



EUROPEAN CENTRAL BANK

EUROSYSTEM

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# Economic and monetary developments

## Overview

**Based on a thorough assessment of the economic and inflation outlook for the euro area, also taking into account the latest staff macroeconomic projections, the Governing Council took a number of decisions at its monetary policy meeting on 12 September in pursuit of its price stability objective.** Incoming information since the last Governing Council meeting indicates a more protracted weakness of the euro area economy, the persistence of prominent downside risks and muted inflationary pressures. This is reflected in the September staff projections, which show a further downgrade of the inflation outlook. At the same time, robust employment growth and increasing wages continue to underpin the resilience of the euro area economy. Against this overall backdrop, the Governing Council announced a comprehensive package of monetary policy measures in response to the continued shortfall of inflation with respect to its aim (see Box 1).

## Economic and monetary assessment at the time of the Governing Council meeting of 12 September 2019

**Global growth softened in the first half of 2019, reflecting decelerating economic activity in both advanced and emerging economies.** This is in line with survey-based indicators which point to subdued global activity. Global growth is projected to decline this year amid weak global manufacturing activity on the back of declining global investment and rising policy and political uncertainty on account of Brexit and the renewed intensification of trade tensions between the United States and China. Looking ahead, global growth is projected to gradually recover over the medium term but to remain below its long-term average. Global trade is expected to further weaken significantly this year but to recover in the medium term, while remaining more subdued than economic activity. Global inflationary pressures are expected to remain contained, while downside risks to global economic activity have intensified.

**Global long-term risk-free rates have declined since the Governing Council meeting in June 2019 amid market expectations of further accommodative monetary policy and a resurgence of global trade uncertainty.** This decline in risk-free rates has supported the prices of euro area equities and corporate bonds. Meanwhile, corporate earnings expectations have fallen somewhat in response to persistent doubts about the global macroeconomic outlook. The EONIA forward curve also shifted downwards. In foreign exchange markets, the euro remained broadly unchanged in trade-weighted terms.

**Euro area real GDP increased by 0.2%, quarter on quarter, in the second quarter of 2019, following a rise of 0.4% in the previous quarter.** Incoming economic data and survey information continue to point to moderate but positive growth in the third

quarter of this year. This slowdown in growth mainly reflects the prevailing weakness of international trade in an environment of prolonged global uncertainties, which are particularly affecting the euro area manufacturing sector. At the same time, the services and construction sectors are showing ongoing resilience and the euro area expansion is also supported by favourable financing conditions, further employment gains and rising wages, the mildly expansionary euro area fiscal stance and the ongoing – albeit somewhat slower – growth in global activity.

**This assessment is broadly reflected in the September 2019 ECB staff macroeconomic projections for the euro area.** These projections foresee annual real GDP increasing by 1.1% in 2019, 1.2% in 2020 and 1.4% in 2021. Compared with the June 2019 Eurosystem staff macroeconomic projections, the outlook for real GDP growth has been revised down for 2019 and 2020. The risks surrounding the euro area growth outlook remain tilted to the downside. These risks mainly pertain to the prolonged presence of uncertainties related to geopolitical factors, the rising threat of protectionism and vulnerabilities in emerging markets.

**According to Eurostat’s flash estimate, euro area annual HICP inflation was 1.0% in August 2019, which is unchanged from July.** Lower energy inflation was offset by higher food inflation, while the rate of HICP inflation excluding food and energy was unchanged. On the basis of current futures prices for oil, headline inflation is likely to decline before rising again towards the end of the year. Measures of underlying inflation remained generally muted and indicators of inflation expectations stand at low levels. While labour cost pressures strengthened and broadened amid high levels of capacity utilisation and tightening labour markets, their pass-through to inflation is taking longer than previously anticipated. Over the medium term, underlying inflation is expected to increase, supported by the ECB’s monetary policy measures, the ongoing economic expansion and robust wage growth.

**This assessment is also broadly reflected in the September 2019 ECB staff macroeconomic projections for the euro area, which foresee annual HICP inflation at 1.2% in 2019, 1.0% in 2020 and 1.5% in 2021.** Compared with the June 2019 Eurosystem staff macroeconomic projections, the outlook for HICP inflation has been revised down over the whole projection horizon, reflecting lower energy prices and the weaker growth environment. Annual HICP inflation excluding energy and food is expected to be 1.1% in 2019, 1.2% in 2020 and 1.5% in 2021.

**The annual growth of broad money increased markedly in July 2019, while loans to the private sector remained broadly unchanged.** Broad money (M3) growth increased to 5.2% in July 2019, after 4.5% in June. Sustained rates of broad money growth reflect ongoing bank credit creation for the private sector and low opportunity costs of holding M3. Furthermore, M3 growth remained resilient in the face of the fading out of the mechanical contribution of the net purchases under the asset purchase programme (APP) and weakening economic momentum. At the same time, favourable bank funding and lending conditions continued to support loan flows and thereby economic growth. The annual growth rate of loans to non-financial corporations remained unchanged at 3.9% in July 2019. The monetary policy measures decided by the Governing Council, including the more accommodative terms of the new series of quarterly targeted longer-term refinancing operations

(TLTRO III), will help to safeguard favourable bank lending conditions and will continue to support access to financing, in particular for small and medium-sized enterprises.

**The aggregate fiscal stance for the euro area is projected to be mildly expansionary, providing some support to economic activity.** In the next two years, the stance will continue to be mildly expansionary, mainly on account of further cuts in direct taxes and social security contributions in most of the larger euro area countries. In view of the weakening economic outlook and the continued prominence of downside risks, governments with fiscal space should act in an effective and timely manner. In countries where public debt is high, governments need to pursue prudent policies that will create the conditions for automatic stabilisers to operate freely.

## Monetary policy decisions

**Based on the regular economic and monetary analyses, the Governing Council made the following decisions:**

- First, the interest rate on the deposit facility was decreased by 10 basis points to -0.50%. The interest rate on the main refinancing operations and the rate on the marginal lending facility were kept unchanged at their current levels of 0.00% and 0.25% respectively. The Governing Council now expects the key ECB interest rates to remain at their present or lower levels until it has seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2% within its projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics.
- Second, net purchases will be restarted under the APP at a monthly pace of €20 billion as from 1 November. The Governing Council expects the APP to run for as long as necessary to reinforce the accommodative impact of the ECB's policy rates, and to end shortly before it starts raising the key ECB interest rates.
- Third, reinvestments of the principal payments from maturing securities purchased under the APP will continue, in full, for an extended period of time past the date when the Governing Council starts raising the key ECB interest rates, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.
- Fourth, the Governing Council decided to change the modalities of TLTRO III to preserve favourable bank lending conditions, ensure the smooth transmission of monetary policy and further support the accommodative stance of monetary policy. The interest rate in each operation will now be set at the level of the average rate applied in the Eurosystem's main refinancing operations over the life of the respective TLTRO. For banks whose eligible net lending exceeds a benchmark, the rate applied in TLTRO III operations will be lower, and can be as low as the average interest rate on the deposit facility prevailing over the life of the operation. The maturity of the operations will be extended from two to three years.

- Fifth, in order to support the bank-based transmission of monetary policy, the Governing Council decided to introduce a two-tier system for reserve remuneration in which part of banks' holdings of excess liquidity will be exempt from the negative deposit facility rate.

The Governing Council took these decisions in response to the continued shortfall of inflation with respect to its aim. With this comprehensive package of monetary policy decisions, the ECB is providing substantial monetary stimulus to ensure that financial conditions remain very favourable and support the euro area expansion, the ongoing build-up of domestic price pressures and, thus, the sustained convergence of inflation to the Governing Council's medium-term inflation aim. The Governing Council reiterated the need for a highly accommodative stance of monetary policy for a prolonged period of time. Looking ahead, it continues to stand ready to adjust all of its instruments, as appropriate, to ensure that inflation moves towards its aim in a sustained manner, in line with its commitment to symmetry.

## 1 External environment

*Global growth softened in the first half of 2019, reflecting decelerating economic activity in both advanced and emerging economies. This is in line with survey-based indicators which point to subdued global activity. Activity in services, although weakening, continued to support growth while growth momentum in global manufacturing remains subdued. Global growth is projected to decrease this year amid weak global manufacturing activity on the back of declining global investment and rising policy and political uncertainty on account of Brexit and the renewed intensification of trade tensions between the United States and China. While those headwinds are expected to weigh on global activity and trade this year and next, recent policy measures are expected to provide some support. As a result, global growth is projected to stabilise over the medium term, albeit at a level below the average growth rate observed before the crisis. Global trade is expected to weaken significantly this year but recover in the medium term, while remaining more subdued than economic activity. Global inflationary pressures are expected to remain contained, while downside risks to global economic activity have intensified.*

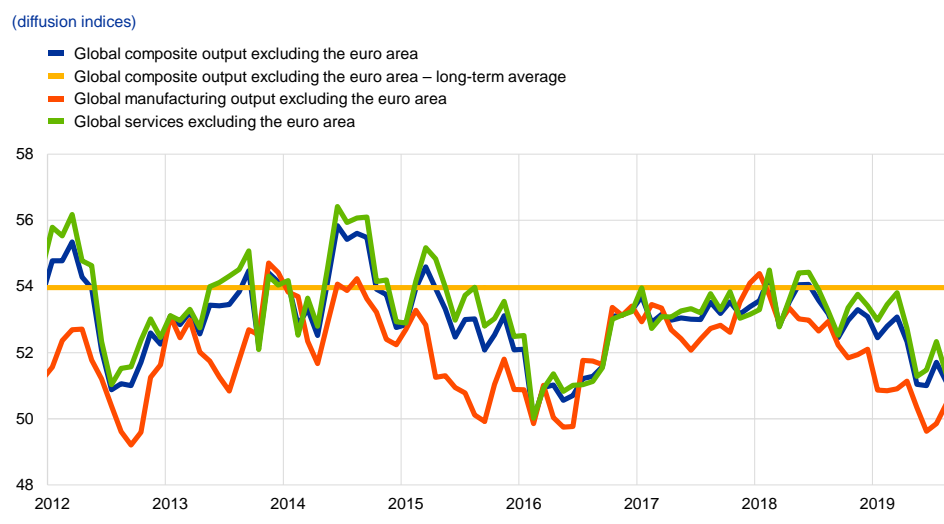
### Global economic activity and trade

**Global growth softened in the first half of 2019.** In the first quarter, real GDP growth held up relatively well in most advanced economies owing to temporary factors in some countries (e.g. positive contributions from net trade and a build-up of inventories in the United States and stock-building in advance of the first Brexit deadline in the United Kingdom). In the second quarter, as the impact of such factors unwound, growth moderated. In the United States, as imports stabilised, the negative contribution of net trade weighed on growth in spite of the fiscal stimulus and resilient private consumption. In the United Kingdom, growth turned negative in the second quarter on account of, among other things, a slowdown in investment. While activity in China remained stable in the first half of the year amid resilient private consumption, growth stumbled in several other emerging market economies (EMEs) in the first quarter, reflecting adverse idiosyncratic factors in some countries (a dam disaster in Brazil and contamination of an oil pipeline in Russia) and more persistent headwinds, such as elevated domestic political uncertainty (in Mexico and Brazil). Growth ticked up in the second quarter as some of these headwinds dissipated and economic activity continued to grow in some other countries (e.g. in Turkey, owing to strong private consumption and a positive net trade contribution).

**Survey-based indicators continue to point to subdued global activity.** The global composite output Purchasing Managers' Index (PMI) excluding the euro area decelerated further in the second quarter of 2019 and, after a small rebound in July, declined again in August. The deceleration in the first half of the year was broad-based across advanced and emerging economies, though more recently a small uptick has been recorded in the composite PMI indicator for EMEs. Global activity in the services sector, which had been more resilient overall at the turn of the year, also deteriorated in the second quarter and declined still further in August, but remains above the 50 threshold. Global manufacturing activity has been on a declining trend for the past

year. After falling into “contraction” territory in June and July (i.e. below the 50 threshold), it rebounded above the neutral mark in August (see Chart 1).

**Chart 1**  
Global composite output PMI



Sources: Markit and ECB calculations.  
Notes: The latest observations are for August 2019. “Long-term average” refers to the period from January 1999 to August 2019.

**Global financial conditions have experienced some volatility in recent months.**

Since the finalisation of the June 2019 Eurosystem staff macroeconomic projections, risky asset prices have experienced some volatility amid conflicting signals. On the one hand, hopes of a bilateral trade deal between the United States and China and the expectation of a more accommodative monetary policy on both sides of the Atlantic led to a rebound in asset prices in June and July. With investors anticipating rate cuts, US Treasury yields and other safe government bond yields moved significantly lower and, at the same time, financial conditions in EMEs eased significantly. On the other hand, the renewed escalation of the US-China trade dispute in early August and the indication from the Federal Open Market Committee (FOMC) that the July rate cut did not mark the start of an easing cycle sapped risk appetite, causing large losses in global equity markets, while core sovereign bond yields continued to move lower on account of falling term premia. Despite the recent risk-off episode, financial market conditions remain loose in both advanced and emerging economies.

**Global growth is projected to decelerate this year.** A number of headwinds continue to weigh on the global economy. Global manufacturing activity is expected to remain weak, mainly on the back of declining growth in global investment and consumption of durable goods, which form a large part of manufacturing output. As uncertainty related to the future of international trading relations mounts, global investment growth is unlikely to regain traction. Recent analysis shows that deteriorating financing conditions, rising macroeconomic uncertainty and unfavourable demand shocks weighed negatively on global investment growth in the second half of 2018 and the beginning of 2019.<sup>1</sup> Faced with a slowing global

<sup>1</sup> See the box entitled “What is behind the decoupling of global activity and trade?”, *Economic Bulletin*, Issue 5, ECB, 2019.



economy, a number of policymakers around the globe have adopted accommodative measures to cushion the negative impact of economic headwinds. In China, fiscal stimulus measures to cushion the slowdown in domestic demand are expected to have an effect mostly in the second half of this year. In the United States, in addition to the sizeable pro-cyclical fiscal stimulus and the recent agreement on new public spending caps, the Federal Reserve System decided to cut its benchmark interest rate with a view to supporting the ongoing economic expansion. A number of other countries have also eased monetary policy (e.g. Australia, Brazil, South Korea, Indonesia, India and Turkey).

**Looking ahead, global growth is projected to gradually recover over the medium term but to remain below its long-term average.** Developments in global growth are being shaped by three main forces. Across advanced economies, the cyclical momentum is projected to slow as capacity constraints become increasingly binding amid positive output gaps and low unemployment rates across key economies, while, towards the end of the projection horizon, policy support is expected to gradually diminish. In addition, the progressive slowdown of the Chinese economy and its rebalancing from investment to consumption are projected to weigh negatively on global growth and on trade in particular. At the same time, the contribution of EMEs (excluding China) to global growth, while still positive, is expected to be weaker than envisaged in the June 2019 Eurosystem staff macroeconomic projections. This is on account of recent data suggesting that the projected recovery from past recessions is materialising at a slower pace than previously assumed. Moreover, although so far the recent financial market stress in Argentina has not spilled over to other emerging markets, it points to the underlying fragility of the recovery in some EMEs. Overall, the pace of global expansion is expected to settle at rates below those seen prior to the 2007-08 financial crisis.

**Turning to developments in individual countries, in the United States, activity is expected to remain resilient in the near term, despite the headwinds related to the trade dispute with China and the less favourable external environment.** The US economy's performance has so far remained robust, reflecting a strong labour market and consumer spending. The lifting of spending caps for the 2020/21 financial year and a two-year suspension of the federal debt limit agreed by Congress at the end of July will further support economic growth. Financial conditions also remain supportive. Following 3.1% real GDP growth in annual terms in the first quarter of 2019, growth moderated to 2.0% in the second quarter, reflecting the unwinding of temporary factors (e.g. positive contributions from inventories and falling imports), while private consumption and government spending remained supportive of economic activity overall. Annual headline consumer price inflation picked up marginally to 1.8% in July from 1.6% in the previous month, largely on account of core inflation, while energy prices declined. Consumer price inflation excluding food and energy increased slightly, rising to 2.2% in July. Growth is projected to gradually return to the potential growth rate of just below 2%, while consumer price inflation is expected to remain above 2% over the medium term.

**The economy in China remains on a gradually slowing trajectory.** In the second quarter of 2019 annual GDP growth slowed to 6.2%, from 6.4% in the first quarter,

owing to weak final consumption that was only partially compensated for by an improvement in investment. Looking ahead, growth is projected to decelerate further in 2020 and 2021, while no additional fiscal support measures have been announced in response to the latest escalation in the trade dispute. Overall, the deceleration in economic activity reflects the past effects of the deleveraging campaign to contain financial risks, the government's focus on rebalancing the economy away from investment and the impact of the ongoing trade tensions with the United States. Progress with the implementation of structural reforms is projected to result in an orderly transition to a more moderate growth path that is less dependent on investment and exports.

**In Japan, underlying growth momentum remains muted.** Growth in the second quarter of 2019 was 0.4% (quarter on quarter), which was better than expected, largely owing to a number of transitory factors, including stronger consumer spending on account of the Golden Week holiday period and higher durable goods purchases. The latter is likely to have partly reflected frontloaded demand ahead of the consumption tax hike scheduled for October 2019. However, exports remained subdued and industrial output and sentiment in the manufacturing sector deteriorated amid weakening external demand and lingering policy uncertainty. Net trade made a negative contribution, with exports remaining flat, while imports rebounded from the weakness observed in the previous quarter. While the near-term profile will be determined by the forthcoming consumption tax hike, implying frontloaded consumption in the third quarter and subsequent payback, economic activity is projected to remain on a moderate trajectory thereafter.

**In the United Kingdom, real GDP growth contracted in the second quarter of 2019, largely on account of the uncertainty surrounding Brexit.** Real GDP growth has displayed some volatility since the start of the year, largely reflecting changes in activity patterns related to the original 29 March Brexit deadline. After growing by 0.5% (quarter on quarter) in the first quarter, real GDP contracted by 0.2% in the second. This was the first quarter of negative growth since 2012 and reflected lower investment and, following the last-minute extension of the Brexit deadline, a reversal of the strong inventory build-up seen in the first quarter. Despite a marked depreciation in the pound sterling since the start of 2019, exports contracted by 3.3% in the second quarter. The net trade contribution remained nonetheless positive, as imports, particularly of goods from the EU, fell by even more than exports (-12.9% quarter on quarter). Growth in domestic consumption remained robust (0.5% quarter on quarter) in the second quarter, supported in part by stronger real wage growth. Survey-based evidence points to some continued slowing of economic activity in the coming quarter. Annual CPI inflation increased modestly to 2.0% in the second quarter, and further to 2.1% in July, largely on account of the recent stronger adverse exchange rate movements. Ongoing uncertainties related to Brexit modalities have recently been reflected in further volatility in the pound sterling and, on the real economy side, are likely to result in further volatility in quarterly real GDP growth and muted growth over the medium term.

**In central and eastern European countries, growth is projected to remain robust over the projection horizon, but more moderate than in 2018.** Solid consumer

spending backed by strong labour markets is expected to support economic activity going forward. Investment growth is forecast to remain strong, though it will moderate somewhat against the backdrop of a more advanced phase of the EU funds cycle. Furthermore, the slowdown in global trade is weighing on the growth outlook for this region. Over the medium term, the pace of economic expansion in these countries is expected to decelerate further towards potential.

**The outlook for economic activity in large commodity-exporting countries points to subdued growth.** In Russia, activity in the second quarter was adversely affected by the feed-in of contaminated oil into a key export pipeline, triggering large-scale disruptions along the supply chain. Although temporary, this will weigh on growth in 2019, which has already been affected by an unexpectedly sharp contraction in the first quarter due to weak investment, weak net exports and substantial downward revisions of historical data. Going forward, the outlook for growth in Russia is being shaped by developments in global oil markets, the implementation of fiscal and structural policies, and the international sanctions under which the economy is currently operating. As a result, growth is expected to decelerate somewhat in the medium term. Growth in Brazil is projected to remain subdued, owing to uncertainty surrounding the pension reforms and concerns about fiscal sustainability. Idiosyncratic shocks at the beginning of the year (due to a mining disaster) also weighed negatively on activity. Sluggish domestic demand and persistent uncertainty coupled with substantial spare capacity are holding back a more vigorous investment response and have affected confidence negatively.

**In Turkey, economic activity surprised significantly to the upside in the first half of 2019.** Following a sharp contraction in the fourth quarter of 2018, the economy recovered in early 2019 on account of a sizeable fiscal stimulus ahead of the local elections in March. The economy continued to grow at a solid pace in the second quarter, despite some unwinding of the fiscal stimulus, owing to strong household consumption and a positive net trade contribution. Investment, on the other hand, continued to contract sharply on account of elevated political uncertainty and tight financing conditions. Looking ahead, growth is expected to weaken for the remainder of 2019 and to gradually accelerate towards the end of the projection horizon.

**Global trade weakened significantly in the first half of the year.** Global trade growth turned negative in the first quarter and remained weak in the second. The trade weakness is largely explained by slowing industrial activity, heightened trade tensions and, to some extent, a weaker Asian tech cycle.<sup>2</sup> The contraction in global trade was broad-based across countries. In addition to one-off factors (e.g. temporarily weak domestic demand in the United States in view of the partial federal government shutdown in the first quarter and a contraction in UK imports in the second quarter following the stockpiling efforts of the previous quarter), the weakness in trade also stemmed from weak intra-Asian trade. The latter appears to be related to the slowdown in China's domestic demand in the context of large regional value chain linkages. According to CPB data, the volume of global merchandise imports, excluding the euro area, contracted by 0.6% in June in three-month-on-three-month terms,

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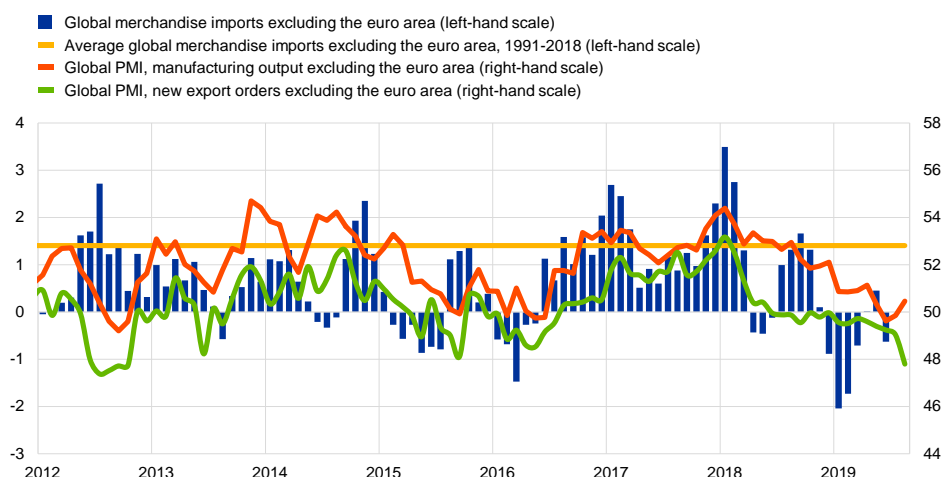
<sup>2</sup> For further details on the global tech cycle, see the box entitled "[What the maturing tech cycle signals for the global economy](#)", *Economic Bulletin*, Issue 3, ECB, 2019.

confirming continued subdued trade momentum in the second quarter (see Chart 2). As survey indicators on new export orders continue to signal a further deterioration, the current weakness in global trade is likely to continue in the near term.

**Since August the trade dispute between the United States and China has intensified significantly.** In early August, following a bilateral meeting with the Chinese authorities, the United States announced the imposition of 10% tariffs on around USD 300 billion worth of US imports from China. These tariffs are being implemented in two stages, on 1 September and 15 December. Initially, the Chinese authorities announced only in-kind retaliatory measures consisting of the decision to suspend imports of US crops. However, towards the end of August, further retaliatory measures were announced with the decision to impose additional tariffs of 5% or 10% on USD 75 billion worth of Chinese imports from the United States and to reinstate previously suspended tariffs on cars and car parts. This latest move prompted a further escalation as the United States announced the imposition of additional 5% tariffs on all US imports from China (worth around USD 550 billion).<sup>3</sup> This further intensification of the trade dispute between the two countries will weigh negatively on global activity and trade. Meanwhile, other trade issues also remain unresolved. The US administration has delayed taking a decision on possible increases in car tariffs until mid-November 2019, while talks with the EU on a new trade agreement, announced in July 2018, are still ongoing.

**Chart 2**  
Surveys and global trade in goods

(left-hand scale: three-month-on-three-month percentage changes; right-hand scale: diffusion indices)



Sources: Markit, CPB Netherlands Bureau for Economic Policy Analysis and ECB calculations.  
Note: The latest observations are for August 2019 for the PMIs and June 2019 for global merchandise imports.

**Global economic growth is projected to weaken this year, and to recover only gradually over the medium term.** According to the September 2019 ECB staff macroeconomic projections, global real GDP growth (excluding the euro area) is

<sup>3</sup> As this new round of tariffs was announced after the cut-off date, it was not included in the baseline forecast for the September 2019 ECB staff macroeconomic projections exercise. On both sides, this latest escalation amounts to an across-the-board increase in tariffs on imports. Additional 5% US tariffs on imports from China will come into effect on 1 September, 15 October (instead of 1 October as initially announced) and 15 December.

projected to decelerate to 3.1% this year, from 3.8% in 2018. This reflects increasing headwinds to global growth in an environment of high and rising political and policy uncertainty. Over the period 2020-21 growth in world economic activity is projected to stabilise at 3.5%, as the (cyclical) slowdown in key advanced economies and China's transition to a more moderate growth path are expected to be only partly counterbalanced by a gradual recovery in several key EMEs. As the growth headwinds weigh more significantly on trade-intensive demand components, such as investment, growth in euro area foreign demand is projected to slow more significantly than global activity this year, falling to 1.0%, from 3.7% in 2018. Global imports are projected to increase gradually over the medium term. Compared with the June 2019 Eurosystem staff macroeconomic projections, both global GDP growth and growth in euro area foreign demand have been revised downwards over the forecast horizon. From a geographical perspective, the revisions of euro area foreign demand reflect weaker than expected trade prospects for EMEs, including China to a lesser extent, as well as the outlook of slower import growth across some key trading partners, including the United Kingdom and other European countries outside the euro area.

**Downside risks to global activity have intensified lately.** A further escalation of trade disputes would pose a risk to global trade and growth. Moreover, a “no deal” Brexit scenario could have more adverse spillover effects, especially in Europe. A sharper slowdown in China's economy could be harder to counteract with efficient policy stimuli and might prove a challenge to the ongoing rebalancing process in China. Repricing in financial markets might weigh significantly on vulnerable EMEs. A further escalation of geopolitical tensions could also adversely affect global activity and trade.

## Global price developments

**Developments in oil prices since late July have mainly been shaped by concerns about the global outlook.** Following the re-escalation of US-China trade tensions in early August, oil prices first declined by around 5%, before making up some ground in the second half of the month. Since April, the outlook for global oil consumption has been revised down repeatedly. Accordingly, production cuts by the OPEC+ group of oil producers, which supported oil prices in the first quarter of the year in particular, have not been sufficient to offset headwinds from concerns about demand for oil. The impact on prices of recent geopolitical uncertainties in the Middle East has also been limited so far. Going forward, risks to oil prices appear broadly balanced. While further weakness in global activity would weigh on prices, restrictions to supply would bolster them. Indeed, Saudi Arabia and Russia have already indicated the possibility of further OPEC+ production cuts in the near future, which could put some renewed upward pressure on prices.

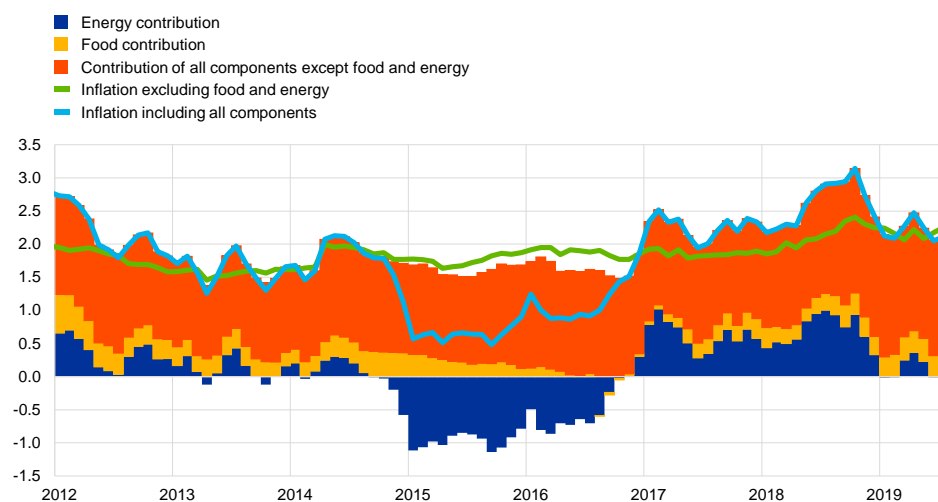
**In the September 2019 ECB staff macroeconomic projections, oil prices are foreseen to decline over the projection horizon.** Amid short-term volatility, concerns about demand for oil and the re-intensification of trade tensions have been a drag on oil prices, despite the agreement between OPEC and other major oil producers to curb production. Consequently, the oil price assumptions underpinning

the September 2019 ECB staff macroeconomic projections were around 8.3% lower for 2019 (and 13.4% and 10.3% lower for 2020 and 2021 respectively) relative to the assumptions underpinning the June 2019 Eurosystem staff macroeconomic projections. Since the cut-off date for the September projections, however, the price of oil has increased marginally, with Brent crude standing at USD 61 per barrel on 5 September.

**Global inflationary pressures remain moderate.** In countries belonging to the Organisation for Economic Co-operation and Development (OECD), annual headline consumer price inflation averaged 2.1% in July 2019, up from 2.0% in the previous month. The increase is due to a positive contribution from core inflation (excluding food and energy) (see Chart 3), which picked up to 2.3% from 2.2% in the previous month, while energy inflation remained flat. Tight labour market conditions across the major advanced economies have so far translated into only moderate wage increases, suggesting that the underlying inflation pressures remain subdued. Nevertheless, they should recover gradually over the projection horizon, reflecting diminishing slack.

**Chart 3**  
OECD consumer price inflation

(year-on-year percentage changes; percentage point contributions)



Sources: OECD and ECB calculations.  
Note: The latest observations are for July 2019.

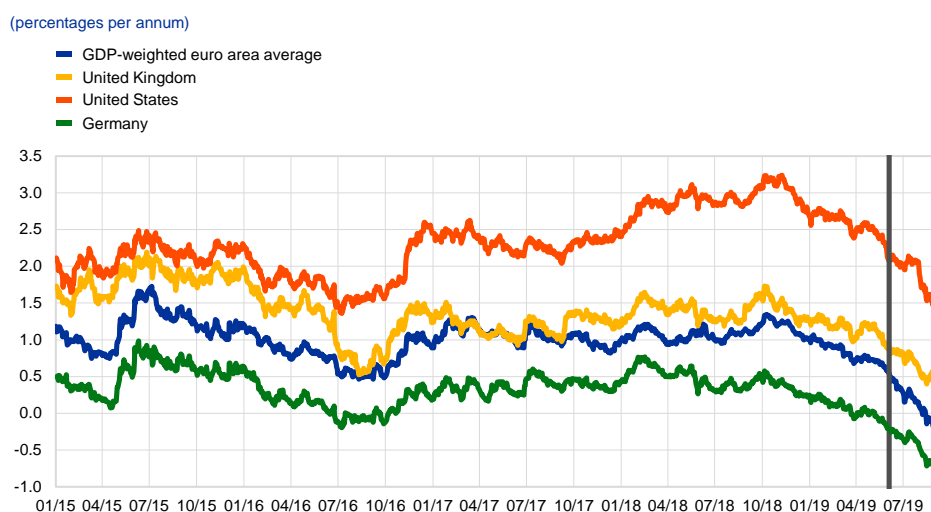
**Looking ahead, global inflationary pressures are expected to remain contained.** Growth in the export prices of the euro area’s competitors is expected to weaken sharply this year and gradually decelerate over the medium term. This reflects the impact of a downward sloping oil price futures curve, which is expected to outweigh the upward pressure arising from gradually diminishing global spare capacity.

## 2 Financial developments

Since the Governing Council's meeting in June 2019, global long-term risk-free rates have declined amid market expectations of further accommodative monetary policy in an environment of heightened global trade uncertainty. This decline in risk-free rates has supported the prices of euro area equities and corporate bonds. Meanwhile, corporate earnings expectations have fallen somewhat in response to persistent doubts about the global macroeconomic outlook. In foreign exchange markets, the euro remained broadly unchanged in trade-weighted terms.

**Long-term yields in both the euro area and the United States declined materially.** During the period under review (6 June to 11 September 2019), the GDP-weighted euro area ten-year sovereign bond yield fell by 55 basis points to -0.06% (see Chart 4). Ten-year sovereign bond yields in the United States and the United Kingdom also dropped significantly, by 38 and 19 basis points respectively. The sizeable falls in government bond yields partly reflect a reappraisal of interest rate expectations in major jurisdictions in the context of heightened uncertainty with regard to global trade relations and the broader macroeconomic outlook.

**Chart 4**  
Ten-year sovereign bond yields



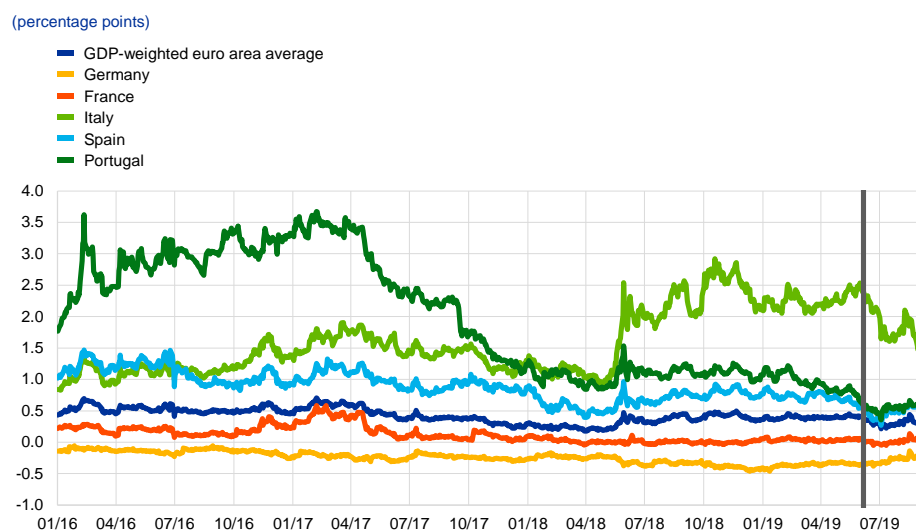
Sources: Thomson Reuters and ECB calculations.

Notes: Daily data. The vertical grey line denotes the start of the review period on 6 June 2019. The latest observations are for 11 September 2019.

**Sovereign bond spreads relative to the risk-free OIS rate were broadly unchanged in most euro area countries.** Sovereign bond spreads were largely stable throughout the review period, with the exception of the Italian market where the ten-year spread declined by 1.1 percentage points following the anticipation and subsequent formation of a new government. Overall, the spread between the GDP-weighted average of euro area ten-year sovereign bond yields and the ten-year OIS rate declined slightly, standing at 0.26 percentage points on 11 September.

## Chart 5

### Ten-year euro area sovereign bond spreads vis-à-vis the OIS rate



Sources: Thomson Reuters and ECB calculations.

Notes: The spread is calculated by subtracting the ten-year OIS rate from the ten-year sovereign bond yield. The vertical grey line denotes the start of the review period on 6 June 2019. The latest observations are for 11 September 2019.

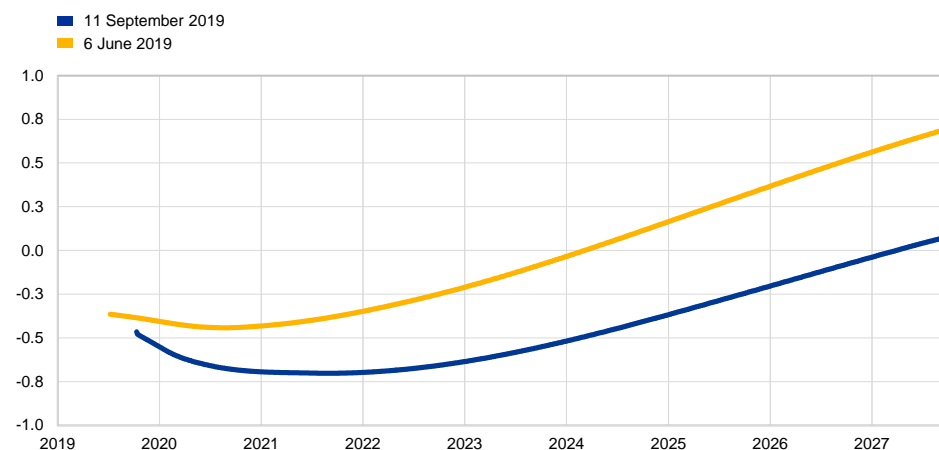
**The euro overnight index average (EONIA) stood, on average, at -36 basis points over the review period.** Excess liquidity decreased by approximately €141 billion to around €1,763 billion. The decline in excess liquidity was mainly driven by an increase in liquidity-absorbing autonomous factors and, to a lesser extent, by voluntary repayments in the second series of targeted longer-term refinancing operations (TLTRO-II). For further details on developments in liquidity conditions, see Box 2.

**The EONIA forward curve shifted downwards and inverted markedly at shorter horizons.** At the end of the review period, the curve displayed a trough of close to 40 basis points below the prevailing level of EONIA around the fourth quarter of 2021 and remained below zero for all horizons up to 2027, reflecting market expectations of a prolonged period of negative interest rates (see Chart 6).



**Chart 6**  
EONIA forward rates

(percentages per annum)



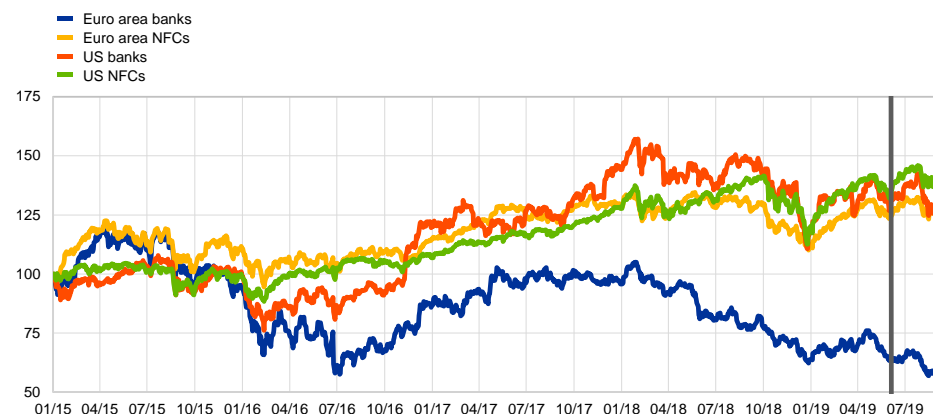
Sources: Thomson Reuters and ECB calculations.

**Non-financial equity prices increased in both the euro area and the United States, supported by a decline in risk-free rates.** The equity prices of euro area non-financial corporations (NFCs) increased by 6% overall, whereas euro area bank shares increased by close to 2% (see Chart 7). The underperformance of bank equity prices might be related to a generally subdued profitability outlook linked to, among other things, high cost structures, ongoing business model adjustment and the challenges of sufficiently benefiting from digitalisation-related efficiencies. In the United States, NFC and bank share prices rose by around 5% and 4%, respectively. Global equity prices were supported by a considerable decline in risk-free rates. However, this support was somewhat offset by an increase in risk premia in response to an intensification of global trade uncertainty and by some downward revisions of corporate earnings expectations, probably in response to lingering doubts about the global macroeconomic outlook.

## Chart 7

### Euro area and US equity price indices

(index: 1 January 2015 = 100)



Sources: Thomson Reuters and ECB calculations.

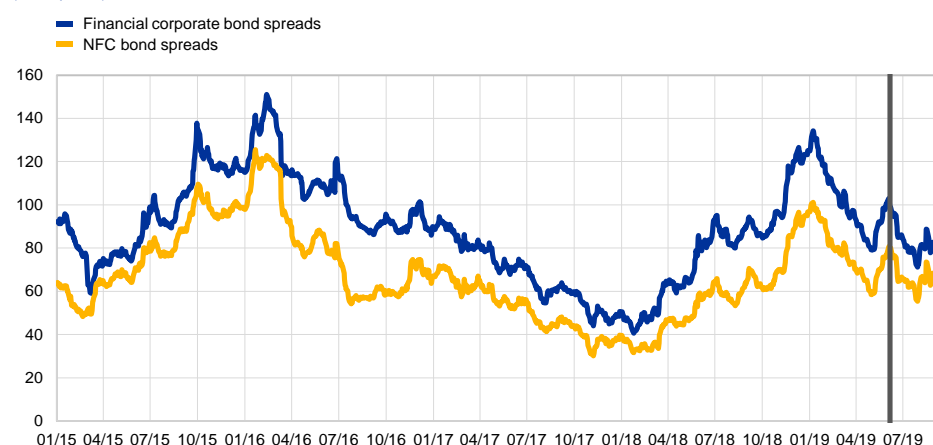
Notes: The vertical grey line denotes the start of the review period on 6 June 2019. The latest observations are for 11 September 2019.

**Euro area corporate bond spreads declined somewhat.** Overall, the spread between the yield on investment-grade euro area NFC bonds and the risk-free rate declined by 5 basis points to stand at 74 basis points (see Chart 8). Yields on financial sector debt also declined, with their spread to the risk-free rate falling by approximately 10 basis points. While both spreads remain broadly around the average levels that have prevailed since the introduction of the corporate sector purchase programme (CSPP) in March 2016, the most recent declines may have been supported by the expectation of additional monetary policy measures.

## Chart 8

### Euro area corporate bond spreads

(basis points)



Sources: iBoxx indices and ECB calculations.

Notes: The vertical grey line denotes the start of the review period on 6 June 2019. The latest observations are for 11 September 2019.

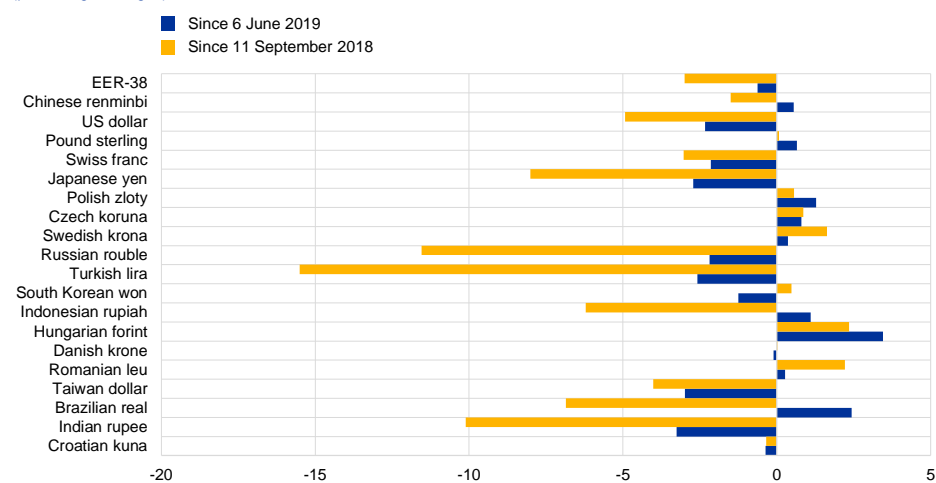
**In foreign exchange markets, the euro remained broadly unchanged in trade-weighted terms over the review period (see Chart 9).** The nominal effective exchange rate of the euro, as measured against the currencies of 38 of the euro area's most important trading partners, depreciated by 0.6%. The euro weakened against the

US dollar (by 2.3%), the Japanese yen (by 2.7%) and the Swiss franc (by 2.1%). The value of the euro also fell vis-à-vis the currencies of most emerging economies. The euro appreciated by 0.6% against the Chinese renminbi, reversing its weaker showing in July. The euro also strengthened against the Brazilian real and the Indonesian rupiah as well as against the pound sterling (by 0.6%) and the currencies of most non-euro area EU Member States.

### Chart 9

#### Changes in the exchange rate of the euro vis-à-vis selected currencies

(percentage changes)



Source: ECB.

Notes: "EER-38" is the nominal effective exchange rate of the euro against the currencies of 38 of the euro area's most important trading partners. All changes have been calculated using the foreign exchange rates prevailing on 11 September 2019.

### 3 Economic activity

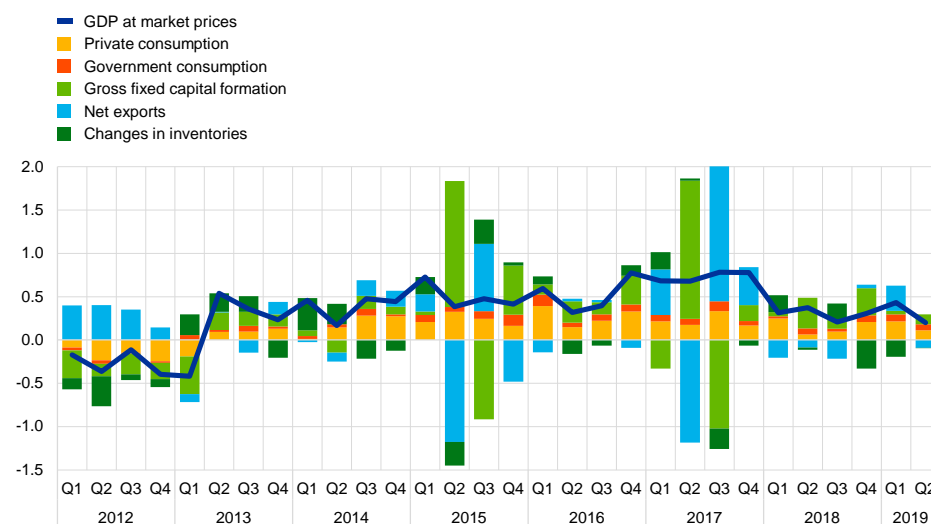
*Euro area economic growth softened in the second quarter of 2019, resuming the moderate performance observed in 2018. In quarter-on-quarter terms, euro area real GDP growth slowed to 0.2% in the second quarter of 2019, supported primarily by an increase in domestic demand, while net exports weighed on growth. Looking ahead, the latest economic indicators and survey results suggest subdued growth. The September 2019 ECB staff macroeconomic projections for the euro area foresee annual real GDP growth at 1.1% in 2019 and 1.2% in 2020, before gradually reaching 1.4% in 2021. Compared with the June 2019 Eurosystem staff macroeconomic projections, the outlook for euro area real GDP growth has been revised down for 2019 and 2020 on account of the deterioration in the short-term outlook, characterised by weaker confidence indicators and continued global uncertainties.*

**Euro area growth remained moderate in the first two quarters of 2019, with differences across countries becoming more noticeable in the second quarter of the year.** Real GDP increased by 0.3%, quarter on quarter, on average in the first two quarters of 2019, continuing at the same average rate of growth as in the previous year (see Chart 10). The moderate performance stems largely from a weakening in foreign demand. Domestic demand continued to be the main driver of economic activity and has been the main GDP component supporting growth since real GDP growth started to slow in early 2018. Changes in inventories made a negligible contribution to real GDP growth in the second quarter of 2019, whereas net trade made a negative contribution, reflecting subdued foreign demand against a background of global policy uncertainty. On the production side, softened economic activity in the second quarter of 2019 was explained by negative growth in the manufacturing sector due to both international trade disputes and country-specific developments (see Box 3). The services sector lost some momentum in the second quarter of 2019 in terms of value added, possibly reflecting some spillover stemming from manufacturing sector weakness.

## Chart 10

### Euro area real GDP and its components

(quarter-on-quarter percentage changes and quarter-on-quarter percentage point contributions)



Source: Eurostat.

Note: The latest observations are for the second quarter of 2019.

#### **Euro area labour markets are still improving, albeit at a moderate pace.**

Employment increased by 0.2%, quarter on quarter, in the second quarter of 2019, after 0.4% in the first quarter, in line with output growth. Compared with the first quarter, employment growth remained unchanged at 0.4% in the services sector while it weakened in the non-construction industry sector to 0.1%, after recording an increase of 0.4% in the first quarter of 2019. In contrast, employment in the construction sector declined by 0.2%, after increasing by 0.2% in the previous quarter.

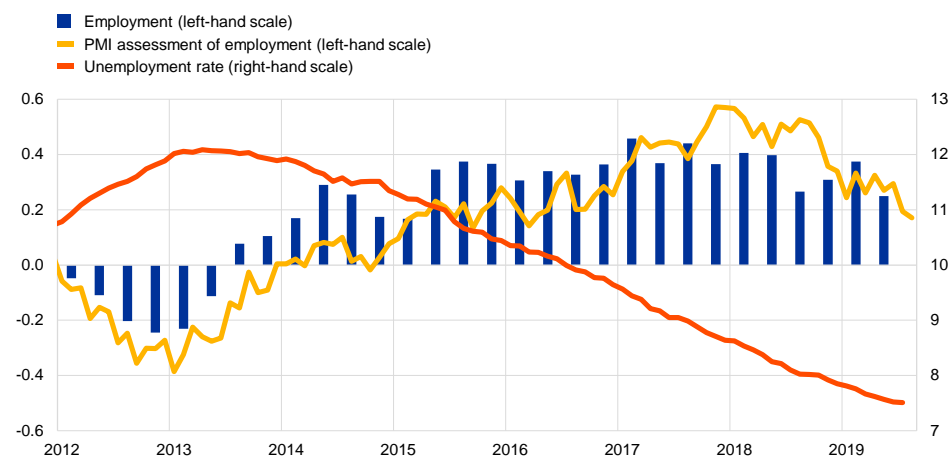
#### **Looking ahead, recent data and survey-based indicators continue to point to positive employment growth, with some further moderation.**

The euro area unemployment rate in July stood unchanged from the previous month at 7.5%, the lowest rate since July 2008. Although short-term survey-based indicators have fallen from the high levels recorded in 2018, they continue to suggest positive employment growth in the near future, with some moderation.

**Chart 11**

**Euro area employment, PMI assessment of employment and unemployment**

(left-hand scale: quarter-on-quarter percentage changes; diffusion index; right-hand scale: percentages of labour force)



Sources: Eurostat, Markit and ECB calculations.

Notes: The Purchasing Managers' Index (PMI) is expressed as a deviation from 50 divided by 10. The latest observations are for the second quarter of 2019 for employment, August 2019 for the PMI and July 2019 for the unemployment rate.

**Developments in private consumption continue to be driven by the recovery in the labour market.** Private consumption rose by 0.2%, quarter on quarter, in the second quarter of 2019, following somewhat stronger growth in the first quarter. The latest developments in retail trade and passenger car registrations are broadly in line with steady consumption growth expected in the near term. From a longer-term perspective, increasing labour income is supporting consumer spending, which is also reflected in still robust consumer confidence (see Box 5). In addition, the strengthening of household balance sheets remains an important factor underpinning resilient consumption growth, with household creditworthiness being a key determinant of consumers' access to credit.

**Business investment growth is expected to continue to be supported by accommodative financing conditions, although subdued earnings expectations suggest some moderation.** Euro area investment growth (excluding construction) rebounded in the second quarter of 2019, rising to 1.0% in quarter-on-quarter terms from -0.9% in the first quarter of 2019. Business investment is expected to see moderate growth in the near term, however, in line with relatively weak business margins and firm valuations. Earnings expectations for listed companies in the euro area suggest a certain degree of moderation regarding investment decisions, although favourable financing conditions should be reflected in non-financial corporations' access to credit and thus boost business investment growth.

**Developments in housing markets are expected to support growth, albeit with a moderating momentum.** Quarterly growth in housing investment slowed significantly to 0.3% in the second quarter of 2019 from 1.4% in the previous quarter, posting the lowest outcome since the first quarter of 2017. Recent short-term indicators and survey results suggest some decelerating momentum in the third quarter of 2019, although they remain above historical averages. The European Commission construction confidence indicator for July and August points to a positive, albeit

decelerating, momentum in the third quarter. Similarly, the Purchasing Managers' Index (PMI) indicator for construction output and its residential component indicated broadly flat growth expectations in the construction sector in July and August, standing below the average level recorded in the previous quarter.

**Growth in euro area exports weakened further in the second quarter of 2019 to 0.0%, owing to a 0.1% decline in goods export volumes.** Exports of services continued to weaken but still expanded by 0.4%. The overall performance mainly reflected extra-euro area exports, and specifically the abrupt fall in exports to the United Kingdom related to persistent uncertainty regarding Brexit. Conversely, some support was provided by overall exports to Asia (excluding China) and primarily chemical exports to the United States. Looking ahead, leading indicators suggest anaemic growth for euro area exports, although the indicator for new manufacturing export orders outside the euro area provided somewhat more positive signals, as did some shipping indices over the summer.

**The latest economic indicators and survey results confirm ongoing downside risks to the euro area economic growth outlook.** Euro area industrial production (excluding construction) saw a broad-based month-on-month decline of 1.6% in July, most notably driven by a decrease in capital goods production. As regards survey information, the European Commission's Economic Sentiment Indicator (ESI) increased between July and August to stand above its long-term average. Compared with the previous quarter, however, it has declined on average so far in the third quarter of 2019. The composite output PMI remained muted throughout the second quarter of 2019. Despite the slight improvement seen more recently, in August it remained below its long-term average, suggesting a mild outlook for economic growth.

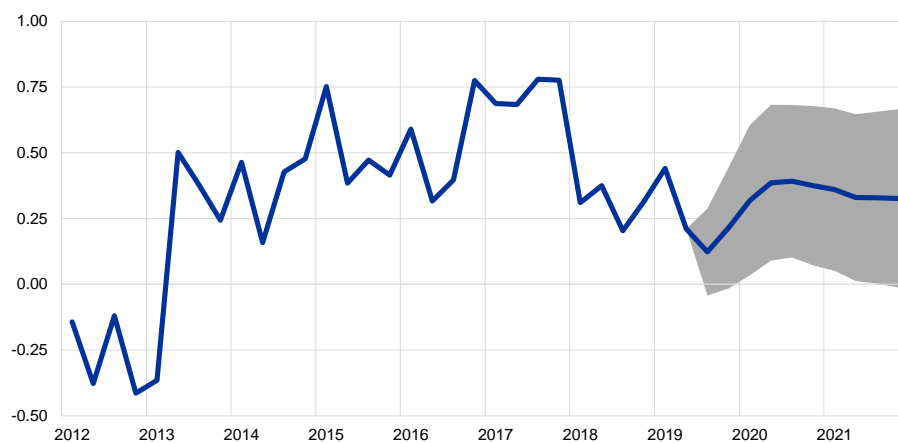
**The ECB's monetary policy will continue to underpin domestic demand against the deterioration in the short-term outlook for euro area real GDP growth.** Private consumption is supported by healthy household balance sheets, robust labour markets and ongoing employment gains. Business investment is fostered by favourable financing conditions and solid demand, despite weaker corporate profitability. Housing investment remains robust overall. The slowdown in global activity is, however, expected to continue to weigh on euro area growth and have an impact on euro area exports against a background of ongoing global policy uncertainty and heightened geopolitical risks.

**The September 2019 ECB staff macroeconomic projections for the euro area foresee annual real GDP increasing by 1.1% in 2019, 1.2% in 2020 and 1.4% in 2021 (see Chart 12).** Compared with the June 2019 Eurosystem staff macroeconomic projections, the outlook for euro area real GDP growth has been revised down for 2019 and 2020 on account of the deterioration in the short-term outlook. The risks surrounding the euro area growth outlook remain tilted to the downside. Global policy uncertainty, rising protectionism and geopolitical factors have regained prominence recently and continue to be a drag on euro area growth.

## Chart 12

### Euro area real GDP (including projections)

(quarter-on-quarter percentage changes)



Sources: Eurostat and the article entitled "ECB staff macroeconomic projections for the euro area, September 2019", published on the ECB's website on 12 September 2019.

Notes: The ranges shown around the central projections are based on the differences between actual outcomes and previous projections carried out over a number of years. The width of the range is twice the average absolute value of these differences. The method used for calculating the ranges, involving a correction for exceptional events, is documented in "New procedure for constructing Eurosystem and ECB staff projection ranges", ECB, December 2009.



## 4 Prices and costs

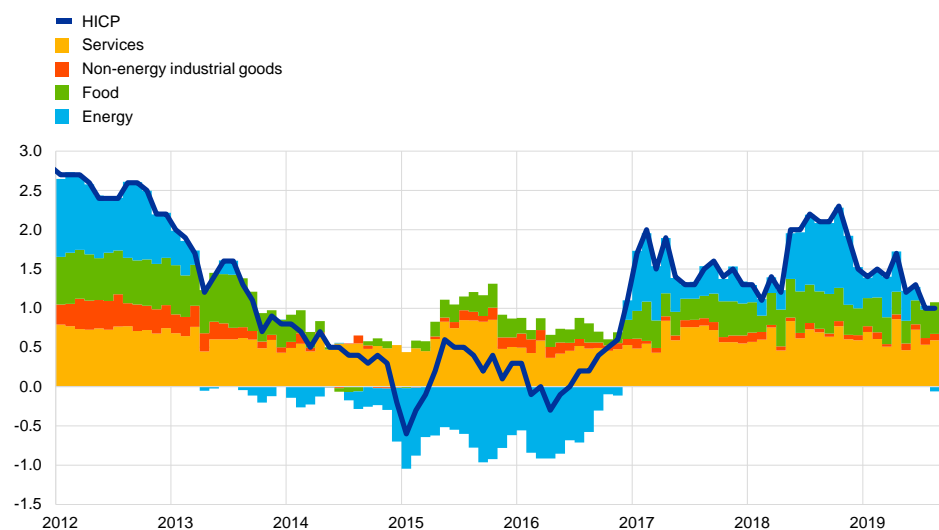
According to Eurostat's flash estimate, euro area annual HICP inflation was 1.0% in August 2019, unchanged from July. Measures of underlying inflation remained generally muted, and indicators of inflation expectations stand at low levels. While labour cost pressures strengthened and broadened amid high levels of capacity utilisation and tightening labour markets, their pass-through to inflation is taking longer than previously anticipated. Looking ahead, underlying inflation is expected to increase over the medium term, supported by the ECB's monetary policy measures, the ongoing economic expansion and robust wage growth. This assessment is also broadly reflected in the September 2019 ECB staff macroeconomic projections for the euro area, which foresee annual HICP inflation at 1.2% in 2019, 1.0% in 2020 and 1.5% in 2021. Compared with the June 2019 Eurosystem staff macroeconomic projections, the outlook for HICP inflation has been revised down over the whole projection horizon, reflecting lower energy prices and the weaker growth environment. Annual HICP inflation excluding energy and food is expected to be 1.1% in 2019, 1.2% in 2020 and 1.5% in 2021.

**Headline inflation was unchanged in August.** According to Eurostat's flash estimate, euro area annual HICP inflation was 1.0% in August, unchanged from July and down from 1.3% in June (see Chart 13). Energy inflation continued to decline and turned negative in August, but was offset by higher food inflation than in July.

**Chart 13**

### Contributions of components of euro area headline HICP inflation

(annual percentage changes; percentage point contributions)



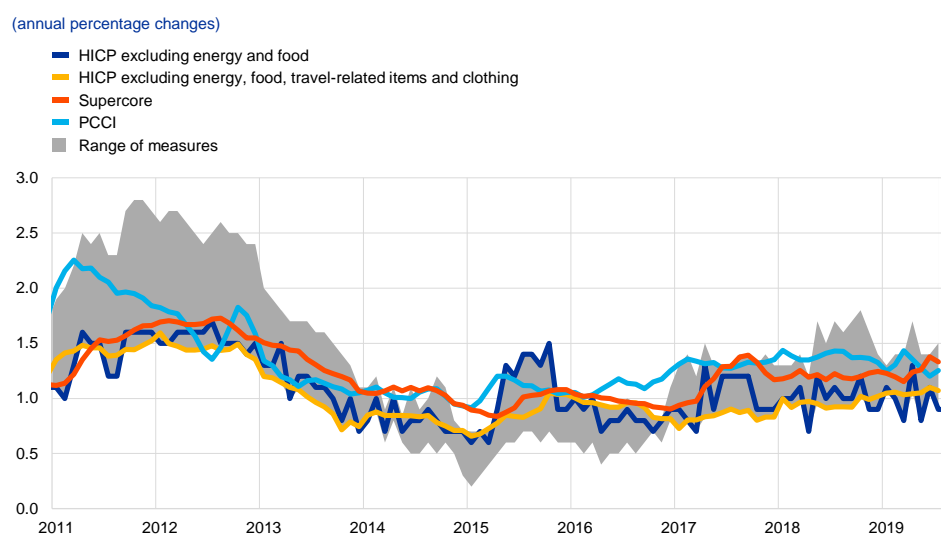
Sources: Eurostat and ECB calculations.

Notes: The latest observations are for August 2019 (flash estimates). Growth rates for 2015 are distorted upwards owing to a methodological change (see the box entitled "A new method for the package holiday price index in Germany and its impact on HICP inflation rates", *Economic Bulletin*, Issue 2, ECB, 2019).

**Measures of underlying inflation remained generally muted.** HICP inflation excluding energy and food fell from 1.1% in June to 0.9% in July and August – the

development was related partly to calendar effects and methodological changes.<sup>4</sup> Measures of underlying inflation that tend to be less volatile than HICP inflation excluding energy and food have also been fairly stable over recent quarters (data available up to July only; see Chart 14). HICP inflation excluding energy, food, travel-related items and clothing was unchanged at 1.1% in June and July. The Persistent and Common Component of Inflation (PCCI) increased slightly from 1.2% in June to 1.3% in July. The Supercore measure decreased from 1.4% in June to 1.3% in July.<sup>5</sup> Overall, measures of underlying inflation continued to move sideways but are up from their lows in 2016.

**Chart 14**  
Measures of underlying inflation



Sources: Eurostat and ECB calculations.

Notes: The latest observations are for August 2019 (flash estimate) for HICP excluding energy and food and for July 2019 for all other measures. The range of measures of underlying inflation consists of the following: HICP excluding energy; HICP excluding energy and unprocessed food; HICP excluding energy and food; HICP excluding energy, food, travel-related items and clothing; the 10% trimmed mean of the HICP; the 30% trimmed mean of the HICP; and the weighted median of the HICP. Growth rates for HICP excluding energy and food for 2015 are distorted upwards owing to a methodological change (see the box entitled "A new method for the package holiday price index in Germany and its impact on HICP inflation rates", *Economic Bulletin*, Issue 2, ECB, 2019).

### The latest indicators of price pressures for non-energy industrial goods

**consumer prices provided mixed signals.** Producer price inflation for domestic sales of non-food consumer goods decreased to 0.8% in July from 0.9% in May and June, but remained well above its long-term average. The corresponding rate of import price inflation increased to 0.8% in July, from 0.5% in June. Earlier in the pricing chain, however, domestic producer price inflation for intermediate goods continued to decline, likely reflecting in part the recent decrease in energy prices. Price pressures also declined at the very early stages of the pricing chain, with both oil and non-oil commodity prices recording a decrease in the year-on-year inflation rate in August compared with July.

<sup>4</sup> Changes in the statistical accounting for package holiday prices in Germany are estimated to have had a downward impact on HICP excluding food and energy in the euro area. For details, see the box entitled "Dampening special effect in the HICP in July 2019" in the article entitled "[Economic Conditions in Germany](#)", *Monthly Report*, Deutsche Bundesbank, August 2019, pp. 57-59.

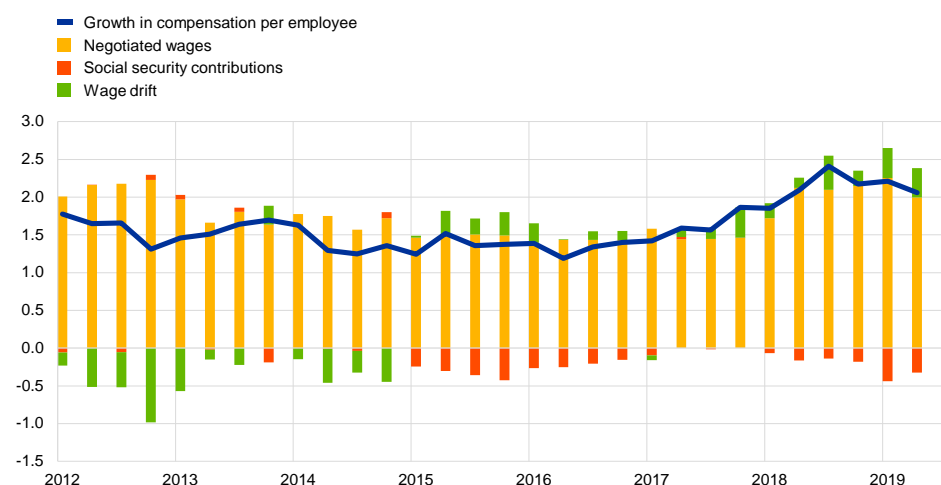
<sup>5</sup> For further information on these measures of underlying inflation, see Boxes 2 and 3 in the article entitled "[Measures of underlying inflation for the euro area](#)", *Economic Bulletin*, Issue 4, ECB, 2018.

**Wage growth has remained robust.** Annual growth in compensation per employee was 2.1% in the second quarter of 2019, down slightly from the 2.2% recorded in the first quarter (see Chart 15). The figures for the first and second quarters of 2019 were affected by a significant drop in social security contributions.<sup>6</sup> Annual growth in wages and salaries per employee, which excludes social security contributions, was 2.4% in the second quarter, after 2.6% in the first quarter and 2.3% on average for the previous year. Annual growth in negotiated wages in the euro area was 2.0% in the second quarter of 2019, down from 2.3% in the first quarter, with the reduction driven mainly by one-off payments in Germany. Looking through temporary factors, annual growth in compensation per employee has stabilised since mid-2018 at a level slightly above its historical average of 2.1%.<sup>7</sup>

### Chart 15

#### Contributions of components of compensation per employee

(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB calculations.

Note: The latest observations are for the second quarter of 2019.

#### Market-based measures of longer-term inflation expectations have remained at very low levels, while survey-based expectations also stand at historical lows.

Market-based measures of inflation expectations fell somewhat over the review period, to hover just above their historical lows. The five-year forward inflation-linked swap rate five years ahead stood at 1.22% on 11 September 2019, around 7 basis points below its level at the time of the July monetary policy meeting of the Governing Council. While the probability of deflation based on market expectations nonetheless remains low, the forward profile of market-based measures of inflation expectations continues to point to a prolonged period of low inflation, with only a very gradual return to inflation levels below, but close to, 2%. Survey-based long-term inflation expectations stand at record lows, according to the ECB Survey of Professional Forecasters for the third quarter of 2019, as well as the July releases from Consensus Economics and the Euro Zone Barometer.

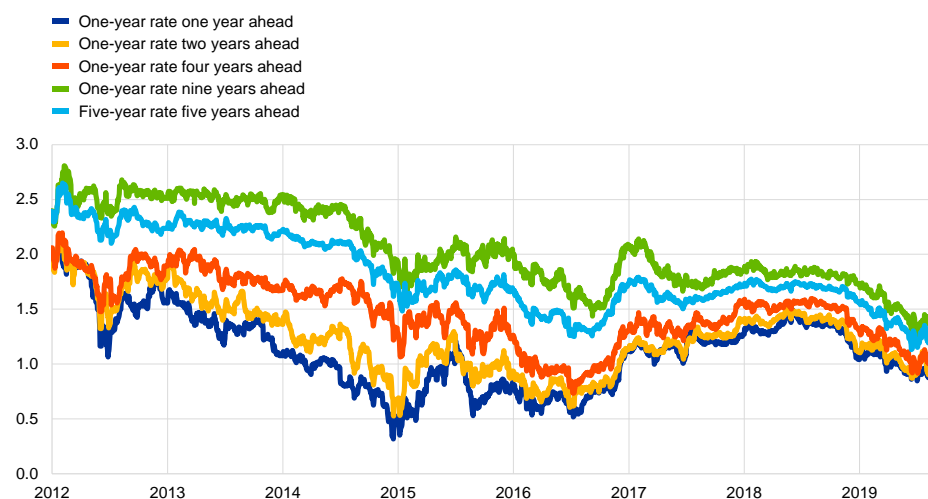
<sup>6</sup> This was related to a permanent reduction in employers' social security contributions in France, replacing the tax credit for employment and competitiveness (*crédit d'impôt pour la compétitivité et l'emploi – CICE*), in the first quarter of 2019.

<sup>7</sup> The historical average is based on data from the first quarter of 1999 to the second quarter of 2019.

## Chart 16

### Market-based measures of inflation expectations

(annual percentage changes)



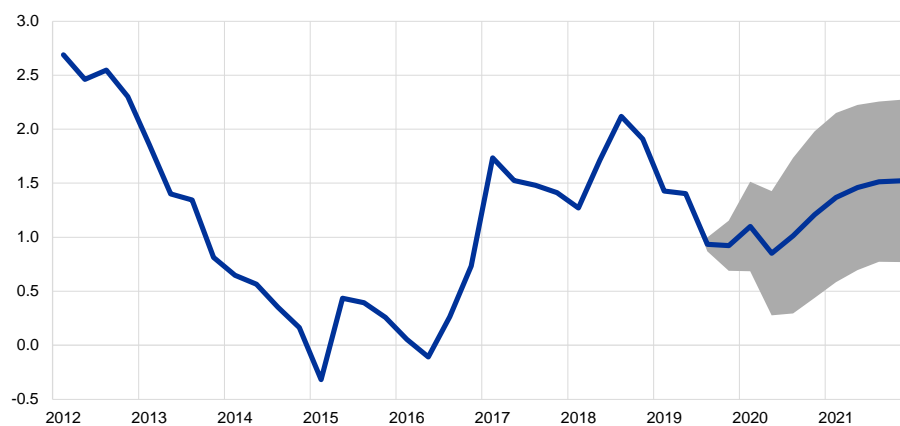
Sources: Thomson Reuters and ECB calculations.  
Note: The latest observations are for 11 September 2019.

**The September 2019 ECB staff macroeconomic projections expect underlying inflation to increase over the medium term.** These projections, which are based on the information available at the end of August, expect headline HICP inflation to average 1.2% in 2019, 1.0% in 2020 and 1.5% in 2021, compared with 1.3%, 1.4% and 1.6% respectively in the June 2019 Eurosystem staff macroeconomic projections (see Chart 17). The revisions are largely explained by the energy component, which was revised notably downwards for both 2019 and 2020, due to lower oil prices. HICP inflation excluding energy and food is projected to move sideways in 2020 and strengthen in 2021, supported by the expected pick-up in activity and the associated recovery in profit margins as past increases in labour costs feed into prices. HICP inflation excluding energy and food is expected to rise from 1.1% in 2019 to 1.2% in 2020 and 1.5% in 2021. This profile represents a downward revision, mainly reflecting weaker than expected data outturns so far this year.

## Chart 17

### Euro area HICP inflation (including projections)

(annual percentage changes)



Sources: Eurostat and the article entitled "ECB staff macroeconomic projections for the euro area, September 2019", published on the ECB's website on 12 September 2019.

Notes: The latest observations are for the second quarter of 2019 (data) and the fourth quarter of 2021 (projection). The ranges shown around the central projections are based on the differences between actual outcomes and previous projections carried out over a number of years. The width of the ranges is twice the average absolute value of these differences. The method used for calculating the ranges, involving a correction for exceptional events, is documented in "New procedure for constructing Eurosystem and ECB staff projection ranges", ECB, December 2009. The cut-off date for data included in the projections was 29 August 2019.

## 5 Money and credit

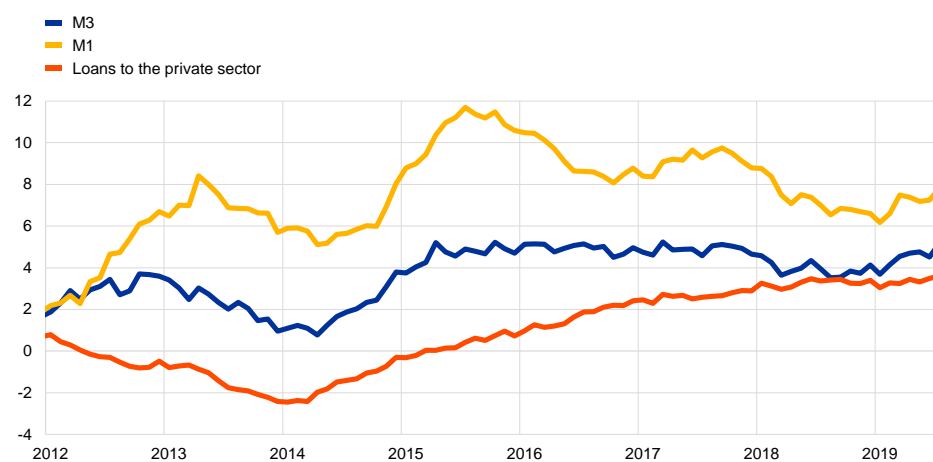
*In July 2019 the annual growth of broad money increased markedly, while loans to the private sector remained broadly unchanged. M3 growth remained resilient in the face of the fading-out of the mechanical contribution of net purchases under the asset purchase programme (APP) and weakening economic momentum. At the same time, favourable bank funding and lending conditions continued to support loan flows and thereby economic growth. Net issuance of debt securities by non-financial corporations (NFCs) was robust in the second quarter of 2019, after recording the highest historical level of net issuance in the first quarter of 2019, amid a continuous improvement in bond market conditions.*

**Broad money growth increased markedly in July.** The annual growth rate of M3 rose to 5.2% in July 2019 from 4.5% in June 2019 (see Chart 18), returning to the solid growth rates observed in the period from 2015 to 2017. Higher broad money growth was supported by lower opportunity costs and remained resilient in the face of the fading-out of the positive mechanical contribution of net purchases under the APP and weakening economic momentum. The narrow monetary aggregate M1, which includes the most liquid components of M3, continued to be the main contributor to broad money growth. The annual growth rate of M1 increased in July to 7.8%, from 7.2% in June, continuing its recovery observed since the start of the year.

**Chart 18**

### M3, M1 and loans to the private sector

(annual percentage changes; adjusted for seasonal and calendar effects)



Source: ECB.

Notes: Loans are adjusted for loan sales, securitisation and notional cash pooling. The latest observation is for July 2019.

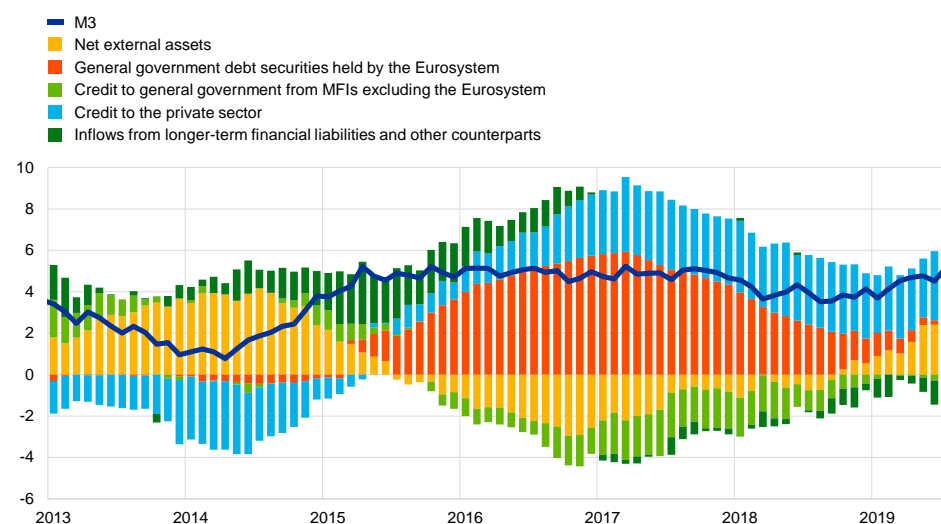
**Overnight deposits, the main contributor to money growth, continued to expand at a robust pace.** The annual growth rate of overnight deposits increased further to 8.3% in July, reflecting a strong rise in the annual growth rate of overnight deposits held by both NFCs and households. Among the M1 components, the annual growth of currency in circulation remained solid, although not exceptionally high by historical standards. This indicates no pervasive substitution into cash in an environment of very low or negative interest rates for the euro area as a whole. Short-term deposits other than overnight deposits (i.e. M2 minus M1) remained

supported by the lower opportunity costs of holding M3, making a neutral contribution to M3 growth in July. At the same time, marketable instruments (i.e. M3 minus M2) continued to contribute negatively to broad money growth as a result of the relatively low remuneration of these instruments.

**External monetary inflows strengthened their contribution to M3 growth further in July.** The decreasing mechanical impact of the APP on M3 growth has been largely offset by positive contributions from credit to the private sector, which remained the main source of money creation (see the blue parts of the bars in Chart 19). The positive contribution to M3 growth from general government securities held by the Eurosystem, which reflects the mechanical contribution of the APP to M3 growth, has become marginal (see the red parts of the bars in Chart 19). In recent months, the smaller contribution made by the APP has been replaced by external monetary flows (see the yellow parts of the bars in Chart 19). The increasing contribution from net external assets reflects greater interest on the part of foreign investors in euro area assets.

**Chart 19**  
M3 and its counterparts

(annual percentage changes; contributions in percentage points; adjusted for seasonal and calendar effects)



Source: ECB.

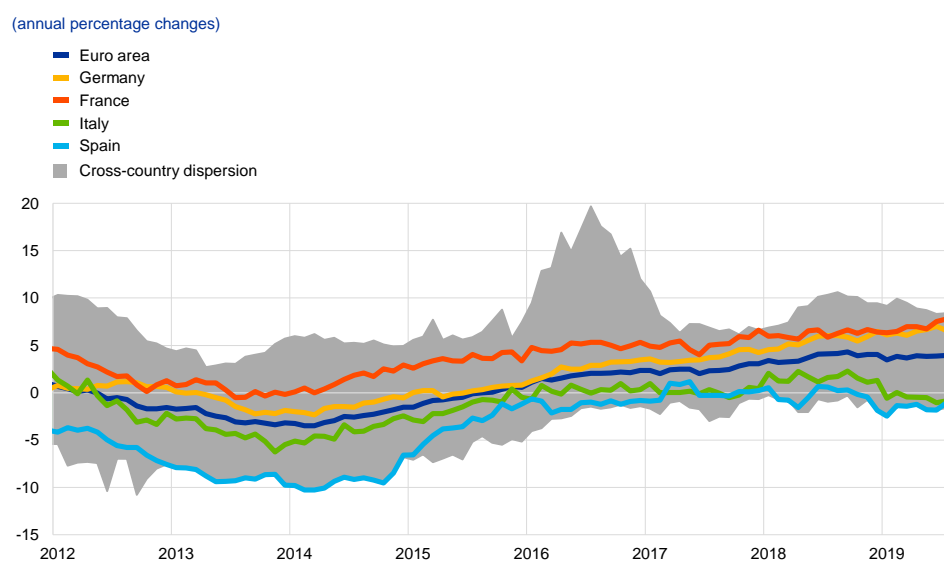
Notes: Credit to the private sector includes MFI loans to the private sector and MFI holdings of debt securities issued by the euro area private non-MFI sector. As such, it also covers purchases by the Eurosystem of non-MFI debt securities under the corporate sector purchase programme. The latest observation is for July 2019.

**The annual growth rate of loans to the private sector remained broadly unchanged with weakness in some cyclically sensitive segments.** The annual growth rate of MFI loans to the private sector (adjusted for loan sales, securitisation and notional cash pooling) stood at 3.6% in July, compared with 3.5% in June (see Chart 18). This development was mainly owing to the slight increase in the annual growth rate of loans to households to 3.4% in July, compared with 3.3% in June. Annual loan growth to households thus continued on its gradual upward trend, benefiting from further improvements in the labour market and still favourable housing market developments. The annual growth rate of loans to NFCs remained stable at 3.9% in July, after reaching its turning point in September 2018 (at 4.3%). This was in

line with its lagging cyclical pattern with respect to real economic activity and the 2018 slowdown in aggregate demand. In particular, this is reflected in the weakness of cyclically sensitive segments, such as short-term loans and loans to the manufacturing sector. Overall, loan growth continued to benefit from favourable lending conditions. Moreover, the growth in loans to firms and households is characterised by considerable heterogeneity across countries (see Charts 20 and 21), reflecting, inter alia, cross-country differences in the business cycle, variations in the availability of other funding sources and heterogeneity in house price developments across countries.

### Chart 20

#### MFI loans to NFCs in selected euro area countries



Source: ECB.

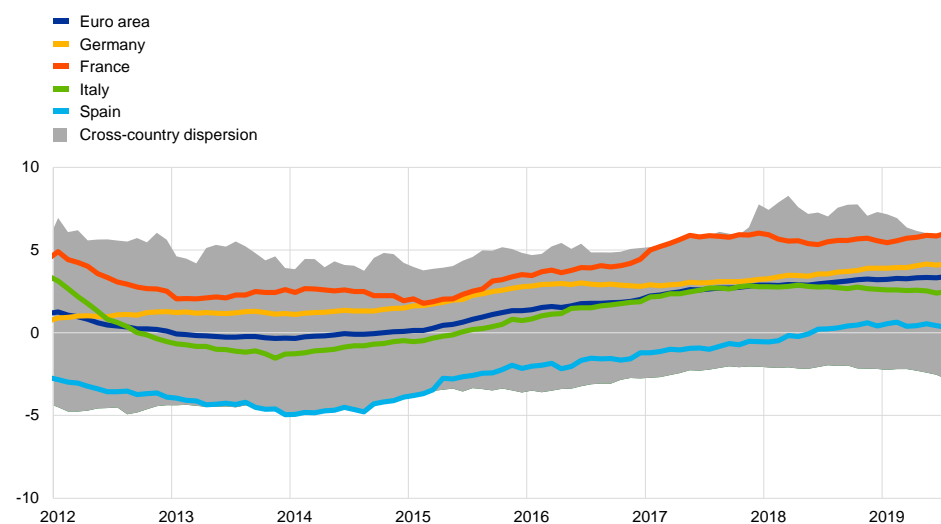
Notes: Loans are adjusted for loan sales, securitisation and notional cash pooling. The cross-country dispersion is calculated on the basis of minimum and maximum values using a fixed sample of 12 euro area countries. The latest observation is for July 2019.



## Chart 21

### MFI loans to households in selected euro area countries

(annual percentage changes)



Source: ECB.

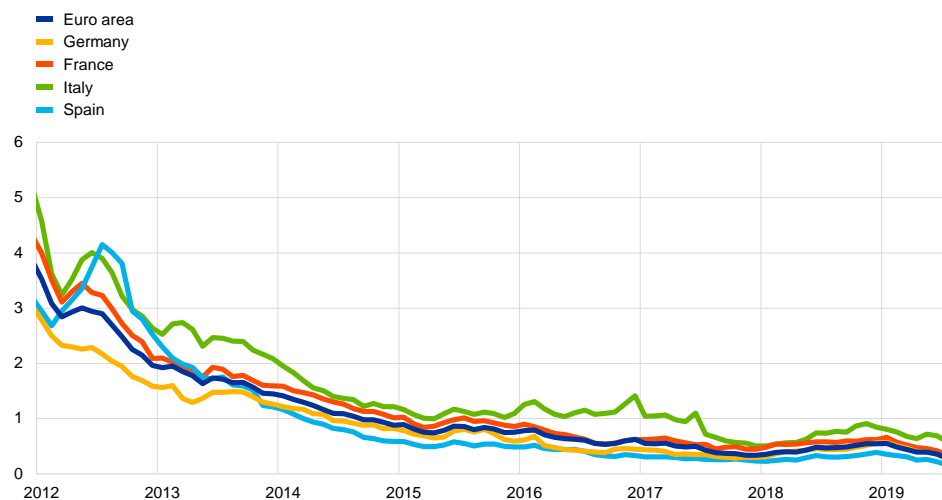
Notes: Loans are adjusted for loan sales and securitisation. The cross-country dispersion is calculated on the basis of minimum and maximum values using a fixed sample of 12 euro area countries. The latest observation is for July 2019.

**Banks' debt funding conditions have improved further.** Since the beginning of 2019 the composite cost of debt financing for euro area banks has decreased further, broadly in line with developments in market reference rates (see Chart 22). This development has been driven mainly by a considerable decline in bank bond yields, while euro area banks' deposit rates have remained close to their historical lows. Compared with deposits, bank bonds have remained the more expensive source of funding, accounting for a limited share in banks' overall debt funding. The improvement in banks' debt funding costs was widespread across the largest euro area countries. Moreover, in their responses to the ECB's bank lending survey, euro area banks reported improved access to funding in the first half of 2019, primarily on account of their access to debt securities funding. At the same time, the level of bank funding costs remained heterogeneous across the largest euro area countries. In the first half of 2019 euro area banks' loan-deposit margins for new business decreased somewhat. In this respect, the ability to charge negative rates on deposits, which is heterogeneous across countries for NFC deposits, significantly affects the size of these margins. In this way, the compression of loan-deposit margins exerts a dampening impact on bank profitability. However, this is compensated for by the positive impact of the low or even negative interest rate environment on credit quality (which reduces provisioning costs) and lending volumes. Overall, euro area banks' funding conditions continue to be favourable, reflecting the ECB's accommodative monetary policy stance and the strengthening of banks' balance sheets. Despite the progress made by banks in consolidating their balance sheets, for instance by reducing non-performing loans, the level of euro area bank profitability remains low.

## Chart 22

### Banks' composite cost of debt financing

(composite cost of deposit and unsecured market-based debt financing; percentages per annum)



Sources: ECB, Markit iBoxx and ECB calculations.

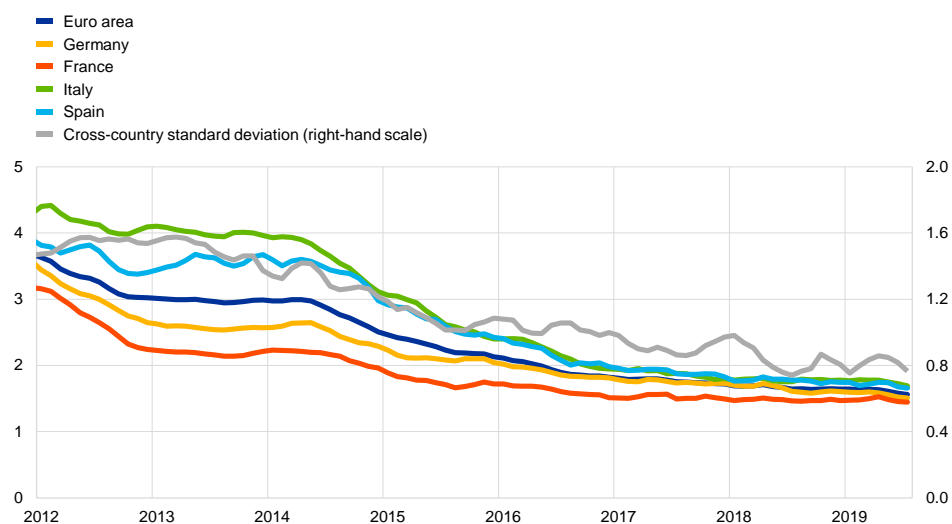
Notes: The composite cost of deposits is calculated as an average of new business rates on overnight deposits, deposits with an agreed maturity and deposits redeemable at notice, weighted by their corresponding outstanding amounts. The latest observation is for July 2019.

**Bank lending rates for NFCs and households decreased further.** This was broadly in line with developments in market reference rates. In July 2019 the composite bank lending rate for NFCs (see Chart 23) stood at 1.56%, only marginally above its historical low, while the composite bank lending rate for housing loans reached a new historical low in July, when it declined to 1.61% (see Chart 24). Competitive pressures and more favourable bank funding costs dampened lending rates for loans to euro area NFCs and households. Overall, composite bank lending rates for loans to NFCs and households have fallen significantly since the ECB's credit easing measures were announced in June 2014. Between May 2014 and July 2019 composite lending rates on loans to NFCs and households fell by around 140 and 130 basis points respectively. The reduction in bank lending rates for loans to NFCs, as well as for loans to small firms (assuming that very small loans of up to €0.25 million are granted primarily to small firms), was particularly significant in those euro area countries more affected by the financial crisis. This indicates a more uniform transmission of monetary policy to bank lending rates across euro area countries and firm sizes.

### Chart 23

#### Composite lending rates for NFCs

(percentages per annum; three-month moving averages)



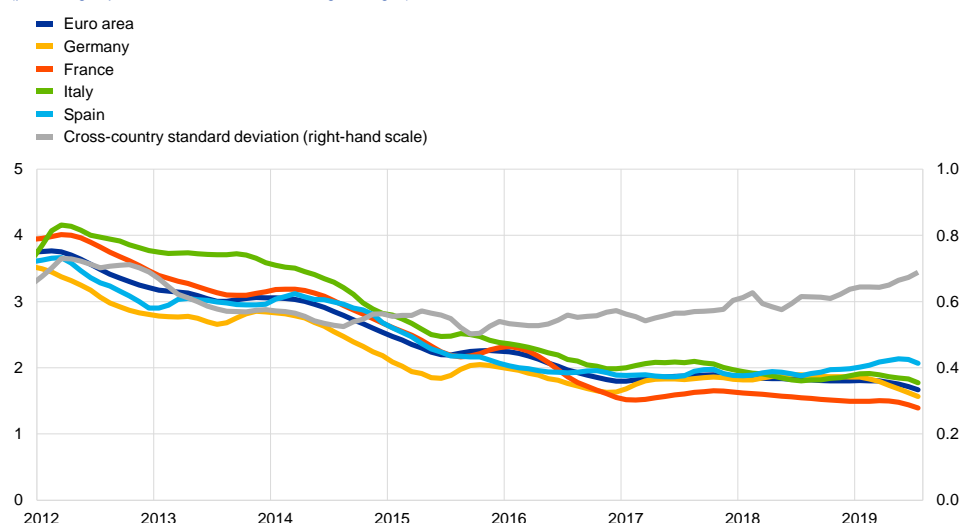
Source: ECB.

Notes: 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. The cross-country standard deviation is calculated using a fixed sample of 12 euro area countries. The latest observation is for July 2019.

### Chart 24

#### Composite lending rates for house purchase

(percentages per annum; three-month moving averages)



Source: ECB.

Notes: 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. The cross-country standard deviation is calculated using a fixed sample of 12 euro area countries. The latest observation is for July 2019.

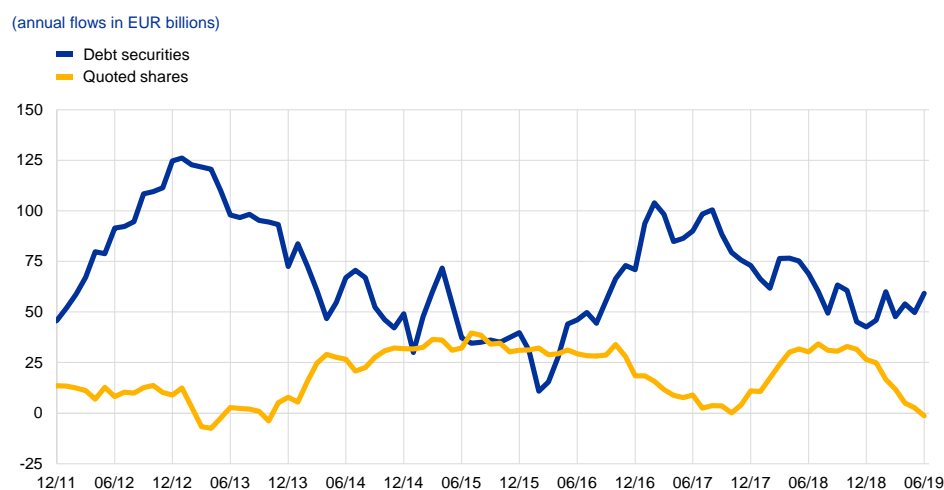
**The annual flow of total external financing to euro area NFCs was broadly unchanged in the second quarter of 2019, after contracting strongly in the previous quarter.** Borrowing from banks strengthened over the quarter, while net issuance of debt securities stood at solid levels. By contrast, net issuance of listed shares and loans from non-monetary financial institutions remained weak. Compared

with earlier economic slowdowns, debt financing flows to NFCs have remained quite resilient. This reflects favourable debt financing conditions, a greater contribution from services and real estate-related activities to overall economic growth, solid business investment growth and a slowdown in profit growth, all of which have supported debt financing volumes.

**In the second quarter of 2019 the net issuance of debt securities by NFCs remained quite robust, albeit decreasing, compared with the level recorded in the previous quarter, which was the highest level recorded since 1999.** The moderation in the net issuance of debt securities in the second quarter of 2019 is in line with the typical seasonal pattern of the series and the pay-back effect following their exceptional strength – at €42 billion – in the previous quarter. Furthermore, from April to June 2019 the cost of market-based debt financing declined by a further 25 basis points and continued to provide support to net debt securities issuance. Taking a medium-term perspective, the gradual slowdown in annual net issuance flows that started in 2017 seems to have stopped at least temporarily (see Chart 25), thus confirming signs of a gradual stabilisation observed since the beginning of 2019. Market data suggest that the net issuance of debt securities in July and August 2019 has remained strong, although confined to investment-grade issuers, while high-yield issuance remains much more muted than it was in the second quarter of 2019. The net issuance of listed shares continued to weaken and turned negative in the second quarter of 2019, reflecting both sluggish M&A activity and a continuous increase in the cost of equity financing.

### Chart 25

#### Net issuance of debt securities and quoted shares by euro area NFCs



Source: ECB.

Notes: Monthly figures based on a 12-month rolling period. The latest observation is for June 2019.

**In June 2019 the cost of financing for NFCs remained slightly above the historical minimum reached in April 2019.** In June 2019 the overall nominal cost of external financing for NFCs, comprising bank lending, debt issuance in the market and equity finance, stood at 4.6%. This was 16 basis points higher than in April 2019, when the cost of financing series reached its historical low, but still lower than the level seen in mid-2014, when market expectations regarding the introduction of the public sector

purchase programme began to emerge. The increase in the cost of financing is attributable to the higher cost of equity driven by increasing risk premia, which was only partially offset by a further decline in the cost of market-based debt. In the following two months, the overall cost of financing is estimated to have remained broadly unchanged at its June 2019 value.

## 6 Fiscal developments

*The euro area fiscal deficit is projected to increase on account of lower primary balances over the entire forecast horizon (2019-21). A favourable interest rate-growth differential and positive, albeit declining, primary balances continue to maintain the euro area government debt-to-GDP ratio on a downward path. The aggregate fiscal stance for the euro area is expected to be mildly expansionary, providing some support to economic activity. In view of the weakening economic outlook and the continued prominence of downside risks, governments with fiscal space that are facing a slowdown should act in an effective and timely manner. At the same time, in countries where public debt is high, governments need to pursue prudent policies and deliver on structural balance targets. This will create the conditions for automatic stabilisers to operate freely.*

**The euro area general government budget balance is projected to decrease over the projection horizon.**<sup>8</sup> Based on the September 2019 ECB staff macroeconomic projections, the general government deficit ratio for the euro area is expected to increase from 0.5% of GDP in 2018 to 0.8% of GDP in 2019. This development is driven by a lower cyclically adjusted primary balance, which is partly offset by lower interest expenditure, while the cyclical component remains broadly unchanged. The higher deficit is expected to persist in 2020 and to increase further to 1.0% of GDP in 2021 (see Chart 26) owing to a continued decline in the cyclically adjusted primary balance.

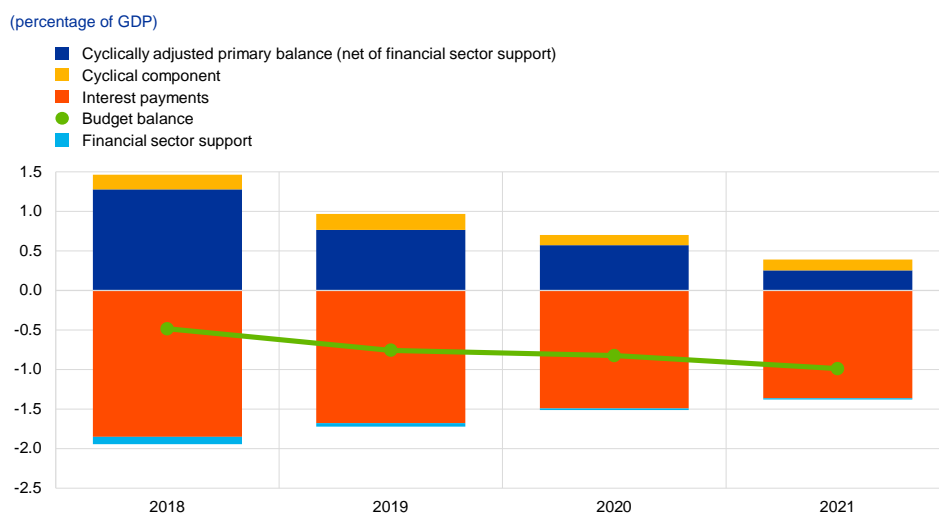
**The outlook for the euro area general government budget balance is broadly unchanged compared to the June 2019 Eurosystem staff projections.** While the deficit ratio is projected to be slightly lower in 2019 on account of a higher cyclically adjusted primary balance, it has been revised slightly upwards for 2021, reflecting a less favourable cyclical component.

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<sup>8</sup> See the “ECB staff macroeconomic projections for the euro area, September 2019”, published on the ECB’s website on 12 September 2019.

## Chart 26

### Budget balance and its components



Sources: ECB and September 2019 ECB staff macroeconomic projections.  
Note: The data refer to the aggregate general government sector of the euro area.

#### The aggregate fiscal stance for the euro area is assessed to be mildly expansionary over the entire projection horizon.<sup>9</sup>

The loosening of the stance in 2019 mainly results from cuts to direct taxes in France and Germany, and increases in public expenditure in Germany. In the following two years, the stance will continue to be mildly expansionary, mainly on account of further cuts to direct taxes and social security contributions in most of the larger euro area countries.

**The euro area aggregate public debt-to-GDP ratio is projected to continue to decline.** According to the September 2019 ECB staff macroeconomic projections, the aggregate general government debt-to-GDP ratio in the euro area is expected to decline from 85.4% of GDP in 2018<sup>10</sup> to 81.2% of GDP in 2021. The projected reduction in the government debt ratio is supported by a negative interest rate-growth differential<sup>11</sup> and continued primary surpluses, although these are expected to decline over time (see Chart 27). Over the projection horizon the debt ratio is expected to fall in most euro area countries, although it will continue to far exceed the reference value of 60% of GDP in some of them. Compared with the June 2019 projections, the decline in the aggregate euro area debt-to-GDP ratio is expected to be slower, with the projected ratio for 2021 revised upwards by 0.7 percentage points. This increase reflects an upward revision of the interest rate-growth differential, lower primary surpluses and a statistical revision of the debt-to-GDP ratio for 2018.

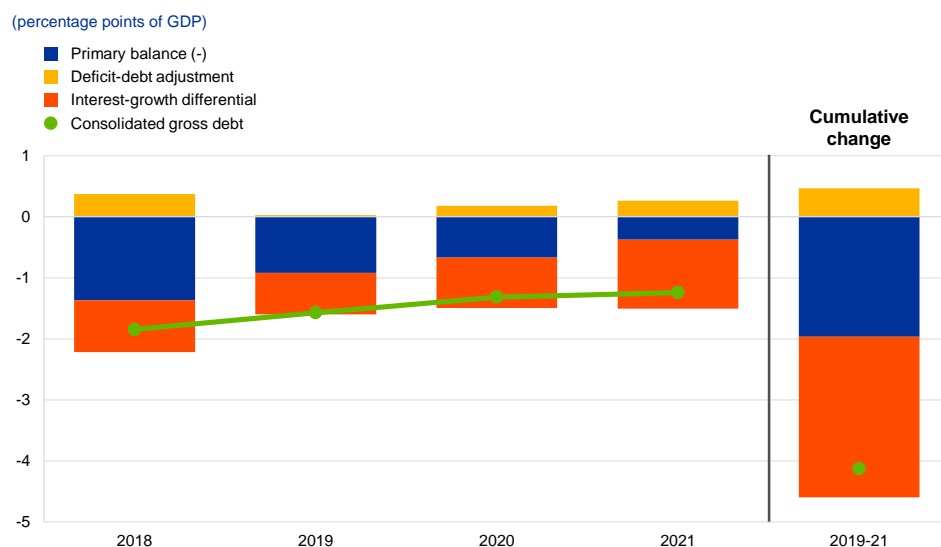
<sup>9</sup> The fiscal stance reflects the direction and size of the stimulus from fiscal policies to the economy, beyond the automatic reaction of public finances to the business cycle. It is measured here as the change in the cyclically adjusted primary balance ratio net of government support to the financial sector. For more details on the concept of the euro area fiscal stance, see the article entitled "The euro area fiscal stance", *Economic Bulletin*, Issue 4, ECB, 2016.

<sup>10</sup> As the projections usually take the most recent data revisions into account, there may be discrepancies compared with the latest validated Eurostat data.

<sup>11</sup> For more information, see the box entitled "Interest rate-growth differential and government debt dynamics", *Economic Bulletin*, Issue 2, ECB, 2019.

## Chart 27

### Drivers of change in public debt



Sources: ECB and September 2019 ECB staff macroeconomic projections.  
Note: The data refer to the aggregate general government sector of the euro area.

### Countries need to prepare 2020 budgets in line with the provisions of the EU fiscal framework.

In view of the weakening economic outlook and the continued prominence of downside risks, governments with fiscal space that are facing a slowdown should act in an effective and timely manner. In countries where public debt is high, governments need to pursue prudent policies and deliver on structural balance targets. This will create the conditions for automatic stabilisers to operate freely. All countries should reinforce their efforts to achieve a more growth-friendly composition of public finances.



# Boxes

## 1 The September policy package

Prepared by Julian Schumacher and Ine Van Robays

**At its September meeting, the Governing Council faced a more protracted slowdown of the euro area economy than previously anticipated, persistent and salient downside risks and a further delay in the convergence of inflation towards its medium-term inflation aim.** The outlook for inflation has continued to fall short of the Governing Council's aim on the back of slower euro area growth dynamics. Inflation rates, both realised and projected, have failed to pick up in recent months, measures of underlying inflation have remained generally muted, and market and survey-based indicators of long-run inflation expectations stand at historically low levels. This picture is also reflected in the latest ECB staff macroeconomic projections for the euro area, which show a further downgrade of the inflation and growth outlook.

**In the pursuit of its mandate to deliver price stability in the euro area, the Governing Council adopted a substantial package of monetary policy measures.** The package consists of five elements: (i) a cut in the interest rate on the deposit facility, (ii) adjustments to the forward guidance on the key ECB interest rates, (iii) the restart of net purchases under the asset purchase programme (APP), (iv) modifications to the modalities of the new series of targeted longer-term refinancing operations (TLTRO III), and (v) the introduction of a two-tier system for reserve remuneration. These measures complement each other in providing substantial monetary stimulus. They will lock in financial conditions across various segments of the market that are sufficiently supportive to foster a reacceleration of growth and the anchoring of inflation expectations. They preserve favourable bank lending conditions and also support the smooth transmission of the accommodative monetary policy stance to the real economy.

**First, the Governing Council decided to lower the interest rate on the deposit facility to -0.50%.** In an environment of excess liquidity, the deposit facility rate is the anchor for short-term interest rates, which in turn underpin the monetary policy transmission mechanism. The interbank market rate (EONIA) anchors the overnight index swap curve in the euro area, which underlies the pricing of many financial instruments and, in particular, the reference rates that are important for loan rate fixation. Reductions in the deposit facility rate thus provide monetary policy stimulus across the entire term structure of interest rates, which constitutes the basis for funding costs for businesses and households. Lowering the interest rate on the deposit facility by 10 basis points therefore adds further accommodation and, in addition, encourages banks to lend to the economy instead of holding on to liquidity, which should support the portfolio rebalancing channel of the APP.

**Second, the Governing Council provided a clear signpost for the future path of short-term interest rates by amending the state-based element of its forward guidance.** The adjustments complement the Governing Council's emphasis on

symmetry in its inflation aim that it had stressed at its July meeting, underlining its determination to act in the face of inflation running below the definition of price stability with the same commitment as with inflation running above it. The September meeting provided further clarifications of the forward guidance.

**The Governing Council has now strengthened the state-based element of its forward guidance by linking it to a more stringent set of conditions for the inflation outlook.** These enhancements clarify the reaction function of the Governing Council with respect to developments in the inflation outlook. In particular, the Governing Council now expects the key ECB interest rates to remain “*at their present or lower levels until we have seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2% within our projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics.*” The reference to levels “*sufficiently close to, but below, 2%*” signals that the inflation outlook has to increase significantly from its current realised and expected levels, and that the convergence of the inflation outlook will need to be observed within the projection horizon. Moreover, the inflation outlook will have to converge in a robust manner, meaning that the Governing Council wants to be sure that the process of convergence is sufficiently mature and realistic before starting to lift policy rates. The qualification that convergence must be reflected in underlying inflation dynamics ensures that the trajectory of realised inflation should underpin the inflation outlook. These elements provide a safeguard against reacting too strongly to transitory inflation shocks, as well as to forecast and measurement errors.

**The strengthened forward guidance underlines the Governing Council’s commitment to maintain a highly accommodative stance for as long as needed for inflation to sustainably reach levels around its medium-term aim.** In addition, the Governing Council indicated that interest rates could be reduced further if warranted by the inflation outlook, thus retaining an “easing bias” on policy rates.

**Third, the Governing Council decided to restart net purchases under its APP at a monthly pace of €20 billion, and will continue to reinvest for an extended period of time.** Renewed net asset purchases will keep a lid on long-term rates by compressing risk premia. At the same time, the Governing Council decided to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period after the date when interest rates are raised, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation. The Governing Council also decided to extend the possibility of purchasing assets with yields below the deposit facility rate, to the extent necessary, to the private sector parts of the APP, namely the third covered bond purchase programme (CBPP3), the asset-backed securities purchase programme (ABSPP) and the corporate sector purchase programme (CSPP). This extension will facilitate the continued smooth implementation of the APP and reflects changes in market interest rates relative to the deposit facility rate.

**Resuming net asset purchases will complement the impact of the forward guidance on interest rates, as they are expected to run for as long as necessary to strengthen the accommodative impact of the policy rates and to end shortly**

**before interest rates are raised.** This enhances the signalling role for policy rates. Since the state-based element of the forward guidance on the ECB's key interest rates is based on developments in projected inflation and the trajectory of underlying inflation, it makes the horizon for net purchases contingent on the inflation outlook. Furthermore, linking the reinvestment policy to interest rates also ensures that the reinvestment horizon moves together with the expected path of interest rates, thereby strengthening the latter's accommodative impact.

**Fourth, the Governing Council decided to adapt the modalities of TLTRO III.** The pricing of the new operations has been made more attractive. In particular, the 10-basis point spread over the entry and minimum borrowing rates announced in June has been removed. The interest rate in each operation will now be set at the level of the average rate applied in the main refinancing operations over the life of the respective TLTRO III operation. Banks that lend more than a specified benchmark will be offered a lower rate, which can be as low as the average interest rate on the deposit facility. The new pricing will support bank funding conditions to ensure that banks continue to offer favourable lending conditions to firms and households. Furthermore, the maturity of the TLTRO III operations has been prolonged from two to three years to better align their length with the typical maturity of bank-based financing of investment projects. This enhances the support that TLTRO III will provide to the financing of the real economy. Finally, counterparties will have the opportunity to make voluntary early repayments of the borrowed amounts at a quarterly frequency starting two years after the settlement of each operation. Together, these modifications will preserve favourable bank lending conditions, ensure the smooth transmission of monetary policy and further support the accommodative stance of monetary policy.

**Finally, the Governing Council decided to introduce a two-tier system for reserve remuneration, in which part of banks' holdings of excess liquidity are exempt from the negative deposit facility rate.** The Governing Council has been closely monitoring the possible side effects of negative interest rates on bank-based intermediation, which can become more prominent the longer negative rates are in place and the lower they are. In this regard, a two-tier system will help to preserve the positive impact of the negative interest rate policy on the economy by offsetting some of the direct impact on bank profitability. The maximum volume of reserve holdings in excess of minimum reserve requirements that will be exempt from the deposit facility rate – the exempt tier – will be determined as a multiple of credit institutions' minimum reserve requirements. The multiplier, which will be applicable as of the seventh maintenance period of 2019, will be set at 6, and the exempt tier will be remunerated at an annual rate of 0%.<sup>12</sup> The remuneration rate of the exempt tier and the multiplier to determine its maximum size can be changed over time, based on money market conditions. With current liquidity conditions,<sup>13</sup> the exempt tier could amount to 43% of excess liquidity holdings if credit institutions make full use of their exempt allowances.

<sup>12</sup> The size of the exempt tier is determined on the basis of average end-of-calendar-day balances on the credit institutions' reserve accounts over a maintenance period. Including minimum reserve requirements, which are remunerated at the interest rate on the main refinancing operations (currently 0%), the maximum total amount of reserves (i.e. required plus excess reserves) to which the deposit facility rate does not apply is thus limited at seven times minimum reserve requirements.

<sup>13</sup> Based on the average minimum reserve requirements and excess liquidity holdings in the third and fourth maintenance periods of 2019 – see the box entitled "Liquidity conditions and monetary policy operations in the period from 17 April to 30 July 2019" in this issue of the Economic Bulletin.

This will support the bank-based transmission of monetary policy, thereby enhancing the effectiveness of the negative interest rates policy in the pass-through of low policy rates to bank lending rates.

**This comprehensive policy package will support the convergence of inflation to the Governing Council's medium-term aim.** Through each of the policy measures and their mutually reinforcing impact, the September policy decisions will provide substantial monetary stimulus to ensure that businesses and households can continue to borrow at very attractive rates. The favourable financing conditions will underpin the economic expansion by supporting consumption and investment dynamics which, in turn, will support the convergence of inflation to the Governing Council's aim.

**In any case, the Governing Council reiterated that it continues to stand ready to adjust all of its instruments, as appropriate, to steer inflation towards its aim in a sustained manner.** A highly accommodative stance of monetary policy will be needed for a prolonged period of time. The September policy package underscores the Governing Council's determination and readiness to provide the necessary accommodation in the pursuit of its price stability objective. If the inflation outlook continues to linger at levels well below its inflation aim, the Governing Council continues to be prepared to use all of its instruments, as appropriate, to ensure that inflation converges sustainably to its aim of close to, but below, 2% in the medium term, in line with its commitment to symmetry.

## 2 Liquidity conditions and monetary policy operations in the period from 17 April to 30 July 2019

Prepared by Annette Kamps and Christian Lizarazo

**This box describes the Eurosystem liquidity conditions and the ECB's monetary policy operations during the third and fourth reserve maintenance periods of 2019, which ran from 17 April to 11 June 2019 and from 12 June to 30 July 2019, respectively.** Throughout this period the interest rates on the main refinancing operations (MROs), the marginal lending facility and the deposit facility remained unchanged at 0.00%, 0.25% and -0.40% respectively. In parallel, the Eurosystem continued the reinvestment phase of its asset purchase programme (APP), reinvesting principal payments from maturing public sector securities, covered bonds, asset-backed securities and corporate sector securities.

### Liquidity needs

**In the period under review, the average aggregate daily liquidity needs of the banking system, defined as the sum of net autonomous factors and reserve requirements, stood at €1,511.3 billion, an increase of €14.9 billion compared with the previous review period (i.e. the first and second reserve maintenance periods of 2019) (Table A).** This slight increase in liquidity needs was largely the result of an increase in net autonomous factors, which increased by €13.0 billion to €1,381.3 billion during the review period.

**The increase in net autonomous factors was due to an increase in liquidity-absorbing factors, which more than offset the growth in liquidity-providing factors.** Liquidity-absorbing factors increased primarily due to “Other autonomous factors”, which grew on average by €28.2 billion to €788.7 billion, and banknotes in circulation, which grew on average by €21.8 billion to €1,234.1 billion. Government deposits, which can exhibit seasonal volatility, remained broadly unchanged at €270.5 billion (up by €7.2 billion) on average over the period under review. Among liquidity-providing factors, net assets denominated in euro increased on average by €16.3 billion to €213.0 billion compared to the previous review period, during which a seasonal pattern at year-end led to a stronger increase. Liquidity-providing factors also increased thanks to a higher value of net foreign assets, which grew on average by €27.9 billion, similar to the previous review period.

**Table A**  
Eurosystem liquidity conditions

**Liabilities – liquidity needs**

(averages; EUR billions)

	Current review period: 17 April to 30 July 2019						Previous review period: 30 January to 16 April 2019	
	Third and fourth maintenance periods		Third maintenance period: 17 April to 11 June		Fourth maintenance period: 12 June to 30 July		First and second maintenance periods	
<b>Autonomous liquidity factors</b>	<b>2,293.3</b>	<b>(+57.2)</b>	<b>2,253.4</b>	<b>(+3.5)</b>	<b>2,339.0</b>	<b>(+85.6)</b>	<b>2,236.1</b>	<b>(+59.3)</b>
Banknotes in circulation	1,234.1	(+21.8)	1,228.1	(+12.4)	1,240.8	(+12.7)	1,212.2	(+2.2)
Government deposits	270.5	(+7.2)	248.3	(-22.2)	295.9	(+47.6)	263.3	(+27.2)
Other autonomous factors	788.7	(+28.2)	776.9	(+13.3)	802.3	(+25.3)	760.6	(+29.9)
<b>Current accounts</b>	<b>1,372.5</b>	<b>(+1.2)</b>	<b>1,404.6</b>	<b>(+25.6)</b>	<b>1,335.7</b>	<b>(-68.9)</b>	<b>1,371.3</b>	<b>(+13.7)</b>
<b>Monetary policy instruments</b>	<b>717.5</b>	<b>(-40.1)</b>	<b>730.8</b>	<b>(-17.3)</b>	<b>702.3</b>	<b>(-28.5)</b>	<b>757.6</b>	<b>(-7.3)</b>
Minimum reserve requirements <sup>1</sup>	130.1	(+1.9)	128.8	(+0.4)	131.5	(+2.6)	128.1	(+1.1)
Deposit facility	587.4	(-42.0)	601.9	(-17.7)	570.8	(-31.1)	629.4	(-8.4)
Liquidity-absorbing fine-tuning operations	0.0	(+0.0)	0.0	(+0.0)	0.0	(+0.0)	0.0	(+0.0)

## Assets – liquidity supply

(averages; EUR billions)

	Current review period: 17 April to 30 July 2019						Previous review period: 30 January to 16 April 2019	
	Third and fourth maintenance periods		Third maintenance period: 17 April to 11 June		Fourth maintenance period: 12 June to 30 July		First and second maintenance periods	
<b>Autonomous liquidity factors</b>	<b>912.3</b>	<b>(+44.2)</b>	<b>904.9</b>	<b>(+18.0)</b>	<b>920.8</b>	<b>(+16.0)</b>	<b>868.1</b>	<b>(+75.4)</b>
Net foreign assets	699.4	(+27.9)	689.7	(+11.1)	710.3	(+20.6)	671.4	(+32.2)
Net assets denominated in euro	213.0	(+16.3)	215.1	(+6.9)	210.5	(-4.6)	196.6	(+43.2)
<b>Monetary policy instruments</b>	<b>3,341.2</b>	<b>(-27.9)</b>	<b>3,355.2</b>	<b>(-6.8)</b>	<b>3,325.1</b>	<b>(-30.0)</b>	<b>3,369.1</b>	<b>(-10.8)</b>
<b>Open market operations</b>	<b>3,341.0</b>	<b>(-28.0)</b>	<b>3,354.8</b>	<b>(-7.1)</b>	<b>3,325.1</b>	<b>(-29.7)</b>	<b>3,369.0</b>	<b>(-10.7)</b>
Tender operations	715.1	(-12.6)	724.2	(-1.8)	704.7	(-19.5)	727.7	(-4.9)
MROs	5.1	(-0.8)	5.5	(-0.2)	4.6	(-0.9)	5.9	(-1.5)
Three-month LTROs	3.3	(-0.7)	3.3	(-0.3)	3.3	(-0.0)	3.9	(-0.7)
TLTRO-II operations	0.0	(+0.0)	0.0	(+0.0)	0.0	(+0.0)	0.0	(+0.0)
Outright portfolios	2,625.9	(-15.4)	2,630.6	(-5.2)	2,620.4	(-10.3)	2,641.3	(-5.9)
First covered bond purchase programme	3.1	(-1.0)	3.2	(-0.7)	2.9	(-0.3)	4.1	(-0.2)
Second covered bond purchase programme	3.5	(-0.4)	3.5	(-0.3)	3.4	(-0.1)	3.9	(-0.1)
Third covered bond purchase programme	261.7	(-0.5)	261.9	(-0.1)	261.5	(-0.4)	262.2	(-0.1)
Securities markets programme	61.4	(-3.9)	62.8	(+0.1)	59.7	(-3.1)	65.3	(-7.7)
Asset-backed securities purchase programme	26.1	(-0.0)	26.2	(+0.3)	26.0	(-0.2)	26.2	(-1.5)
Public sector purchase programme	2,092.4	(-9.2)	2,095.2	(-4.4)	2,089.2	(-6.0)	2,101.6	(+2.9)
Corporate sector purchase programme	177.7	(-0.3)	177.7	(-0.1)	177.6	(-0.1)	178.0	(+0.9)
Marginal lending facility	0.2	(+0.1)	0.4	(+0.3)	0.0	(-0.3)	0.1	(-0.1)

## Other liquidity-based information

(averages; EUR billions)

	Current review period: 17 April to 30 July 2019						Previous review period: 30 January to 16 April 2019	
	Third and fourth maintenance periods		Third maintenance period: 17 April to 11 June		Fourth maintenance period: 12 June to 30 July		First and second maintenance periods	
Aggregate liquidity needs	1,511.3	(+14.9)	1,477.4	(-14.3)	1,550.0	(+72.6)	1,496.4	(-15.1)
Autonomous factors <sup>2</sup>	1,381.3	(+13.0)	1,348.6	(-14.7)	1,418.6	(+70.0)	1,368.3	(-16.2)
Excess liquidity	1,829.6	(-42.9)	1,877.4	(+7.3)	1,775.1	(-102.3)	1,872.5	(+4.3)

## Interest rate developments

(averages; percentages)

	Current review period: 17 April to 30 July 2019						Previous review period: 30 January to 16 April 2019	
	Third and fourth maintenance periods		Third maintenance period: 17 April to 11 June		Fourth maintenance period: 12 June to 30 July		First and second maintenance periods	
MRO	0.00	(+0.00)	0.00	(+0.00)	0.00	(+0.00)	0.00	(+0.00)
Marginal lending facility	0.25	(+0.00)	0.25	(+0.00)	0.25	(+0.00)	0.25	(+0.00)
Deposit facility	-0.40	(+0.00)	-0.40	(+0.00)	-0.40	(+0.00)	-0.40	(+0.00)
EO尼亚	-0.363	(+0.00)	-0.360	(+0.01)	-0.367	(-0.01)	-0.367	(-0.00)

Source: ECB.

Notes: All figures in the table are rounded to the nearest €0.1 billion. Figures in brackets denote the change from the previous review or maintenance period.

1) "Minimum reserve requirements" is a memo item that does not appear on the Eurosystem balance sheet and therefore should not be included in the calculation of total liabilities.

2) The overall value of autonomous factors also includes "items in course of settlement".

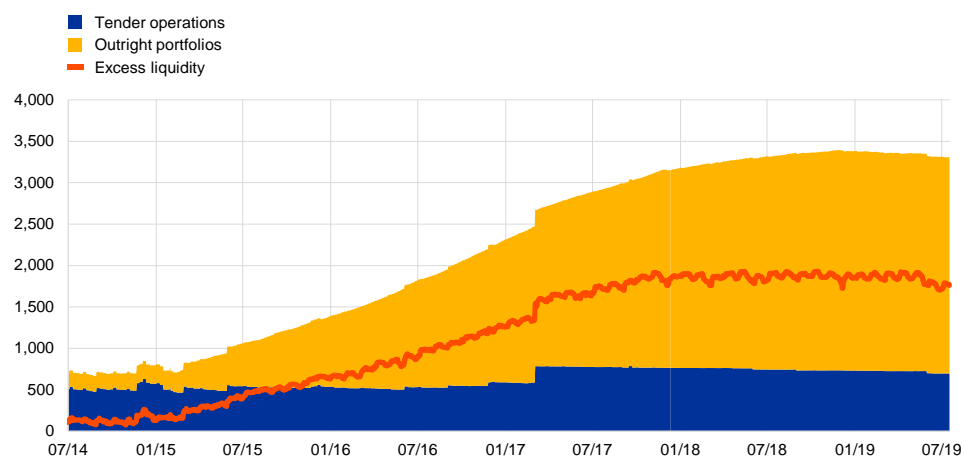
## Liquidity provided through monetary policy instruments

**The average amount of liquidity provided through open market operations – including both tender operations and monetary policy portfolios – decreased by €27.9 billion to €3,341.2 billion (see Chart A).** This decrease was driven by lower demand in tender operations as well as a smaller liquidity injection stemming from monetary policy portfolios, which was due to redemptions of securities purchased under the securities markets programme and a small decline in the book value of the assets acquired in the public sector purchase programme (PSPP). Limited temporary deviations in the overall size and composition of the APP may occur during the reinvestment phase for operational reasons.

### Chart A

Evolution of liquidity provided through open market operations and excess liquidity

(EUR billions)



Source: ECB.



**The average amount of liquidity provided through tender operations declined slightly over the review period, by €12.6 billion to €15.1 billion.** This decrease was mainly attributable to lower liquidity provided through targeted longer-term refinancing operations (TLTROs), which decreased on average by €11.2 billion as a result of voluntary early repayments. Lower demand by counterparties led to a decline in the provision of liquidity via MROs and via three-month longer-term refinancing operations (LTROs), falling by €0.8 billion to €5.1 billion on average and by €0.7 billion to €3.3 billion on average, respectively.

**Liquidity provided through the Eurosystem's monetary policy portfolios decreased by €15.4 billion to €2,625.9 billion on average, owing to redemptions of bonds held under the securities market programme and a small decline in the PSPP.** Redemptions of bonds held under the securities markets programme and the first two covered bond purchase programmes totalled €5.4 billion. Regarding the APP portfolios, since 1 January 2019 the programme has been in the reinvestment phase. Limited temporary deviations in the overall size and composition of the APP may occur during the reinvestment phase for operational reasons.<sup>14</sup> The PSPP declined slightly over the review period by €9.2 billion to €2,092.4 billion on average.

## Excess liquidity

**As a consequence of the developments detailed above, average excess liquidity declined compared with the previous review period, by €42.9 billion to €1,829.6 billion (see Chart A).** This decline reflects higher net autonomous factors and lower liquidity provided through the Eurosystem's tender operations and monetary policy portfolios. Regarding the allocation of excess liquidity holdings between current accounts and the deposit facility, average current account holdings increased marginally, by €1.2 billion to €1,372.5 billion, while average recourse to the deposit facility declined by €42.0 billion to €587.4 billion.

## Interest rate developments

**Overnight unsecured and secured money market rates for general collateral remained close to the ECB deposit facility rate.** In the unsecured market, the euro overnight index average (EONIA) averaged -0.363%, unchanged from the previous review period. It fluctuated between a low of -0.379%, observed on 19 June, and a high of -0.252%, observed on 7 June, ahead of the Whit Monday holiday on 10 June. The increase in the rate coincided with a noticeable drop in the volume by almost €800 million to €611 million between Thursday, 6 June and Friday, 7 June. Anecdotally, EONIA panel banks have historically shown a tendency to move from overnight into two or three-day maturities in order to bridge long weekends. As a result, the EONIA volume tends to decline abruptly on such days. Regarding the secured money market, the spread between the average overnight repo rates for the standard and the

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<sup>14</sup> See the article entitled "[Taking stock of the Eurosystem's asset purchase programme after the end of net asset purchases](#)", *Economic Bulletin*, Issue 2, ECB, 2019.

extended collateral basket in the general collateral pooling market<sup>15</sup> widened marginally. Compared with the previous review period, the average overnight repo rate for the standard collateral basket increased by 0.6 basis point to -0.419%, while the average overnight repo rate for the extended collateral basket increased by 1.1 basis point to -0.397%.

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<sup>15</sup> The GC Pooling market allows repurchase agreements to be traded on the Eurex platform against standardised baskets of collateral.

### 3 Domestic versus foreign factors behind the fall in euro area industrial production

Prepared by Roberto A. De Santis and Srečko Zimic

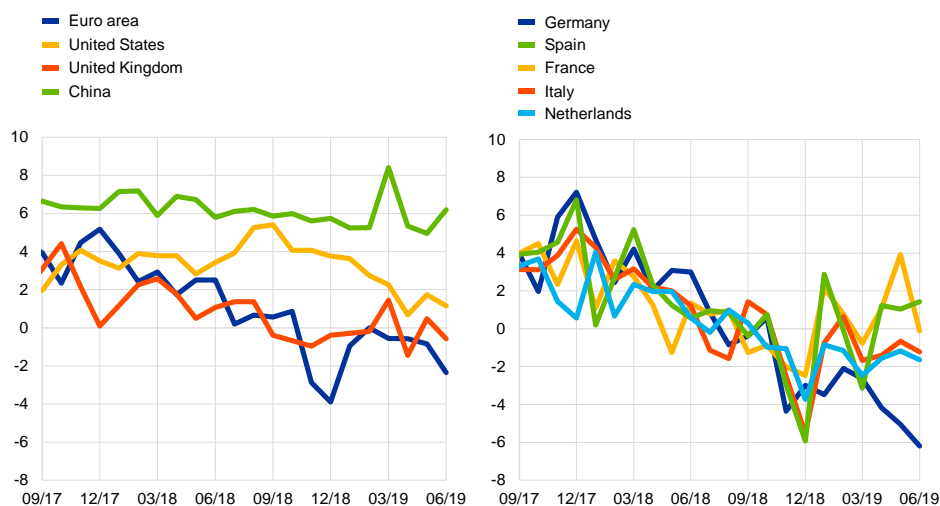
**After a sharp decline in 2018 amid weak global trade, year-on-year growth in euro area industrial production (excluding construction) recovered marginally in 2019 but remained in negative territory.**

In the period from January 2018 to June 2019 the year-on-year growth rate of euro area industrial production (excluding construction) fell by 6.3 percentage points overall, from 3.9% to -2.4% (see Chart A). This is by far the largest fall recorded among major economies in that period. In the United States, the decline in industrial production started later, in September 2018. Among the largest euro area countries, the biggest declines were recorded by Germany (10.9 percentage points), the Netherlands (5.7 percentage points) and Italy (5.5 percentage points). In France and Spain, industrial production dropped in 2018 in line with developments in all other euro area countries, but reversed its negative trend in 2019; the patterns remain highly volatile, however. The slowdown in manufacturing activity in the euro area seems to have had an adverse impact on growth rates in some sub-components of services, although the services sector overall has so far remained relatively resilient. This box examines the factors behind the developments in euro area industrial production, aiming to quantify the relative importance of foreign versus domestic shocks through the lens of a multi-country structural vector autoregression (SVAR) model.

#### Chart A

Industrial production excluding construction in the euro area and other major economies

(year-on-year percentage changes)



Source: Eurostat.

Note: The latest observation is for June 2019.

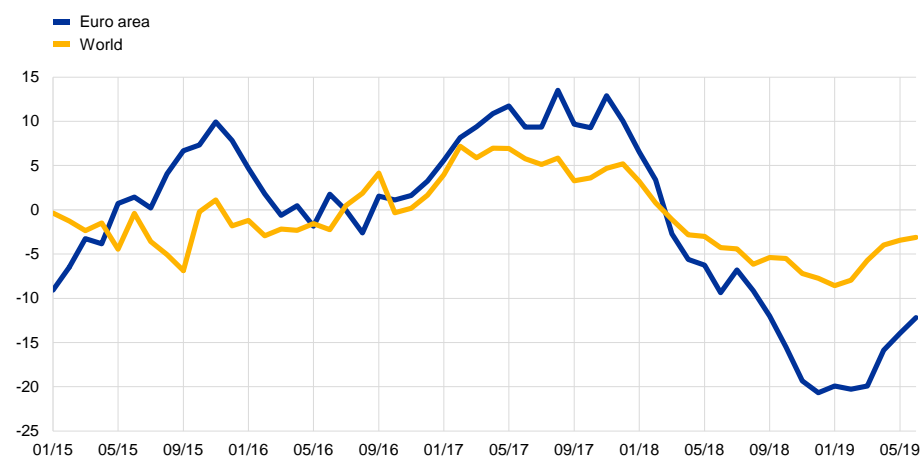
**All these developments occurred against the background of a drop in global trade.** Due to the intensification of trade tensions between the United States and China and the uncertainty surrounding Brexit, world new export orders plunged during

the period considered, and euro area new export orders fell even more severely (see Chart B).

### Chart B

#### Purchasing Managers' Indices for global and euro area new export orders

(year-on-year percentage changes)



Source: Markit.

Note: The latest observation is for June 2019.

#### **A model covering industrial production in a number of large economies is used to assess the importance of foreign spillovers to euro area industrial production.**

The model uses seasonally adjusted monthly industrial production series (excluding construction) for the euro area, China, the United Kingdom and the United States (see Chart A). It is estimated for a relatively short sample period (January 2007 to June 2019), partly because the economic relationships between countries may have been different before the global economic and financial crisis, but also to include data for China. The model also controls for a global factor, which is proxied by the Purchasing Managers' Index (PMI) for world new export orders (see Chart B). To give more prominence to this global trade factor, it is assumed to only react with a lag to industrial production shocks in individual countries, while industrial production in each country reacts to global shocks contemporaneously. All other variables are modelled assuming that a shock has an instantaneous effect on the variable in the home country that is larger in absolute value than its effect on foreign variables.<sup>16</sup>

#### **The results of the model suggest that the fall in industrial production growth in the euro area in the past year has been driven by both weaker foreign demand for euro area goods and adverse domestic shocks.**

Whereas weakness in international trade was the main contributor to the fall in euro area industrial production growth in the first half of 2018 (see grey bar in Chart C),<sup>17</sup> from July 2018 onwards euro area-specific developments also played a major role (see yellow bar). It is also worth pointing out that euro area industrial production has been affected by

<sup>16</sup> The shock identification method is explained in De Santis, R. A. and Zimic, S, "Spillovers among sovereign debt markets: Identification through absolute magnitude restrictions", *Journal of Applied Econometrics*, Vol. 33, No 5, 2018, pp. 727-747.

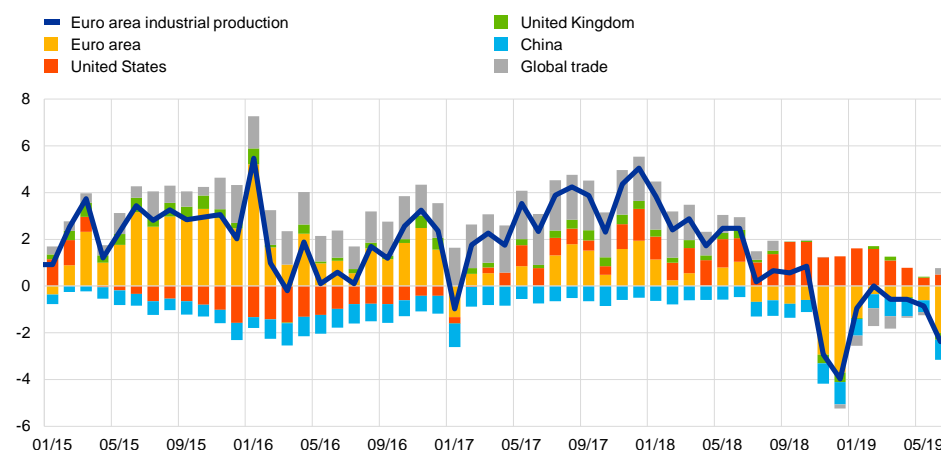
<sup>17</sup> In the first half of 2018 the global trade factor made a negative contribution of 1.5 percentage points to the change in industrial production in the euro area. This is the difference between the grey bar (in Chart C) in June 2018 and in January 2018.

recent developments in the United States (red bar in Chart C). China's negative contribution has been relatively stable since the beginning of 2016. Given the developments shown for Germany in Chart A, euro area domestic shocks may reflect negative developments in the German car industry. The introduction of a new emissions test for motor vehicles on 1 September 2018 – the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) – causing supply disruptions in Germany, and possibly also the potential diesel engine ban announced in the summer of 2018 and expected to be introduced in major German cities in 2019, which may have discouraged consumers from buying diesel cars, appear to be key country-specific temporary factors that account for a large share of the drop in euro area industrial production in the second half of 2018. The more recent increase in the negative contribution of domestic factors to euro area industrial production growth (in June 2019) is due to lower industrial output growth in Germany (see Chart A), possibly linked to the weaker consumption growth recorded in this country in the second quarter of 2019.

### Chart C

#### Shock decomposition of euro area industrial production excluding construction

(year-on-year percentage changes)



Sources: Eurostat, Markit and ECB calculations.

Notes: Shocks to countries' industrial production are identified using the absolute magnitude restriction method (see De Santis, R.A. and Zimic, S., op. cit.), which assumes that the effect of the shock on the domestic economy at the time of impact is larger in absolute value than the magnitude of the foreign spillover. The PMI for world new export orders, which is a proxy for global trade, is assumed to react to countries' industrial production shocks with one lag. The overall sample period is from January 2007 to June 2019.

**All in all, the fall in euro area industrial production growth over the last year appears to have been driven by both the intensification of global trade tensions and domestic developments.** Between July 2018 and June 2019 the global trade factor and all factors associated with developments in China, the United Kingdom and United States explained 37% of the fall in euro area industrial production growth, while domestic factors contributed 63%, although part of this effect may reflect temporary factors linked to the car industry in the second half of 2018. The marked weakness in manufacturing activity may be feeding into some sub-components of services, but overall the services sector is currently withstanding the negative shock. The possible implications for services must be monitored closely.

## 4 How does the current employment expansion in the euro area compare with historical patterns?

Prepared by Vasco Botelho and António Dias da Silva

**This box looks at the current employment expansion in the euro area and compares it with past periods of employment growth.** Employment in the euro area has grown for almost six consecutive years, from its trough in the second quarter of 2013. Since the start of the current employment expansion, employment has increased by more than 11 million people and the unemployment rate has declined by more than 4 percentage points, with the latter approaching the levels reached before the crisis. Meanwhile, labour productivity growth and real wage growth have been relatively weak. Against this background, this box aims to identify similarities and differences between the current employment expansion and previous episodes of expansion. In particular, it takes a long-term perspective to analyse the relationship between employment growth and GDP growth, the behaviour of unemployment, and the relationship between productivity growth and real wage growth. The analysis relies on annual data from the European Commission AMECO database for the first 12 countries to join the euro area<sup>18</sup>, for the period between 1960 and 2018. These data are then partitioned into ten separate periods of consecutive positive or negative employment growth.<sup>19</sup> These periods, which identify employment expansions and contractions, are a useful benchmark to assess the strength and maturity of the current employment expansion.

**From a historical perspective, the current employment expansion has not been particularly lengthy so far, with average employment growth being marginally lower than that observed during the previous expansion.** Chart A shows the average yearly employment and GDP growth for the 12 countries during the identified periods of employment expansion or contraction. The median employment expansion lasted around six years, with the 1995-2008 expansion being the longest period of consecutive employment growth over the time period analysed in this box. The median employment contraction lasted around two years. Against this backdrop, the current period of employment expansion is not particularly long. Looking at the rate of expansion, during the last three employment expansions, employment increased on average by 1.4% per year. In the current expansion, by contrast, employment rose at a rate of around 1.2% for each year between 2014 and 2018, with a lower rate being forecast for 2019.<sup>20</sup>

<sup>18</sup> The 12 countries considered in the analysis are: Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. They are referred to as the EA12.

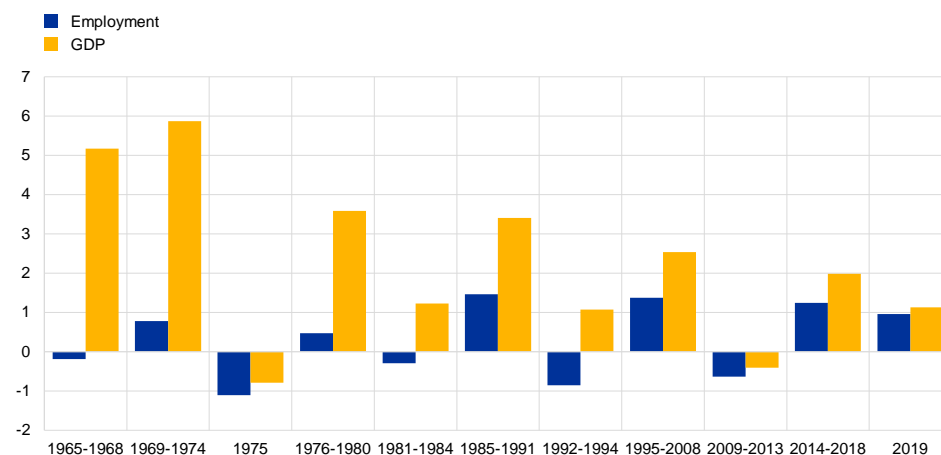
<sup>19</sup> Using this definition, the historical data from 1960 to 2018 were partitioned into ten distinct time periods. An exception is made for 2011, which has been included in a period of contraction despite recording a slight increase in employment growth. Data for 2019 are shown separately and are based on the spring 2019 forecast of the European Commission, to ensure consistency with the analysis of historical AMECO data.

<sup>20</sup> As the purpose of the analysis is to compare employment growth with GDP growth, it does not explicitly account for population change over time. If the employment-to-population ratio is considered instead, employment developments look more pronounced for the current expansion period than for previous expansions. In particular, the employment-to-population ratio (for the 15-64 age group) reached pre-crisis levels in 2015 and its current level is the highest observed over the time period analysed in this box.

## Chart A

### Average annual employment growth and real GDP growth

(percentages, per year)



Sources: European Commission AMECO database and ECB staff calculations.

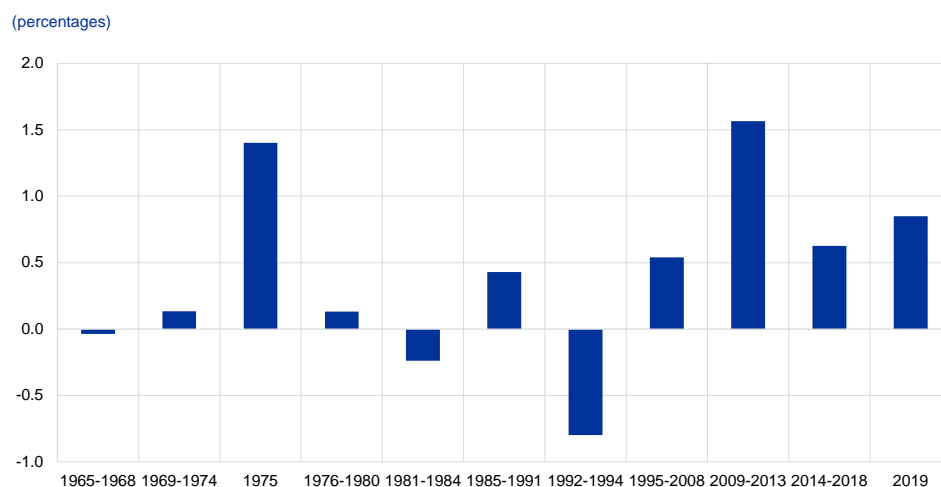
Note: 2019 is based on the European Commission spring forecast for the EA12 available in the AMECO database.

**At the same time, the current expansion is more employment-rich than previous ones, when employment growth is assessed against real GDP growth.<sup>21</sup>** Indeed, the average real GDP growth rate during the current employment expansion is the lowest observed for any of the employment expansions in the sample period, but employment growth decelerated by a smaller amount. Taking a longer-term perspective, the last three employment expansions (2014-18, 1995-2008 and 1985-91) were characterised by a significantly higher employment growth rate than the earlier expansion periods. This implies that the elasticity of employment growth (to GDP growth) strengthened during the last three employment expansions and has increased steadily over time between the expansion period 1985-91 and the current expansion (see Chart B).

<sup>21</sup> See also the box entitled “Employment growth and GDP in the euro area”, *Economic Bulletin*, Issue 2, ECB, 2019.

## Chart B

### Elasticity of employment to real GDP



Sources: European Commission AMECO database and ECB staff calculations.

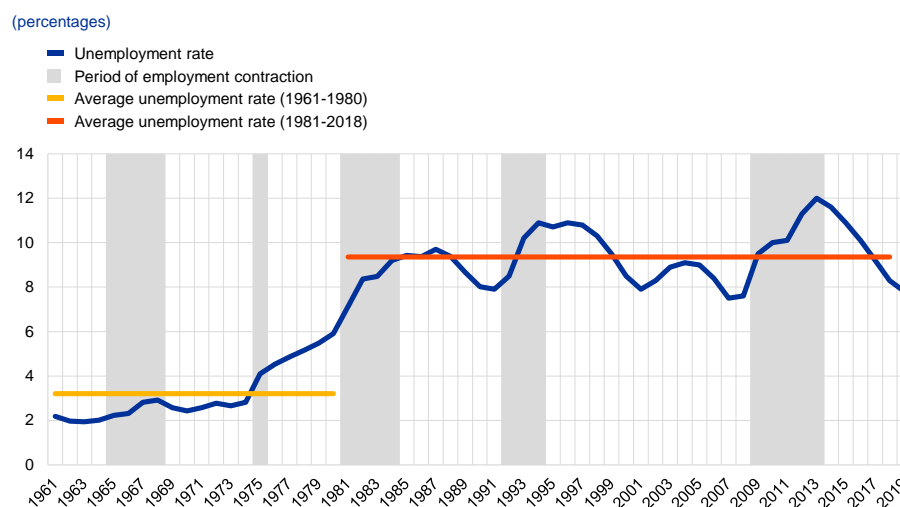
Notes: 2019 is based on the European Commission spring forecast for the EA12 available in the AMECO database. The elasticity is calculated as the ratio of cumulative employment growth to cumulative GDP growth in each period.

**Additionally, the fall in the unemployment rate during the current expansion period has been particularly notable from a historical perspective.** Over the period 2014-18 the unemployment rate declined by an average of 0.7 percentage points per year, which is the fastest rate of decline in any five-year period during the sample period (see Chart C). This fast-paced decline occurs against the backdrop of historically high levels for the unemployment rate. Taking a long-term view, a possible structural change in the unemployment rate in the group of 12 countries can be identified around the mid-1970s, when the unemployment rate moved to a substantially higher level.<sup>22</sup> Indeed, over the past three decades, the annual unemployment rate has rarely declined below 8%. If the unemployment rate continues to decline at the current rate, it will fall below its pre-crisis levels by 2020. However, it remains to be seen whether the unemployment rate in the euro area could decrease to levels closer to those observed before the 1980s.

<sup>22</sup> Various authors have tried to explain the increase in European unemployment. See, for example, Blanchard, O., "European unemployment: the evolution of facts and ideas", *Economic Policy*, Vol. 21, No 45, 2006, pp. 5-59, which argues that there are several possible causes of the increase in European unemployment in the 1970s. The main explanations for the initial increase in unemployment in Europe are related to the impact of adverse and largely common shocks, such as the increase in oil prices and the slowdown in productivity growth. Moreover, different institutions have led to heterogeneous outcomes across countries; and some labour market policy responses were inadequate to address the increase in unemployment.



## Chart C Unemployment rate



Sources: European Commission AMECO database and ECB staff calculations.

Note: 2019 is based on the European Commission spring forecast for the EA12 available in the AMECO database.

### The decline in unemployment and the increase in employment in the current expansion have occurred alongside moderating labour costs, but that moderation has been weaker than that seen in the previous expansion.

Real wages increased at an average rate of 0.3% per year over the period 2014-18, which is lower than the rate of 0.5% observed during the previous expansion period. However, average productivity growth during the current expansion has been only 0.7%, while in the previous expansion it stood at 1.1%.<sup>23</sup> Thus, real unit labour costs have continued to decline, although at a lower rate<sup>24</sup> (see Chart D). Taking a longer-term perspective, the decline in average GDP growth, together with the higher elasticity of employment growth to GDP growth, is associated with a slowdown in the growth rate of labour productivity per person employed. The productivity slowdown in the 12 countries in the sample has been prolonged over the course of the last four decades and has been accompanied by decelerating real wage growth. The deceleration in real wage growth was particularly marked in relation to the slowdown in productivity growth during the 1980s, leading to a sharp decline in the labour share during that period, as real wages became less responsive to labour productivity developments.

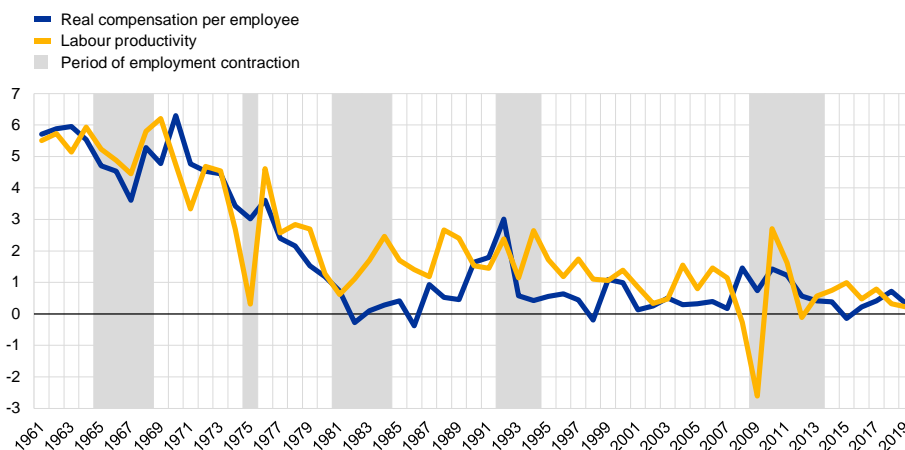
<sup>23</sup> Real wages are defined as real compensation per employee for the total economy, while labour productivity is defined as real gross domestic product per person employed. The conversion from nominal to real is conducted using the price deflator for GDP at market prices.

<sup>24</sup> The growth rate of real unit labour costs can be calculated as the difference between the growth rate of real wages and the growth rate of labour productivity. As such, real unit labour costs declined on average by 0.6% per year during the 1995-2008 employment expansion and are declining on average by 0.4% per year during the current employment expansion.

## Chart D

### Labour productivity and real compensation per employee

(growth rates, percentages)



Sources: European Commission AMECO database and ECB staff calculations.

Note: 2019 is based on the European Commission spring forecast for the EA12 available in the AMECO database.

#### **Overall, this long-term analysis helps to put the recent recovery into perspective, in the context of past employment expansions and contractions.**

The reaction of employment to GDP growth has increased since the mid-1980s, with the current expansion being more employment-rich than past expansions. However, the elasticity of employment to GDP has historically been higher (in absolute terms) during employment contractions than during expansions, revealing some asymmetry in the way employment adjusts during upturns and downturns. The relationship between employment growth and GDP growth might have been affected by many factors, including structural reforms aimed at increasing flexibility in labour and product markets, or long-term shifts in the sectoral composition of employment and the increase in employment in the services sector. All in all, the observed changes in the long-term relationship between employment and GDP on the one hand and between real compensation per employee and productivity on the other could also reflect other factors such as a favourable shift in the schedule of labour supply, as well as unfavourable total factor productivity and/or capital productivity developments favouring a strengthening of the demand for labour relative to the demand for capital.

## 5 Household income risk over the business cycle

Prepared by Maarten Dossche and Jacob Hartwig

**Household income and wealth inequality have become more important in explaining the macroeconomy.** Since the financial crisis, there has been increased awareness that heterogeneity across households and firms is key to understanding business cycle fluctuations (e.g. via balance sheets, credit constraints).<sup>25</sup> At the same time, public interest in the distributional aspects of economic policies has continued to grow. In addition, the increased availability of microdata makes it possible to document relevant microeconomic stylised facts. In this vein, this box sheds light on the relationship between business cycle fluctuations and income changes at the level of individual workers in the euro area.

**Evidence suggests that household income risk varies over the business cycle and affects workers unequally.** Individual earnings risk may be considered the most direct type of household income risk, before any insurance from social transfers or intra-household resource pooling. Based on this, Guvenen et al. document the variation in individual earnings risk using a large administrative micro dataset for the United States.<sup>26</sup> They find that the skewness of income changes is strongly procyclical: large upward earnings movements are less likely during recessions, whereas large drops in earnings are more likely. In addition, they find that aggregate shocks do not affect workers with different characteristics in the same way: the income of some workers (e.g. young, lower-wage earners) is systematically more sensitive to the business cycle than that of others. This is quite different from purely random income shocks that are mostly used when modelling household income risk.

**Household income risk is important for the propagation of macroeconomic shocks and the transmission of economic policies.** Several authors find that the dynamics of household income risk give rise to a cyclical precautionary savings motive that substantially raises the sensitivity of consumption to fluctuations in aggregate income.<sup>27</sup> Evidence also shows that the marginal propensity to consume out of disposable income (MPC) is greater in households with higher income risk, which makes aggregate consumption even more sensitive to the business cycle.<sup>28</sup> To the extent that incomes of households with a high MPC benefit more from macroeconomic

<sup>25</sup> See Ahn, S., Kaplan, G., Moll, B., Winberry, T. and Wolf, C., “When Inequality Matters for Macro and Macro Matters for Inequality”, *NBER Macroeconomics Annual 2017*, Vol. 32, 2018.

<sup>26</sup> See Guvenen, F., Ozkan, S. and Song, J., “The Nature of Countercyclical Income Risk”, *Journal of Political Economy*, Vol. 122, No 3, June 2014, pp. 621-660.

<sup>27</sup> See McKay, A., “Time-varying idiosyncratic risk and aggregate consumption dynamics”, *Journal of Monetary Economics*, Vol. 88, June 2017, pp. 1-14; Bayer, C., Luetticke, R., Pham-Dao, L. and Tjaden, V., “Precautionary Savings, Illiquid Assets, and the Aggregate Consequences of Shocks to Household Income Risk”, *Econometrica*, Vol. 87, Issue 1, January 2019, pp. 255-290; Heathcote, J. and Perri, F., “Wealth and Volatility”, *The Review of Economic Studies*, Vol. 85, Issue 4, October 2018, pp. 2173-2213.

<sup>28</sup> See Jappelli, T. and Pistaferri, L., “Fiscal Policy and MPC Heterogeneity”, *American Economic Journal: Macroeconomics*, Vol. 6, No 4, October 2014, pp. 107-136; Auclert, A., “Monetary Policy and the Redistribution Channel”, *American Economic Review*, Vol. 109, No 6, June 2019, pp. 2333-2367.

stabilisation policies, the distribution of household income risk also amplifies the effects of fiscal and monetary policies.<sup>29</sup>

**Variation in income risk in the euro area can be studied using survey data on income.** Due to limited data availability until recently, there has so far been no systematic analysis of trends in individual earnings risk in the euro area, both over time and across individuals. To address this, the box uses the longitudinal data on individual income levels observed over a four-year period as provided by the European Union Statistics on Income and Living Conditions (EU-SILC). The analysis focuses on the four largest euro area countries. This facilitates a better understanding of microeconomic stylised facts across the euro area, while exploiting national differences in terms of economic structures and recent macroeconomic developments.<sup>30</sup>

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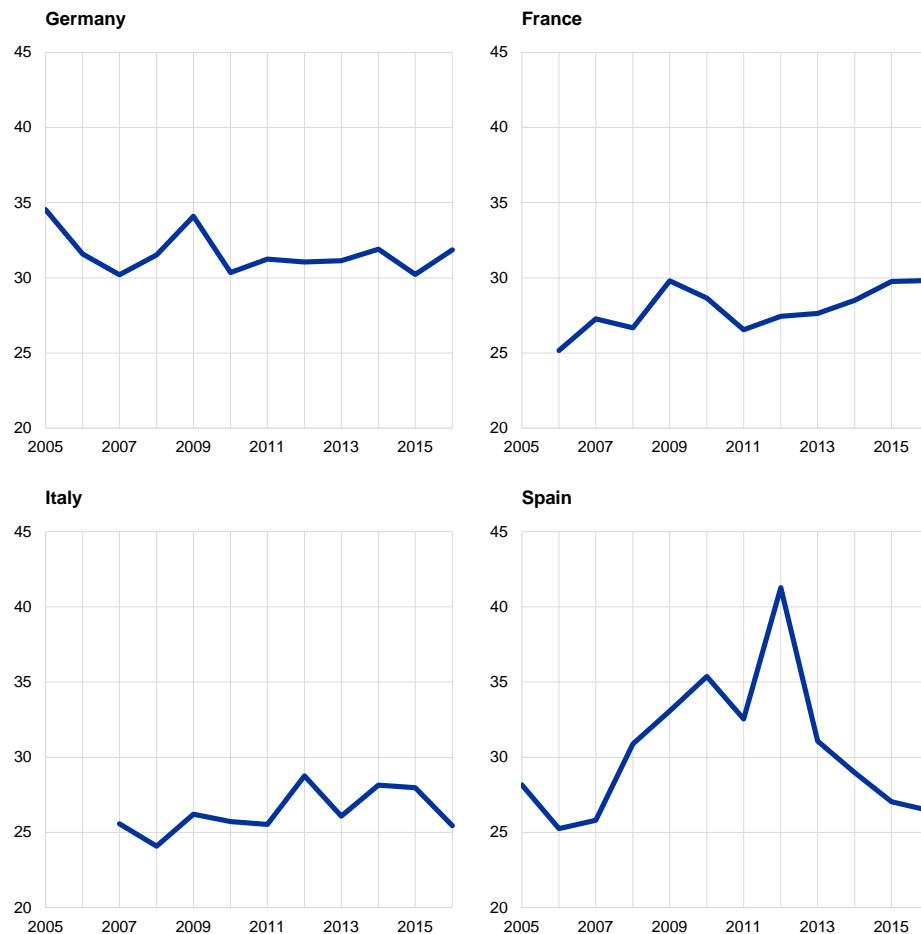
<sup>29</sup> See Ampudia, M., Georgarakos, D., Slacalek, J., Tristani, O., Vermeulen, P. and Violante, G., "Monetary policy and household inequality", *Working Paper Series*, No 2170, ECB, July 2018; Kaplan, G. and Violante, G., "A Model of the Consumption Response to Fiscal Stimulus Payments", *Econometrica*, Vol. 82, No 4, July 2014, pp. 1199-1239.

<sup>30</sup> The longitudinal dimension of the EU-SILC data is not available for Germany. Given that the German EU-SILC data are based on the German Socio-Economic Panel (GSOEP), the analysis uses the newly developed EU-SILC clone provided with the GSOEP since version 34.

## Chart A

### Downward labour income risk

(percentage share of individuals experiencing a decline in labour income)



Sources: Eurostat, DIW Berlin and ECB calculations.

Note: Share of individuals aged 25-65 experiencing a decline in their labour income (based on the EU-SILC variable PY010G for gross employee cash income in the longitudinal data files; the EU-SILC longitudinal data file clone of the GSOEP is used for Germany).

### Downward income risk is procyclical in the euro area, but varies significantly across countries.

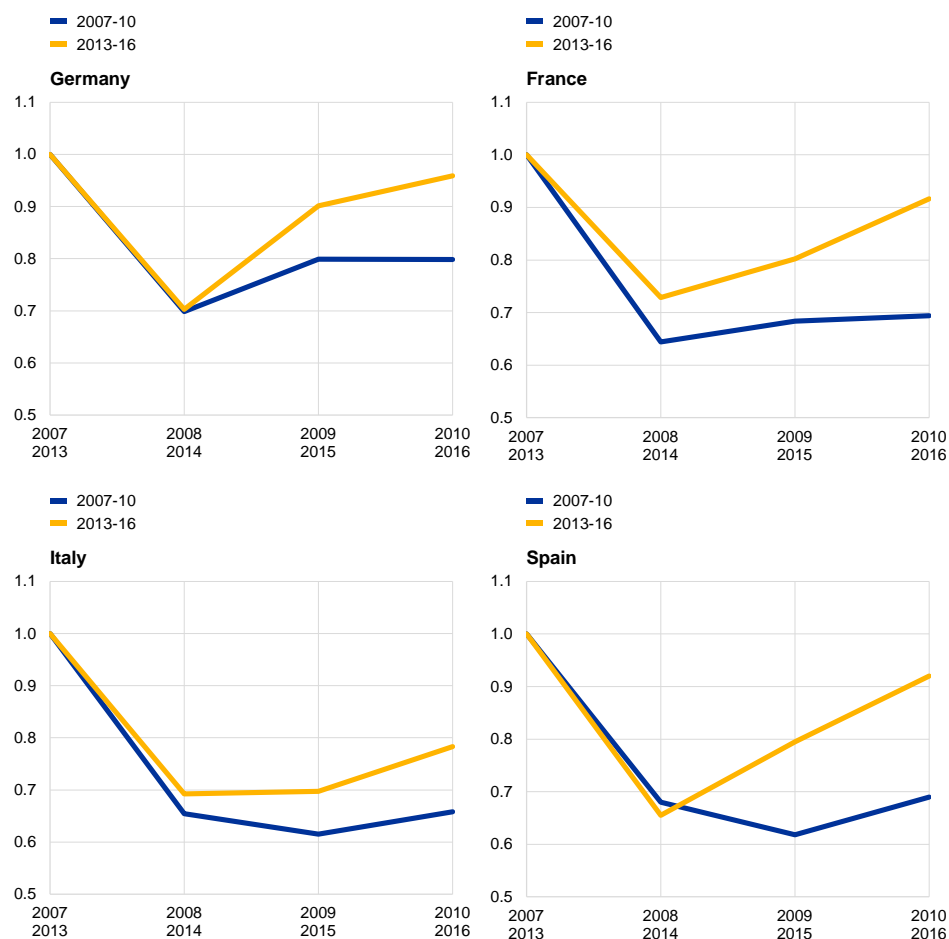
Chart A shows the variation in the proportion of workers experiencing a fall in labour income compared to the previous year (i.e. realised income risk).<sup>31</sup> As the number of workers becoming unemployed increases during recessions, the proportion of workers seeing a fall in income rises during recessions and vice versa. This is clearly visible in 2008 and 2009 during the financial crisis, but even more so in Spain in 2011 and 2012 during the sovereign debt crisis. In Spain, the higher variability of unemployment is also reflected in a higher variability of the share of workers experiencing a decline in labour income. This is much less common in Germany, France and Italy, where labour markets are known to be less fluid.

<sup>31</sup> The percentage share of individuals experiencing a decline in wage income captures a range of different phenomena: periods of unemployment, wage cuts and labour supply adjustments on both the intensive and the extensive margin. This indicator can therefore not be interpreted as a measure of wage rigidity.

## Chart B

### Labour income path following a large reduction in income

(income normalised to 1 in the first year)



Sources: Eurostat, DIW Berlin and ECB calculations.

Note: Trends in the normalised labour income of men aged 26-50 experiencing a large reduction in income (defined as a drop in income of more than 15%) in 2007 or 2013 (income based on the EU-SILC variable PY010G for gross employee cash income in the longitudinal data files; the EU-SILC longitudinal data file clone of the GSOEP is used for Germany).

### Downward income risk is persistent, implying a large impact on lifetime

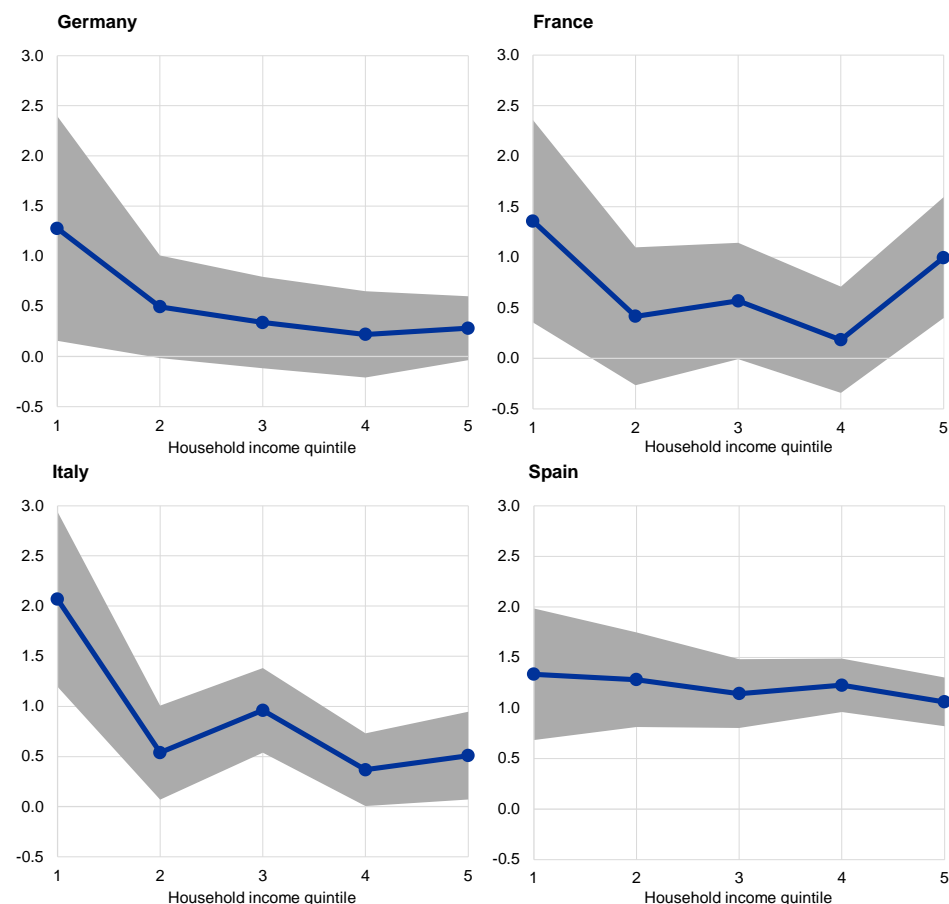
**incomes.** Chart B shows how following a large drop in an individual's labour income, income also tends to be significantly lower during the two following years. This suggests that realised downward income risk is persistent, implying that job losses may significantly affect individual lifetime labour income, and thus also consumer spending.<sup>32</sup> In addition, the persistence also seems to depend on the state of the business cycle: drops in income since 2013, the start of the current economic expansion, seem to be less persistent than those seen at the start of the financial crisis. While there are significant differences from country to country in the variation of the proportion of workers seeing a drop in labour income, the degree of persistence seems quite comparable.

<sup>32</sup> See Pissarides, C., "Loss of Skill During Unemployment and the Persistence of Employment Shocks", *The Quarterly Journal of Economics*, Vol. 107, No 4, November 1992, pp. 1371-1391.

## Chart C

### Worker betas across the income distribution

(income elasticity in relation to GDP growth)



Sources: Eurostat, DIW Berlin and ECB calculations.

Note: Estimated elasticity of labour income to aggregate GDP growth across the household income distribution (individuals are sorted into income quintiles based on the household income in the two previous years to avoid any spurious correlation between exposure and sorting; household income is based on EU-SILC variable HY020 total disposable household income in the longitudinal data file; the EU-SILC longitudinal data file clone from the GSOEP is used for Germany). Grey areas represent 95% confidence bounds.

**Income risk in the euro area differs across individual households.** Chart C reports “worker betas”, as documented in Guvenen et al. for the United States.<sup>33</sup> Worker betas measure the elasticity of labour income in relation to changes in aggregate GDP growth. Across the income distribution, the sensitivity of labour income to changes in GDP growth is significantly higher for workers in lower-income households. This pattern is particularly visible in Germany, France and Italy. In Spain, the sensitivity of labour income within lower-income households to GDP growth is comparable to that of workers in other countries, but it does not decrease as much when households earn higher incomes. This may reflect the generally higher variability in unemployment in Spain, affecting workers across the income distribution

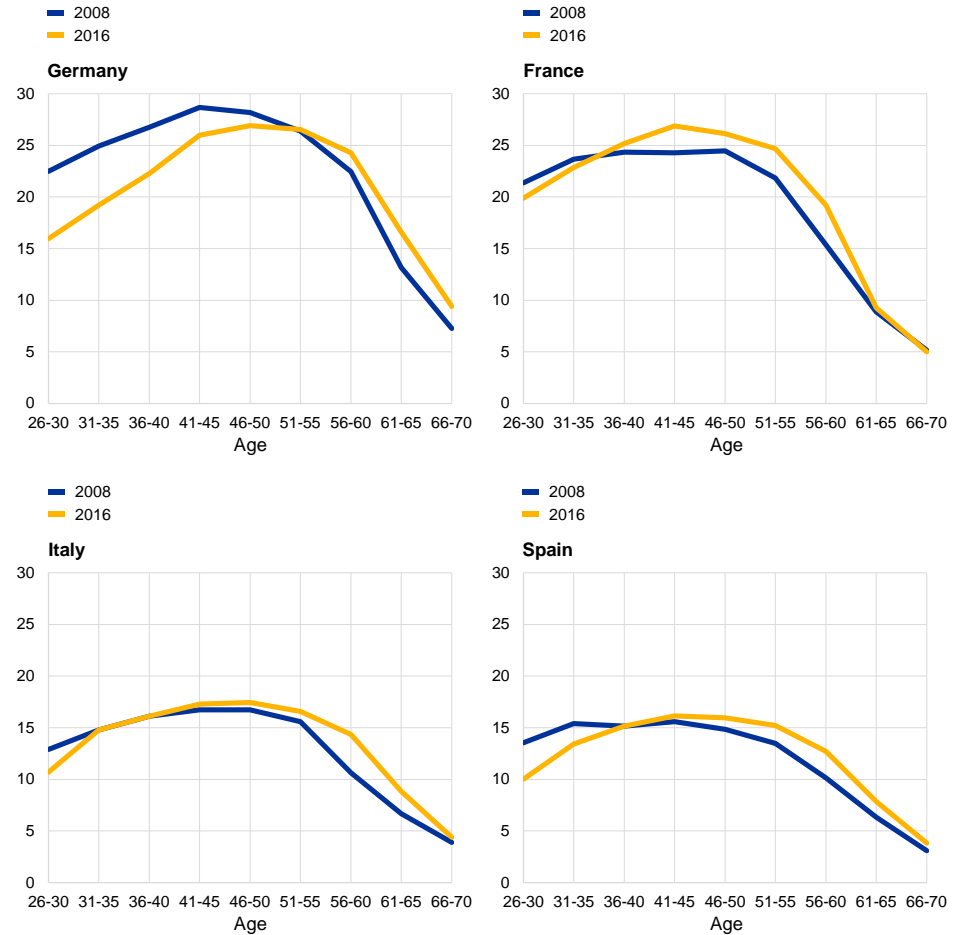
<sup>33</sup> See Guvenen, F., Schulhofer-Wohl, S., Song, J. and Yogo, M., “Worker Betas: Five Facts about Systematic Earnings Risk”, *American Economic Review*, Vol. 107, No 5, May 2017, pp. 398-403.

more equally.<sup>34</sup> However, identifying a structural explanation for this finding is beyond the scope of this box.

### Chart D

#### Labour income across the age distribution

(EUR thousands per year)



Sources: Eurostat, DIW Berlin and ECB calculations.

Note: Estimated labour income of individuals aged 26-70 (in five-year age groups) in 2015 constant euro (based on the EU-SILC variable PY010G for gross employee cash income in the longitudinal data files; the EU-SILC longitudinal data file clone of the GSOEP is used for Germany).

#### The distribution of income risk also demonstrates who primarily bears the cost of business cycle fluctuations.

There has been a long-standing debate within macroeconomics on the welfare cost of business cycles. Using a representative agent model, Lucas argued that the welfare cost of recessions is fairly small.<sup>35</sup> This implies that the case for using macroeconomic policies aimed at stabilising the business cycle would be quite weak. Research since Lucas has shown that understanding both the distribution of income and consumption losses and their persistence is key to

<sup>34</sup> There is evidence to suggest that the divergence in unemployment rates across euro area countries is related to the existence of different labour market institutions. See Boeri, T. and Jimeno, J., "Learning from the Great Divergence in unemployment in Europe during the crisis", *Labour Economics*, Vol. 41, Issue C, 2016, pp. 32-46.

<sup>35</sup> Lucas, R., *Models of business cycles*, Basil Blackwell, Oxford, 1987.



assessing how harmful economic downturns are.<sup>36</sup> In this context, Chart D shows the distribution of real labour income across age groups in 2008 and 2016. It suggests that, since the financial crisis, the incomes of younger workers have not increased to the same extent as those of older workers. In Germany and Spain, the income of younger workers in real terms was even lower in 2016 than in 2008. Taking into account heterogeneity across individuals, the welfare costs of business cycles are therefore likely to be quite substantial in the euro area.

**Household income risk behaves in a similar way in the euro area as in other economies, an insight which is useful for assessing the current economic outlook.** All in all, the analysis suggests that, as in the United States, (i) individual earnings risk is strongly connected to the performance of the labour market, and (ii) in a downturn it increases much more for some groups of workers than for others. This is important for understanding how economic policy is transmitted and macroeconomic shocks are amplified. In the wake of the significant external shock that recently hit the euro area economy, the ongoing resilience in the labour market (cf. Section 3) may help to explain why household income risk has so far not amplified the macroeconomic impact of this shock.

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<sup>36</sup> See Krebs, T., "Job Displacement Risk and the Cost of Business Cycles", *American Economic Review*, Vol. 97, No 3, June 2007, pp. 664-686.

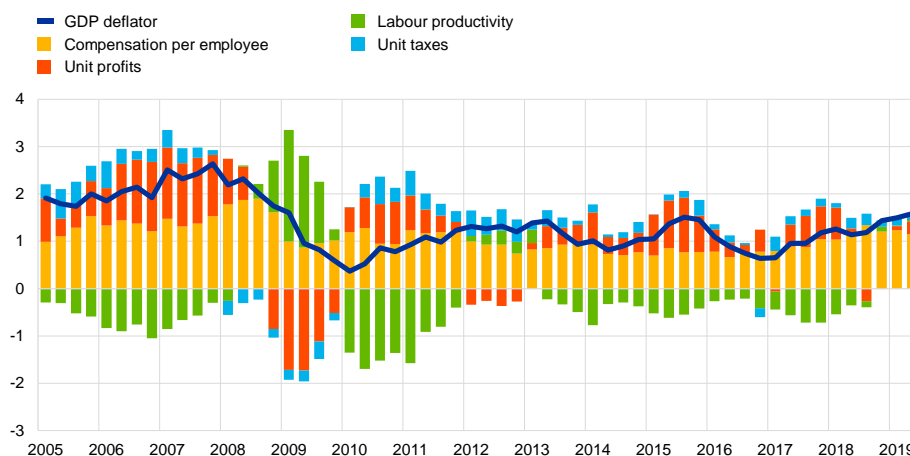
## 6 How do profits shape domestic price pressures in the euro area?

Prepared by Elke Hahn

**Profits can account for a significant part of domestic price formation and affect the pass-through of changes in costs to final prices.** National accounts contain a broad measure of profits, gross operating surplus, which can tell us more about the role of profits for domestic price pressures, as measured in the GDP deflator. Chart A depicts this role in terms of movements in unit profits, thus gross operating surplus divided by real GDP, the measure of profit margins used in this box. Unit profits accounted for roughly one-third of the increase in the euro area GDP deflator over the past two decades. This box illustrates how profits have recently shaped domestic price pressures in the euro area. It explains which factors are the main drivers of the movements in profit margins and discusses how they have likely contributed to their recent developments.

**Chart A**  
GDP deflator and contributions

(annual percentage changes, p.p. contributions to annual percentage changes, quarterly data)



Sources: Eurostat and ECB calculations.

Notes: The combined contributions from compensation per employee and labour productivity provide the contribution from unit labour costs. The latest observations are for the second quarter of 2019.

**The contributions from unit profits to domestic cost pressures decreased in 2018 and slightly strengthened but remained low during the first half of 2019.**

Unit profit growth weakened noticeably in the course of 2018, that is to say, over the period when wage growth (measured in terms of compensation per employee) and unit labour cost growth picked up strongly, thereby restraining the pace of increase in the growth rate of the GDP deflator (see Chart A). In the first half of 2019, unit profit growth turned slightly positive and supported the gradual further increase in the growth rate of the GDP deflator. At the aggregate level, there are two main driving factors that typically account for the movements in the unit profit contribution, the economic cycle and the terms of trade.

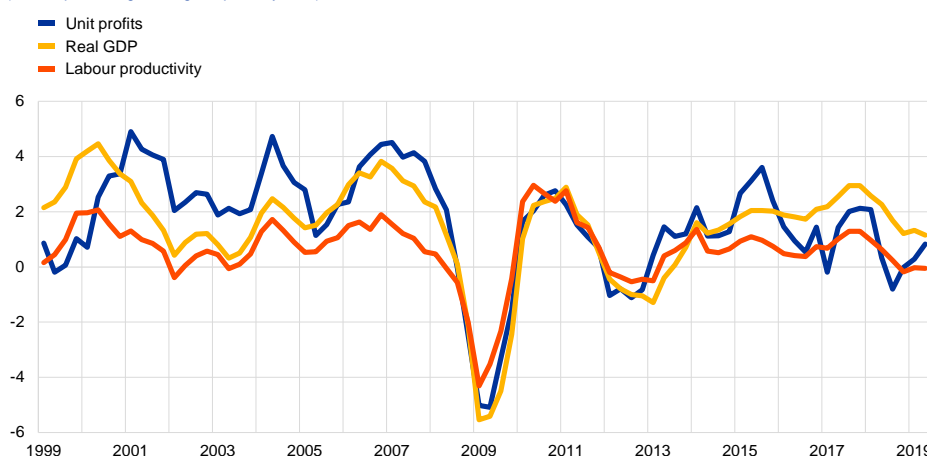
**Profit margins are empirically found to procyclically move alongside developments in economic activity (see Chart B).**

In a downturn, unit labour costs typically rise since contractually fixed wages respond only with some delay to the downturn, while labour productivity drops immediately given the faster downward reaction of output than employment. As the weaker economic environment limits the scope for offsetting price increases, there is a squeeze in profit margins in a downturn and vice versa in an upswing. Profit margins, hence, show a strong positive response to real GDP and labour productivity developments as broad cyclical indicators. Chart B illustrates that this comovement also pertained in 2018 when growth in unit profits weakened in tandem with the slowdown in real GDP and labour productivity growth. In the first half of 2019, the deteriorations in all three indicators came to a halt, while unit profit growth had already started to strengthen gradually, reflecting the impact of other factors than the cycle.

**Chart B**

**Unit profits, GDP and labour productivity**

(annual percentage changes, quarterly data)



Sources: Eurostat and ECB calculations.  
Note: The latest observations are for the second quarter of 2019.

**Profit margins are sometimes also closely related to developments in the terms of trade, in particular if these are subject to strong changes (see Chart C).**

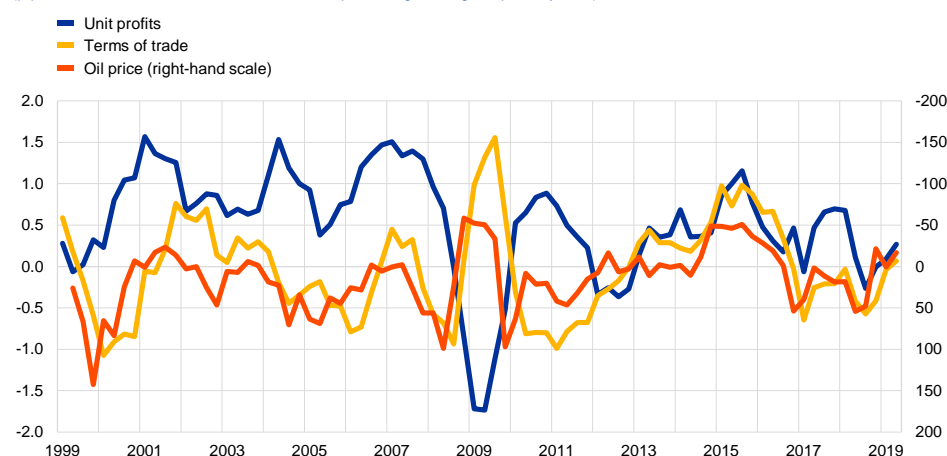
Such changes can be traced back to different sources. Improvements in the terms of trade related to a drop in the prices of imported inputs such as oil can have a positive impact on profit margins, if firms adjust their selling prices downwards by less than the fall in their input costs. This appears to have been the case in the period from mid-2014 to early 2016. Changes in export prices, related to a depreciation in the euro exchange rate, can benefit profit margins if exporters price their products to the market and keep their export prices in foreign currency unchanged. Furthermore, terms of trade developments can also be influenced by developments in relative prices between the domestic and foreign economy if these are also reflected in the dynamics of export and import prices. In this respect, stronger relative price developments in the domestic economy than those of the foreign economy could entail improvements in the terms of trade with positive repercussions for profit margins. In 2018, the terms of trade appear to have weighed on profit margins and this was mainly due to the increase in oil prices. Oil prices, however, have come down since the end of 2018 leading to improvements

in the terms of trade. This seems to have supported unit profit growth and thereby contributed to their more favourable developments compared to that of cyclical indicators in the first half of 2019.<sup>37</sup>

### Chart C

#### Unit profits, terms of trade and oil prices

(p.p. contributions to the GDP deflator, annual percentage changes, quarterly data)



Sources: Eurostat, Bloomberg and ECB calculations.  
Note: The latest observations are for the second quarter of 2019.

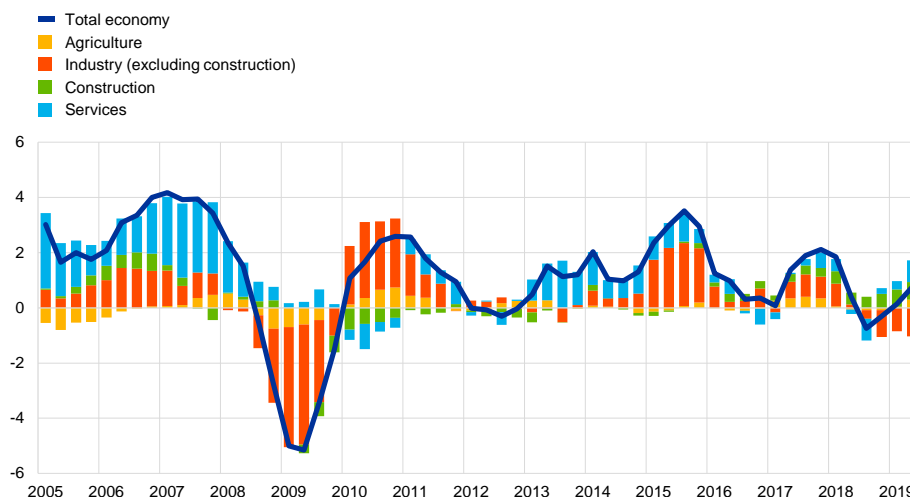
**The sector composition of developments in unit profits confirms that the weakening in unit profits in 2018 occurred mainly in cyclically-sensitive sectors, while the gradual strengthening in unit profits in the first half of 2019 reflected developments in less cyclically-sensitive sectors (see Chart D).** A procyclical impact on unit profits is visible, in particular, for the industrial sector (excluding construction), which is heavily exposed to developments in trade and has thus suffered the most from the deterioration in the global environment and the euro area business cycle since end-2017. The deterioration in the terms of trade associated with the rebound in oil prices in the course of 2018 is likely to have contributed to the moderation in profit margins in 2018 particularly in sectors such as transportation (part of the services sector), and the ensuing decline in oil prices may have likewise supported their rebound. At the same time, developments in profit margins in more domestically-oriented sectors such as the construction sector have been holding up better over the entire period, which owes also to the currently very favourable financing conditions.

<sup>37</sup> A further factor that contributed to the increase in unit profit growth in the first half of 2019 is the implementation of a fiscal measure in France in 2019. This fiscal measure entails the conversion of a tax credit (the CICE) into a permanent cut to employers' social security contributions, thereby implying a decrease in compensation per employee growth but a corresponding increase in unit profit growth.

## Chart D

### Developments in unit profits and contributions from economic sectors

(annual percentage changes, p.p. contributions to annual percentage changes, quarterly data)



Sources: Eurostat and ECB calculations.

Notes: In the decomposition of unit profit growth by economic sectors unit profits are calculated based on value added. The latest observations are for the second quarter of 2019.

**To conclude, aggregate profit margins weakened in the course of 2018 and dampened the increase in domestic price pressures in the euro area for that year, but started to increase gradually in the first half of 2019.** The decline in profit margins in 2018 was a reaction to the recent slowdown in economic activity and the oil price-related deterioration in the terms of trade in that year.<sup>38</sup> The adjustment implied a partial buffering of the recorded increases in labour costs and generates the picture of a limited pass-through of wages to prices. In the first half of 2019 profit margins started to rebound reflecting, among other things, improvements in the terms of trade related to lower oil prices. Looking ahead, profit margins should strengthen in line with the gradual increase in economic activity envisaged in the September 2019 ECB staff macroeconomic projections.

<sup>38</sup> Econometric evidence suggests that the decline in the growth rate of unit profits in 2018 was largely accounted for by foreign demand, oil supply and wage mark-up shocks (see the speech by Philip R. Lane, "The Phillips Curve at the ECB", *London School of Economics*, 4 September 2019).

# Articles

## 1 Derivatives transactions data and their use in central bank analysis

Prepared by **Lena Boneva, Benjamin Böninghausen, Linda Fache Rousová and Elisa Letizia**

Data on derivatives transactions have recently become available at a number of central banks, including the ECB, and have opened up new avenues for analysis. Collected as a result of reforms of the over-the-counter (OTC) derivatives market, which were primarily designed to counter systemic risk, the data have numerous applications beyond the domain of financial stability.

This article presents two such applications. It demonstrates how data gathered under the European Market Infrastructure Regulation (EMIR) can be used to better understand two types of derivatives market that are of particular importance for central bank analysis, namely the interest rate derivatives and inflation-linked swap markets.

For the interest rate derivatives market, the article shows how investor expectations for interest rates may be inferred through “positioning indicators” that track how a set of “informed investors” take positions in the market in anticipation of future interest rate movements. Such quantity-based indicators can complement other, more established indicators of interest rate expectations, such as forward rates or survey-based measures.

For euro area inflation-linked swap markets, the article exploits the fact that EMIR data allow a first systematic look at trading activity in these markets, which can provide valuable and timely information on investors’ inflation expectations. It highlights a number of structural features of activity in these markets and discusses their possible implications for the monitoring of market-based measures of inflation compensation.

### 1 Introduction

**Since the collapse of Lehman Brothers and near-failure of AIG in 2008, OTC derivatives have been recognised as one of the amplifiers of the global financial crisis.** In response, G20 leaders pledged at the Pittsburgh summit in September 2009 to reform OTC derivatives markets to improve their transparency, prevent market abuse and reduce systemic risks. In Europe, this initiative was formalised in 2012 in the European Market Infrastructure Regulation (EMIR). EMIR imposes several requirements on entities that enter into a derivatives contract, such as the

implementation of risk management standards, clearing of certain contracts through central counterparties (CCPs) and reporting obligations.<sup>39</sup>

**While the OTC derivative reforms were primarily designed with the aim of reducing systemic risk, data from EMIR have applications in central bank analysis beyond the financial stability domain.**<sup>40</sup> Following a brief introduction to the EMIR data (see Section 2), this article presents two examples of such uses. First, it shows how EMIR data on interest rate derivatives can be used to gauge the expectations of investors regarding the future evolution of key interest rates (see Section 3). This is based on the premise that investors expecting lower interest rates in the future position themselves by buying more contracts (than they sell) that benefit from lower interest rates. “Positioning indicators” calculated on this basis can thus be seen as capturing the strength of informed investors’ expectations and have the potential to complement other indicators of interest rate expectations such as forward rates or survey-based measures. Second, the article looks at structural activity patterns in euro area inflation-linked swap markets (see Section 4). It provides an overview of the most relevant contracts and the counterparties that trade in those markets, and draws some conclusions for the ECB’s monitoring of market-based measures of inflation compensation, in particular regarding the information content at various maturities. Both applications demonstrate the wide potential for the use of EMIR data in central bank analysis.

## 2 The EMIR data

**In February 2014 EMIR introduced mandatory reporting of all individual derivatives contracts.** This reporting obligation applies to both OTC and exchange-traded derivatives in all five main asset classes, i.e. commodity, equity, foreign exchange, credit and interest rate derivatives. Trades cleared via CCPs are also included. The reporting covers information on both the counterparties involved and the characteristics of the contract, which may change over the life cycle of a derivative trade and are submitted daily.<sup>41</sup>

**All EU-located entities that enter a derivatives contract are subject to the reporting obligation.** They must report to one of the seven trade repositories

<sup>39</sup> For a comprehensive overview of the elements of the OTC derivative reforms, see the article entitled “[Looking back at OTC derivative reforms – objectives, progress and gaps](#)”, *Economic Bulletin*, Issue 8, ECB, 2016.

<sup>40</sup> For examples of how EMIR data are used in the financial stability context, see e.g. Abad, J. et al., “Shedding light on dark markets: First insights from the new EU-wide OTC derivatives dataset”, *ESRB Occasional Paper Series*, No 11, European Systemic Risk Board, 2016; Hoffmann, P., Langfield, S., Pierobon, F. and Vuilleme, G., “Who bears interest rate risk”, *Working Paper Series*, No 2176, ECB, 2018; Dalla Fontana, S., Holz auf der Heide, M., Pelizzon, L. and Scheicher, M., “The anatomy of the euro area interest rate swap market”, *Working Paper Series*, No 2242, ECB, September 2018; Rosati, S., Vacirca, F., “Interdependencies in the euro area derivatives clearing network: A multi-layer network approach”, forthcoming in the *Journal of Network Theory in Finance*; Benos, E., Payne, R. and Vasios, M., “Centralized Trading, Transparency and Interest Rate Swap Market Liquidity: Evidence from the Implementation of the Dodd-Frank Act”, forthcoming in the *Journal of Financial and Quantitative Analysis*.

<sup>41</sup> For each derivative transaction more than 120 data fields have to be reported. The information includes the type of derivative, the underlying, the price, the amount outstanding, the execution and clearing venues of the contract, the valuation, the collateral and life-cycle events. For more details, see “[Commission Delegated Regulation \(EU\) No 148/2013](#)”.

currently authorised by the European Securities and Markets Authority (ESMA). Daily transaction-by-transaction derivatives data are then made available to over 100 authorities in the EU, depending on their mandate and jurisdiction. For example, the ECB obtains a subset of the data reported by euro area counterparties.<sup>42</sup> One important implication of this is that transactions between two counterparties domiciled outside the euro area (e.g. between two UK banks or between UK and US banks) are typically not available to the ECB.

**Owing to their volume, velocity and variety, the EMIR data can be classified as “big data”, which poses many challenges for using them.** In cooperation with the European Systemic Risk Board (ESRB), the ECB has developed an EMIR-dedicated IT infrastructure to store and access the data received from all trade repositories. Despite the significant improvement in data quality since the launch of EMIR reporting in 2014, a careful data cleaning procedure has to be applied before the data can be used for policy analysis; for example, observations are deleted when both the market and notional values are missing or when the notional value is considered an outlier.<sup>43</sup> This article focuses on data between 2 May 2018 and 12 June 2019, as the cleaned data – even as a time-series – are of sufficiently good quality and easily accessible through the EMIR IT infrastructure.

### 3 Inferring market expectations for future interest rates from EMIR data

**The interest rate derivatives market allows market participants to trade financial products linked to future interest rates.** The market value of these contracts changes as interest rates move, and investors can use them to hedge against movements in interest rates or for speculative purposes. By analysing the positioning of participants in the market, some inference can be made about their views on the outlook for interest rates.

**The market positioning indicators based on EMIR data help to inform central bank analysis.** Information on the positioning of certain groups of investors in interest rate derivatives can complement price-based indicators and surveys, which are both commonly used to infer financial market expectations for monetary policy or the macroeconomic outlook.<sup>44</sup>

**Positioning indicators rely on three main building blocks:** (i) the assessment of an investor’s “net long” (or “net short”) position in a certain contract, (ii) the identification of a specific set of “informed investors”, and (iii) the choice of appropriate interest rate derivative contracts.

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<sup>42</sup> In fact, the ECB’s access is somewhat wider than this. See Article 2 of “[Commission Delegated Regulation \(EU\) No 151/2013](#)”.

<sup>43</sup> This is when the value exceeds a fixed threshold. The thresholds differ across asset classes and have been set on the basis of ECB market intelligence activity.

<sup>44</sup> Price-based indicators include, in particular, those calculated on the basis of forward contracts on key euro area interest rates such as EONIA and EURIBOR, either for a given forward horizon (e.g. a one-year rate, one year ahead) or for reserve maintenance periods that are tied to specific ECB Governing Council meetings. Surveys considered by the ECB include those from private providers commonly referenced in the marketplace as well as the ECB’s own, recently introduced [Survey of Monetary Analysts](#).



**An investor’s net long (or net short) position captures how and to what extent they may profit from future interest rate movements.** In the case of a fixed-income futures contract – say, a bond futures contract – a buyer, or an investor holding a long position, gains from a decline in interest rates owing to the inverse relationship between interest rates and the value of the underlying bond. The opposite is true for a seller, or the investor who holds a short position. Where an investor simultaneously holds long and short positions, exposure to future interest rate movements is determined by netting all positions. As a result, investors with a “dovish” interest rate outlook (i.e., expecting interest rate declines) are likely to be positioned net long, while those with a “hawkish” view would position themselves net short.

**Any meaningful positioning indicator needs to single out a particular subset of investors since the market overall is positioned neither net long nor net short.**

This follows from the fact that, if one investor takes a long position, another investor has to take an equivalent short position in the same derivative. As a consequence, the net long (and net short) position of all investors combined must be equal to zero, barring reporting errors and/or sample limitations. An informative positioning indicator therefore has to focus on a particular, meaningful set of investors.<sup>45</sup>

**The positioning indicator constructed here aims to single out “informed investors” who actively take positions in interest rate derivatives on the basis of their expectations for future interest rates.** Their identification is challenging, however. Box 1 explains how EMIR data are enriched to obtain a detailed sector classification which facilitates this task. But even a granular sector classification cannot fully capture the heterogeneity of individual investors’ trading strategies in interest rate derivatives.<sup>46</sup> To address these challenges, “informed sectors” are chosen according to the following criteria: (i) they form a view on future interest rates on the basis of monetary policy and macroeconomic developments, (ii) they react quickly to a change in the outlook, (iii) they trade actively in derivatives contracts, primarily to generate a profit from them, and (iv) they pursue a strategy that is neither very short-term (e.g. arbitrageurs trading to exploit intraday volatility) nor very long-term (e.g. insurance companies or banks hedging their balance sheet duration gaps). The sector referred to as “hedge funds” can satisfy all these criteria, in particular as it is normally identified as comprising entities which take positions on the basis of their expectations for the future evolution of financial market prices in a relatively unconstrained way. However, there are many difficulties in correctly identifying such funds<sup>47</sup> and there may be other classes of investors acting in a similar manner.

**Therefore, we report a range of positioning indicators based on different investor categories (Table 1).** The first sample follows the definition of hedge funds

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<sup>45</sup> The frequently cited (disaggregated) Commitments of Traders report published by the US Commodity Futures Trading Commission provides such subsets. Some market observers use it to follow the evolution of the long and short positions of commercial and non-commercial counterparties in futures contracts on, for instance, currencies and commodities.

<sup>46</sup> Other approaches, complementary to the one employed here, can be more data-driven, e.g. focusing on investors that change their position often or whose activity in the market is particularly intense. Such approaches will be explored in further extension of this work.

<sup>47</sup> The main difficulty is limited data coverage and disclosure, as many hedge funds are domiciled in off-shore centres.

in the ECB's Manual on investment fund statistics<sup>48</sup> and includes all non-UCITS funds, as well as UCITS funds<sup>49</sup> with a hedge fund strategy (see Box 1). The second sample is broader as it includes all investment funds. One rationale for broadening the category is that an asset manager would have only one view on the short-term interest rate outlook, but would typically control several funds, some of them falling into the category of hedge funds and others not. The third sample also includes other financial institutions – which are not banks, insurance companies or pension funds – to control for misclassification and to capture other types of active investor such as systematic trading firms. Finally, to capture only large and active<sup>50</sup> investors, all previous samples are restricted to the counterparties that hold the largest 100 portfolios in terms of gross notional amount on average over time.

**Table 1**  
Defining informed investors

	Non-UCITS and hedge fund UCITS	All investment funds	Other financial institutions	Largest 100 investors	Average number of investors in the sample across time
Positioning measure 1	✓				229
Positioning measure 2		✓			402
Positioning measure 3		✓	✓		450
Positioning measure 4	✓			✓	97
Positioning measure 5		✓		✓	99
Positioning measure 6		✓	✓	✓	100

Note: The average number of investors included in positioning measures 4-6 is not always 100 as some of the 100 counterparties with the largest portfolios are not active over the full period.

**Finally, a class of interest rate derivatives needs to be chosen.** A basic choice is between derivatives with linear payoffs (e.g., swaps, forwards or futures) and derivatives with non-linear payoffs (most notably options). Since the positioning indicators are intended to capture exposure to general interest rate movements rather than unusual developments, this suggests a preference for derivatives with linear payoffs. In addition, the market segment has to be sufficiently liquid, which is not always the case for options markets.

**The full interest rate derivatives market in the euro area is very large in terms of both volume and the number of instruments it contains (Chart 1).** As of June 2019 the total outstanding notional amount in interest rate derivatives was around

<sup>48</sup> The [Manual on investment fund statistics](#) defines hedge funds as funds "which apply relatively unconstrained investment strategies to achieve positive absolute returns, and whose managers, in addition to management fees, are remunerated in relation to the fund's performance", but it is acknowledged that a generally accepted definition of hedge funds does not exist.

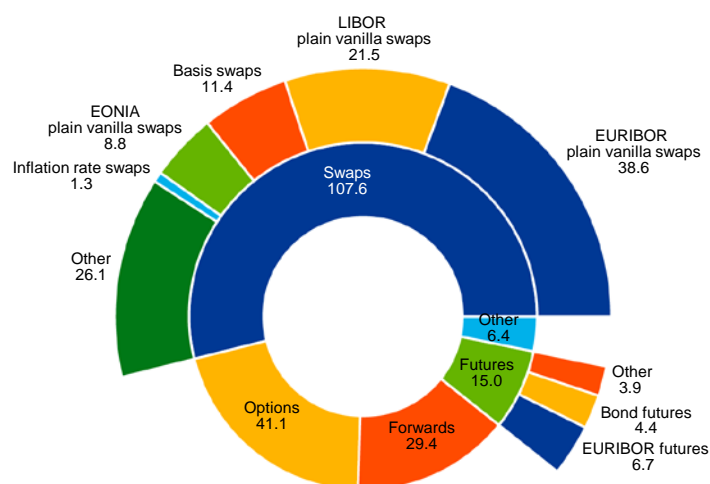
<sup>49</sup> The classification of funds into UCITS and non-UCITS depends on whether they fall under the [EU Directive on undertakings for collective investment in transferable securities \(UCITS\)](#). UCITS funds are mutual funds which can be sold to retail investors and are perceived as non-speculative, diversified and well-regulated investments.

<sup>50</sup> Classifying funds on the basis of their description as active or passive shows that the sample is not dominated by passive funds.

€200 trillion, which accounted for two-thirds of the total euro area derivatives market.<sup>51</sup> Interest rate swaps and futures are key instruments in the interest rate derivatives market. Swaps are the most prominent contracts, covering about 54% of the notional value of outstanding contracts. Swaps (including those based on EONIA) are traded “over the counter” and are used for a wide range of purposes, including the hedging of interest rate risks on banks and insurers’ balance sheets (e.g. risks arising from positive and negative duration gaps respectively). The futures market is smaller than the swaps market, but is exchange-traded and hence much more standardised and extremely liquid. Among futures, three-month EURIBOR futures have the largest notional amount outstanding (around €7 trillion out of €15 trillion in June 2019), followed by eurodollar and Bund futures.

**Chart 1**  
The euro area interest rate derivatives market

(EUR trillions)



Sources: EMIR data available to the ECB.

Notes: Figures show notional amounts outstanding as at 12 June 2019. The sample includes both cleared and uncleared outstanding contracts for which the direction (i.e. buyer or seller side) is known. “Forwards” includes forward rate agreements; “Options” includes swaptions. “Other” (€6.4 trillion) includes less common and unclassified contracts. For swaps, “LIBOR plain vanilla swaps” comprises contracts referenced to pound sterling LIBOR, US dollar LIBOR, Japanese yen LIBOR and Swiss franc LIBOR. “Basis swaps” includes all contracts which exchange two floating rates. “Other” comprises contracts exchanging two fixed rates and fixed-for-floating rate swaps not indexed to EURIBOR, EONIA or LIBOR, as well as other less common or unclassified contracts. For futures, “Bonds” includes all bond futures (both government and corporate, of any maturity and any country), while “Other” includes eurodollar futures and unclassified contracts. The notional amounts reported should be interpreted as an upper bound because transactions could be counted more than once as a result of transactions that could not be paired. In addition, if a clearing member clears a trade on behalf of a client, two transactions (a transaction between the client and the clearing member and a transaction between the clearing member and the CCP) are counted.

**The positioning indicators are based on EURIBOR futures contracts, owing to their significant information content as regards euro area interest rate developments.** As suggested by market intelligence, informed investors make extensive use of EURIBOR futures, primarily on account of their substantial liquidity and high degree of standardisation. Investors that need to adjust their positions may often prefer futures contracts to interest rate swaps, since it is easier to close out existing positions. Moreover, futures on the three-month EURIBOR are attractive

<sup>51</sup> The aggregates of gross notional values derived from EMIR data tend to be different from those obtained from the Bank for International Settlements semi-annual surveys, owing to various conceptual and measurement differences between the two data sources. For more details, see Abad, J. et al., op. cit.; *ESMA Annual Statistical Report, EU Derivatives Markets, 2018*, European Securities and Markets Authority, October 2018.

because of their direct link to euro area short-term interest rate developments at specific horizons. The basis risk of tracking EONIA through a EURIBOR futures contract is fairly limited at present given the stable spreads between the two. The focus of the positioning indicators is on EURIBOR futures with a residual maturity of above one year to facilitate comparison with gauges of interest rate expectations commonly used by central banks, for instance the one-year EONIA, one year ahead.<sup>52</sup>

**The positioning measure is the ratio of informed investors' net long positions to their gross positions.**<sup>53</sup> The net long position (long minus short) of each investor is normalised by their gross position (long plus short). This measure has at least two advantages. First, because the measure is normalised by the gross position, it allows the views expressed by all informed investors to be considered, including smaller investors that may have strong views but are unable to take sizeable absolute positions. A simple sum of net long positions across all informed investors without any normalisation would give significant weight to very large investors and idiosyncrasies of individual players. Second, the sum across all informed investors and the normalisation also make the indicator more robust against misreporting.

**The measure reveals that the positioning of investment funds is relatively polarised, suggesting that a focus on this investor category is indeed warranted since investment funds appear more inclined to express a view on future interest rates than other types of investor.** Using all investment funds (positioning measure 2) as the category representative of informed investors, Chart 2 shows that around 60% of these investors take an either extreme hawkish or extreme dovish view, with the extreme dovish view clearly predominating on the date in question (12 June 2019). This pattern is different from that for dealer banks, for example, which tend to be positioned in a more neutral way, as they typically act as market makers. This does not imply that dealer banks do not have views on monetary policy or the macroeconomic outlook, but their dealing activity generally outweighs the proprietary risk-taking motive. Since dealing activity also implies that many of their positions offset each other, their portfolios tend to be large in terms of gross notional amount (as indicated by the size of the bubbles) but less so in terms of the net notional amount.

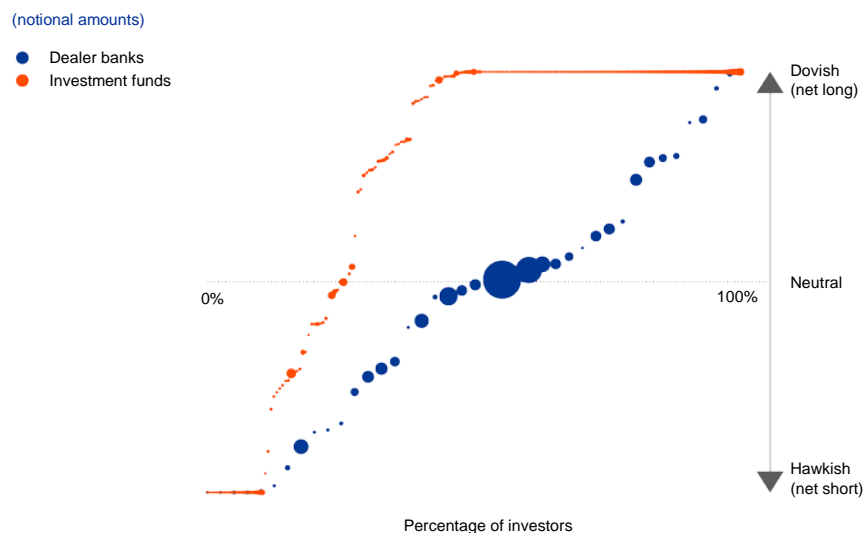
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<sup>52</sup> In addition, for maturities of over one year the mechanical roll-over effect in the nearest-dated futures is removed.

<sup>53</sup> Positioning at the sector level is computed as the average of individual positions.

## Chart 2

### Empirical quantiles of the net-over-gross positioning of investment funds and dealer banks



Sources: EMIR data available to the ECB.

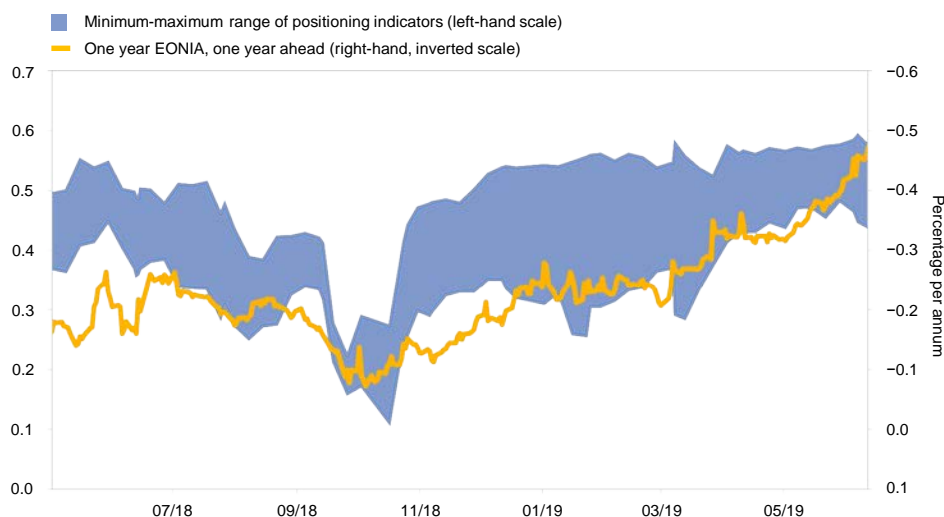
Note: Data are as at 12 June 2019 and show net-over-gross positions of individual investors in the market for EURIBOR futures with a residual maturity of more than one year. The size of the bubbles is proportional to the size of individual portfolios in terms of gross notional amount.

### Net long positioning has trended upwards since the start of 2019, consistent with market expectations of a more accommodative monetary policy (Chart 3).

The one-year EONIA forward rate one year ahead provides another approximation of how interest rate expectations have evolved over the period under consideration. It shows a downward trend starting in late 2018 as investors started pricing in a more accommodative monetary policy and became less sanguine about the global economic outlook. Consistent with these developments, informed investors have increased their net long positions over the same period. The results shown here thus suggest that the positioning indicators – as a quantity, or volume-based, proxy for expectations about monetary policy and the general economic outlook – can provide signals comparable to price, or rate-based, proxies. Further data analysis may also help identify sectors whose positioning, on average, appears to be the most indicative of the market's price formation mechanism. Ideally, such analysis would also shed new light on the information embedded in forward interest rates, in particular in situations where the signals from the positioning and price-based indicators are not entirely consistent.

### Chart 3

#### Positioning of informed investors in three-month EURIBOR futures and one-year EONIA, one year ahead



Source: EMIR data available to the ECB.

Note: The range is calculated from positioning indicators based on six different samples of informed investors as detailed in Table 1. A positioning indicator is calculated as the mean of the ratio of net to gross notional amount across individual investors in a sample. A smoothing correction has been applied for an outlier observation on 5 June 2019.

### Box 1

#### Identifying counterparty sector in EMIR data

Prepared by Francesca D. Lenoci and Elisa Letizia

**A prerequisite for the definition of “informed investors” is comprehensive and detailed information on sector classification.** This box explains how EMIR data are enriched to obtain such a classification.

**While EMIR data contain a field with information on the sector of a reporting counterparty, this information suffers from some limitations.** The first relates to data quality: the sector reported by some counterparties varies over time, and in some cases the sector is missing. The second limitation is conceptual: the EMIR sector classification is not sufficiently detailed for many central bank purposes and does not single out entities with key roles in the derivatives market. In particular, CCPs, their clearing members and banks which are subsidiaries of the 16 largest dealers (G16) are not directly identifiable.<sup>54</sup> Furthermore, the EMIR sector breakdown<sup>55</sup> does not always overlap with the widely used ESA 2010 classification.<sup>56</sup>

<sup>54</sup> The G16 are: Bank of America, Barclays, BNP Paribas, Citigroup, Crédit Agricole, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JPMorgan Chase, Morgan Stanley, Nomura, Royal Bank of Scotland, Société Générale, UBS and Wells Fargo.

<sup>55</sup> The EMIR sector classification distinguishes eight types of financial entity: alternative investment funds, assurance undertakings, credit institutions, insurance undertakings, investment firms, institutions for occupational retirement provision, reinsurance undertakings, undertakings for collective investment in transferable securities (UCITS) and their management companies, and a residual category. Non-financial corporations report one letter codes from the NACE statistical classification.

<sup>56</sup> The European System of Accounts (ESA 2010) is a statistical classification system used to group institutional units with the same primary activity. The sector code divides the economy into six sectors: non-financial corporations, financial corporations, general government, households, non-profit institutions serving households and the rest of the world.

**To overcome these limitations, EMIR data are enriched with eight data sources to obtain a sector classification.** The classification is performed using one source at a time, thereby establishing a hierarchy among sources. In the first step, counterparties are classified using four official lists: the ECB's lists of monetary financial institutions and investment funds, the list of insurance undertakings compiled by the European Insurance and Occupational Authority (EIOPA) and ESMA's list of CCPs. As these lists cover only a limited set of entities located in the EU/euro area, four more data sources are used in the second step: the European System of Central Banks' Register of Institutions and Affiliates Data (RIAD) and three commercial data sources (BankFocus, Lipper and Orbis). As a last source in the hierarchy, the sector given in the EMIR data is used, but only if reported consistently.

**The resulting sector classification has a good coverage, is detailed and shows whether an entity plays a key role in the derivatives market.** As of mid-2019, the counterparty sector has been identified for more than 98% of the notional value of outstanding trades in EMIR data (Chart A).<sup>57</sup> Granular information on subsectors is often also available. For instance, banks are further split into investment and commercial banks, and investment funds into UCITS and alternative investment funds. Information on investment funds' strategy (e.g. bond, equity, hedge fund) is also at hand. Moreover, entities with key roles in the derivatives market, such as clearing members and banks belonging to the G16 dealers, are flagged as such.

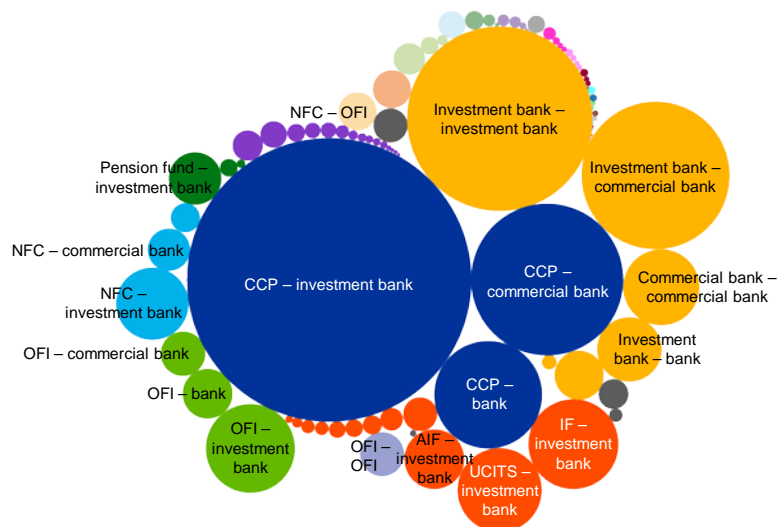
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<sup>57</sup> For the remaining 2%, the domicile of the counterparty is either not available or outside Europe.

## Chart A

### Identifying counterparty sector in EMIR data: breakdown by notional value

(percentages of gross notional value of outstanding contracts)



<b>Banks</b>	Investment	43.1%
	Commercial	13.2%
	Not allocated	4.8%
<b>CCPs</b>		23.3%
<b>Investment funds (IFs)</b>	UCITS	1.7%
	AIFs	1.2%
	Not allocated	2.0%
<b>Other financial institutions (OFIs)</b>		4.3%
<b>Non-financial corporations (NFCs)</b>		3.0%
<b>Insurance companies</b>	Life and composite	0.3%
	Non-life	0.1%
	Not allocated	0.3%
<b>Pension funds (PFs)</b>	Private	0.4%
	Public	0.1%
	Not allocated	0.1%
<b>Government institutions</b>		0.4%
<b>Central bank</b>		0.1%
<b>Money market funds</b>		0.0%
<b>Other</b>		1.7%

Sources: EMIR data, ECB, EIOPA, ESMA, BankFocus, Lipper, Orbis and ECB calculations.

Notes: Data are as at mid-June 2019. The table shows the new sector classification sorted by percentage of gross notional value of all outstanding contracts ("Not allocated" indicates that the notional amount has not been allocated to one of the subsector categories). The chart shows pairs of counterparty sectors, where the bubbles are proportional to the gross notional value of all outstanding contracts. Investment banks include G16 dealers (and relevant banking subsidiaries) and banks performing both commercial and investment banking activity. AIF stands for alternative investment fund. "Other" is a residual category for when the sector is not known.

## 4 Examining euro area inflation-linked swap markets

**Another promising application of the EMIR data lies in providing a more thorough understanding of euro area inflation-linked derivatives markets,**



**which contain important information on the inflation expectations of investors.**

Inflation expectations play a central role for the ECB, since its primary objective is to maintain price stability in the euro area. In the conduct of monetary policy, such expectations are relevant in their own right, since they influence economic decisions in areas such as consumption and investment, as well as wage and price setting, and thus inflation. Moreover, they serve as a cross-check on the inflation outlook in the Eurosystem/ECB staff macroeconomic projections, which in turn inform the ECB's monetary policy decisions. In addition to survey-based measures, which capture inflation expectations as expressed directly in regular expert surveys, there are market-based measures of inflation compensation, reflecting the information derivable from the prices of financial instruments. These include inflation-linked swaps, inflation-linked bonds and inflation options, all of which are linked to future inflation outcomes. Since these financial instruments are traded continuously, market-based measures not only provide additional valuable information on the inflation expectations of investors, but can also give more timely indications of potential shifts in the inflation outlook.<sup>58</sup>

**EMIR data allow a first quantitative look at the structure of the euro area inflation-linked swap (ILS) market.** To date the ECB has relied heavily on market intelligence regarding the activity underlying developments in, for instance, ILS rates. Such market intelligence – while useful – is generally qualitative in nature, and challenging to gather in a consistent fashion across counterparties in practice. The EMIR data complement this type of information and allow it to be cross-checked by offering a quantitative, more systematic look at trading activity in euro area ILS markets. This section uses the EMIR data to demonstrate some structural features of these markets.<sup>59</sup>

**The data suggest that activity in the euro area ILS market is dominated by swaps linked to aggregate euro area inflation rather than national consumer price indices.** Chart 4 shows that, on average, swaps linked to the euro area Harmonised Index of Consumer Prices excluding tobacco (HICPxT) account for more than 80% of both the number of transactions and the notional amount involved. The remaining euro area ILS market is almost exclusively linked to the French consumer price index (CPI). Activity in swaps linked to other countries' CPIs is very limited, even Italian CPI-linked swaps, despite the existence of a sizeable Italian CPI-linked bond market.<sup>60</sup> Since the monitoring of investors' inflation expectations relies on market quotes (as ILSs are traded "over the counter"), it appears reasonable to assign a higher information content to those ILSs for which quotes are more firmly supported by

<sup>58</sup> For more information see the article entitled "[Interpreting recent developments in market-based indicators of longer-term inflation expectations](#)", *Economic Bulletin*, Issue 6, ECB, 2018.

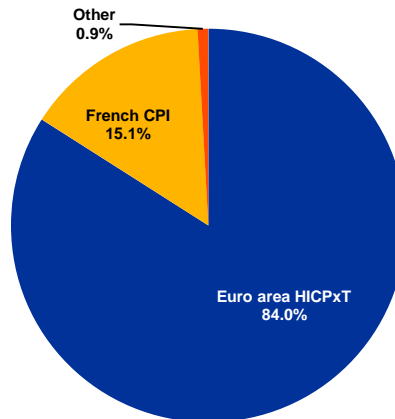
<sup>59</sup> The portion of euro area ILS markets covered by the data available at the ECB has an outstanding notional amount of close to €1 trillion. However, since these data represent a subset of the market (see Section 2), the actual size of the market is larger, and potentially significantly so. In any case, the subset reveals that, in the euro area, the ILS market is substantially smaller than the interest rate derivatives market. For instance, the outstanding notional amount of EURIBOR futures contracts is roughly ten times as high as that of euro area HICP-linked swaps.

<sup>60</sup> Inflation-linked bonds are also primarily indexed to the aggregate euro area HICPxT, but both France and Italy have substantial – and comparable – amounts of bonds outstanding that are linked to their respective national CPIs.

underlying activity.<sup>61</sup> On that basis and in light of the above observations, monitoring aggregate euro area inflation expectations in ILS markets seems most reliable. However, this does not preclude the monitoring of individual countries' CPI-linked ILS rates to detect expectations of possible deviations from the aggregate at the national level.

#### Chart 4

Euro area inflation-linked swap market activity, by underlying reference index



Sources: EMIR data and ECB calculations.

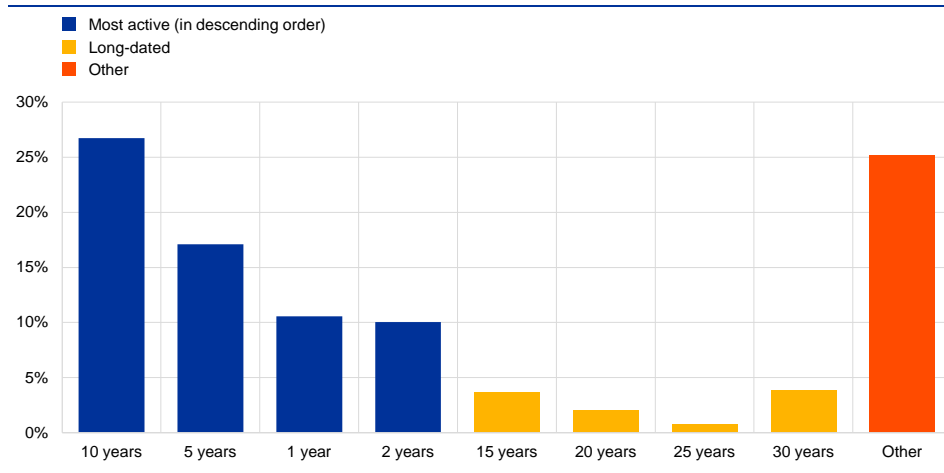
Notes: Data are as at mid-2019. The shares are based on the average of two activity measures, namely the number of transactions and the notional amount involved in these transactions.

**EMIR data also show that activity is relatively concentrated in the ten-year, five-year, two-year and one-year maturity segments.** These results relate to *spot* rates of zero coupon swaps – that is, swaps that exchange fixed rate payments for variable payments on the basis of realised inflation between now and a given future date. Chart 5 shows that the four most active points on the curve account for around 50% of all activity in euro area HICPxT-linked swaps. The fact that almost a quarter of activity is clustered at the ten-year spot point, with the second-largest share at the five-year spot point, has an interesting corollary. It suggests that among *forward* ILS rates, the five-year rate five years ahead – which commands considerable attention in the marketplace – is also the rate most supported by underlying activity. Moreover, rather than declining mechanically with maturity, activity is still notable at a number of longer-dated points along the spot curve, for example at the 15, 20, and 30-year maturities. In the context of central bank analysis, this is reassuring since longer-term ILS rates are less affected by short-term transitory shocks and may thus provide a cleaner guide to investors' "steady state" inflation expectations.

<sup>61</sup> Note that these quotes are "created" in large data warehouses of global banks and probably also include some information derived from the inflation-linked bond and other markets. Nonetheless, underlying activity is useful in judging the information content of quotes in OTC markets. This is because, while the actual price (or rate) at which two counterparties transact remains confidential, a sizeable amount of activity in these markets is intermediated by dealers that take (at least) one side of the transaction and simultaneously provide quotes for the product in question. Hence, published dealer quotes are informed by – and adjusted in response to – the trades conducted between dealers and other investors. This suggests that the more sizeable the underlying activity in an OTC market, the more likely it is that quoted prices (or rates) provide a reliable guide to where investors are willing to transact.

## Chart 5

### Activity in euro area HICPxT-linked inflation swaps, by maturity



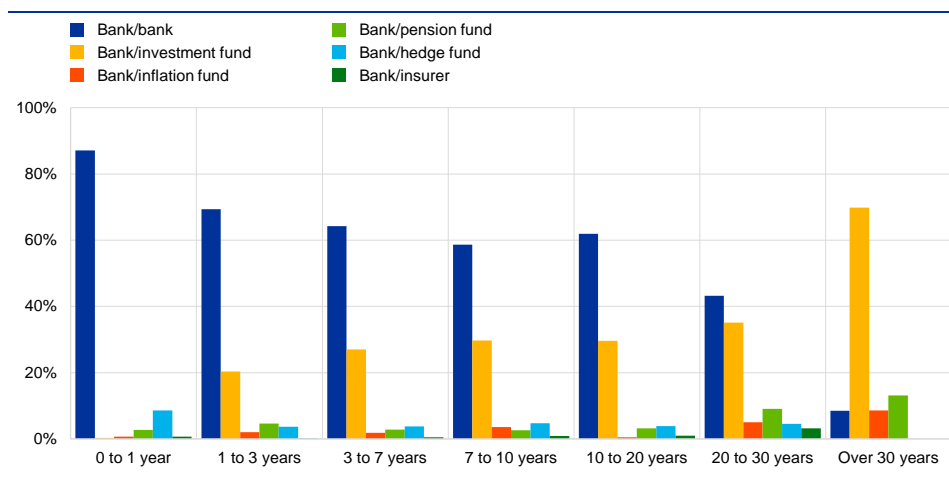
Sources: EMIR data and ECB calculations.

Notes: Data are as at mid-2019. The activity shares are based on the average of four measures that (i) consider the number of transactions or the notional amount involved and (ii) define maturity either as maturity date minus effective date or as maturity date minus execution date. "Other" refers to maturities not shown in the chart.

**There are important differences in sectoral activity across maturities: hedge funds are quite active at the very short end of the curve, while pension funds show above-average activity in the long to ultra-long segments.** Chart 6 sorts transactions into different maturity buckets instead of focusing on individual maturity points. It further shows sector pairs involving banks on at least one side of the transaction. This is due to the dominant role played by banks in the ILS market and because activity accounted for by other sector pairs is negligible. Apart from highlighting the dominance of bank-bank and bank-investment fund transactions across maturity buckets, Chart 6 shows notable activity of hedge funds at short maturities. This observation is consistent with market intelligence, according to which some hedge funds have in recent years stepped up their efforts to forecast near-term inflation and then trade on the basis of those forecasts in ILS markets. Moreover, the fact that pension funds are over-proportionally represented in maturities of 20 years and above is in line with the notion that these actors use the ILS market to hedge inflation-linked liabilities, in particular those incurred as part of defined-benefit plans.

**Chart 6**

Shares of euro area HICPxT-linked swap transactions for selected sector pairs, by maturity



Sources: EMIR data and ECB calculations.

Notes: Sectors are identified using the classification reported in the EMIR database, enriched by a more granular classification and following a thorough data quality check. For example, inflation funds are identified as investment funds whose names and descriptions suggest a strong focus on inflation-adjusted or real returns. Shares are based on the average of the share of the number of transactions between June 2016 and January 2018 and the share of the notional amount involved in these transactions. Percentages add up to 100% for each maturity bucket across the six sector pairs shown. Data are based on reports from DTCC, which is one of the seven trade repositories reporting under EMIR currently authorised by ESMA.

**The results show that it is important for the ECB, in assessing investors' inflation expectations, to consider not only overall activity patterns across the ILS curve but also the sectoral composition of activity in different segments of the curve.** More precisely, while the article has shown that activity in longer-dated euro area ILSs of 15 years and beyond is not negligible compared with shorter-dated maturities, the sectoral analysis indicates that a relatively large share of that activity stems from pension funds. Since the latter often use the ILS market to hedge against developments in inflation, they tend to act more as price takers, certainly when compared with hedge funds active at the short end of the ILS curve, which are more likely to express particular views on future inflation. Thus, when price sensitivity is also factored in, the information content of longer-dated ILS rates may be lower than suggested by overall activity in that maturity bucket.

**Overall, EMIR data help uncover a number of interesting structural features of euro area ILS markets, suggesting that further EMIR-based analysis can help the ECB better assess future developments in these markets.** The findings presented in this section are consistent with market intelligence received. This supports the notion that the EMIR data can indeed serve as a complement to and cross-check other information by offering a quantitative, more systematic view. Natural extensions of the more structural analysis presented here are tracking overall activity or the activity of different investor groups over time as well as across maturities. Moreover, the richness of the data extends beyond the information touched upon in this article, most notably to the prices at which counterparties transact with each other. EMIR data are thus an important addition to the ECB's toolbox for analysis of euro area ILS markets.

## 5 Conclusions

**This article has shown how EMIR data can be used for analysis beyond the domain of financial stability.** This article presents examples based on two classes of derivatives market that are of particular importance for central bank analysis: the interest rate and inflation-linked derivatives markets.

**The first example illustrates how EMIR data can help infer investor expectations for future interest rates.** The positioning indicators developed track how a group of “informed investors” position themselves in the futures market in anticipation of future interest rate movements. Such quantity-based indicators can act as a complement to other, more established indicators of interest rate expectations, such as forward rates or survey-based measures. While this article provides first insights from such quantity-based indicators, further data analysis may help refine the indicators and also shed new light on the information embedded in forward interest rates, particularly in situations where the signals from the positioning and price-based indicators are not entirely consistent.

**The second example shows how EMIR data allow a first systematic look at trading activity in euro area inflation-linked swap markets.** This example highlights a number of structural features of these markets, which can provide valuable and timely information on the inflation outlook of investors. Overall, the results support the notion that EMIR data can complement and help to cross-check more qualitative market intelligence on activity in these markets. For example, the data can help assess the information content of inflation-linked swap rates, both across different maturities and on the basis of the relative activity of different types of investors. The data can thus be seen as an important addition to the analytical toolbox of the ECB.

**Despite the many challenges in using these “big data”, the use of EMIR data at the ECB and at central banks more generally is on the rise.** The increasing scale of analysis based on these data underlines the benefits for policymakers of the reporting of EMIR data as part of the measures to increase transparency in the OTC derivatives market.

## 2 The taxonomy of ECB instruments available for banking supervision

Prepared by Rinke Bax and Andreas Witte

### 1 Introduction

**In November 1999, the ECB Monthly Bulletin featured an article on the legal instruments of the European Central Bank.** Since being entrusted with the task of supervising credit institutions in 2014, the ECB has adopted a wide range of further legal and non-legal instruments in the context of prudential supervision. These tasks have been conferred on the ECB by the SSM Regulation<sup>62</sup> and give the ECB the exclusive competence to carry them out with respect to all credit institutions. The SSM Regulation establishes specific types of legal act which the ECB can adopt for the purpose of exercising its tasks under that regulation. The SSM Regulation also stipulates that the ECB's supervisory tasks must be exercised separately from those relating to monetary policy. This article describes the instruments the ECB has adopted in its role as banking supervisor in recent years.

**Supervising banks involves changes to their legal position, e.g. as a result of the imposition of supervisory measures which must be complied with as a legal obligation, or by granting permission for a course of action which the bank would otherwise not be allowed to take.** Such changes in legal position can only be effected by means of a binding legal instrument. For these purposes, primary law (primarily the Treaty on the Functioning of the European Union and the Statute of the ESCB) and secondary law (primarily the SSM Regulation) provide a broad range of instruments (some of which qualify as legal acts) for the ECB to adopt as tools to carry out its supervisory tasks.

**In many cases, however, it may be useful for the ECB – or, for that matter, any other supervisory authority – to issue instruments other than binding legal acts.** Such instruments can, for instance, be used to communicate to the public the ECB's position on a question of policy, or to provide guidance on how it intends to use its supervisory powers in the future.

**There is, therefore, a range of instruments which the ECB may use in the area of supervision, reflecting the relatively wide range of supervisory activities it undertakes.** Different kinds of instruments may be useful for different purposes. The present article attempts to bring some order to this multitude of different instruments and to describe their legal implications. Section II will discuss legal acts of a binding nature while Section III will broadly address legally non-binding instruments and documents, some of which qualify as legal acts in spite of their non-binding nature. Section IV will address the difficulties in distinguishing between these two categories,

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<sup>62</sup> Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions (OJ L 287, 29.10.2013, p. 63).

which is not always straightforward, and Section V will summarise and draw some general conclusions.

## 2 Binding legal acts and other binding instruments

### 2.1 General remarks

**Article 4(3) of the SSM Regulation lists the binding legal instruments which are available for adoption by the ECB in its supervisory capacity.** This list was not created entirely by the drafters of the SSM Regulation, but rather builds on the primary law catalogue of legal acts under Union law in Article 34.1 of the Statute of the ESCB<sup>63</sup>, which lists regulations, decisions, recommendations and opinions<sup>64</sup>. In addition, the SSM Regulation mentions several other instruments which are not included in the primary law catalogue of legal acts but which can be adopted in a binding manner in order to carry out its tasks under the SSM Regulation.

**There are five main tools available to the ECB for this purpose: regulations, decisions, guidelines, recommendations and instructions to NCAs (mentioned in Article 9(1)(3) of the SSM Regulation and Article 22 of the SSM Framework Regulation).**

### 2.2 ECB Regulations

**ECB Regulations are characterised by two defining features which they share with Regulations adopted by Parliament and the Council: they apply on a general – rather than case-specific – basis and they are directly applicable in the Member States (of the euro area for the ECB regulations).** In this sense, the term “regulation” in Article 4(3) of the SSM Regulation is used in the same sense as in Articles 288(2) and 132(1), first indent, TFEU and Article 34.1, first indent, of the Statute of the ESCB. They also benefit from the supremacy of Union law and supersede the application of conflicting national legislation. However, in the supervisory field the ECB is not a legislator itself; it is – as is made explicit in Article 4(3) of the SSM Regulation – bound by the “single rulebook” This consists of the “level 1” texts adopted by Parliament and the Council, most importantly CRD IV (Directive 2013/36/EU), the BRRD (Directive 2014/59/EU), the CRR (Regulation 575/2013), the SRM Regulation (Regulation 806/2014), as well as the “level 2” texts. These “level 2 texts” consist largely of Regulatory Technical Standards (RTSs) drafted by the EBA on the basis of Article 10 of the EBA Regulation and subsequently adopted by the Commission on the basis of Article 290 TFEU, using an empowerment included in a

<sup>63</sup> It corresponds, in substance, to Article 132(1) TFEU, which, in turn, constitutes a specification of the general catalogue of Union legal acts in Article 288 TFEU. Not all legal acts listed in the latter are also included in Article 132(1) TFEU and Article 34.1 of the Statute of the ESCB; in particular, the omission of directives makes it clear that the ECB is not empowered to adopt this type of legal act.

<sup>64</sup> ECB Opinions will not be discussed and further in this article. Although ECB Opinions may be adopted in relation to draft legislation relating to the supervision of credit institutions, they are not intrinsically linked to the exercise of the ECB's supervisory powers.

level 1 text and Implementing Technical Standards (ITSs) drafted by the EBA on the basis of Article 15 of the EBA Regulation and subsequently adopted by the Commission on the basis of Article 291 TFEU, also using an empowerment in a level 1 text. In addition, there are cases where the Commission adopts delegated regulations in the area of banking supervision directly on the basis of Article 290 of the TFEU and an empowerment in a level 1 text without the need for an EBA drafting procedure under Article 10 of the EBA Regulation. One example of this is Commission Delegated Regulation (EU) 2015/61 which, on the basis of Article 291 of the TFEU and Article 460 of the CRR, defines the calculation of the liquidity coverage ratio (LCR). RTSs, ITSs and Commission Delegated Regulations make up the vast majority of “level 2” texts and are adopted in the form of regulations, ensuring their direct applicability throughout the Union. The ECB is mandated to apply these acts and it may not amend or deviate from them or enact new legislation in the form of generally applicable Regulations not foreseen in the level 1 acts.<sup>65</sup>

**Article 4(3) is not, in itself, a sufficient legal basis for the adoption of regulations but rather presupposes an otherwise existing legal basis for the ECB to act. It is limited to stating that, in principle, regulations are also an admissible legal act which the ECB may use in the area of banking supervision.**

An example of the ECB acting in a regulatory capacity is Regulation 2016/445, in which the ECB exercised options and discretions available under relevant Union law with direct applicability within the Member States participating in the SSM, with the exception of Member States in close cooperation. The ECB could exercise these options and discretions only where they are entrusted not to Member States but to the competent authority – a role which, according to Article 9(1) of the SSM Regulation, is now exercised by the ECB for significant institutions. Another example is Article 6(7), which enables the adoption of regulations establishing a framework to organise the practical arrangements for the implementation of the interaction between the ECB and the NCAs within the SSM and which has been used, most importantly, for the SSM Framework Regulation (Regulation (EU) No 468/2014). These examples show some parallels with the ECB’s competence to adopt regulations within the area of monetary policy. The ECB may also only adopt regulations for specific fields of monetary policy, unlike the EU legislator which, once it is conferred a competence, is normally granted the choice of the most appropriate legal instrument to adopt.<sup>66</sup> In the case of ECB regulations, publication in the Official Journal of the EU is mandatory for them to enter into effect (Article 297(2) of the TFEU and Article 17.7 of the ECB Rules of Procedure).

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<sup>65</sup> It would therefore appear that ECB Regulations are “regulatory acts” as opposed to “legislative acts” in the dichotomy developed by case-law for the purposes of Article 263(4) of the TFEU. See Case C-583/11 P *Inuit Tapiriit Kanatami and Others v Parliament and Council*, ECLI:EU:C:2013:625.

<sup>66</sup> This difference is visible in the field of banknotes and coins: while the rules on coins are adopted in the form of a regulation, the rules on the reproduction of banknotes had to be adopted via a decision as the Statute does not allow the ECB to adopt regulations in the field of banknotes.



## 2.3 ECB Decisions

### Different types of “decisions”

**As in the rest of the Treaty, the word “decision” has three different connotations:**

- First – and this is the narrowest meaning – the term is used in the same sense as in Articles 288(4) and 132(1), second indent, of the TFEU and Article 34.1, second indent, of the Statute of the ESCB. In other words, it describes an act which is intended to create legal effects which are case-specific and sometimes limited to specific addressees, rather than applicable in general – this constitutes the main difference from a regulation. This is the meaning of the word “decision” which is the focus of the present discussion.
- Second, the term is used in Article 26(8) of the SSM Regulation to describe the decision-making process within the SSM. In this sense, “decision” is a generic term that encompasses any act which must be adopted by the Governing Council of the ECB upon a proposal from the Supervisory Board. This decision-making procedure applies to all measures involving an assessment connected to the exercise of the tasks conferred on the ECB by the SSM Regulation, unless a decision-making power has been delegated to heads of business areas within the ECB – again, by the Governing Council upon a proposal from the Supervisory Board, to whom the act adopted under delegation is attributed. This second meaning includes all decisions under the first bullet point, but also goes well beyond this; the adoption of an ECB Regulation in the area of supervision, for instance, would also be a supervisory “decision” in this sense.
- Finally, in the broadest possible sense and in the sense which is closest to non-technical common usage, the word “decision” is, within the ECB, sometimes also used for any kind of resolution made by bodies of the ECB. These “decisions” need not necessarily have legal effect towards parties outside the ECB, but they are binding for the institution and the body that has adopted them. For example, certain letters to banks are decided on by the Supervisory Board of the ECB in its meetings without these letters being sent through a non-objection procedure. Such “decisions” on the text of letters sent to banks are not legal acts (and not “decisions” in the present sense) but rather tools for the execution of supervisory tasks (Article 26(1) of the SSM Regulation).

**As mentioned above, the first meaning of the word “decision”, that corresponding to Articles 288(4) and 132(1), second indent, of the TFEU, is the meaning on which the present discussion will focus.** In this sense, a decision is characterised by its binding legal effect, which it has in common with a regulation. The primary difference between the two lies in their scope of application. While regulations are generally applicable, decisions without addressees apply only to a specific object. Decisions, moreover, come in two varieties, either as decisions with specified

addressees or decisions without addressee yet addressing a specific issue (see below).<sup>67</sup>

## Decisions with addressees

**A decision with addressees must specify these addressees unambiguously and is binding only on them.** For this reason, it is the usual form of legal act used by the ECB to carry out its supervision in concrete individual cases. Supervisory measures imposing requirements on supervised entities, or conversely granting a permission required under applicable law, for example, almost always take the form of a decision with addressee. For this reason, it can be thought of as analogous to case-specific, legally binding forms of legal acts in national administrative law systems, e.g. the *Verwaltungsakt* in Germany, the *acte administratif* in France, or the *Bescheid* in Austria. Owing to its legally binding nature, the decision with addressee is challengeable before the Union courts, usually by means of an action for annulment under Article 263 of the TFEU. The specified addressees have automatic standing for such an action, while (non-privileged) non-addressees do so only if they can demonstrate that they are directly and individually affected by it. Such decisions must be notified to their addressees.<sup>68</sup>

## Decisions without addressees

**The decision without addressee is also binding, but it cannot be used to directly affect the legal situation of a given party, e.g. a supervised entity, for which purpose a decision addressed to that entity would be needed.** It is the appropriate legal form to define, with legal effect, a case which affects more than the situation of a particular party while establishing binding rules for the ECB in the conduct of certain tasks. It is often used to establish organisational arrangements in a legally sound manner, e.g. the Administrative Board of Review and its procedure or the internal separation between the supervisory and the monetary policy functions of the ECB (see below). There is, therefore, a certain overlap with the scope of application for regulations, the only difference being the internally binding nature of the decisions without addressees.

**The ECB has already adopted several such decisions without addressees in the context of the SSM, some of which have been published in the Official Journal.** This list shows that the majority of such decisions without addressees are of an institutional nature.

- A decision on the establishment of an Administrative Board of Review.<sup>69</sup>

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<sup>67</sup> Since the Treaty of Lisbon this distinction has been explicitly codified in Article 288(4) of the TFEU, but it was common practice even before.

<sup>68</sup> This follows also from Article 17a.4 of the ECB Rules of Procedure. In addition to the addressees, and according to Article 24(5) of the SSMR, persons to whom the decision is of “direct and individual concern” may also request a review of a decision.

<sup>69</sup> Decision of the ECB of 14 April 2014 concerning the establishment of an Administrative Board of Review and its Operating Rules (ECB/2014/16), (OJ L 175, 14.6.2014, p. 47).

- A decision amending the ECB's Rules of Procedure in the light of the ECB's supervisory tasks.<sup>70</sup>
- A decision on the close cooperation with the national competent authorities of participating Member States whose currency is not the euro.<sup>71</sup>
- A decision on the appointment of representatives of the ECB to the Supervisory Board.<sup>72</sup>
- Decisions on the provision to the ECB of supervisory information reported to the national competent authorities.<sup>73</sup>
- A decision on the implementation of separation between the monetary policy function and the supervisory function.<sup>74</sup>
- A decision on public access to ECB documents in the possession of the national competent authorities.<sup>75</sup>
- A decision on the disclosure of confidential information in the context of criminal proceedings.<sup>76</sup>
- A decision on principles for performance feedback to national competent authority sub-coordinators.<sup>77</sup>
- Decisions on the delegation of certain decision-making powers related to supervisory tasks.<sup>78</sup>

<sup>70</sup> Decision (EU) 2016/1717 of the ECB of 21 September 2016 amending Decision ECB/2004/2 adopting the Rules of Procedure of the ECB (ECB/2016/27), (OJ L 258, 24.9.2016, p. 17).

<sup>71</sup> Decision of the ECB of 31 January 2014 on the close cooperation with the national competent authorities of participating Member States whose currency is not the euro (ECB/2014/5), (OJ L 198, 5.7.2014, p. 7).

<sup>72</sup> Decision of the ECB of 6 February 2014 on the appointment of representatives of the ECB to the Supervisory Board (ECB/2014/4), (OJ L 196, 3.7.2014, p. 38).

<sup>73</sup> Decision of the ECB of 2 July 2014 on the provision to the ECB of supervisory data reported to the national competent authorities by the supervised entities pursuant to Commission Implementing Regulation (EU) No 680/2014 (ECB/2014/29), (OJ L 214, 19.7.2014, p. 34); Decision (EU) 2017/1493 of the ECB of 3 August 2017 amending Decision ECB/2014/29 on the provision to the ECB of supervisory data reported to the national competent authorities by the supervised entities pursuant to Commission Implementing Regulation (EU) No 680/2014 (ECB/2017/23), (OJ L 216, 22.8.2017, p. 23); and Decision (EU) 2017/1198 of the ECB of 27 June 2017 on the reporting of funding plans of credit institutions by national competent authorities to the ECB (ECB/2017/21), (OJ L 172, 5.7.2017, p. 32).

<sup>74</sup> Decision of the ECB of 17 September 2014 on the implementation of separation between the monetary policy and supervision functions of the ECB (ECB/2014/39), (OJ L 300, 18.10.2014, p. 57).

<sup>75</sup> Decision (EU) 2015/811 of the ECB of 27 March 2015 on public access to ECB documents in the possession of the national competent authorities (ECB/2015/16), (OJ L 128, 23.5.2015, p. 27).

<sup>76</sup> Decision (EU) 2016/1162 of the ECB of 30 June 2016 on disclosure of confidential information in the context of criminal investigations (ECB/2016/19), (OJ L 192, 16.7.2016, p. 73).

<sup>77</sup> Decision (EU) 2017/274 of the ECB of 10 February 2017 laying down the principles for providing performance feedback to national competent authority sub-coordinators and repealing Decision (EU) 2016/3 (ECB/2017/6), (OJ L 40, 17.2.2017, p. 72).

## 2.4 ECB Instructions and guidelines

**National competent authorities are responsible for assisting the ECB, where appropriate, with the preparation and implementation of any acts relating to the ECB's supervisory tasks.** To this end, the SSM Regulation gives the ECB the power to adopt guidelines and instructions addressed to national competent authorities.

**Such guidelines and instructions are not legal acts (because they are not included in the catalogue of legal acts defined in Article 132(1) of the TFEU and Article 34.1 of the Statute of the ESCB), but they are legal instruments and are binding on the national competent authorities to which they are addressed.**

**More specifically, ECB instructions exist in two variants.** They can be case-specific or general, i.e. relating not to an individual case but to a particular subject and applying in all relevant future cases.

### Case-specific ECB Instructions

**Case-specific instructions command the national competent authority to take a particular course of action with regard to an individual case.** The instruction can, most importantly, order the adoption of a national decision or other administrative act by the national competent authority, making use of a power available to it (but not to the ECB) under the relevant national law. These instructions, which are analogous to intra-Eurosystem instructions pursuant to Article 14.3 of the Statute of the ESCB in the realm of monetary policy, have their legal basis in Article 9(1), third sub-paragraph, of the SSM Regulation, as further specified in Article 22 of the SSM Framework Regulation. The ECB may also adopt instructions addressed to the national competent authority of a Member State in close cooperation within the meaning of Article 7(1) of the SSM Regulation. The instructions are binding on the national competent authority to which they are addressed; this can be concluded from the word “require” in the legal basis cited, which denotes the creation of a binding obligation. They must be notified to their addressees (Article 17a.3 of the ECB Rules of Procedure).

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<sup>78</sup> Decision (EU) 2017/933 of the ECB of 16 November 2016 on a general framework for delegating decision-making powers for legal instruments related to supervisory tasks (ECB/2016/40), (OJ L 141, 1.6.2017, p. 14); Decision (EU) 2017/934 of the ECB of 16 November 2016 on the delegation of decisions on the significance of supervised entities (ECB/2016/41), (OJ L 141, 1.6.2017, p. 18); Decision (EU) 2017/935 of the ECB of 16 November 2016 on delegation of the power to adopt fit and proper decisions and the assessment of fit and proper requirements (ECB/2016/42), (OJ L 141, 1.6.2017, p. 21); Decision (EU) 2017/936 of the ECB of 23 May 2017 nominating heads of work units to adopt delegated fit and proper decisions (ECB/2017/16), (OJ L 141, 1.6.2017, p. 26); Decision (EU) 2018/228 of the ECB of 13 February 2018 amending Decision (EU) 2017/936 nominating heads of work units to adopt delegated fit and proper decisions (ECB/2018/6), (OJ L 43, 16.2.2018, p. 18); Decision (EU) 2018/228 of the ECB of 13 February 2018 amending Decision (EU) 2017/936 nominating heads of work units to adopt delegated fit and proper decisions (ECB/2018/6), (OJ L 43, 16.2.2018, p. 18); Decision (EU) 2018/546 of the ECB of 15 March 2018 on delegation of the power to adopt own funds decisions (ECB/2018/10), (OJ L 90, 6.4.2018, p. 105); Decision (EU) 2018/547 of the ECB of 27 March 2018 nominating heads of work units to adopt delegated own funds decisions (ECB/2018/11), (OJ L 90, 6.4.2018, p. 110).

## General ECB Instructions

**In addition, instructions can be general, i.e. not relating to an individual case but rather to a subject, to be applied in all future cases in which the issue governed by the instruction arises.** In this case, the instruction is of a general nature. Such general instructions, normally addressed to only one NCA, contain the general framework and the main rules to be implemented by the national competent authorities.

**Article 6(5)(a) of the SSM Regulation explicitly empowers the ECB to adopt general instructions governing the supervision of less significant institutions by the national competent authorities.** This is consistent with the principle that carrying out specific supervisory tasks for less significant institutions is the responsibility of the national competent authorities, including the adoption of supervisory decisions, with the exception of licencing and the qualifying holding regime (Article 6(6) of the SSM Regulation). The ECB exercises general oversight over the functioning of the system (Article 6(5)(c) of the SSM Regulation) but does not intervene in individual cases, with the caveat that it can take over direct supervision entirely where necessary (Article 6(5)(b) of the SSM Regulation). The SSM Regulation therefore only allows the ECB to issue case-specific instructions to significant institutions for which it is directly competent, or in the case of close cooperation, while limiting it to general instructions for less significant institutions. Nonetheless, within their scope of application general instructions are also binding on the national competent authorities to which they are addressed; they are not mere “soft law” instruments. They can thus be seen as an embodiment of the idea, emphasised by the European Court of Justice, that the ECB has been conferred exclusive competences as regards the tasks listed in Article 4(1) of the SSM Regulation for the prudential supervision of less significant institutions as well, and that the activities of the national competent authorities in this regard are a case of assistance provided by them to the ECB rather than an exercise of an inherently national competence.<sup>79</sup>

**ECB Guidelines, which are addressed to all national competent authorities, are also of a general rather than case-specific nature, yet are nonetheless binding on their addressees.** The line between general instructions and guidelines is therefore not easy to establish, and practical experience in the adoption of general instructions is limited. However, it can be argued that the main difference lies in the fact that guidelines are of a quasi-regulatory nature. Even though they do not impose obligations directly on third parties other than national competent authorities (in particular not on credit institutions), they do govern a particular area in a general manner, applying to all national competent authorities and prescribing in an abstract way what is entailed in the performance of the activities governed by the guidelines. General instructions, on the other hand, can be addressed to one or a subset of national competent authorities and in response to a narrow supervisory topic, such as a pressing need to take action which has arisen, but applying to all less significant institutions subject to the supervision of these authorities and which find themselves in the situation envisaged by the general instruction.

<sup>79</sup> Court of Justice, Judgment of 8 May 2019, Case C-450/17 P Landeskreditbank Baden-Württemberg - Förderbank v European Central Bank, ECLI:EU:C:2019:372, paras. 38-41.

The ECB has to date adopted and published several ECB Guidelines:

- Guideline (EU) 2015/856 of the ECB of 12 March 2015 laying down the principles of an Ethics Framework for the Single Supervisory Mechanism (ECB/2015/12), (OJ L 135, 2.6.2015, p. 29).<sup>80</sup>
- Guideline (EU) 2016/256 of the ECB of 5 February 2016 concerning the extension of common rules and minimum standards to protect the confidentiality of the statistical information collected by the ECB assisted by the national central banks to national competent authorities of participating Member States and to the ECB in its supervisory functions (ECB/2016/1), (OJ L 47, 24.2.2016, p. 16).
- Guideline (EU) 2016/1993 of the ECB of 4 November 2016 laying down the principles for the coordination of the assessment pursuant to Regulation (EU) No 575/2013 of the European Parliament and of the Council and the monitoring of institutional protection schemes including significant and less significant institutions (ECB/2016/37), (OJ L 306, 15.11.2016, p. 32).
- Guideline (EU) 2016/1994 of the ECB of 4 November 2016 on the approach for the recognition of institutional protection schemes for prudential purposes by national competent authorities pursuant to Regulation (EU) No 575/2013 of the European Parliament and of the Council (ECB/2016/38), (OJ L 306, 15.11.2016, p. 37).
- Guideline (EU) 2017/697 of the ECB of 4 April 2017 on the exercise of options and discretions available in Union law by national competent authorities in relation to less significant institutions (ECB/2017/9), (OJ L 101, 13.4.2017, p. 156).

**In any case, it is imperative to distinguish between guidelines of the ECB and those issued by the EBA under Article 16 of the EBA Regulation (Regulation (EU) No 1093/2010).** In spite of the use of the same label, these EBA guidelines are not legally binding; they are soft law instruments addressed by the EBA to competent authorities (the ECB being one of them) which carry only a comply-or-explain obligation.

**Since ECB Guidelines, like general instructions, are not addressed to credit institutions, they cannot have any binding legal effect on such institutions.**

They are, however, binding upon the national competent authorities. In addition to this, and in line with the principle of harmonious interpretation, one would expect the national competent authorities not only to faithfully implement the guidelines but also to interpret and apply their respective national law in a manner which gives the best possible effect to the guidelines. There are no obligations under Union law to publish ECB Guidelines; they only need to be notified to their addressees (Article 17a.2 of the

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<sup>80</sup> Unlike the other guidelines in this list, this particular one was adopted on the basis of a special decision-making procedure in Article 6(7) of the SSM Regulation, rather than the non-objection procedure under Article 26(8) of the SSM Regulation which is the usual procedure for the adoption of instruments in the area of banking supervision. The reason behind this is that the non-objection procedure does not apply to the general framework under which supervisory decisions are taken, like the organisational framework referred to in Article 6(7) of the SSM Regulation; see recital (6) of Decision ECB/2014/1.

ECB Rules of Procedure for guidelines adopted under Articles 4(3) and 6(5)(a) of the SSM Regulation and Article 17.2 of the ECB Rules of Procedure for guidelines adopted on different legal bases). However, in line with the transparency obligation of EU public institutions, the ECB has published parts of the ECB Guidelines which are of interest to the general public. This, in turn, enhances the transparency of the activities of European banking supervision.

### 3 Non-legally binding legal acts, instruments and documents

#### 3.1 General remarks

**In addition to the legal acts and binding instruments described above, the ECB may also make public any non-binding instruments or documents for the purpose of providing transparency to supervised entities and the general public.** In doing so, the ECB shall ensure that such instruments are not perceived as having any binding effect on third parties. It is noted that instruments and policy documents published on the ECB's website, while not imposing any obligations on third parties, do bind the ECB and therefore create legitimate expectations as to how European banking supervision will perform its supervisory tasks. To the extent it has created legitimate expectations the ECB is bound to act accordingly.<sup>81</sup>

#### 3.2 ECB Recommendations

**ECB Recommendations are legal acts without binding effect. They are normally adopted by the Governing Council.**<sup>82</sup> ECB Recommendations may be published in the Official Journal, in which case they are published in all official EU languages. There are two types of ECB Recommendation.

**First, ECB Recommendations can be the instrument by which the ECB recommends legislative procedures at the Union level, leading to the enactment of complementary legislation.** Although recommendations of this type may be adopted in relation to legislation relating to the ECB's supervisory tasks, this contribution to the legislative activity is not intrinsically linked to the exercise of the ECB's supervisory powers.<sup>83</sup>

**Second, ECB Recommendations can also be used by the ECB to recommend actions to be taken.** In the execution of its supervisory tasks, the ECB has made use of this type of recommendation on a number of occasions to provide credit institutions

<sup>81</sup> See for instance Case T-374/04 Germany v Commission, paragraph 111.

<sup>82</sup> Article 17.4 of the ECB Rules of Procedure states that ECB recommendations shall be adopted by the Governing Council or the Executive Board in their respective domain of competence, and shall be signed by the President.

<sup>83</sup> The ECB has adopted a Recommendation for a Council Regulation amending Regulation (EC) No 2532/98 concerning the powers of the ECB to impose sanctions (ECB/2014/19), (OJ C 144, 14.5.2014, p. 2).

with a series of recommendations on dividend distribution policies.<sup>84</sup> To date, dividend distribution is the only topic on which the ECB has issued recommendations addressed to all credit institutions. The ECB has also addressed national competent authorities in a recommendation on common specifications for the exercise of some options and discretions available under Union law by national competent authorities in relation to less significant institutions.<sup>85</sup> All of the aforementioned ECB Recommendations have been published in the Official Journal.

### 3.3 Supervisory disclosure obligations

**Directive 2013/36/EU<sup>86</sup> requires competent authorities responsible for banking supervision to disclose the texts of laws, regulations, administrative rules and general guidance adopted in their Member State in the field of prudential requirements, as well as the manner of exercise of the options and discretions available in Union law, the general criteria and methodologies of the Supervisory Review and Evaluation Process (SREP) and aggregate statistical data on key aspects of the implementation of the prudential.** In keeping with these rules, the ECB makes public information on rules and guidance, options and national discretions, the SREP and aggregate statistical data on its Banking Supervision website.

**The ECB applies all relevant Union law and all the implementing relevant laws and regulations of the Member States whose currency is the euro or whose currency is not the euro but which have established a close cooperation.** In view of the large number of relevant laws and regulations applicable, the ECB's website refers to the website of the EBA for information on these laws and regulations. The EBA lists on its website the national laws and regulations adopted by each EU Member State to implement the provisions of CRD IV and the CRR, the administrative rules, e.g. instructing supervised banks on how to comply with legislative and regulatory requirements, and general guidance, e.g. explicit disclosure requirements under CRD IV, or any other information that supervisory authorities publish to increase understanding of the new capital adequacy framework. The ECB also refers to the EBA's website regarding the manner of exercise of the options and discretions available under Union law. Additionally, the ECB has adopted and published on its

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<sup>84</sup> Recommendation of the European Central Bank of 28 January 2015 on dividend distribution policies (ECB/2015/2) (OJ C 51, 13.2.2015, p. 1.); Recommendation of the ECB of 17 December 2015 on dividend distribution policies (ECB/2015/49), (OJ C 438, 30.12.2015, p. 1.); Recommendation of the ECB of 13 December 2016 on dividend distribution policies (ECB/2016/44) (OJ C 481, 23.12.2016, p. 1.); Recommendation of the ECB of 28 December 2017 on dividend distribution policies (ECB/2017/44) (OJ C 8, 11.1.2018, p. 1.); and Recommendation of the ECB of 7 January 2019 on dividend distribution policies (ECB/2019/1) (OJ C 11, 11.1.2019, p. 1).

<sup>85</sup> Recommendation of the European Central Bank of 4 April 2017 on common specifications for the exercise of some options and discretions available in Union law by national competent authorities in relation to less significant institutions (ECB/2017/10), (OJ C 120, 13.4.2017, p. 2).

<sup>86</sup> Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338).



website a Regulation and a Guide on the ECB's exercise of options and discretions available under Union law.<sup>87</sup>

**The ECB has made available on its website specific information about the SREP, both for significant institutions and for less significant institutions.** This information includes year-by-year descriptions of the methodology used for the supervisory review and aggregate statistical data. It also publishes on its website aggregate statistical data on the financial sector, market risk, operational risk, supervisory measures and administrative penalties as well as waivers.

### 3.4 Policy documents

**In addition to disclosing those instruments typically made public as part of the supervisory disclosure requirements, the ECB, in an ongoing effort to provide transparency to supervised entities and the general public, also publishes different types of policy documents, which are not legal acts and are not legally binding on third parties, with the purpose of clarifying supervisory practices and expectations and ensuring the consistent application and equal treatment of supervised entities.** Such policy documents have differing names, including “Policy stance”, “Guidance”, “Joint Supervisory Standard”, “Methodology”, “Guide” or “Letter”. These policy documents are to be distinguished from non-binding ECB legal acts such as recommendations.

**Apart from the letters to Members of the European Parliament from either the President of the ECB or the Chair of the Supervisory Board, of which there have been over 160 to date, these various policy documents can be divided into three further broad categories: guides, reports and letters to CEOs of credit institutions.**

**The ECB has published guides and guidance on a number of different topics.** Guides typically aim to ensure consistency between and equal treatment of significant credit institutions, for instance by setting out the details of processes applied by the ECB in the exercise of its supervisory tasks (see as an example the Guide to assessments of licence applications, the Guide to internal models, the Guides to the internal liquidity adequacy assessment process (ILAAP) and the internal capital adequacy assessment process (ICAAP), the Guide to on-site inspections and internal model investigations and the Guide to fit and proper assessments). Generally speaking, the ECB will make use of “Guides” or “Guidance” where its policy objective is to provide transparency to credit institutions either on how the ECB intends to apply the relevant Union law or to describe the details of processes applied by the ECB in carrying out its supervisory tasks, as well as how it would expect a prudent credit institution to act in view of relevant Union law. It may be expected that, with the initial phase of the SSM behind it, future ECB publications on its supervisory policies would increasingly be labelled with names such as “Guide” or “Guidance”. Guides or

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<sup>87</sup> Regulation (EU) 2016/445 of the ECB of 14 March 2016 on the exercise of options and discretions available in Union law (ECB/2016/4), (OJ L 78, 24.3.2016, p. 60) and ECB Guide on options and discretions available in Union law of November 2016.

guidance cannot and should not aim to create new obligations or requirements on credit institutions. Similarly, such documents should not appear to exclude any different application of relevant Union law in specific cases. Accordingly, the wording and context, its substance and the intention of the ECB should not produce any legal effect on credit institutions.

**The ECB also publishes reports, such as the Report on recovery plans<sup>88</sup>, the Report on the Thematic Review on effective risk data aggregation and risk reporting<sup>89</sup>, the SSM thematic review on profitability and business models<sup>90</sup> or the ECB Annual Report on supervisory activities.** These documents aim to inform the general public of supervisory activities performed by the ECB or lessons learned from such supervisory activities. Such documents are typically purely descriptive in nature and follow either a specific supervisory exercise or activity. With the notable exception of the ECB Annual Report on supervisory activities, these reports are normally produced only once.

**Finally, the ECB publishes letters to CEOs of credit institutions, providing transparency to the general public on the existing supervisory practices or supervisory tasks performed.** Typically, letters to CEOs of credit institutions are addressed to all credit institutions and contain general, non-confidential information relevant for all credit institutions or a large portion of them. Examples of such letters are the “Announcement letter to institutions on the launch of the validation reporting on internal models for credit risk” of 5 March 2019, the “Letter on variable remuneration policy” which has been sent to credit institutions on a more or less yearly basis and recalls the importance of a sound remuneration policy and the expectation that credit institutions take into account future legislation when determining remuneration policies. Only non-confidential letters to credit institutions are made public, and usually only those letters that are addressed to or relevant for all credit institutions. Occasionally, a letter to one specific credit institution is made public, for instance the letter to Dexia of 27 November 2017 containing an ECB Decision permitting Dexia Crédit Local S.A., on the basis of the consolidated situation of Dexia S.A., to include in Common Equity Tier 1 the instruments issued as a result of the conversion of the preferred shares into ordinary shares. Letters to CEOs may also merely contain information on upcoming publications or supervisory exercises. Examples of such letters are the letter on Validation reporting on internal models for credit risk of 5 March 2019 or the letter with a Status update on TRIM: overview of outcome of general topics review and interim update on preliminary results of credit risk on-site investigations of 15 June 2018.

**Although most of the documents made public by the ECB in the exercise of its supervisory tasks can be placed in one of the broad categories listed above, not all such documents fit perfectly into one of these categories.** A case in point would be the SSM thematic review on profitability and business models of September

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<sup>88</sup> Report on recovery plans of July 2018.

<sup>89</sup> Report on the Thematic Review on effective risk data aggregation and risk reporting of May 2018.

<sup>90</sup> SSM thematic review on profitability and business models, Report on the outcome of the assessment, September 2018.

2018, which is labelled as a “report” but at the same time contains certain supervisory expectations.

#### 4 Distinguishing between binding and non-binding instruments

**In its supervisory capacity the ECB is to execute the policy devised by the Union legislator, the Commission and the EBA.** The ECB may adopt the necessary regulations to organise or specify the arrangements required for it to carry out the tasks conferred on it by the SSM Regulation. The ECB is prevented from adopting rules of general application imposing prudential requirements on credit institutions. Similarly, the ECB cannot regulate fields which the legislator has, for the time being, decided not to harmonise, nor can it complement Union law when the latter leaves options or discretions to the national legislature or to the financial institutions themselves. The power to act by adopting rules of general application on these matters lies with the Union legislator, together with the Commission and the EBA, as appropriate, in accordance with the Treaties.

**In practice, the distinction between rules of general application on the one hand, and providing transparency on the consistent application of relevant Union law and equal treatment on the other hand, may not always be apparent.**

For instance, a guide setting out supervisory expectations regarding the implementation of a specific provision under Union law may be perceived as binding by its addressees if that Guide does not make explicit that such expectations will always be assessed against all the relevant circumstances of an individual case and will be adjusted where appropriate. This distinction must nevertheless be made on the basis of the content of a document as well as its title, as the jurisprudence of the ECJ makes clear that the content of a document, and not its form or designation, determines its legal effect and whether it can be challenged.<sup>91</sup>

**Therefore, the distinction between legally binding acts containing prudential requirements, on the one hand, and non-binding legal acts and documents, on the other, needs to be carefully applied by the ECB when adopting legal acts or when publishing policy documents.** This is not only a question of legal certainty for the intended addressees of an instrument but can also be of crucial relevance in litigation, since case-law (including a ruling against an ECB policy document<sup>92</sup>) has made it clear that acts with legal effects are subject to actions for annulment and may imply liability on the part of the ECB, irrespective of how they are titled.

**In order to determine whether an act has legal effects, the wording and context of the act in question<sup>93</sup> as well as its content are examined by the European**

<sup>91</sup> See for instance *Commission v Council*, 22/70, paragraph 39 and *Athinaïki Techniki v Commission*, Case C-521/06, paragraphs 43 and 45. As the General Court recalled in its judgment in *United Kingdom v ECB* Case T-496/11, paragraph 30, case-law is intended to prevent the form or designation given to the act by its author from allowing that act to escape judicial review even though it does, in fact, have legal effects.

<sup>92</sup> Judgement of 23 April 1986, *Parti écologiste “Les Verts” v Parliament*, 294/83, ECLI:EU:C:1986:166. Judgment of 4 March 2015, *United Kingdom v ECB*, ECLI:EU:T:2015:133.

<sup>93</sup> See e.g. judgment of 20 March 1997, *France v Commission*, C-57/95, EU:C:1997:164, paragraph 18.

**Court of Justice.**<sup>94</sup> Measures producing legal effects likely to affect an addressee's interests by clearly altering its legal position constitute acts or decisions open to challenge by an application for annulment, no matter what their title, name or qualification.<sup>95</sup>

**In addition, the Court has consistently held that the binding legal effects of a measure must be assessed in accordance with objective criteria, such as the contents of that measure<sup>96</sup>, taking into account, as appropriate, the context in which it was adopted<sup>97</sup>, and the powers of the institution which adopted the measure.<sup>98</sup>** In extreme cases, this objective assessment can lead to an admissible action for annulment even against acts which were not subjectively intended to be binding by the adopting institution.<sup>99</sup>

**Against this background, the ECB, when publishing non-binding documents, either in the form of legal acts (recommendations) or in the form of policy documents, must ensure that they cannot be considered as legally binding by any interested party and that they should not have effects that modify the legal rights of a third party.** This is particularly difficult in this context, in which markets have an impact on individual positions, and in which the markets react to ECB/SSM communications, even though they are not meant to be binding but rather only a clarification or preannouncement of the policy which will be applied in the future.

## 5 Conclusions

**The ECB may adopt a wide range of legal instruments in the exercise of its supervisory tasks, and has also has regularly published non-legal acts to further clarify its position.**

**The ECB may adopt a number of legally binding legal acts for the purpose of exercising its supervisory powers and its supervisory discretion.** The ECB has some regulatory powers to fulfil its supervisory tasks, but it can only exercise them within the scope granted to it by the legislator; it cannot legislate to amend or deviate from the Single Rulebook, or enact new legislation in the form of generally applicable regulations. By adopting legal acts, legal instruments or by disclosing documents, the ECB can, however, bind its discretion with a view to the principle of self-commitment. On the other hand, the ECB is mandated to adopt individual supervisory decisions addressed to credit institutions, and it does so on a continuous basis. In addition, the

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<sup>94</sup> See e.g. judgments of 9 October 1990, *France v Commission*, C-366/88, EU:C:1990:348, paragraph 11; of 13 November 1991, *France v Commission*, C-303/90, EU:C:1991:424, paragraph 10; and of 20 March 1997, *France v Commission*, C-57/95, cited above, paragraph 9.

<sup>95</sup> See inter alia the judgment of 11 November 1981 in Case 60/81 *IBM v Commission* [1981] ECR 2639, paragraph 12.

<sup>96</sup> Judgment of 11 November 1981, C-60/81, *IBM v Commission* ECLI:EU:C:1981:264, paragraph 9; and judgment of 20 March 1997, C-57/95 *France v Commission*, ECLI:EU:C:1997:164, paragraph 9.

<sup>97</sup> Order of 13 June 1991, C-50/90, *Sunzest v Commission*, ECLI:EU:C:1991:253, paragraph 13, and judgment of 26 January 2010, C-362/08 P, *Internationaler Hilfsfonds v Commission*, ECLI:EU:C:2010:40, paragraph 58.

<sup>98</sup> Judgment of 1 December 2005, C-301/03, *Italy v Commission*, ECLI:EU:C:2005:727, paragraph 28.

<sup>99</sup> Judgment of 4 March 2015, T-496/11, *United Kingdom v ECB*, ECLI:EU:T:2015:133.

ECB has adopted decisions without addressees, mainly to further organise the functioning of the SSM. The ECB may also adopt non-binding legal acts, primarily consisting of recommendations to banks and NCAs.

**An important tool for banking supervisors, and also for the ECB in the exercise of its supervisory tasks, is the disclosure of non-binding policy documents to provide transparency on supervisory practices and expectations towards credit institutions.** These policy documents are not legal acts and are therefore to be distinguished from recommendations. The ECB has made public a large number of such policy documents on its website and is expected to continue to make use of this useful and practical tool. Considering that there may be only a very fine line between adopting rules of general application, on the one hand, and providing transparency on the consistent application of relevant Union law and equal treatment, on the other, the ECB must give due consideration to the limitations of such documents and make adequate efforts to be clear on the non-binding nature of its stances in this respect. Policy documents should not appear to contain rules of general application, in either title or content, as the content of a document and not its name determines its legal effect and whether it can be challenged.

# Statistics

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## Further information

ECB statistics can be accessed from the Statistical Data Warehouse (SDW):	<a href="http://sdw.ecb.europa.eu/">http://sdw.ecb.europa.eu/</a>
Data from the statistics section of the Economic Bulletin are available from the SDW:	<a href="http://sdw.ecb.europa.eu/reports.do?node=1000004813">http://sdw.ecb.europa.eu/reports.do?node=1000004813</a>
A comprehensive Statistics Bulletin can be found in the SDW:	<a href="http://sdw.ecb.europa.eu/reports.do?node=1000004045">http://sdw.ecb.europa.eu/reports.do?node=1000004045</a>
Methodological definitions can be found in the General Notes to the Statistics Bulletin:	<a href="http://sdw.ecb.europa.eu/reports.do?node=10000023">http://sdw.ecb.europa.eu/reports.do?node=10000023</a>
Details on calculations can be found in the Technical Notes to the Statistics Bulletin:	<a href="http://sdw.ecb.europa.eu/reports.do?node=10000022">http://sdw.ecb.europa.eu/reports.do?node=10000022</a>
Explanations of terms and abbreviations can be found in the ECB's statistics glossary:	<a href="http://www.ecb.europa.eu/home/glossary/html/glossa.en.html">http://www.ecb.europa.eu/home/glossary/html/glossa.en.html</a>

## Conventions used in the tables

-	data do not exist/data are not applicable
.	data are not yet available
...	nil or negligible
(p)	provisional
s.a.	seasonally adjusted
n.s.a.	non-seasonally adjusted

# 1 External environment

## 1.1 Main trading partners, GDP and CPI

	GDP <sup>1)</sup> (period-on-period percentage changes)						CPI (annual percentage changes)						
	G20	United States	United Kingdom	Japan	China	Memo item: euro area	OECD countries		United States	United Kingdom (HICP)	Japan	China	Memo item: euro area <sup>2)</sup> (HICP)
							Total	excluding food and energy					
	1	2	3	4	5	6	7	8	9	10	11	12	13
2016	3.3	1.6	1.8	0.6	6.7	1.9	1.1	1.9	1.3	0.7	-0.1	2.0	0.2
2017	3.8	2.4	1.8	1.9	6.8	2.5	2.3	1.9	2.1	2.7	0.5	1.6	1.5
2018	3.7	2.9	1.4	0.8	6.6	1.9	2.6	2.1	2.4	2.5	1.0	2.1	1.8
2018 Q3	0.8	0.7	0.7	-0.5	1.6	0.2	2.9	2.2	2.6	2.5	1.1	2.3	2.1
Q4	0.7	0.3	0.2	0.4	1.5	0.3	2.8	2.3	2.2	2.3	0.8	2.2	1.9
2019 Q1	0.8	0.8	0.5	0.5	1.4	0.4	2.2	2.2	1.6	1.9	0.3	1.8	1.4
Q2	.	0.5	-0.2	0.3	1.6	0.2	2.3	2.2	1.8	.	0.8	2.6	1.4
2019 Mar.	.	.	.	.	.	.	2.3	2.1	1.9	1.9	0.5	2.3	1.4
Apr.	.	.	.	.	.	.	2.5	2.2	2.0	2.1	0.9	2.5	1.7
May	.	.	.	.	.	.	2.3	2.1	1.8	2.0	0.7	2.7	1.2
June	.	.	.	.	.	.	2.0	2.2	1.6	2.0	0.7	2.7	1.3
July	.	.	.	.	.	.	.	.	1.8	2.1	0.5	2.8	1.0
Aug. <sup>3)</sup>	.	.	.	.	.	.	.	.	.	.	.	.	1.0

Sources: Eurostat (col. 3, 6, 10, 13); BIS (col. 9, 11, 12); OECD (col. 1, 2, 4, 5, 7, 8).

1) Quarterly data seasonally adjusted; annual data unadjusted.

2) Data refer to the changing composition of the euro area.

3) The figure for the euro area is an estimate based on provisional national data, as well as on early information on energy prices.

## 1.2 Main trading partners, Purchasing Managers' Index and world trade

	Purchasing Managers' Surveys (diffusion indices; s.a.)						Merchandise imports <sup>1)</sup>						
	Composite Purchasing Managers' Index					Memo item: euro area	Global Purchasing Managers' Index <sup>2)</sup>			Global	Advanced economies	Emerging market economies	
	Global <sup>2)</sup>	United States	United Kingdom	Japan	China		Manufacturing	Services	New export orders				
	1	2	3	4	5	6	7	8	9	10	11	12	
2016	51.6	52.4	53.4	50.5	51.4	53.3	51.7	52.0	50.1	1.1	1.4	0.9	
2017	53.2	54.3	54.7	52.5	51.8	56.4	53.8	53.8	52.8	5.8	3.1	7.7	
2018	53.4	55.0	53.3	52.1	52.3	54.6	53.1	53.8	50.9	4.4	3.1	5.2	
2018 Q3	53.1	54.8	53.9	51.5	52.1	54.3	52.6	53.2	49.8	1.7	0.5	2.4	
Q4	53.1	54.7	51.4	52.3	51.5	52.3	52.0	53.5	49.9	-0.9	1.6	-2.4	
2019 Q1	52.8	54.8	50.6	50.6	51.5	51.5	50.9	53.4	49.6	-0.7	-0.2	-1.1	
Q2	51.5	51.8	50.5	50.8	51.6	51.8	50.4	51.8	49.4	-0.6	-1.4	-0.1	
2019 Mar.	53.1	54.6	50.0	50.4	52.9	51.6	50.9	53.8	49.7	-0.7	-0.2	-1.1	
Apr.	52.3	53.0	50.9	50.8	52.7	51.5	51.1	52.7	49.6	0.0	-1.2	0.8	
May	51.0	50.9	50.9	50.7	51.5	51.8	50.3	51.3	49.4	0.5	-0.9	1.3	
June	51.0	51.5	49.7	50.8	50.6	52.2	49.6	51.5	49.2	-0.6	-1.4	-0.1	
July	51.7	52.6	50.7	50.6	50.9	51.5	49.9	52.3	49.0	.	.	.	
Aug.	51.1	50.7	50.2	51.9	51.6	51.9	50.5	51.3	47.8	.	.	.	

Sources: Markit (col. 1-9); CPB Netherlands Bureau for Economic Policy Analysis and ECB calculations (col. 10-12).

1) Global and advanced economies exclude the euro area. Annual and quarterly data are period-on-period percentages; monthly data are 3-month-on-3-month percentages. All data are seasonally adjusted.

2) Excluding the euro area.

## 2 Financial developments

### 2.1 Money market interest rates

(percentages per annum; period averages)

	Euro area <sup>1)</sup>					United States	Japan
	Overnight deposits (EONIA)	1-month deposits (EURIBOR)	3-month deposits (EURIBOR)	6-month deposits (EURIBOR)	12-month deposits (EURIBOR)	3-month deposits (LIBOR)	3-month deposits (LIBOR)
	1	2	3	4	5	6	7
2016	-0.32	-0.34	-0.26	-0.17	-0.03	0.74	-0.02
2017	-0.35	-0.37	-0.33	-0.26	-0.15	1.26	-0.02
2018	-0.36	-0.37	-0.32	-0.27	-0.17	2.31	-0.05
2019 Feb.	-0.37	-0.37	-0.31	-0.23	-0.11	2.68	-0.08
Mar.	-0.37	-0.37	-0.31	-0.23	-0.11	2.61	-0.07
Apr.	-0.37	-0.37	-0.31	-0.23	-0.11	2.59	-0.06
May	-0.37	-0.37	-0.31	-0.24	-0.13	2.53	-0.07
June	-0.36	-0.38	-0.33	-0.28	-0.19	2.40	-0.07
July	-0.37	-0.40	-0.36	-0.35	-0.28	2.29	-0.07
Aug.	-0.36	-0.41	-0.41	-0.40	-0.36	2.16	-0.10

Source: ECB.

1) Data refer to the changing composition of the euro area, see the General Notes.

### 2.2 Yield curves

(End of period; rates in percentages per annum; spreads in percentage points)

	Spot rates					Spreads			Instantaneous forward rates			
	Euro area <sup>1), 2)</sup>					Euro area <sup>1), 2)</sup>	United States	United Kingdom	Euro area <sup>1), 2)</sup>			
	3 months	1 year	2 years	5 years	10 years	10 years - 1 year	10 years - 1 year	10 years - 1 year	1 year	2 years	5 years	10 years
	1	2	3	4	5	6	7	8	9	10	11	12
2016	-0.93	-0.82	-0.80	-0.47	0.26	1.08	1.63	1.17	-0.78	-0.75	0.35	1.35
2017	-0.78	-0.74	-0.64	-0.17	0.52	1.26	0.67	0.83	-0.66	-0.39	0.66	1.56
2018	-0.80	-0.75	-0.66	-0.26	0.32	1.07	0.08	0.51	-0.67	-0.45	0.44	1.17
2019 Feb.	-0.57	-0.57	-0.54	-0.28	0.23	0.80	0.17	0.49	-0.56	-0.44	0.27	1.06
Mar.	-0.57	-0.61	-0.62	-0.45	-0.01	0.60	0.00	0.35	-0.64	-0.59	-0.02	0.75
Apr.	-0.56	-0.60	-0.59	-0.39	0.08	0.67	0.12	0.43	-0.62	-0.54	0.08	0.88
May	-0.57	-0.64	-0.69	-0.56	-0.13	0.51	-0.08	0.24	-0.72	-0.72	-0.17	0.64
June	-0.60	-0.69	-0.75	-0.64	-0.26	0.43	0.07	0.14	-0.78	-0.79	-0.29	0.44
July	-0.67	-0.74	-0.79	-0.72	-0.39	0.35	0.02	0.09	-0.82	-0.84	-0.45	0.25
Aug.	-0.84	-0.88	-0.93	-0.92	-0.65	0.23	-0.27	0.03	-0.94	-1.00	-0.73	-0.12

Source: ECB.

1) Data refer to the changing composition of the euro area, see the General Notes.

2) ECB calculations based on underlying data provided by EuroMTS and ratings provided by Fitch Ratings.

### 2.3 Stock market indices

(index levels in points; period averages)

	Dow Jones EURO STOXX indices												United States	Japan
	Benchmark		Main industry indices										Standard & Poor's 500	Nikkei 225
	Broad index	50	Basic materials	Consumer services	Consumer goods	Oil and gas	Financials	Industrials	Technology	Utilities	Telecoms	Health care		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2016	321.6	3,003.7	620.7	250.9	600.1	278.9	148.7	496.0	375.8	248.6	326.9	770.9	2,094.7	16,920.5
2017	376.9	3,491.0	757.3	268.6	690.4	307.9	182.3	605.5	468.4	272.7	339.2	876.3	2,449.1	20,209.0
2018	375.5	3,386.6	766.3	264.9	697.3	336.0	173.1	629.5	502.5	278.8	292.9	800.5	2,746.2	22,310.7
2019 Feb.	355.0	3,223.1	699.4	266.4	667.5	329.9	152.9	598.9	480.6	301.7	285.8	743.0	2,754.9	21,123.6
Mar.	365.7	3,332.9	718.3	272.1	692.2	339.9	157.6	621.0	493.4	307.8	297.0	755.1	2,804.0	21,414.9
Apr.	379.0	3,458.8	750.9	277.8	731.0	341.6	163.8	652.7	522.5	311.9	296.9	749.6	2,903.8	21,964.9
May	369.4	3,385.4	710.2	267.4	721.6	324.7	157.0	643.9	519.6	312.0	290.9	732.7	2,854.7	21,218.4
June	369.7	3,406.0	722.6	264.9	728.5	323.2	152.0	652.3	517.5	323.9	296.6	734.0	2,890.2	21,060.2
July	380.0	3,507.8	739.6	271.8	752.7	329.3	155.8	666.2	548.2	326.4	292.2	769.2	2,996.1	21,593.7
Aug.	363.6	3,355.3	704.2	262.0	722.8	303.0	144.1	639.4	523.4	325.7	281.9	778.9	2,897.5	20,629.7

Source: ECB.



## 2 Financial developments

### 2.4 MFI interest rates on loans to and deposits from households (new business) <sup>1), 2)</sup>

(Percentages per annum; period average, unless otherwise indicated)

	Deposits				Revolving loans and overdrafts	Extended credit card credit	Loans for consumption			Loans to sole proprietors and unincorporated partnerships	Loans for house purchase				Composite cost-of-borrowing indicator	
	Over-night	Redeemable at notice of up to 3 months	With an agreed maturity of:				By initial period of rate fixation	APRC <sup>3)</sup>	Floating rate and up to 1 year		Over 1 year	By initial period of rate fixation				
			Up to 2 years	Over 2 years								Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 and up to 10 years		Over 10 years
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2018 Aug.	0.03	0.45	0.30	0.64	6.01	16.78	5.44	5.88	6.41	2.38	1.63	1.82	1.92	1.85	2.11	1.81
Sep.	0.03	0.45	0.30	0.69	6.04	16.71	5.30	5.74	6.27	2.33	1.60	1.81	1.91	1.85	2.08	1.79
Oct.	0.03	0.45	0.29	0.73	5.97	16.73	5.06	5.71	6.23	2.45	1.60	1.80	1.91	1.86	2.09	1.80
Nov.	0.04	0.44	0.29	0.73	5.93	16.67	4.94	5.68	6.18	2.37	1.61	1.85	1.94	1.88	2.11	1.81
Dec.	0.03	0.43	0.30	0.78	5.87	16.68	4.92	5.47	5.98	2.27	1.61	1.80	1.91	1.84	2.10	1.80
2019 Jan.	0.03	0.42	0.33	0.74	5.92	16.63	5.32	5.83	6.34	2.36	1.61	1.81	1.89	1.86	2.09	1.82
Feb.	0.03	0.42	0.32	0.70	5.97	16.61	5.28	5.71	6.28	2.41	1.59	1.84	1.87	1.84	2.09	1.80
Mar.	0.03	0.40	0.30	0.76	5.90	16.65	5.41	5.61	6.18	2.36	1.60	1.80	1.83	1.81	2.06	1.78
Apr.	0.03	0.40	0.32	0.75	5.88	16.66	5.56	5.63	6.19	2.36	1.60	1.77	1.77	1.77	2.02	1.75
May	0.03	0.43	0.31	0.79	5.81	16.67	5.61	5.76	6.34	2.33	1.58	1.79	1.73	1.74	1.99	1.72
June	0.03	0.43	0.32	0.82	5.81	16.63	5.43	5.67	6.24	2.31	1.56	1.73	1.67	1.65	1.95	1.67
July <sup>(p)</sup>	0.03	0.43	0.31	0.80	5.75	16.58	5.74	5.73	6.30	2.34	1.56	1.71	1.59	1.57	1.90	1.61

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) Including non-profit institutions serving households.

3) Annual percentage rate of charge (APRC).

### 2.5 MFI interest rates on loans to and deposits from non-financial corporations (new business) <sup>1), 2)</sup>

(Percentages per annum; period average, unless otherwise indicated)

	Deposits			Revolving loans and overdrafts	Other loans by size and initial period of rate fixation									Composite cost-of-borrowing indicator
	Over-night	With an agreed maturity of:			up to EUR 0.25 million			over EUR 0.25 and up to 1 million			over EUR 1 million			
		Up to 2 years	Over 2 years		Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 year	Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 year	Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 year	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
2018 Aug.	0.03	0.08	0.61	2.25	2.19	2.43	2.32	1.67	1.63	1.73	1.10	1.27	1.69	1.63
Sep.	0.03	0.08	0.44	2.22	2.21	2.35	2.31	1.65	1.54	1.67	1.13	1.40	1.69	1.65
Oct.	0.03	0.06	0.52	2.22	2.13	2.43	2.33	1.66	1.60	1.69	1.23	1.10	1.66	1.64
Nov.	0.03	0.06	0.63	2.19	2.19	2.40	2.34	1.67	1.60	1.67	1.20	1.35	1.69	1.66
Dec.	0.03	0.07	0.53	2.18	2.20	2.29	2.25	1.60	1.59	1.67	1.21	1.39	1.59	1.63
2019 Jan.	0.03	0.05	0.54	2.22	2.15	2.40	2.32	1.67	1.62	1.72	1.13	1.30	1.61	1.63
Feb.	0.03	0.03	0.52	2.21	2.15	2.41	2.33	1.65	1.63	1.70	1.13	1.39	1.56	1.64
Mar.	0.03	0.07	0.62	2.17	2.17	2.38	2.30	1.66	1.58	1.68	1.19	1.36	1.57	1.65
Apr.	0.03	0.06	0.54	2.19	2.19	2.36	2.26	1.67	1.60	1.64	1.16	1.33	1.44	1.62
May	0.03	0.04	0.46	2.15	2.18	2.38	2.29	1.66	1.59	1.63	1.09	1.16	1.50	1.57
June	0.03	0.03	0.56	2.17	2.13	2.33	2.25	1.63	1.55	1.56	1.09	1.28	1.39	1.55
July <sup>(p)</sup>	0.03	0.04	0.58	2.11	2.06	2.49	2.19	1.65	1.56	1.54	1.16	1.32	1.39	1.56

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector.

## 2 Financial developments

### 2.6 Debt securities issued by euro area residents, by sector of the issuer and initial maturity

(EUR billions; transactions during the month and end-of-period outstanding amounts; nominal values)

	Outstanding amounts							Gross issues <sup>1)</sup>						
	Total	MFIs (including Euro- system)	Non-MFI corporations			General government		Total	MFIs (including Euro- system)	Non-MFI corporations			General government	
			Financial corporations other than MFIs	FVCs	Non- financial corporations	Central govern- ment	Other general govern- ment			Financial corporations other than MFIs	FVCs	Non- financial corporations	Central govern- ment	Other general govern- ment
Short-term														
2016	1,241	518	135	.	59	466	62	349	161	45	.	31	79	33
2017	1,240	519	155	.	70	438	57	367	167	54	.	37	79	31
2018	1,222	505	174	.	72	424	47	388	171	65	.	41	76	35
2019 Feb.	1,277	539	170	.	94	419	55	392	189	74	.	42	63	24
Mar.	1,331	564	178	.	98	435	55	431	186	81	.	44	79	40
Apr.	1,319	562	169	.	109	418	61	421	195	68	.	53	58	47
May	1,338	574	169	.	115	422	59	443	196	70	.	56	83	37
June	1,303	557	162	.	100	428	56	370	152	68	.	45	71	35
July	1,332	576	167	.	109	424	57	455	204	74	.	55	76	45
Long-term														
2016	15,379	3,695	3,174	.	1,184	6,684	641	220	62	53	.	19	78	8
2017	15,360	3,560	3,050	.	1,243	6,865	642	247	66	73	.	18	83	7
2018	15,753	3,687	3,151	.	1,267	7,022	626	228	64	68	.	16	75	6
2019 Feb.	15,956	3,749	3,175	.	1,276	7,125	632	300	104	56	.	14	115	11
Mar.	16,024	3,754	3,201	.	1,301	7,127	641	269	76	63	.	25	88	17
Apr.	15,999	3,746	3,183	.	1,307	7,122	641	233	55	68	.	19	84	8
May	16,061	3,766	3,202	.	1,306	7,153	635	247	62	80	.	13	86	7
June	16,109	3,766	3,222	.	1,313	7,175	633	242	61	74	.	22	80	5
July	16,184	3,788	3,254	.	1,324	7,183	636	250	70	70	.	25	76	8

Source: ECB.

1) For the purpose of comparison, annual data refer to the average monthly figure over the year.

### 2.7 Growth rates and outstanding amounts of debt securities and listed shares

(EUR billions; percentage changes)

	Debt securities							Listed shares			
	Total	MFIs (including Eurosystem)	Non-MFI corporations			General government		Total	MFIs	Financial corporations other than MFIs	Non- financial corporations
			Financial corporations other than MFIs	FVCs	Non- financial corporations	Central government	Other general government				
Outstanding amount											
2016	16,620.2	4,213.2	3,309.9	.	1,243.5	7,149.9	703.7	7,089.5	537.6	1,080.2	5,471.6
2017	16,600.8	4,079.3	3,205.3	.	1,312.6	7,303.6	699.9	7,954.7	612.5	1,249.6	6,092.6
2018	16,975.2	4,191.4	3,325.4	.	1,339.7	7,446.0	672.7	7,027.2	465.1	1,099.4	5,462.7
2019 Feb.	17,233.2	4,287.1	3,344.7	.	1,370.8	7,544.0	686.5	7,716.0	518.7	1,225.2	5,972.1
Mar.	17,354.9	4,318.0	3,379.3	.	1,399.5	7,562.4	695.7	7,761.2	495.8	1,230.9	6,034.5
Apr.	17,318.1	4,308.1	3,351.6	.	1,415.7	7,540.5	702.3	8,090.6	537.0	1,281.8	6,271.8
May	17,399.4	4,339.3	3,370.9	.	1,421.0	7,574.4	693.8	7,586.8	470.9	1,208.1	5,907.8
June	17,411.4	4,322.8	3,383.8	.	1,413.7	7,602.7	688.4	7,940.6	493.3	1,246.0	6,201.3
July	17,516.6	4,363.8	3,420.9	.	1,433.3	7,606.2	692.4	7,980.5	484.0	1,252.8	6,243.7
Growth rate											
2016	0.3	-3.0	-1.2	.	6.2	2.2	-0.1	0.5	1.2	0.9	0.4
2017	1.3	-0.5	0.1	.	5.9	2.3	0.5	1.0	6.1	2.8	0.2
2018	1.9	1.7	3.1	.	3.3	1.9	-4.3	0.7	-0.1	2.4	0.4
2019 Feb.	2.7	3.0	2.6	.	4.6	2.5	-1.6	0.5	-0.1	2.1	0.3
Mar.	2.5	3.0	3.0	.	3.6	2.1	0.0	0.4	-0.2	1.7	0.2
Apr.	2.3	2.9	1.6	.	4.0	2.1	0.7	0.0	-0.2	-0.1	0.1
May	2.6	3.9	2.0	.	3.7	2.1	0.6	0.0	-0.2	-0.2	0.0
June	2.8	4.4	1.8	.	4.4	2.3	1.0	0.0	-0.1	0.0	0.0
July	2.9	5.1	1.9	.	4.7	2.0	1.3	-0.1	-0.1	-0.1	-0.1

Source: ECB.

## 2 Financial developments

### 2.8 Effective exchange rates <sup>1)</sup>

(period averages; index: 1999 Q1=100)

	EER-19						EER-38	
	Nominal	Real CPI	Real PPI	Real GDP deflator	Real ULCM <sup>2)</sup>	Real ULCT	Nominal	Real CPI
	1	2	3	4	5	6	7	8
2016	94.4	89.5	90.8	85.1	79.0	89.3	109.7	88.9
2017	96.6	91.4	91.9	86.0	78.3	89.8	112.0	90.0
2018	98.9	93.4	93.4	87.5	79.3	90.9	117.9	93.8
2018 Q3	99.2	93.7	93.4	87.7	79.3	91.3	119.2	94.8
Q4	98.5	93.0	92.9	87.1	79.1	90.4	118.4	93.8
2019 Q1	97.4	91.7	92.1	85.9	78.6	89.1	116.7	92.1
Q2	97.3	91.4	91.6	.	.	.	116.8	91.9
2019 Mar.	96.9	91.1	91.5	-	-	-	116.2	91.6
Apr.	96.7	91.0	91.3	-	-	-	116.1	91.4
May	97.4	91.4	91.8	-	-	-	117.0	91.9
June	97.9	91.9	91.9	-	-	-	117.4	92.2
July	97.5	91.4	91.1	-	-	-	116.5	91.4
Aug.	98.1	91.9	91.4	-	-	-	117.6	92.1
	<i>Percentage change versus previous month</i>							
2019 Aug.	0.7	0.6	0.4	-	-	-	0.9	0.8
	<i>Percentage change versus previous year</i>							
2019 Aug.	-0.8	-1.6	-1.9	-	-	-	-1.2	-2.7

Source: ECB.

1) For a definition of the trading partner groups and other information see the General Notes to the Statistics Bulletin.

2) ULCM-deflated series are available only for the EER-18 trading partner group.

### 2.9 Bilateral exchange rates

(period averages; units of national currency per euro)

	Chinese renminbi	Croatian kuna	Czech koruna	Danish krone	Hungarian forint	Japanese yen	Polish zloty	Pound sterling	Romanian leu	Swedish krona	Swiss franc	US Dollar
	1	2	3	4	5	6	7	8	9	10	11	12
2016	7.352	7.533	27.034	7.445	311.438	120.197	4.363	0.819	4.4904	9.469	1.090	1.107
2017	7.629	7.464	26.326	7.439	309.193	126.711	4.257	0.877	4.5688	9.635	1.112	1.130
2018	7.808	7.418	25.647	7.453	318.890	130.396	4.261	0.885	4.6540	10.258	1.155	1.181
2018 Q3	7.915	7.417	25.718	7.455	324.107	129.606	4.303	0.892	4.6471	10.405	1.144	1.163
Q4	7.895	7.420	25.864	7.462	322.995	128.816	4.299	0.887	4.6605	10.320	1.137	1.141
2019 Q1	7.663	7.422	25.683	7.464	317.907	125.083	4.302	0.873	4.7358	10.419	1.132	1.136
Q2	7.672	7.418	25.686	7.467	322.973	123.471	4.282	0.875	4.7480	10.619	1.126	1.124
2019 Mar.	7.587	7.421	25.676	7.462	315.924	125.674	4.297	0.858	4.7546	10.500	1.131	1.130
Apr.	7.549	7.428	25.677	7.465	321.181	125.436	4.286	0.862	4.7584	10.482	1.132	1.124
May	7.674	7.419	25.768	7.468	324.978	122.948	4.296	0.872	4.7594	10.737	1.130	1.118
June	7.794	7.408	25.605	7.467	322.559	122.081	4.264	0.891	4.7250	10.626	1.117	1.129
July	7.715	7.390	25.548	7.466	325.269	121.406	4.260	0.899	4.7286	10.560	1.108	1.122
Aug.	7.858	7.390	25.802	7.460	326.906	118.179	4.347	0.916	4.7280	10.736	1.089	1.113
	<i>Percentage change versus previous month</i>											
2019 Aug.	1.9	0.0	1.0	-0.1	0.5	-2.7	2.0	1.8	0.0	1.7	-1.7	-0.8
	<i>Percentage change versus previous year</i>											
2019 Aug.	-0.6	-0.5	0.5	0.1	1.2	-7.8	1.4	2.1	1.8	2.6	-4.6	-3.7

Source: ECB.

## 2 Financial developments

### 2.10 Euro area balance of payments, financial account

(EUR billions, unless otherwise indicated; outstanding amounts at end of period; transactions during period)

	Total <sup>1)</sup>			Direct investment		Portfolio investment		Net financial derivatives	Other investment		Reserve assets	Memo: Gross external debt
	Assets	Liabilities	Net	Assets	Liabilities	Assets	Liabilities		Assets	Liabilities		
	1	2	3	4	5	6	7	8	9	10	11	12
<i>Outstanding amounts (international investment position)</i>												
2018 Q2	25,683.4	26,256.5	-573.2	10,999.6	9,039.5	8,752.4	10,907.1	-96.6	5,337.9	6,309.9	690.0	14,294.7
Q3	25,848.2	26,265.3	-417.1	10,967.4	8,923.6	8,891.9	10,984.8	-80.1	5,395.1	6,356.9	673.9	14,343.2
Q4	25,145.7	25,478.1	-332.4	10,679.9	8,813.7	8,481.9	10,369.2	-94.5	5,359.4	6,295.2	719.1	14,054.3
2019 Q1	26,292.8	26,450.1	-157.3	10,900.8	8,851.1	9,091.7	11,127.4	-100.1	5,659.2	6,471.6	741.1	14,431.9
<i>Outstanding amounts as a percentage of GDP</i>												
2019 Q1	226.3	227.6	-1.4	93.8	76.2	78.2	95.8	-0.9	48.7	55.7	6.4	124.2
<i>Transactions</i>												
2018 Q3	26.5	-58.8	85.3	-110.6	-93.6	39.0	-9.5	34.9	62.0	-44.3	1.3	-
Q4	-379.3	-447.2	67.8	-269.6	-182.3	-35.4	-143.7	29.9	-110.0	-121.2	5.8	-
2019 Q1	337.3	279.8	57.5	79.7	27.7	52.9	142.3	6.6	195.4	109.7	2.7	-
Q2	172.3	103.4	68.9	-15.8	2.1	1.5	53.1	13.1	170.7	48.2	2.8	-
2019 Jan.	293.8	291.1	2.6	53.7	38.9	38.3	59.9	1.0	203.5	192.4	-2.7	-
Feb.	-2.6	-5.4	2.8	20.6	7.8	-0.8	23.0	-1.1	-21.6	-36.2	0.2	-
Mar.	46.2	-5.9	52.1	5.4	-18.9	15.3	59.5	6.8	13.5	-46.4	5.2	-
Apr.	166.3	189.6	-23.3	29.0	73.7	9.4	-8.6	3.1	121.7	124.5	3.2	-
May	86.8	45.9	40.9	12.8	-4.2	-0.2	58.3	2.2	70.2	-8.1	1.8	-
June	-80.8	-132.1	51.3	-57.6	-67.4	-7.7	3.5	7.8	-21.1	-68.2	-2.2	-
<i>12-month cumulated transactions</i>												
2019 June	156.8	-122.7	279.5	-316.3	-246.1	58.0	42.3	84.4	318.2	81.1	12.6	-
<i>12-month cumulated transactions as a percentage of GDP</i>												
2019 June	1.3	-1.0	2.4	-2.7	-2.1	0.5	0.4	0.7	2.7	0.7	0.1	-

Source: ECB.

1) Net financial derivatives are included in total assets.

## 3 Economic activity

### 3.1 GDP and expenditure components

(quarterly data seasonally adjusted; annual data unadjusted)

	GDP											
	Total	Domestic demand							External balance <sup>1)</sup>			
		Total	Private consumption	Government consumption	Gross fixed capital formation			Changes in inventories <sup>2)</sup>	Total	Exports <sup>1)</sup>	Imports <sup>1)</sup>	
	Total construction				Total machinery	Intellectual property products						
1	2	3	4	5	6	7	8	9	10	11	12	
<i>Current prices (EUR billions)</i>												
2016	10,806.0	10,340.5	5,853.0	2,228.6	2,211.7	1,053.5	686.2	466.4	47.1	465.5	4,938.7	4,473.1
2017	11,183.8	10,702.9	6,025.6	2,292.4	2,325.1	1,116.8	720.2	482.7	59.8	480.9	5,303.1	4,822.2
2018	11,544.0	11,053.2	6,197.9	2,357.4	2,425.8	1,189.5	757.2	473.9	72.0	490.8	5,560.7	5,069.8
2018 Q3	2,893.1	2,777.4	1,554.1	590.8	612.6	300.3	192.0	119.0	19.9	115.8	1,401.6	1,285.8
Q4	2,917.2	2,800.7	1,564.7	595.5	623.4	305.9	192.9	123.3	17.1	116.5	1,415.6	1,299.0
2019 Q1	2,939.5	2,807.5	1,572.9	599.9	627.1	312.5	192.5	120.8	7.6	132.0	1,429.4	1,297.4
Q2	2,959.2	2,829.9	1,583.9	604.9	633.3	314.5	195.3	122.2	7.7	129.3	1,433.5	1,304.2
<i>as a percentage of GDP</i>												
2018	100.0	95.7	53.7	20.4	21.0	10.3	6.6	4.1	0.6	4.3	-	-
<i>Chain-linked volumes (prices for the previous year)</i>												
<i>quarter-on-quarter percentage changes</i>												
2018 Q3	0.2	0.4	0.2	0.2	0.5	0.1	0.8	1.0	-	-	0.4	0.9
Q4	0.3	0.3	0.4	0.4	1.5	1.3	0.5	3.6	-	-	1.0	1.0
2019 Q1	0.4	0.2	0.4	0.4	0.2	1.4	-0.1	-2.3	-	-	0.9	0.4
Q2	0.2	0.3	0.2	0.3	0.5	0.0	1.2	0.9	-	-	0.0	0.2
<i>annual percentage changes</i>												
2016	1.9	2.4	2.0	1.8	4.0	2.8	5.9	4.2	-	-	3.0	4.2
2017	2.5	2.1	1.6	1.5	3.5	3.4	4.4	2.5	-	-	5.4	4.8
2018	1.9	1.5	1.4	1.1	2.3	3.3	4.4	-2.9	-	-	3.5	2.8
2018 Q3	1.7	1.8	1.1	0.9	3.4	2.3	4.3	4.7	-	-	3.3	3.8
Q4	1.2	1.8	1.2	1.0	4.0	3.3	2.3	8.8	-	-	1.9	3.3
2019 Q1	1.3	1.4	1.1	1.3	4.0	4.7	3.2	3.6	-	-	3.4	3.8
Q2	1.2	1.2	1.2	1.3	2.8	2.9	2.4	3.2	-	-	2.4	2.6
<i>contributions to quarter-on-quarter percentage changes in GDP; percentage points</i>												
2018 Q3	0.2	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.2	-0.2	-	-
Q4	0.3	0.3	0.2	0.1	0.3	0.1	0.0	0.1	-0.3	0.0	-	-
2019 Q1	0.4	0.1	0.2	0.1	0.0	0.2	0.0	-0.1	-0.2	0.3	-	-
Q2	0.2	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	-0.1	-	-
<i>contributions to annual percentage changes in GDP; percentage points</i>												
2016	1.9	2.3	1.1	0.4	0.8	0.3	0.4	0.2	0.0	-0.4	-	-
2017	2.5	2.1	0.9	0.3	0.7	0.3	0.3	0.1	0.1	0.5	-	-
2018	1.9	1.5	0.7	0.2	0.5	0.3	0.3	-0.1	0.0	0.5	-	-
2018 Q3	1.7	1.8	0.6	0.2	0.7	0.2	0.3	0.2	0.3	-0.1	-	-
Q4	1.2	1.7	0.6	0.2	0.8	0.3	0.2	0.3	0.0	-0.5	-	-
2019 Q1	1.3	1.3	0.6	0.3	0.8	0.5	0.2	0.1	-0.4	0.0	-	-
Q2	1.2	1.1	0.6	0.3	0.6	0.3	0.2	0.1	-0.3	0.0	-	-

Sources: Eurostat and ECB calculations.

1) Exports and imports cover goods and services and include cross-border intra-euro area trade.

2) Including acquisitions less disposals of valuables.

## 3 Economic activity

### 3.2 Value added by economic activity

(quarterly data seasonally adjusted; annual data unadjusted)

	Gross value added (basic prices)											Taxes less subsidies on products
	Total	Agriculture, forestry and fishing	Manufacturing energy and utilities	Construction	Trade, transport, accommodation and food services	Information and communication	Finance and insurance	Real estate	Professional, business and support services	Public administration, education, health and social work	Arts, entertainment and other services	
	1	2	3	4	5	6	7	8	9	10	11	12
<b>Current prices (EUR billions)</b>												
2016	9,694.0	159.3	1,944.5	485.1	1,831.7	449.1	473.6	1,097.2	1,075.0	1,847.5	331.1	1,112.0
2017	10,024.2	174.0	2,008.4	510.0	1,909.8	470.0	466.4	1,121.4	1,128.7	1,897.8	337.8	1,159.6
2018	10,340.0	175.4	2,059.5	546.5	1,968.8	489.5	467.9	1,153.9	1,179.1	1,956.1	343.3	1,203.9
2018 Q3	2,590.6	44.0	516.6	137.7	492.5	122.4	117.3	288.9	295.4	490.0	85.8	302.5
Q4	2,613.5	44.5	516.2	140.9	497.2	124.7	117.7	291.5	299.5	494.8	86.4	303.7
2019 Q1	2,633.2	44.9	518.0	144.6	501.3	125.8	117.9	294.0	302.1	497.5	87.1	306.3
Q2	2,650.7	46.3	515.5	146.4	505.4	127.0	118.0	296.3	305.5	502.2	88.0	308.5
<i>as a percentage of value added</i>												
2018	100.0	1.7	19.9	5.3	19.0	4.7	4.5	11.2	11.4	18.9	3.3	-
<b>Chain-linked volumes (prices for the previous year)</b>												
<i>quarter-on-quarter percentage changes</i>												
2018 Q3	0.2	-0.8	-0.2	0.7	0.0	1.6	0.7	0.4	0.2	0.3	0.4	0.1
Q4	0.3	0.8	-0.4	1.2	0.5	0.3	0.0	0.3	0.8	0.5	0.3	0.2
2019 Q1	0.5	0.7	0.0	1.5	1.0	1.3	0.0	0.4	0.2	0.1	0.6	0.1
Q2	0.1	0.0	-0.7	0.1	0.1	0.5	0.7	0.4	0.6	0.3	0.1	0.9
<i>annual percentage changes</i>												
2016	1.8	-1.4	3.0	1.6	1.9	3.9	-0.8	0.4	2.5	1.6	0.2	2.8
2017	2.5	1.0	3.4	2.5	3.0	4.9	1.3	0.5	4.1	1.6	0.9	2.5
2018	2.0	1.0	1.9	3.5	2.2	4.2	0.7	1.4	3.4	1.0	0.6	1.7
2018 Q3	1.7	0.1	1.3	3.4	1.8	4.8	0.9	1.3	2.7	0.8	0.4	1.8
Q4	1.2	0.0	-0.6	3.5	1.5	3.5	0.4	1.3	2.8	0.9	0.5	1.3
2019 Q1	1.4	0.4	-0.3	4.6	1.9	4.4	0.9	1.2	1.9	1.1	1.1	0.9
Q2	1.1	0.7	-1.3	3.5	1.6	3.8	1.4	1.5	1.9	1.2	1.4	1.3
<i>contributions to quarter-on-quarter percentage changes in value added; percentage points</i>												
2018 Q3	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	-
Q4	0.3	0.0	-0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	-
2019 Q1	0.5	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	-
Q2	0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	-
<i>contributions to annual percentage changes in value added; percentage points</i>												
2016	1.8	0.0	0.6	0.1	0.4	0.2	0.0	0.1	0.3	0.3	0.0	-
2017	2.5	0.0	0.7	0.1	0.6	0.2	0.1	0.1	0.5	0.3	0.0	-
2018	2.0	0.0	0.4	0.2	0.4	0.2	0.0	0.2	0.4	0.2	0.0	-
2018 Q3	1.7	0.0	0.3	0.2	0.3	0.2	0.0	0.1	0.3	0.1	0.0	-
Q4	1.2	0.0	-0.1	0.2	0.3	0.2	0.0	0.1	0.3	0.2	0.0	-
2019 Q1	1.4	0.0	-0.1	0.2	0.4	0.2	0.0	0.1	0.2	0.2	0.0	-
Q2	1.1	0.0	-0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.0	-

Sources: Eurostat and ECB calculations.

## 3 Economic activity

### 3.3 Employment <sup>1)</sup>

(quarterly data seasonally adjusted; annual data unadjusted)

	Total	By employment status		By economic activity									
		Employees	Self-employed	Agriculture, forestry and fishing	Manufacturing, energy and utilities	Construction	Trade, transport, accommodation and food services	Information and communication	Finance and insurance	Real estate	Professional, business and support services	Public administration, education, health and social work	Arts, entertainment and other services
	1	2	3	4	5	6	7	8	9	10	11	12	13
Persons employed													
<i>as a percentage of total persons employed</i>													
2016	100.0	85.4	14.6	3.2	14.8	5.9	24.9	2.8	2.6	1.0	13.5	24.2	7.0
2017	100.0	85.8	14.2	3.2	14.7	6.0	24.9	2.8	2.5	1.0	13.8	24.2	7.0
2018	100.0	86.0	14.0	3.1	14.7	6.0	24.9	2.9	2.4	1.0	13.9	24.1	6.9
<i>annual percentage changes</i>													
2016	1.4	1.7	-0.3	-0.3	0.8	0.3	1.5	3.1	-0.5	2.2	2.9	1.3	0.7
2017	1.6	2.0	-0.7	-0.6	1.2	1.8	1.7	3.1	-1.4	2.1	3.3	1.3	1.0
2018	1.5	1.8	-0.3	-0.4	1.4	2.6	1.5	3.2	-1.0	1.8	2.6	1.2	0.5
2018 Q3	1.4	1.7	-0.2	0.0	1.3	2.7	1.5	3.6	-1.2	1.7	2.4	1.2	0.0
Q4	1.4	1.6	-0.2	-0.3	1.2	3.2	1.5	3.5	-0.7	1.3	1.9	1.2	-0.1
2019 Q1	1.4	1.6	-0.1	0.2	1.2	2.6	1.3	3.9	-0.3	2.1	1.8	1.2	0.3
Q2	1.2	1.5	-0.5	-1.9	0.9	1.7	1.3	3.9	-0.5	1.3	1.5	1.3	1.1
Hours worked													
<i>as a percentage of total hours worked</i>													
2016	100.0	80.7	19.3	4.3	15.3	6.6	25.7	3.0	2.6	1.0	13.3	21.9	6.2
2017	100.0	81.1	18.9	4.2	15.3	6.7	25.7	3.0	2.5	1.0	13.5	21.8	6.2
2018	100.0	81.5	18.5	4.2	15.3	6.8	25.7	3.1	2.5	1.0	13.7	21.8	6.1
<i>annual percentage changes</i>													
2016	1.4	1.9	-0.5	-0.2	1.0	0.4	1.6	3.1	-0.1	2.7	3.1	1.3	0.6
2017	1.2	1.7	-0.9	-1.1	1.0	1.8	1.2	2.9	-2.0	2.2	2.9	0.8	0.4
2018	1.5	1.9	-0.5	0.2	1.2	2.9	1.2	3.0	-1.1	1.9	2.8	1.3	0.3
2018 Q3	1.6	2.0	0.0	0.7	1.1	3.6	1.4	3.6	-1.1	2.1	3.1	1.3	0.3
Q4	1.5	2.0	-0.3	0.0	1.2	3.5	1.4	3.7	-0.4	0.8	2.3	1.4	0.4
2019 Q1	1.7	2.0	0.5	1.2	1.4	3.8	1.6	4.0	-0.1	1.6	2.2	1.3	0.5
Q2	1.0	1.3	-0.5	-1.7	0.6	2.2	1.0	3.4	-1.0	1.5	1.5	1.0	0.8
Hours worked per person employed													
<i>annual percentage changes</i>													
2016	0.0	0.2	-0.3	0.1	0.2	0.1	0.1	0.0	0.4	0.5	0.1	0.0	-0.1
2017	-0.4	-0.3	-0.3	-0.5	-0.2	0.0	-0.5	-0.2	-0.6	0.1	-0.3	-0.5	-0.6
2018	0.0	0.1	-0.2	0.6	-0.2	0.3	-0.3	-0.1	-0.1	0.1	0.2	0.1	-0.2
2018 Q3	0.2	0.3	0.2	0.7	-0.2	0.9	-0.1	0.1	0.0	0.4	0.7	0.0	0.3
Q4	0.2	0.3	-0.1	0.3	0.0	0.3	-0.1	0.2	0.4	-0.5	0.3	0.2	0.5
2019 Q1	0.3	0.4	0.5	1.0	0.2	1.2	0.3	0.1	0.3	-0.5	0.3	0.0	0.2
Q2	-0.2	-0.2	0.0	0.2	-0.3	0.4	-0.3	-0.6	-0.5	0.2	0.1	-0.3	-0.3

Sources: Eurostat and ECB calculations.

1) Data for employment are based on the ESA 2010.

## 3 Economic activity

### 3.4 Labour force, unemployment and job vacancies

(seasonally adjusted, unless otherwise indicated)

	Labour force, millions <sup>1)</sup>	Under-employment, % of labour force <sup>1)</sup>	Unemployment										Job vacancy rate <sup>2)</sup>	
			Total		Long-term unemployment, % of labour force <sup>1)</sup>	By age				By gender				
			Millions	% of labour force		Adult		Youth		Male		Female		
						Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions		% of labour force
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
% of total in 2016			100.0		81.7		18.3		52.2		47.8			
2016	162.028	4.3	16.258	10.0	5.0	13.294	9.0	2.965	20.9	8.484	9.7	7.774	10.4	1.7
2017	162.659	4.1	14.761	9.1	4.4	12.094	8.1	2.667	18.8	7.637	8.7	7.124	9.5	1.9
2018	163.301	3.8	13.393	8.2	3.8	10.964	7.4	2.429	17.0	6.900	7.9	6.493	8.6	2.1
2018 Q3	163.730	3.6	13.144	8.0	3.6	10.744	7.2	2.400	16.8	6.792	7.7	6.352	8.4	2.1
Q4	163.702	3.7	12.970	7.9	3.6	10.596	7.1	2.375	16.5	6.651	7.6	6.319	8.3	2.3
2019 Q1	163.278	3.6	12.690	7.7	3.5	10.371	6.9	2.319	16.1	6.480	7.4	6.209	8.2	2.3
Q2	-	-	12.417	7.6	-	10.166	6.8	2.251	15.6	6.387	7.3	6.029	7.9	2.3
2019 Feb.	-	-	12.713	7.8	-	10.393	7.0	2.320	16.1	6.495	7.4	6.217	8.2	-
Mar.	-	-	12.563	7.7	-	10.264	6.9	2.299	15.9	6.422	7.3	6.141	8.1	-
Apr.	-	-	12.500	7.6	-	10.238	6.8	2.262	15.6	6.421	7.3	6.079	8.0	-
May	-	-	12.413	7.6	-	10.153	6.8	2.260	15.6	6.396	7.3	6.017	7.9	-
June	-	-	12.338	7.5	-	10.107	6.8	2.231	15.5	6.345	7.2	5.992	7.9	-
July	-	-	12.322	7.5	-	10.077	6.7	2.245	15.6	6.332	7.2	5.991	7.9	-

Sources: Eurostat and ECB calculations.

1) Not seasonally adjusted.

2) The job vacancy rate is equal to the number of job vacancies divided by the sum of the number of occupied posts and the number of job vacancies, expressed as a percentage.

### 3.5 Short-term business statistics

	Industrial production					Construction production	ECB indicator on industrial new orders	Retail sales				New passenger car registrations	
	Total (excluding construction)		Main Industrial Groupings					Total	Food, beverages, tobacco	Non-food	Fuel		
	Manufacturing	Intermediate goods	Capital goods	Consumer goods	Energy								
1	2	3	4	5	6	7	8	9	10	11	12	13	
% of total in 2015	100.0	88.7	32.1	34.5	21.8	11.6	100.0	100.0	100.0	40.4	52.5	7.1	100.0
annual percentage changes													
2016	1.6	1.8	1.8	2.0	1.8	0.5	3.0	0.6	1.6	1.0	2.3	1.3	7.2
2017	2.9	3.2	3.4	3.8	1.4	1.2	3.1	7.9	2.5	1.6	3.5	1.0	5.7
2018	0.9	1.2	0.6	1.8	1.3	-1.5	2.1	2.7	1.6	1.3	1.9	0.6	0.8
2018 Q3	0.5	0.7	-0.3	1.5	1.0	-1.2	2.4	1.6	1.3	1.1	1.5	0.1	3.4
Q4	-1.9	-1.7	-2.1	-2.0	-0.4	-3.6	1.9	-1.0	1.5	1.4	1.7	1.7	-9.4
2019 Q1	-0.5	-0.2	-0.6	-0.5	1.4	-2.7	4.5	-3.2	2.4	1.1	3.5	2.9	-3.6
Q2	-1.4	-1.5	-2.1	-2.8	1.6	0.1	2.0	-3.3	2.0	1.1	2.9	0.5	-1.7
2019 Feb.	-0.2	0.7	-0.5	0.3	3.4	-6.1	6.9	-3.8	3.0	0.9	4.6	2.9	-2.3
Mar.	-0.7	0.2	-0.3	1.1	-0.2	-7.7	5.9	-3.0	2.1	0.6	3.7	1.8	-5.5
Apr.	-0.7	-0.8	-1.1	-2.2	1.9	0.0	3.0	-1.8	2.1	2.3	1.8	1.5	-0.2
May	-0.8	-0.8	-2.4	-1.8	3.1	0.4	1.7	-5.0	1.1	-0.3	2.5	-0.9	1.1
June	-2.6	-2.8	-2.6	-4.4	-0.1	-0.1	1.0	-3.1	2.8	1.2	4.4	1.0	-5.6
July	-	-	-	-	-	-	-	-	2.2	1.3	2.8	2.0	-
month-on-month percentage changes (s.a.)													
2019 Feb.	0.0	0.5	0.0	0.0	0.6	-3.3	3.1	-1.5	0.7	0.3	1.1	-0.4	-0.1
Mar.	-0.2	-0.2	0.0	0.8	-0.8	-0.8	-0.2	0.1	0.1	0.4	-0.1	-0.6	-3.6
Apr.	-0.5	-0.8	-0.9	-1.9	0.3	1.8	-1.5	0.9	0.2	0.0	0.4	-0.2	4.8
May	0.8	0.8	-0.2	0.9	2.5	0.5	-0.5	-1.9	-0.4	-0.8	0.0	-1.4	2.8
June	-1.6	-1.7	-0.8	-4.0	-2.6	-0.2	0.0	0.8	1.2	1.3	1.1	1.8	-6.7
July	-	-	-	-	-	-	-	-	-0.6	-0.3	-1.0	0.0	-

Sources: Eurostat, ECB calculations, ECB experimental statistics (col. 8) and European Automobile Manufacturers Association (col. 13).



## 3 Economic activity

### 3.6 Opinion surveys (seasonally adjusted)

	European Commission Business and Consumer Surveys (percentage balances, unless otherwise indicated)							Purchasing Managers' Surveys (diffusion indices)				
	Economic sentiment indicator (long-term average = 100)	Manufacturing industry		Consumer confidence indicator	Construction confidence indicator	Retail trade confidence indicator	Service industries		Purchasing Managers' Index (PMI) for manufacturing	Manufacturing output	Business activity for services	Composite output
		Industrial confidence indicator	Capacity utilisation (%)				Services confidence indicator	Capacity utilisation (%)				
	1	2	3	4	5	6	7	8	9	10	11	12
1999-15	99.2	-5.3	80.7	-11.7	-15.0	-8.7	7.2	-	51.2	52.5	53.0	52.8
2016	104.1	-1.8	81.7	-8.1	-16.4	0.6	11.3	88.9	52.5	53.6	53.1	53.3
2017	110.1	5.5	83.2	-5.4	-4.2	2.3	14.6	89.8	57.4	58.5	55.6	56.4
2018	111.2	6.6	83.8	-4.9	6.1	1.3	15.2	90.3	54.9	54.7	54.5	54.6
2018 Q3	110.9	5.9	83.7	-5.1	6.6	1.9	15.3	90.3	54.3	54.0	54.4	54.3
Q4	108.8	3.6	83.6	-6.4	7.9	-0.3	13.4	90.4	51.7	51.0	52.8	52.3
2019 Q1	106.0	-0.5	83.2	-7.0	7.5	-1.0	11.6	90.7	49.1	49.0	52.4	51.5
Q2	104.1	-4.3	82.4	-7.0	6.1	-0.7	11.6	90.5	47.7	48.5	53.1	51.8
2019 Mar.	105.6	-1.6	-	-6.6	7.5	0.3	11.5	-	47.5	47.2	53.3	51.6
Apr.	103.9	-4.3	82.8	-7.3	6.5	-1.1	11.8	90.6	47.9	48.0	52.8	51.5
May	105.2	-2.9	-	-6.5	4.1	-0.9	12.1	-	47.7	48.9	52.9	51.8
June	103.3	-5.6	-	-7.2	7.6	0.1	11.0	-	47.6	48.5	53.6	52.2
July	102.7	-7.3	81.9	-6.6	5.0	-0.7	10.6	90.5	46.5	46.9	53.2	51.5
Aug.	103.1	-5.9	-	-7.1	3.7	0.5	9.3	-	47.0	47.9	53.5	51.9

Sources: European Commission (Directorate-General for Economic and Financial Affairs) (col. 1-8) and Markit (col. 9-12).

### 3.7 Summary accounts for households and non-financial corporations (current prices, unless otherwise indicated; not seasonally adjusted)

	Households							Non-financial corporations						
	Saving ratio (gross) <sup>1)</sup>	Debt ratio	Real gross disposable income	Financial investment	Non-financial investment (gross)	Net worth <sup>2)</sup>	Housing wealth	Profit share <sup>3)</sup>	Saving ratio (net)	Debt ratio <sup>4)</sup>	Financial investment	Non-financial investment (gross)	Financing	
	Percentage of gross disposable income (adjusted)		Annual percentage changes					Percentage of net value added		Percentage of GDP		Annual percentage changes		
	1	2	3	4	5	6	7	8	9	10	11	12	13	
2016	12.1	93.8	1.8	2.0	6.1	3.3	2.7	35.7	7.7	139.0	4.9	6.1	2.9	
2017	11.7	93.7	1.4	2.1	7.2	4.3	4.2	34.5	6.9	137.3	3.7	4.5	2.3	
2018	11.9	93.5	1.6	2.0	7.7	2.5	4.7	34.3	6.6	136.2	2.0	7.7	1.3	
2018 Q2	11.7	93.5	2.1	2.0	8.2	4.0	4.7	34.8	7.0	137.7	3.1	1.6	1.8	
Q3	11.8	93.5	1.4	2.0	8.5	3.6	4.7	34.4	6.8	137.4	2.7	8.6	1.6	
Q4	11.9	93.5	1.6	2.0	8.5	2.5	4.7	34.3	6.6	136.2	2.0	21.3	1.3	
2019 Q1	12.4	93.1	2.7	2.2	7.7	3.5	4.0	33.9	6.4	135.9	1.8	5.5	1.3	

Sources: ECB and Eurostat.

- 1) Based on four-quarter cumulated sums of both saving and gross disposable income (adjusted for the change in the net equity of households in pension fund reserves).
- 2) Financial assets (net of financial liabilities) and non-financial assets. Non-financial assets consist mainly of housing wealth (residential structures and land). They also include non-financial assets of unincorporated enterprises classified within the household sector.
- 3) The profit share uses net entrepreneurial income, which is broadly equivalent to current profits in business accounting.
- 4) Based on the outstanding amount of loans, debt securities, trade credits and pension scheme liabilities.

## 3 Economic activity

### 3.8 Euro area balance of payments, current and capital accounts

(EUR billions; seasonally adjusted unless otherwise indicated; transactions)

	Current account											Capital account <sup>1)</sup>	
	Total			Goods		Services		Primary income		Secondary income		Credit	Debit
	Credit	Debit	Net	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit		
1	2	3	4	5	6	7	8	9	10	11	12	13	
2018 Q3	1,038.1	963.7	74.4	588.2	525.3	230.1	204.4	191.1	165.4	28.7	68.7	8.8	5.7
Q4	1,058.8	978.0	80.8	600.4	530.8	233.3	205.8	195.1	167.4	29.9	74.1	22.0	64.3
2019 Q1	1,061.1	969.7	91.3	606.2	524.6	233.7	205.7	192.0	171.5	29.2	67.9	10.5	14.8
Q2	1,043.9	972.2	71.8	597.0	520.9	232.1	217.4	188.0	171.1	26.8	62.8	9.0	6.1
2019 Jan.	361.0	322.8	38.3	201.7	173.6	77.3	68.8	71.5	56.6	10.5	23.8	3.9	4.6
Feb.	348.9	318.6	30.4	200.8	173.2	77.1	68.1	62.3	55.3	8.7	21.9	3.6	4.1
Mar.	351.1	328.4	22.7	203.6	177.9	79.3	68.7	58.2	59.5	10.0	22.3	3.0	6.1
Apr.	346.9	323.8	23.1	197.9	174.0	77.1	70.9	63.2	58.4	8.7	20.5	2.4	1.9
May	350.9	320.6	30.3	199.7	172.8	77.0	71.4	64.8	56.9	9.3	19.5	3.0	2.0
June	346.2	327.8	18.4	199.3	174.1	78.0	75.1	60.0	55.8	8.8	22.8	3.6	2.3
<i>12-month cumulated transactions</i>													
2019 June	4,201.8	3,883.6	318.2	2,391.8	2,101.5	929.1	833.3	766.2	675.3	114.6	273.5	50.2	91.0
<i>12-month cumulated transactions as a percentage of GDP</i>													
2019 June	35.9	33.2	2.7	20.4	17.9	7.9	7.1	6.5	5.8	1.0	2.3	0.4	0.8

1) The capital account is not seasonally adjusted.

### 3.9 Euro area external trade in goods<sup>1)</sup>, values and volumes by product group<sup>2)</sup>

(seasonally adjusted, unless otherwise indicated)

	Total (n.s.a.)		Exports (f.o.b.)					Imports (c.i.f.)					
	Exports	Imports	Total			Memo item: Manu- facturing	Total			Memo items:			
			Intermediate goods	Capital goods	Consumption goods		Intermediate goods	Capital goods	Consumption goods	Manu- facturing	Oil		
1	2	3	4	5	6	7	8	9	10	11	12	13	
<i>Values (EUR billions; annual percentage changes for columns 1 and 2)</i>													
2018 Q3	4.7	10.2	572.8	278.5	117.7	166.8	479.1	530.8	310.1	86.1	127.0	373.6	68.5
Q4	3.8	7.8	580.1	278.3	123.3	168.3	485.1	535.6	309.4	88.5	129.9	379.8	66.0
2019 Q1	4.1	5.1	588.1	283.9	120.5	172.7	492.9	531.6	306.5	85.0	132.6	381.2	64.2
Q2	2.4	2.4	582.4	.	.	.	485.8	529.7	.	.	.	378.0	.
2019 Jan.	2.6	3.5	195.2	94.9	40.6	56.9	164.3	177.9	102.6	29.0	43.7	127.0	20.9
Feb.	6.2	5.6	195.4	94.2	40.0	57.1	163.9	174.8	100.8	27.5	43.9	126.2	21.0
Mar.	3.5	6.2	197.5	94.9	40.0	58.7	164.6	178.9	103.2	28.5	45.0	128.0	22.2
Apr.	5.4	6.8	192.7	92.4	39.1	58.2	159.8	177.4	101.8	27.9	44.8	126.8	21.8
May	7.1	4.8	195.5	91.6	40.4	59.0	163.3	175.9	101.1	28.3	43.7	125.0	22.3
June	-4.7	-4.2	194.3	.	.	.	162.7	176.4	.	.	.	126.2	.
<i>Volume indices (2000 = 100; annual percentage changes for columns 1 and 2)</i>													
2018 Q3	1.1	2.0	125.4	125.8	125.3	127.6	126.2	115.6	115.1	119.1	115.6	120.4	99.5
Q4	0.2	1.7	126.0	124.9	130.1	127.7	126.6	116.2	115.2	119.9	117.1	120.8	100.5
2019 Q1	0.1	1.4	126.8	126.9	126.2	129.3	126.9	116.6	116.6	115.3	118.8	120.7	107.9
Q2	.	.	.	.	.	.	.	.	.	.	.	.	.
2018 Dec.	-5.0	0.3	125.6	123.7	132.5	127.6	125.6	116.8	116.0	120.0	115.4	119.8	108.9
2019 Jan.	-1.1	1.9	126.4	127.1	127.9	128.3	126.8	117.6	118.2	118.8	116.9	120.6	111.3
Feb.	2.0	1.5	126.6	126.3	125.6	128.4	126.7	115.3	115.0	112.4	118.8	120.5	105.8
Mar.	-0.7	0.8	127.5	127.1	125.1	131.2	127.1	116.9	116.7	114.6	120.9	121.2	106.5
Apr.	0.9	2.4	123.6	123.1	121.4	129.6	122.9	115.8	114.9	113.1	120.4	120.7	98.8
May	3.3	1.3	125.3	122.1	125.9	130.2	125.6	115.1	113.6	117.0	118.0	119.5	99.2

Sources: ECB and Eurostat.

1) Differences between ECB's b.o.p. goods (Table 3.8) and Eurostat's trade in goods (Table 3.9) are mainly due to different definitions.

2) Product groups as classified in the Broad Economic Categories.

## 4 Prices and costs

### 4.1 Harmonised Index of Consumer Prices <sup>1)</sup>

(annual percentage changes, unless otherwise indicated)

	Total					Total (s.a.; percentage change vis-à-vis previous period) <sup>2)</sup>						Administered prices	
	Index: 2015 = 100	Total		Goods	Services	Total	Processed food	Unprocessed food	Non-energy industrial goods	Energy (n.s.a.)	Services	Total HICP excluding administered prices	Administered prices
		Total excluding food and energy											
	1	2	3	4	5	6	7	8	9	10	11	12	13
% of total in 2019	100.0	100.0	70.9	55.5	44.5	100.0	14.5	4.5	26.4	10.1	44.5	86.7	13.3
2016	100.2	0.2	0.8	-0.4	1.1	-	-	-	-	-	-	0.2	0.3
2017	101.8	1.5	1.0	1.6	1.4	-	-	-	-	-	-	1.6	1.0
2018	103.6	1.8	1.0	2.0	1.5	-	-	-	-	-	-	1.7	2.2
2018 Q3	104.1	2.1	1.0	2.6	1.5	0.5	0.4	0.3	0.1	2.7	0.3	2.1	2.4
Q4	104.3	1.9	1.0	2.3	1.5	0.3	0.3	0.3	0.1	1.6	0.2	1.8	2.8
2019 Q1	103.5	1.4	1.0	1.5	1.4	0.0	0.6	0.2	0.1	-2.4	0.3	1.3	2.4
Q2	105.3	1.4	1.1	1.3	1.5	0.5	0.6	-0.2	0.1	1.6	0.6	1.3	2.1
2019 Mar.	104.4	1.4	0.8	1.6	1.1	0.1	0.4	-1.3	-0.1	0.8	0.2	1.3	2.2
Apr.	105.1	1.7	1.3	1.5	1.9	0.3	0.1	0.0	0.0	0.7	0.5	1.7	2.1
May	105.2	1.2	0.8	1.4	1.0	0.1	0.2	0.5	0.1	0.9	-0.2	1.1	2.0
June	105.4	1.3	1.1	1.0	1.6	0.1	0.2	0.4	0.0	-1.2	0.4	1.1	2.2
July	104.9	1.0	0.9	0.9	1.2	0.0	0.2	0.4	0.1	-0.6	0.1	1.0	1.3
Aug. <sup>3)</sup>	105.1	1.0	0.9	.	1.3	0.1	0.2	0.9	0.0	-0.6	0.1	.	.

	Goods						Services						
	Food (including alcoholic beverages and tobacco)			Industrial goods			Housing	Transport	Communication	Recreation and personal care	Miscellaneous		
	Total	Processed food	Unprocessed food	Total	Non-energy industrial goods	Energy	Rents						
	14	15	16	17	18	19	20	21	22	23	24	25	
% of total in 2019	19.0	14.5	4.5	36.5	26.4	10.1	11.0	6.5	7.2	2.6	15.3	8.4	
2016	0.9	0.6	1.4	-1.1	0.4	-5.1	1.1	1.1	0.8	0.0	1.3	1.2	
2017	1.8	1.5	2.4	1.5	0.3	4.9	1.3	1.2	2.1	-1.1	2.1	0.8	
2018	2.2	2.1	2.3	1.9	0.3	6.4	1.2	1.2	1.5	-0.1	2.0	1.4	
2018 Q3	2.5	2.1	3.8	2.7	0.2	9.5	1.1	1.1	1.4	0.2	2.2	1.3	
Q4	2.0	1.9	2.0	2.4	0.2	8.4	1.2	1.1	1.5	-0.3	1.9	1.7	
2019 Q1	2.0	1.9	1.9	1.3	0.3	3.9	1.2	1.2	1.3	-0.6	1.7	1.5	
Q2	1.5	1.8	0.6	1.2	0.3	3.6	1.3	1.3	2.1	-1.2	2.0	1.5	
2019 Mar.	1.8	2.0	1.1	1.5	0.1	5.3	1.2	1.2	1.1	-0.7	1.2	1.5	
Apr.	1.5	1.7	0.8	1.6	0.2	5.3	1.3	1.2	2.5	-1.2	2.8	1.6	
May	1.5	1.9	0.4	1.3	0.3	3.8	1.3	1.2	1.5	-1.5	1.0	1.4	
June	1.6	1.9	0.7	0.6	0.3	1.7	1.5	1.4	2.2	-0.9	2.1	1.4	
July	1.9	2.0	1.7	0.4	0.4	0.5	1.5	1.5	2.1	-1.1	0.8	1.4	
Aug. <sup>3)</sup>	2.1	2.0	2.5	.	0.4	-0.6	.	.	.	.	.	.	

Sources: Eurostat and ECB calculations.

1) Data refer to the changing composition of the euro area.

2) In May 2016 the ECB started publishing enhanced seasonally adjusted HICP series for the euro area, following a review of the seasonal adjustment approach as described in Box 1, *Economic Bulletin*, Issue 3, ECB, 2016 (<https://www.ecb.europa.eu/pub/pdf/ecbu/eb201603.en.pdf>).

3) Estimate based on provisional national data, as well as on early information on energy prices.

## 4 Prices and costs

### 4.2 Industry, construction and property prices

(annual percentage changes, unless otherwise indicated)

	Industrial producer prices excluding construction <sup>1)</sup>										Con- struction <sup>2)</sup>	Residential property prices <sup>3)</sup>	Experimental indicator of commercial property prices <sup>3)</sup>
	Total (index: 2015 = 100)	Total	Industry excluding construction and energy						Energy				
			Manu- facturing	Total	Intermedi- ate goods	Capital goods	Consumer goods						
							Total	Food, beverages and tobacco		Non- food			
1	2	3	4	5	6	7	8	9	10	11	12	13	
% of total in 2015	100.0	100.0	77.3	72.1	28.9	20.7	22.5	16.5	5.9	27.9			
2016	97.9	-2.1	-1.4	-0.5	-1.6	0.5	0.0	0.0	0.0	-6.9	0.7	4.0	5.0
2017	100.8	3.0	3.0	2.1	3.2	0.9	1.9	2.9	0.2	5.6	2.0	4.3	4.8
2018	104.0	3.2	2.4	1.5	2.6	1.0	0.4	0.2	0.6	8.1	2.4	4.8	4.2
2018 Q3	104.9	4.3	3.2	1.5	3.1	1.1	0.1	-0.3	0.7	12.5	3.0	4.9	3.3
Q4	105.7	4.0	2.3	1.4	2.5	1.1	0.3	-0.2	0.8	11.1	2.3	4.7	3.0
2019 Q1	105.4	3.0	1.3	1.1	1.3	1.5	0.4	-0.1	1.0	7.7	2.5	4.0	.
Q2	104.8	1.6	1.0	0.9	0.7	1.5	1.0	0.9	0.9	3.1	.	.	.
2019 Feb.	105.5	3.0	1.5	1.2	1.3	1.6	0.5	0.0	1.0	8.0	-	-	-
Mar.	105.4	2.9	1.7	1.1	1.2	1.6	0.2	-0.4	1.0	7.7	-	-	-
Apr.	105.1	2.6	1.6	1.1	1.2	1.5	0.8	0.6	1.0	6.4	-	-	-
May	105.0	1.6	1.2	1.0	0.8	1.6	1.0	0.9	0.9	3.1	-	-	-
June	104.4	0.7	0.3	0.8	0.2	1.5	1.2	1.3	0.9	-0.2	-	-	-
July	104.6	0.2	0.3	0.6	-0.2	1.5	1.0	1.1	0.8	-1.7	-	-	-

Sources: Eurostat, ECB calculations, and ECB calculations based on MSCI data and national sources (col. 13).

1) Domestic sales only.

2) Input prices for residential buildings.

3) Experimental data based on non-harmonised sources (see [https://www.ecb.europa.eu/stats/ecb\\_statistics/governance\\_and\\_quality\\_framework/html/experimental-data.en.html](https://www.ecb.europa.eu/stats/ecb_statistics/governance_and_quality_framework/html/experimental-data.en.html) for further details).

### 4.3 Commodity prices and GDP deflators

(annual percentage changes, unless otherwise indicated)

	GDP deflators						Oil prices (EUR per barrel)	Non-energy commodity prices (EUR)							
	Total (s.a.; index: 2010 = 100)	Total	Domestic demand					Exports <sup>1)</sup>	Imports <sup>1)</sup>	Import-weighted <sup>2)</sup>			Use-weighted <sup>2)</sup>		
			Total	Private consump- tion	Govern- ment consump- tion	Gross fixed capital formation				Total	Food	Non-food	Total	Food	Non-food
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
% of total									100.0	45.4	54.6	100.0	50.4	49.6	
2016	106.9	0.8	0.4	0.4	0.5	0.7	-1.3	-2.4	39.9	-2.0	-1.4	-2.8	-3.1	-3.7	-2.3
2017	107.9	0.9	1.3	1.3	1.4	1.6	1.9	2.9	48.1	5.8	-3.5	16.6	6.7	-1.6	17.8
2018	109.2	1.3	1.7	1.5	1.7	1.9	1.3	2.3	60.4	-0.9	-6.3	4.3	-0.2	-5.5	5.7
2018 Q3	109.3	1.2	1.9	1.7	1.9	2.3	2.2	3.8	64.8	2.0	-3.4	7.1	3.1	-2.2	8.8
Q4	109.9	1.4	2.0	1.7	1.7	2.1	1.7	2.9	59.5	1.9	0.1	3.6	2.3	0.2	4.4
2019 Q1	110.3	1.5	1.6	1.3	1.6	2.2	1.3	1.6	55.6	3.2	3.7	2.8	3.9	5.2	2.7
Q2	110.8	1.6	1.6	1.4	1.6	2.2	1.1	1.2	61.0	-1.8	-0.6	-2.8	-0.1	4.8	-4.9
2019 Mar.	-	-	-	-	-	-	-	-	58.8	4.3	2.4	6.0	5.9	6.3	5.5
Apr.	-	-	-	-	-	-	-	-	63.4	2.0	1.2	2.8	4.3	7.5	1.0
May	-	-	-	-	-	-	-	-	63.1	-4.2	-3.3	-5.0	-2.3	2.6	-7.1
June	-	-	-	-	-	-	-	-	56.0	-2.9	0.5	-5.8	-2.1	4.4	-8.4
July	-	-	-	-	-	-	-	-	57.1	2.9	4.2	1.8	3.0	7.8	-1.6
Aug.	-	-	-	-	-	-	-	-	53.3	-1.0	1.0	-2.7	-1.2	3.3	-5.7

Sources: Eurostat, ECB calculations and Bloomberg (col. 9).

1) Deflators for exports and imports refer to goods and services and include cross-border trade within the euro area.

2) Import-weighted: weighted according to 2009-11 average import structure; use-weighted: weighted according to 2009-11 average domestic demand structure.

## 4 Prices and costs

### 4.4 Price-related opinion surveys

(seasonally adjusted)

	European Commission Business and Consumer Surveys (percentage balances)					Purchasing Managers' Surveys (diffusion indices)			
	Selling price expectations (for next three months)				Consumer price trends over past 12 months	Input prices		Prices charged	
	Manu- facturing	Retail trade	Services	Construction		Manu- facturing	Services	Manu- facturing	Services
	1	2	3	4	5	6	7	8	9
1999-15	4.2	-	-	-3.6	32.0	56.7	56.3	-	49.7
2016	-0.4	2.3	4.4	-7.1	0.6	49.8	53.9	49.3	49.6
2017	9.2	5.1	6.9	2.5	12.7	64.6	56.3	55.1	51.6
2018	11.5	7.4	9.4	12.1	20.3	65.4	57.9	56.1	52.7
2018 Q3	11.1	7.5	9.0	12.4	21.2	65.2	58.4	55.5	52.8
Q4	11.9	8.5	10.0	13.0	23.9	62.6	58.4	54.5	52.7
2019 Q1	8.9	8.2	10.4	11.4	20.4	53.9	57.7	53.0	53.1
Q2	4.6	7.2	9.1	6.1	19.7	50.6	57.1	51.2	52.3
2019 Mar.	6.9	7.8	10.4	8.9	21.5	52.3	56.8	52.3	53.3
Apr.	5.2	8.3	10.1	7.8	15.6	52.7	57.7	51.4	53.1
May	5.3	7.7	8.2	6.7	22.6	51.2	57.5	51.6	51.6
June	3.2	5.5	9.0	3.9	21.0	48.0	56.2	50.6	52.3
July	1.4	6.8	8.5	4.0	18.7	46.3	56.7	48.8	52.3
Aug.	2.2	6.0	8.7	4.4	18.1	46.7	56.8	49.4	52.1

Sources: European Commission (Directorate-General for Economic and Financial Affairs) and Markit.

### 4.5 Labour cost indices

(annual percentage changes, unless otherwise indicated)

	Total (index: 2016 = 100)	Total	By component		For selected economic activities		Memo item: Indicator of negotiated wages <sup>1)</sup>
			Wages and salaries	Employers' social contributions	Business economy	Mainly non-business economy	
	1	2	3	4	5	6	7
% of total in 2018	100.0	100.0	75.3	24.7	69.0	31.0	
2016	100.0	1.3	1.4	1.0	1.1	1.6	1.4
2017	101.8	1.8	1.8	1.8	1.9	1.6	1.5
2018	104.1	2.2	2.1	2.7	2.4	1.8	2.0
2018 Q3	100.8	2.4	2.3	2.9	2.6	2.1	2.1
Q4	110.6	2.3	2.3	2.4	2.3	2.4	2.1
2019 Q1	99.6	2.5	2.5	2.2	2.4	2.4	2.3
Q2	.	.	.	.	.	.	2.0

Sources: Eurostat and ECB calculations.

1) Experimental data based on non-harmonised sources (see [https://www.ecb.europa.eu/stats/ecb\\_statistics/governance\\_and\\_quality\\_framework/html/experimental-data.en.html](https://www.ecb.europa.eu/stats/ecb_statistics/governance_and_quality_framework/html/experimental-data.en.html) for further details).

## 4 Prices and costs

### 4.6 Unit labour costs, compensation per labour input and labour productivity

(annual percentage changes, unless otherwise indicated; quarterly data seasonally adjusted; annual data unadjusted)

	Total (index: 2010 =100)	Total	By economic activity									
			Agriculture, forestry and fishing	Manu- facturing, energy and utilities	Con- struction	Trade, transport, accom- modation and food services	Information and commu- nication	Finance and insurance	Real estate	Professional, business and support services	Public ad- ministration, education, health and social work	Arts, enter- tainment and other services
	1	2	3	4	5	6	7	8	9	10	11	12
Unit labour costs												
2016	105.6	0.8	1.3	-0.7	0.5	1.1	-0.2	2.7	4.6	1.0	1.1	2.0
2017	106.3	0.7	-0.7	-0.8	1.0	0.2	0.6	-1.9	4.1	1.8	1.3	1.6
2018	108.1	1.7	0.7	1.5	0.9	1.7	1.8	-0.3	3.7	1.9	2.2	2.2
2018 Q3	108.5	2.2	2.2	2.2	1.5	2.4	1.5	-0.4	4.3	2.7	2.5	2.5
Q4	109.0	2.4	1.3	3.5	1.6	2.3	2.3	0.0	4.2	2.0	2.3	2.5
2019 Q1	109.4	2.2	1.3	3.6	1.0	2.3	1.4	-0.5	4.8	2.0	2.0	1.7
Q2	110.0	2.1	-0.9	3.8	0.8	2.2	1.6	-1.1	2.7	2.1	2.0	2.7
Compensation per employee												
2016	109.6	1.3	0.1	1.4	1.8	1.5	0.6	2.4	2.8	0.6	1.4	1.5
2017	111.4	1.6	0.8	1.4	1.7	1.5	2.3	0.8	2.5	2.6	1.6	1.5
2018	113.8	2.1	2.1	1.9	1.8	2.4	2.8	1.4	3.2	2.7	2.0	2.3
2018 Q3	114.3	2.4	2.4	2.2	2.2	2.7	2.7	1.8	3.9	3.0	2.1	2.9
Q4	114.9	2.2	1.6	1.7	1.9	2.3	2.3	1.1	4.3	2.9	2.0	3.2
2019 Q1	115.3	2.2	1.6	2.1	2.9	2.9	1.9	0.8	3.9	2.0	1.8	2.5
Q2	115.9	2.1	1.8	1.5	2.6	2.5	1.5	0.9	3.0	2.5	1.9	3.0
Labour productivity per person employed												
2016	103.8	0.5	-1.1	2.2	1.3	0.4	0.8	-0.2	-1.7	-0.4	0.3	-0.5
2017	104.8	0.9	1.5	2.2	0.7	1.3	1.8	2.7	-1.6	0.8	0.3	-0.1
2018	105.2	0.4	1.5	0.4	0.8	0.7	1.0	1.7	-0.4	0.7	-0.2	0.2
2018 Q3	105.3	0.2	0.1	0.0	0.7	0.3	1.2	2.1	-0.4	0.3	-0.4	0.4
Q4	105.3	-0.2	0.3	-1.8	0.4	0.0	0.0	1.2	0.0	0.9	-0.3	0.7
2019 Q1	105.4	0.0	0.3	-1.5	1.9	0.6	0.5	1.3	-0.8	0.0	-0.2	0.8
Q2	105.3	-0.1	2.7	-2.2	1.8	0.3	-0.1	2.0	0.2	0.4	-0.1	0.3
Compensation per hour worked												
2016	111.2	1.1	-0.5	1.2	1.9	1.0	0.5	1.9	2.4	0.2	1.4	1.6
2017	113.3	1.9	1.0	1.5	1.6	1.8	2.5	1.4	2.4	2.7	2.1	2.1
2018	115.6	2.0	1.8	2.0	1.2	2.4	2.7	1.5	2.7	2.4	1.9	2.1
2018 Q3	115.5	2.1	2.4	2.2	1.4	2.5	2.5	1.8	2.8	2.3	2.0	2.1
Q4	116.0	1.8	1.3	1.7	1.3	2.1	1.9	0.8	4.0	2.5	1.7	2.4
2019 Q1	116.5	1.8	0.2	1.9	1.9	2.3	1.6	0.5	3.8	1.7	1.8	2.4
Q2	117.3	2.2	2.7	1.8	2.4	2.6	1.7	1.3	2.6	2.5	2.2	3.4
Hourly labour productivity												
2016	105.7	0.5	-1.2	2.0	1.2	0.3	0.8	-0.6	-2.2	-0.5	0.3	-0.4
2017	107.2	1.3	2.1	2.4	0.8	1.8	2.0	3.3	-1.7	1.2	0.8	0.6
2018	107.7	0.5	0.8	0.6	0.5	1.0	1.2	1.8	-0.5	0.5	-0.3	0.3
2018 Q3	107.2	0.1	-0.6	0.2	-0.1	0.4	1.1	2.1	-0.8	-0.4	-0.5	0.1
Q4	107.2	-0.3	0.0	-1.7	0.0	0.1	-0.2	0.8	0.5	0.6	-0.5	0.2
2019 Q1	107.3	-0.3	-0.7	-1.7	0.7	0.2	0.3	1.0	-0.3	-0.3	-0.2	0.6
Q2	107.5	0.2	2.5	-1.9	1.3	0.6	0.4	2.5	0.0	0.3	0.2	0.7

Sources: Eurostat and ECB calculations.

## 5 Money and credit

### 5.1 Monetary aggregates <sup>1)</sup>

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	M3											
	M2						M3-M2					
	M1		M2-M1				7	M3-M2			11	12
	Currency in circulation	Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits redeemable at notice of up to 3 months	Repos	Money market fund shares		Debt securities with a maturity of up to 2 years				
1	2	3	4	5	6	8	9	10				
Outstanding amounts												
2016	1,075.3	6,082.8	7,158.1	1,330.6	2,221.0	3,551.5	10,709.7	69.6	523.1	86.6	679.2	11,388.9
2017	1,111.6	6,637.3	7,748.9	1,197.0	2,260.9	3,457.9	11,206.8	74.7	512.0	71.6	658.4	11,865.1
2018	1,162.7	7,114.8	8,277.4	1,128.2	2,298.0	3,426.1	11,703.6	74.6	523.3	73.1	670.9	12,374.5
2018 Q3	1,150.6	7,009.8	8,160.3	1,126.6	2,284.6	3,411.2	11,571.5	71.4	495.4	60.4	627.3	12,198.8
Q4	1,162.7	7,114.8	8,277.4	1,128.2	2,298.0	3,426.1	11,703.6	74.6	523.3	73.1	670.9	12,374.5
2019 Q1	1,180.7	7,285.2	8,465.9	1,113.0	2,318.5	3,431.5	11,897.4	74.4	509.6	30.9	614.9	12,512.3
Q2	1,188.0	7,419.2	8,607.2	1,110.2	2,338.9	3,449.1	12,056.3	74.9	509.6	38.0	622.6	12,678.9
2019 Feb.	1,172.8	7,190.1	8,362.9	1,125.1	2,308.9	3,433.9	11,796.8	70.7	505.1	57.4	633.2	12,430.0
Mar.	1,180.7	7,285.2	8,465.9	1,113.0	2,318.5	3,431.5	11,897.4	74.4	509.6	30.9	614.9	12,512.3
Apr.	1,182.2	7,307.3	8,489.5	1,126.3	2,327.2	3,453.5	11,943.0	73.9	514.0	39.4	627.3	12,570.3
May	1,185.4	7,365.5	8,550.9	1,124.6	2,335.2	3,459.8	12,010.7	70.7	511.9	46.0	628.5	12,639.2
June	1,188.0	7,419.2	8,607.2	1,110.2	2,338.9	3,449.1	12,056.3	74.9	509.6	38.0	622.6	12,678.9
July <sup>(p)</sup>	1,193.1	7,492.8	8,685.9	1,099.5	2,345.0	3,444.5	12,130.3	76.5	525.1	36.2	637.8	12,768.2
Transactions												
2016	38.1	541.6	579.7	-106.1	16.1	-90.0	489.8	-4.3	34.3	18.3	48.3	538.0
2017	36.4	591.8	628.1	-110.5	34.3	-76.2	551.9	6.9	-10.9	-18.4	-22.4	529.5
2018	50.0	461.9	511.9	-71.5	45.0	-26.5	485.4	-3.5	11.3	-2.3	5.5	490.8
2018 Q3	16.0	116.1	132.1	-51.8	14.1	-37.7	94.4	-2.4	-12.6	-4.8	-19.7	74.7
Q4	12.1	105.3	117.4	0.3	13.4	13.7	131.1	2.9	27.7	9.3	39.8	170.9
2019 Q1	18.1	167.8	185.9	-17.5	21.0	3.5	189.4	-0.5	-20.5	-38.7	-59.6	129.7
Q2	7.9	138.8	146.6	-3.7	20.3	16.5	163.2	0.8	0.3	7.6	8.6	171.8
2019 Feb.	5.1	66.3	71.4	0.8	6.2	6.9	78.3	-4.3	-3.5	-4.2	-12.0	66.2
Mar.	8.0	90.7	98.7	-13.4	9.5	-3.9	94.8	3.5	2.5	-24.7	-18.7	76.1
Apr.	1.5	22.3	23.8	13.2	8.6	21.7	45.6	-0.5	4.6	8.2	12.3	57.9
May	3.2	58.4	61.6	-3.2	8.0	4.7	66.3	-3.2	-2.1	5.3	0.0	66.3
June	3.2	58.0	61.2	-13.7	3.8	-9.9	51.3	4.5	-2.2	-5.9	-3.6	47.6
July <sup>(p)</sup>	5.0	70.4	75.4	-12.1	6.0	-6.1	69.3	1.4	15.6	-3.0	13.9	83.3
Growth rates												
2016	3.7	9.7	8.8	-7.4	0.7	-2.5	4.8	-5.8	7.0	26.1	7.6	5.0
2017	3.4	9.8	8.8	-8.4	1.5	-2.1	5.2	10.0	-2.1	-21.4	-3.3	4.7
2018	4.5	6.9	6.6	-6.0	2.0	-0.8	4.3	-4.6	2.2	-3.4	0.8	4.1
2018 Q3	4.1	7.3	6.9	-7.4	1.8	-1.4	4.3	2.5	-6.7	-26.1	-8.1	3.6
Q4	4.5	6.9	6.6	-6.0	2.0	-0.8	4.3	-4.6	2.2	-3.4	0.8	4.1
2019 Q1	5.6	7.8	7.5	-5.5	2.6	-0.2	5.2	-1.1	-1.7	-49.5	-6.3	4.5
Q2	4.8	7.7	7.2	-6.2	3.0	-0.1	5.0	1.1	-1.0	-39.6	-4.7	4.5
2019 Feb.	5.0	6.9	6.6	-4.9	2.2	-0.2	4.5	-7.1	-1.7	-4.1	-2.6	4.1
Mar.	5.6	7.8	7.5	-5.5	2.6	-0.2	5.2	-1.1	-1.7	-49.5	-6.3	4.5
Apr.	5.2	7.7	7.4	-3.7	2.8	0.6	5.3	-4.6	-0.8	-42.9	-5.8	4.7
May	4.9	7.6	7.2	-3.9	3.0	0.7	5.2	-2.4	-0.3	-28.2	-3.4	4.8
June	4.8	7.7	7.2	-6.2	3.0	-0.1	5.0	1.1	-1.0	-39.6	-4.7	4.5
July <sup>(p)</sup>	5.0	8.3	7.8	-5.5	3.0	0.1	5.5	10.7	1.9	-40.5	-1.2	5.2

Source: ECB.

1) Data refer to the changing composition of the euro area.

## 5 Money and credit

### 5.2 Deposits in M3 1)

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	Non-financial corporations 2)					Households 3)					Financial corporations other than MFIs and ICPFs 2)	Insurance corporations and pension funds	Other general government 4)
	Total	Overnight	With an agreed maturity of up to 2 years	Redeemable at notice of up to 3 months	Repos	Total	Overnight	With an agreed maturity of up to 2 years	Redeemable at notice of up to 3 months	Repos			
	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Outstanding amounts</b>													
2016	2,093.2	1,630.3	295.1	159.6	8.2	6,055.5	3,402.3	644.9	2,006.3	2.1	972.0	199.5	383.8
2017	2,239.0	1,795.5	285.7	148.8	9.1	6,315.2	3,700.7	562.0	2,051.9	0.7	998.6	204.4	412.6
2018	2,336.5	1,900.3	280.8	147.5	7.8	6,643.0	4,034.7	517.3	2,089.8	1.2	1,004.6	200.2	431.2
2018 Q3	2,309.7	1,886.3	267.9	148.7	6.8	6,545.8	3,946.3	524.6	2,073.8	1.1	986.4	212.2	438.3
Q4	2,336.5	1,900.3	280.8	147.5	7.8	6,643.0	4,034.7	517.3	2,089.8	1.2	1,004.6	200.2	431.2
2019 Q1	2,383.9	1,960.5	269.6	147.9	5.9	6,753.9	4,126.3	515.0	2,111.2	1.3	977.7	213.2	462.3
Q2	2,407.2	1,985.8	263.8	150.2	7.4	6,844.1	4,203.9	510.3	2,128.0	1.9	1,012.3	217.4	462.3
2019 Feb.	2,347.9	1,919.0	275.8	147.0	6.1	6,723.4	4,103.0	516.8	2,102.0	1.5	965.2	206.0	452.1
Mar.	2,383.9	1,960.5	269.6	147.9	5.9	6,753.9	4,126.3	515.0	2,111.2	1.3	977.7	213.2	462.3
Apr.	2,390.9	1,963.1	271.7	148.8	7.2	6,789.7	4,156.2	513.5	2,118.3	1.7	983.4	211.7	459.0
May	2,401.7	1,977.0	268.5	149.2	7.0	6,828.6	4,188.3	512.7	2,126.1	1.6	990.2	216.7	458.7
June	2,407.2	1,985.8	263.8	150.2	7.4	6,844.1	4,203.9	510.3	2,128.0	1.9	1,012.3	217.4	462.3
July (p)	2,438.0	2,018.0	263.2	150.4	6.4	6,898.1	4,253.7	508.8	2,133.4	2.1	1,003.2	220.9	453.6
<b>Transactions</b>													
2016	131.8	156.6	-25.2	0.3	0.1	300.7	334.2	-46.5	13.9	-0.9	24.1	-28.4	19.1
2017	179.8	182.7	-3.1	-0.8	1.0	254.1	303.6	-81.6	33.5	-1.3	55.4	6.3	26.9
2018	93.6	103.0	-6.9	-1.1	-1.4	327.1	325.8	-45.1	45.9	0.5	-1.9	-4.8	17.8
2018 Q3	25.9	35.4	-9.9	0.6	-0.2	76.0	75.5	-10.7	11.3	0.0	-29.2	-8.0	11.4
Q4	27.3	14.2	13.0	-0.7	0.9	96.6	88.3	-7.5	15.7	0.1	17.2	-12.4	-6.8
2019 Q1	50.1	61.9	-11.4	0.8	-1.2	109.7	90.9	-2.7	21.4	0.1	-31.8	12.4	30.5
Q2	26.8	28.1	-5.4	2.6	1.5	90.2	78.1	-4.8	16.3	0.6	34.9	4.5	-0.3
2019 Feb.	22.6	19.6	4.4	-0.3	-1.0	44.9	38.8	-0.5	6.8	-0.1	-14.5	2.1	13.7
Mar.	34.0	40.0	-6.6	0.8	-0.2	29.7	22.8	-2.1	9.2	-0.3	9.8	7.0	10.0
Apr.	7.0	2.7	2.1	1.0	1.3	35.1	29.8	-2.0	6.9	0.4	6.4	-1.6	-3.3
May	11.8	15.0	-3.3	0.3	-0.2	38.8	32.0	-0.9	7.7	-0.1	4.7	5.0	-0.3
June	8.1	10.5	-4.1	1.3	0.4	16.3	16.3	-1.9	1.7	0.3	23.8	1.0	3.3
July (p)	30.2	31.1	0.1	0.0	-1.0	53.6	49.6	-1.8	5.4	0.3	-12.8	3.3	-8.7
<b>Growth rates</b>													
2016	6.8	10.4	-7.9	0.3	1.4	5.2	10.9	-6.7	0.7	-29.3	2.5	-12.5	5.2
2017	8.6	11.2	-1.1	-0.5	12.5	4.2	8.9	-12.7	1.7	-65.5	5.8	3.2	7.0
2018	4.2	5.7	-2.5	-0.7	-16.0	5.2	8.8	-8.0	2.2	65.1	-0.2	-2.3	4.3
2018 Q3	4.8	7.0	-6.8	0.3	27.4	4.5	8.4	-10.0	1.9	-45.8	1.0	5.2	4.8
Q4	4.2	5.7	-2.5	-0.7	-16.0	5.2	8.8	-8.0	2.2	65.1	-0.2	-2.3	4.3
2019 Q1	5.9	7.7	-2.7	0.2	-17.5	5.7	8.9	-5.5	2.9	-18.1	-2.4	0.4	10.8
Q2	5.7	7.6	-4.9	2.3	12.4	5.8	8.6	-4.8	3.1	73.3	-0.9	-1.7	8.1
2019 Feb.	4.4	6.0	-2.8	-0.1	-25.7	5.6	8.9	-6.1	2.5	-13.6	-3.7	-1.3	8.4
Mar.	5.9	7.7	-2.7	0.2	-17.5	5.7	8.9	-5.5	2.9	-18.1	-2.4	0.4	10.8
Apr.	5.8	7.1	-0.6	1.6	0.1	5.8	8.9	-5.2	2.9	1.5	0.1	-0.5	9.2
May	5.5	6.8	-1.3	1.4	8.9	6.0	8.9	-4.7	3.2	20.2	-0.7	0.3	8.8
June	5.7	7.6	-4.9	2.3	12.4	5.8	8.6	-4.8	3.1	73.3	-0.9	-1.7	8.1
July (p)	7.0	8.8	-3.0	2.4	-8.1	6.1	9.2	-4.6	3.1	15.9	-0.2	1.5	6.2

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

3) Including non-profit institutions serving households.

4) Refers to the general government sector excluding central government.



## 5 Money and credit

### 5.3 Credit to euro area residents <sup>1)</sup>

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	Credit to general government			Credit to other euro area residents								
	Total	Loans	Debt securities	Total	Loans					Debt securities	Equity and non-money market fund investment fund shares	
					Total	To non-financial corporations <sup>3)</sup>	To households <sup>4)</sup>	To financial corporations other than MFIs and ICPFs <sup>3)</sup>	To insurance corporations and pension funds			
												Adjusted loans <sup>2)</sup>
1	2	3	4	5	6	7	8	9	10	11	12	
Outstanding amounts												
2016	4,389.3	1,084.0	3,292.1	12,881.4	10,711.1	10,982.1	4,311.4	5,449.3	836.7	113.5	1,387.4	782.9
2017	4,625.9	1,033.3	3,578.7	13,116.4	10,874.1	11,167.4	4,325.4	5,600.0	839.1	109.6	1,442.4	799.8
2018	4,687.0	1,007.4	3,668.2	13,418.1	11,127.0	11,484.9	4,408.8	5,741.5	848.8	127.9	1,520.0	771.0
2018 Q3	4,627.4	1,003.5	3,609.9	13,363.1	11,064.5	11,394.1	4,396.2	5,702.0	841.9	124.4	1,513.8	784.8
Q4	4,687.0	1,007.4	3,668.2	13,418.1	11,127.0	11,484.9	4,408.8	5,741.5	848.8	127.9	1,520.0	771.0
2019 Q1	4,662.8	1,001.3	3,650.1	13,527.0	11,196.3	11,548.1	4,422.3	5,788.2	854.4	131.4	1,527.4	803.4
Q2	4,633.4	1,000.7	3,621.0	13,642.4	11,293.8	11,668.4	4,461.7	5,825.7	874.9	131.4	1,546.6	802.0
2019 Feb.	4,684.7	1,000.8	3,672.0	13,502.5	11,179.4	11,527.1	4,425.2	5,770.5	857.4	126.3	1,533.1	789.9
Mar.	4,662.8	1,001.3	3,650.1	13,527.0	11,196.3	11,548.1	4,422.3	5,788.2	854.4	131.4	1,527.4	803.4
Apr.	4,639.6	998.2	3,630.0	13,570.4	11,234.0	11,591.2	4,443.8	5,800.5	864.1	125.7	1,523.3	813.1
May	4,632.4	1,004.3	3,616.4	13,592.9	11,257.4	11,623.7	4,463.9	5,807.5	862.8	123.2	1,533.9	801.6
June	4,633.4	1,000.7	3,621.0	13,642.4	11,293.8	11,668.4	4,461.7	5,825.7	874.9	131.4	1,546.6	802.0
July <sup>(p)</sup>	4,673.6	1,000.6	3,661.4	13,680.0	11,338.8	11,710.6	4,486.4	5,842.7	876.1	133.7	1,534.2	807.0
Transactions												
2016	485.9	-34.5	520.3	319.6	235.8	259.9	82.5	121.1	43.2	-11.0	80.3	3.6
2017	289.7	-43.2	332.3	362.7	274.8	315.6	82.7	173.7	22.0	-3.5	64.3	23.6
2018	92.5	-28.3	120.8	372.6	304.7	378.4	124.0	166.2	-3.6	18.1	89.4	-21.4
2018 Q3	48.0	-16.2	64.5	105.3	91.0	88.0	48.7	49.9	-12.1	4.5	18.6	-4.2
Q4	40.8	4.0	36.8	66.0	60.1	92.6	16.5	42.0	-1.8	3.4	13.6	-7.7
2019 Q1	-41.0	-6.8	-34.2	107.5	83.1	78.7	25.2	50.1	6.0	1.8	-1.7	26.1
Q2	-56.9	-1.4	-55.8	126.4	113.8	134.4	53.8	38.7	24.2	-2.8	17.5	-4.9
2019 Feb.	10.9	-4.8	15.3	46.4	25.0	32.2	17.6	12.9	-4.1	-1.4	7.1	14.3
Mar.	-38.8	0.4	-38.7	26.2	23.1	27.7	3.2	18.8	-2.4	3.5	-8.7	11.8
Apr.	-22.2	-3.2	-19.0	40.5	41.7	46.6	26.1	12.6	8.6	-5.7	-6.3	5.2
May	-8.3	5.9	-14.5	34.0	25.6	33.7	21.9	7.6	-1.5	-2.5	13.9	-5.5
June	-26.4	-4.1	-22.3	52.0	46.6	54.0	5.8	18.4	17.1	5.3	10.0	-4.6
July <sup>(p)</sup>	14.8	-0.2	15.0	34.7	45.0	43.0	25.9	17.1	-0.1	2.2	-14.2	3.9
Growth rates												
2016	12.4	-3.1	18.7	2.5	2.3	2.4	1.9	2.3	5.5	-8.9	6.1	0.5
2017	6.6	-4.0	10.2	2.8	2.6	2.9	1.9	3.2	2.7	-3.1	4.6	3.0
2018	2.0	-2.7	3.4	2.8	2.8	3.4	2.9	3.0	-0.4	16.5	6.2	-2.7
2018 Q3	3.1	-4.4	5.3	3.0	3.0	3.4	3.2	3.1	-0.3	11.7	5.9	-1.1
Q4	2.0	-2.7	3.4	2.8	2.8	3.4	2.9	3.0	-0.4	16.5	6.2	-2.7
2019 Q1	1.8	-2.4	3.0	2.8	2.7	3.2	2.5	3.1	-1.3	14.8	4.1	1.9
Q2	-0.2	-2.0	0.3	3.1	3.2	3.5	3.3	3.2	1.8	5.8	3.2	1.2
2019 Feb.	2.5	-2.6	4.0	2.8	2.7	3.3	2.6	3.2	-1.4	10.6	5.3	-0.3
Mar.	1.8	-2.4	3.0	2.8	2.7	3.2	2.5	3.1	-1.3	14.8	4.1	1.9
Apr.	1.3	-2.7	2.5	2.7	2.8	3.4	2.8	3.2	0.6	5.4	2.6	1.2
May	0.6	-2.2	1.5	2.6	2.7	3.3	2.7	3.1	-0.4	1.6	3.1	0.5
June	-0.2	-2.0	0.3	3.1	3.2	3.5	3.3	3.2	1.8	5.8	3.2	1.2
July <sup>(p)</sup>	-0.5	-1.4	-0.2	2.9	3.2	3.6	3.3	3.2	2.5	7.1	1.2	1.8

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) Adjusted for loan sales and securitisation (resulting in derecognition from the MFI statistical balance sheet) as well as for positions arising from notional cash pooling services provided by MFIs.

3) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

4) Including non-profit institutions serving households.

## 5 Money and credit

### 5.4 MFI loans to euro area non-financial corporations and households <sup>1)</sup>

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	Non-financial corporations <sup>2)</sup>					Households <sup>3)</sup>				
	Total	Adjusted loans <sup>4)</sup>	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Adjusted loans <sup>4)</sup>	Loans for consumption	Loans for house purchase	Other loans
	1					2				
<b>Outstanding amounts</b>										
2016	4,311.4	4,309.1	1,013.3	795.7	2,502.4	5,449.3	5,728.7	615.9	4,084.1	749.3
2017	4,325.4	4,360.1	987.3	820.2	2,517.9	5,600.0	5,866.6	654.4	4,217.0	728.6
2018	4,408.8	4,494.3	995.7	844.3	2,568.7	5,741.5	6,023.3	683.5	4,353.9	704.1
2018 Q3	4,396.2	4,459.8	999.7	836.2	2,560.4	5,702.0	5,979.1	678.6	4,311.7	711.7
Q4	4,408.8	4,494.3	995.7	844.3	2,568.7	5,741.5	6,023.3	683.5	4,353.9	704.1
2019 Q1	4,422.3	4,508.9	979.9	852.0	2,590.4	5,788.2	6,065.7	694.4	4,391.6	702.2
Q2	4,461.7	4,555.9	978.6	867.7	2,615.5	5,825.7	6,112.2	707.6	4,421.3	696.8
2019 Feb.	4,425.2	4,506.1	980.1	851.5	2,593.7	5,770.5	6,051.7	690.8	4,375.6	704.0
Mar.	4,422.3	4,508.9	979.9	852.0	2,590.4	5,788.2	6,065.7	694.4	4,391.6	702.2
Apr.	4,443.8	4,528.0	984.9	858.9	2,600.0	5,800.5	6,083.2	695.7	4,405.3	699.5
May	4,463.9	4,546.6	982.4	865.7	2,615.9	5,807.5	6,098.7	701.0	4,409.5	697.0
June	4,461.7	4,555.9	978.6	867.7	2,615.5	5,825.7	6,112.2	707.6	4,421.3	696.8
July <sup>(p)</sup>	4,486.4	4,575.9	987.1	874.7	2,624.6	5,842.7	6,133.0	710.8	4,437.0	694.9
<b>Transactions</b>										
2016	82.5	100.4	-14.7	43.2	54.0	121.1	113.8	24.1	105.4	-8.4
2017	82.7	131.7	-0.3	38.0	45.0	173.7	165.5	45.1	134.3	-5.8
2018	124.0	176.1	19.6	33.5	70.8	166.2	188.6	39.6	136.4	-9.8
2018 Q3	48.7	47.8	16.4	9.7	22.6	49.9	48.6	10.3	40.5	-0.9
Q4	16.5	40.9	-2.3	7.4	11.3	42.0	50.8	7.7	39.2	-4.9
2019 Q1	25.2	23.7	-14.3	10.3	29.2	50.1	49.0	11.7	38.7	-0.3
Q2	53.8	58.4	2.6	18.6	32.7	38.7	48.6	13.1	27.3	-1.7
2019 Feb.	17.6	17.3	0.7	5.3	11.6	12.9	17.5	3.3	9.1	0.5
Mar.	3.2	8.3	-0.8	2.2	1.9	18.8	16.1	3.9	15.8	-0.9
Apr.	26.1	23.7	6.4	7.2	12.6	12.6	17.4	2.8	10.2	-0.4
May	21.9	18.8	-2.4	7.0	17.4	7.6	16.9	5.6	4.2	-2.2
June	5.8	15.8	-1.4	4.4	2.8	18.4	14.3	4.7	12.8	0.8
July <sup>(p)</sup>	25.9	21.8	8.3	7.3	10.3	17.1	20.9	3.3	15.5	-1.7
<b>Growth rates</b>										
2016	1.9	2.4	-1.4	5.7	2.2	2.3	2.0	4.1	2.7	-1.1
2017	1.9	3.1	0.0	4.8	1.8	3.2	2.9	7.3	3.3	-0.8
2018	2.9	4.1	2.0	4.1	2.8	3.0	3.2	6.1	3.2	-1.4
2018 Q3	3.2	4.3	3.3	4.6	2.8	3.1	3.1	6.9	3.2	-0.9
Q4	2.9	4.1	2.0	4.1	2.8	3.0	3.2	6.1	3.2	-1.4
2019 Q1	2.5	3.7	-1.2	4.6	3.3	3.1	3.3	6.1	3.5	-1.5
Q2	3.3	3.9	0.2	5.6	3.8	3.2	3.3	6.4	3.4	-1.1
2019 Feb.	2.6	3.8	0.1	4.5	3.0	3.2	3.3	6.0	3.5	-1.2
Mar.	2.5	3.7	-1.2	4.6	3.3	3.1	3.3	6.1	3.5	-1.5
Apr.	2.8	3.9	-0.9	5.3	3.4	3.2	3.3	5.8	3.5	-1.3
May	2.7	3.8	-1.6	5.5	3.5	3.1	3.3	6.1	3.4	-1.6
June	3.3	3.9	0.2	5.6	3.8	3.2	3.3	6.4	3.4	-1.1
July <sup>(p)</sup>	3.3	3.9	-0.2	5.7	3.9	3.2	3.4	6.2	3.5	-1.2

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

3) Including non-profit institutions serving households.

4) Adjusted for loan sales and securitisation (resulting in derecognition from the MFI statistical balance sheet) as well as for positions arising from notional cash pooling services provided by MFIs.

## 5 Money and credit

### 5.5 Counterparts to M3 other than credit to euro area residents <sup>1)</sup>

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	MFI liabilities						MFI assets			
	Central government holdings <sup>2)</sup>	Longer-term financial liabilities vis-à-vis other euro area residents					Net external assets	Other		
		Total	Deposits with an agreed maturity of over 2 years	Deposits redeemable at notice of over 3 months	Debt securities with a maturity of over 2 years	Capital and reserves		Total		
								Repos with central counterparties <sup>3)</sup>	Reverse repos to central counterparties <sup>3)</sup>	
1	2	3	4	5	6	7	8	9	10	
<b>Outstanding amounts</b>										
2016	307.7	6,955.9	2,089.5	70.9	2,145.9	2,649.6	1,124.8	257.0	205.9	121.6
2017	343.9	6,768.4	1,968.3	59.7	2,014.1	2,726.2	935.5	299.8	143.5	92.5
2018	378.9	6,808.8	1,941.4	56.0	2,090.6	2,720.8	1,028.6	428.5	187.0	194.9
2018 Q3	403.7	6,693.6	1,934.8	56.9	2,048.5	2,653.5	881.1	424.5	177.3	183.0
Q4	378.9	6,808.8	1,941.4	56.0	2,090.6	2,720.8	1,028.6	428.5	187.0	194.9
2019 Q1	367.4	6,903.1	1,937.7	55.6	2,144.8	2,764.9	1,174.3	418.6	199.0	212.3
Q2	366.6	6,980.2	1,955.8	57.6	2,132.3	2,834.6	1,315.2	434.7	191.5	207.8
2019 Feb.	409.0	6,875.6	1,936.6	55.6	2,140.6	2,742.7	1,110.1	417.2	198.1	210.5
Mar.	367.4	6,903.1	1,937.7	55.6	2,144.8	2,764.9	1,174.3	418.6	199.0	212.3
Apr.	362.2	6,892.0	1,934.7	56.0	2,129.7	2,771.5	1,196.5	417.9	216.8	232.2
May	361.8	6,905.8	1,932.2	56.5	2,130.3	2,786.8	1,271.1	410.5	212.8	229.2
June	366.6	6,980.2	1,955.8	57.6	2,132.3	2,834.6	1,315.2	434.7	191.5	207.8
July <sup>(p)</sup>	370.5	7,015.8	1,927.8	58.1	2,148.5	2,881.5	1,399.7	401.2	206.5	224.1
<b>Transactions</b>										
2016	22.0	-122.9	-71.3	-8.6	-118.7	75.7	-278.3	-90.2	12.8	-12.0
2017	39.1	-74.9	-83.7	-6.6	-72.0	87.4	-92.5	-66.2	-61.2	-28.5
2018	39.0	45.1	-37.8	-4.9	17.0	70.8	64.6	45.2	21.8	24.2
2018 Q3	76.4	29.8	-16.2	-1.5	19.2	28.4	38.9	-11.3	3.2	-0.8
Q4	-24.1	16.4	-0.5	-0.9	3.4	14.4	34.7	21.8	9.7	11.9
2019 Q1	-11.4	50.8	-10.7	-0.3	44.7	17.1	109.7	-7.1	2.7	5.5
Q2	-0.7	46.8	20.5	2.0	-1.8	26.2	109.0	39.4	-7.1	-4.5
2019 Feb.	31.5	21.3	-3.3	0.0	26.3	-1.8	42.7	19.1	-0.9	2.1
Mar.	-41.4	8.4	-1.5	0.0	-1.4	11.3	48.0	7.6	-8.4	-10.2
Apr.	-5.2	-5.4	-2.6	0.3	-14.0	10.9	26.5	2.5	17.8	19.8
May	-0.4	5.2	-1.8	0.6	-0.9	7.2	58.9	-13.5	-4.1	-2.9
June	4.8	47.1	24.8	1.1	13.1	8.1	23.6	50.4	-20.8	-21.4
July <sup>(p)</sup>	3.9	-3.5	-29.1	0.4	10.0	15.3	59.0	-24.9	14.9	16.3
<b>Growth rates</b>										
2016	7.8	-1.7	-3.4	-10.9	-5.3	2.9	-	-	6.3	-9.0
2017	12.6	-1.1	-4.0	-9.7	-3.4	3.3	-	-	-29.8	-23.5
2018	11.3	0.7	-1.9	-8.1	0.8	2.7	-	-	11.0	2.2
2018 Q3	14.3	0.0	-2.8	-9.3	0.0	2.3	-	-	7.5	3.9
Q4	11.3	0.7	-1.9	-8.1	0.8	2.7	-	-	11.0	2.2
2019 Q1	8.8	1.3	-1.6	-6.4	2.5	2.7	-	-	18.9	12.7
Q2	12.0	2.1	-0.4	-1.3	3.2	3.2	-	-	5.1	6.7
2019 Feb.	19.7	1.4	-1.8	-7.1	2.9	2.8	-	-	35.9	27.9
Mar.	8.8	1.3	-1.6	-6.4	2.5	2.7	-	-	18.9	12.7
Apr.	4.6	1.1	-1.9	-5.4	2.2	2.6	-	-	40.6	44.3
May	8.7	1.3	-1.6	-3.8	2.4	2.8	-	-	14.4	15.9
June	12.0	2.1	-0.4	-1.3	3.2	3.2	-	-	5.1	6.7
July <sup>(p)</sup>	5.5	1.9	-1.9	0.5	3.8	3.4	-	-	7.1	9.9

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) Comprises central government holdings of deposits with the MFI sector and of securities issued by the MFI sector.

3) Not adjusted for seasonal effects.

## 6 Fiscal developments

### 6.1 Deficit/surplus

(as a percentage of GDP; flows during one-year period)

	Deficit (-)/surplus (+)					Memo item: Primary deficit (-)/ surplus (+)
	Total	Central government	State government	Local government	Social security funds	
	1	2	3	4	5	6
2015	-2.0	-1.9	-0.2	0.1	-0.1	0.3
2016	-1.6	-1.7	-0.1	0.2	0.1	0.6
2017	-1.0	-1.3	0.0	0.2	0.1	1.0
2018	-0.5	-1.1	0.1	0.2	0.3	1.3
2018 Q2	-0.5	.	.	.	.	1.4
Q3	-0.4	.	.	.	.	1.4
Q4	-0.5	.	.	.	.	1.3
2019 Q1	-0.7	.	.	.	.	1.1

Sources: ECB for annual data; Eurostat for quarterly data.

### 6.2 Revenue and expenditure

(as a percentage of GDP; flows during one-year period)

	Revenue						Expenditure						
	Total	Current revenue				Capital revenue	Total	Current expenditure				Capital expenditure	
		Direct taxes	Indirect taxes	Net social contributions	Compensation of employees			Intermediate consumption	Interest	Social benefits			
1	2	3	4	5	6	7	8	9	10	11	12	13	
2015	46.2	45.7	12.5	13.0	15.2	0.5	48.3	44.4	10.0	5.2	2.3	22.7	3.9
2016	46.0	45.5	12.5	12.9	15.2	0.5	47.5	44.0	9.9	5.2	2.1	22.7	3.6
2017	46.1	45.7	12.8	12.9	15.2	0.4	47.0	43.3	9.8	5.2	2.0	22.4	3.8
2018	46.3	45.9	13.0	13.0	15.2	0.4	46.8	43.1	9.8	5.2	1.8	22.3	3.7
2018 Q2	46.2	45.8	12.9	12.9	15.2	0.4	46.7	43.0	9.8	5.2	1.9	22.3	3.7
Q3	46.2	45.8	12.9	13.0	15.2	0.4	46.7	43.0	9.8	5.2	1.9	22.3	3.6
Q4	46.3	45.9	13.0	13.0	15.2	0.4	46.8	43.1	9.8	5.2	1.8	22.3	3.7
2019 Q1	46.2	45.7	12.9	13.0	15.1	0.4	46.8	43.1	9.8	5.2	1.8	22.3	3.7

Sources: ECB for annual data; Eurostat for quarterly data.

### 6.3 Government debt-to-GDP ratio

(as a percentage of GDP; outstanding amounts at end of period)

	Total	Financial instrument			Holder			Original maturity		Residual maturity			Currency	
		Currency and deposits	Loans	Debt securities	Resident creditors	Non-resident creditors	Up to 1 year	Over 1 year	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Euro or participating currencies	Other currencies	
	1	2	3	4	5	MFIs 6	7	8	9	10	11	12	13	14
2015	90.1	2.8	16.4	70.9	44.3	27.5	45.7	9.1	81.0	17.5	31.3	41.3	88.0	2.1
2016	89.2	2.7	15.6	70.9	46.8	30.7	42.5	8.8	80.5	17.2	29.8	42.2	87.2	2.1
2017	87.1	2.6	14.5	70.0	47.6	32.1	39.5	8.0	79.0	15.8	28.9	42.3	85.2	1.8
2018	85.1	2.6	13.7	68.9	47.3	32.3	37.8	7.5	77.7	15.6	28.2	41.3	83.7	1.5
2018 Q2	86.6	2.6	14.0	70.0	.	.	.	.	.	.	.	.	.	.
Q3	86.4	2.6	13.8	70.0	.	.	.	.	.	.	.	.	.	.
Q4	85.1	2.6	13.7	68.9	.	.	.	.	.	.	.	.	.	.
2019 Q1	85.9	2.6	13.6	69.7	.	.	.	.	.	.	.	.	.	.

Sources: ECB for annual data; Eurostat for quarterly data.

## 6 Fiscal developments

### 6.4 Annual change in the government debt-to-GDP ratio and underlying factors <sup>1)</sup>

(as a percentage of GDP; flows during one-year period)

	Change in debt-to-GDP ratio <sup>2)</sup>	Primary deficit (+)/surplus (-)	Deficit-debt adjustment							Interest-growth differential	Memo item: Borrowing requirement	
			Total	Transactions in main financial assets				Revaluation effects and other changes in volume	Other			
				Total	Currency and deposits	Loans	Debt securities					Equity and investment fund shares
	1	2	3	4	5	6	7	8	9	10	11	12
2015	-1.9	-0.3	-0.8	-0.5	0.2	-0.3	-0.3	-0.1	0.0	-0.4	-0.8	1.2
2016	-0.8	-0.6	0.1	0.2	0.3	-0.1	0.0	0.1	0.0	-0.1	-0.4	1.6
2017	-2.2	-1.0	-0.1	0.3	0.5	0.0	-0.2	0.1	-0.1	-0.4	-1.1	0.9
2018	-1.9	-1.3	0.3	0.3	0.4	-0.1	0.0	0.1	0.0	0.0	-0.9	0.8
2018 Q2	-2.8	-1.4	-0.2	0.3	0.2	-0.1	0.0	0.2	-0.1	-0.4	-1.3	0.5
Q3	-2.0	-1.4	0.5	0.7	0.6	0.0	0.0	0.2	-0.1	-0.1	-1.1	1.0
Q4	-1.9	-1.3	0.3	0.5	0.4	-0.1	0.0	0.1	0.0	-0.2	-0.9	0.8
2019 Q1	-1.2	-1.1	0.7	0.7	0.6	-0.1	0.0	0.2	0.1	-0.1	-0.8	1.2

Sources: ECB for annual data; Eurostat for quarterly data.

1) Intergovernmental lending in the context of the financial crisis is consolidated except in quarterly data on the deficit-debt adjustment.

2) Calculated as the difference between the government debt-to-GDP ratios at the end of the reference period and a year earlier.

### 6.5 Government debt securities <sup>1)</sup>

(debt service as a percentage of GDP; flows during debt service period; average nominal yields in percentages per annum)

	Debt service due within 1 year <sup>2)</sup>					Average residual maturity in years <sup>3)</sup>	Average nominal yields <sup>4)</sup>						
	Total	Principal		Interest			Outstanding amounts				Transactions		
		Maturities of up to 3 months	Maturities of up to 3 months	Total	Floating rate		Zero coupon	Fixed rate	Maturities of up to 1 year	Issuance	Redemption		
	1	2	3	4	5	6	7	8	9	10	11	12	13
2016	14.1	12.4	4.6	1.7	0.4	6.9	2.6	1.2	-0.1	3.0	2.9	0.2	1.2
2017	12.9	11.2	4.2	1.7	0.4	7.1	2.4	1.1	-0.2	2.8	2.3	0.3	1.1
2018	12.6	11.1	3.7	1.5	0.4	7.3	2.3	1.1	-0.1	2.7	2.5	0.4	0.9
2018 Q2	12.5	10.9	3.4	1.6	0.4	7.3	2.4	1.1	-0.2	2.8	2.5	0.4	0.9
Q3	12.7	11.1	3.7	1.6	0.4	7.3	2.3	1.1	-0.1	2.7	2.6	0.4	0.9
Q4	12.6	11.1	3.7	1.5	0.4	7.3	2.3	1.1	-0.1	2.7	2.5	0.4	0.9
2019 Q1	12.7	11.2	3.8	1.5	0.4	7.4	2.3	1.1	0.0	2.6	2.5	0.5	1.0
2019 Feb.	12.7	11.2	4.0	1.5	0.4	7.3	2.3	1.1	0.0	2.7	2.4	0.4	0.9
Mar.	12.7	11.2	3.8	1.5	0.4	7.4	2.3	1.1	0.0	2.6	2.5	0.5	1.0
Apr.	13.1	11.6	3.9	1.5	0.4	7.4	2.3	1.2	0.0	2.6	2.5	0.5	1.1
May	12.8	11.4	3.4	1.5	0.4	7.4	2.3	1.2	0.0	2.6	2.5	0.5	1.0
June	12.8	11.4	3.7	1.5	0.4	7.4	2.3	1.3	0.0	2.6	2.3	0.5	0.9
July	13.0	11.5	4.0	1.5	0.4	7.5	2.2	1.3	-0.1	2.6	2.3	0.4	1.0

Source: ECB.

1) At face value and not consolidated within the general government sector.

2) Excludes future payments on debt securities not yet outstanding and early redemptions.

3) Residual maturity at the end of the period.

4) Outstanding amounts at the end of the period; transactions as 12-month average.

## 6 Fiscal developments

### 6.6 Fiscal developments in euro area countries

(as a percentage of GDP; flows during one-year period and outstanding amounts at end of period)

	Belgium 1	Germany 2	Estonia 3	Ireland 4	Greece 5	Spain 6	France 7	Italy 8	Cyprus 9	
Government deficit (-)/surplus (+)										
2015	-2.4	0.8	0.1	-1.9	-5.6	-5.3	-3.6	-2.6	-1.3	
2016	-2.4	0.9	-0.3	-0.7	0.5	-4.5	-3.5	-2.5	0.3	
2017	-0.8	1.0	-0.4	-0.3	0.7	-3.1	-2.8	-2.4	1.8	
2018	-0.7	1.7	-0.6	0.0	1.1	-2.5	-2.5	-2.1	-4.8	
2018 Q2	-0.4	1.9	0.1	-0.6	0.8	-2.7	-2.7	-2.0	3.5	
Q3	-0.3	2.0	0.1	-0.5	0.8	-2.6	-2.5	-2.1	-4.9	
Q4	-0.7	1.7	-0.6	0.0	1.1	-2.5	-2.5	-2.1	-4.8	
2019 Q1	-1.0	1.7	-0.7	0.0	0.4	-2.4	-3.2	-2.1	-4.2	
Government debt										
2015	106.4	71.6	9.9	76.8	175.9	99.3	95.6	131.6	108.0	
2016	106.1	68.5	9.2	73.5	178.5	99.0	98.0	131.4	105.5	
2017	103.4	64.5	9.2	68.5	176.2	98.1	98.4	131.4	95.8	
2018	102.0	60.9	8.4	64.8	181.1	97.1	98.4	132.2	102.5	
2018 Q2	105.9	62.2	8.7	68.4	177.5	98.2	99.0	133.5	102.9	
Q3	105.4	61.8	8.5	67.4	182.3	98.3	99.4	133.5	110.1	
Q4	102.0	60.9	8.4	63.6	181.1	97.1	98.4	132.2	102.5	
2019 Q1	105.1	61.0	8.1	65.6	181.9	98.7	99.7	134.0	105.0	
	Latvia 10	Lithuania 11	Luxembourg 12	Malta 13	Netherlands 14	Austria 15	Portugal 16	Slovenia 17	Slovakia 18	Finland 19
Government deficit (-)/surplus (+)										
2015	-1.4	-0.3	1.4	-1.0	-2.0	-1.0	-4.4	-2.8	-2.6	-2.8
2016	0.1	0.2	1.9	0.9	0.0	-1.6	-2.0	-1.9	-2.2	-1.7
2017	-0.6	0.5	1.4	3.4	1.2	-0.8	-3.0	0.0	-0.8	-0.8
2018	-1.0	0.7	2.4	2.0	1.5	0.1	-0.5	0.7	-0.7	-0.7
2018 Q2	-0.2	0.7	1.7	3.8	1.8	0.1	-1.1	0.5	-0.6	-1.0
Q3	-0.5	0.6	2.1	3.4	2.0	0.2	-0.2	0.5	-0.5	-0.7
Q4	-1.0	0.7	2.4	2.0	1.5	0.1	-0.5	0.7	-0.7	-0.8
2019 Q1	-0.9	0.2	2.8	1.9	1.8	-0.2	-0.1	0.6	-0.7	-0.8
Government debt										
2015	36.8	42.6	22.2	57.9	64.6	84.7	128.8	82.6	52.2	63.4
2016	40.3	40.0	20.7	55.5	61.9	83.0	129.2	78.7	51.8	63.0
2017	40.0	39.4	23.0	50.2	57.0	78.2	124.8	74.1	50.9	61.3
2018	35.9	34.2	21.4	46.0	52.4	73.8	121.5	70.1	48.9	58.9
2018 Q2	36.9	35.0	22.1	49.0	53.9	76.3	124.9	72.6	51.9	60.0
Q3	37.0	35.0	21.7	46.0	52.9	75.4	124.8	71.1	51.5	59.4
Q4	35.9	34.2	21.4	46.0	52.4	73.8	121.5	70.1	48.9	59.5
2019 Q1	37.2	34.1	21.3	46.6	50.9	72.7	123.0	67.9	48.9	59.3

Source: Eurostat.

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