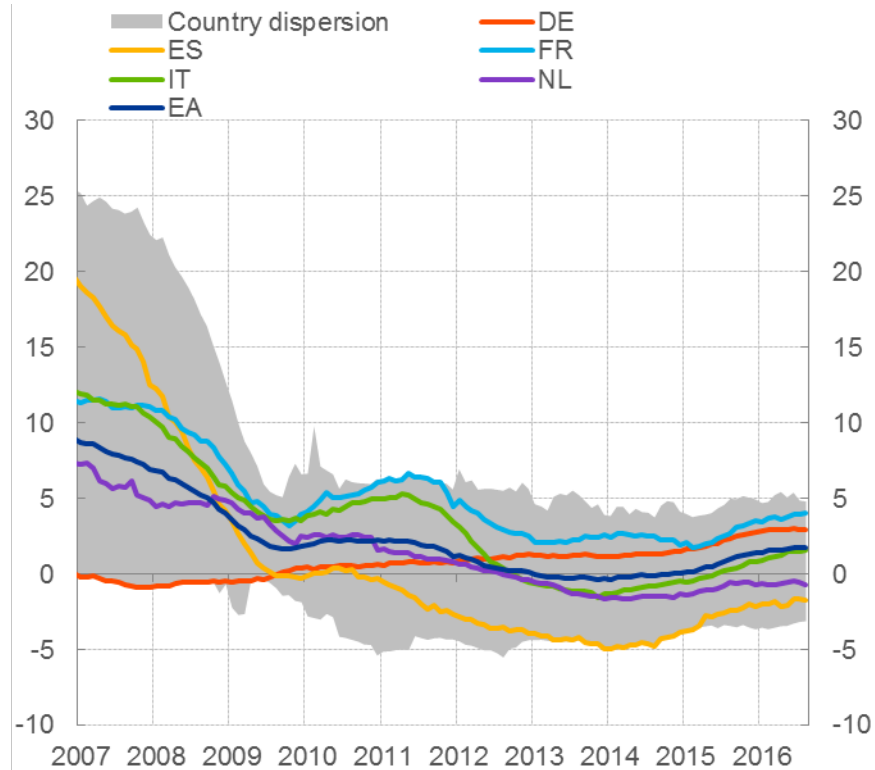
Source: ECB (IMIR).
Notes: The figure reports the density approximation of the lending rate distributions in three different periods (September 2011, June 2014 and June 2016). Other countries: 142 MFIs from DE, AT, FR, BE, NL.

Credit growth in the Euro Area

MFI loans to non-financial corporations in selected euro area countries
(annual percentage changes)



MFI loans to households in selected euro area countries
(annual percentage changes)



Source: ECB.

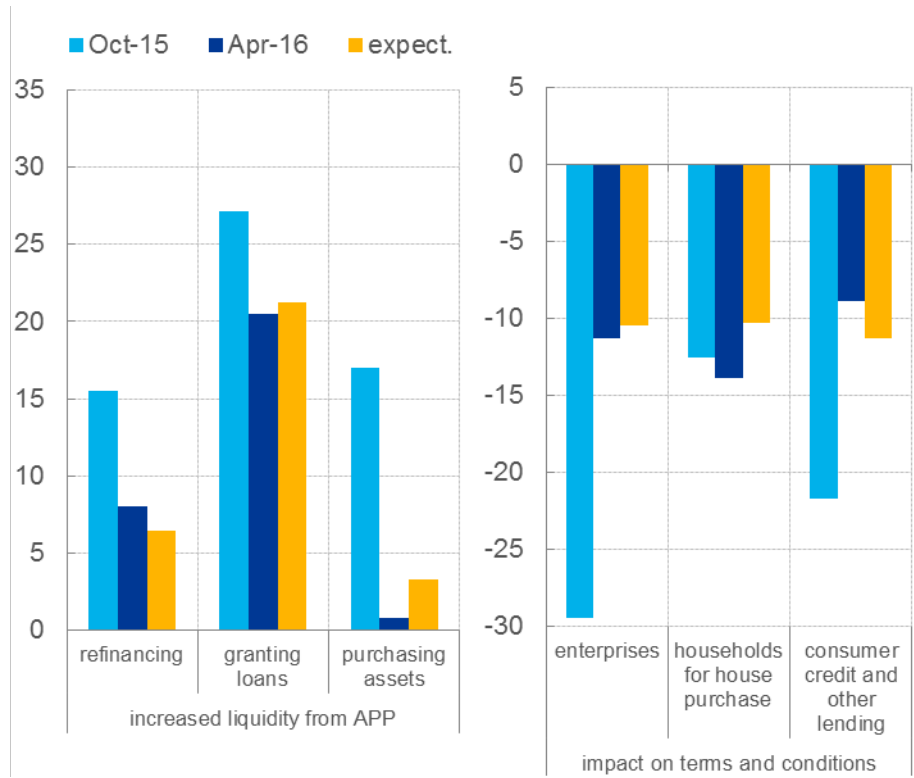
Notes: Adjusted for loan sales, securitisation and notional cash pooling. The cross-country dispersion is calculated on the basis of minimum and maximum values using a fixed sample of 12 euro area countries.

Latest observation: August 2016.

APP & NIRP reinforce bank lending channel

Purposes for which euro area banks use the additional liquidity from the expanded APP and impact on margins

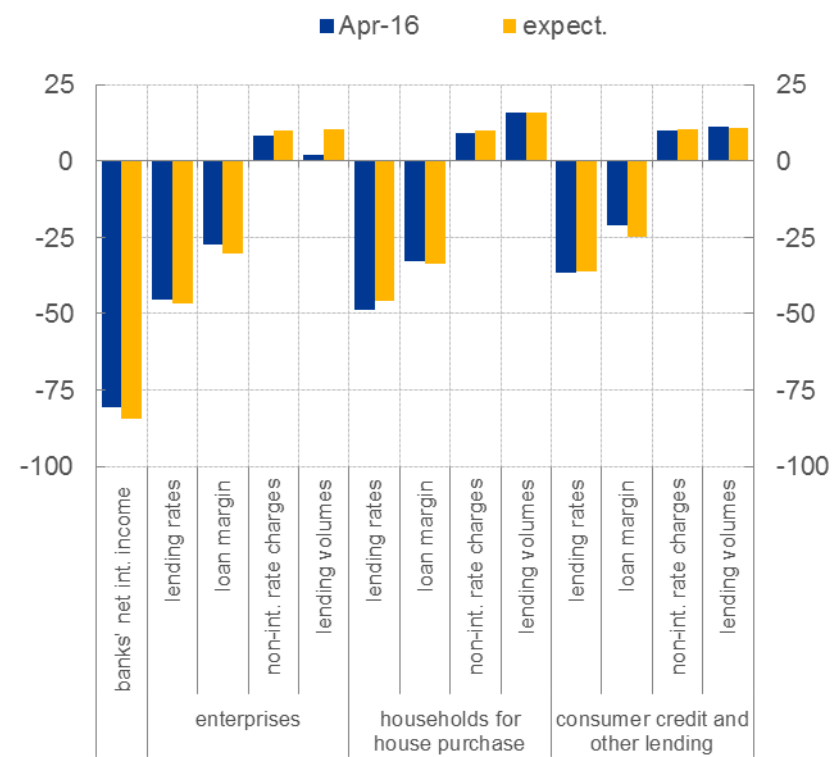
(LHS: average percentages of respondents per category; RHS: net percentages of respondents)



Source: ECB (BLS).
 Notes: Increased liquidity from APP refers to both increased liquidity from sales of marketable assets and/or from increased customers' deposits. Sum of contributed somewhat and considerably to this purpose.

Impact of the negative DFR on banks' net interest margin and bank lending

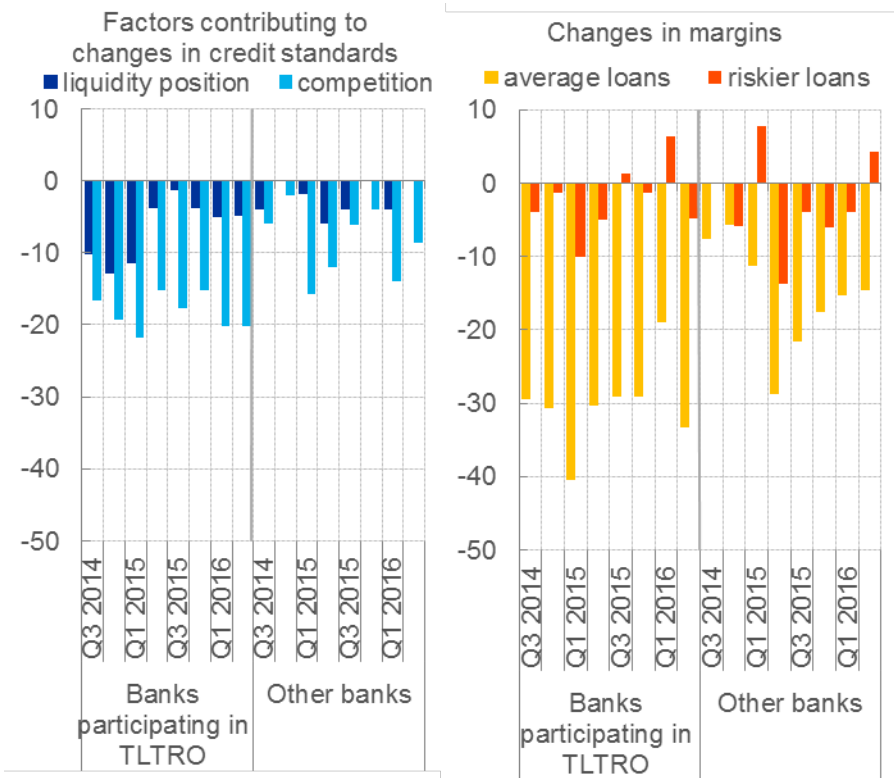
(net percentage of respondents; over the past and next six months)



Source: ECB (BLS).
 Notes: The net percentages are defined as the difference between the sum of the percentages for "increased considerably" and "increased somewhat" and the sum of the percentages for "decreased somewhat" and "decreased considerably". The results shown are calculated as a percentage of the number of banks which did not reply "not applicable".

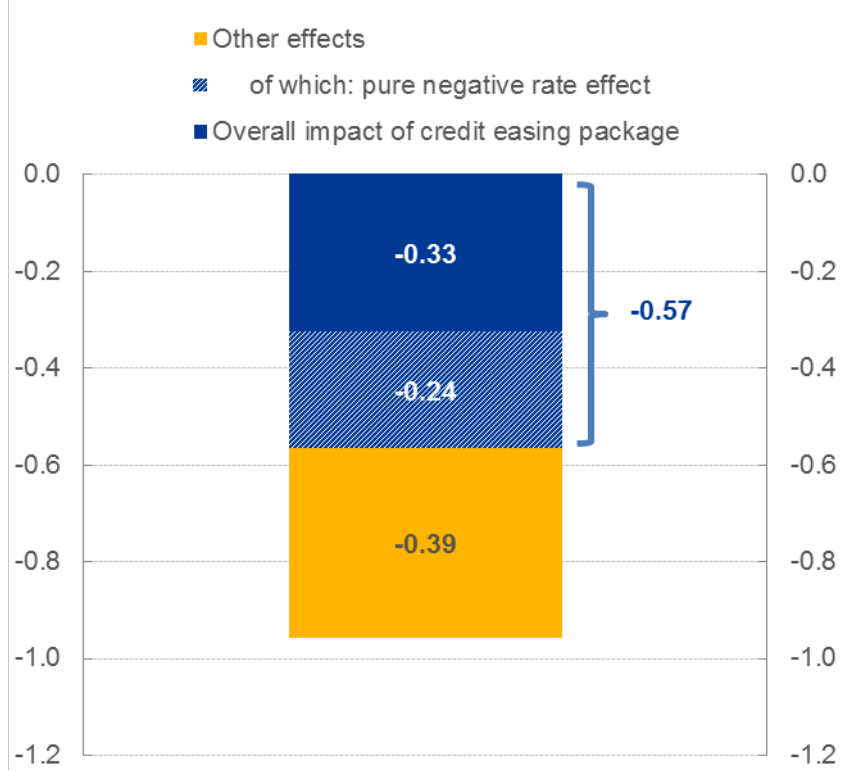
Impact of non-standard measures on lending margins

Banks' liquidity position, competitive pressures and lending margins for loans to enterprises by TLTRO participation (unweighted net percentages)



Source: ECB, BLS.
 Notes: Based on unweighted individual data. Net percentages for banks indicating their participation in at least one of the TLTROs and other reporting banks. Evidence on TLTRO participation refers to the results of the September 2015, January 2015, July 2015, January 2016 and July 2016 BLS. Selected factors contributing to changes in credit standards as well as changes in margins refer to loans to enterprises.

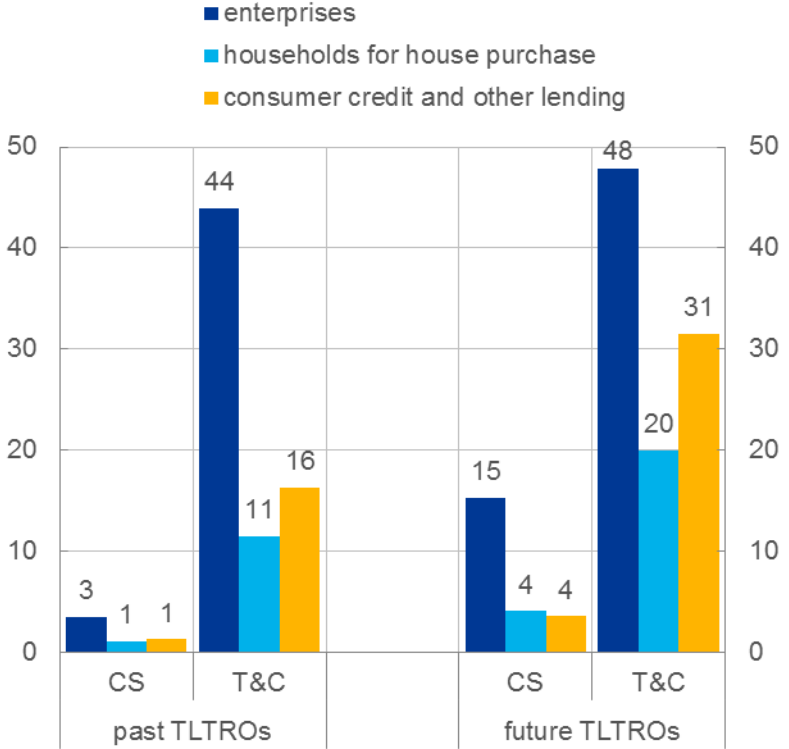
Model-based decomposition of change in median loan-deposit margin for June 2014 to July 2016 (percentage points)



Sources: ECB, ECB estimates.

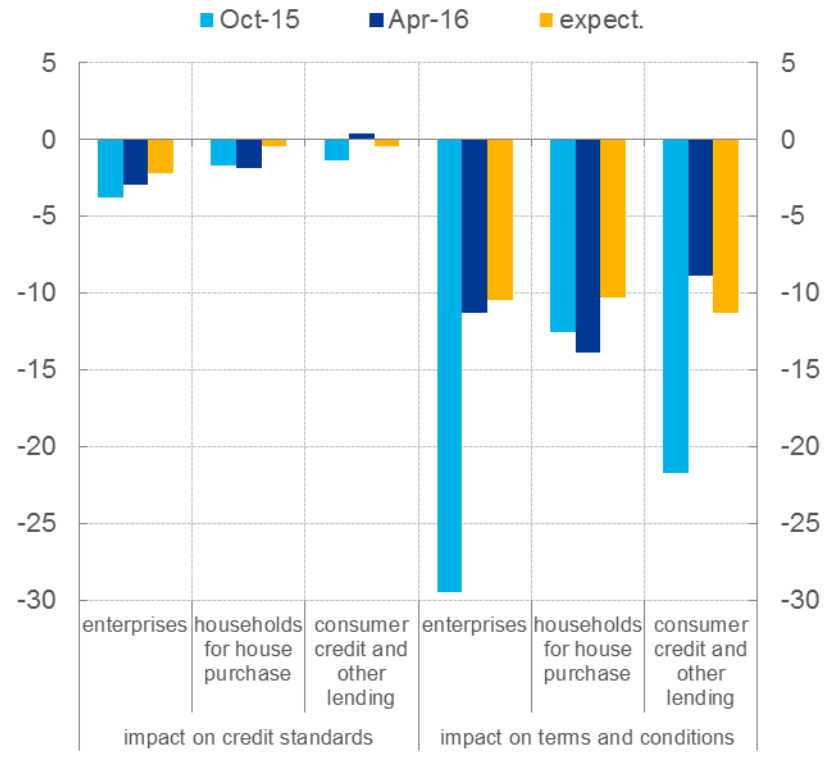
Survey evidence: Impact on lending conditions

Improvement of past and future TLTROs on credit standards (CS) for loans and on credit terms and conditions (T&C) (percentage of respondents)



Source: ECB (BLS).
 Notes: "Past TLTROs" refer to all TLTROs which took place up until the specified survey round; likewise, "future TLTROs" refer to operations beyond this point. Values displayed in the chart are the sum of the percentage of banks responding "has contributed or will contribute considerably to easing credit standards/terms and conditions" and "has contributed or will contribute somewhat to easing credit standards/terms and conditions".

Improvement of the expanded APP on bank lending (net percentage of respondents; over the past and next six months)

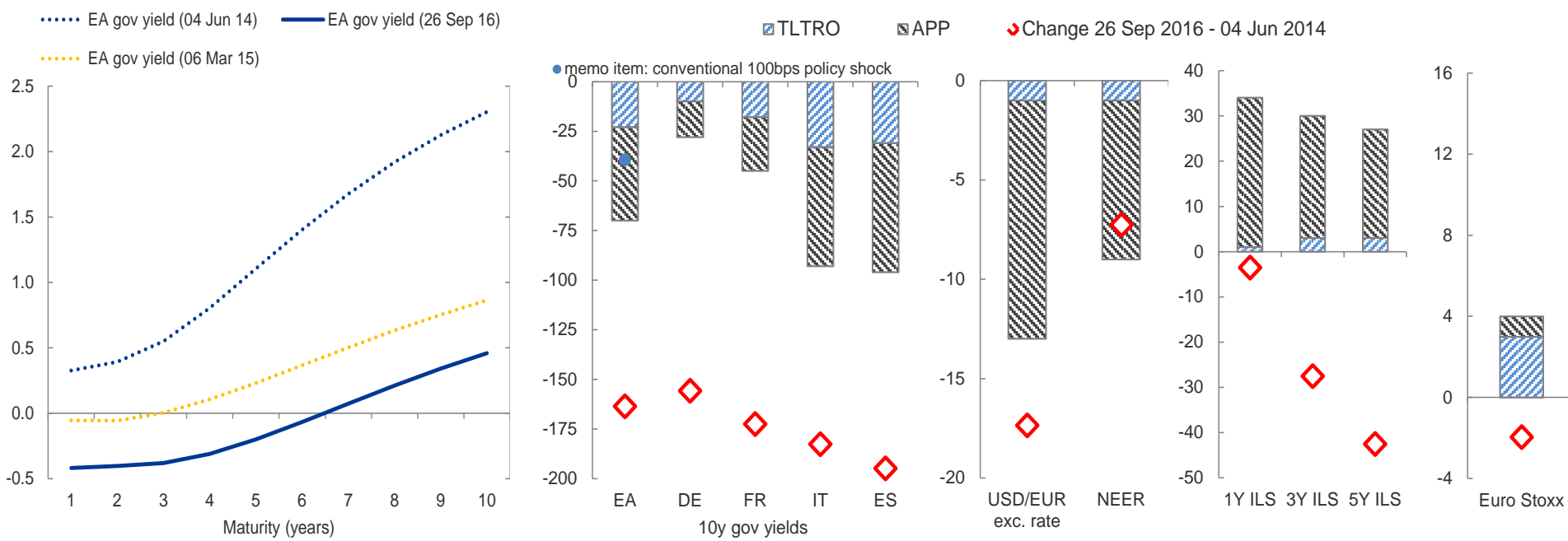


Source: ECB (BLS).
 Notes: The net percentages are defined as the difference between the sum of the percentages for "tightened considerably" and "tightened somewhat" and the sum of the percentages for "eased somewhat" and "eased considerably". The results shown are calculated as a percentage of the number of banks which did not reply "not applicable". The timescale in the legend refers to the respective BLS survey rounds. "expect." stands for expectations that banks provided in the current round.

NIRP, APP, TLTRO eased borrowing terms across markets

Term structure, yields and financial prices since 4 June 2014 and impact of measures until March 2015

(exchange rates and Eurostoxx in percent; else in basis points)



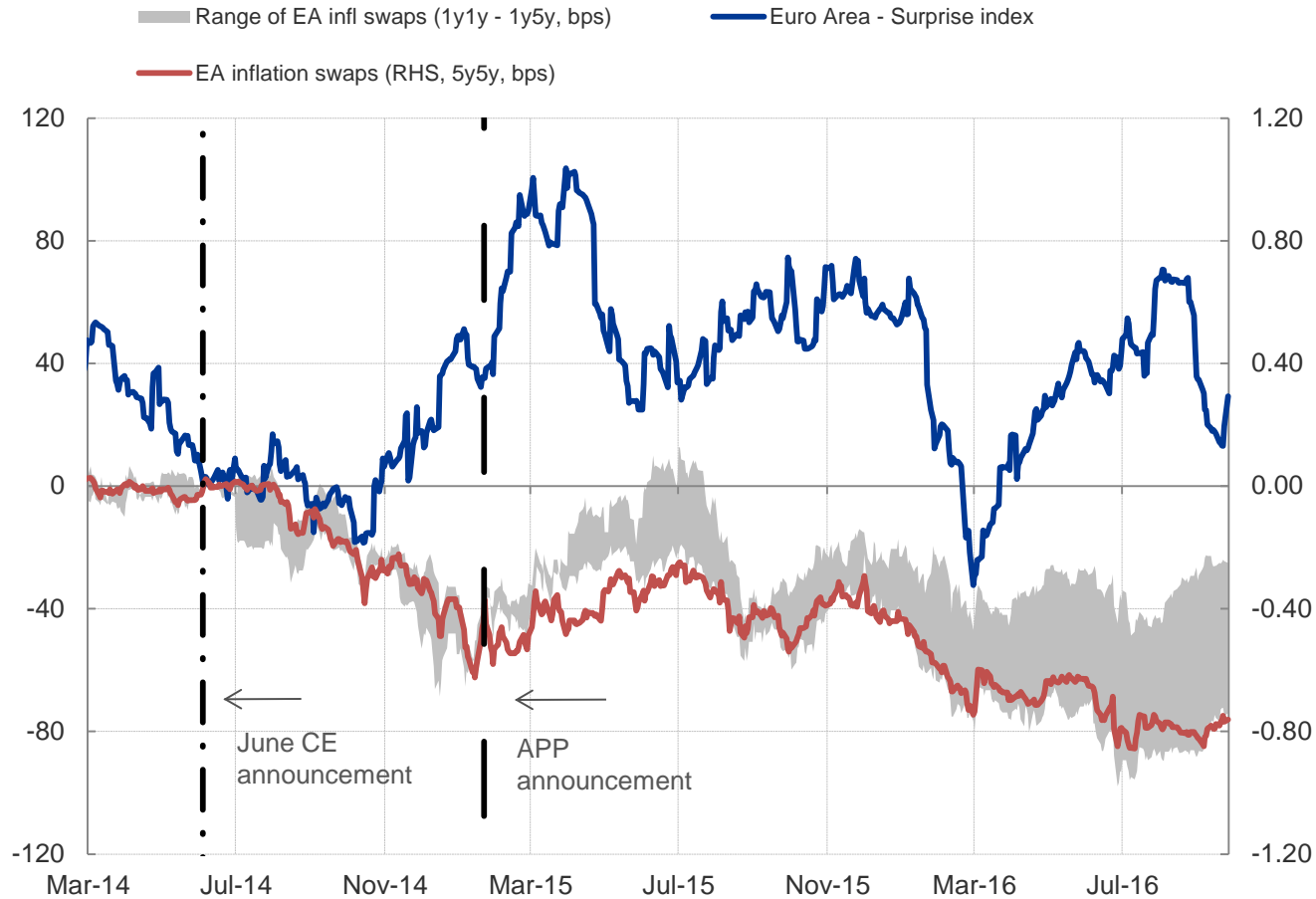
Sources: Bloomberg, ECB, ECB calculations.

Notes: The impact of APP and TLTRO is estimated on the basis of an “controlled event-study” methodology which focuses on the announcement effects of the June-September package; see the EB article “The transmission of the ECB’s recent non-standard monetary policy measures” (Issue 7 / 2015). The January 2015 APP impact is estimated on the basis of two event-studies exercises by considering a broad set of events that, starting from September 2014, have affected market expectations about the programme; see Altavilla, Carboni, and Motto (2015) “Asset purchase programmes and financial markets: lessons from the euro area” ECB WP No 1864, and De Santis (2015) mimeo. The ten-year government bond yield for the euro area refers to an indicator constructed by the ECB using the Nelson-Siegel-Svensson model, which includes all issuers and all ratings. The nominal effective exchange rate of the euro used in the estimation is that against the currencies of the EER-19 group of trading partners (Australia, Bulgaria, Canada, China, Croatia, the Czech Republic, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States). For the TLTROs, the events are 8 May and 5 June 2014. For the APP, the exercise is based on 17 event dates. For 2014 the selected events are: 4, 12, 24 and 25 September; 2, 10 and 24 October; 6, 17, 21 and 27 November and 4 December. For 2015 the events are 2, 8, 14 and 22 January and 5 March.

Latest observation: 26 September 2016.

Flow of macro-news and market-based inflation expectations

(Surprise index and Inflation swap-derived inflation expectations index, 4 June 2014=0)

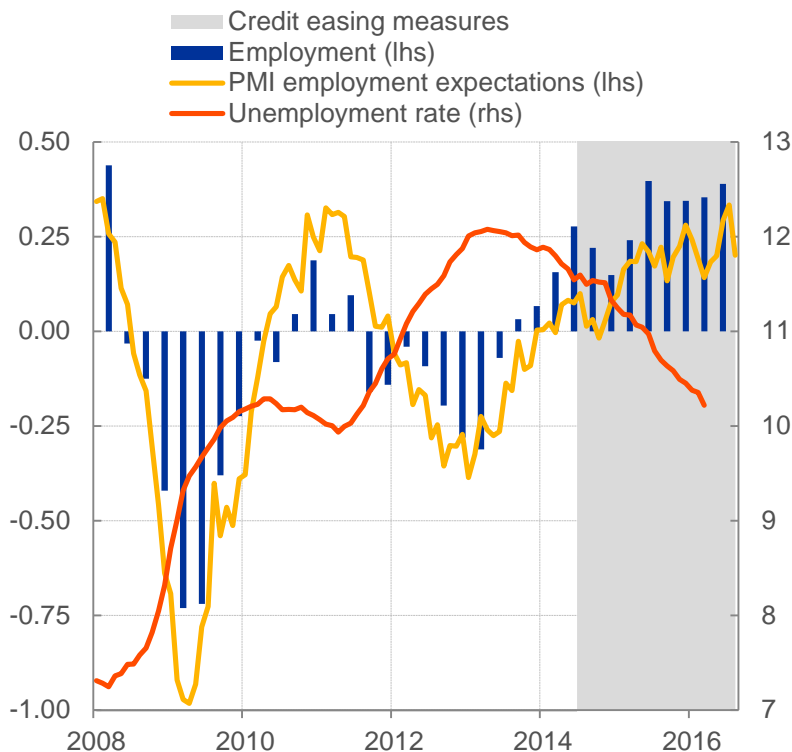


Sources: Bloomberg and ECB.
Latest observation: 26 September 2016.

Inflection point for employment and real investment

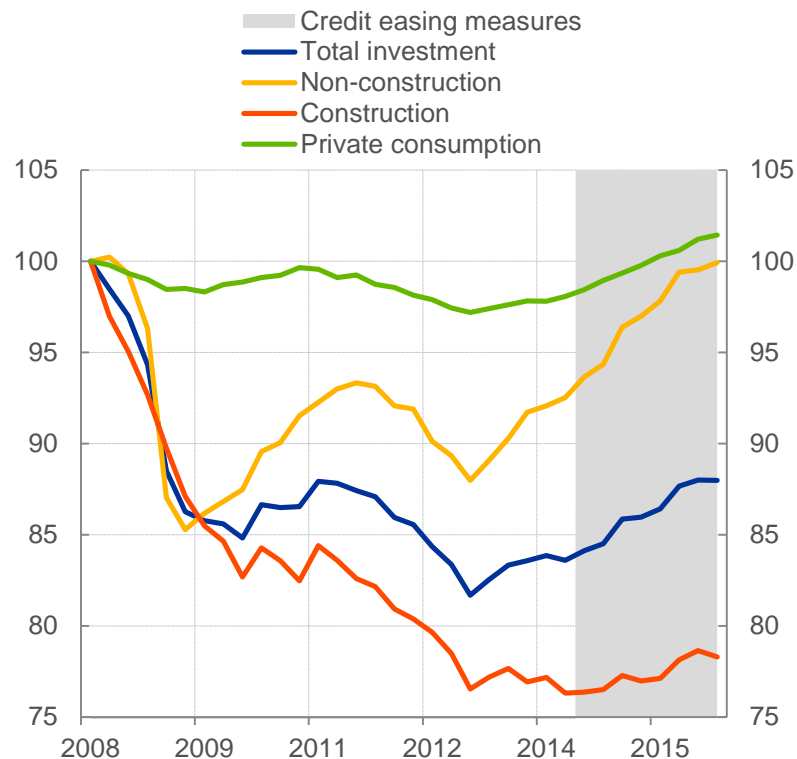
Employment, unemployment and the PMI

(q-o-q % growth; index; % of labour force)



Real investment

(Index, 2008Q1 = 100)



Sources: Eurostat and Markit.

Note: The PMI is expressed as deviations from 50 divided by 10.

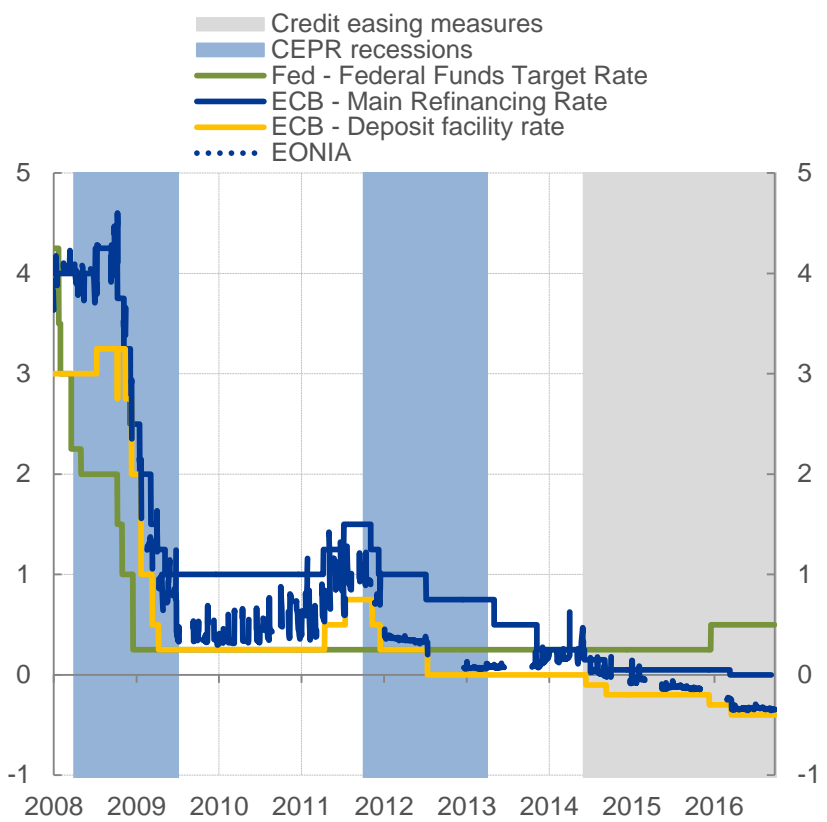
Latest observation: 2016Q2 for employment, August 2016 for unemployment and April 2016 for the PMI.

Sources: Eurostat and ECB calculations

Latest observation: 2016Q2.

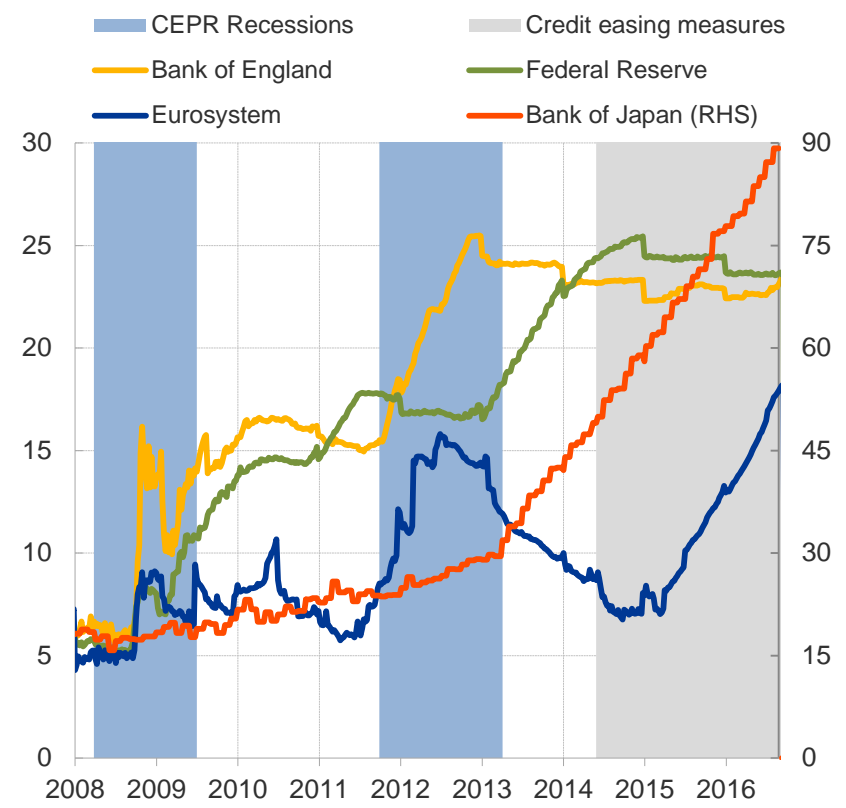
Post-2014 policies have eased further, restored liquidity

ECB and FED key interest rates and EONIA (percent)



Source: ECB, Federal Reserve.
 Notes: Main Refinancing Rate (ECB), Federal Funds Target Rate (Fed), EONIA (ECB).
 Latest observation: 23 September 2016.

Central bank balance sheets (percent of GDP)



Source: ECB, Federal Reserve, Bank of England, Bank of Japan, Eurostat, BIS.
 Notes: The ECB balance sheet only comprises assets related to monetary policy.
 Latest observation: August 2016.