



EUROPEAN CENTRAL BANK

EUROSYSTEM

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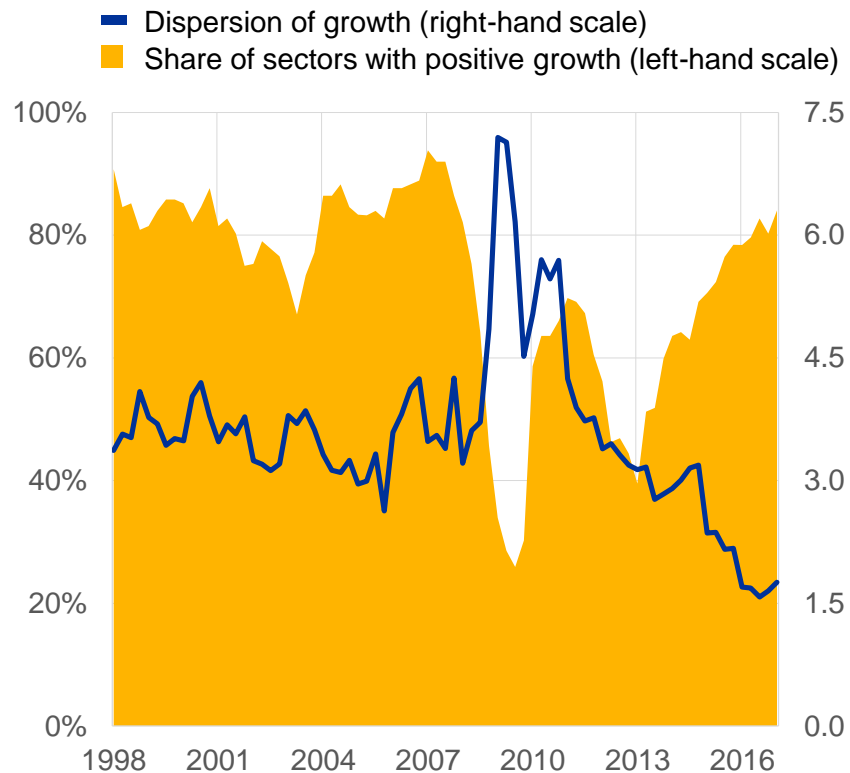
Member of the Executive Board
European Central Bank

Convergence matters for monetary policy

Brussels, 30 June 2017

Dispersion of value-added growth

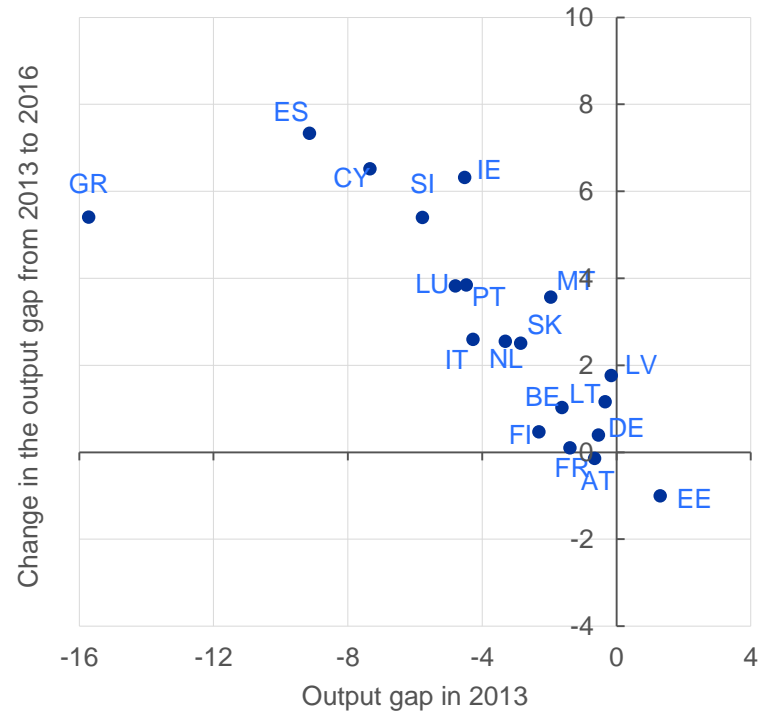
(lhs-axis: percentages, rhs-axis: percentage points)



Sources: Eurostat and ECB calculations.

Notes: The share of sectors with positive growth is constructed as the percentage of the 162 country-sector pairs that reported positive year-on-year growth in value added. The dispersion of growth is measured as the weighted standard deviation of year-on-year growth in value added in the same 162 country-sector pairs. The latest observation is for 2016Q4.

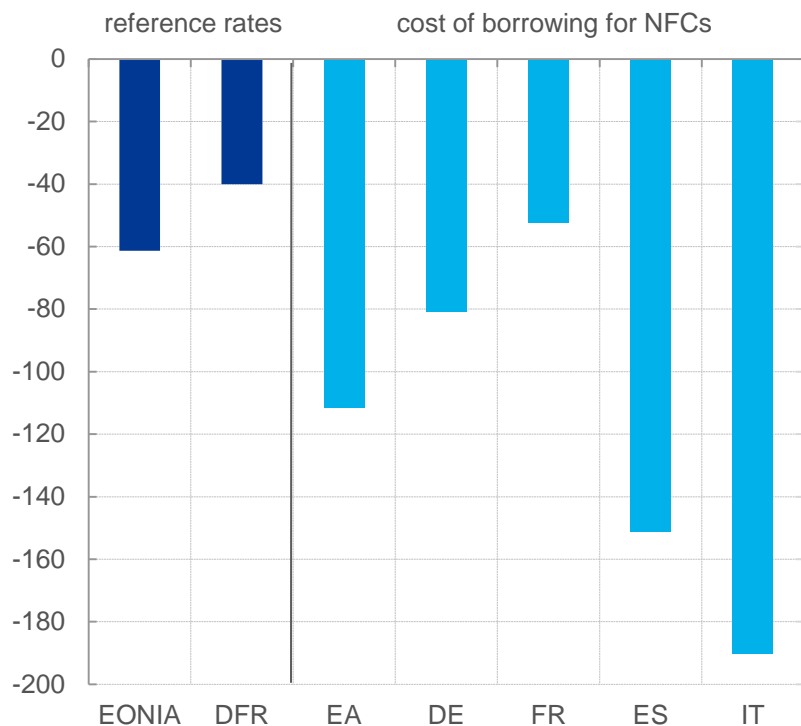
Convergence of output gaps since 2013 (percentage points)



Sources: Eurostat and ECB calculations.

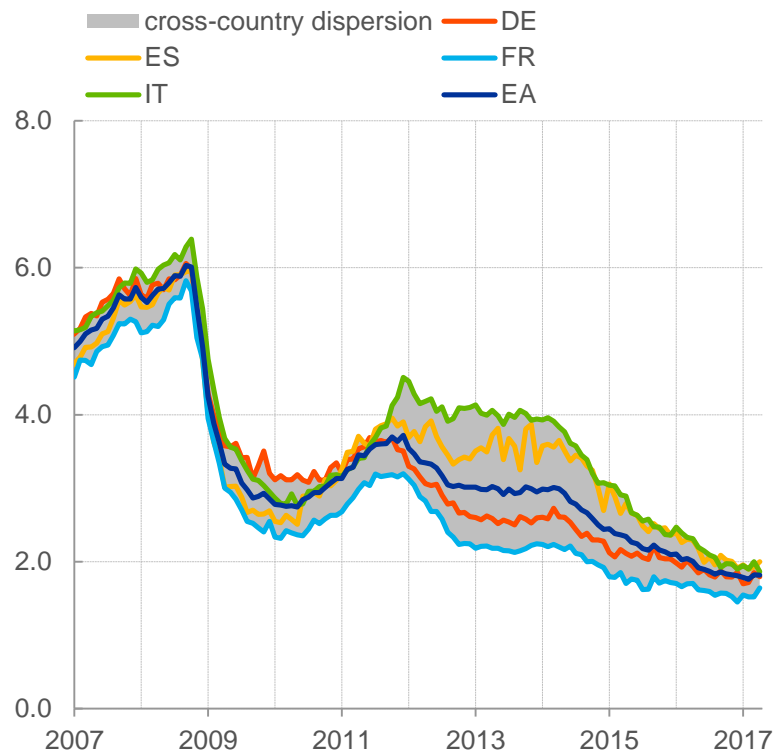
Bank lending rates fell in response to ECB policy measures

Changes in reference rates and NFCs' cost of borrowing, May 2014 – April 2017 (basis points)



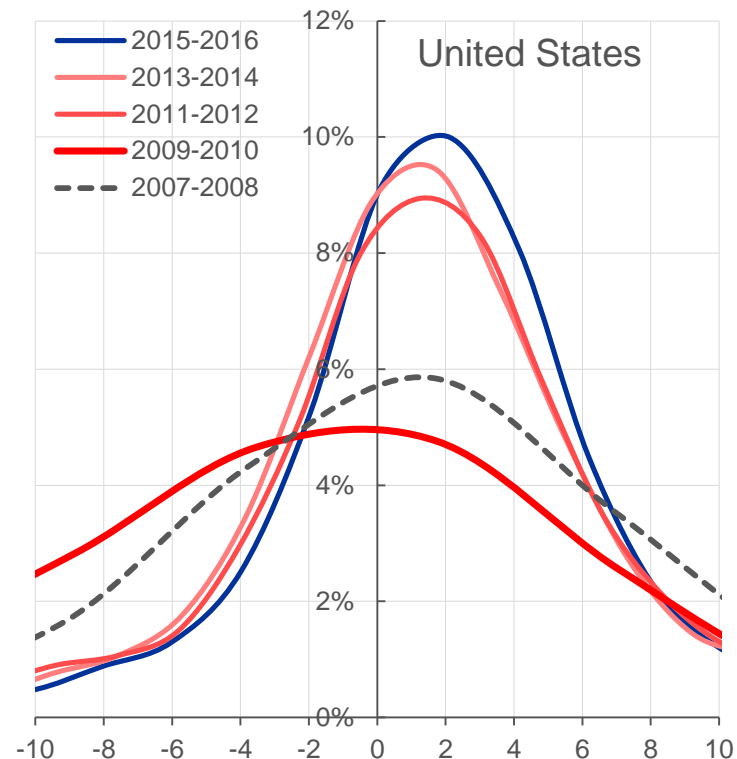
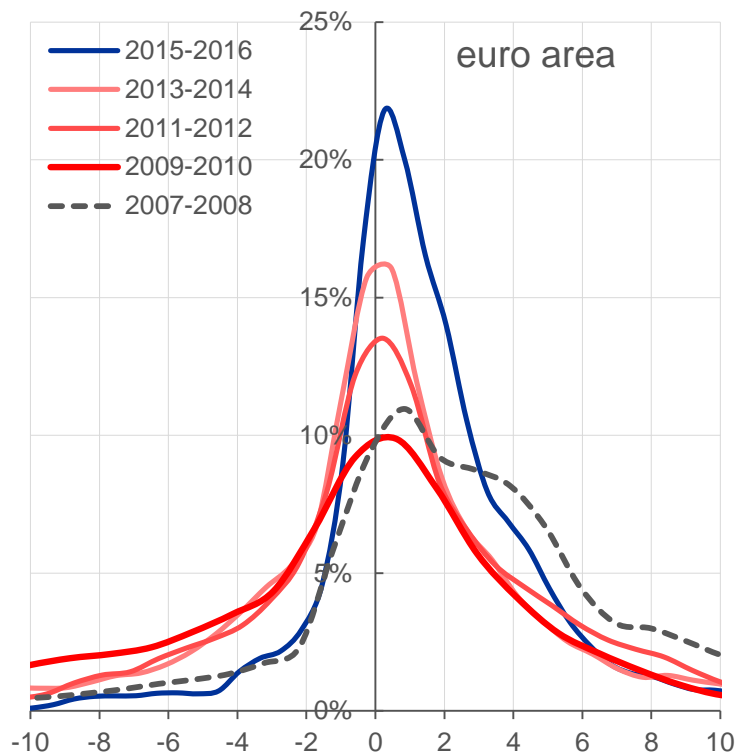
Source: ECB.
Latest observation: April 2017.

Composite lending rates to NFCs (percent per annum)



Source: ECB.
Notes: Calculated by aggregating short and long-term rates using a 24-month moving average of new business volumes. The cross-country dispersion displays the min and max range of DE, FR, IT, ES.
Latest observation: April 2017.

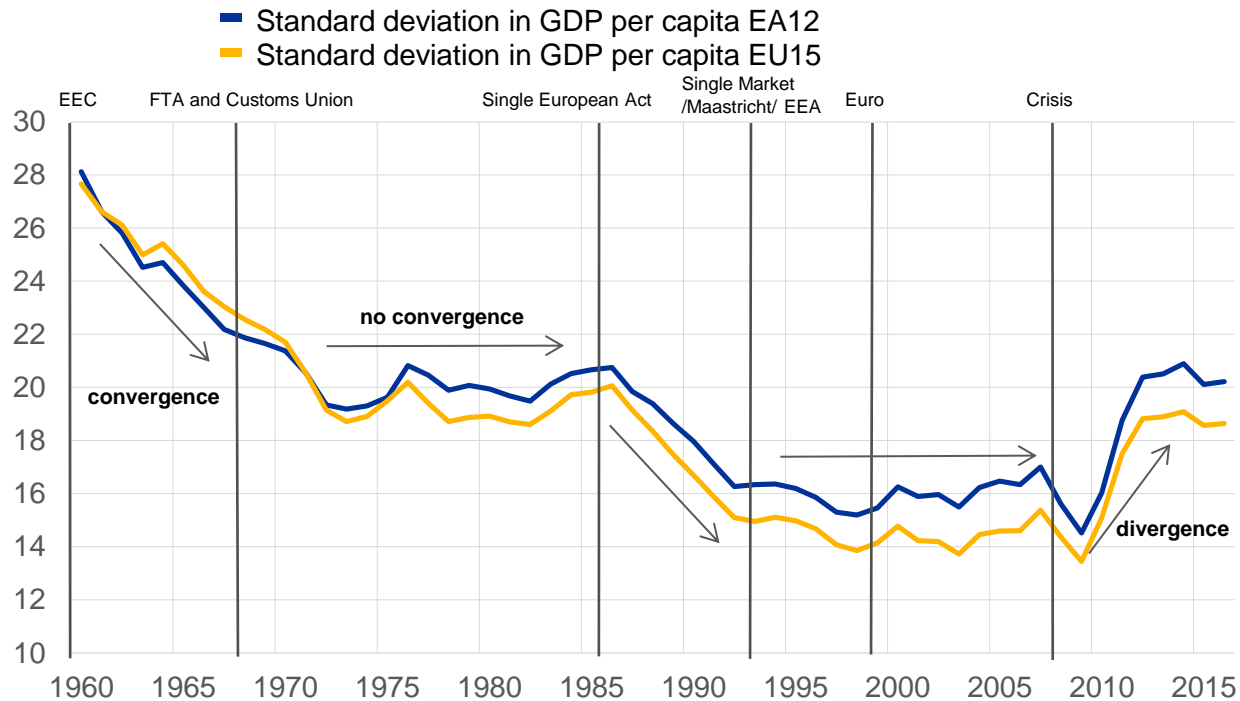
Sectoral growth distributions (densities)



Sources: Eurostat and ECB calculations.

Note: The euro area distributions are calculated for each period on the year-on-year growth rates for 162 country-sector pairs (9 sectors across 18 countries). For the United States the distributions are calculated for 20 sectors in the 52 states and jurisdictions.

Real convergence in EA12 and EU15: A long-term perspective (standard deviation in GDP per capita relative to EA12/EU15)

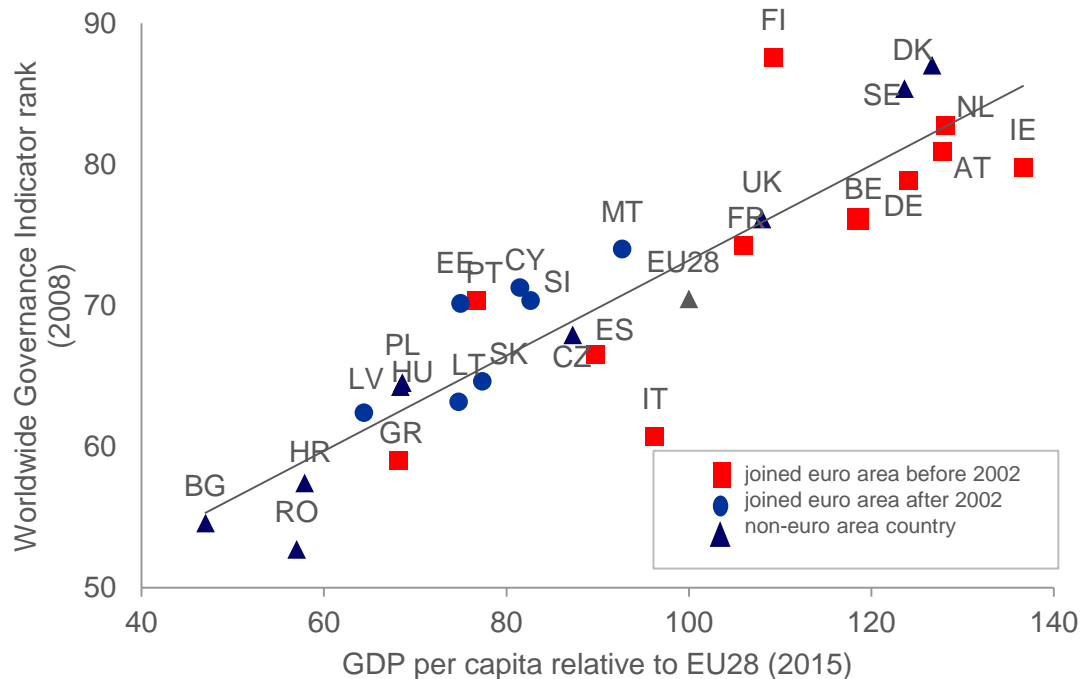


Source: Diaz del Hoyo, Dorrucchi, Heinz and Muzikarova (2017), based on European Commission data.

Notes: GDP per capita in purchasing power standards (PPS). EA12 denotes the countries that adopted the euro by 2002, EU15 the countries that were EU members by 1995. Luxembourg is excluded from the country sample. Data for Ireland are adjusted in order to control for the exceptional GDP revision in 2015, which did not reflect an actual increase in economic activity. German data are approximated by data for West Germany over the period 1960-1991. EEC: European Economic Community; FTA: Free Trade Area; EEA: European Economic Area.

A close correlation between institutional quality and living standards

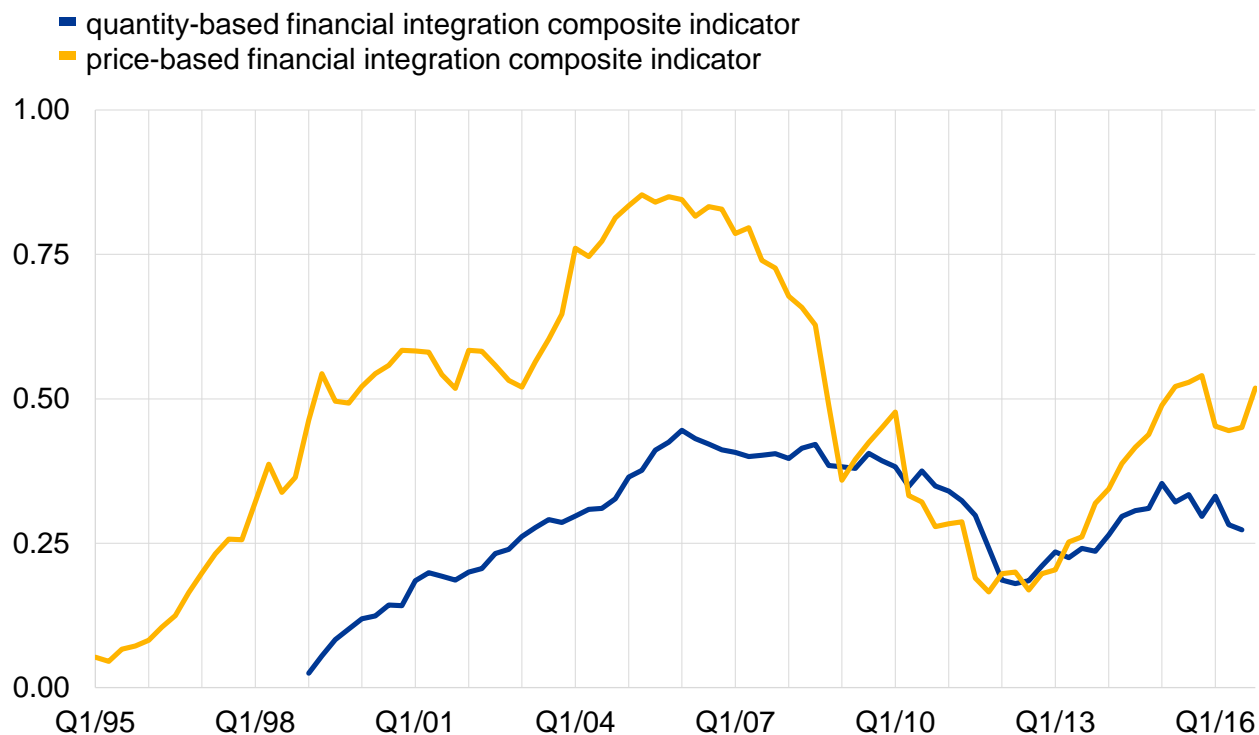
GDP per capita relative to EU28 in 2015 and Worldwide Governance Indicator rank in 2008 (index EU28=100; ranking)



Sources: Eurostat and World Bank.

Notes: The Worldwide Governance Indicator is the composite rank of average positions in six broad institutional dimensions. Luxembourg is excluded because GDP per capita computations are distorted by e.g. the high number of cross-border workers.

Price-based and quantity-based financial integration composite indicators (index)

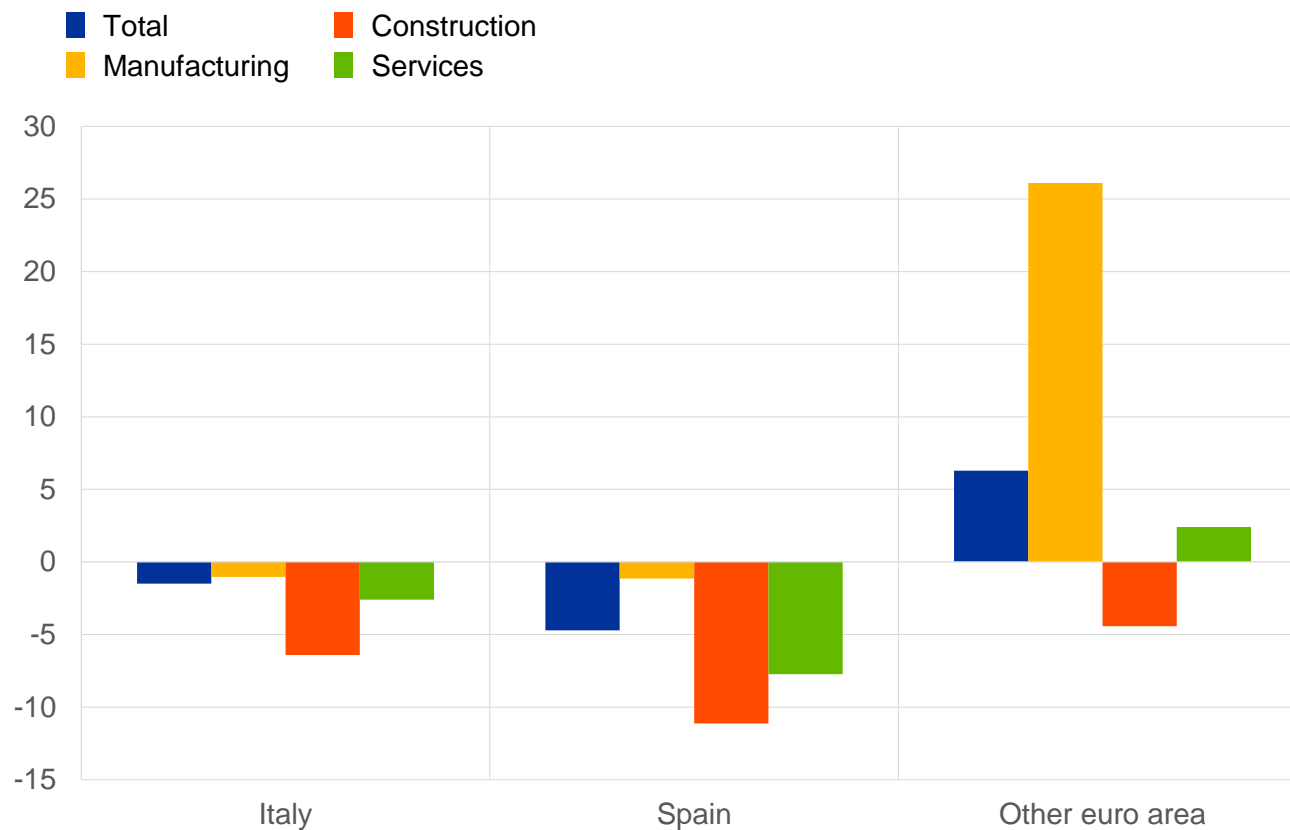


Sources: ECB and ECB calculations.

Notes: The price-based composite indicator aggregates ten indicators covering the period from the first quarter of 1995 to the fourth quarter of 2016, and the quantity-based composite indicator aggregates five indicators available from the first quarter of 1999 to the third quarter of 2016. The composite indicators are bounded between zero (full fragmentation) and one (full integration). Increases in the composite indicators signal higher financial integration. For a detailed description of the indicators and the input data, see European Central Bank (2017), "Financial integration in Europe", May.

TFP growth was also weak in the manufacturing sector

TFP growth in main economic sectors, 1999 to 2007 (in percentages)

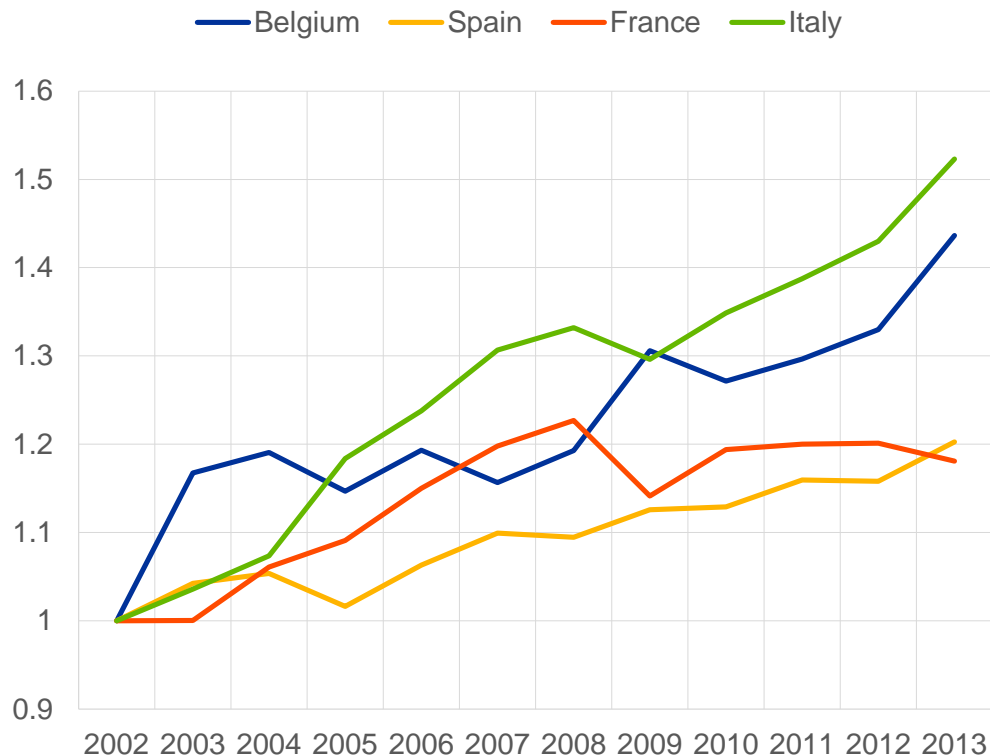


Source: European Commission.

Notes: No data are available for Greece and Portugal. "Other EA" refers to Belgium, Germany, France, the Netherlands Austria and Finland. The 2007 value for Belgium is extrapolated from 2006. Aggregates are unweighted. "Total" includes also other sectors, such as agriculture and mining, electricity, transport, and financial intermediation.

Capital misallocation in four euro area countries

(weighted averages of sectoral dispersion in the marginal revenue of productivity of capital, where the weights are the sectoral shares in value added)



Source: ECB staff calculations on CompNet data. Sample with 20 or more employees.

Note: Input misallocation is computed as the within-sector dispersion in marginal productivity of capital, as in Hsieh and Klenow (2009). Sector dispersion is thereafter aggregated to the country level using value added sector shares.