EUROPEAN CENTRAL BANK

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Contents

Economic and monetary developments

Overview

After the contraction in the first quarter of the year, the euro area economy is gradually reopening as the coronavirus (COVID-19) pandemic situation improves and vaccination campaigns make significant progress. The latest data signal a bounce-back in services activity and ongoing dynamism in manufacturing production. Economic activity is expected to accelerate in the second half of this year as further containment measures are lifted. A pick-up in consumer spending, strong global demand and accommodative fiscal and monetary policies will lend crucial support to the recovery. At the same time, uncertainties remain, as the near-term economic outlook continues to depend on the course of the pandemic and on how the economy responds after reopening. Inflation has picked up over recent months, largely on account of base effects, transitory factors and an increase in energy prices. It is expected to rise further in the second half of the year, before declining as temporary factors fade out. The new staff projections point to a gradual increase in underlying inflation pressures throughout the projection horizon, although the pressures remain subdued in the context of still significant economic slack that will only be absorbed gradually over the projection horizon. Headline inflation is expected to remain below the Governing Council's aim over the projection horizon.

Preserving favourable financing conditions over the pandemic period remains essential to reduce uncertainty and bolster confidence, thereby underpinning economic activity and safeguarding medium-term price stability. Financing conditions for firms and households have remained broadly stable since the Governing Council's monetary policy meeting in March. However, market interest rates have increased further. While partly reflecting improved economic prospects, a sustained rise in market rates could translate into a tightening of wider financing conditions that are relevant for the entire economy. Such a tightening would be premature and would pose a risk to the ongoing economic recovery and the outlook for inflation. Against this background and based on a joint assessment of financing conditions and the inflation outlook, the Governing Council decided to confirm its very accommodative monetary policy stance.

Economic and monetary assessment at the time of the Governing Council meeting of 10 June 2021

The June 2021 Eurosystem staff macroeconomic projections suggest that global economic activity continued to recover at the turn of the year despite the intensification of the pandemic, with emerging market economies becoming the epicentre of new infections globally. While activity in the fourth quarter of 2020 turned out to be slightly stronger than expected in the previous projections, the global economy entered 2021 on a weaker footing amid a resurgence in new infections and tighter containment measures. Recent surveys signal strong momentum in global

activity, although signs of divergence between advanced and emerging market economies, and between the manufacturing and services sectors, are becoming more apparent. The large fiscal stimulus approved by the Biden administration is projected to strengthen the recovery in the United States, with some positive global spillovers. Against this backdrop, the growth outlook for the global economy is little changed compared to the previous projections. Global real GDP growth (excluding the euro area) is projected to increase by 6.2% this year, before slowing to 4.2% and 3.7% in 2022 and 2023 respectively. However, euro area foreign demand was revised upwards compared with the previous projections. It is projected to increase by 8.6% this year and by 5.2% and 3.4% in 2022 and 2023 respectively. This mainly reflects stronger demand from the United States and the United Kingdom, the euro area's key trading partners. The export prices of euro area competitors were revised upwards for this year amid higher commodity prices and stronger demand. Risks to the global baseline projections relate mainly to the future course of the pandemic. Other risks to the global outlook for activity are judged to be broadly balanced, while the risks for global inflation are tilted to the upside.

Financial conditions in the euro area have continued to tighten somewhat since the last Governing Council meeting, amid positive risk sentiment. Over the review period (11 March to 9 June 2021), euro area sovereign bond yields and their spreads over the overnight index swap (OIS) rate increased moderately, mainly amid an improved economic outlook in the light of progress in vaccination campaigns across the euro area together with continuing policy support. The forward curve of the euro overnight index average (EONIA) increased marginally across medium to long-term maturities, while the short end of the curve has remained largely the same, suggesting no expectations of an imminent policy rate change in the very near term. Equity prices also increased, supported by a combination of still relatively low discount rates and a strong recovery in corporate earnings growth expectations. Mirroring equity prices, euro area corporate bond spreads continued to tighten and stand at levels last observed prior to March 2020. In foreign exchange markets, the nominal effective exchange rate of the euro strengthened slightly.

In the first quarter of the year, euro area real GDP declined further, by 0.3%, to stand 5.1% below its pre-pandemic level of the fourth quarter of 2019. Business and consumer surveys and high-frequency indicators point to a sizeable improvement in activity in the second quarter of this year. Business surveys indicate a strong recovery in services activity as infection numbers decline, which will allow a gradual normalisation of high-contact activities. Manufacturing production remains robust, supported by solid global demand, although supply-side bottlenecks could pose some headwinds for industrial activity in the near term. Indicators of consumer confidence are strengthening, suggesting a strong rebound in private consumption in the period ahead. Business investment shows resilience, despite weaker corporate balance sheets and the still uncertain economic outlook. Looking ahead, growth is expected to continue to improve strongly in the second half of 2021 as progress in vaccination campaigns allows a further relaxation of containment measures. Over the medium term, the recovery in the euro area economy is expected to be buoyed by stronger global and domestic demand, as well as by continued support from both monetary policy and fiscal policy.

This assessment is broadly reflected in the baseline scenario of the June 2021 Eurosystem staff macroeconomic projections for the euro area. These projections foresee annual real GDP growth at 4.6% in 2021, 4.7% in 2022 and 2.1% in 2023. Compared with the March 2021 ECB staff macroeconomic projections, the outlook for economic activity has been revised up for 2021 and 2022, while it is unchanged for 2023.

Overall, the risks surrounding the euro area growth outlook are broadly balanced. On the one hand, an even stronger recovery could be predicated on brighter prospects for global demand and a faster-than-anticipated reduction in household savings once social and travel restrictions have been lifted. On the other hand, the ongoing pandemic, including the spread of virus mutations, and its implications for economic and financial conditions continue to be sources of downside risk.

According to Eurostat's flash release, euro area annual inflation increased from 1.3% in March to 1.6% in April and 2.0% in May 2021. This rise was due mainly to a strong increase in energy price inflation, reflecting both sizeable upward base effects as well as month-on-month increases, and, to a lesser extent, a slight increase in non-energy industrial goods inflation. Headline inflation is likely to increase further towards the autumn, reflecting mainly the reversal of the temporary VAT reduction in Germany. Inflation is expected to decline again at the start of next year as temporary factors fade out and global energy prices moderate. Underlying price pressures are expected to increase somewhat this year owing to temporary supply constraints and the recovery in domestic demand. Nevertheless, the price pressures will likely remain subdued overall, in part reflecting low wage pressures, in the context of still significant economic slack, and the appreciation of the euro exchange rate. Once the impact of the pandemic fades, the unwinding of the high level of slack, supported by accommodative monetary and fiscal policies, will contribute to a gradual increase in underlying inflation over the medium term. Survey-based measures and market-based indicators of longer-term inflation expectations remain at subdued levels, although market-based indicators have continued to increase.

This assessment is broadly reflected in the baseline scenario of the June 2021 Eurosystem staff macroeconomic projections for the euro area, which foresees annual inflation at 1.9% in 2021, 1.5% in 2022 and 1.4% in 2023. Compared with the March 2021 ECB staff macroeconomic projections, the outlook for inflation has been revised up for 2021 and 2022, largely owing to temporary factors and higher energy price inflation. It is unchanged for 2023, as the increase in underlying inflation is largely counterbalanced by an expected decline in energy price inflation. HICP inflation excluding energy and food is projected to increase from 1.1% in 2021 to 1.3% in 2022 and 1.4% in 2023, revised up throughout the projection horizon compared with the March 2021 projection exercise.

Money creation in the euro area moderated in April 2021, showing some initial signs of normalisation following the massive monetary expansion associated with the coronavirus crisis. Broad money (M3) growth declined to 9.2% in April 2021, from 10.0% in March and 12.3% in February. The deceleration in March and April was due partly to strong negative base effects as the large inflows in the initial

phase of the pandemic crisis dropped out of the annual growth statistics. It also reflects a moderation in shorter-term monetary dynamics, mainly originating from weaker developments in deposits by households and firms in April and lower liquidity needs as the pandemic situation improves. The ongoing asset purchases by the Eurosystem continue to be the largest source of money creation. While also decelerating, the narrow monetary aggregate M1 has remained the main contributor to broad money growth. Its strong contribution is consistent with a still heightened preference for liquidity in the money-holding sector and a low opportunity cost of holding the most liquid forms of money.

The annual growth rate of loans to the private sector declined to 3.2% in April, from 3.6% in March and 4.5% in February. This decline took place amid opposing dynamics in lending to non-financial corporations and to households. The annual growth rate of loans to non-financial corporations fell to 3.2% in April, after 5.3% in March and 7.0% in February. The contraction reflects large negative base effects and some frontloading in loan creation in March relative to April. The annual growth rate of loans to households rose to 3.8% in April, after 3.3% in March and 3.0% in February, supported by solid monthly flows and positive base effects. Overall, the Governing Council's policy measures, together with the measures adopted by national governments and other European institutions, remain essential to support bank lending conditions and access to financing, in particular for those most affected by the pandemic.

As a result of the very sharp economic downturn during the coronavirus pandemic and the strong fiscal reaction, the general government budget deficit in the euro area increased strongly, to 7.3% of GDP in 2020 from 0.6% in 2019. This year, as new waves of the pandemic have hit euro area countries, many emergency measures have been extended and additional recovery support has been put in place. As a result, the June 2021 Eurosystem staff macroeconomic projections foresee only a marginal improvement in the general government budget balance in the euro area to -7.1% of GDP in 2021. However, as the pandemic abates and the economic recovery takes hold, the deficit ratio is expected to fall more swiftly, to 3.4% in 2022 and 2.6% at the end of the projection horizon in 2023. Euro area debt is projected to peak at just below 100% of GDP in 2021 and to decline to around 95% of GDP in 2023, which is about 11 percentage points higher than before the coronavirus crisis. Nonetheless, an ambitious and coordinated fiscal stance remains crucial, as a premature withdrawal of fiscal support would risk weakening the recovery and amplifying the longer-term scarring effects. National fiscal policies should thus continue to provide critical and timely support to the firms and households most exposed to the ongoing pandemic and the associated containment measures. At the same time, fiscal measures should remain temporary and countercyclical, while ensuring that they are sufficiently targeted in nature to address vulnerabilities effectively and to support a swift recovery in the euro area economy. As a complement to national fiscal measures, the Next Generation EU package is expected to play a key role by contributing to a faster, stronger and more uniform recovery. It should increase economic resilience and the growth potential of EU Member States' economies, particularly if the funds are used for productive public spending and are accompanied by productivity-enhancing structural policies. According to the June macroeconomic

projections, the combination of Next Generation EU grants and loans should provide additional stimulus of around 0.5% of GDP per year between 2021 and 2023.

The monetary policy decisions

On 10 June 2021 the Governing Council decided to reconfirm its very accommodative monetary policy stance in order to preserve favourable financing conditions for all sectors of the economy, which is needed for a sustained economic recovery and for safeguarding price stability.

1. The Governing Council decided to keep the key ECB interest rates unchanged. They are expected to remain at their present or lower levels until the inflation outlook robustly converges to a level sufficiently close to, but below, 2% within the projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics.

2. The Governing Council will continue to conduct net asset purchases under the pandemic emergency purchase programme (PEPP) with a total envelope of €1,850 billion until at least the end of March 2022 and, in any case, until the Governing Council judges that the coronavirus crisis phase is over. Based on a joint assessment of financing conditions and the inflation outlook, the Governing Council expects net purchases under the PEPP over the coming quarter to continue to be conducted at a significantly higher pace than during the first months of the year. The Governing Council will purchase flexibly according to market conditions and with a view to preventing a tightening of financing conditions that is inconsistent with countering the downward impact of the pandemic on the projected path of inflation. In addition, the flexibility of purchases over time, across asset classes and among jurisdictions will continue to support the smooth transmission of monetary policy. If favourable financing conditions can be maintained with asset purchase flows that do not exhaust the envelope over the net purchase horizon of the PEPP, the envelope need not be used in full. Equally, the envelope can be recalibrated if required to maintain favourable financing conditions to help counter the negative pandemic shock to the path of inflation. Furthermore, the Governing Council will continue to reinvest the principal payments from maturing securities purchased under the PEPP until at least the end of 2023. In any case, the future roll-off of the PEPP portfolio will be managed to avoid interference with the appropriate monetary policy stance.

3. Net purchases under the asset purchase programme (APP) will continue at a monthly pace of €20 billion. The Governing Council continues to expect monthly net asset purchases under 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 the Governing Council starts raising the key ECB interest rates. In addition, the Governing Council intends to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when it 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.

4. Finally, the Governing Council will continue to provide ample liquidity through its refinancing operations. The funding obtained through the third series of targeted longer-term refinancing operations (TLTRO III) plays a crucial role in supporting bank lending to firms and households.

The Governing Council will also continue to monitor developments in the exchange rate with regard to their possible implications for the medium-term inflation outlook. It stands 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

The June 2021 Eurosystem staff macroeconomic projections suggest that global economic activity continued to recover at the turn of the year. While activity in the fourth quarter of 2020 turned out to be slightly stronger than had been expected in the previous projections, the global economy entered 2021 on a weaker footing amid a resurgence in new infections and tighter containment measures. Recent surveys signal strong momentum in global activity, although signs of divergence between advanced and emerging market economies, and between the manufacturing and services sectors are becoming more apparent. The large fiscal stimulus approved by the Biden administration is projected to strengthen the recovery in the United States, with some positive global spillovers. Against this backdrop, the growth outlook for the global economy is little changed compared to the previous projections. Global real GDP (excluding the euro area) is projected to increase by 6.2% this year, before slowing to 4.2% in 2022 and 3.7% in 2023. However, euro area foreign demand was revised upwards compared with the previous projections. It is projected to increase by 8.6% this year and by 5.2% and 3.4% in 2022 and 2023 respectively. This mainly reflects stronger demand from the United States and the United Kingdom, the euro area's key trading partners. The export prices of euro area competitors were revised upwards for this year amid higher commodity prices and stronger demand. Risks to the global baseline projections relate mainly to the future course of the pandemic. Other risks to the global outlook for activity are judged to be broadly balanced, while the risks for global inflation are tilted to the upside.

Global economic activity and trade

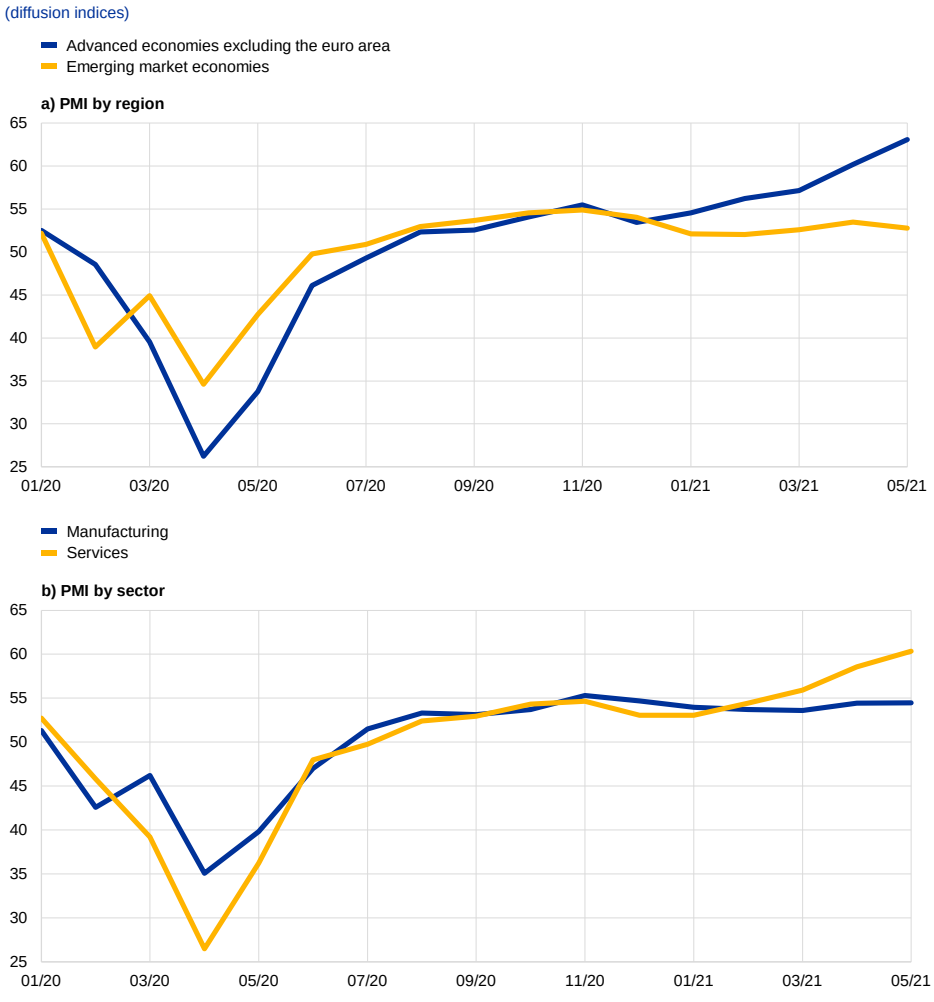
Global economic activity continued to recover at the turn of the year despite the intensification of the pandemic. Global real GDP growth (excluding the euro area) increased by 2.6% quarter on quarter in the fourth quarter of 2020, which was stronger than had been expected in the March 2021 ECB staff macroeconomic projections. However, the global economy entered the year on a weaker footing, as a resurgence in new infections led governments to tighten containment measures. Consequently, global real GDP growth (excluding the euro area) is estimated to have slowed markedly to 0.7% quarter on quarter in the first quarter of 2021. This pattern reflects slower growth in advanced and emerging market economies alike. At the same time, activity in advanced economies was more resilient than had been expected in the previous projections, as households and firms adapted better to lockdowns, and additional policy stimulus was implemented. The slowdown in emerging market economies (EMEs), by contrast, turned out to be more pronounced.

The pandemic intensified in EMEs, while the situation in advanced economies improved markedly with the roll-out of vaccination campaigns. Earlier this year, the situation also deteriorated in Europe, while the rapid pace of vaccination in the United Kingdom and the United States helped to push down the number of new infections in advanced economies overall. The pandemic situation in EMEs remains precarious and continues to be the key factor shaping economic developments across countries.

At the current juncture, survey data signal strong momentum in global activity amid more apparent signs of divergence across countries and sectors. The global composite output PMI increased to 58.8 in May – well above its long-term average and also outside its historical interquartile range. While the strong momentum is generally visible across both the manufacturing and the services sectors, lately some differences across countries and sectors have become more apparent. First, the growth momentum in advanced economies is solid and has recently strengthened further. This contrasts with EMEs, where activity continues to improve at a slower pace (Chart 1, upper panel). Second, there was a sharp pick-up in the pace of economic expansion in the services sector as restrictions were lifted. This rapid expansion should also be seen in the context of the recovery starting from low levels, especially in contact-intensive services. By contrast, manufacturing output, which proved more resilient at the height of the pandemic, continues to grow at a slower, albeit still buoyant, pace amid some headwinds created by supply constraints (Chart 1, lower panel).

Chart 1

Global (excluding the euro area) output PMI by regions and sectors



Sources: Markit and ECB calculations.
Note: The latest observations are for May 2021.

The global recovery has been supported by very accommodative financial conditions. In both advanced and emerging market economies, financial conditions remain supportive, as rising bond yields were offset by higher equity prices and narrowing corporate bond spreads.

The near-term outlook for the global economy continues to be shaped by the potential course of the pandemic. In advanced economies outside the euro area, the swift roll-out of vaccinations holds the promise that the pandemic can be contained, economies can gradually re-open and then recover rather quickly. This contrasts with the pandemic situation in some large EMEs, where economic activity is expected to have weakened further despite the relatively limited restrictions on mobility implemented by authorities to date.

Some positive spillovers to the global economy are expected from the large fiscal stimulus approved by the Biden administration, which will strengthen the recovery in the United States. The American Rescue Plan (ARP), totalling USD 1.9 trillion (8.9% of GDP), includes a renewal of unemployment benefits, additional one-off payments to households and an increase in both local and state spending to finance public health efforts and education. Additional stimulus checks sent out since the ARP was signed into law in mid-March are projected to stimulate private consumption in the coming quarters, leading to positive spillovers to other countries through trade linkages. Meanwhile, the Biden administration announced two new medium-term fiscal plans, namely the American Jobs Plan and the American Families plan. The former proposes a variety of infrastructure investments to be partly financed by higher corporate income taxes, while the latter focuses on social welfare spending and tax credits, and is almost fully financed by higher personal income taxes. Overall, the impact of the two plans on economic activity is estimated to be more limited compared with the ARP owing to their decade-long implementation and the fact that they will be funded by higher taxes.

The growth outlook for the global economy is little changed compared to the previous projections. Global real GDP (excluding the euro area) is projected to increase by 6.2% this year, before slowing to 4.2% in 2022 and 3.7% in 2023. It has been revised downwards by 0.3 percentage points in 2021 and upwards by 0.3 percentage points in 2022 compared with the previous projections, and remained unchanged for 2023. This pattern reflects an interplay of factors, including a worsening of the pandemic in advanced economies at the beginning of this year and in EMEs more recently, as well as the macroeconomic impact of the large fiscal stimulus in the United States and an improving outlook in other advanced economies as a result of the fast vaccine roll-out. Among EMEs, in India the near-term outlook worsened significantly owing to a deterioration in epidemiological conditions. However, mobility and economic indicators suggest that the fallout from the current wave may not be as severe as that observed last spring.

In the United States, economic activity is projected to expand on the back of strong policy support and a gradual reopening of the economy. Following solid quarter-on-quarter annualised growth of 6.4% in the first quarter of 2021, activity is expected to pick up further in the second quarter amid strong consumer spending supported by the disbursement of government direct income support to households.

Meanwhile, in the labour market, the vacancy rate stood at elevated levels, while the unemployment rate continued to be relatively high. This suggests that skills mismatches in the labour market and a shortage of workers in contact-intensive services sectors may create some headwinds as the economy reopens. Employment surveys indicate that growth in hourly earnings accelerated in April, and the number of hours worked per week jumped to an all-time high, in particular in industries with a large number of vacancies, such as food services. Headline annual consumer price inflation increased to 4.2% in April. While the rise in headline inflation resulted mainly from a strong annual increase in the energy component, core inflation also increased significantly as sectors hit hard by the pandemic have increased prices significantly as the economy reopens, for example prices of air fares and accommodation. Disruption to global supply chains weighed on car production in the United States and is likely to have contributed to higher prices for used cars in April.

In the United Kingdom, fiscal spending and the extension of key measures taken in response to the coronavirus are expected to support the economy. Real GDP growth contracted by 1.5% in the first quarter of 2021, when a strict lockdown was in place. This relatively mild contraction suggests that firms and households adapted well to government restrictions. Private consumption contributed negatively nonetheless, as did the significant reversal of the stocks built up late last year in response to fears of a “no-deal” Brexit. However, towards the end of the first quarter, as vaccination progressed and restrictions on mobility were gradually eased, economic activity started to pick up. Business surveys, consumer confidence and mobility trackers all signal a strong rebound in the second quarter. Annual consumer price inflation increased to 1.5% in April, up from 0.7% in the previous month, while core inflation increased to 1.3% in April, up from 1.1% in March. The rise in inflation was mostly driven by energy prices as the recent rise in oil prices started to feed through to household energy prices, adding to the increase in transport prices. Looking ahead, headline inflation is expected to continue to rise towards the Bank of England’s 2% target over the next few months, mainly owing to base effects stemming from weak price pressures in spring 2020 and the impact of recent rises in energy prices.

In China, economic activity is expected to continue to grow at a steady pace over the projection horizon. In May survey data pointed to a steady growth momentum. This followed weaker than expected outturns in industrial production and retail sales growth in the previous month, while in April export growth was solid and is becoming broader based against the backdrop of stronger global demand. Expansionary policies also continued to support the recovery, although the policy stance is gradually becoming more balanced. Looking ahead, the main driver of economic activity is expected to switch from investment to private consumption as the outlook for employment and income firms up. Annual headline consumer price inflation increased modestly to 1.3% in May, up from 0.9% in April. Consumer price inflation remains subdued overall. While energy prices increased markedly, the recovery in pork meat supply, following last year’s outbreak of African swine fever, is keeping food price inflation contained. Meanwhile, annual producer price inflation increased to 9.0% in May.

In Japan, the recovery is expected to resume more firmly later this year and to proceed at a moderate pace thereafter. Stronger domestic demand following an easing of containment measures, as well as continued fiscal support and recovering external demand, are expected to support the gradual but steady recovery. Real GDP fell by 1.3% in the first quarter of 2021, as the second state of emergency, enacted between early January and mid-March, weighed on private consumption and business investment. The third state of emergency announced in late-April and limited progress on vaccination are likely to defer a firmer recovery to the second half of this year. Annual headline CPI inflation stood at -0.4% in April, as the impact of rising energy prices was outweighed by a sharp decline in mobile phone charges. Annual CPI inflation is projected to rise gradually over the projection horizon, but to remain below the Bank of Japan's target.

In central and eastern European EU Member States, the recovery slowed significantly at the turn of the year. It is expected to decelerate further in the near term as the worsened pandemic conditions continue to weigh on activity. Once lockdowns are eased and progress is made on vaccinations, activity is forecast to gradually regain momentum, supported by accommodative fiscal and monetary policies.

In large commodity-exporting countries, economic activity is recovering as global demand strengthens. In Russia, following a relatively mild recession last year, economic activity in the first quarter was estimated to increase slightly. Looking ahead, stronger global demand for oil, together with a rebound in consumption and investment, are expected to support activity over the projection horizon. In Brazil, activity continued to recover in the first quarter and stood close to its pre-pandemic levels despite the resurgence in new infections. Looking ahead stronger foreign demand and private consumption are expected to drive the recovery. By contrast, monetary policy has recently been tightening, while fiscal space continues to be limited.

In Turkey, domestic demand is slowing amid the gradual withdrawal of credit stimulus. Furthermore, increased policy uncertainty and weakened market confidence continue to weigh on near-term economic prospects. The impact of weaker domestic absorption on economic activity has been offset by stronger export performance in the first quarter of 2021. Looking ahead, provided that the recent shift in policy direction towards macroeconomic stability is sustained, real GDP growth is likely to remain subdued but more balanced.

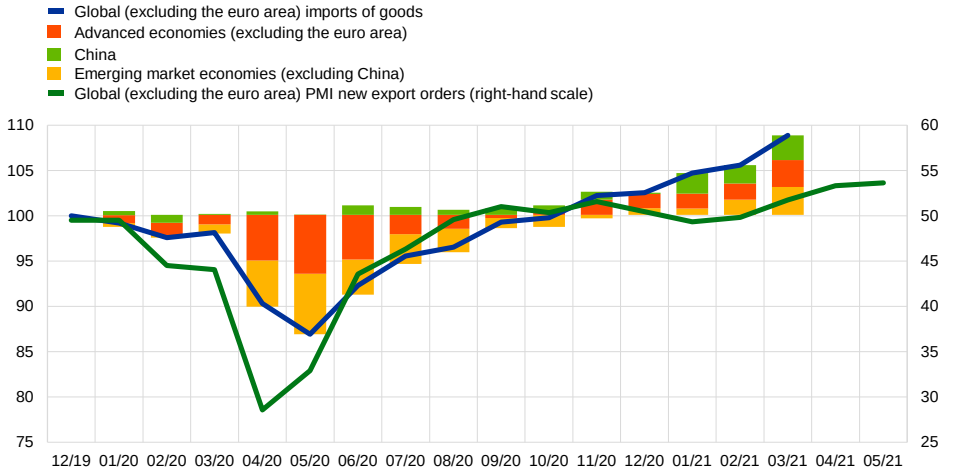
The recovery in global trade proceeds unabated as domestic demand strengthens in advanced economies and China. Following the dynamic recovery in global goods imports (excluding the euro area) in late 2020, growth momentum has slowed somewhat more recently. The recovery is mainly driven by an improvement in domestic absorption in key advanced economies and in China, despite some higher volatility recorded around the Lunar New Year holiday period (Chart 2). While international trade in services is picking up steam, its ascent from the trough reached in late spring 2020 remains gradual, as containment measures and travel restrictions remain in place. In the near term the recovery in trade is expected to proceed unabated. The PMI manufacturing new export orders index increased further in May,

staying well above its long-term average, suggesting a further acceleration in global trade in the near term. However, disruptions in global supply chains continue to create headwinds to the recovery of global trade. High-frequency indicators of supply chain bottlenecks, such as the PMIs for work backlogs, have risen to their highest levels since the aftermath of the global financial crisis, while PMI supplier delivery times lengthened and now stand close to the all-time high registered at the peak of the pandemic. Furthermore, the high level of the PMI new order-to-inventory ratio and PMI backlog of work signal that production is struggling to meet strong and rising demand, especially in the technology and automobile industries.

Chart 2

Global (excluding the euro area) imports of goods and new export orders

(left-hand scale: index, December 2019 = 100; right-hand scale: diffusion index)



Sources: Markit, CPB Netherlands Bureau for Economic Policy Analysis and ECB calculations.
Note: The latest observations are for May 2021 for the PMI data and March 2021 for global merchandise imports.

The improved outlook in key trading partners of the euro area led to stronger euro area foreign demand. Euro area foreign demand is forecast to expand by 8.6% this year and by 5.2% and 3.4% in 2022 and 2023 respectively – an upward revision for all three years compared with the March 2021 ECB staff macroeconomic projections. This mainly reflects the stronger than projected demand from the United States and the United Kingdom, notwithstanding weaker than expected outturns in the first quarter. Overall, more positive outturns at the start of the year and an improved outlook in some key euro area trading partners imply that the gap in the trajectory of global trade relative to the pre-pandemic path has narrowed further. Global imports (excluding the euro area) were also revised upwards over the projection horizon and are expected to increase by 10.8% in 2021, before slowing to 4.9% in 2022 and 3.7% in 2023.

Risks to the baseline projections for global growth are judged to be broadly balanced, while those for global inflation are tilted to the upside. In line with the previous projection rounds, two alternative scenarios for the global outlook are used to illustrate the uncertainty surrounding the future course of the pandemic. These scenarios reflect the interplay between developments in the pandemic and the

associated path of containment measures.[1] Other risks to the global outlook for activity relate to a faster than currently projected unwinding of excess savings built up across advanced economies during the pandemic. This could lead to stronger private consumption in these economies and thus activity and inflation. Prospects of a stronger and faster recovery in advanced economies may alter market participants' expectations about global monetary policy prospects and increase the risk of repricing in global financial markets. This kind of repricing commonly weighs more on EMEs, especially those with weak fundamentals. It would accentuate the risks associated with high indebtedness across advanced and emerging market economies. If disruptions in global supply chains are more protracted than currently assumed, stronger inflationary pressures and headwinds to the recovery in global activity and trade could result.

Global price developments

Global commodity prices have increased further since the previous projections. The price rally that had already started last summer halted temporarily in March amid volatile market sentiment in the face of rising sovereign bond yields. This led to a slight correction in oil prices, while food and metals prices have remained broadly stable. Since then, however, prices have moved higher, as accommodative policies coupled with the ongoing vaccine roll-out and expected lifting of containment measures have led to an improved demand outlook for commodities. According to the International Energy Agency, global oil demand is expected to recover most of the volume lost during the pandemic by the end of 2021. Against this backdrop, OPEC+ has gradually revised its production targets upwards, which also includes the phasing-out of the unilateral production cuts by Saudi Arabia. Overall, global oil prices are being shaped by a combination of stronger demand and gradually increasing supply and are also underpinned by a positive global risk sentiment.

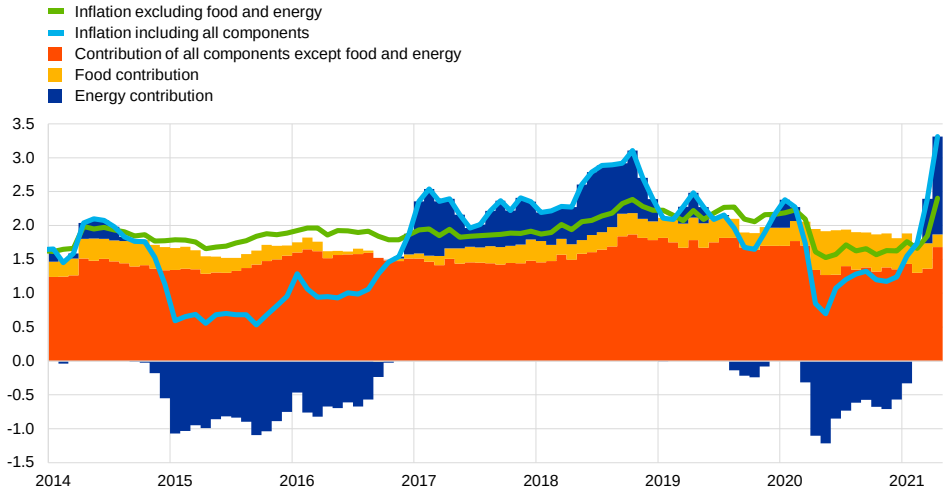
Global consumer price inflation is projected to increase amid higher commodity prices and recovering demand. However, the projected increase in inflation is likely to be transitory, given the degree of slack in the global economy and anchored inflation expectations. Annual consumer price inflation in member countries of the Organisation for Economic Co-operation and Development (OECD) increased to 3.3% in April, up from 2.4% in March (Chart 3). Energy prices rose sharply, while food price inflation eased further in April. Core consumer price index inflation (excluding food and energy) increased to 2.4% in April, up from 1.8% the previous month. Headline annual consumer price inflation increased across all advanced economies but remained in negative territory in Japan. With regard to major non-OECD EMEs, in China annual headline inflation edged back more firmly into positive territory after two quarters of near-zero inflation.

[1] For further details, see Section 5 entitled "Alternative scenarios for the euro area economic outlook" in the June 2021 Eurosystem staff macroeconomic projections for the euro area.

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 April 2021.

The rising inflation observed this year and its expected gradual deceleration thereafter is also embedded in euro area competitors' export price projections. Euro area competitors' export prices (in national currency) are projected to increase significantly in the course of this year. Compared with the March 2021 ECB staff macroeconomic projections, euro area competitors' export prices were revised upwards for this year amid higher commodity prices and stronger demand. Looking further ahead euro area competitors' export prices are broadly comparable to previous projections.

2 Financial developments

While the forward curve of the euro overnight index average (EONIA) increased slightly across medium to long-term maturities, the short end of the curve has remained largely the same, suggesting no expectations of an imminent policy rate change in the very near term. Over the review period (11 March to 9 June 2021), euro area sovereign bond yields increased moderately, mainly amid an improved economic outlook in the light of progress in vaccination campaigns across the euro area together with continuing policy support. The more recent widening in sovereign spreads over the overnight index swap (OIS) rate across jurisdictions may be related in part to speculation about an early tapering of purchases under the pandemic emergency purchase programme (PEPP). Equity prices also increased, supported by a strong recovery in corporate earnings growth expectations while discount rates remained relatively low. Mirroring equity prices, euro area corporate bond spreads continued to tighten and stand at levels last observed prior to March 2020. In foreign exchange markets, the nominal effective exchange rate of the euro strengthened slightly.

The EONIA and the benchmark euro short-term rate (€STR) averaged -48 and -57 basis points respectively over the review period.[2] Excess liquidity increased by approximately €516 billion to around €4,207 billion, mainly reflecting asset purchases under the PEPP and the asset purchase programme (APP), as well as the TLTRO III.7 operation take-up of €330.5 billion. These liquidity injections were partially offset by developments in autonomous factors and expiring TLTRO II operations.

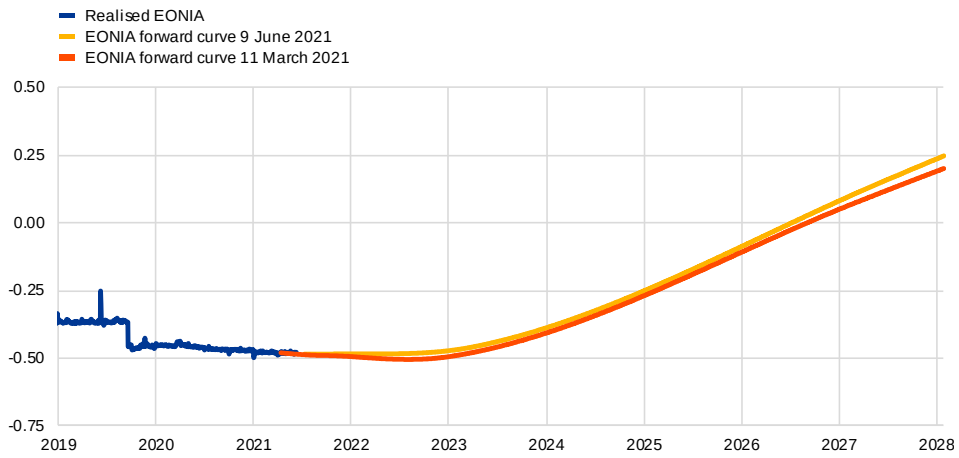
While the EONIA forward curve shifted slightly upwards across medium to long-term maturities over the review period, the short end of the curve remained broadly unchanged and continues to indicate no expectations of an imminent change in the deposit facility rate (Chart 4). The short end of the EONIA forward curve is currently almost completely flat, suggesting that financial market participants are not pricing in an imminent rate cut or hike. The 10-year EONIA spot rate rose by 6.2 basis points.

[2] The methodology for calculating the EONIA changed on 2 October 2019; it is now calculated as the €STR plus a fixed spread of 8.5 basis points. See the box entitled "Goodbye EONIA, welcome €STR!", *Economic Bulletin*, Issue 7, ECB, 2019.

Chart 4

EONIA forward rates

(percentages per annum)



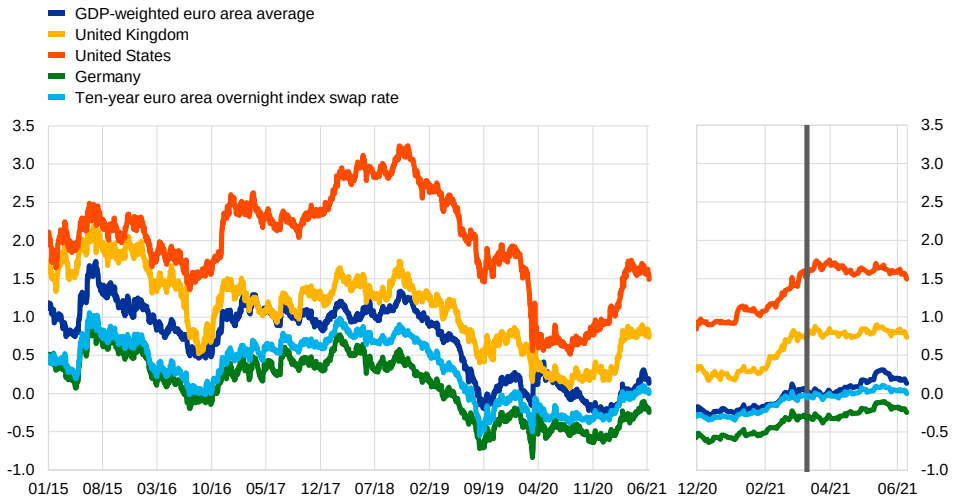
Sources: Refinitiv and ECB calculations.

Euro area sovereign bond yields increased somewhat over the review period (Chart 5). Euro area sovereign bond yields rose notably as term premia became less negative. The brightening of the public health situation and a corresponding improvement in market participants' assessment of the economic outlook contributed to the movement. Specifically, the GDP-weighted euro area ten-year sovereign bond yield increased by 14 basis points to reach 0.13%. At the same time, ten-year sovereign bond yields in the United States and the United Kingdom decreased slightly to stand at 1.49% and 0.73% respectively.

Chart 5

Ten-year sovereign bond yields

(percentages per annum)



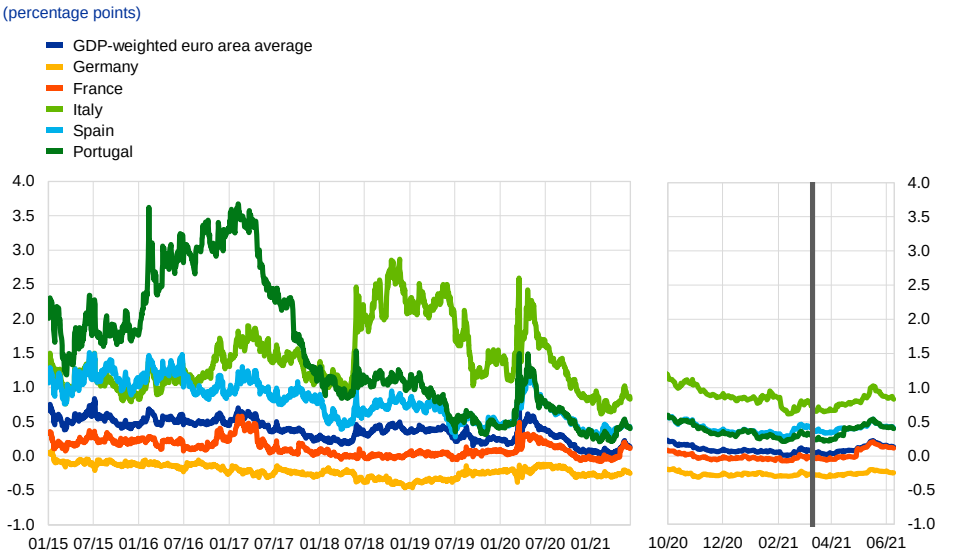
Sources: Refinitiv and ECB calculations.
Notes: The vertical grey line denotes the start of the review period on 11 March 2021. The latest observation is for 9 June 2021.

Long-term spreads of euro area sovereign bonds relative to OIS rates increased moderately (Chart 6). While the widening of yield spreads over the review period can

partly be attributed to an increase in credit risk premia, more recent gyrations may likewise be related to speculation about adjustments in the pace of PEPP purchases as well as significant sovereign bond supply. Overall, the increase in sovereign spreads has been broad-based across countries, with Italian, Portuguese and French ten-year spreads increasing by 16, 15 and 15 basis points to stand at 0.83%, 0.40% and 0.11% respectively. Over the same period, German and Spanish ten-year spreads increased by 3 and 4 basis points to reach -0.25% and 0.41% respectively.

Chart 6

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

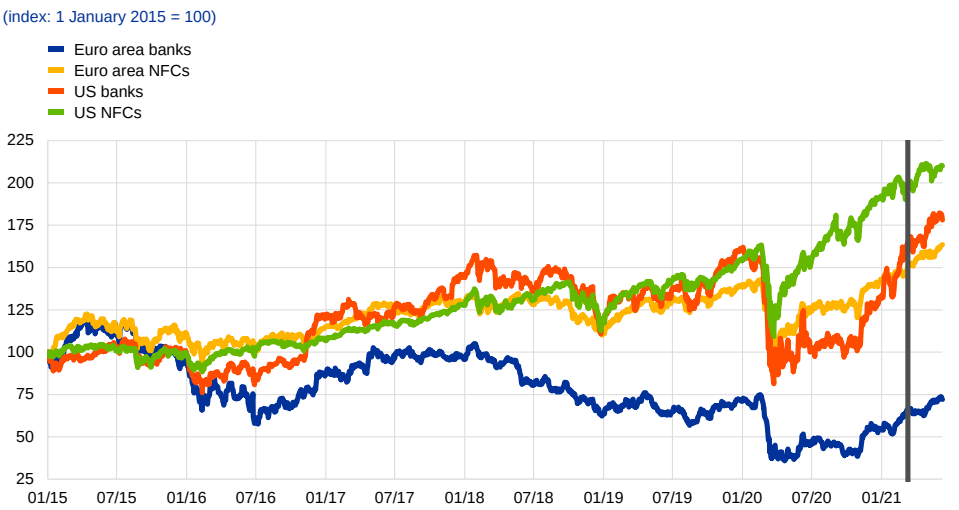


Sources: Refinitiv and ECB calculations.
Notes: The spread is calculated by subtracting the ten-year OIS rate from the ten-year sovereign bond yield. The vertical grey line denotes the start of the review period on 11 March 2021. The latest observation is for 9 June 2021.

Equity prices increased on both sides of the Atlantic, reaching record highs in the United States, on the back of higher earnings growth expectations and discount rates remaining at relatively low levels (Chart 7). Euro area equity prices rose against the backdrop of persistently low discount rates and especially of a strong recovery in corporate earnings growth expectations. However, equity markets continue to signal an uneven recovery across sectors and countries. At the same time, there are no evident signs of overvaluation or excessive risk taking. Overall, the stock prices of euro area and US non-financial corporations (NFCs) increased by 7.9% and 5.4% respectively, while the equity prices of euro area and US banks rose by 11% and 8.6%.

Chart 7

Euro area and US equity price indices

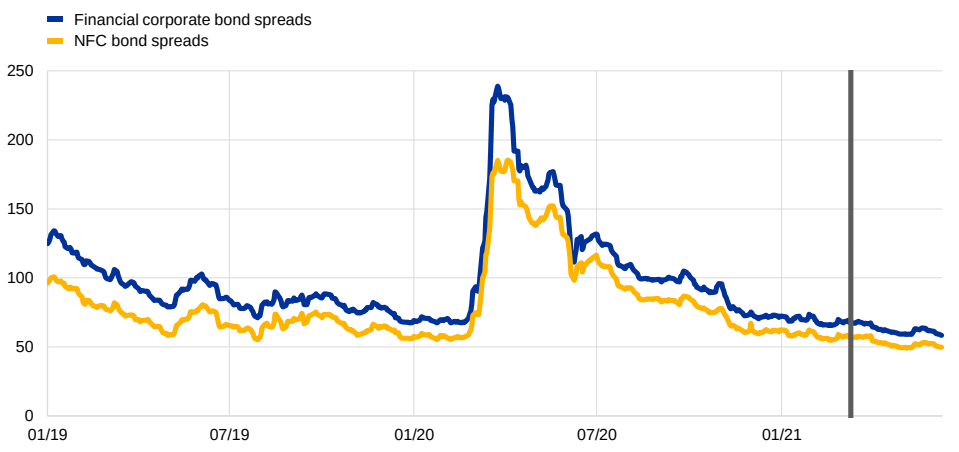


Sources: Refinitiv and ECB calculations.
Notes: The vertical grey line denotes the start of the review period on 11 March 2021. The latest observation is for 9 June 2021.

Euro area corporate bond spreads continued to tighten slightly to levels last observed prior to March 2020 (Chart 8). Mirroring the increase in equity prices, euro area corporate bond spreads continued to decline. Over the review period, the investment-grade NFC bond spread and financial sector bond spread (relative to the risk-free rate) narrowed by 8 and 9 basis points respectively, to stand at pre-pandemic levels. Reasons for the continued tightening are likely related to further improvements in the macroeconomic outlook, coupled with the unprecedented policy support and rating agencies' currently relatively benign view of near-term credit risks. Despite this, pockets of vulnerability continue to exist, and the current level of spreads appears to be predicated on ongoing policy support.

Chart 8

Euro area corporate bond spreads

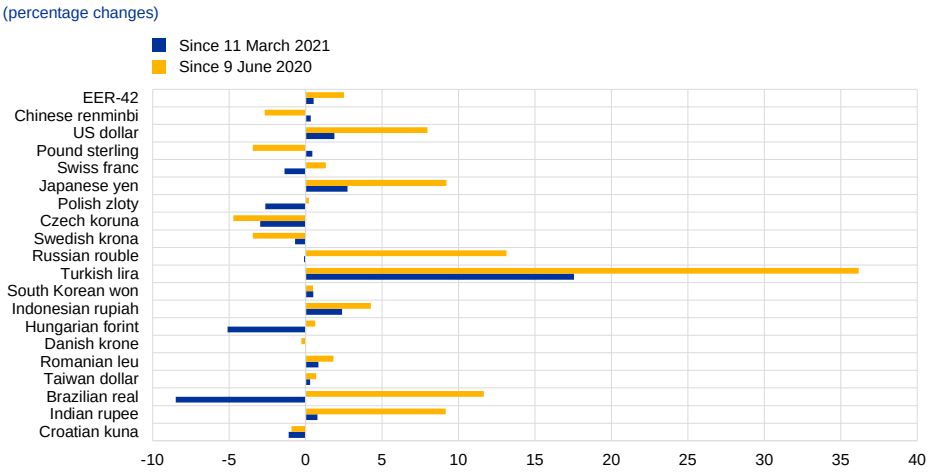


Sources: Markit iBoxx indices and ECB calculations.
Notes: The spreads are the difference between asset swap rates and the risk-free rate. The indices comprise bonds of different maturities (with at least one year remaining) with an investment-grade rating. The vertical grey line denotes the start of the review period on 11 March 2021. The latest observation is for 9 June 2021.

In foreign exchange markets, the euro appreciated slightly in trade-weighted terms (Chart 9) in the context of an improved economic outlook for the euro area. Over the review period, the nominal effective exchange rate of the euro, as measured against the currencies of 42 of the euro area's most important trading partners, strengthened by 0.5%. The euro appreciated against the US dollar (by 1.9%), reflecting the improved outlook for the euro area economy as the pace of vaccination picked up, coupled with the weakness of the dollar, which declined from the end of March alongside US Treasury yields. The euro also appreciated against the Japanese yen (by 2.7%), the pound sterling (by 0.4%) and the Chinese renminbi (by 0.3%). The euro appreciated strongly (by 17.5%) against the Turkish lira, which experienced broad-based weakness, while depreciating markedly (by 8.5%) against the Brazilian real, which broadly strengthened on the back of rebounding commodity prices. The euro also depreciated against the Swiss franc (by 1.4%) and the currencies of several non-euro area EU Member States, including the Hungarian forint, the Czech koruna and the Polish zloty.

Chart 9

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



Source: ECB.
Notes: EER-42 is the nominal effective exchange rate of the euro against the currencies of 42 of the euro area's most important trading partners. A positive (negative) change corresponds to an appreciation (depreciation) of the euro. All changes have been calculated using the foreign exchange rates prevailing on 9 June 2021.

3 Economic activity

GDP declined further by 0.3% in the first quarter of 2021 to stand 5.1% below its pre-pandemic level of the fourth quarter of 2019. Domestic demand contributed negatively to growth in the first quarter of 2021, while net trade provided a small positive contribution. Changes in inventories had a strong positive impact on growth. Business and consumer surveys and high-frequency indicators point to a sizeable improvement in activity in the second quarter of this year. Manufacturing production remains robust, supported by solid global demand, although supply-side bottlenecks could pose some headwinds for industrial activity in the near term. At the same time, business surveys indicate a strong recovery in services activity as infection numbers decline, which will allow a gradual normalisation of high-contact activities. Indicators of consumer confidence are strengthening, suggesting a strong rebound in private consumption in the period ahead. Business investment shows resilience, despite weaker corporate balance sheets and the still uncertain economic outlook. Growth is expected to continue to improve strongly in the second half of 2021 as progress in vaccination campaigns should allow a further relaxation of containment measures. Over the medium term, the recovery in the euro area economy is expected to be buoyed by stronger global and domestic demand, as well as by continued support from both monetary policy and fiscal policy.

This assessment is broadly reflected in the baseline scenario of the June 2021 Eurosystem staff macroeconomic projections for the euro area. These projections foresee annual real GDP growth at 4.6% in 2021, 4.7% in 2022 and 2.1% in 2023. Compared with the March 2021 ECB staff macroeconomic projections, the outlook for economic activity has been revised up for 2021 and 2022, while it is unchanged for 2023.

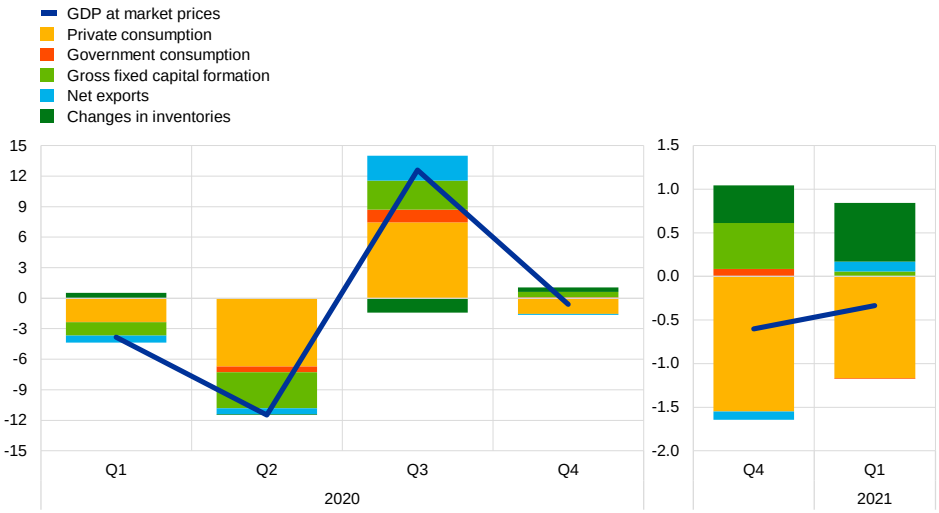
Overall, the risks surrounding the euro area growth outlook are assessed as broadly balanced. On the one hand, an even stronger recovery could be predicated on brighter prospects for global demand and a faster-than-anticipated reduction in household savings once social and travel restrictions have been lifted. On the other hand, the ongoing pandemic, including the spread of virus mutations, and its implications for economic and financial conditions continue to be sources of downside risk.

Following a renewed contraction in output in the first quarter of 2021, economic activity in the euro area is set for a rebound in the second quarter. Real GDP declined further by 0.3% quarter on quarter in the first quarter of 2021, following a fall of 0.6% in the fourth quarter of last year (Chart 10). The decline was somewhat lower than the 0.4% contraction foreseen in the March 2021 ECB staff macroeconomic projections. The fall in output in the first quarter was due to domestic demand, particularly private consumption, while changes in inventories had a strong positive impact with a further small positive contribution from net trade. On the production side, developments in the first quarter continued to vary significantly across sectors. While value added in the services sector declined further, output in the industrial sector (excluding construction) increased again.

Chart 10

Euro area real GDP and its components

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



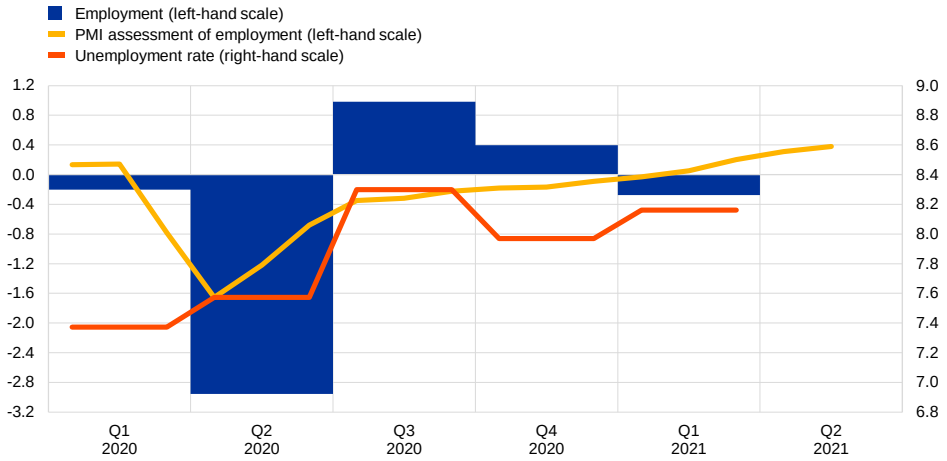
Source: Eurostat.

The euro area labour market continues to benefit from significant policy support mitigating the impact of the pandemic. According to the preliminary flash data release, employment declined by 0.3% quarter on quarter in the first quarter of 2021, following an increase of 0.3% in the fourth quarter of 2020 (Chart 11). The unemployment rate in that quarter consequently increased to 8.2% from 8.0% in the previous quarter. Employment in the first quarter of 2021 was 2.2% below the level recorded in the fourth quarter of 2019 prior to the outbreak of the pandemic. Hours worked continue to play an important role in the adjustment of the euro area labour markets and policy responses to the challenges posed by the pandemic. Total hours worked declined by 1.5% quarter on quarter in the fourth quarter of 2020 – the last available data point – following an increase of 14.7% in the third quarter, remaining 6.4% below the level seen at end-2019. Meanwhile, the unemployment rate declined to 8.0% in April 2021 from a level of 8.1% in the previous month and below the pandemic crisis peak of 8.7% recorded in August 2020. Nevertheless, the unemployment rate exceeds the pre-pandemic level of 7.3% recorded in February 2020. Workers covered by job retention schemes were estimated to account for around 6% of the labour force in March 2021, down from almost 20% in April 2020. However, the number of workers covered by such schemes has been rising since October 2020 as a result of renewed containment measures in some countries. Looking ahead, the substantial numbers of workers who are still covered by job retention schemes pose upward risks to the unemployment rate.

Chart 11

Euro area employment, the PMI assessment of employment and the unemployment rate

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



Sources: Eurostat, Markit and ECB calculations.
Notes: The PMI employment index is shown at a monthly frequency; employment and unemployment are shown at a quarterly frequency. The PMI is expressed as a deviation from 50 divided by 10. The latest observations are for the first quarter of 2021 for employment, May 2021 for the PMI and April 2021 for the unemployment rate.

Despite improved short-term labour market indicators, households' unemployment expectations remain elevated. In May 2021 the composite PMI employment indicator for the euro area continued to increase further in expansionary territory. The indicator has pointed to expanding employment since February of this year. More recently, the expectations of households about future unemployment conditions have improved. While unemployment expectations have declined since March 2021, they remain significantly above pre-pandemic levels.

Following a fall in private consumption in the first quarter, consumers have gradually become more optimistic, although their financial situation remains fragile. After a weak first quarter, when private consumption fell by 2.3%, consumer spending is expected to recover in the course of the second quarter even though this is not yet fully evident in a number of indicators released at the beginning of that quarter. In April 2021 the volume of retail trade shrank by 3.1% month on month, nonetheless standing 0.3% above its average level in the first quarter. Car registrations declined slightly in April (by 0.4% month on month), to more than 20% below their February 2020 levels. On the positive side, consumer confidence returned to its pre-pandemic level in May (-5.1 compared with -8.1 in April and -10.8 in March). The latest increases are largely attributable to households' improving expectations about the general economic situation, while their assessment of their current personal financial situation is still well below pre-crisis levels. As the economy recovers, labour income should increasingly support household income, reducing its dependence on fiscal support. In April consumers also started saving less in bank deposits, in line with a gradual recovery of private consumption (see also Section 5). The European Commission's Consumer Survey suggests that consumer spending will continue to rise over the next 12 months, while showing no signs of exuberance.

Corporate (non-construction) investment declined slightly in the first quarter of 2021, but a strong rebound is expected in the second quarter and for the remainder of the year. Supply-chain bottlenecks and a tightening of containment measures in some euro area countries contributed to a 0.4% quarter-on-quarter contraction in non-construction investment in the first quarter of the year, following an elevated quarterly growth rate in the last quarter of 2020. The first quarter decline reflects a strong reduction in investment in motor vehicles and a marked reversal of the strong investment in intellectual property products seen in the last quarter of 2020, which more than offset the strong growth in investment in other machinery. In the second quarter of 2021, short-term indicators suggest a marked and broadly-based strengthening across countries. In particular, survey data into May show a strong increase in confidence in the capital goods sector, reflecting buoyant demand and strong export orders following record-high production expectations in April. On the supply side, capacity utilisation in the capital goods sector was also well above the pre-pandemic level at the start of the second quarter and reported limits to production from shortages of equipment have increased sharply. For the year as a whole, survey data support the view of stronger business investment growth ahead. The latest Survey on the Access to Finance of Enterprises (SAFE[3]), conducted in March and April 2021, points to a stabilisation in firms' fixed investment decisions despite still elevated uncertainty and weaker corporate balance sheets.[4] The April 2021 bi-annual European Commission Investment Survey foresees industrial investment growing by 7% in 2021 – around twice the rate expected in the November 2020 survey – and mainly for extension and replacement purposes, rather than to rationalise production.

Housing investment increased further in the first quarter of 2021 and its overall positive trend is expected to continue going forward. Housing investment increased in the first quarter, rising by 0.5% quarter on quarter, falling short of its pre-crisis level in the last quarter of 2019 by 1.2%. Looking ahead, housing investment in the euro area is expected to continue on a positive trend, although the strength of the upward movement in the short term is likely to be limited by supply constraints. On the demand side, the European Commission's survey data show that consumers' short-term intentions to buy or build a house have reached their highest level since early 2003, while their intentions to renovate their homes reached their highest level on record. On the supply side, confidence in the construction sector continued to improve in April and May. The strong increase in companies' assessments of the overall level of orders signals a robust demand for housing. At the same time, however, supply concerns have intensified. According to the European Commission's survey data, construction companies faced historically high production limits in the first two months of the second quarter owing to scarcity of materials and labour shortages. Supply constraints are also reflected in the PMI surveys for the construction sector, which suggest that supplier delivery times rose markedly on average in April and May, compared with the first quarter of 2021. Moreover, firms' business expectations for the coming year fell somewhat but remained in expansionary territory.

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3 See "Survey on the Access to Finance of Enterprises", ECB, 1 June 2021.

4 See also the section entitled "Corporate solvency challenges could weigh on sovereigns, households and creditors", *Financial Stability Review*, ECB, May 2021.

Euro area trade growth decreased in the first quarter of 2021 and resulted in a slightly positive net trade contribution to GDP. After sustained growth rates in the second half of 2020, the recovery of euro area exports slowed down in the first quarter of 2021 (+1.0% quarter on quarter). Disruptions as a result of Brexit together with shipping and input-related constraints exerted a drag. Nominal trade in goods data reveal that trade with the United Kingdom only partially recovered from the Brexit-related slump of January 2021, with nominal imports particularly affected and standing at 75% of their December 2020 level in March 2021. As regards other destinations, positive contributions to the growth of extra-euro area goods export volumes came from China. From a sectoral perspective, a slowdown is apparent across all categories except capital goods. Long delivery times and increasing freight rates, along with a shortage of intermediate inputs (such as chemicals, wood, plastic, metals and semiconductors), put a strain on the growth of euro area manufacturing exports (see Box 6). However, order-based forward-looking indicators signal a strong momentum ahead for goods exports. Trade in services shows some signs of improvement with the upcoming summer season and expectations for mobility easing that would support travel services exports. Imports increased broadly at the same pace as exports in the first quarter of 2021 (+0.9% quarter on quarter) and are expected to be sustained by the recovery of domestic demand in the coming quarters.

Incoming information points to a sizeable improvement in euro area activity in the second quarter of 2021. Survey data have improved, consistent with renewed robust growth in the second quarter of 2021. The recent strengthening has been broad-based across sectors as well as across countries. The composite output PMI, which rose from 48.1 in the fourth quarter of 2020 to 49.9 in the first quarter of 2021, has recently increased further, averaging 55.4 over April and May. This improvement reflects developments in both manufacturing and services – both sectors are now generating survey results consistent with growth. Progress with vaccination campaigns appears to have spurred confidence further, particularly in services. Confidence has risen across all services sub-sectors, although it remains significantly below pre-pandemic levels in high-contact activities. The increase in confidence bodes well for the expected recovery of services, but the very large gap in comparison with pre-crisis levels of activity in high-contact sub-sectors suggests that they still suffer from ample spare capacity.

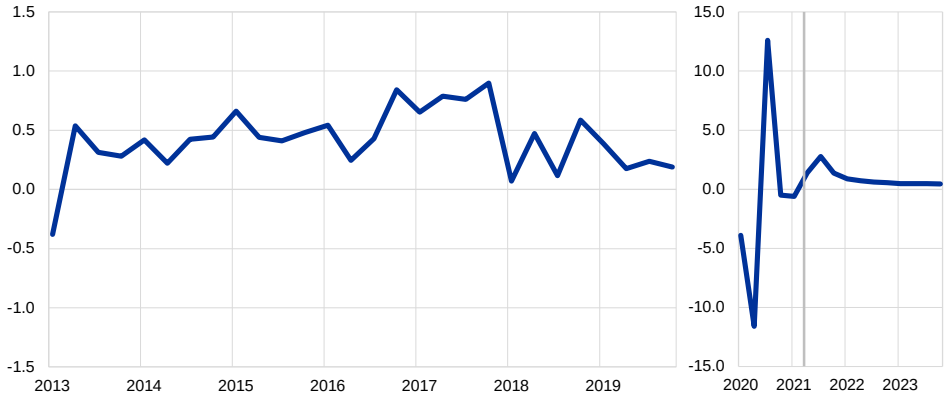
The ongoing COVID-19 pandemic has weakened growth in recent months, yet recovery is imminent, and a strong rebound is expected as of the second half of 2021. Notwithstanding an extension of stringent containment measures for much of the first half of 2021, learning effects, resilient manufacturing output and foreign demand, as well as support from monetary and fiscal policy, have contained output losses to a greater extent than in the first wave of the pandemic despite supply bottlenecks hampering production in some sectors. In the near term, an accelerated roll-out of vaccinations and concomitant declines in infection rates should allow a faster than previously expected unwinding of containment measures from their more stringent levels in the first half of 2021. This is reflected in the June 2021 Eurosystem staff macroeconomic projections for the euro area, which foresee annual real GDP growth of 4.6% in 2021, 4.7% in 2022 and 2.1% in 2023 (Chart 12). Euro area activity is projected to return to growth in the second quarter of 2021 and, driven by a sharp

rebound in private consumption and an easing of current supply chain disruptions, to pick up strongly in the second half of the year, allowing real GDP to exceed its pre-crisis level as of the first quarter of 2022.[5]

Chart 12

Euro area real GDP (including projections)

(quarter-on-quarter percentage changes)



Sources: Eurostat and the article entitled "Eurosystem staff macroeconomic projections for the euro area, June 2021", published on the ECB's website on 10 June 2021.
Notes: In view of the unprecedented volatility of real GDP in 2020, this chart uses a different scale from 2020 onwards. The vertical line indicates the start of the projection horizon. The chart does not show ranges around the projections, reflecting the fact that, in the present circumstances, the standard computation method for those ranges (which is based on historical projection errors) would not provide a reliable indication of the unprecedented uncertainty surrounding current projections.

5 See Box 4 of the article entitled "Eurosystem staff macroeconomic projections for the euro area, June 2021", published on the ECB's website on 10 June 2021.

4 Prices and costs

According to Eurostat's flash release, annual euro area inflation rose to 2.0% in May 2021, up from 1.3% in March and 1.6% in April. That rise was mainly due to a strong increase in energy price inflation (reflecting sizeable upward base effects, as well as month-on-month increases), but also, to a lesser extent, a slight increase in non-energy industrial goods inflation. Headline inflation is likely to increase further towards the autumn, mainly reflecting the reversal of the temporary VAT cut in Germany. Inflation is expected to decline again at the start of next year as the impact of temporary factors fades and global energy prices moderate. Underlying price pressures are expected to increase somewhat this year, owing to temporary supply constraints and the recovery in domestic demand. Nevertheless, price pressures are expected to remain subdued overall, partly reflecting low wage pressures, in the context of significant economic slack and the effects of the recent appreciation of euro exchange rates. When the impact of the pandemic fades, the unwinding of the high levels of slack will, supported by accommodative monetary and fiscal policies, contribute to a gradual increase in underlying inflation over the medium term. Survey and market-based indicators of longer-term inflation expectations remain at subdued levels, although market-based indicators have continued to increase.

This assessment is broadly reflected in the baseline scenario of the June 2021 Eurosystem staff macroeconomic projections for the euro area, which foresees annual HICP inflation of 1.9% in 2021, 1.5% in 2022 and 1.4% in 2023. Compared with the March 2021 ECB staff macroeconomic projections, the outlook for inflation has been revised upwards for 2021 and 2022, largely owing to temporary factors and increases in energy price inflation. It is unchanged for 2023, when the expected increase in underlying inflation is largely counterbalanced by an expected decline in energy price inflation. HICP inflation excluding energy and food is projected to stand at 1.1% in 2021, 1.3% in 2022 and 1.4% in 2023, with upward revisions being seen at all projection horizons relative to the March 2021 projection exercise.

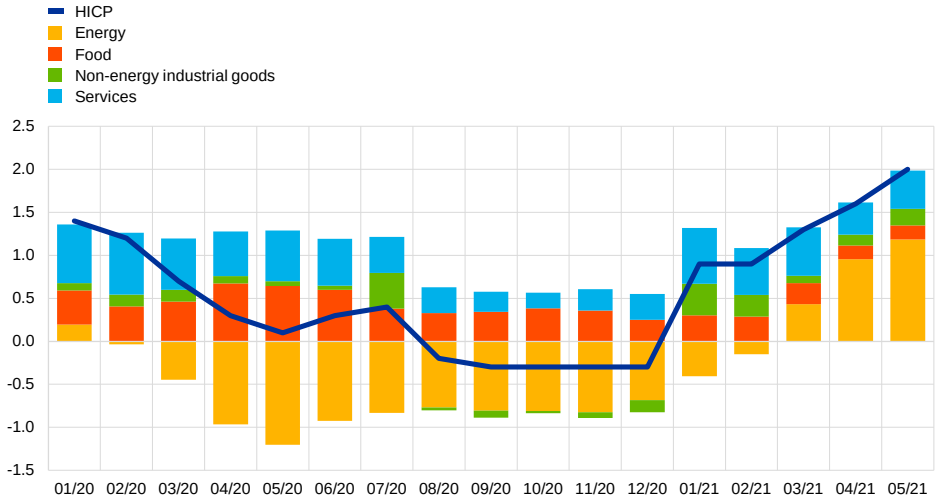
According to Eurostat's flash estimate, annual HICP inflation rose further in May. It stood at 2.0% in that month, up from 1.6% in April and 1.3% in March, mainly reflecting the further strengthening of energy inflation (Chart 13). Upward base effects associated with the strong declines observed in oil and energy prices in spring 2020 accounted for around half of the total increase seen in headline inflation between December 2020 and May 2021.[6]

[6] For more information on the impact that base effects have on energy inflation, see the box entitled "Recent dynamics in energy inflation: the role of base effects and taxes", *Economic Bulletin*, Issue 3, ECB, 2021.

Chart 13

Headline inflation and its components

(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB calculations.
Note: The latest observations are for May 2021 (flash estimate).

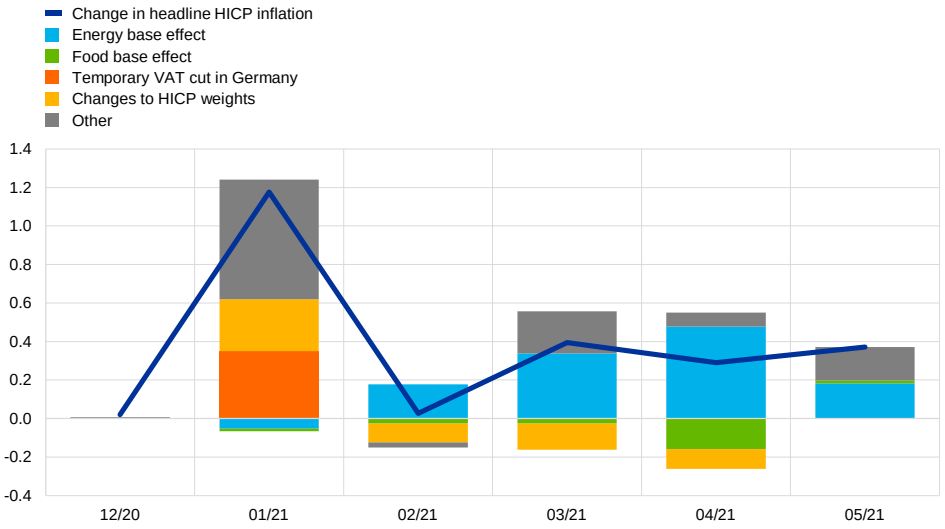
Developments in headline inflation in recent months also reflect the influence of other temporary factors. For instance, the changes to HICP weights at the start of this year resulted in strong increases in inflation in January, but that effect has more or less unwound in subsequent months (with April being the most recent month for which that calculation can be carried out).[7] Similarly, the temporary surge in unprocessed food prices in April 2020 resulted in a downward base effect in April 2021, which offset some of the upward pressure from energy-related base effects (Chart 14). Calendar effects have also had an impact on inflation rates in recent months. For instance, services inflation rose to 1.1% in May, up from 0.9% in the previous month, partly on account of the timing of Easter and other holidays in that period. At the same time, changes in the timing and scope of sales periods in shops had a strong upward impact on non-energy industrial goods (NEIG) inflation in January and February, but that effect has since unwound, and the figure of 0.7% that was recorded in May – slightly above the long-term average of 0.6% – may be a better indication of the extent to which input costs have increased along the supply chain in recent months.

7 The coronavirus (COVID-19) pandemic triggered significant changes in household spending in 2020. Those shifts are reflected in the 2021 HICP weights – and, therefore, the resulting annual inflation figures. For analysis of the complexity of this impact, see the box entitled "2021 HICP weights and their implications for the measurement of inflation", *Economic Bulletin*, Issue 2, ECB, 2021.

Chart 14

Contributions of base effects and other temporary factors to monthly changes in annual HICP inflation

(percentage point changes and contributions)



Sources: Eurostat, Deutsche Bundesbank and ECB calculations.
Notes: The contribution made by the temporary VAT cut in Germany is based on estimates provided in the Deutsche Bundesbank's November 2020 Monthly Report. The contribution made by changes to HICP weights cannot be calculated for May 2021 (as the necessary data are not yet available) and is therefore netted out in the "other" component. The latest observations are for May 2021 (based on flash estimate).

Price imputations imply continued uncertainty surrounding the signal for underlying price pressures. According to provisional data from Eurostat, imputation shares declined only moderately between January and May, falling from 13% to 10% for the HICP and from 18% to 13% for the HICP excluding energy and food. This is mainly explained by the imputation share for services, which has been fairly stable at around one-fifth since November of last year as a result of the large shares for recreational and travel-related services. In contrast, the imputation share for NEIG items has declined considerably, falling from 17% in January to just 6% in May. However, given the greater weight attributed to services, these developments continue to imply a high degree of uncertainty surrounding the signal for underlying price pressures.

Measures of underlying inflation do not provide a broad-based signal pointing to a sustained rise in inflationary pressures (Chart 15). After increasing strongly in January, HICPX inflation declined considerably, falling to 0.9% in March and 0.7% in April, before rising to 0.9% in May. Those patterns in the first few months of 2021 were mainly attributable to developments in clothing, footwear and travel-related services (including package holidays, accommodation services and air passenger transport).[8] HICPXX inflation, which excludes those clothing and travel-related items, has been more stable than HICPX inflation and stood at 1.2% in April (the latest figure available). Looking at other measures of underlying inflation, the Persistent and Common Component of Inflation (PCCI) stood at around 1.4% in April, broadly

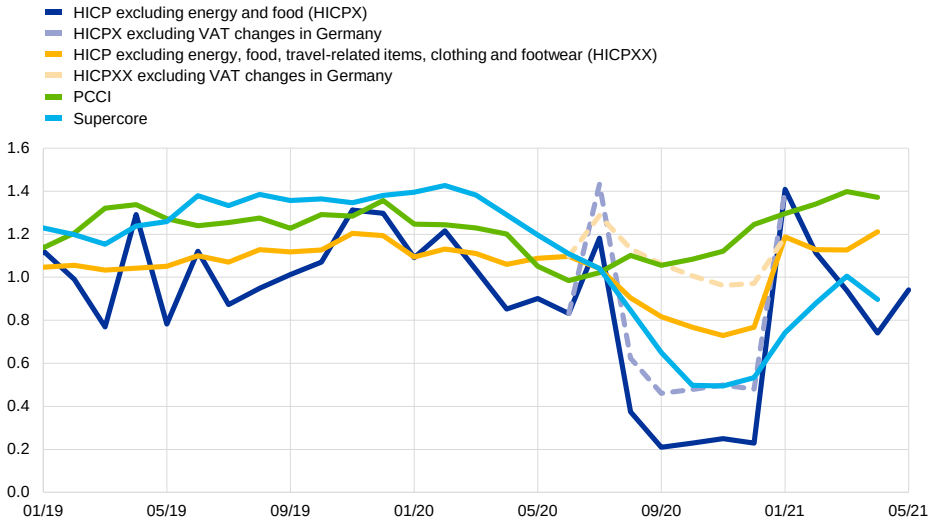
8 For details of potential commonality in travel-related items affected by COVID-19 lockdowns, see the box entitled "Prices for travel during the COVID-19 pandemic: is there commonality across countries and items?", *Economic Bulletin*, Issue 1, ECB, 2021.

unchanged from March, whereas the Supercore measure declined moderately (falling from 1.0% to 0.9%) over the same period.

Chart 15

Measures of underlying inflation

(annual percentage changes)



Sources: Eurostat and ECB calculations.
Note: The latest observations relate to May 2021 for the HICPX indicator (flash estimate) and April 2021 for the rest.

Pipeline price pressures for non-energy industrial consumer goods continue to increase considerably – albeit mainly at earlier stages of the pricing chain thus far. In this respect, producer price inflation for intermediate goods has risen further, standing at 6.9% in April, 2.5 percentage points higher than in March and 4.4 percentage points higher than in February. Likewise, import price inflation for intermediate goods has increased substantially, standing at 7.1% in April, up from 4.6% in March and 1.5% in February. These developments probably reflect upward pressure from shipping costs, supply bottlenecks and high levels of commodity price inflation. These pressures are less visible at later stages of the pricing chain, in line with past experience of substantial buffering along the pricing chain. However, at 0.9% in March and 1.0% in April, domestic producer price inflation for non-food consumer goods has increased and moved above its long-term average of 0.6%. The impact that domestic producer prices are having on consumer goods inflation is, in part, being contained by the negative annual growth rates of import prices for non-food consumer goods (-0.8% in April, down from -0.5% in March), which remain subdued owing to the impact of past exchange rate appreciation.[9]

Growth in negotiated wages weakened substantially in the first quarter of 2021 (Chart 16). The 1.4% year-on-year growth seen in that quarter represents a substantial moderation relative to the rates recorded in the fourth quarter of 2020 (2.0%) and across 2020 as a whole (1.8%). As anticipated, COVID-19's impact on negotiated wages did not become visible until wage agreements concluded before the

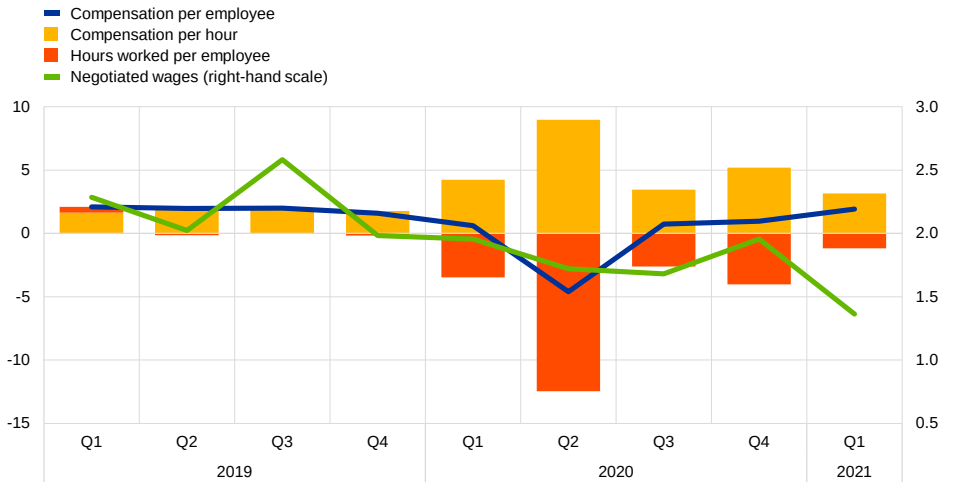
[9] For a stylised overview of the supply price chain for HICP non-energy industrial goods, see the box entitled "What can recent developments in producer prices tell us about pipeline pressures?", *Economic Bulletin*, Issue 3, ECB, 2017.

onset of the pandemic had expired and new agreements were either delayed or concluded using lower wage rates.[10] Given the possible coverage and timing issues, the negotiated wage growth seen in the first quarter may not necessarily be indicative of actual pay growth. Indicators of actual wage growth, such as compensation per employee (CPE) or compensation per hour (CPH), continue to be strongly affected by job retention and temporary lay-off schemes, which have an impact on pay and hours worked and tend to depress CPE and push up CPH. In the first quarter of 2021, the difference between the growth rates of those two indicators declined but remained significant. While annual CPE growth rose to 1.9% in the first quarter of this year, up from 1.0% in the fourth quarter of 2020, annual CPH growth fell from 5.2% to 3.2% over the same period.

Chart 16

Contributions made by components of compensation per employee

(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB calculations.
Note: The latest observations relate to the first quarter of 2021.

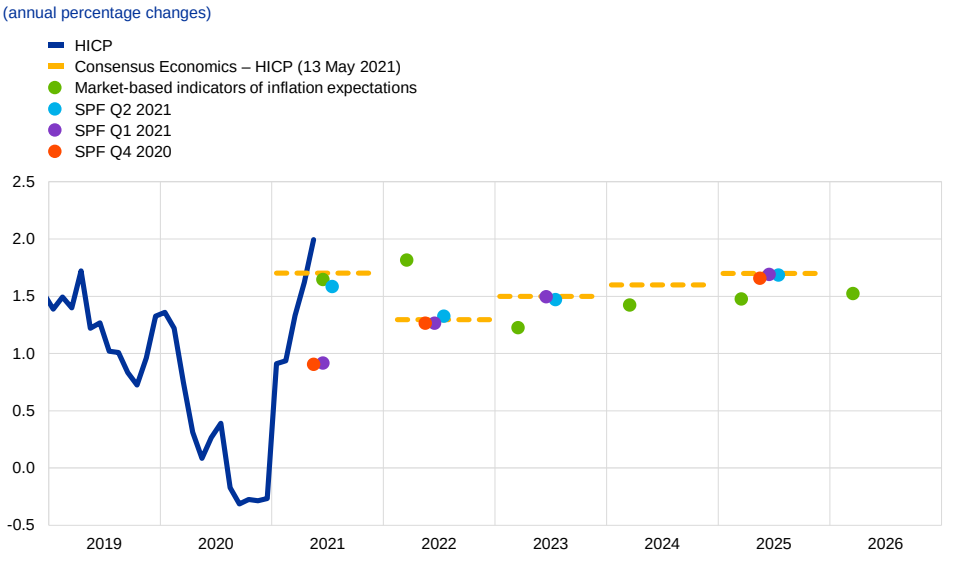
Market-based indicators of inflation compensation have continued to rise. Both shorter and longer-term market-based indicators of inflation compensation remain on an upward path, against the backdrop of improvements in risk sentiment and expectations regarding the unwinding of pent-up consumer spending, as well as the fiscal stimuli deployed around the globe. Long-term inflation risk premia are estimated to have increased considerably over the past few months, thereby accounting for the bulk of the overall increase in long-term inflation compensation. Improvements in expectations have been stronger at shorter horizons, resulting in the flattening of the inflation forward curve (Chart 17). The most prominent forward inflation-linked swap rate, the five-year inflation-linked swap rate five years ahead, stood at 1.56% on 9 June, up from 1.52% on 20 April. As regards survey-based measures, data from the ECB's Survey of Professional Forecasters (SPF) and Consensus Economics indicate

[10] For detailed analysis of the indicator of negotiated wages, including details of recent developments and the role that the indicator plays in assessing and forecasting wage developments at the current juncture, see the box entitled "Assessing wage dynamics during the COVID-19 pandemic: can data on negotiated wages help?", *Economic Bulletin*, Issue 8, ECB, 2020.

that average longer-term inflation expectations for 2025 remained unchanged at 1.7% in April.

Chart 17

Survey and market-based indicators of inflation expectations



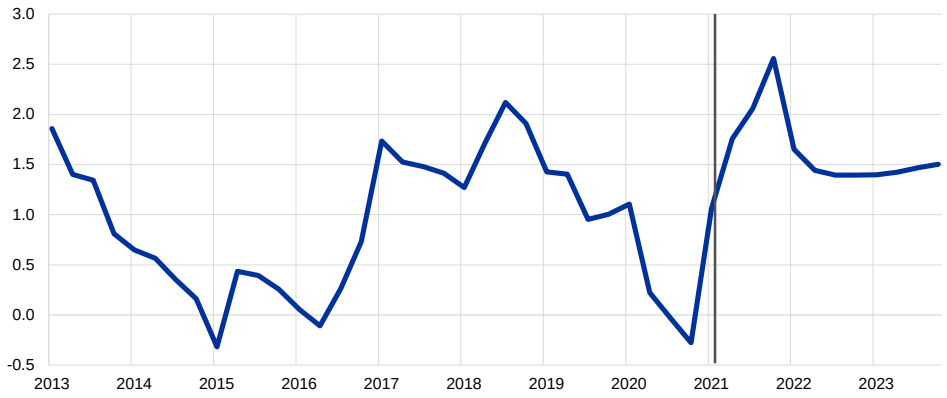
Sources: Eurostat, Thomson Reuters, Consensus Economics, ECB (SPF) and ECB calculations.
Notes: The SPF for the second quarter of 2021 was conducted between 31 March and 12 April 2021. The market-implied curve is based on the one-year spot inflation rate and the one-year forward rate one year ahead, the one-year forward rate two years ahead, the one-year forward rate three years ahead and the one-year forward rate four years ahead. The latest observations for market-based indicators of inflation compensation relate to 9 June 2021.

The June 2021 Eurosystem staff macroeconomic projections foresee inflation rising substantially in the course of 2021, before falling back at the beginning of 2022 and remaining broadly flat until the end of 2023. Annual HICP inflation is projected to average 1.9% in 2021, peaking at 2.6% in the fourth quarter, before averaging 1.5% and 1.4% in 2022 and 2023 respectively. The strong growth projected for 2021 reflects upward pressures from a number of temporary factors, including the reversal of the German VAT cut, a strong rebound in energy inflation (due to upward base effects) and an increase in input costs on account of supply constraints. Once the impact of those temporary effects has faded, HICP inflation is expected to be broadly flat in 2022 and 2023. The projected economic recovery and decreases in slack are expected to lead to a gradual increase in HICP inflation excluding energy and food, which is forecast to rise to 1.4% in 2023, up from 1.1% in 2021. Meanwhile, HICP food inflation is also projected to increase slightly over the projection horizon. However, the upward pressures that those two components exert on headline inflation are expected to be broadly offset in 2022 and 2023 by projected declines in energy inflation, given the downward-sloping profile of the oil price futures curve.

Chart 18

Euro area HICP inflation (including projections)

(annual percentage changes)



Sources: Eurostat and the article entitled "Eurosystem staff macroeconomic projections for the euro area, June 2021", published on the ECB's website on 10 June 2021.
Notes: The vertical line indicates the start of the projection horizon. The latest observations are for the first quarter of 2021 (data) and the fourth quarter of 2023 (projections). The cut-off date for data included in the projections was 26 May 2021 (and 18 May 2021 for assumptions).

5 Money and credit

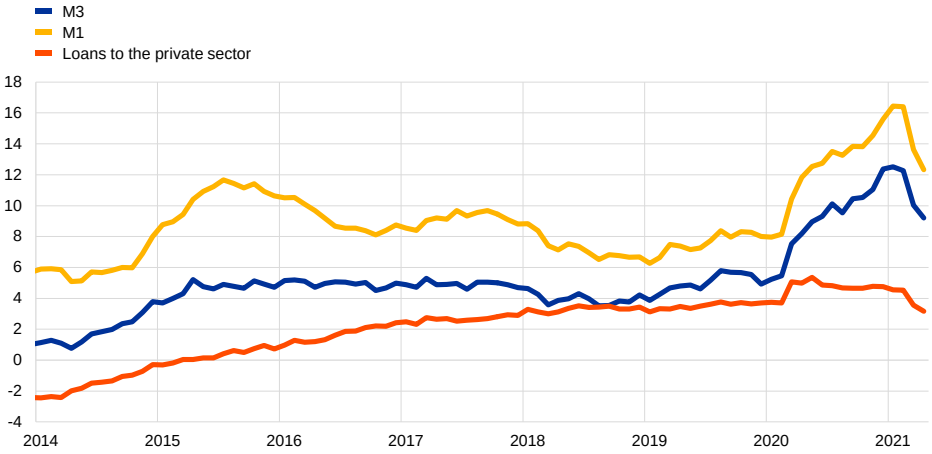
Money creation in the euro area moderated in April 2021, showing some initial signs of normalisation following the significant monetary expansion associated with the coronavirus (COVID-19) crisis. Domestic credit remained the dominant source of money creation, with Eurosystem asset purchases being the most prominent contributor. While the sizeable and timely measures implemented by monetary, fiscal and supervisory authorities continued to support the flow of credit to the euro area economy, growth in loans to the private sector moderated and returned to pre-pandemic levels, driven by loans to firms. The total volume of external financing for firms rebounded in the first quarter of 2021. Meanwhile, the overall cost of firms' external financing rose slightly in the first four months of the year, mainly on account of increases in the cost of equity, with the cost of market-based debt and bank lending also increasing marginally.

Broad money growth moderated in April 2021. The annual growth rate of M3 fell to 9.2% in April, down from 10.0% in March (Chart 19), on account of a relatively small monthly inflow and moderation in the growth of overnight deposits. In addition to a strongly negative base effect as the large inflows seen in the initial phase of the pandemic dropped out of the annual growth figures, the fall in M3 growth also reflected smaller inflows for households' deposits and outflows for firms' deposits. That decline in households' accumulation of deposits coincided with an upturn in consumer confidence and supports expectations of an increase in consumer spending. Although the shorter-term dynamics of broad money moderated further, the pace of money creation remained high on the back of the support provided by monetary, fiscal and prudential policies. On the components side, the main driver of M3 growth was the narrow aggregate M1, which includes the most liquid components of M3. The annual growth rate of M1 fell to 12.3% in April, down from 13.6% in March, mainly as a result of developments in deposits held by firms and households. Other short-term deposits and marketable instruments continued to make a limited contribution to annual M3 growth, reflecting the low level of interest rates and investors' search for yield.

Chart 19

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 observations are for April 2021.

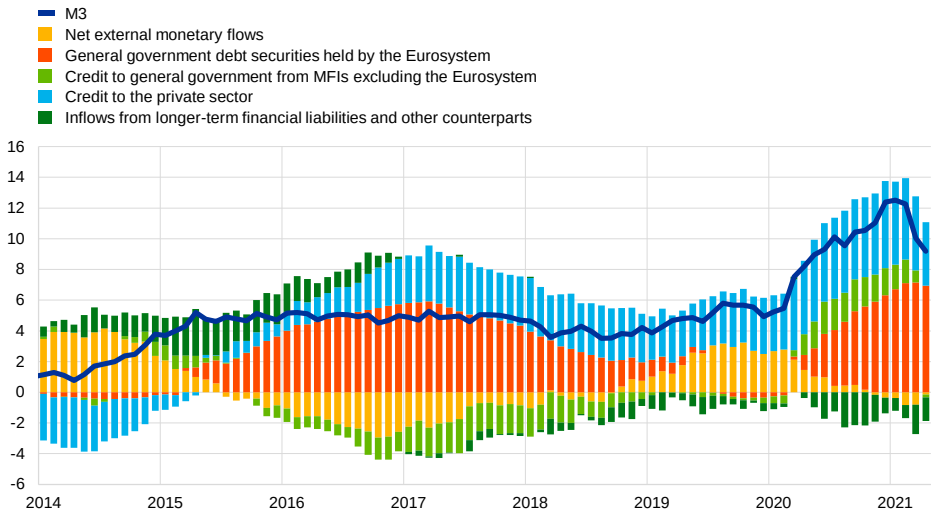
Growth in overnight deposits moderated further. The annual growth rate of overnight deposits fell to 12.7% in April, down from 14.2% in March, driven mainly by the holdings of firms and households. In the case of firms, growth in deposit holdings varied across countries in April, reflecting differences in both the liquidity needs of firms and the support measures provided by national governments. Meanwhile, the annual growth rate of currency in circulation remained broadly stable at 9.8%. Overall, money holders' strong preference for overnight deposits during the pandemic reflects precautionary motives, as well as the very low level of interest rates, which reduces the opportunity cost of holding such instruments.

Money creation continued to be driven by Eurosystem asset purchases. In April, the largest contribution to M3 growth came from the Eurosystem's net purchases of government securities under the asset purchase programme (APP) and the pandemic emergency purchase programme (PEPP) (red portion of the bars in Chart 20). Further support for M3 growth came from credit to the private sector (blue portion of the bars). Bank credit to general government stopped making a positive contribution to money creation, owing to sales of government bonds and reduced issuance of government securities (light green portion of the bars). Net external monetary flows continued to have a slight dampening effect on money creation (yellow portion of the bars). Similarly, longer-term financial liabilities and other counterparts also continued to dampen broad money growth (dark green portion of the bars), owing to developments in other counterparts, while favourable conditions for targeted longer-term refinancing operations (TLTROs), which continued to support the substitution of bank funding, made a small contribution to M3 growth.

Chart 20

M3 and its counterparts

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



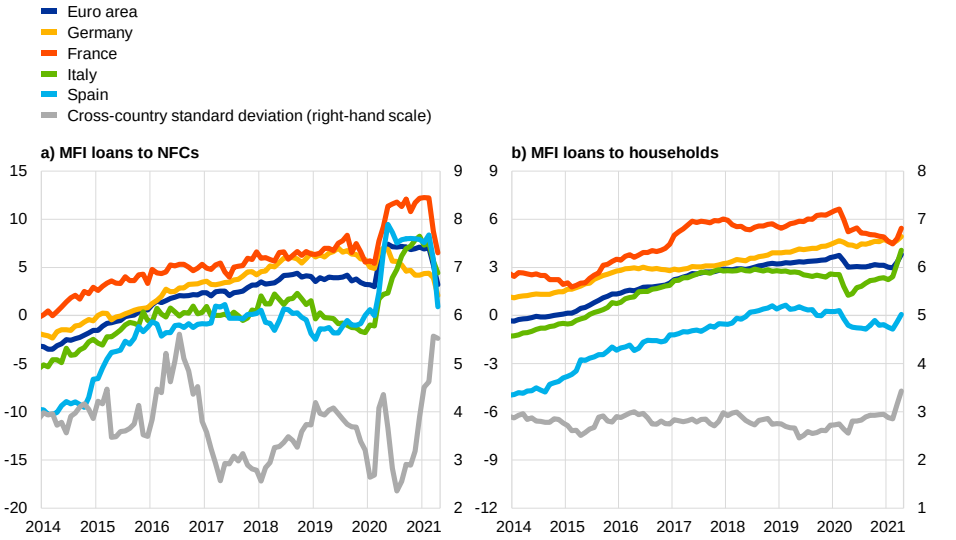
Source: ECB.
Notes: Credit to the private sector includes loans to the private sector by monetary financial institutions (MFIs) and MFIs' holdings of debt securities issued by the euro area private non-MFI sector. As such, it also covers purchases by the Eurosystem of non-MFI debt securities under the corporate sector purchase programme (CSPP). The latest observations are for April 2021.

Growth in loans to the private sector declined in April, returning to the lower levels seen prior to the pandemic. The annual growth rate of bank loans to the private sector fell to 3.2% in April, down from 3.6% in March (Chart 19). This development was mainly explained by a decline in the annual growth rate of loans to firms, which fell to 3.2% in April, down from 5.3% in March, while the annual growth rate of loans to households increased to 3.8% in April, having stood at around 3.0% since June 2020 (Chart 21). The moderation in lending to firms in April should be interpreted in the light of various developments. It may have reflected a reduction in liquidity needs, as the sectors that have been most affected by the pandemic are showing signs of recovery. Another factor was the large lending flows seen in March 2021, which were partly explained by some banks frontloading in an attempt to hit the TLTRO lending performance benchmarks in order to benefit from the attractive conditions. Firms' COVID-related reliance on longer-term loans continued to increase at the expense of shorter-term loans.

Chart 21

MFI loans in selected euro area countries

(annual percentage changes; standard deviation)



Source: ECB.
Notes: Loans are adjusted for loan sales and securitisation; in the case of non-financial corporations (NFCs), loans are also adjusted for 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 observations are for April 2021.

Total lending to households picked up in April (Chart 21). This was mainly due to loans for house purchase, the annual growth rate of which (5.4%) was the highest since the start of the global financial crisis. At the same time, the annual growth rate of consumer credit turned positive, reflecting improvements in consumer confidence and spending possibilities, standing at 0.3% in April, up from -1.7% in March. However, households appear to have increased their spending primarily by drawing down deposits accumulated over the last year. Meanwhile, the annual growth rate of other lending to households remained broadly stable at 1.5% in April. Developments in this loan category, which are largely explained by lending to small firms (sole proprietors and unincorporated partnerships), have remained subdued despite slight improvements in recent months. Although governments have helped small firms to meet their financing needs, such companies have been particularly affected by the slowdown in economic activity.

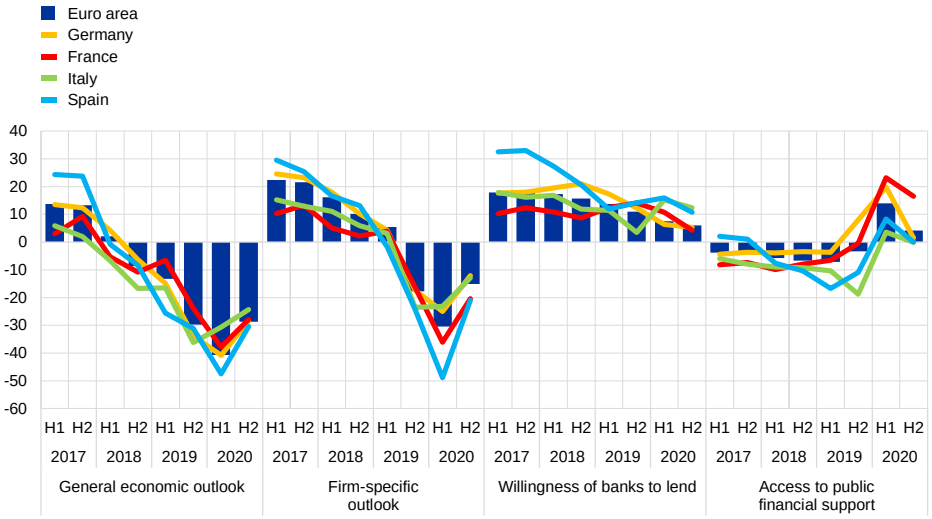
The overall moderation in the growth of loans to firms masks some heterogeneity. According to the latest round of the ECB's Survey on the Access to Finance of Enterprises in the euro area (SAFE), which covered the period from October 2020 to March 2021, fewer small and medium-sized enterprises (SMEs) reported improvements in the availability of loans in that period. A net 3% of respondent SMEs in the euro area signalled improvements in the availability of bank loans (down from 6% in the previous survey round). Micro companies were the most pessimistic in their assessment of the situation. Indeed, for the first time since mid-2015, they signalled a decline in the availability of bank loans, whereas the responses of large companies suggested that availability had returned to pre-COVID-19 levels. Meanwhile, a smaller net percentage of SMEs regarded the macroeconomic environment as having adversely affected their access to finance

(Chart 22). That net percentage was comparable to the levels seen just before the onset of the pandemic and may reflect the beneficial effects of ongoing policy support measures. At the same time, a slightly smaller net percentage of SMEs signalled an improvement in banks' readiness to provide credit. Similarly, a lower net percentage of SMEs reported improvements in access to public financial support, probably reflecting the declines observed in the use of guarantees towards the end of 2020. When asked specifically about government support schemes introduced in response to the pandemic, most respondent SMEs confirmed that they had had access to them over the last 12 months and that those schemes had helped them to meet their immediate and short-term obligations (see also Box 2 of this issue of the Economic Bulletin).

Chart 22

Changes in factors with an impact on the availability of external financing to euro area SMEs

(over the preceding six months; net percentages of respondents)



Source: ECB.
Notes: This chart refers to the following question in the SAFE survey: "For each of the following factors, would you say that they have improved, remained unchanged or deteriorated over the past six months?" Net percentages are calculated as the difference between the percentage of respondents reporting that a factor has improved and the percentage reporting that it has deteriorated. Figures refer to rounds 17 (April-September 2017) to 24 (October 2020-March 2021) of the survey.

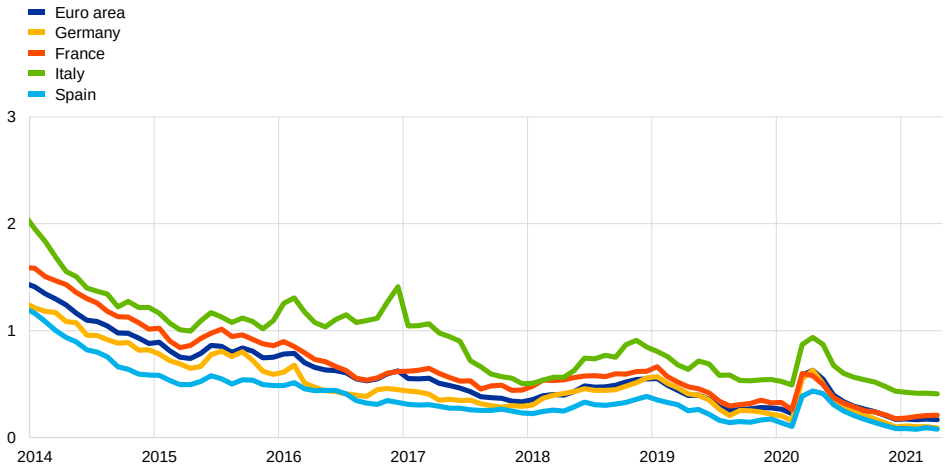
Banks have continued to benefit from favourable funding conditions, while rising credit risk is weighing on their intermediation capacity. The composite cost of debt financing for euro area banks remains below its pre-pandemic level, owing to sizeable monetary policy support and the continued support of governments and regulatory authorities (Chart 23), notwithstanding an increase in bank bond yields since the beginning of 2021. The ECB's APP and PEPP have placed downward pressure on yields, and banks have replaced some market-based funding with TLTROs at very favourable conditions. Both factors have also supported market conditions for bank bonds. Moreover, prices for covered bank bonds are being directly supported by the ECB's third covered bond purchase programme (CBPP3). Meanwhile, euro area banks' deposit rates remained broadly unchanged at historical lows in April 2021, thereby contributing to favourable debt funding conditions amid the effective pass-through of negative rates. Indeed, euro area banks have, since the onset of the pandemic, increasingly charged negative interest rates on NFCs'

deposits. At the same time, banks' ability to charge negative rates is dependent on their market power, and rates on retail deposits from households have tended to remain at or above zero, which compresses banks' net interest margins. While banks continued to strengthen their loss-absorption capacity in the fourth quarter of 2020 by increasing their capitalisation, rising credit risk and low bank profitability may hamper banks' ability to supply credit. As the April 2021 euro area bank lending survey showed, banks continued to tighten their credit standards in the first quarter of 2021 (albeit only on loans to firms and less than in the two previous quarters), reflecting an increase in their perception of risk and a decline in their tolerance of risk as a result of the pandemic.

Chart 23

Composite cost of debt financing for banks

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



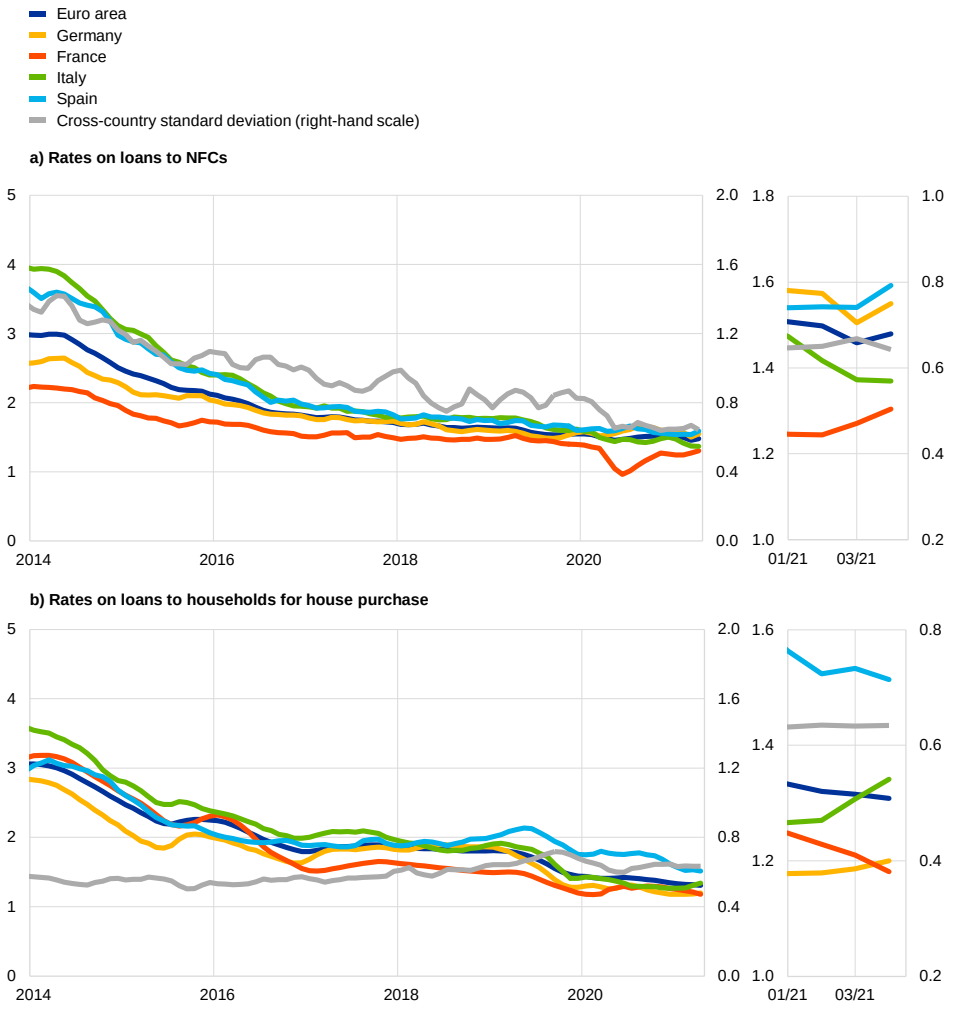
Sources: ECB, Markit iBoxx and ECB calculations.
Notes: The composite cost of deposits is calculated as the average of new business rates on overnight deposits, deposits with an agreed maturity and deposits redeemable at notice, weighted by their respective outstanding amounts. The latest observations are for April 2021.

Bank lending rates for loans to NFCs rose, but remained low. In April 2021 the composite bank lending rate for loans to NFCs increased by 17 basis points to stand at 1.56%, after declining in the first quarter of the year, while the corresponding rate for loans to households for house purchase remained unchanged at a historical low of 1.31% (Chart 24). These developments reflect the ongoing impact of the policy measures that have been implemented by the ECB, supervisory authorities and national governments in support of credit supply conditions, particularly for the firms that have been worst affected by the pandemic. The spread between bank lending rates on very small loans and rates on large loans has stabilised at pre-pandemic levels. At the same time, uncertainty regarding the pandemic's longer-term impact on the economy – and thus borrowers' creditworthiness and banks' balance sheets – remains high. All existing policy support measures remain essential in order to prevent that uncertainty from precipitating a broad-based tightening of financing conditions, amplifying the economic impact of the pandemic.

Chart 24

Composite bank lending rates in selected euro area countries

(percentages per annum (three-month moving averages); standard deviation)



Source: ECB.
Notes: These indicators of the total cost of bank lending are 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 observations are for April 2021.

The total volume of external financing for firms rose slightly in the first quarter of 2021. The annual growth rate of external financing stood at 4.5% in March 2021, with the shorter-term dynamics of financing reversing the downward trend that began to be observed at the end of last summer. These flows have been driven mostly by borrowing from banks and, to a lesser extent, net issuance of listed shares (panel (a) of Chart 25). Firms have reduced their market-based borrowing, while external financing flows have continued to benefit from favourable financing conditions. The motives underlying borrowing from banks are heterogeneous across sectors: export-oriented sectors are likely to have benefited from improved global conditions, and construction activity has been buoyant in some countries, while other sectors more exposed to the fallout from the pandemic have needed higher levels of liquidity.

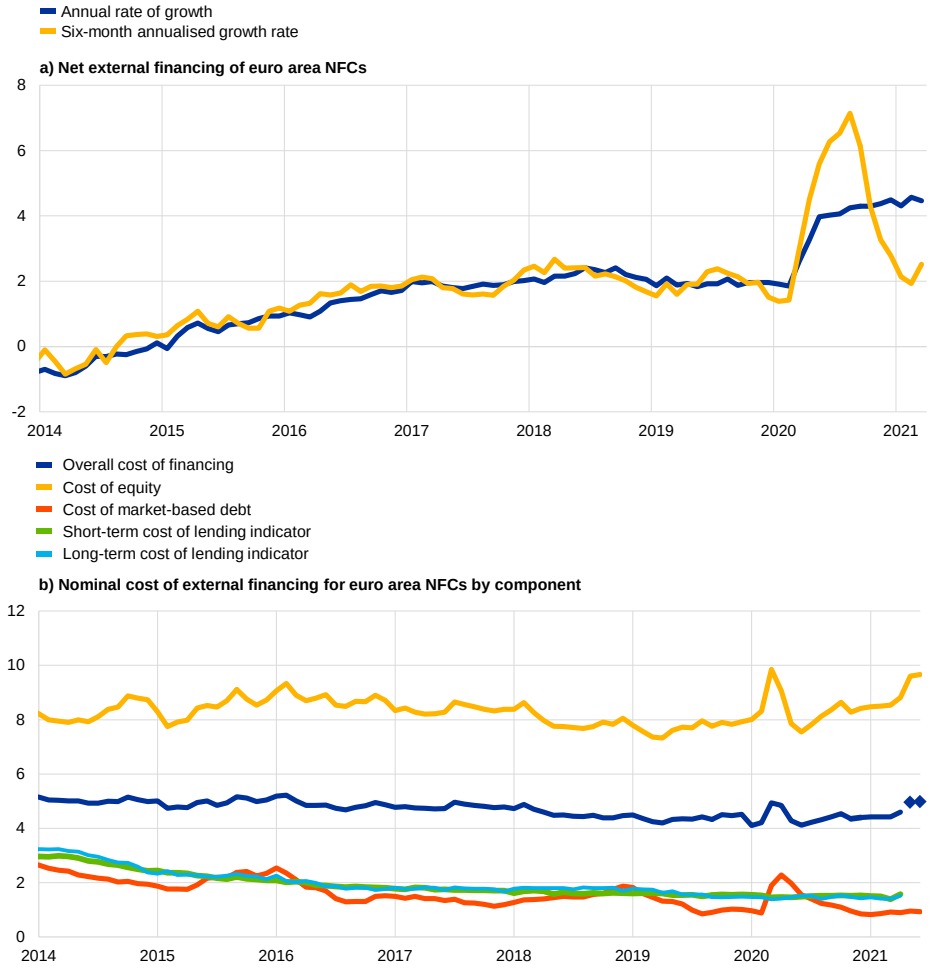
The total nominal cost of external financing for NFCs (comprising bank lending, debt issuance in the market and equity finance) remained low, but increased

slightly. It stood at 4.6% at the end of April (panel (b) of Chart 25), around 30 basis points below the peak seen in March 2020 and 50 basis points higher than the historical low observed in June 2020. The slight increase seen in the overall cost of financing in the first four months of 2021 was related to the higher cost of equity, which reflected increases in both risk-free rates and the equity risk premium. At the same time, the further compression of corporate bond spreads offset those increases in risk-free rates, so the cost of market-based debt remained virtually unchanged overall. The cost of bank lending – primarily long-term lending – also increased slightly. Between the end of April and 9 June 2021, the overall cost of financing is estimated to have increased by a further 35 basis points or so, primarily on account of an increase in the cost of equity. This was due to a slight increase in the equity risk premium, following an exceptionally strong rise in long-term corporate earnings expectations (as also evidenced by business surveys), while discount rates remained at low levels overall. With earnings expectations increasing so strongly and discount rates remaining low, models would normally have expected equity prices to increase somewhat more strongly than they did, which is therefore mechanically reflected in a slightly higher risk premium. Over the same period, the cost of market-based debt increased only marginally – with higher risk-free rates being almost entirely offset by the further compression of corporate bond spreads – in both the investment grade and the high-yield segments.

Chart 25

External financing of euro area NFCs

(percentage changes – panel (a); percentages per annum – panel (b))



Sources: Eurostat, Dealogic, ECB, Merrill Lynch, Bloomberg, Thomson Reuters and ECB estimates.
Notes: Panel (a) – Net external financing is the sum of MFI loans, net issuance of debt securities and net issuance of listed shares. MFI loans are adjusted for sales, securitisation and cash pooling activities. Panel (b) – The overall cost of financing for NFCs is calculated as a weighted average of the costs of bank borrowing, market-based debt and equity, based on their respective outstanding amounts. The dark blue diamonds indicate nowcasts for the overall cost of financing in May and June 2021, assuming that bank lending rates remain unchanged at their April 2021 levels. The latest observations for panel (a) are for March 2021. The latest observations for panel (b) relate to 9 June 2021 for the cost of market-based debt (monthly average of daily data), 4 June 2021 for the cost of equity (weekly data) and April 2021 for the cost of lending (monthly data).

6 Fiscal developments

As a result of the very sharp economic downturn during the coronavirus (COVID-19) pandemic and the strong fiscal reaction, the general government budget deficit in the euro area increased strongly, to 7.3% of GDP in 2020 from 0.6% in 2019. This year, as new waves of the pandemic have hit euro area countries, many emergency measures have been extended and additional recovery support has been put in place. As a result, the June 2021 Eurosystem staff macroeconomic projections foresee only a marginal improvement in the general government budget balance in the euro area to -7.1% of GDP in 2021. However, as the pandemic abates and the economic recovery takes hold, the deficit ratio is expected to fall more swiftly, to 3.4% in 2022 and 2.6% at the end of the projection horizon in 2023. Euro area debt is projected to peak at just below 100% of GDP in 2021 and to decline to around 95% of GDP in 2023, which is about 11 percentage points higher than before the coronavirus crisis. Nonetheless, an ambitious and coordinated fiscal stance remains crucial, as a premature withdrawal of fiscal support would risk weakening the recovery and amplifying the longer-term scarring effects. National fiscal policies should thus continue to provide critical and timely support to the firms and households most exposed to the ongoing pandemic and the associated containment measures. At the same time, fiscal measures should remain temporary and countercyclical, while ensuring that they are sufficiently targeted in nature to address vulnerabilities effectively and to support a swift recovery in the euro area economy. As a complement to national fiscal measures, the Next Generation EU (NGEU) package is expected to play a key role by contributing to a faster, stronger and more uniform recovery. It should increase economic resilience and the growth potential of EU economies, particularly if the funds are used for productive public spending and are accompanied by productivity-enhancing structural policies. According to the June macroeconomic projections, the combination of NGEU grants and loans should provide additional stimulus of around 0.5% of GDP per year between 2021 and 2023.

According to the June 2021 Eurosystem staff macroeconomic projections, the euro area general government budget balance will improve only marginally in 2021, but should recover strongly as of 2022.[11] The general government deficit ratio for the euro area increased from 0.6% of GDP in 2019 to 7.3%[12] of GDP in 2020, the largest deficit since the introduction of the euro. It is projected to decline only marginally to 7.1% in 2021, but then more strongly to 3.4% in 2022 and 2.6% in 2023 (Chart 26). The rise in the budget deficit in 2020 was largely attributable to a deterioration in the cyclically adjusted primary balance on the back of economic support measures in response to the pandemic amounting to around 4% of GDP. The crisis and recovery support is now projected to increase to about 4½% of GDP in 2021. This reflects the fact that governments have prolonged emergency measures, gradually expanded their size and/or adopted new ones to support the recovery, including measures to be funded through NGEU. The deficit increase last year was also partly the result of a large negative cyclical component, which is expected to start

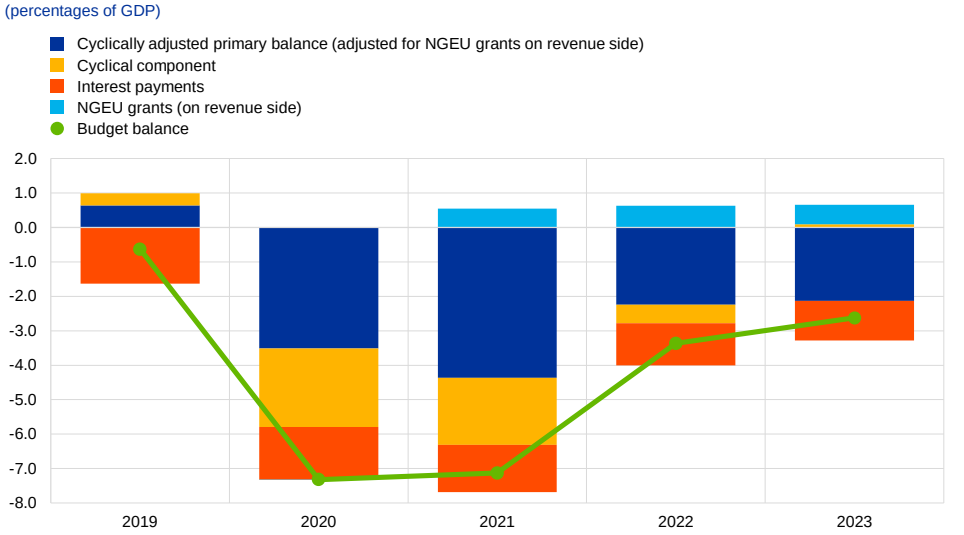
11 See the "Eurosystem staff macroeconomic projections for the euro area, June 2021", published on the ECB's website on 10 June 2021.

12 The euro area budget balance for 2020 has been updated compared to the Eurostat data release of 22 April 2021 (first notification at -7.2% of GDP) following an update of the data for Germany.

declining, albeit only marginally, in 2021. The more significant improvement in the budget balance from 2022 onwards is projected to be driven by a higher cyclically adjusted primary balance, as a large share of the emergency measures (which are not funded by NGEU grants) will expire. Moreover, the contribution from the economic cycle is expected to increase swiftly as of 2022. To a lesser extent, but over the whole projection horizon, the improvement in the budget balance will also be helped by gradually falling contributions from interest payments.

Chart 26

Budget balance and its components



Sources: ECB and June 2021 Eurosystem staff macroeconomic projections.
Note: The data refer to the aggregate general government sector of euro area countries.

The euro area projections include NGEU grants of around 0.6% of GDP in each year of the projection horizon which, together with a limited amount of loans, are assumed to finance 0.5% of GDP of additional stimulus per year. NGEU grants incorporated in the projections amount to about 1¾% of GDP over the period 2021-23. Together with loans of about 0.3% of GDP, NGEU is assumed to finance close to 1.9% of GDP of spending, of which slightly more than 1.5% of GDP would go to additional stimulus, while the rest would be used to finance existing plans.

The aggregate fiscal stance was highly expansionary in 2020 and is projected to remain expansionary in 2021.[13] A tightening of the fiscal stance from the very high levels of support is expected to take place in 2022 as the fiscal support fades along with the expiry of pandemic and temporary support measures. In 2023 the fiscal

[13] 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. Given that the higher budget revenues related to NGEU grants from the EU budget do not have a contractionary impact on demand, the cyclically adjusted primary balance is in this context adjusted to exclude those revenues. Note also that the euro area fiscal projections referred to in this section do not include the European supranational deficit and debt related to NGEU transfers. 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.

stance is projected to be broadly neutral.[14] This notwithstanding, the level of fiscal support to the economic recovery remains large over the whole projection horizon, which is reflected in the overall primary fiscal balance remaining firmly negative, improving only gradually from -5.8% in 2021 to -1.5% of GDP in 2023.

In addition to the fiscal support for their economies, euro area countries have provided sizeable loan guarantee envelopes to bolster the liquidity positions of firms. In total, these guarantee envelopes amount to around 19% of GDP for the euro area in 2021, with the size of the envelope and the take-up rate differing substantially across countries. The loan guarantees are contingent liabilities for governments and any calls on the guarantees will therefore constitute additional public spending that increases government debt.

The budget balance in 2021 is now projected to be significantly lower than previously projected in the March 2021 ECB staff macroeconomic projections, and the outlooks for 2022 and 2023 have also been revised down somewhat. Specifically, the euro area general government budget balance as a share of GDP has been revised down by 1.0 percentage points for 2021 and by 0.2 and 0.3 percentage points, respectively, for the subsequent two years. These revisions are due to the higher discretionary fiscal measures in response to the pandemic, particularly in 2021, which are only partly compensated by a stronger contribution from the economic cycle. The projected interest payments remain broadly the same as in the March projections.

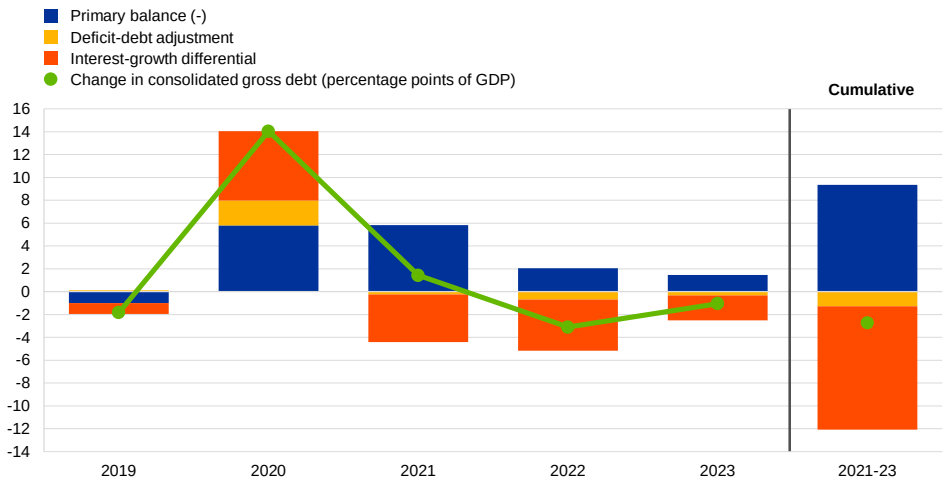
The euro area aggregate public debt-to-GDP ratio increased strongly in 2020 and is projected to peak at just below 100% in 2021, before declining gradually to about 95% in 2023. The 14 percentage point increase in the debt ratio in 2020 reflects a combination of a high primary deficit and a very adverse interest-growth differential, but also a significant deficit-debt adjustment owing to, among other things, liquidity support in response to the pandemic. In 2021 a still high primary deficit will be only partly compensated by a significant debt-reducing contribution from the interest-growth differential. In 2022 and 2023, however, the debt ratio will start falling as smaller primary deficits are more than offset by favourable contributions from interest-growth differentials and, to a lesser extent, by negative deficit-debt adjustments (Chart 27). As a result, at the end of the projection horizon in 2023, the debt-to-GDP ratio is expected to be around 11 percentage points above its pre-crisis level. It should, however, be noted that the coronavirus crisis has had a somewhat smaller adverse impact on the debt path than was generally expected in the initial phase of the crisis.

[14] The fiscal stance is assessed at -4.2 percentage points of GDP in 2020 and is projected to be -1, +2.1 and +0.1 percentage points of GDP in 2021, 2022 and 2023, respectively, after adjustment for revenues related to NGEU grants.

Chart 27

Drivers of change in euro area government debt

(percentages of GDP, unless otherwise indicated)



Sources: ECB and June 2021 Eurosystem staff macroeconomic projections.
Note: The data refer to the aggregate general government sector of euro area countries.

National fiscal policies should continue to provide critical and timely support to the firms and households most exposed to the ongoing pandemic and the associated containment measures. A premature withdrawal of fiscal support would risk weakening the recovery and amplifying the longer-term scarring effects. At the same time, fiscal measures should remain temporary and countercyclical, while ensuring that they are sufficiently targeted in nature to address vulnerabilities effectively and to support a swift recovery in the euro area economy. Fiscal sustainability will be helped by the expected economic recovery and, importantly, also by financing conditions, which should continue to be supportive. It remains essential, however, that Member States gradually reduce budgetary imbalances once economic activity has sufficiently recovered. This process can be amplified by a decisive shift towards a more growth-friendly composition of public finances and structural reforms that raise the growth potential of euro area economies, as also put forward in the Commission's recommendations for fiscal policies issued on 2 June (for details, see the box entitled "Implications of the 2021 stability programmes for fiscal policies in the euro area" in this issue of the Economic Bulletin). NGEU's Recovery and Resilience Facility can provide important support in this respect, not least by accelerating the green and digital transitions.

Boxes

1 Developments in the euro area current account during the pandemic

Prepared by Michael Fidora, Fausto Pastoris and Martin Schmitz

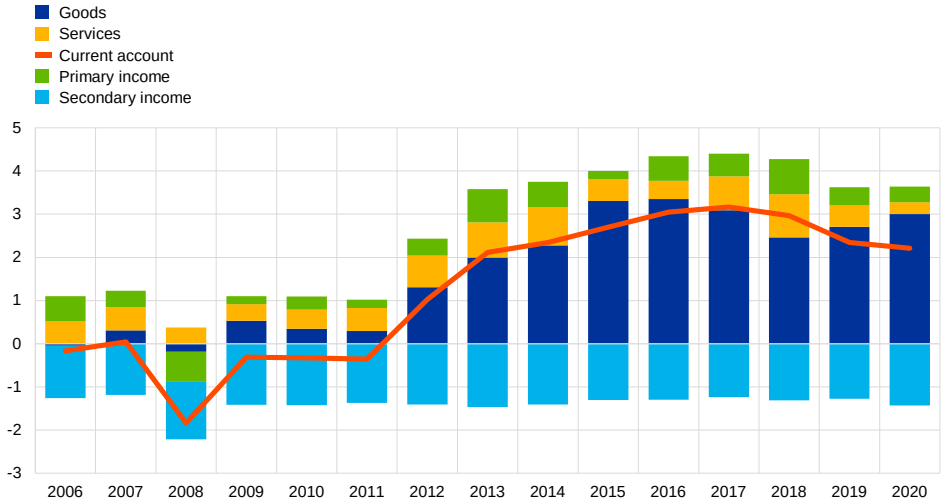
Amid elevated volatility in economic activity and international trade due to the coronavirus (COVID-19) pandemic, the euro area current account surplus narrowed only slightly in 2020 compared with 2019, from 2.3% to 2.2% of GDP (Chart A, panel a). However, the moderate decrease in the current account surplus in relation to GDP masks a sizeable decline in its value, from €280 billion in 2019 to €250 billion in 2020, as nominal GDP fell sharply over this period, Moreover, pronounced shifts took place in the trade composition and geographic breakdown of the surplus, as well as in the underlying gross external (credit and debit) transactions. This box reviews the main developments in the euro area current account in 2020, with a focus on how the pandemic affected its various components.

Chart A

Developments in the euro area current account

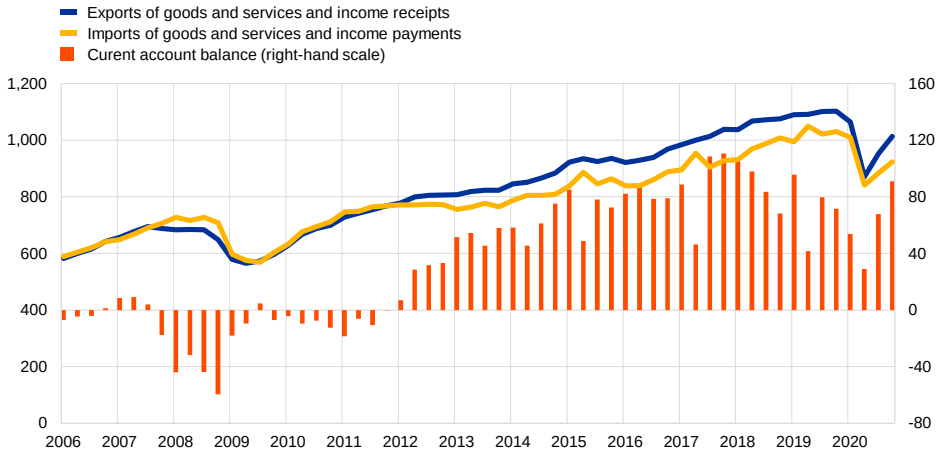
a) Euro area current account balance

(percentages of GDP)



b) Quarterly euro area current account transactions

(EUR billions; seasonally and working-day adjusted)



Sources: ECB and Eurostat.

External transactions in the euro area current account contracted sharply in the first half of 2020 following the outbreak of the pandemic and the introduction of measures to contain its spread (Chart A, panel b). In nominal terms the euro area current account surplus was €55 billion lower in the first half of 2020 than in the first half of 2019.[1] This resulted from a steep fall in gross credit flows, i.e. exports of goods and services and income receipts from abroad, which more than offset the contraction in gross debit flows, i.e. imports of goods and services and income payments to non-euro area residents. As external demand recovered during the second half of the year and euro area exports rebounded more strongly than imports, the current account surplus was €7 billion higher in the second half of 2020 than in the second half

[1] Data on intra-annual developments are presented in seasonally and working day-adjusted terms.

of 2019.[2] Overall, in nominal terms, the current account surplus was more than 10% lower in 2020 than in 2019.

The surplus on trade in goods increased to 3.0% of GDP in 2020, as the drop in euro area exports was outweighed by an even sharper decrease in imports. In 2020 the surplus on the balance of trade in goods increased by €17 billion (or 0.3 percentage points in terms of GDP). This masked a significant decline in the value of goods exports, by €216 billion (or 0.8 percentage points in terms of GDP), which was more than offset by a stronger decrease in imports, by €234 billion (or 1.1 percentage points in terms of GDP). Statistics for trade in goods show a notable reduction in the euro area deficit in energy, linked to both favourable developments in energy prices and lower import volumes due to the fall in economic activity. On the other hand, the euro area's surplus in manufactured goods decreased significantly amid the disruptions to global value chains, which were also reflected in a marked reduction in the euro area deficit in intermediate goods.[3]

The economic repercussions of the pandemic are particularly visible in the balance of trade in services, where travel restrictions led to a sharp reduction in the euro area surplus on travel services (Chart B). The surplus on the balance of trade in services decreased in 2020 by €29 billion (or 0.2 percentage points in terms of GDP). This decline was mainly driven by lower surpluses for travel services (down from 0.3% of GDP in 2019 to 0.1% of GDP in 2020) and transport services (down from 0.2% of GDP to 0.1% of GDP). For travel services, this reflected a collapse in exports (by around 65% in nominal terms compared with 2019) due to the travel restrictions introduced to contain the pandemic.[4] On the other hand, the surplus for telecommunications, computer and information services increased (from 0.8% of GDP to 0.9% of GDP), driven by higher exports. The large shifts in the deficits for charges for the use of intellectual property (which increased by 0.2 percentage points in terms of GDP) and research and development services (which decreased by 0.4 percentage points in terms of GDP) reflected a pronounced volatility in euro area imports of these services in recent years, linked to the activities of large multinational enterprises.[5]

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2 While the trade balance improved in the second half of the year, the income balance deteriorated further. The contraction of the euro area income balance in 2020 was due to a worsening of the deficit in secondary income and a decrease in the surplus on investment income. The investment income balance reflects the euro area's earnings on net foreign assets. Developments in the euro area's net foreign assets (the net international investment position) were in recent years driven not only by the current account balance but also by the valuation channel (i.e. fluctuations in the valuations of external assets and liabilities due to exchange rate and other asset price changes). For further details see the box entitled "Factors driving the recent improvement in the euro area's international investment position", *Economic Bulletin*, Issue 3, ECB, 2018.

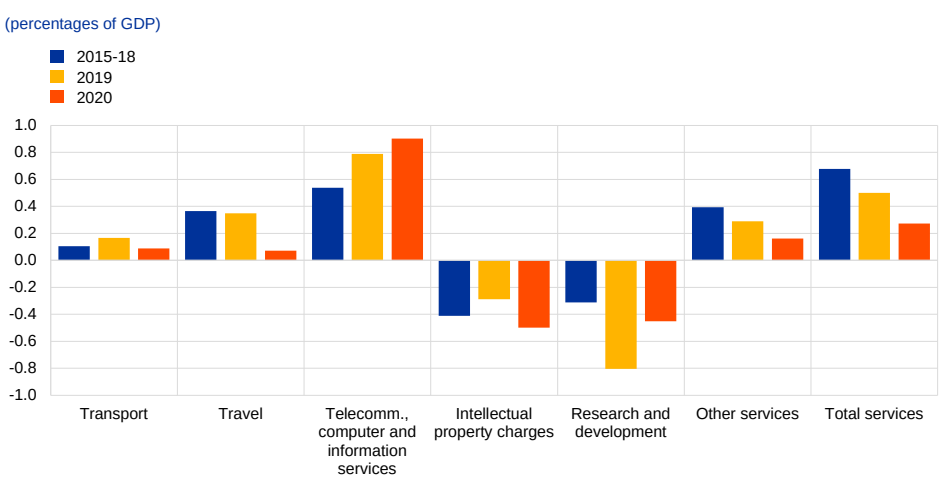
3 See also the box entitled "The great trade collapse of 2020 and the amplification role of global value chains", *Economic Bulletin*, Issue 5, ECB, 2020.

4 See also the box entitled "Developments in the tourism sector during the COVID-19 pandemic", *Economic Bulletin*, Issue 8, ECB, 2020.

5 For additional information on the impact of multinationals' operations on the euro area's external accounts see the article entitled "Multinational enterprises, financial centres and their implications for external imbalances: a euro area perspective", *Economic Bulletin*, Issue 2, ECB, 2020; and Lane, P.R., "Maximising the user value of statistics: lessons from globalisation and the pandemic", speech at the European Statistical Forum (virtual), 26 April 2021.

Chart B

Developments in the euro area services trade balance by main type of service

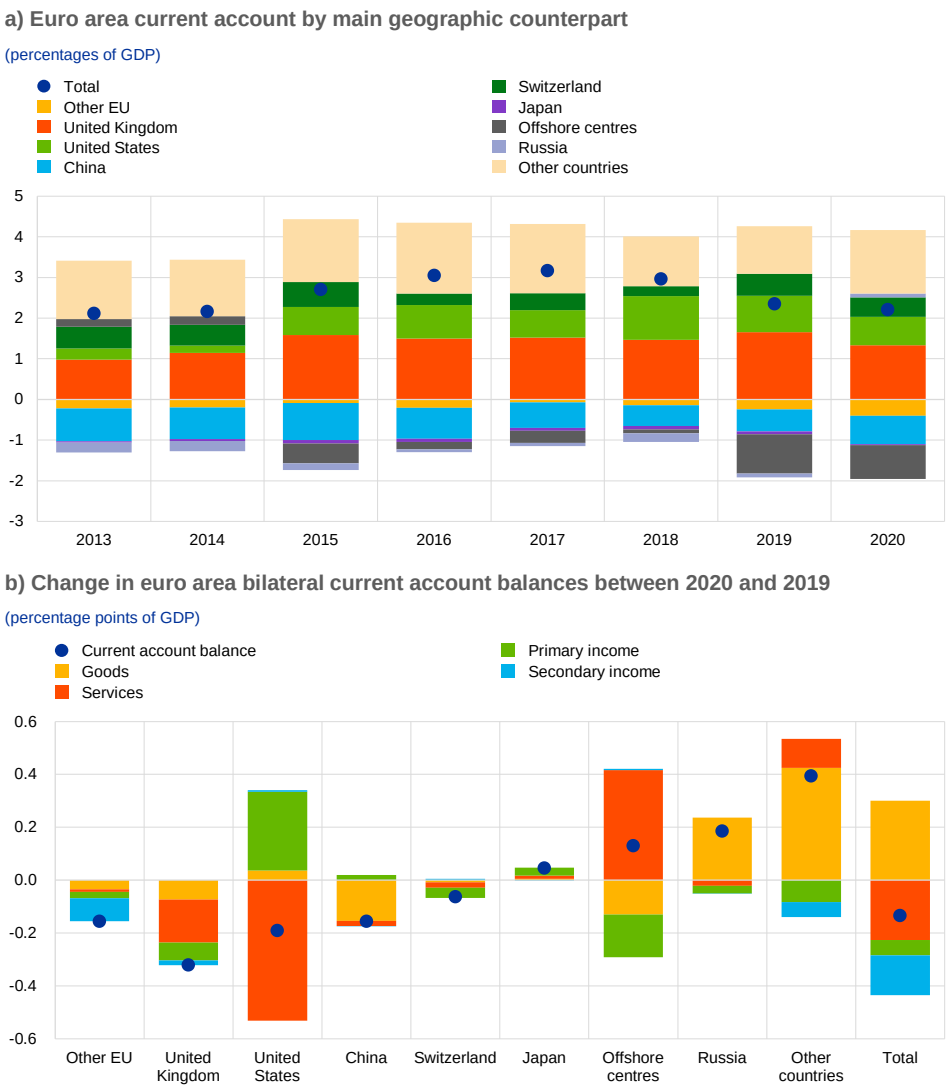


Source: ECB.
Note: "Other services" comprises the categories of trade in services not shown elsewhere in the chart.

Data on the geographic counterparts of the euro area current account show that in 2020 the euro area recorded a decline in its largest bilateral surpluses (Chart C, panel a). As in recent years, the euro area's largest bilateral surpluses in 2020 were vis-à-vis the United Kingdom, the United States and Switzerland (1.3%, 0.7% and 0.5% of GDP respectively). The group "other countries" – including major oil producers – also contributed positively to the euro area's external surplus (with a surplus of about 1.6% of GDP), while the euro area ran a current account deficit vis-à-vis China (0.6% of GDP) and the group "offshore centres" (0.7% of GDP).

Chart C

Geographic breakdown of the euro area current account



Sources: ECB and Eurostat.
Notes: "Other EU" comprises the non-euro area EU Member States and those EU institutions and bodies that are considered for statistical purposes as being outside the euro area, such as the European Commission and the European Investment Bank. "Offshore centres" comprises countries or jurisdictions outside the EU that provide financial services to non-residents on a scale that is disproportionate to the size of their domestic economy, including for example Hong Kong SAR and the Cayman Islands. "Other countries" includes all countries and country groups not shown in the chart, as well as unallocated transactions.

The most pronounced changes in the geographic breakdown of the euro area current account balance in 2020 were declining surpluses vis-à-vis the United Kingdom and the United States, and an increasing surplus vis-à-vis the group "other countries" (Chart C, panel b). The reductions in the surpluses vis-à-vis the United Kingdom and the United States were mainly driven by services. In the case of the United Kingdom this was primarily due to a significant decrease in euro area travel exports amid the pandemic travel restrictions, while for the United States it also reflected a marked increase in payments for the use of intellectual property, related to the operations of multinational enterprises.[6] The goods surplus vis-à-vis the group

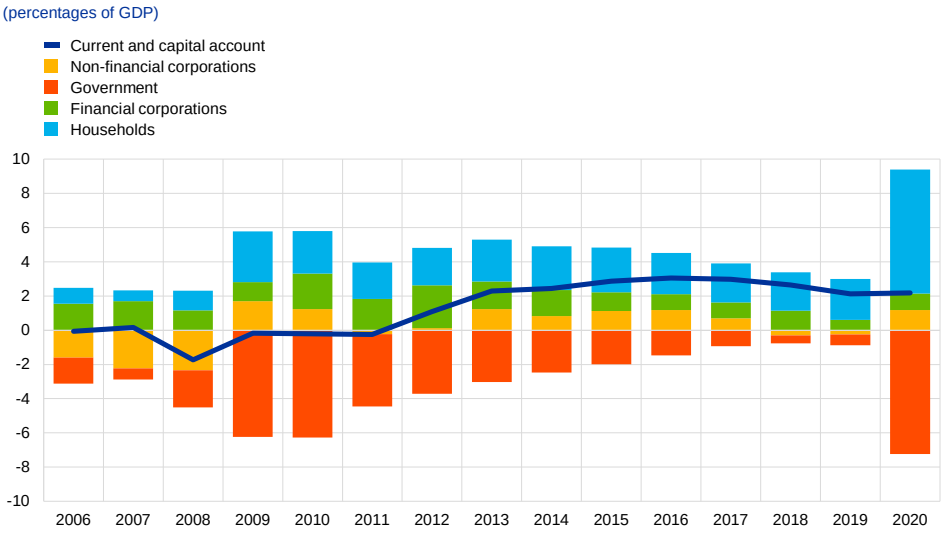
[6] These operations are also reflected in a corresponding reduction in the euro area services deficit vis-à-vis offshore centres.

"other countries" increased strongly owing to the aforementioned decline in energy imports, which was also the driver of the shift from a bilateral current account deficit to a surplus vis-à-vis Russia. The goods deficit vis-à-vis China increased further in 2020, partly reflecting an increase in imports of medical supplies linked to the pandemic.

From a saving/investment perspective, the stability of euro area net lending to the rest of the world in 2020 masked unprecedented increases in net lending by the household sector and in net borrowing by the general government sector (Chart D). The need to contain the repercussions of the pandemic on the economy abruptly halted the steady reduction in the net borrowing of the general government sector observed in recent years, with euro area governments' net borrowing increasing to 7.3% of GDP in 2020. However, this was almost fully offset by a strong increase in euro area households' net lending (to 7.3% of GDP), reflecting both precautionary and forced savings.[7] As net lending of both the non-financial and financial corporation sectors also increased in 2020 – albeit more modestly – euro area net lending to the rest of the world was stable overall at around 2.2% of GDP.

Chart D

Euro area sectoral net lending/borrowing and the current and capital account balance



Sources: ECB and Eurostat.
Notes: The sectoral decomposition of euro area net lending/borrowing reflects the euro area domestic sectoral balances taken from the non-financial sectoral accounts data. The euro area current and capital account reflects the euro area's net lending/borrowing to/from the rest of the world as included in the balance of payments data. Minor discrepancies may exist between the two indicators as a result of discrepancies between the data sources.

The current account balances of euro area countries developed heterogeneously in 2020, with countries highly dependent on tourism experiencing large deteriorations in their trade balances (Chart E). These sharp movements, mainly linked to a pronounced drop in travel exports, led to a sizeable deterioration in the current account balances of Spain (from 2.1% to 0.7% of GDP), Portugal (from 0.4% to -1.2% of GDP) and Greece (from -1.5% to -6.7% of GDP). Malta and Cyprus also recorded sharp deteriorations in their current account balances, mainly due to declining net exports in travel and other services. At the same

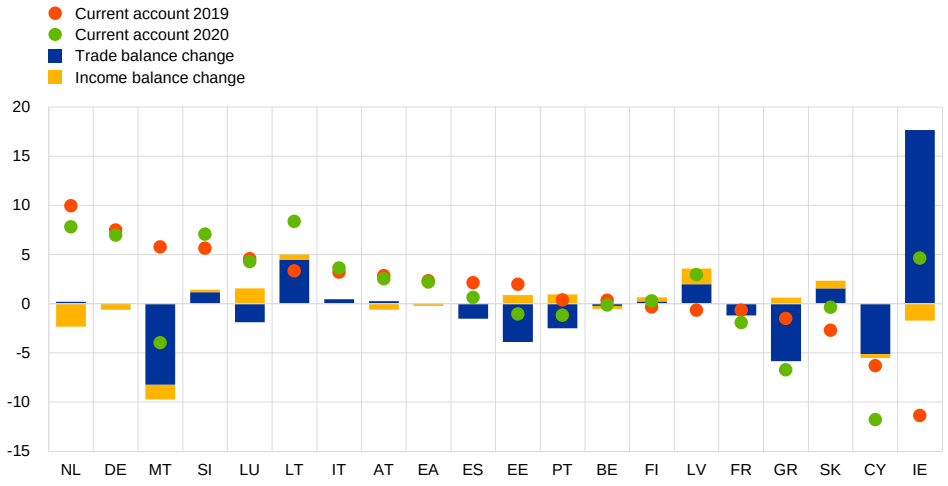
7 See also the box entitled "COVID-19 and the increase in household savings: precautionary or forced?", *Economic Bulletin*, Issue 6, ECB, 2020.

time, Ireland recorded a strong improvement in its current account balance, driven by changes in services trade – and to a lesser extent in goods trade – reflecting mainly the activities of large multinational enterprises.[8]

Chart E

Current account changes in euro area countries between 2020 and 2019

(percentages of GDP; percentage points)



Sources: ECB and Eurostat.
Notes: The trade balance incorporates the goods and services balances. The income balance incorporates the primary and secondary income balances. "EA" stands for "euro area".

[8] The exceptional improvement in Ireland's services balance in 2020 was due to a strong decrease in research and development services imports, in the context of pronounced volatility in Ireland's external accounts due to the very large impact of the operations of multinationals.

2 The impact of fiscal support measures on the liquidity needs of firms during the pandemic

Prepared by Roberto A. De Santis, Annalisa Ferrando and Elena Sofia Gabbani

European governments responded to the outbreak of the coronavirus (COVID-19) pandemic by deploying large fiscal packages with the aim of supporting households, workers and firms. After nearly a year of fiscal support, information on how these packages have been used during this time to help firms' liquidity needs in the short and medium term was gathered through the survey on the access to finance of enterprises (SAFE).[1] The government fiscal measures are classified into three main groups: i) payroll support;[2] ii) tax cuts and tax moratoria; and iii) other types of support.[3] This box provides a summary of the survey results, grouping the outcomes for individual countries in four distinct sectors (industry, construction, wholesale and retail trade, and other business services).[4]

Two-thirds of the firms surveyed made use of at least one government policy support measure introduced in response to the pandemic. Around 55% of the large euro area firms and 48% of the euro area SMEs surveyed tapped government support to ease their wage bills; around 28% of the large firms and 25% of the SMEs benefited from tax cuts and tax moratoria; and around 24% of the large firms and 32% of the SMEs made use of other government support schemes (Chart A, panel a).

1 The biannual SAFE was conducted between 8 March and 22 April 2021. Euro area firms were asked to report on changes in their financial situation and on the need for and availability of external financing during the period between October 2020 and March 2021. The total sample size was 11,007 firms, of which 10,054 (91%) are SMEs. All figures in this box are weighted by size class, economic activity and country to reflect the economic structure of the underlying population of firms. See the SAFE report.

2 Payroll support refers to government subsidies in the form of subsidised wages for employees who temporarily saw a full or partial reduction of their working hours, so-called short-time work schemes.

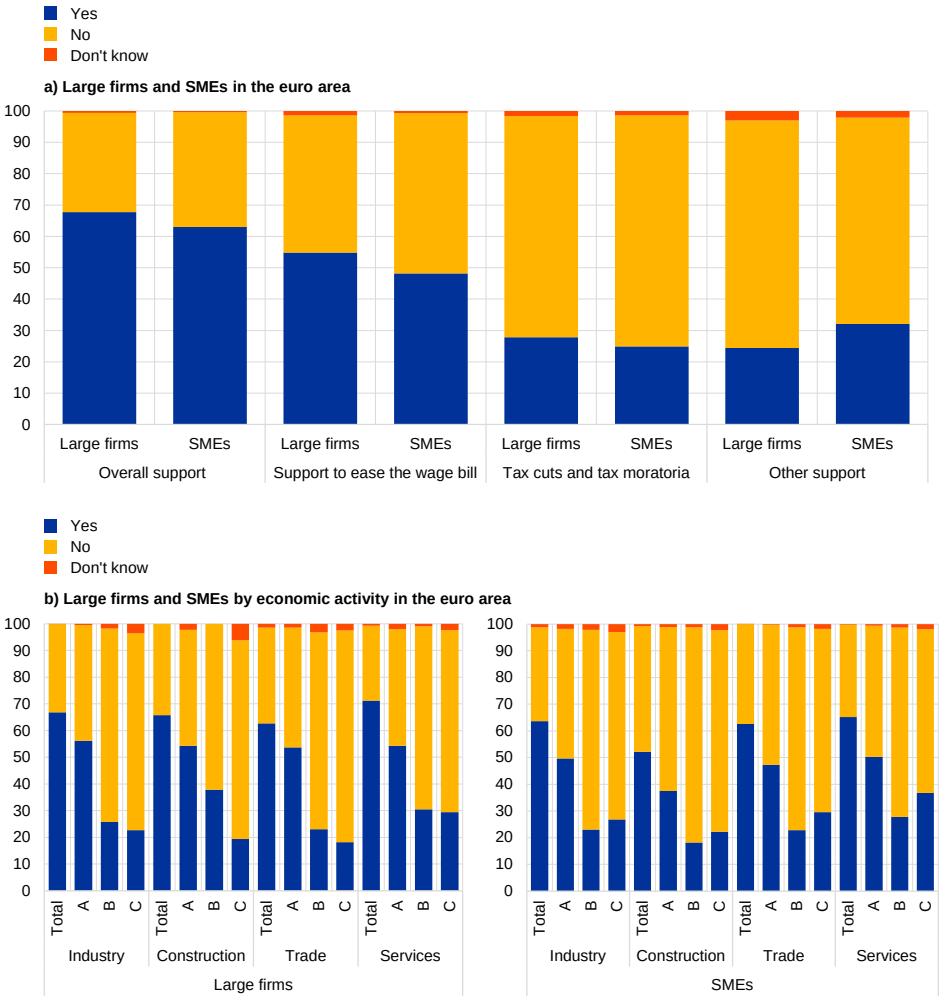
3 Although not specified in the questionnaire, this third category might include several schemes related to government support, such as bank loan guarantees not used for the wage bills, direct financial aid, recapitalisation and restructuring funds. See also the box entitled Government support policies during the COVID-19 period in the SAFE report for further details on the ad hoc questions introduced in the SAFE.

4 This box complements related assessments of government schemes. Albertazzi et al. assess how the announced public loan guarantee schemes might affect the scale of losses that banks may face. Falagiarda et al. discuss the characteristics of these schemes and their take-up across the larger euro area countries. Anderson et al. provide a summary of the credit support measures in Europe's five largest economies. A 2021 OECD study provides a summary of liquidity and structural support measures globally. See Albertazzi, U., Bijsterbosch, M., Grodzicki, M., Metzler, J. and Ponte Marques, A., "Potential impact of government loan guarantee schemes on bank losses", *Financial Stability Review*, ECB, May 2020; Falagiarda, M., Prapiestis, A. and Rancoita, E., "Public loan guarantees and bank lending in the COVID-19 period", *Economic Bulletin*, Issue 6, ECB, 2020; Anderson, J., Papadia, F. and Véron, N., "COVID-19 credit-support programmes in Europe's five largest economies", *Working Paper*, 03/2021, Bruegel, 2021; and *One year of SME and entrepreneurship policy responses to COVID-19: Lessons learned to "build back better"*, OECD, April 2021.

Chart A

Percentage of euro area enterprises that received government fiscal support in response to the pandemic: size and sectoral breakdown

(percentage of respondents)



Source: ECB and European Commission survey on the access to finance of enterprises (SAFE).
Note: "A" refers to government payroll support; "B" refers to government support in the form of tax cuts and tax moratoria; "C" refers to other government support schemes; "Total" refers to the aggregate of the policy schemes (i.e. at least one type of policy support received).

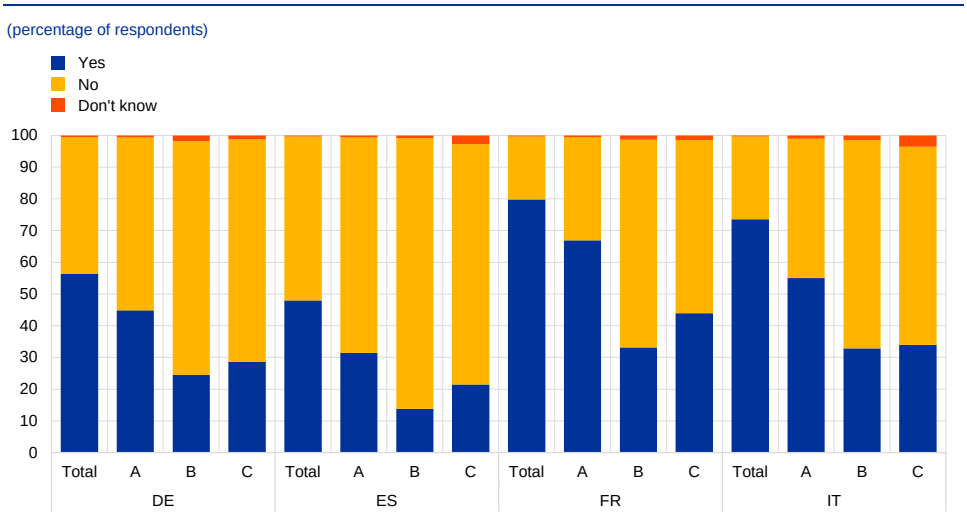
Across sectors, government support to SMEs was higher in industry and services than in construction. Activities that were severely affected by social distancing measures, such as hospitality, travel, entertainment and culture, are typically run by small and medium-sized enterprises (SMEs) with up to 249 employees, i.e. the type of companies that feature most prominently in the SAFE. For these types of activity, SMEs received relatively more support than large firms in the form of other government support schemes, in part reflecting the fact that country-specific policies were mainly designed to help smaller firms. Government support to SMEs was relatively higher in industry and services than in construction, particularly in the form of payroll support. Instead, large firms benefited from government support to ease the wage bill across all sectors (Chart A, panel b). Around half of the surveyed SMEs in industry, wholesale and retail trade (labelled "Trade" in the charts) and other business services (labelled "Services") and 37% of SMEs in

construction received government support to ease their wage bills; these shares decline to around one-quarter and 18% respectively for support in the form of tax cuts and tax moratoria. The divergence across sectors is larger for support in the form of other government support schemes (Chart A, panel b).

Government support varied across countries. A lower fraction of SMEs in Spain and Germany made use of fiscal support in relative terms compared to that of SMEs in France and Italy, independently of the type of support (Chart B). Specifically, around two-thirds of firms in France used government liquidity support to ease their wage bills, while only one-third of firms in Spain said they received such support. As for support in the form of tax cuts and tax moratoria, one-third of firms in Italy said that they had benefited from such support, while this share declines to 14% in Spain. 44% of the surveyed firms in France also made use of other government support schemes, while the equivalent figure for firms located in Spain is around 21%.

Chart B

Percentage of SMEs that used government fiscal support in response to the pandemic: country breakdown



Source: ECB and European Commission survey on the access to finance of enterprises (SAFE).
Note: "A" refers to government payroll support; "B" refers to government support in the form of tax cuts and tax moratoria; "C" refers to other government support schemes; "Total" refers to the aggregate of the policy schemes (i.e. at least one type of policy support received).

An analysis based on firm-level responses suggests that firms more negatively affected by the pandemic made more use of fiscal support. Looking at the financial situation of individual firms, we distinguish between "vulnerable" firms, i.e. those which in in the latest survey round (October 2020-March 2021) had signalled declining turnover and profits and increasing interest expenses and leverage compared to the previous six months, and "profitable" firms, which over the same period had signalled increasing turnover and profits and decreasing interest expenses and leverage.[5] Chart C shows the proportion in their respective groups of firms that used at least one type of fiscal support across all euro area countries. Both shares are very large in Ireland and France and smaller in Portugal. On average, across the euro

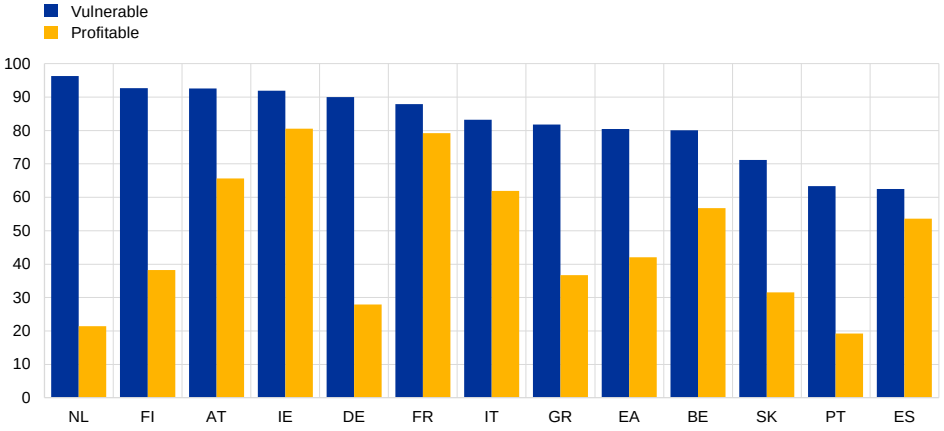
[5] For developments over time of vulnerable and profitable firms before the pandemic see Survey on the Access to Finance of Enterprises in the euro area, October 2017 to March 2018, ECB.

area, 80% of the more vulnerable firms and around 40% of the more profitable firms, within their own group in each case, used fiscal support during the pandemic. Compared to the historical evidence, a relatively large share of vulnerable firms had been classified as non-vulnerable before the pandemic outbreak. This suggests that there was more fiscal support for the worst-hit firms that had faced immediate liquidity needs.

Chart C

Share of vulnerable and profitable firms that used government fiscal support

(percentage of respondents within their respective groups)



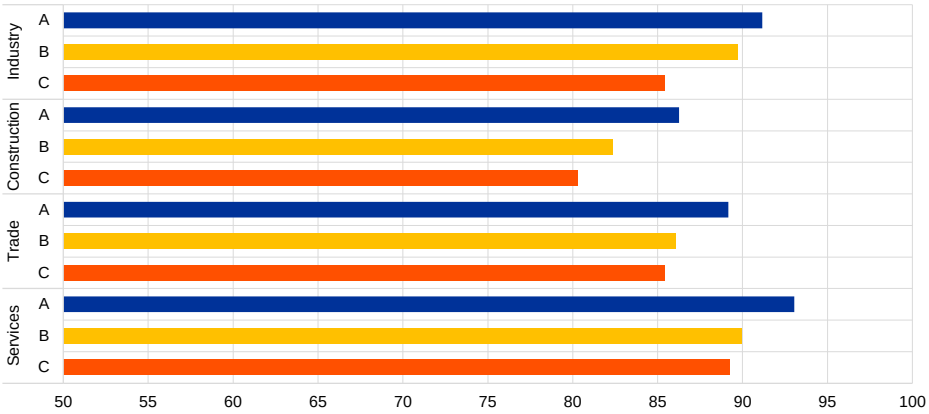
Source: ECB and European Commission survey on the access to finance of enterprises (SAFE).
Note: Vulnerable firms are defined as those that reported in the current SAFE wave (October 2020-March 2021) compared to the previous SAFE wave (April-September 2020) simultaneously lower turnover and profits, higher interest expenses and a higher or unchanged debt-to-total assets ratio; profitable firms are defined as those that reported in the current compared to the previous SAFE wave simultaneously higher turnover and profits, lower or no interest expenses and a lower or no debt-to-assets ratio.

Most firms that took up government support used it to cover their immediate and short-term obligations. Firms that used government support were requested to assess the importance of the different measures in easing their liquidity needs (where liquidity refers to the amount of cash needed to cover the firm's immediate and short-term obligations). Overall, these support schemes played an important role in mitigating liquidity risk, albeit with some variation across sector and type of public support. Across those firms that obtained government support to ease their wage bills, on average around 90% of euro area SMEs considered it important in helping them to meet their short-term obligations, with the highest percentages being reported by firms in the services sector (Chart D). Similarly, tax cuts and moratoria were considered important by 87% of SMEs on average, with the highest percentages in the industry and services sectors. Finally, other support schemes were considered important by more than two-thirds of SMEs, notably in the services sector. Across countries, of the relatively small fraction of SMEs in Germany that took up fiscal support (Chart B), the majority of them reported to have made widespread use of all types of government support schemes to boost their liquidity. Italian SMEs found the wage bill support and tax cuts and moratoria to be more important, while French SMEs reported higher percentages for other types of support and payroll support schemes.

Chart D

Importance of government support measures by type for euro area SMEs that used support to address short-term obligations

(percentage of respondents who replied either very important or moderately important)



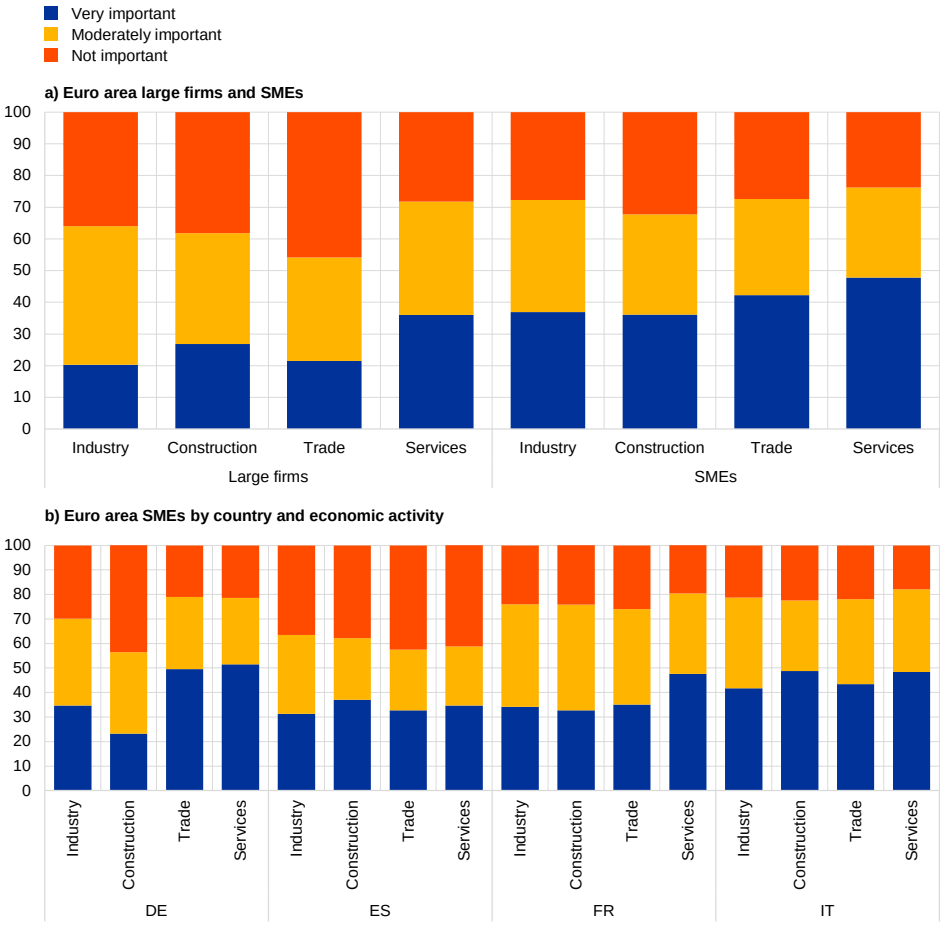
Source: ECB and European Commission survey on the access to finance of enterprises (SAFE).
Note: "A" refers to government payroll support; "B" refers to government support in the form of tax cuts and tax moratoria; "C" refers to other government support schemes.

More than two-thirds of firms that used government support measures indicated that the measures either currently in place or planned in response to the pandemic would make it easier for them to meet their debt obligations in the next two years. Firms were asked to assess whether the pandemic-related support measures either currently in place or expected to be introduced by governments in the near future would be sufficient to reduce the risk of their enterprise facing bankruptcy in the next two years (i.e. how likely it was that the firm would be unable to meet its medium and long-term debt obligations). In response, 74% of SMEs and 65% of large firms that had received government support indicated that the policies would ease their liquidity needs in the medium term (Chart E, panel a). In particular, firms in other business services stated that the schemes would help to reduce their bankruptcy risk in the next two years. Across all countries, firms considered the government liquidity support measures to be critical in reducing bankruptcy risk.

Chart E

Importance of government support measures for euro area enterprises that used support to address longer-term obligations

(percentage of respondents)



Source: ECB and European Commission survey on the access to finance of enterprises (SAFE).

Overall, government fiscal support measures were effective in easing the liquidity needs of firms following the outbreak of the pandemic. Around two-thirds of large firms and SMEs surveyed made use of government policy support measures. Most firms used the schemes to cover their immediate and short-term obligations, particularly to ease their wage bills and tax situation. Firms also indicated that pandemic-related measures either currently in place or planned by governments would make it easier for them to meet their debt obligations in the next two years.

3 Liquidity conditions and monetary policy operations in the period from 27 January to 27 April 2021

Prepared by Guido Della Valle and Nikolaus Solonar

This box describes the ECB's monetary policy operations and euro area liquidity developments during the first and second reserve maintenance periods of 2021. Together, these two maintenance periods lasted from 27 January to 27 April (the "review period").

The level of central bank liquidity in the banking system continued to rise during the review period. This was largely due to net asset purchases conducted under the asset purchase programme (APP) and the pandemic emergency purchase programme (PEPP), as well as the settlement of the seventh operation in the third series of targeted longer-term refinancing operations (TLTRO III). On 11 March, the Governing Council announced that it expected purchases under the PEPP to be conducted at a significantly higher pace over the second quarter than during the first months of the year. During the review period, net autonomous liquidity factors remained at levels broadly similar to those seen during the previous review period, which ran from 4 November 2020 to 26 January 2021.

Liquidity needs

The average daily liquidity needs of the banking system, defined as the sum of net autonomous factors and reserve requirements, increased marginally by €4.4 billion, reaching €2,030.6 billion on average during the review period. This modest increase from the previous review period is due to the combined effects of a small increase of €2.2 billion in the net autonomous factors, to €1,883.7 billion, and an increase of €2.2 billion in the minimum reserve requirements, to €146.9 billion (see the section of Table A entitled "Other liquidity-based information").

The increase in net autonomous factors was mainly due to higher government deposits, which increased in the review period by €29.6 billion (or 5%) to €618.3 billion. This increase partially reverses a decline in the last quarter of 2020 from the record high observed earlier in 2020, when governments stepped up their security issuance to finance the policy response to the coronavirus (COVID-19) crisis and increased their precautionary balances in response to uncertainty. Overall, despite the rise, government deposits remain below the record high of €729.8 billion recorded in the sixth maintenance period of 2020, but still significantly above their historical average of €246.8 billion during the same period in previous years (27 January to 27 April in 2020, 2019 and 2018). The increase in government deposits was partially offset by a €24.5 billion decline in other autonomous factors, to €891.1 billion. Banknotes in circulation increased by €23.4 billion to €1,440.0 billion. In total, liquidity-absorbing autonomous factors increased by €28.4 billion to €2,949.4 billion. The increase in liquidity-absorbing factors was partially offset by a €26.2 billion increase in liquidity-providing autonomous factors, to €1,066.0 billion, which was due

to the combined effects of a €56.5 billion increase in net assets denominated in euro and a €30.3 billion decline in net foreign assets. Table A presents an overview of the autonomous factors discussed above and their changes.

Table A

Eurosystem liquidity conditions

Liabilities

(averages; EUR billions)

	Current review period: 27 January 2021 to 27 April 2021						Previous review period: 4 November 2020 to 26 January 2021	
	First and second maintenance periods		First maintenance period: 27 January to 16 March		Second maintenance period: 17 March to 27 April		Seventh and eighth maintenance periods	
Autonomous liquidity factors	**2,949.4**	**(+28.4)**	**2,930.2**	**(+54.4)**	**2,971.8**	**(+41.5)**	**2,921.0**	**(-77.4)**
Banknotes in circulation	1,440.0	(+23.4)	1,433.4	(+4.0)	1,447.7	(+14.3)	1,416.7	(+31.8)
Government deposits	618.3	(+29.6)	595.8	(+65.4)	644.5	(+48.8)	588.7	(-141.1)
Other autonomous factors (net)[1)]	891.1	(-24.5)	901.1	(-15.1)	879.6	(-21.5)	915.7	(+32.0)
Current accounts above minimum reserve requirements	**3,132.3**	**(+282.0)**	**3,011.2**	**(+127.4)**	**3,273.6**	**(+262.4)**	**2,850.3**	**(+287.6)**
of which exempted excess reserves under the two-tier system[2)]	874.1	(+14.9)	871.4	(+8.4)	876.8	(+5.4)	859.2	(+12.0)
of which non-exempted excess reserves under the two-tier system[2)]	2,268.4	(+277.2)	2,139.9	(+118.9)	2,396.9	(+257.1)	1,991.2	(+269.9)
Minimum reserve requirements[3)]	**146.9**	**(+2.2)**	**146.5**	**(+1.0)**	**147.5**	**(+1.0)**	**144.8**	**(+1.8)**
Exempt allowance[3)]	**881.6**	**(+13.0)**	**878.8**	**(+5.8)**	**884.8**	**(+5.9)**	**868.5**	**(+10.9)**
Deposit facility	**634.2**	**(+73.0)**	**598.0**	**(+11.1)**	**676.4**	**(+78.4)**	**561.2**	**(+125.8)**
Liquidity-absorbing fine-tuning operations	**0.0**	**(+0.0)**	**0.0**	**(+0.0)**	**0.0**	**(+0.0)**	**0.0**	**(+0.0)**

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) Computed as the sum of the revaluation accounts, other claims and liabilities of euro area residents, capital and reserves.
2) Exempted and non-exempted excess reserves are explained on the ECB's website.
3) Memo item that does not appear on the Eurosystem balance sheet and therefore should not be included in the calculation of total liabilities.

Assets

(averages; EUR billions)

	Current review period: 27 January 2021 to 27 April 2021						Previous review period: 4 November 2020 to 26 January 2021	
	First and second maintenance periods		First maintenance period: 27 January to 16 March		Second maintenance period: 17 March to 27 April		Seventh and eighth maintenance periods	
Autonomous liquidity factors	**1,066.0**	**(+26.2)**	**1,068.3**	**(+81.6)**	**1,063.3**	**(-4.9)**	**1,039.8**	**(-57.2)**
Net foreign assets	826.5	(-30.3)	834.9	(-13.6)	816.7	(-18.2)	856.8	(-8.4)
Net assets denominated in euro	239.5	(+56.5)	233.3	(+95.2)	246.6	(+13.3)	183.0	(-48.8)
Monetary policy instruments	**5,797.2**	**(+359.5)**	**5,617.9**	**(+112.1)**	**6,006.3**	**(+388.4)**	**5,437.7**	**(+395.1)**
Open market operations	5,797.2	(+359.5)	5,617.9	(+112.1)	6,006.3	(+388.4)	5,437.7	(+395.1)
Tender operations	1,913.8	(+139.9)	1,792.8	(-0.1)	2,054.9	(+262.1)	1,773.9	(+125.9)
MROs	0.4	(-0.0)	0.4	(+0.1)	0.3	(-0.1)	0.4	(-0.9)
Three-month LTROs	0.5	(-0.4)	0.7	(-0.2)	0.3	(-0.4)	0.9	(-0.7)
TLTRO II operations	9.7	(-12.8)	15.7	(+0.0)	2.6	(-13.1)	22.5	(-17.9)
TLTRO III operations	1,876.5	(+152.3)	1,749.4	(-0.0)	2,024.8	(+275.4)	1,724.2	(+141.5)
PELTROs	26.7	(+0.8)	26.6	(+0.0)	26.9	(+0.3)	25.9	(+3.9)
Outright portfolios	3,883.4	(+219.6)	3,825.1	(+112.2)	3,951.4	(+126.3)	3,663.8	(+269.2)
First covered bond purchase programme	0.5	(-0.0)	0.5	(-0.0)	0.4	(-0.0)	0.5	(-0.0)
Second covered bond purchase programme	2.6	(-0.2)	2.6	(-0.1)	2.5	(-0.1)	2.8	(-0.1)
Third covered bond purchase programme	289.5	(+2.2)	289.3	(+1.5)	289.7	(+0.4)	287.3	(+1.5)
Securities markets programme	25.6	(-3.0)	27.1	(-1.5)	23.8	(-3.3)	28.6	(-4.5)
Asset-backed securities purchase programme	28.7	(-1.0)	28.8	(-0.8)	28.7	(-0.1)	29.7	(+0.1)
Public sector purchase programme	2,374.3	(+37.2)	2,366.1	(+20.9)	2,383.9	(+17.8)	2,337.1	(+53.9)
Corporate sector purchase programme	263.4	(+13.5)	259.4	(+7.4)	268.1	(+8.7)	249.9	(+17.6)
Pandemic emergency purchase programme	898.8	(+170.9)	851.3	(+84.8)	954.2	(+102.9)	727.9	(+200.6)
Marginal lending facility	0.0	(-0.0)	0.0	(-0.0)	0.0	(-0.0)	0.0	(+0.0)

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.

Other liquidity-based information

(averages; EUR billions)

	Current review period: 27 January 2021 to 27 April 2021						Previous review period: 4 November 2020 to 26 January 2021	
	First and second maintenance periods		First maintenance period: 27 January to 16 March		Second maintenance period: 17 March to 27 April		Seventh and eighth maintenance periods	
Aggregate liquidity needs[1)]	2,030.6	(+4.4)	2,008.7	(-26.4)	2,056.3	(+47.7)	2,026.3	(-18.2)
Net autonomous factors[2)]	1,883.7	(+2.2)	1,862.2	(-27.3)	1,908.9	(+46.7)	1,881.5	(-20.1)
Excess liquidity[3)]	3,766.5	(+355.1)	3,609.3	(+138.5)	3,950.0	(+340.7)	3,411.4	(+413.4)

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) Computed as the sum of net autonomous factors and minimum reserve requirements.
2) Computed as the difference between autonomous liquidity factors on the liability side and autonomous liquidity factors on the asset side. For the purposes of this table, items in the course of settlement are also added to net autonomous factors.
3) Computed as the sum of current accounts above minimum reserve requirements and the recourse to the deposit facility minus the recourse to the marginal lending facility.

Interest rate developments

(averages; percentages)

	Current review period: 27 January 2021 to 27 April 2021						Previous review period: 4 November 2020 to 26 January 2021	
	First and second maintenance periods		First maintenance period: 27 January to 16 March		Second maintenance period: 17 March to 27 April		Seventh and eighth maintenance periods	
MROs	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	-0.50	(+0.00)	-0.50	(+0.00)	-0.50	(+0.00)	-0.50	(+0.00)
EONIA[1)]	-0.480	(-0.005)	-0.478	(-0.001)	-0.481	(-0.003)	-0.475	(-0.006)
€STR	-0.565	(-0.005)	-0.563	(-0.001)	-0.567	(-0.003)	-0.560	(-0.006)

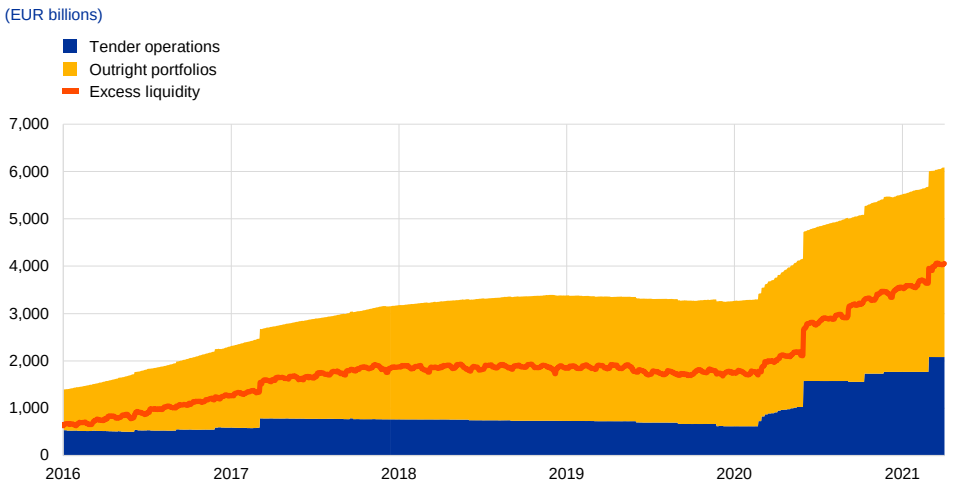
Source: ECB.
Notes: Figures in brackets denote the change from the previous review or maintenance period.
1) As of 1 October 2019, the euro overnight index average (EONIA) is computed as the euro short-term rate (€STR) plus 8.5 basis points. Differences in the changes shown for EONIA and the €STR are due to rounding.

Liquidity provided through monetary policy instruments

The average amount of liquidity provided through monetary policy instruments increased by €359.5 billion, reaching €5,797.2 billion on average during the review period (Chart A). Around 61% of the increase is the result of ongoing net purchases under the asset purchase programmes, primarily the PEPP, while the remaining 39% is the result of credit operations, mainly the allotment of the seventh operation in the TLTRO III series in March 2021.

Chart A

Evolution of liquidity provided through open market operations and excess liquidity



Source: ECB.
Note: The latest observations are for 27 April 2021.

The average amount of liquidity provided through credit operations increased by €139.9 billion during the review period. This was largely the result of the settlement of the seventh operation in the TLTRO III series on 24 March, which injected €330.5 billion. This injection was partially offset by the final maturity of the TLTRO II series, in which €9.7 billion was repaid. The first operation of the four additional pandemic emergency longer-term refinancing operations (PELTROs), announced in December 2020 and settled on 25 March 2021, added an additional €0.8 billion of liquidity. The main refinancing operations (MROs) and three-month longer-term refinancing operations (LTROs) continue to play a marginal role, with the average recourse to these two regular refinancing operations decreasing by €0.4 billion compared with the previous review period, to a new record low of €0.9 billion.

At the same time, outright portfolios increased by €219.6 billion to €3,883.4 billion due to net purchases under the APP and the PEPP. Average holdings in the PEPP increased by €170.9 billion in relation to the average of the previous review period, reaching €898.8 billion. Purchases under the PEPP represented the largest increase by far across all asset purchase programmes, followed by purchases under the public sector purchase programme (PSPP) and the corporate sector purchase programme (CSPP), the average holdings of which increased by €37.2 billion to €2,374.3 billion and €13.5 billion to €263.4 billion, respectively.

Excess liquidity

Average excess liquidity increased by €355.1 billion to a new record high of €3,766.5 billion (Chart A). Excess liquidity is the sum of banks' reserves in excess of the reserve requirement and the recourse to the deposit facility net of any recourse to the marginal lending facility. It reflects the difference between liquidity provided and liquidity needs. Banks' current account holdings in excess of minimum reserve

requirements grew by €282.0 billion to €3,132.3 billion, while the average recourse to the deposit facility increased by €73 billion to €634.2 billion.

Excess reserves exempted from the negative deposit facility rate under the two-tier system[1] rose by €14.9 billion to €874.1 billion, while non-exempted reserves rose by €277.2 billion to €2,268.4 billion. The increase in exempted excess reserves largely reflects an increase in the exemption allowance by €13 billion to €881.6 billion, itself a function of the minimum reserve requirement and the increase thereof during the review period. The rise of non-exempt reserves is attributed to the general increase in excess liquidity, driven by net asset purchases and the greater recourse to credit operations. The aggregate utilisation rate of the exemption allowance, i.e. the ratio between exempt reserves and the maximum which could be exempt, rose marginally from 98.9% to 99.1%. The steadily high utilisation rate shows that excess liquidity continues to remain broad-based, with a large majority of banks holding reserves well in excess of the minimum requirement. The utilisation rate has remained above 98% since the third maintenance period of 2020. In this review period, exempt excess reserves accounted for 23.3% of total excess liquidity, compared to 25.2% in the previous review period.

Interest rate developments

The average €STR declined marginally during this review period compared to the previous review period. The €STR averaged -56.5 basis points during this review period, virtually unchanged when compared to an average of -56.0 basis points during the previous review period, as the magnitude of excess liquidity makes the €STR relatively inelastic to even large liquidity changes. It is noteworthy that, as of October 2019, the EONIA is calculated as the €STR plus a fixed spread of 8.5 basis points. Therefore, it moved, and will continue to move, in parallel with the €STR. ECB policy rates – the rates on the deposit facility, the MRO and the marginal lending facility – were left unchanged during the review period.

[1] The two-tier system for remunerating excess reserve holdings is explained on the ECB's website.

4 The impact of the COVID-19 crisis on the euro area labour market for men and women

Prepared by Vasco Botelho and Pedro Neves

In the euro area, based on data available up to the fourth quarter of 2020, the coronavirus (COVID-19) crisis led to a decline in the labour force, a fall in employment and an increase in unemployment, with different developments for men and women across time.[1] Employment in the euro area decreased by around 3.1 million workers between the fourth quarter of 2019 and the fourth quarter of 2020 (Chart A). Around 1.9 million of these workers are estimated to be men and roughly 1.2 million are estimated to be women. This implies a total decline in employment of 2.2% for men and 1.5% for women over this period.[2] Unemployment increased by 0.9 million over the same period, with 495,000 men and 388,000 women becoming unemployed. In total, there was an 8.0% increase in male unemployment and a 6.6% increase in female unemployment between the fourth quarter of 2019 and the fourth quarter of 2020. The percentage rise in unemployment during this period peaked in the third quarter of 2020, at 10.5% for men and 12.8% for women. Then, during the fourth quarter of 2020, the number of women unemployed decreased more than the number of men unemployed. The large decline in employment was not accompanied by corresponding increases in unemployment for either gender, with 2.2 million people becoming inactive between the fourth quarter of 2019 and the fourth quarter of 2020, of which 1.4 million were men and 0.8 million were women. While female labour force participation was more affected during the first wave of the pandemic, up to the second quarter of 2020, it recovered at a faster pace during the second half of the year.

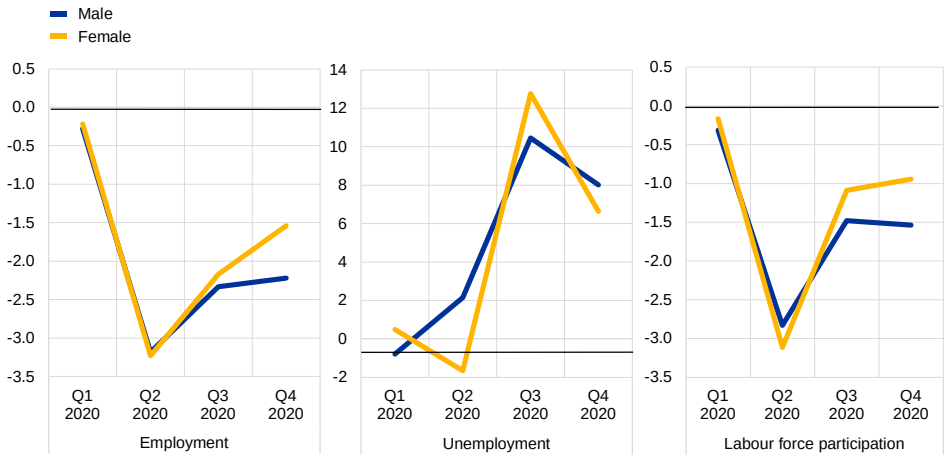
1 The employment and total hours worked aggregates are based on the Eurostat national accounts data, whereas the information on unemployment and the gender composition of employment and hours worked are retrieved from Eurostat's quarterly EU labour force survey. The gender-specific effects on employment and hours worked are mapped at the sectoral and aggregate levels from the labour force survey to the national accounts data. This implicitly assumes that the gender distribution in the euro area as calculated using the labour force survey also broadly holds for the national accounts data. In this box, the terms "usual hours worked" and "contractual hours worked" are used interchangeably.

2 Up to the third quarter of 2020, the decline in employment for men and women was broadly equal at around 2.3% for men and 2.2% for women cumulatively from the fourth quarter of 2019.

Chart A

Changes in euro area employment, unemployment and labour force participation for men and women during the COVID-19 crisis

(percentages)



Sources: Eurostat, EU labour force survey and ECB staff calculations.
Notes: The chart shows the percentage change in the number of employed and unemployed workers across gender between the fourth quarter of 2019 and each quarter of 2020. The change in labour force participation is calculated accordingly. The labour force is calculated as the sum of employed and unemployed workers.

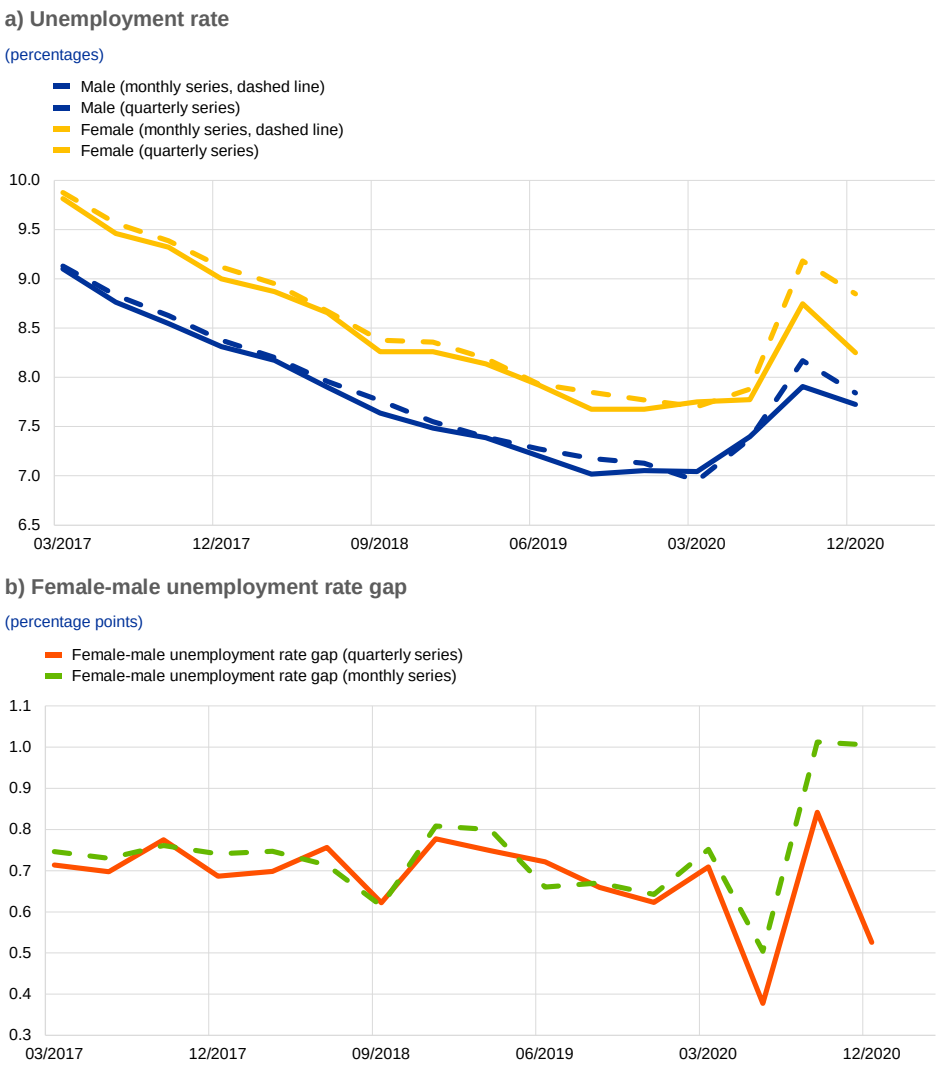
The unemployment rate for women is higher than that for men, but there is some uncertainty about the size of the gap between female and male unemployment rates (Chart B). The unemployment rate for women is higher than that for men, standing at 8.3% in the fourth quarter of 2020, compared with 7.7% for men. This is not a new development: in the fourth quarter of 2019, before the COVID-19 crisis hit, the unemployment rate was 7.7% for women and 7.1% for men. The female-male unemployment gap thus stood at 0.6 percentage points in the fourth quarter of 2019 and at 0.5 percentage points in the fourth quarter of 2020.[3] The female-male unemployment rate gap decreased in the second quarter of 2020 before increasing again in the third quarter. However, there is some uncertainty on its path after this point. This uncertainty stems from the use of different statistical indicators from the EU labour force survey (namely monthly versus quarterly time series) and from the ongoing statistical reclassification of workers in job retention schemes.[4] According to Eurostat, quarterly time series are more robust but less timely than monthly time series. Based on the monthly time series, the female-male unemployment gap remained broadly unchanged in the fourth quarter of 2020, with the female unemployment rate being 1 percentage point higher than the male unemployment rate. By contrast, the quarterly time series suggests that the female-male unemployment gap decreased in the fourth quarter of 2020, with the female unemployment rate 0.5 percentage points higher than the male unemployment rate.

3 More precisely, the female-male unemployment gap was 0.53 percentage points in the fourth quarter of 2020 because the unemployment rate calculated to two decimal places was 8.25% for women and 7.72% for men.

4 The COVID-19 crisis has led to large changes in labour force participation; monthly labour market indicators across gender do not fully capture these changes and are revised ex post. The uncertainty regarding the size of the female-male unemployment rate gap arising from the frequency of the dataset is a temporary issue that is expected to be addressed in the near future with the implementation of the Integrated European Social Statistics methodology.

Chart B

Gap in female-male unemployment rates – quarterly versus monthly statistics



Sources: Eurostat, EU labour force survey and ECB staff calculations.
Notes: Data with different time frequencies give a different impression of the gap between the female and male unemployment rates. The increased labour market volatility during the pandemic, which can be attributed to the number of people leaving the labour force and the extensive use of job retention schemes, may affect these unemployment gaps. The latest observations are for March 2021 for the monthly time series and the fourth quarter of 2020 for the quarterly time series.

Preliminary evidence suggests that both men and women benefited considerably from the widespread use of job retention schemes. The number of workers citing temporary lay-offs as a reason for being absent from work over a given week is broadly similar across gender, with women accounting for 49.4% of workers laid off in EU Member States in the fourth quarter of 2020. This indicator can be considered a proxy for the number of workers in job retention schemes who are working zero hours.[5] The widespread use of job retention schemes has broadly supported employment and protected jobs during the pandemic. The number of

[5] See Gómez, A.L. and Montero, J.M., "Impact of lockdown on the euro area labour market in 2020 H1", *Economic Bulletin*, Issue 4, Banco de España, 2020. For a comprehensive assessment of the impact and widespread use of job retention schemes, see the article entitled "The impact of the COVID-19 pandemic on the euro area labour market", *Economic Bulletin*, Issue 8, ECB, 2020.

temporary lay-offs peaked at 38.9% of the total number of absences from work in the second quarter of 2020 and plateaued at 14.1% in the fourth quarter.[6] Moreover, the female share of workers temporarily laid off increased from an average of 34.7% between 2006 and 2019 to 45.7% in the first quarter of 2020, before increasing further to stand at 49.4% in the fourth quarter of 2020.[7]

Analysing total hours worked can provide an insight into the different factors affecting labour market developments across gender during the COVID-19 crisis. Total hours worked decreased by 6.4% between the fourth quarter of 2019 and the fourth quarter of 2020. Men accounted for 4.4 percentage points of this decrease and women 2.0 percentage points. For men, the decline in employment was responsible for 1.3 percentage points of the decrease in total hours worked, with the decline in average hours worked accounting for the remaining 3.1 percentage points. For women, these factors contributed 0.6 percentage points and 1.4 percentage points respectively. The pronounced decline in average hours worked by gender can be further analysed by breaking down the changes according to usual hours worked (interpretable as contractual hours) and actual hours worked.[8] The gap between actual hours worked and contractual hours worked can thus provide additional information on ad hoc factors driving the decline in total hours worked for men and women during the COVID-19 pandemic.

The decline in average contractual hours worked accounts for one-third of the decline in average hours worked for men, whereas contractual hours worked have remained broadly unchanged for women (Chart C). The decline in contractual hours worked by men accounts for 1.2 percentage points of the decline in total hours worked between the fourth quarter of 2019 and the fourth quarter of 2020, while contractual hours worked by women remained broadly unchanged during this period.[9] Changes in contractual hours are mostly driven by composition effects, which differ across gender. Preliminary data from the EU quarterly labour force survey suggest that women saw a stronger decline in part-time employment and in the number of permanent employees than men. Conversely, for men there were more pronounced declines in the number of people working full-time and in temporary employment, and a stronger increase in the number of underemployed part-time workers. The broad absence of changes in usual hours worked by women is related to composition effects such as the decline in part-time employment, which has affected

6 The COVID-19 crisis substantially increased the number of temporary lay-offs in the EU. Between 2006 and 2019 they accounted for only 2.7% of the total number of absences from work on average.

7 In Germany, the Federal Employment Agency provides a gender breakdown of the number of workers on short-time work schemes (“Kurzarbeit”). These data are available up to October 2020 and confirm that both men and women were greatly supported by job retention schemes in the country. However, they also suggest that men are more likely to be in Kurzarbeit than women, with the female share of workers in Kurzarbeit peaking at 46.1% in March 2020 before progressively declining to 37.4% in October 2020. Thus, there may be some country-level heterogeneity in the relative impact of job retention schemes across gender.

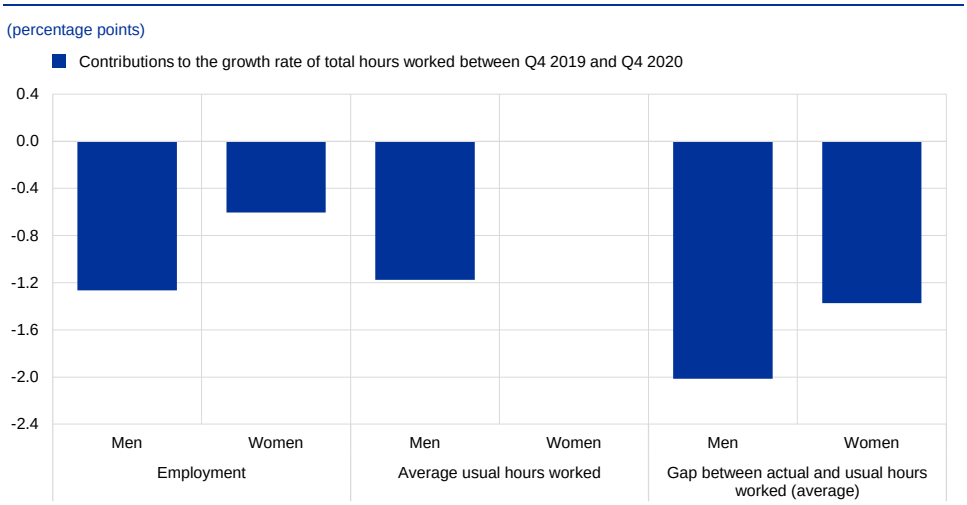
8 Actual hours worked include (i) the contracted hours of work, and (ii) paid and unpaid overtime and hours worked in additional jobs. Actual hours worked exclude time not worked because of, among other things, public holidays, annual paid leave, own illness, injury and temporary disability, maternity leave, parental leave, schooling or training, slack work for technical or economic reasons, strikes or labour disputes, bad weather and compensatory leave.

9 Average usual hours worked by women did not change between the fourth quarter of 2019 and the fourth quarter of 2020, remaining at 32.9 hours per week.

women to a larger extent than men.[10] As part-time employees work fewer hours compared with their full-time counterparts, this induced a composition effect that increases the number of contractual hours worked. By contrast, the decline in usual hours worked by men was driven by a relatively stronger decline in the number of men working full-time and by an increase in the number of underemployed part-time workers.[11]

Chart C

Contributions of employment, usual hours worked and actual hours worked to changes in total hours worked



Sources: Eurostat, EU labour force survey and ECB staff calculations.
Note: The contributions of employment, usual hours worked, and the gap between actual and usual hours worked refer to the period between the fourth quarter of 2019 and the fourth quarter of 2020.

The gap between actual and usual hours worked disproportionately contributes to the decline of total hours worked across gender, offering some insight into labour supply decisions at the household level. The gap between actual and usual hours worked accounts for around two-thirds of the decline in average hours worked for men and for all of the decline in average hours worked for women between the fourth quarter of 2019 and the fourth quarter of 2020. Changes in the gap between actual and usual hours worked by men contributed 2.0 percentage points to the decline in total hours worked, whereas changes in the gap between actual and usual

10 The gender-specific declines in part-time employment during the COVID-19 crisis broadly correspond to the gender composition of part-time employment in the fourth quarter of 2019.

11 Albeit to a much lesser extent, the decline in male self-employment also contributed to the decline in contractual hours worked. Self-employed workers account for around 14% of total employment and for 18.5% of total hours worked. From this, it can be said that self-employed people work, on average, longer hours than employees. Self-employed workers represent around 17% of total employment for men and around 10% for women. Despite the low share of self-employment in total employment for both men and women, job losses for self-employed men can be important for the decline in contractual hours worked, as (i) self-employed workers work, on average, longer hours than employees, and (ii) self-employed men work, on average, longer hours than self-employed women, making the composition effect stronger for men. For more details, see Eurostat, "Hours of work – annual statistics", May 2020.

hours worked by women contributed 1.4 percentage points.[12] Job retention schemes incentivised labour hoarding and allowed for flexibility through adjustments in hours worked, leading to a larger gap between actual and contractual hours worked for both men and women.[13] This suggests that the disproportionate declines in average actual hours worked are in part also driven by ad hoc partial reductions in the working time of employed workers, which can affect women more than men.[14] This outcome can also provide insights into labour supply decisions at the household level. These are explored in more detail by Fuchs-Schündeln et al.[15], who show that an increase in the need for in-person childcare following the closure of schools and care services in response to the COVID-19 pandemic could affect up to 35% of the workforce (and up to 12% of usual hours worked) in Europe.

The decline in total hours worked was linked to heterogeneous sectoral developments across gender (Chart D).[16] Both men and women were significantly affected by the pandemic when considering changes in total hours worked between the fourth quarter of 2019 and the fourth quarter of 2020 across sectors. The effects of the pandemic were relatively stronger for men in the trade, transportation, and professional services sectors, when compared with the share of total hours worked by men in each sector in the fourth quarter of 2019. By contrast, contributions to the decline in total hours worked were relatively higher for women in the accommodation and food services, administrative and support services, and recreation and personal services sectors. In most sectors, the decline in total hours worked was driven by a decline in employment and by a decline in average hours. Employment losses between the fourth quarter of 2019 and the fourth quarter of 2020 were mainly concentrated in the wholesale and retail trade and transportation sectors for men and in the recreation and personal services sectors for women. Conversely, the employment gains in public administration and in education were tilted towards female workers. The fall in average hours worked complemented the sectoral asymmetry and within-sector gender heterogeneity in the observed declines in employment and accounted for most of the decline in total hours worked.

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12 These percentage point contributions take into account gender-specific base effects, namely the fact that women work around 40% of the total hours worked in the euro area. As a robustness check, the same exercise was re-run using a bottom-up approach that maps the growth rate of employment and hours worked between the EU labour force survey and the national accounts data at the sectoral level. Interestingly, the differences in the contributions of employment and average hours worked between men and women are smaller under these alternative calculations. In this case, the gender contributions to the decline in total hours worked amount to the following: (i) for employment, -1.0 percentage points for men and -0.9 percentage points for women; and (ii) for average hours worked, -2.7 percentage points for men and -1.9 percentage points for women. This would then affect the quantitative contribution of changes in the gap between actual and usual hours worked across gender, making it weaker for men and stronger for women. Therefore, sector composition effects could be incorporated to better qualify the differential labour market impact of the COVID-19 crisis by gender.

13 Labour hoarding is the part of labour input which is not fully utilised by a company during its production process at any given point in time. Labour hoarding can potentially help firms avoid re-hiring and training costs when economic conditions improve after a recession.

14 The contribution of the gap between average actual hours worked and contractual hours worked by men to the decline in total hours worked is also affected by the stronger increase in the number of men being underemployed part-time workers between the fourth quarter of 2019 and the fourth quarter of 2020.

15 Fuchs-Schündeln, N., Kuhn, M. and Tertilt, M., "The short-run macro implications of school and child-care closures", *IZA Discussion Paper Series*, No 13353, IZA Institute of Labor Economics, Bonn, June 2020.

16 The sectoral and gender effects of the COVID-19 crisis on employment and average hours worked documented in Chart D are constructed using the bottom-up approach described previously.

Chart D

Sectoral contributions to the growth in employment and average hours worked by gender

(percentage points)

Sources: Eurostat, EU labour force survey and ECB staff calculations.
Notes: The sectoral contributions to employment and average hours worked refer to the period between the fourth quarter of 2019 and the fourth quarter of 2020. These are constructed under the previously described bottom-up approach, which maps the gender and sectoral composition in the EU labour force survey to the sectoral composition for employment and hours worked in the national accounts data. "Other services" comprises the recreation and personal services sectors.

In summary, this box documents the impact of the COVID-19 crisis on the euro area labour market based on data available up to the fourth quarter of 2020, highlighting that both men and women were significantly affected. More men than women lost their jobs and became inactive during the COVID-19 crisis, while job retention schemes seem to have broadly protected employment and significantly benefited workers from both genders. The decline in average hours worked was somewhat more pronounced for men than for women. However, the factors behind this decline differed across gender. The decline in average hours worked for men was driven in part by a decrease in contractual hours, whereas ad hoc reductions in hours worked, which increase the gap between the actual hours worked and the contractual hours of work, contributed to the decline in average hours worked for both men and women. These developments can be attributed to the asymmetric sectoral impact of the COVID-19 crisis.[17] The effects documented in this box only refer to the aggregate impact on employment, unemployment, labour force participation and hours worked across gender, and do not take into account welfare losses that workers incur when another member of their household loses their job. Moreover, Bluedorn et al.[18] argue

[17] For more on this, see the box entitled "High-frequency data developments in the euro area labour market", *Economic Bulletin*, Issue 5, 2020, which offers an early preview of the sectoral heterogeneity of the COVID-19 crisis on the labour market from a high frequency data perspective. For a comprehensive assessment of the impact of COVID-19 on the euro area labour market, including the widespread use of job retention schemes, see the article entitled "The impact of the COVID-19 pandemic on the euro area labour market", *Economic Bulletin*, Issue 8, ECB, 2020.

[18] Bluedorn, J., Caselli, F., Hansen, N-J. and Mendes Tavares, M., "Gender and Employment in the COVID-19 Recession: Evidence on 'She-cessions'", *IMF Working Paper Series*, No 2021/095, March 2021.

that the extent and persistence of a differential employment response for women during the COVID-19 crisis varies significantly across countries and that gender differences in employment are typically short-lived.

5 Euro area house price developments during the coronavirus pandemic

Prepared by Moreno Roma

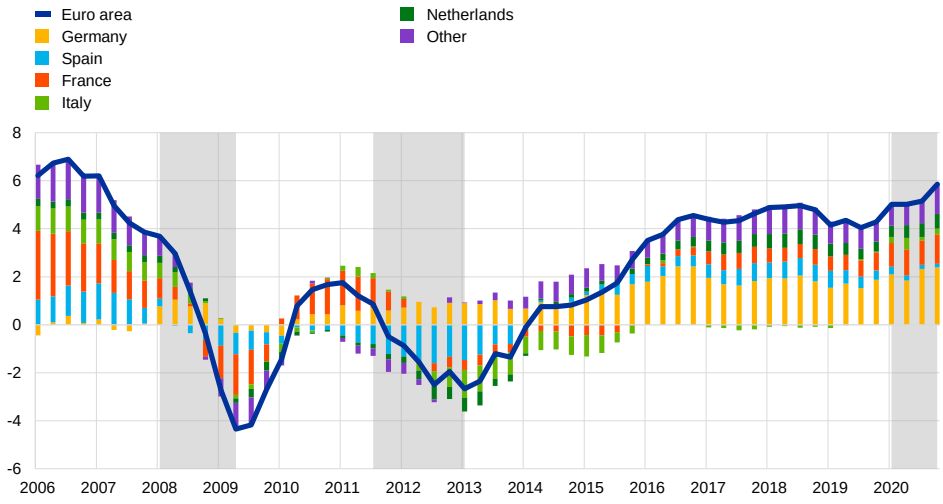
Aggregate euro area house price dynamics have remained robust during the coronavirus (COVID-19) pandemic. Year-on-year house price growth increased from 4.3% at the end of 2019 to stand at 5.8% in the last quarter of 2020 – the highest growth rate since mid-2007. This box reviews recent developments in euro area house prices and their relation to macroeconomic conditions from different angles (across countries, types of housing and location).

The pandemic is different from previous crises. The global financial crisis of 2008 originated in the US housing market and the sovereign debt crisis starting in 2010 had adverse implications for financing conditions in several euro area countries. In both cases, euro area house prices declined relatively quickly (Chart A, shaded areas). The COVID-19 crisis hit households at a time when income and employment were relatively strong, and while growth contracted sharply house prices held up and have even increased since the start of the pandemic.

Chart A

Euro area residential property prices and contributions by countries

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



Sources: ECB, own calculations and Eurostat. The latest observations are for the fourth quarter of 2020.
Note: The shaded areas indicate periods of recession in the euro area.

A first angle from which to assess aggregate euro area house price developments is by looking at underlying country contributions. The observed resilience in house prices in 2020 was broad-based and all large euro area countries contributed positively to the annual increase in euro area house prices. Germany, France and the Netherlands accounted for around 73% of the total increase in the last quarter of 2020 (Chart A), which is more than their weight in the overall house price index. In the case of Germany, the positive contribution to euro area house prices

started in mid-2010, also reflecting some catching up after a period of subdued house price developments.

The resilience in euro area residential property prices reflects a combination of factors. First, the negative impact of the COVID-related shock is associated with a sharp fall in housing transaction volumes in the second quarter of 2020 owing to lockdown measures.[1] This shift continued to some extent in the third quarter of 2020 and generally entailed a quantity adjustment rather than a price adjustment. Second, moratoria on loan repayments and job retention schemes cushioned, to some extent, falls in household income and an increase in unemployment. Third, loans for house purchase continued to grow in 2020 and financing conditions remained favourable, with the composite lending rate for house purchase at an all-time low of 1.3% at the end of 2020. In addition, a period of forced saving associated with the pandemic may have loosened liquidity constraints for some households, especially in countries with large down payment requirements. Finally, amid considerable economic uncertainty and a low-yield environment, private and institutional investors have contributed to housing demand for investment motives.

A second angle from which to assess aggregate euro area house price developments is by disentangling prices of new and existing housing. In a buoyant housing market, one would expect the prices of existing housing to rise more than those of new build, as demand may be partly redirected to the existing stock to compensate for the scarce supply of new housing. Indeed, prices of existing properties have been particularly dynamic in the pandemic period and, given their large weight in house price indices, they have contributed significantly to house price increases (Chart B).[2] According to Eurostat data, in the course of 2020, prices of existing housing in the euro area increased 0.8 percentage points more, in annual terms, than prices of new housing.

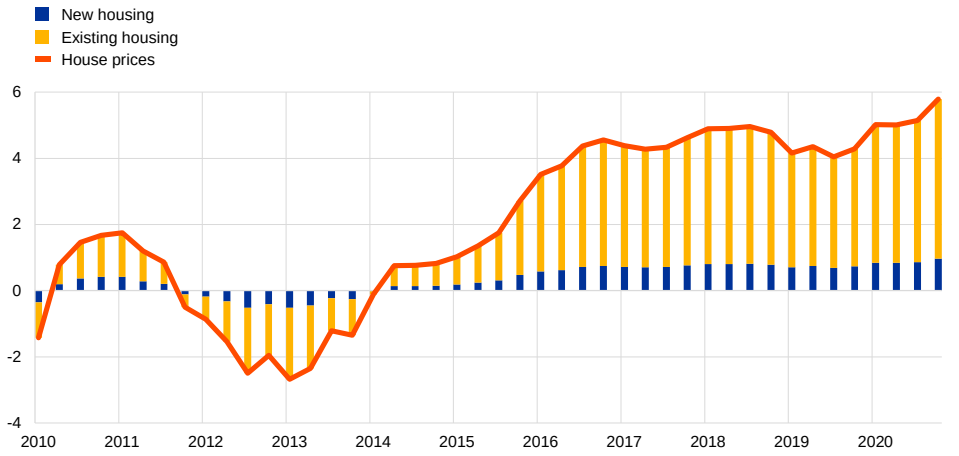
1 The availability of housing transaction data is limited to selected euro area countries (Eurostat and national sources) and does not include the euro area aggregate. Nevertheless, available data generally point to sharp declines in the annual rate of change in transactions in the second quarter of 2020 (from falls in excess of 40% in Spain and Ireland, to an increase close to 7% in the Netherlands), followed by a gradual normalisation in the third quarter of 2020.

2 The weight of existing housing in the euro area is approximately 83%.

Chart B

Euro area residential property prices and contributions by types of housing

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



Sources: ECB, own calculations and Eurostat. The latest observations are for the fourth quarter of 2020.
Notes: Euro area weights for new and existing housing are a weighted average of country weights based on GDP weights. For Greece, weights of new and existing housing were approximated using the euro area average excluding Greece. Euro area house prices refer to the ECB's residential property price indicator.

Developments varied considerably across euro area countries, but those countries experiencing strong house price dynamics (i.e. Germany, France and Austria) were generally associated with higher price increases for existing housing. This could suggest that the contraction in euro area housing investment observed in 2020 (in excess of 5% in annual terms) may have weighed on the supply of new build, thus putting additional upward pressure on the prices of existing housing. The contraction in approvals of building permits seen in the course of 2020 could prolong this phenomenon, thus continuing to support house prices.

Aggregate euro area house price developments can be assessed from a third angle by comparing developments in capital cities with developments in the rest of the country.[3] Different house price developments at the regional level could be justified by fundamentals, such as differences in regional income, employment, population dynamics and amenities, but they could also signal the exuberance of house prices in certain areas.[4] The recent resilience of the housing market appears to be broad-based and not limited to capital cities (Chart C). According to ECB estimates, in the course of 2020, euro area house prices in selected capital cities increased 0.7 percentage points less, year on year, than the euro area aggregate. This may reflect some natural deceleration in price dynamics given the strong house price increases in capital cities in previous years, and that the elevated price levels reached in some jurisdictions triggered some price spillovers or shifts in demand to areas outside capital cities. The observed rise in house prices outside capital cities may also reflect a preference shift associated with increased possibilities for working from home.

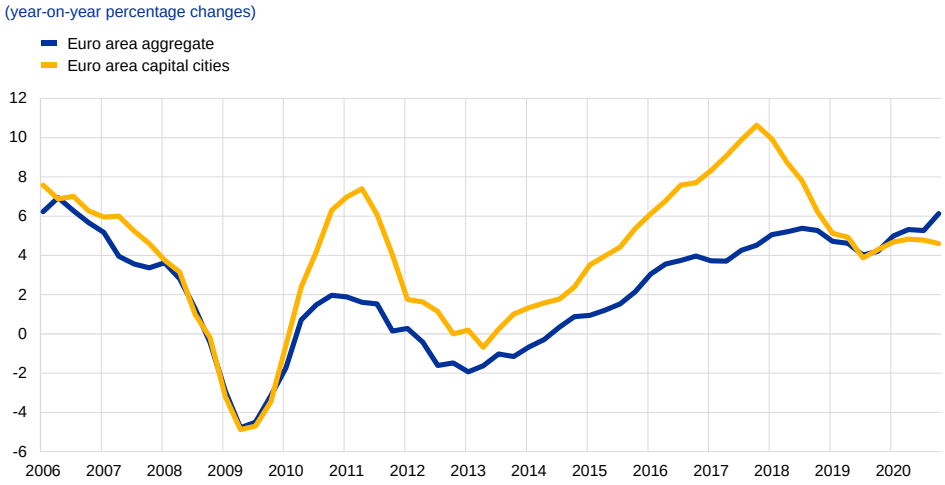
3 Euro area house prices can be decomposed into developments in selected euro area capital cities and compared with those of a synthetic euro area aggregate The synthetic euro area aggregate includes euro area countries for which house prices in capital cities are available and accounts for around 95% of the euro area (see the notes under Chart C). Developments in official and synthetic euro area house prices in the period considered are broadly comparable.

4 For a discussion, see the box entitled "Residential real estate prices in capital cities: a review of trends", *Financial Stability Review*, May, ECB, 2017.

Whether and to what extent such mobility to less central locations is permanent needs to be corroborated by further evidence once the pandemic has ended.

Chart C

Residential property prices for a synthetic euro area aggregate and selected euro area capital cities



Sources: ECB, own calculations, Eurostat and national sources. The latest observations are for the fourth quarter of 2020.
Notes: The euro area synthetic aggregate series is a weighted average based on 2019 GDP weights. The aggregate includes Belgium, Germany, Estonia, Ireland, Spain, France, Italy, Netherlands, Austria Slovenia and Finland. The aggregation for the fourth quarter of 2020 does not include Belgium and Slovenia.

Overall, an assessment of recent house price developments from different angles points to resilient and broad-based growth across jurisdictions, types of housing and locations. House price dynamics remain highly dependent on the recovery path in an environment that is characterised, on the one hand, by favourable financing conditions and, on the other, by pandemic-related uncertainties.

6 The semiconductor shortage and its implication for euro area trade, production and prices

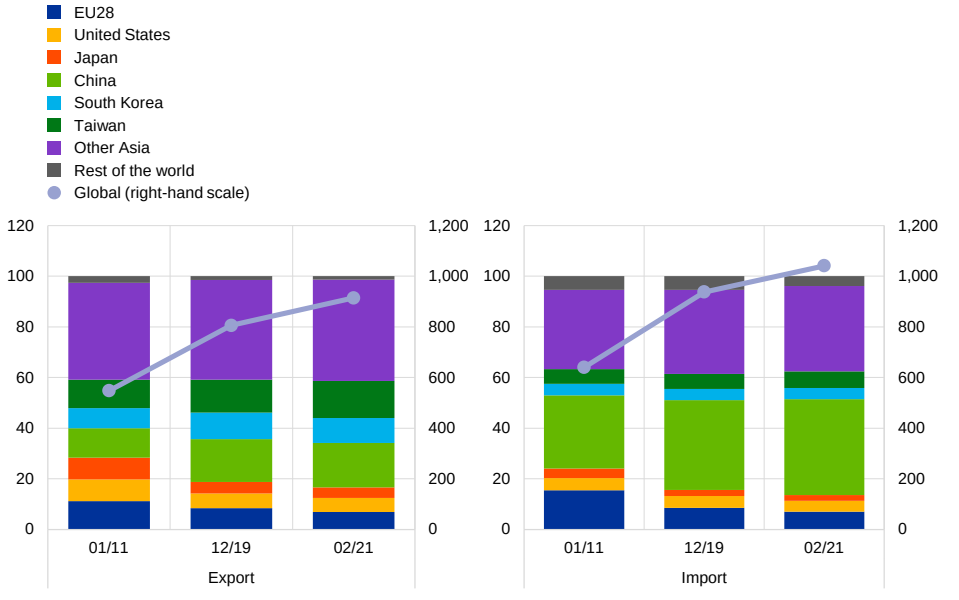
Prepared by Maria Grazia Attinasi, Roberta De Stefani, Erik Frohm, Vanessa Gunnella, Gerrit Koester, Alexandros Melemenidis and Máté Tóth

The semiconductor industry has recently seen a strong surge in demand. Revenues from global sales of semiconductors have almost doubled over the past decade and the Asian economies have consolidated their market dominance in this regard (Chart A). Looking at imports, the share of Chinese imports of semiconductors appears to be growing compared to that of the EU and the United States. At the onset of the COVID-19 pandemic, while sales of semiconductors to the motor vehicle industry collapsed globally during the second quarter of 2020, this shortfall was more than offset by a strong demand for computer and electronic equipment owing to the shift to remote working and distance learning. Once the global recovery took hold, the production of semiconductors was not sufficient to meet the surge in demand from the motor vehicle industry. In addition, various adverse events, such as fires and droughts affecting large manufacturing plants aggravated the global supply shortage of semiconductors.

Chart A

Global semiconductor trade by region

(left-hand side: percentage share; right-hand side: USD billions)



Sources: Trade Data Monitor and ECB calculations.
Notes: Semiconductor parts under Harmonized System (HS) code 8541 and HS code 8542. Latest observations are for February 2021.

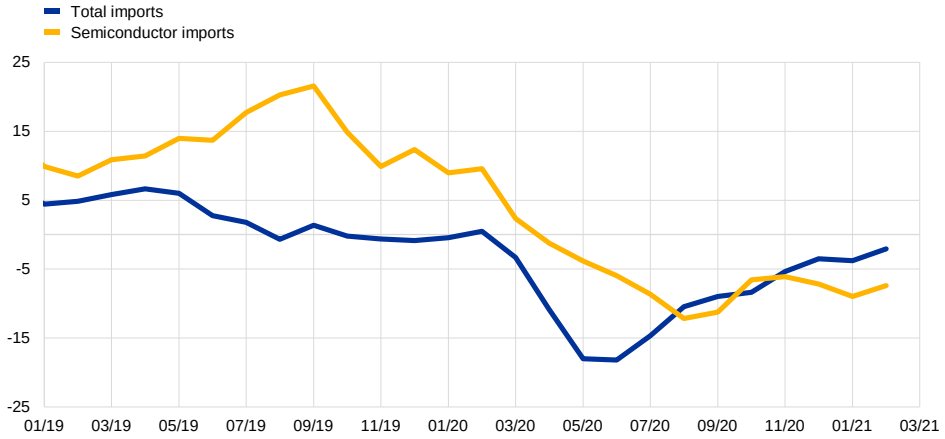
While experiencing a recovery in demand, euro area producers of manufacturing goods struggled to source semiconductors. Since the supply had meanwhile been directed elsewhere, euro area imports of semiconductors decreased

substantially following the start of the pandemic despite being more resilient than total imports. However, their growth rates lagged behind that of total imports during the recovery phase (Chart B). Although the share in production of inputs from the IT and electronic sector is not that substantial, this sector is a crucial upstream supplier and any disruptions are therefore likely to extend to many other sectors in the economy. Combined with shortages of other inputs (e.g. chemicals, plastic, metals and wood), and shipping disruptions, the semiconductor chip shortage severely affected suppliers' delivery times. This resulted in an unprecedented increase in the ratio of PMI new orders to suppliers' delivery time[1] for manufacturers in the euro area, particularly in industries that use semiconductors for production, such as the auto and auto parts as well as the technology equipment industries (Chart C).

Chart B

Euro area semiconductor imports

(annual percentage changes of three-month moving averages of values)



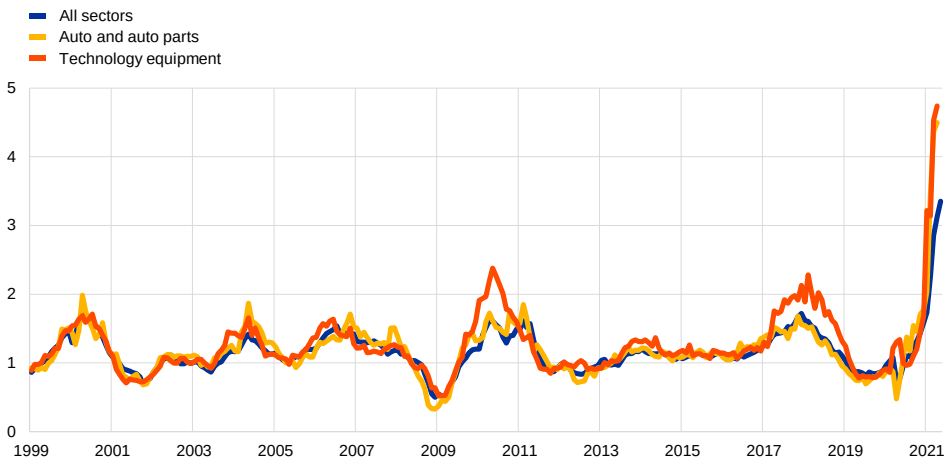
Sources: Trade Data Monitor and ECB calculations.
Note: Latest observations are for February 2021.

[1] Note that an increase (decrease) in the PMI suppliers' delivery time index indicates a shorter (longer) delivery time.

Chart C

Euro area suppliers' delivery times

(ratio of PMI new orders to suppliers' delivery times)



Sources: Markit and ECB calculations.
Note: Latest observations are for April 2021 for sectoral PMI and May 2021 for the aggregate PMI.

Recent survey evidence points to severe bottlenecks in some of the key manufacturing industries, particularly in Germany. According to the latest quarterly European Commission Business survey, 23% of manufacturing firms in the euro area reported a lack of material and/or equipment as a key factor limiting production (Chart D), which currently stands well above the historical average (around 6%). Chart D shows that the effects of these semiconductor bottlenecks are most visible in industries with a higher input share of electronic equipment, such as in the computer and electronic, electrical equipment and automotive industries. Across countries, this shortage is clearly apparent for German firms.

Chart D

Shortage of material and/or equipment as a factor limiting production

(percentage of survey respondents by industry)

	Euro area	Germany	France	Italy	Spain	Netherlands
Manufacturing	23	42	6	7	14	20
Computers/electronics	34	70	-1	14	19	11
Electrical equipment	36	56	23	12	32	37
Motor vehicles/trailers	35	58	2	7	50	35

Source: European Commission Business survey, April 2021.
Note: The time series for the survey responses are seasonally adjusted which may explain negative values in some industries.

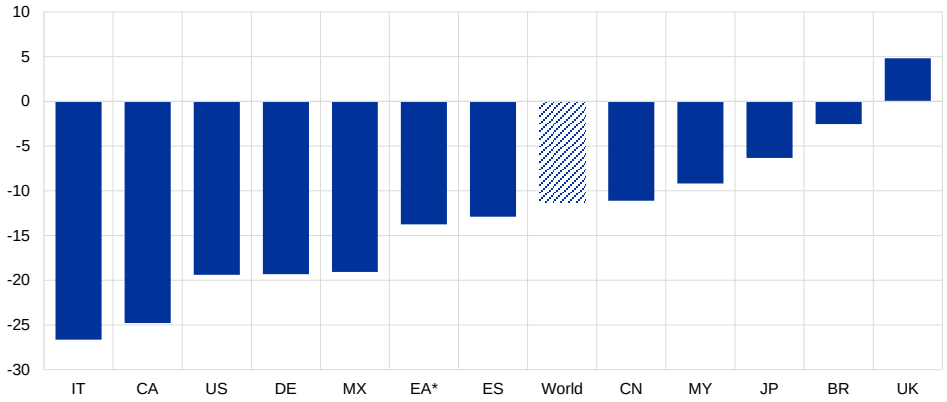
This misalignment between production and orders in some of the key manufacturing industries also points to supply bottlenecks. Thus far, the motor vehicle industry appears to be mostly affected by the chip shortage. In the first quarter of 2021, global production of passenger vehicles fell by almost 1.3 million vehicles, corresponding to a 11.3% decline against the last quarter of 2020 and to around a 2.8% decrease compared to the 2019 level of production (Chart E). Motor vehicle

production in the euro area declined for four consecutive months up to March 2021, standing at 18.2% below its November 2020 level. In Germany, the monthly increase in manufacturing order backlogs consistently outstripped production growth between January and March 2021, particularly in the automotive and computer/electronic industries. This is confirmed by the ECB's recent contacts with non-financial companies.[2] These contacts expected supply constraints to deteriorate in the second quarter of 2021 before gradually easing in the second half of the year.

Chart E

Global motor vehicle production

(passenger vehicles production, change between Q1 2021 and Q4 2020)



Sources: Haver, Eurostat and ECB calculations.
Notes: Countries are chosen on the basis of data availability and their global aggregate covers 70% of global motor vehicle production. Seasonally adjusted series. *EA data refer to euro area industrial production data, NACE2 code 29.1.

So far there is very limited evidence concerning the effects of semiconductor shortages on price developments along the pricing chain. Upward price effects could result, for example, from a scarcity of supply of goods, increasing pricing power at the different levels of the supply chain or from companies trying to pass on costs resulting from forced underutilisation in production. Euro area producer price inflation for both electronic components and boards, for which semiconductors play an important role, continues to remain negative (Chart F). At the later stages of the pricing chain, consumer price inflation for computers and motor vehicles (the two largest components in electronic consumer goods) reveals some increase for motor vehicles,[3] while prices for computers actually began to decrease again. However, it should be noted that upward price effects from semiconductor shortages might materialise but only with a substantial time lag along the pricing chain.

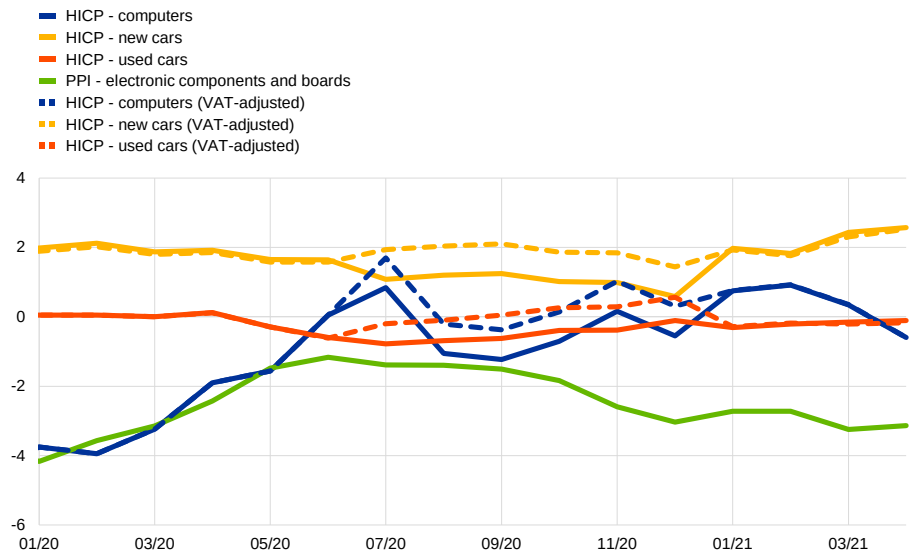
2 See the box entitled "Main findings from the ECB's recent contacts with non-financial companies", *Economic Bulletin*, Issue 3, ECB, 2021.

3 While in the United States, used car prices in particular increased very strongly during the pandemic – partly due to the recent slowdown in new car production stemming from semiconductor shortages – they did not exhibit a substantial upward dynamic in the euro area.

Chart F

Producer and consumer prices for products that rely on semiconductors

(annual percentage changes)



Sources: Eurostat and ECB staff calculations.
Notes: Dashed lines reflect series at constant taxes (assuming full pass-through of changes in indirect taxes, which include the temporary VAT cut in Germany). Latest observations are for April 2021.

The shortage of semiconductors is expected to persist in the near term. While the major global chip manufacturing firms plan to expand capacity and boost their capital expenditure by almost 74%, which is largely planned to be implemented by end-2021, both the complexity and the time required to build new plants is such that the industry's headwinds are likely to remain throughout this year.

7 Implications of the 2021 stability programmes for fiscal policies in the euro area

Prepared by Stephan Haroutunian, Sebastian Hauptmeier and Steffen Osterloh

The stability programmes for the period 2021-24 for the first time provide comprehensive details of the euro area countries' medium-term budgetary plans in response to the coronavirus (COVID-19) pandemic. Last year, given the newness of the major health crisis and the extreme uncertainty associated with it, euro area governments mostly abstained from submitting detailed fiscal plans. The updated programmes, which were submitted at the end of April 2021, were prepared by governments in the knowledge that the general escape clause of the Stability and Growth Pact (SGP) would remain active until at least the end of 2021, allowing them to deviate from the SGP's adjustment requirements.[1] Furthermore, the programmes were supposed to reflect the country-specific recommendations (CSRs) adopted by the European Council on 20 July 2020 for the period 2020-21, which did not include numerical budgetary adjustment requirements, but instead called for fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability "when economic conditions allow". For the near term, it was recommended that governments "take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery". Finally, the programmes are a first reflection of the recovery and resilience plans that Member States had to submit by 30 April outlining the reforms and projects they intend to implement using the funds available through the Next Generation EU (NGEU). Against this background, this box reviews euro area countries' medium-term budgetary plans for exiting the current crisis and points to remaining challenges arising from the recommendations for fiscal policies issued by the European Commission on 2 June in its 2021 European Semester Spring Package.

The 2021 stability programmes outline Member States' fiscal policy projections at a time when fiscal policy is playing a critical role in the policy response to the pandemic. At the start of the crisis, fiscal policy was aimed at ensuring availability of the necessary resources for the health system and protecting firms and workers in the affected industries.[2] As the vaccine roll-out continues and the lockdown measures are gradually being lifted, fiscal policy is shifting from temporary, targeted emergency measures to measures aimed at supporting the recovery. Government investments, complemented by the NGEU and accompanied by appropriate structural policies, have a major role to play in that respect.

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1 The general escape clause was activated in March 2020 and extended to 2021 in September 2020. It allows Member States to depart from the SGP's adjustment requirements in certain specific situations, such as in periods of a severe economic downturn for the euro area or the Union as a whole. For further details, see Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank – Annual Sustainable Growth Strategy 2021, COM(2020) 575 final.

2 For an overview, see the article entitled "The initial fiscal policy responses of euro area countries to the COVID-19 crisis", *Economic Bulletin*, Issue 1, ECB, 2021.

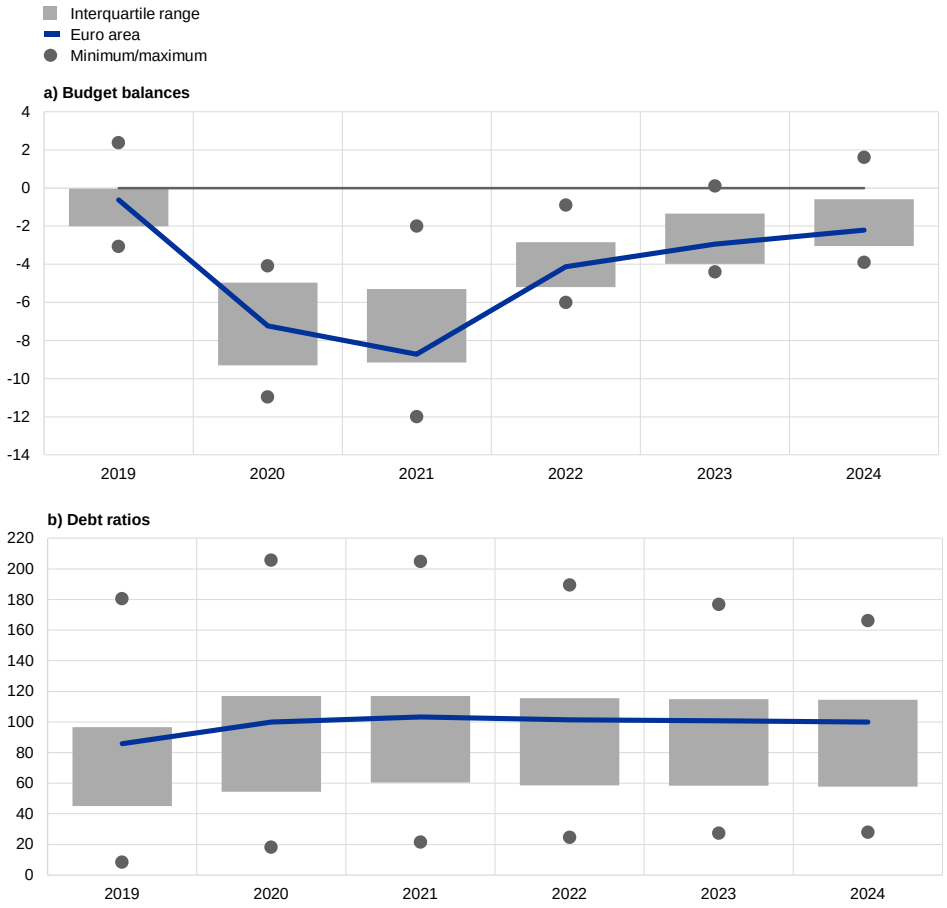
According to the stability programmes, budgetary imbalances are set to decline gradually from their high levels over the forecasting horizon. At the euro area level, the government deficit-to-GDP ratio rose from 0.6% to 7.2% between 2019 and 2020, and is set to increase further to 8.7% in 2021 (Chart A), while at the individual country level, the expected government deficits range from 2% to 12% of GDP for 2021. Although the aggregate euro area government deficit is expected to remain above pre-crisis levels (by 1.5 percentage points) until the end of the forecasting horizon (i.e. 2024), there is expected to be less dispersion in budgetary positions across countries. Some euro area countries are not planning to reduce their deficits to below the 3% of GDP threshold within the forecasting horizon (Chart B), especially some with high debt-to-GDP ratios (most notably Italy, Spain, Belgium and France), while several others, including the former programme countries Greece, Cyprus and Portugal, are planning for comparably smaller budget deficits. The euro area average debt-to-GDP ratio is projected in the stability programmes to exceed 103% in 2021, implying an increase of around 17 percentage points compared with the pre-crisis level in 2019. In 2022 it is expected to start declining slightly, owing mainly to the anticipated reversal of support measures and elevated nominal growth, but in 2024 it is expected to remain at around 100%. Moreover, additional, albeit limited, debt related to the NGEU will start to accumulate at the EU level from 2021, which is estimated to amount to around 1% of GDP over the period 2021-22.[3] It should be noted that the fiscal trajectory described in the national stability programmes differs from the fiscal forecast outlined in the June 2021 Eurosystem staff Broad Macroeconomic Projection Exercise, as set out in Section 6 of this issue of the Economic Bulletin, which takes into account only measures that have been approved by the national parliament or that have already been defined in detail by the government and are likely to pass the legislative process.

[3] See page 2 of the European Commission's "European Economic Forecast Spring 2021", which states that the total EU expenditure expected to be financed by grants from the Recovery and Resilience Facility (RRF) over the forecasting horizon of 2021-22 amounts to €140 billion, or just below 1% of 2019 GDP. The total economic impact generated by the RRF over the forecasting horizon is expected to be around 1.2% of 2019 EU real GDP.

Chart A

Projected general government budget balances and debt-to-GDP ratios based on the 2021 stability programmes

(percentages of GDP)

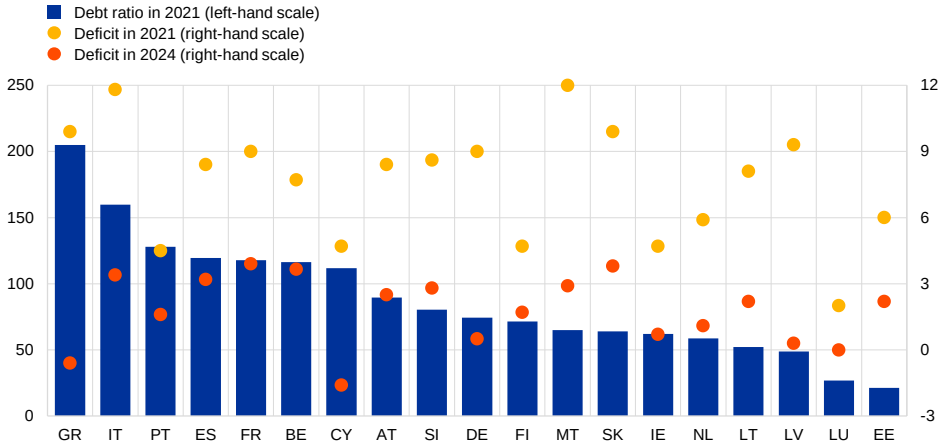


Sources: European Commission (AMECO database for 2019-20) and own calculations based on the 2021 stability programmes for the period 2021-24.
Note: The euro area aggregate data refer to the aggregate general government sector of euro area countries.

Chart B

Projected general government debt ratios and deficits based on the 2021 stability programmes

(percentages of GDP)



Sources: 2021 stability programmes.

Unlike in the case of the great financial crisis, the recovery from the COVID-19 pandemic is expected to be supported by expanding public investment. According to the 2021 stability programmes, the vast majority of euro area countries are planning to enhance the resources available for government investment, which the economic literature tends to view as a particularly growth-friendly category of government expenditure.[4] The share of public investment in GDP is expected to increase from its pre-crisis level, up from 2.8% in 2019 to 3.3% in 2023. This is in stark contrast to the years following the great financial crisis when many euro area countries pursued fiscal consolidation measures that focused largely on cutting government investment. More specifically, over the period 2009-13 the share of euro area government expenditure on government gross fixed capital formation in GDP dropped from 3.7% to 2.9%, with some of the largest reductions being recorded in those countries with the greatest need for consolidation. The increase in investment which is planned for the coming years is largely down to the NGEU, including most notably the Recovery and Resilience Facility (RRF), which provides euro area countries with an ideal opportunity to support the recovery with policies that increase the growth potential of their economies.[5]

The CSRs proposed by the European Commission as part of its 2021 European Semester Spring Package foresee that the SGP's general escape clause will remain activated in 2022, while calling for Member States' fiscal policies to be of high quality and become more differentiated. The SGP's general escape clause "will continue to be applied in 2022 and is expected to be deactivated as of 2023". Whereas the CSRs released in 2020 were homogenous across Member States, those published in spring 2021 recommend that fiscal policies in 2022 "take into account the state of the recovery, fiscal sustainability and the need to reduce economic, social and

4 For an overview, see the article entitled "The composition of public finances in the euro area", *Economic Bulletin*, Issue 5, ECB, 2017.

5 For further details, see Section 6 of this issue of the Economic Bulletin.

territorial divergences". Low-debt countries are recommended to pursue a (specifically measured) supportive fiscal stance[6], including the impulse provided by the RRF, while high-debt countries are recommended to "use the [RRF] to finance additional investment in support of the recovery while pursuing a prudent fiscal policy". This latter recommendation applies to Belgium, France, Greece, Spain, Italy and Portugal. It is also recommended that all Member States preserve nationally financed investment while "at the same time, the growth of nationally financed current expenditure should be kept under control, and be limited for Member States with high debt". As part of a recommendation emphasising the importance of the quality of budgetary measures in ensuring a sustainable and inclusive recovery, there is also a call to enhance investment, notably in the green and digital transitions, to boost potential growth. Finally, in its assessment of Member States' compliance with the deficit and debt criteria, the European Commission assesses that the deficit criterion is not fulfilled by 23 Member States and that the debt criterion is not fulfilled by 13 Member States. This notwithstanding, it considers that, "taking into account the high uncertainty, the agreed fiscal policy response to the COVID-19 crisis and the Council Recommendations of 20 July 2020", a decision on whether to place Member States under the excessive deficit procedure should not be taken at the current juncture.

The medium-term budgetary plans as outlined in the 2021 stability programmes are surrounded by a high degree of uncertainty. This uncertainty relates not only, inter alia, to the evolution of the COVID-19 pandemic, but also to the potentially large transformative impact on the euro area of the RRF. It is therefore important for the euro area as a whole that fiscal policies continue to provide support for the time being, while strengthening fiscal sustainability through sufficiently targeted measures and gradually differentiated policies at the national level.

6 Instead of using the usual measures to determine the fiscal stance, such as those applied in Section 6 of this issue of the Economic Bulletin, the European Commission measures the fiscal stance as the change in primary expenditure (net of discretionary revenue measures and excluding crisis-related temporary emergency measures) including expenditure financed by grants under the RRF and other EU funds. This takes into account, inter alia, the fact that RRF grants, while not affecting the deficit, provide an impulse to the economies.

Articles

1 Globalisation and its implications for inflation in advanced economies

Prepared by Maria Grazia Attinasi and Mirco Balatti

1 Introduction

The globalisation of inflation hypothesis argues that the factors influencing inflation dynamics are becoming increasingly global. In recent years, economists have started to reassess the predictive power of standard inflation models (e.g. the Phillips curve) and to increasingly look at global factors, including globalisation, as a possible explanation behind the reduced sensitivity of inflation to domestic determinants (the so-called globalisation of inflation hypothesis).[1] Accordingly, in addition to domestic measures of slack, standard models of inflation should account for the role of global factors over and beyond their impact via import prices.

The interest in the global determinants of inflation stems from the observed co-movement of inflation rates across advanced economies (AEs) amid the growing internationalisation of goods, services and financial markets. Average headline inflation rates in AEs have declined from around 10% in the 1970s to rates below 2% since 2014. However, the pace of globalisation has accelerated significantly since the early 1990s (Chart 1) with profound implications for the structure of the global economy. While the role of external factors (e.g. commodity prices) on inflation outcomes has been widely documented, it could also be argued that globalisation, by increasing the interconnectedness of the world economies, entails the propagation of shocks in one economy to other countries, thus influencing domestic macroeconomic outcomes. In this regard researchers have looked at the possibility that globalisation might affect inflation in a more fundamental way rather than just causing temporary shifts in the level of inflation.[2] More specifically, by changing the structure of the world economy, globalisation could alter the inflation formation process thus affecting the more persistent component of inflation across AEs.

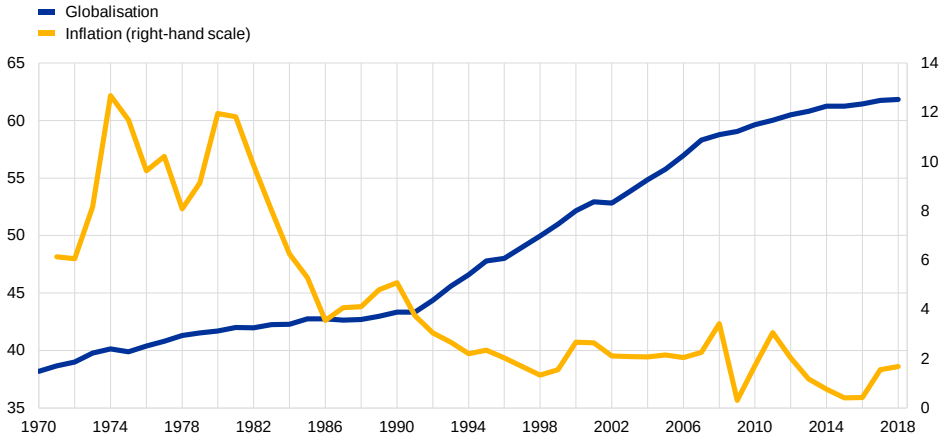
1 See Auer, R., Borio, C. and Filardo, A., "The globalisation of inflation: the growing importance of global value chains", *BIS Working Papers*, No 602, Bank for International Settlements, January 2017.

2 See Forbes, K., "Has globalization changed the inflation process?", *BIS Working Papers,* No 791, Bank for International Settlements, June 2019.

Chart 1

Median inflation rates in advanced economies and the KOF Globalisation Index

(left-hand scale: index; right-hand scale: annual percentage changes)



Sources: ECB staff calculations, KOF Swiss Economic Institute and national sources.
Note: Headline median inflation of 22 OECD countries and the KOF Globalisation Index.

This article reviews recent inflation developments across AEs and the channels through which globalisation can feed into the more persistent component of inflation. The question is relevant from a monetary policy perspective. If the impact of globalisation on inflation is found to be only transitory, then the monetary authority should "look through" it. If, instead, globalisation entails a change in price and wage-setting behaviour, it would feed into the more persistent component of inflation, with direct implications for the conduct of monetary policy. The focus of this article is on medium-term inflation developments, measured as a smoothed average of core inflation in order to exclude the more volatile sub-components (such as oil and food prices) and referred to as the more persistent component of inflation. The article finds that three elements of globalisation appear to be linked to a lower persistent inflation: trade integration, informational globalisation and global value chain participation. However, available estimates suggest that this effect is economically small, and the article concludes that globalisation does not appear to be a key determinant of the synchronisation and decline in inflation rates observed across AEs. Looking ahead a reversal (or further slowdown) of globalisation trends could provide only limited tailwinds for inflation trends.

2 Inflation in advanced economies: historical developments and common drivers

Cyclical shocks may cause temporary deviations of inflation from the central bank's objective. In the pursuit of their price stability mandate, central banks aim at a low and stable rate of inflation over the medium to long term. This amounts to setting a quantitative target (or objective) for the annual rate of change in the price level, which

usually corresponds to 2%.[3] As headline inflation comprises a broad-based basket of goods and services, movements in the more volatile inflation components, such as commodity and food prices, influence inflation temporarily. These short-term changes are usually looked through by the monetary authority,[4] which relies on measures of underlying inflation to have a more accurate signal of medium-term inflationary pressures.[5]

Inflation outcomes may also be influenced by structural forces reflecting, for example, changes in the structure of the economy stemming from both domestic and external factors (e.g. increasing trade integration). Given their gradual and persistent character, these changes could feed into the more persistent component of inflation thus potentially interfering with the medium-term price stability objective. Central banks would then tend to react in order to insulate inflation outcomes from this type of perturbation. However, since in recent years interest rates have been nearing the lower bound in many countries, a fundamental consideration, which is outside the scope of this article, is whether the monetary policy space available to neutralise the persistent influence of structural forces on inflation is diminished.

Over the past half-century, average inflation rates across AEs have displayed increasing co-movement amid declining volatility. Since the early 1970s and until the mid-1980s, inflation rates in several AEs rose to levels exceeding 10% (Chart 2), with the exception of Germany and Switzerland.[6] Inflation rates started to decline and to stabilise at lower levels in the late 1980s amid a shift in several central banks towards a more aggressive monetary policy stance. Since the early 1990s both the headline and the more persistent component of inflation started to decline gradually, along with reduced dispersion across AEs (Chart 2). In the decade after the global financial crisis (GFC), inflation rates have been trending further down along with a marked decline in volatility. During this period, characterised by low inflation and low interest rates, economists and policymakers have been confronted with a "missing inflation" puzzle.

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3 The ECB Governing Council has adopted a quantitative definition of price stability according to which it aims to maintain inflation rates below, but close to, 2% over the medium term. The inflation rate is measured as the year-on-year change in the Harmonised Index of Consumer Prices (HICP). For the United States, the Federal Open Market Committee (FOMC) judges that an inflation rate of 2% over the longer term, as measured by the annual change in the price index for personal consumption expenditures, is most consistent with the Federal Reserve's mandate to maintain price stability.

4 However, movements in oil and commodity prices can have a more lasting impact on inflation, thus becoming relevant for monetary policy if they feed into core inflation over the medium term. In this regard it is always necessary to conduct a careful analysis of the underlying factors driving commodity prices in order to assess the implications for medium-term price stability and to determine the appropriate monetary policy response to changes in commodity prices. See also the article entitled "Commodity prices and their role in assessing euro area growth and inflation", *Monthly Bulletin*, ECB, October 2013.

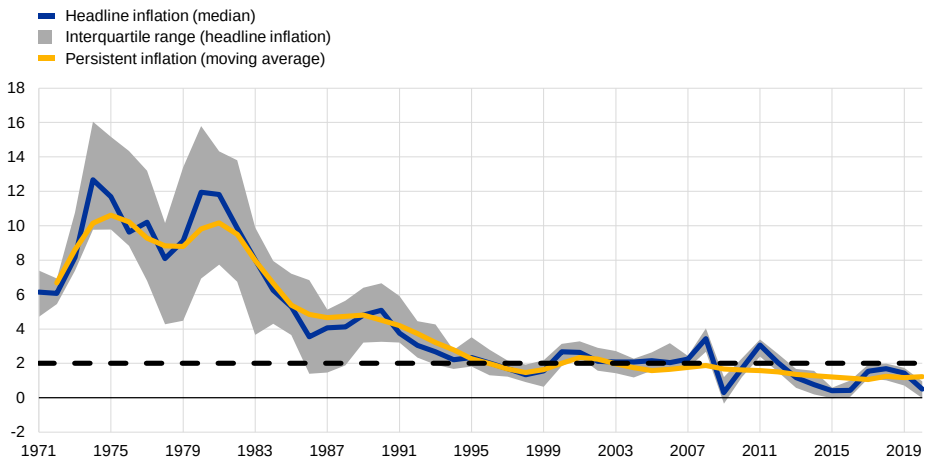
5 Measures of underlying inflation aim to remove the "noise" and to capture the (unobservable) persistent component of inflation. See the article entitled "Measures of underlying inflation for the euro area", *Economic Bulletin*, Issue 4, ECB, 2018. The article discusses three categories of underlying inflation measures: i) permanent exclusion measures, which permanently remove certain volatile sub-components (e.g. oil prices) that have little relevance for medium-term inflation as they are less persistent; ii) temporary exclusion measures, which rely on trimmed means or weighted medians of inflation; and iii) frequency exclusion measures, which aim to filter out the transitory component of all HICP sub-items and retain only the persistent ones. The measure of persistent inflation used in this article is a hybrid of category one and three.

6 See the article entitled "The 'Great Inflation': Lessons for monetary policy", *Monthly Bulletin*, ECB, May 2010.

Chart 2

Headline and persistent inflation in advanced economies

(annual percentage changes)



Sources: national sources and ECB staff calculations.
Notes: The chart consists of data for a panel of 22 OECD countries. Persistent inflation is computed as a three-year centred moving average of median core inflation rates. The latest observation is for 2020.

The increasing synchronisation of inflation rates across countries reflects the influence of common factors, as widely documented in the literature. Ciccarelli and Mojon[7] document the large co-movement in headline inflation rates in OECD countries and show that global inflation accounts for about 70% of the cross-country variance of inflation. The authors find that the inclusion of global inflation consistently improves domestic inflation forecasts. In a similar vein, Mumtaz and Surico[8] find that the importance of the global factor was more prominent until the mid-1970s, while it declined thereafter.[9]

International inflation co-movements may be explained by factors such as common shocks, the evolution of the monetary policy regime and structural changes. These factors affect inflation outcomes in different ways with different implications from a monetary policy perspective.

First, common shocks, of which fluctuations in oil and non-oil commodity prices are a typical example, are a global source of headline inflation volatility. As argued by Lane,[10] since central banks tend to stabilise medium-term inflation without fully insulating inflation outcomes from the impact of these (largely temporary) shocks, the latter may account for strong co-movements in the deviation of national

7 Ciccarelli, M. and Mojon, B., "Global Inflation", *The Review of Economics and Statistics*, Vol. 92, No 3, August 2010, pp. 524-535. The authors develop three alternative measures of global inflation: a cross-country average of inflation rates, the aggregate OECD inflation and a measure based on static factor analysis.

8 Mumtaz, H. and Surico, P., "Evolving International Inflation Dynamics: World and Country-specific Factors", *Journal of the European Economic Association*, Vol. 10, No 4, August 2012, pp. 716-734.

9 Taking a longer historical perspective, Gerlach and Stuart analyse data from the 1850s and argue that the role of international inflation on domestic prices, excluding the "Great Inflation" period, has remained remarkably stable over time. See Gerlach, S. and Stuart, R., "International Co-Movements of Inflation, 1851-1913", *CEPR Discussion Paper*, No DP15914, March 2021.

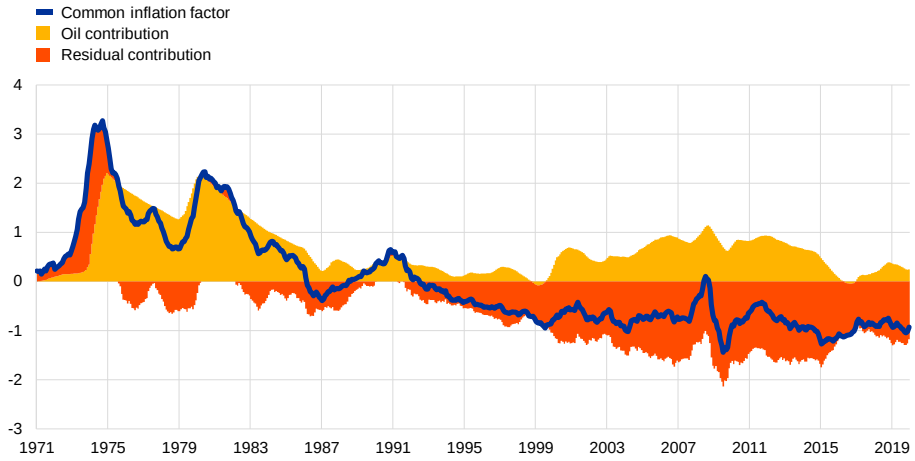
10 Lane, P. R., "International inflation co-movements", speech delivered at the Inflation: Drivers and Dynamics 2020 Online Conference, Federal Reserve Bank of Cleveland/European Central Bank, 22 May 2020.

inflation rates from their medium-term target (or objective). Chart 3 depicts the evolution of the estimated (unobserved) common factor in headline inflation across countries and the estimated contribution of oil prices since the early 1970s. The chart illustrates that fluctuations in oil prices played a significant role in explaining the international co-movement in inflation during the 1970s, but since the late 1980s their importance started to diminish thus pointing to a role also for other factors.[11]

Chart 3

Global inflation and commodities

(standardised annual percentage changes; percentage point contributions)



Sources: national sources and ECB staff calculations.
Notes: The common factor is demeaned. The estimation sample runs from January 1971 to December 2019. The blue line reflects the zero mean common factor in global inflation as derived by replicating the principal component approach of Ciccarelli and Mojon (op. cit.) for a sample of 34 advanced and emerging economies. The yellow bars reflect the contributions of oil prices derived as in Yellen, J.L., "Inflation Dynamics and Monetary Policy", speech delivered at the Philip Gamble Memorial Lecture, University of Massachusetts, Amherst, 24 September 2015. The coefficients are estimated by a linear regression of the common factor on oil prices. The red bars are the residual contributions.

Second, the shift to inflation-targeting regimes played an important role in the convergence of inflation outcomes towards low and stable levels across AEs. The early 1990s marked a shift in the monetary policy conduct of several AE central banks towards an inflation-targeting regime aimed at taming persistently high inflation rates and anchoring inflation expectations (Table 1).[12] The pursuit of low and stable inflation benefited from a higher level of central bank independence as the consensus around a reduction of political pressure in the conduct of monetary policy emerged.[13] The successful taming of inflation under inflation-targeting frameworks until 2007 was

11 The relatively diminished contribution of oil prices to the common inflation component is confirmed also when the relationship is estimated starting from the early 1990s, or when including food prices or when month-on-month changes are employed. Lane, ibid., points out that the transmission of fluctuations in commodity prices to domestic inflation is, however, neither automatic nor uniform across countries. With an independent monetary policy regime, hence flexible exchange rates, there is no deterministic relationship between international relative price movements and overall inflation rates. For example, while the oil price is globally quoted in US dollars, the pattern of movements in the USD/EUR exchange rate has meant that the oil price in euro has been much less volatile than the oil price in US dollars.

12 During this period many monetary authorities shifted towards an inflation-targeting regime, either explicitly or implicitly, in a trend that has been referred to as the "globalisation of central banking". See Arrigoni, S., Beck, R., Ca' Zorzi, M. and Stracca, L., "Globalisation: What's at stake for central banks", VoxEU, February 2020.

13 In this context, the adoption of explicit inflation targets, promoted accountability and constrained discretionary policy thus counterbalancing the flexibility stemming from greater independence. See Dall'Orto Mas, R. et al., "The case for central bank independence", *Occasional Paper Series*, No 248, ECB, 2020.

tested by the GFC.[14] Inflation rates remained subdued and interest rates approached the effective lower bound (Chart 4) thereby constraining the available monetary policy space to bring inflation back to target.

Table 1

Monetary policy frameworks in advanced economies

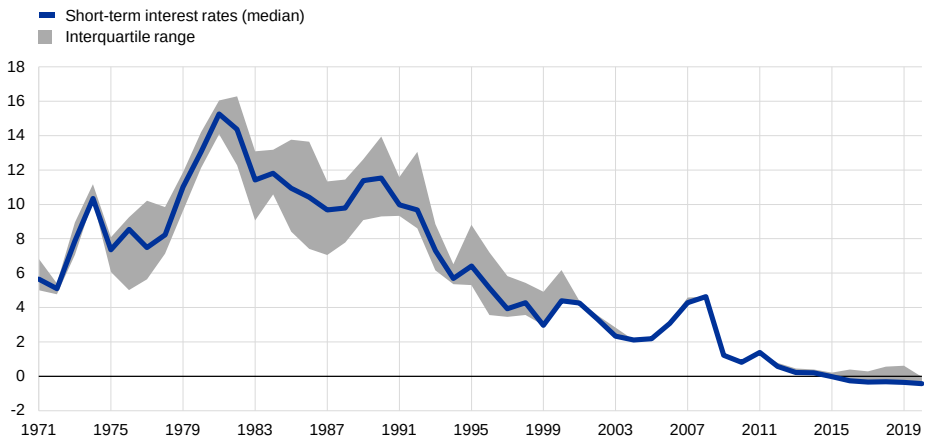
Country	Central bank	Policy framework	Definition of inflation target/objective	Target/Objective point/range	Reference price index	Commodity exporter
Australia	Reserve Bank of Australia	Inflation targeting	1996	2-3	CPI	Yes
Canada	Bank of Canada	Inflation targeting	1991	2 (1-3)	CPI	Yes
Switzerland	Swiss National Bank	Other	1999	0-2	CPI	
Euro area	European Central Bank	Price stability	1998	Below, but close to, 2%	HICP	
United Kingdom	Bank of England	Inflation targeting	1992	2 (1-3)	CPI	
Japan	Bank of Japan	Inflation targeting	2013	2	CPI	
South Korea	Bank of Korea	Inflation targeting	1998	2	CPI	
Norway	Norges Bank	Inflation targeting	2001	2	CPI	Yes
New Zealand	Reserve Bank of New Zealand	Inflation targeting	1989	2 (1-3)	CPI	Yes
Sweden	Sveriges Riksbank	Inflation targeting	1993	2	CPI	
United States	Federal Reserve System	Other	2012	2	PCE	

Sources: Balatti, M., "Inflation volatility in small and large advanced open economies", *Working Paper Series*, No 2448, ECB, 2020 and *Annual Report on Exchange Arrangements and Exchange Restrictions 2019*, International Monetary Fund, August, 2020.
Notes: Adapted from Balatti and IMF, the table includes 11 advanced economies with explicit inflation or price stability objectives. CPI is the Consumer Price Index, HICP is the Harmonised Index of Consumer Prices and PCE is the Personal Consumption Expenditures Price Index.

[14] Rogoff, K., "Globalization and global disinflation", *Economic Review*, Vol. 88, Issue Q IV, 2003, pp. 45-78; Williams, J.C., "Inflation Targeting and the Global Financial Crisis: Successes and Challenges", Federal Reserve Bank of San Francisco, October 2014.

Chart 4

Interest rates in advanced economies



Sources: national sources and ECB staff calculations.
Notes: The chart consists of data for a panel of 22 OECD countries. Interest rates on three-month maturity contracts are used as proxies of the short-term rates. In the period after the creation of the euro area, the interquartile range of interest rates is mechanically affected by the fact that some countries within the sample share the same monetary policy.

Third, structural changes in the economy can influence inflation dynamics by feeding into the more persistent component of inflation. The structure of the economy matters for inflation outcomes because it determines price and wage-setting dynamics. Changes in the structure of the economy fall broadly into two main categories.[15] First, changes that are domestic in nature but affect national economies in similar ways, thus resulting in a common inflation pattern across countries. Demographic changes are one example of this type of structural change and may influence inflation through multiple channels.[16] Second, changes of a global nature that increase the interdependence of the world economies, of which the economic and financial globalisation that has taken hold since the 1990s is certainly the most notable example.

The influence of globalisation on inflation outcomes has been widely debated by policymakers and academics alike. In a standard Phillips curve framework,[17] external forces (e.g. foreign demand, foreign prices) feed on inflation via pressures on domestic slack and/or via import prices of final goods or intermediate goods. Moreover, as trade integration mainly influences the price of tradable goods relative to non-tradable goods the impact on average inflation rates over the medium term is

15 Lane, op. cit.

16 See Lis, E., Nickel, C. and Papetti, A., "Demographics and inflation in the euro area: a two-sector new Keynesian perspective", *Working Paper Series*, No 2382, ECB, March 2020. Population ageing may affect inflation via shrinking labour force participation and productivity, but also by contributing to the trend decline in the equilibrium interest rate. However, a full assessment of the channels of domestic changes in the structure of the economy is beyond the scope of this article.

17 Inflation dynamics are typically modelled in terms of a Phillips curve – formulated as an inverse relationship over the short to medium term between the rate of inflation and the cyclical position of the domestic economy. During periods of economic expansion, declining economic slack (e.g. low unemployment) puts upward pressure on prices via rising wages, as they are passed on by businesses to consumers. Empirical estimates of the Phillips curve rely on measures of labour market slack, and control, among other variables, for the role of inflation expectations, oil prices and the exchange rate. Given its good empirical properties, the Phillips curve has become the workhorse model used in many central banks to analyse and forecast developments in both headline and core inflation.

thought to be limited. Arguments in support of a more direct role of foreign factors in explaining inflation fluctuations have been growing,[18] calling to augment traditional Phillips curve models with measures of global slack. At the same time, the transformational role of globalisation for the world economy has been increasingly acknowledged. Global economic integration in its various dimensions (e.g. labour, trade in final and intermediate products) may act as a persistent and positive supply shock leading to sustained disinflationary pressures, thus shifting the Phillips curve downwards. But it may also affect the market structure by increasing competition within many markets, thus causing structural changes that would influence the inflation process, possibly flattening the Phillips curve.[19]

3 Globalisation: main features and transmission channels to inflation

Globalisation, in its multidimensional character, has shaped the world economy in a fundamental way. Albeit on an upward trend since the 1970s, globalisation gathered speed in the 1990s, entering a period of "hyper-globalisation"[20] which led to the progressive reduction of (cross-border) frictions to the flow of people, capital, goods, services, information and knowledge. Globalisation stalled after the GFC owing to a slowdown in the speed of economic integration. This slowdown reflected compositional effects stemming from the increasing weight of emerging market economies (EMEs) in global economic activity, as these economies have a lower trade intensity; a moderation in global value chain (GVC) expansion which partly pre-dated the GFC; and diminishing support from trade finance.[21]

Trade integration and the increasing fragmentation of production in vertically integrated supply chains have been a landmark feature of globalisation. Trade intensity, measured as the share of world imports of goods and services to GDP, has increased from 30% in 1980 to more than 50% in 2008 and has broadly stabilised around this level since. Trade integration was spurred by the trade liberalisation efforts (i.e. bilateral and multilateral free trade agreements) which resulted in an unprecedented decline in average tariff rates (Chart 5, panel a)) as well as lower taxes and regulations. At the same time, advances in information and transportation technologies and falling trade barriers enabled the fragmentation of production processes along supply chains (GVCs) located in different countries. GVC integration resulted in a sharp increase in trade in intermediate goods which are used as inputs of production. From 1995 to 2007, GVC-related trade rose from around 25% to 40% of

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18 See Borio, C. and Filardo, A., "Globalisation and inflation: New cross-country evidence on the global determinants of domestic inflation", *BIS Working Papers*, No 227, Bank for International Settlements, May 2007. For a more recent analysis see Auer, Borio and Filardo, op. cit. who have also focused on the global and domestic drivers of inflation. See Section 4 of this article for a more in-depth review.

19 Carney, M., "Inflation in a globalised world", remarks at the Federal Reserve Bank of Kansas City Economic Symposium, Jackson Hole, Wyoming, 29 August 2015; and Carney, M., "[De]Globalisation and inflation", speech delivered at the IMF Michel Camdessus Central Banking Lecture, September 2017.

20 Rodrik, D., *The Globalization Paradox: Democracy and the Future of the World Economy*, WW Norton, 2011.

21 IRC Trade Task Force, "Understanding the weakness in global trade – What is the new normal?", *Occasional Paper Series*, No 178, ECB, September 2016.

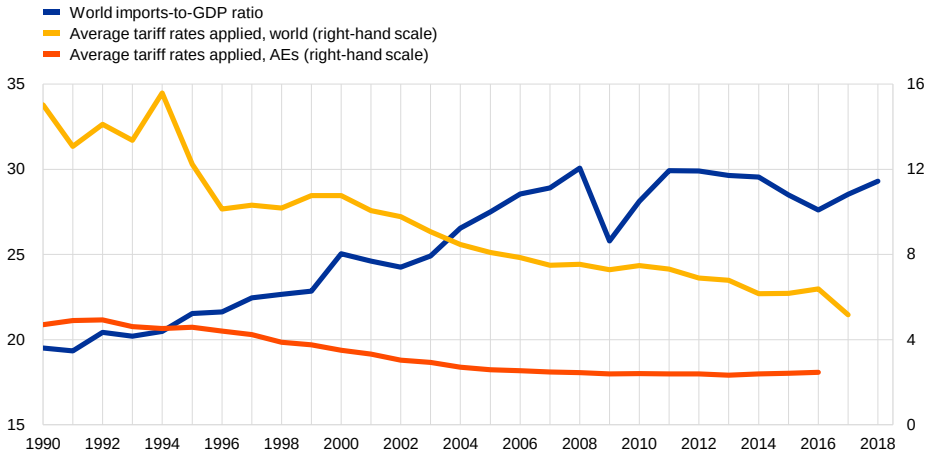
global exports and plateaued since the GFC (Chart 5, panel b), red line).[22] The increase in GVC participation is closely linked to the growing integration of EMEs in global production processes, particularly the unprecedented rise of China whose share in global GDP has increased from about 5% in 1993 to 19% in 2019.

Chart 5

Trade globalisation

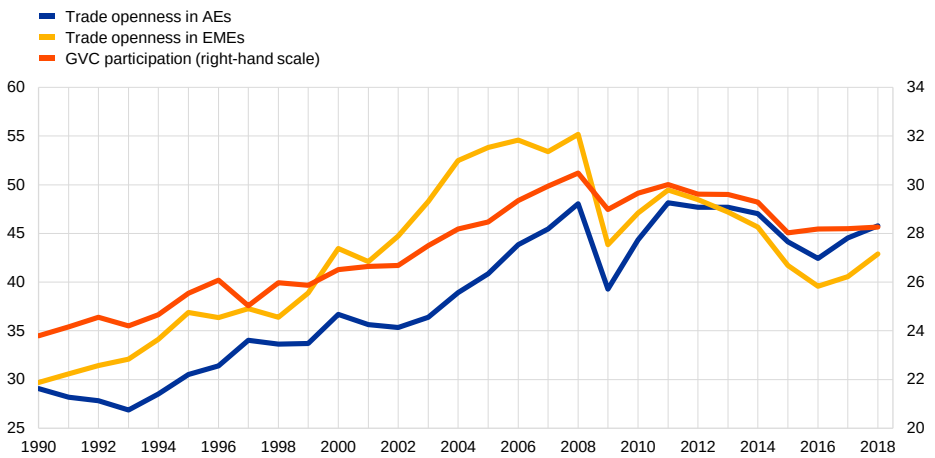
a) Trade intensity and tariff rates

(left-hand scale: ratio; right-hand scale: percentages)



b) Trade openness and global value chain participation

(ratio)



Sources: OECD TiVA, IMF, World Bank (World Development Indicators) and ECB staff calculations.
Notes: Ratio of nominal imports to GDP. The average tariff rate applied is the unweighted average of effectively applied rates for all products subject to tariffs calculated for all traded goods in percentage terms. Trade openness is calculated as the sum of imports and exports relative to GDP. GVC participation is calculated as the ratio of GVC-related trade to gross exports. GVC-related trade is defined as the value added that has crossed at least two national borders (Borin and Mancini, op. cit.). Values between 2016 and 2018 are based on ECB estimates.

Trade globalisation may affect inflation in AEs by influencing the price and wage-setting mechanism. Increasing trade integration and greater participation of low-cost producers in global production has a direct disinflationary effect. This effect

[22] GVC-related trade is measured as the share of traded intermediate goods in total global exports that cross at least two national borders (see Borin, A. and Mancini, M., "Follow the value added: tracking bilateral relations in global value chains", MPRA Paper, No 82692, University Library of Munich, November 2017).

works via lower imported inflation,[23] but also via decreasing the average mark-ups of domestic firms in the face of tougher foreign competition.[24] As a result, less productive firms could exit the market, further lowering cost pressures.[25] Participation in GVCs can further contribute to the disinflationary effects, and it is associated with more synchronised inflation dynamics across AEs.[26] Andrews et al.[27] find that for AEs the rise in GVC participation has pushed producer price index (PPI) inflation down by 0.15 percentage points on average. GVC participation contributes to lower inflation by exerting downward pressures on unit labour costs (by raising productivity and reducing wage growth) in the importing country, especially when low-wage countries are integrated in supply chains.

Globalisation has also had pervasive effects on labour markets – eroding the bargaining power of workers in AEs and further moderating production costs. On the one hand, increased trade integration has enabled a geographical shift of the centres of production towards large EMEs characterised by an abundance of low-cost labour for manufacturing goods. In this regard notable examples are the re-integration of central, eastern and south-eastern European countries into the market economy after 1990 and the integration of China in the world economy in the early 2000s, which both constituted an unprecedented increase in global labour supply. Many workers moved within countries from rural areas to cities. In China, for example, the trend in rural to urban migration is closely linked to this integration and has allowed for a decades-long expansion of export capacity without a concomitant increase in the cost of production.[28] On the other hand, by facilitating international migration flows towards AEs, globalisation has influenced the relationship between unemployment and the wage-setting behaviour of the hosting country. In the presence of a strong rise in migration inflows, heterogeneous labour supply elasticities between native and immigrant workers lower the marginal labour costs and put downward pressure on inflation.[29]

Informational globalisation and digitalisation are two other dimensions of global integration which have been increasing across AEs since 1990. The

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23 This direct effect is usually captured via import prices, and it may result in a lasting disinflationary effect only to the extent that foreign prices are systematically lower than domestic prices. For the case of France, Carluccio et al. show that the differential between France export prices (which proxy for the price level of domestically produced goods) and the import prices of low wage countries (e.g. China and the countries that joined the EU in or after 2004) was large over the period 1994-2014 and it has only slightly declined over time. See Carluccio, J., Gautier, E. and Guilloux-Nefussi, S., "Dissecting the Impact of Imports from Low-Wage Countries on French Consumer Prices", *Banque de France Working Papers*, No 672, April 2018.

24 Melitz, M. and Ottaviano, G., "Market size, Trade, and Productivity", *Review of Economic Studies*, Vol. 75, Issue 1, 2008, pp. 295-316.

25 Guerrieri, L., Gust, C. and López-Salido, J.D., "International competition and inflation: a New Keynesian perspective", *American Economic Journal: Macroeconomics*, Vol. 2, No 4, 2010, pp. 247-80; Amiti, M., Itskhoki, O. and Konings, J., "International Shocks, Variable Markups and Domestic Prices", *Review of Economic Studies*, Vol. 86(6), November 2019, pp. 2356-2402.

26 See de Soyres, F. and Franco, S., "Inflation Dynamics and Global Value Chains", *Policy Research Working Paper*, No 9090, World Bank, 2019.

27 Andrews, D., Gal, P. and Witheridge, W., "A genie in a bottle? Globalisation, Competition and Inflation?", *OECD Economics Department Working Papers*, No 1462, 2018.

28 For an extensive analysis on the role of China for inflation dynamics in advanced economies, see Gern, K.-J. et al., "Higher inflation in China: Risks for Inflation and Output in Advanced Economies", *Kiel Policy Briefs*, No 36, Kiel Institute for the World Economy, October 2011.

29 Bentolila, S., Dolado, J.J. and Jimeno, J.F., "Does immigration affect the Phillips curve? Some evidence for Spain", *European Economic Review*, Vol. 52, No 8, 2008, pp. 1398-1423.

technological advancements of the last decades have led to a sharp increase in the flow of information and communication across AEs. While these flows are very difficult to measure, the KOF Swiss Economic Institute produces some indicators.[30] The KOF Informational Globalisation (de jure) Index[31] refers to the ability to share information across countries and is measured by internet access and press freedom. While this measure has been trending upward since 1970, the de facto dimension of the KOF Informational Globalisation Index, measured by used internet bandwidth, international patents and technology export increased strikingly after the GFC. Both measures have plateaued in the last few years.

Digitalisation-driven integration has changed the pricing behaviour of large retailers at a global scale. The advent of algorithmic pricing technologies, easily transferable across countries and firms, and the transparency of the internet have enlarged geographical horizons for consumers, and reinforced globalisation trends via lower search costs for consumers and improved efficiency and productivity for producers. The enhanced competitive behaviour of firms increases the geographical correlation of price changes and tends to dampen price increases.[32] Firms in some industries update their prices more frequently than in previous decades, although the extent to which dynamic pricing affects the flexibility of reference prices, hence the slope of the Phillips curve, remains unclear. For the United States there is evidence that goods prices have become significantly more uniform across retailers, suggesting higher strategic complementarities in the price-setting behaviour of firms (i.e. a high sensitivity to competitors' prices)[33] whereas for some euro area countries early evidence points to less uniform pricing than in the United States.

The rise of "superstar firms", many of which operate in the technology sector, has an ambiguous impact on price setting. Highly productive "superstar firms" have rapidly increased their market share, allowing firms with superior quality products, lower marginal costs or greater innovation ability to reap disproportionate rewards relative to previous eras.[34] This trend is likely to have influenced the evolution of prices over time, but the direction of the impact remains ambiguous. On the one hand, such firms can leverage the higher productivity to lower prices and maximise their market share. So long as this results in an increasing degree of competition, mark-ups and prices would be dampened further, flattening underlying inflation. On the other hand, if globalisation channels sales towards the most productive firms in each industry, product market concentration would rise, and competition would fall. Depending on the contestability of the market, monopolistic and oligopolistic market power would allow firms to increase mark-ups with a consequent impact on price setting.

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30 Gygli, S., Haelg, F., Potrafke, N. and Sturm, J.-E, "The KOF Globalisation Index – revisited", *The Review of International Organizations*, Vol. 14(3), 2019, pp. 543-574.

31 Dreher, A., "Does Globalization Affect Growth? Evidence from a new Index of Globalization", *Applied Economics*, Vol. 38(10), 2006, pp. 1091-1110.

32 Cavallo, A., "Scraped Data and Sticky Prices", *The Review of Economics and Statistics*, Vol. 100, No 1, 2018, pp. 105-119.

33 Belz, S., Wessel, D. and Yellen, J., "What's (Not) Up With Inflation?", The Brookings Institution, January 2020.

34 Autor, D., Dorn, D., Katz, L.F., Patterson, C. and Van Reenen, J., "The Fall of the Labor Share and the Rise of Superstar Firms", *The Quarterly Journal of Economics*, Vol. 135, Issue 2, 2020, pp. 645-709.

4 The impact of globalisation on inflation in advanced economies

Empirical evidence on how global slack influences the response of inflation to domestic cyclical conditions is mixed. The early literature on the disinflationary effects of globalisation mostly focused on measures of global slack. Borio and Filardo[35] find that the inclusion of global slack (i.e. a weighted average of international output gaps) adds considerable explanatory power to traditional benchmark inflation rate equations, thus explaining cyclical fluctuations in inflation across AEs. Lodge and Mikolajun[36] augment a Phillips curve for a panel of AEs with measures of both global slack and global inflation and find little evidence that global slack drives domestic inflation.[37] Global inflation is found to have had a more prominent role during the 1970s and 1980s (i.e. the Great Inflation period) but lost significance during periods of more stable inflation rates. Bianchi and Civelli[38] find that global slack affects inflation dynamics and that globalisation, measured in terms of trade and financial openness, is positively related to the effects of global slack on inflation. However, the authors conclude that "… the effects of globalization require substantially large changes in the degree of openness in order to be economically significant". The analysis presented in Box 1 confirms that in the case of central and eastern European EU countries their increasing integration in the world economy since the early 2000s has weakened the responsiveness of consumer price inflation to domestic conditions, though the effect is quantitatively small. This impact is more pronounced in the manufacturing sector given a higher GVC integration, hence higher exposure to international competition and strategic complementarities. Certain aspects of digitalisation (e.g. the use of internet for e-commerce) are also found to weaken the correlation between inflation and domestic cyclical conditions.

Evidence on the impact of globalisation on persistent inflation is limited and points, at best, to an economically small impact. Forbes[39] analyses the impact of global variables on inflation dynamics and finds that while there is a positive correlation between measures of global slack and cyclical inflation, the impact on the more persistent component of inflation is not significant. Likewise, Kamber and Wong[40] study the role of foreign shocks in driving inflation outcomes and find evidence of a sizeable influence on inflation gaps, while the impact on the permanent component is small. The negative but relatively small correlation between globalisation and the persistent component of inflation is confirmed in the analysis presented in Box 2.

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35 Borio, C. and Filardo, A., op. cit.

36 Mikolajun, I. and Lodge, D., "Advanced economy inflation: the role of global factors", *Working Paper Series*, No 1948, ECB, August 2016.

37 See the article entitled "Domestic and global drivers of inflation in the euro area", *Economic Bulletin*, Issue 4, ECB, 2017, which finds only limited support for including measures of global slack and measures of integration in GVCs in Phillips curve analyses when studying inflation in the euro area.

38 Bianchi, F. and Civelli, A., "Globalization and inflation: Evidence from a time-varying VAR", *Review of Economic Dynamics*, Vol. 18, Issue 2, 2015, pp. 406-433.

39 See Forbes, K., "Has globalization changed the inflation process?", op. cit.

40 Kamber, G. and Wong, B., "Global factors and trend inflation", *Journal of International Economics*, Vol. 122, 2020.

Three elements of globalisation are found to be inversely related to the persistent component of inflation across AEs: trade integration, informational globalisation and GVC participation. The broad perspective on globalisation presented in this article and employed in the empirical analysis in Box 2 allows a comprehensive investigation of how globalisation can influence inflation dynamics. The findings point to the presence of compositional effects as globalisation, in its various dimensions, appears to act as a disinflationary force in the case of goods inflation, but not for services inflation. This suggests that the sharpest movements in overall inflation, which took place in the 1990s and then again after the GFC, are possibly linked to other factors, such as shifts in monetary policy regimes, falling inflation expectations and lower wage indexation. The findings are in line with the literature and hold for the cross-section of AEs analysed as well as for the euro area. Therefore this article concurs with Forbes,[41] who finds that "global variables … have limited ability to improve our understanding of the dynamics of the underlying slow-moving trend in inflation, and they do not appear to have become more important over the last decade". A direct implication is that while standard inflation frameworks can be augmented to account for the role of global factors, they should not be fully replaced. This is consistent with the evidence that the major plunge in inflation rates across AEs and its persistent component started in the 1980s, when globalisation was still latent and digitalisation was low, and it came to a halt around the mid-1990s, when China had not yet joined the World Trade Organization (WTO) (see Chart 2). The analysis in Box 2 further shows that the fall in inflation rates that occurred in the 1990s was synchronised across goods and services. As the latter are expected to have been relatively unaffected by cross-border integration, it can be concluded that while globalisation likely pushed down a little further the persistent component of inflation it seems unlikely to have been the main force behind its decline.

Box 1

Globalisation and the Phillips curve in central and eastern European EU countries

Prepared by Tina Zumer and Francesco Chiacchio

This box examines the responsiveness of consumer prices to domestic conditions in central and eastern European EU countries and whether their correlation is affected by two measures of globalisation: trade openness and participation in global value chains (GVCs). In the homogeneous group of 11 central and eastern European (CEE) EU countries, which includes five euro area countries (Estonia, Latvia, Lithuania, Slovenia and Slovakia) and six other EU Member States (Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania), a standard representation of a hybrid new Keynesian Phillips curve is estimated, proxying marginal costs with economic slack and using quarterly data over 2001-2019. During this period, the CEE EU countries maintained a high level of openness and were relatively more integrated in global production chains than the euro area as well as most advanced economies (AEs).[42] The estimations are carried out by regressing the quarter-on-quarter change of the HICP excluding energy and food on the unemployment gap, past

41 Forbes, K., "Inflation Dynamics: Dead, Dormant, or Determined Abroad?", *Brookings Papers on Economic Activity*, Fall 2019, pp. 257-338.

42 See, for example, the article entitled "The impact of global value chains on the macroeconomic analysis of the euro area", *Economic Bulletin*, Issue 8, ECB, 2017.

inflation and the two lags of the import deflator.[43] To investigate whether globalisation affects the slope of the Phillips curve, the coefficient of the unemployment gap is interacted with measures of trade openness and integration in cross-border supply chains.[44]

Globalisation may not only affect inflation levels but also change the price-setting behaviour of firms and thus the way inflation responds to domestic conditions, though its overall effect is a priori ambiguous. Rising exposure to global competition may limit the scope for firms to pass domestic costs on to consumers in order not to lose competitiveness or market share. However, greater integration and openness to trade can affect market concentration and favour larger and more productive players that are relatively more protective of mark-ups. The findings of this box, while not making causal statements, support the argument that rising exposure to global competition may overall limit the scope for firms to pass their costs on to consumers.

For the panel of CEE EU countries, a high dependence on export markets and high GVC participation are associated with a lower correlation of inflation with the domestic business cycle (Chart A, left-hand and middle panels). The estimated coefficients turn out significantly lower for observations with relatively higher GVC participation and trade openness (Chart A, yellow bars). However, as the country-specific time-variation in GVC participation is smaller than the cross-country variation (which drives the estimated coefficients shown in Chart A), it is likely that the contribution of GVC participation in lowering the correlation between activity and prices for individual countries is plausibly small.[45]

43 The dependent variable is the annualised quarter-on-quarter growth rate of underlying inflation, while the import deflator is taken in year-on-year growth rates. Regressions also include a rich set of fixed effects accounting for a country's macroeconomic cycle and idiosyncratic shocks affecting all countries.

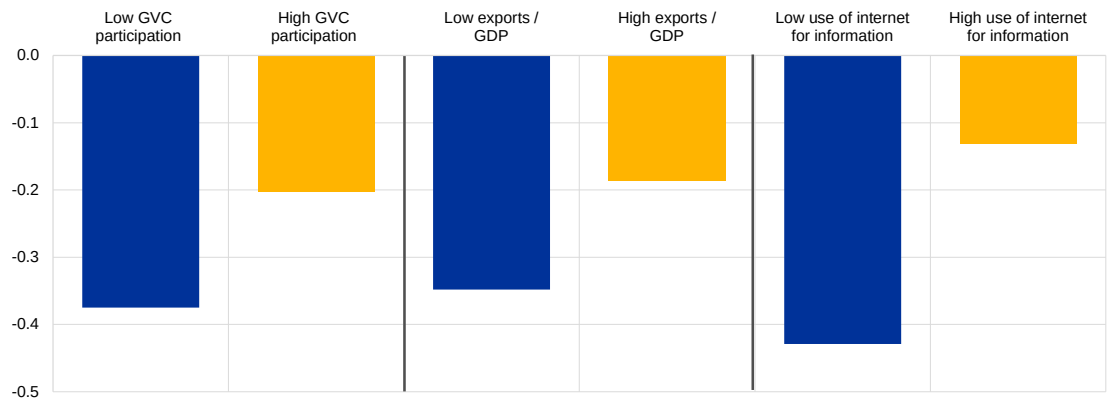
44 Trade openness is computed as gross exports of goods and services as a percentage of GDP. GVC participation is measured as the share of GVC-related trade in total gross exports (Borin and Mancini, op. cit.), where GVC-related trade is defined as the sum of exported domestic value added that is re-exported by a direct importer (forward GVC trade) and foreign value added embedded in own exports (backward GVC trade). For a better interpretation of interaction terms, levels of GVC participation and openness are expressed as dummies equal to 1 if the underlying observation is higher than that of the panel long-term median.

45 This resonates with the cross-sectional analysis in Bianchi and Civelli, op. cit.

Chart A

Global factors affecting the slope of price Phillips curves in CEE EU countries

(estimated coefficients of the unemployment gap)



Sources: Eurostat, ECB, World Input-Output Database, and authors' calculations.
Notes: Results from a reduced form-estimation of a Phillips curve in a panel of 11 countries over 2001-2019, where the lagged unemployment gap is interacted with a dummy equal to 1 if the underlying value of GVC participation, exports of goods and services as a percentage of GDP, or the percentage of individuals finding information about goods and services online is higher than that of the panel long-term median. The dependent variable is the annualised quarter-on-quarter growth rate of underlying inflation. Other controls include lagged inflation, the two lags of the import deflator, as well as country-period and year fixed effects. Coefficients of interaction terms are statistically significant. GVC participation is computed as the share of GVC-related trade in total gross exports (Borin and Mancini, op. cit.), where GVC-related trade is defined as the sum of exported domestic value added that is re-exported by a direct importer (forward GVC trade) and foreign value added embedded in own exports (backward GVC trade). The sample for GVC participation ends in 2016, with values for 2015 and 2016 based on authors' estimates. Digitalisation data are broadly available from 2004.

Certain aspects of digitalisation that enhance global integration are also found to weaken the correlation between underlying inflation and domestic conditions in CEE EU countries. Adapting the previous analysis, similar results are obtained using measures of informational globalisation (e.g. the use of internet for e-commerce or for finding information about goods and services; Chart A, right-hand panel). These variables capture technological developments fostering the cross-border flow of information or lowering entry costs into global markets that may affect business dynamism, competition and price transparency.[46]

A similar analysis at the sectoral level suggests that GVC integration channels are particularly relevant for manufacturing industries. The aggregate approach described above is complemented by the estimation of a sectoral Phillips curve panel where sectoral labour costs drive sectoral output price inflation.[47] By interacting sectoral labour costs with the change in GVC participation at the sectoral level, we find that the exposure to global competition lowers the correlation between sectoral wages and producer prices and particularly so for manufacturing industries (relative to the rest of the business economy), which are the most integrated in GVCs, generally sell highly tradable goods and are less local in nature. This increases strategic complementarities and the dependence of producer price inflation on global economic conditions. Thus, the industrial composition of an economy is an important aspect in assessing how global factors may influence the responsiveness of inflation to the business cycle, as GVCs are a sectoral phenomenon.

Overall, for a panel of CEE EU countries there is evidence that growing global economic integration has reduced the sensitivity of inflation to domestic slack, hence the slope of the Phillips curve in the

46 See, for example, the article entitled "The digital economy and the euro area", *Economic Bulletin*, Issue 8, ECB, 2020.

47 We regress growth of sectoral gross output deflator on growth of sectoral labour costs per worker, growth of sectoral deflator of import of intermediates and growth of sectoral mean labour productivity. Data are sourced from CompNet (7th Vintage dataset), where annual information is available for seven CEE countries and 56 two-digit sectors (according to the NACE Rev. 2 classification) of the business economy, from 2005 to 2015.

last two decades. Global economic integration appears to have affected firms' price-setting behaviour**,** though the small quantitative estimates also imply that even if future structural transformations, like how production processes will be organised, will keep shaping price setting, these would have limited implications for the aggregate inflation of individual countries.

Box 2
The impact of globalisation on inflation and its components in advanced economies: empirical evidence

Prepared by Maria Grazia Attinasi and Mirco Balatti

This box investigates empirically the globalisation of inflation hypothesis and finds limited supporting evidence. Understanding the effect of the external environment on domestic conditions is important in the conduct of monetary policy. Econometric analysis for a panel of advanced economies (AEs) finds that over the last three decades the persistent component of inflation, measured as a 12-quarter moving average of core inflation, has been sensitive to some measures of globalisation. Yet the economic importance of these factors is limited and leaves scope for domestic determinants.

In contrast to a large part of the literature, this analysis takes an encompassing view of globalisation which is not limited to goods trade linkages and prices of traded goods. On the back of the rise of financial and informational integration, services have become more tradable and their share in consumption baskets has grown. Assessing the role of globalisation on services prices can shed some light on the future role of foreign and domestic factors for inflation dynamics. As the role of services in high-income economies increases, the question of whether this will strengthen the link between persistent inflation and domestic economic developments also arises, given that changes in services prices are commonly attributed to domestic rather than to foreign factors.[48] Breaking down overall inflation into goods and services inflation helps to understand overall inflation dynamics.[49] Their unique characteristics also imply a different exposure to globalisation factors (e.g. trade integration owing to the higher tradability) and are exploited in the analysis to test the validity of the predictions of the globalisation of inflation hypothesis.

The persistent component of inflation in goods and services has fallen sharply in AEs since the early 1990s (Chart B). In particular, for goods it has dropped from around 3% to around 0.5% in 2019, whereas for services it declined from around 5% to around 1.5%. As a result, the wedge between services and goods persistent inflation has remained positive throughout the last 25 years but has narrowed significantly in the aftermath of the GFC.[50] One tenet of the globalisation of inflation hypothesis is that prices of more tradable products are affected by economic integration to a greater extent. However, the fact that the largest inflation swings during the period of analysis took place in the early 1990s, when globalisation was still in the early stages, and were synchronised across goods

[48] See Lane, Philip R., Member of the Executive Board of the ECB, interview with The Financial Times, published 2 February 2020.

[49] Peach, R., Rich, R.W. and Linder, M., "The parts are more than the whole: separating goods and services to predict core inflation", *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, Vol. 19, No 7, 2013.

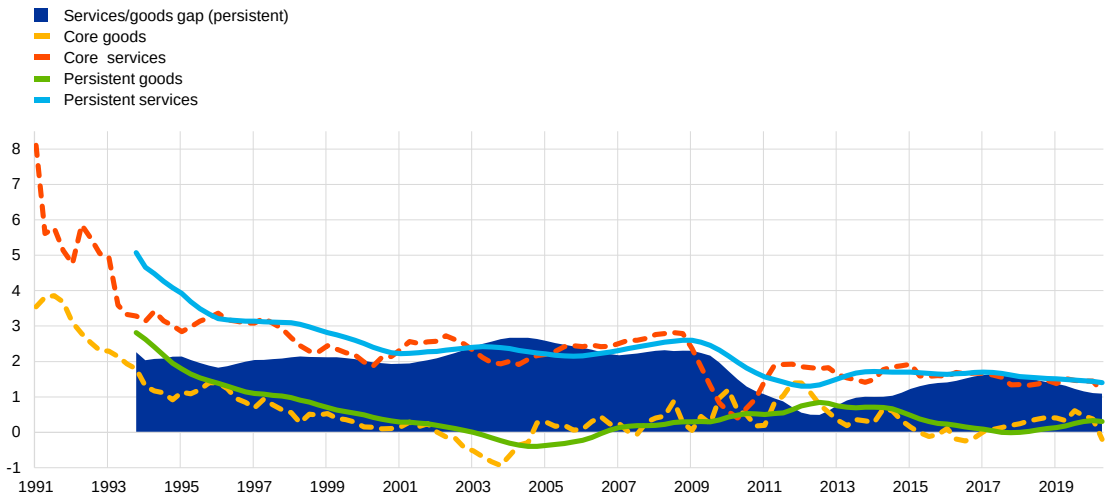
[50] See the box entitled "What is behind the change in the gap between services price inflation and goods price inflation?", *Economic Bulletin*, Issue 5, ECB, 2019 for an analysis of the goods and services gap in the euro area.

and services, casts doubts over the assumption of a prominent influence of globalisation on inflation.[51]

Chart B

Inflation in goods and services in advanced economies

(Percentages; percentage points)



Sources: national sources and ECB staff calculations.
Notes: persistent inflation rates are computed based on 12-quarter moving averages of core goods and services, calculated as the weighted average (GDP purchasing power parity (PPP) weights) of six advanced economies (Australia, Canada, the euro area, Japan, the United Kingdom and the United States). The latest observation is for Q2 2020.

Estimates of a dynamic panel model provide empirical evidence on the role of globalisation in price dynamics. The specification is inspired by Forbes[52] in which persistent inflation, computed as a 12-quarter moving average of core inflation rates, is determined by real exchange rate movements and is augmented by various indicators of globalisation including trade integration, financial globalisation and informational globalisation. While we do not aim at a causal interpretation, the exercise can reveal linkages between the different dimensions of integration and persistent inflation and inform on possible differences between goods and services. The equation is estimated using a generalised method of moments (GMM) approach to allow for the inclusion of a lagged dependent variable and a lag of the independent variables. The estimation follows an Arellano-Bond procedure, also using lags in the difference equation and additionally includes the consensus forecast of inflation expectations in the level equation for the instrumented variable. The equation is estimated over the period Q4 1996 to Q1 2018 using quarterly data for six AEs (Australia, Canada, the euro area, Japan, the United Kingdom and the United States) and the panel is strongly balanced. Persistent inflation estimates are employed as independent variables.[53]

51 In addition, in the spirit of Reis and Watson, co-movements in inflation rates of goods and services can be labelled as “pure” inflation, while diverging developments can be interpreted as relative price changes. Reis, R. and Watson, M.W., “Relative Goods’ Prices, Pure Inflation, and the Phillips Correlation”, *American Economic Journal: Macroeconomics*, Vol. 2, No 3, 2010, pp. 128-57.

52 See Forbes, K., “Has globalization changed the inflation process?”, op. cit.

53 As we are focused on the slow-moving part of inflation, we compute 12-quarter moving averages of core inflation. These are estimated individually for each country and each of the three consumer price indexes (CPI) considered: overall CPI, goods CPI and services CPI, taken from national sources. Core measures are chosen to minimise the influence of highly volatile components such as oil, whose price is also determined in international markets.

Table A

Panel estimates – summary of impact of globalisation indicators on persistent inflation

Variable	Overall	Goods	Services
Trade integration	-	-	-
Informational globalisation	Not significant	-	+
GVC participation	-	-	+

Source: ECB staff calculations.
Notes: The table reports the sign of the coefficient of the dynamic panel equation estimated using GMM. Trade integration is proxied by the KOF Trade Globalisation (de jure) Index, the informational globalisation measure is taken from the KOF Informational Globalisation (de facto) Index and GVC participation is computed as the ratio of GVC-related trade to gross exports. GVC-related trade is defined as the value added that has crossed at least two national borders à la Borin and Mancini, op. cit. with values between 2016 and 2018 based on internal ECB estimates.

Indicators of globalisation are significantly correlated with overall persistent inflation mainly through the goods component. As shown in Table A, three elements of globalisation appear to contribute to a decline in the persistent component of overall as well as goods inflation in AEs: trade integration (lower trade barriers), informational globalisation (digitalisation-driven integration) and global value chain participation. By contrast, the results suggest that different globalisation measures have had an offsetting impact on services inflation, thereby reducing the total effect.[54] At the same time, estimates of specifications including domestic variables (e.g. output gap and labour cost) suggest that these indicators are robustly significant and domestic factors continue to play an important role in driving price dynamics.

The panel estimates do not point to a large difference in the effects of globalisation before or after the financial crisis, or between the euro area economies and other AEs. A number of robustness tests of the main results are implemented which also explore specifically whether the effects of globalisation indicators vary noticeably in sub-periods or across economies. These tests point to qualitatively similar results after the global financial crisis and do not present evidence of a different effect for euro area economies. Our conclusions are also robust to a supplementary set of tests spanning different specifications where we employ alternative proxies for explanatory variables, additional controls and a different number of instrumental variables.

A quantification of the overall impact finds that the effect of globalisation on persistent inflation has been small. Using the estimated coefficients and the developments of the globalisation metrics discussed above, we compute the contribution of a higher interconnectedness to the variations in persistent inflation. Albeit subject to uncertainty, the results indicate that, among the analysed economies, globalisation provided limited headwinds to overall and goods inflation over the last three decades. The findings echo earlier empirical evidence presented in the literature.[55]

54 The heterogeneity between some of the parameters in goods and services calls for future research to improve the understanding behind the driving forces. Nonetheless, the difference in the response of prices to a higher informational globalisation in the goods market compared with the services market might be due to different reasons. These can include the fact that a higher transparency of the internet lowers search costs and accentuates competition in the goods market where products are more comparable and homogeneous in contrast to the services sector. With respect to GVC participation, albeit elusive and thus harder to measure, services are considered as the “glue” and catalyst of complex supply chains (Low). It is therefore plausible that the value added and mark-ups of the services sector are positively correlated to a more extensive use of GVCs. Low, P., “The role of services in global value chains”, in Elms, D. and Low, P. (eds.), *Global value chains in a changing world*, 2013, pp. 61-81.

55 See Bianchi and Civelli, op. cit.; Forbes, K., “Has globalization changed the inflation process?”, op. cit.; and Eo, Y., Uzeda, L. and Wong, B., “Understanding Trend Inflation Through the Lens of the Goods and Services Sectors”, *Staff Working Paper*, No 2020-45, Bank of Canada, November 2020.

5 Conclusion

This article discussed the disinflationary role of globalisation in AEs, with a focus on the more persistent component of inflation. Drawing from the existing literature, this article reviewed three sets of factors that can explain the international co-movement of inflation and its declining path observed in the past decades. First, there are common shocks (e.g. fluctuations in commodity prices), which affect the most volatile component of headline inflation. Second, the shift in the monetary policy of several AEs towards an inflation-targeting regime and the anchoring of inflation expectations succeeded in keeping inflation steadily close to target over the past three decades and until the GFC. Third, changes in the structure of the economy that affect the wage and price-setting mechanisms can influence the more persistent component of inflation.

Evidence presented in this article shows that the disinflationary role of globalisation has been economically small. Most of the economic literature focuses on augmenting an otherwise standard Phillips curve framework with measures of global slack and shows that when controlling for such factors, the sensitivity of domestic inflation to domestic slack is diminished. While evidence of the impact on the persistent component of inflation is more limited, typically the impact is found to be smaller. This article concludes that globalisation does not appear to be a major force behind the disinflationary trends of the past decades, and any headwinds stemming from globalisation were too small to be economically meaningful. This conclusion hinges on three main elements. First, the major plunge in inflation and its persistent component started in the 1980s, when globalisation was still latent, and came to a halt around the mid-1990s, when China had not yet joined the WTO. Furthermore, the fall in inflation was synchronised across goods and services and, because of their different tradability, they should not respond homogeneously to cross-border integration. Second, and related to the latter point, evidence presented in this article suggests that globalisation has a heterogeneous impact on the sectors of the economy, with the manufacturing sector being more exposed to disinflationary forces than the services sector. This lends support to the view that globalisation leads to relative price changes but not necessarily to a decline in overall inflation. Finally, even when globalisation acts as a disinflationary force, the estimated impact is economically small. In view of this, and given that in recent years interest rates have been nearing the lower bound in many countries, a possible reason behind the persistently low inflation observed over the past decades is the limited space available to monetary policy to neutralise the influence of structural forces on inflation (either of a domestic or foreign origin).

Looking ahead, globalisation is at a crossroads. While rising protectionism seems to be threatening globalisation, growing digitalisation and services trade are also providing new impetus, shifting and re-shaping the future path of globalisation. Moreover, while global integration growth may be waning, regional trade integration appears to have been deepening both for economic and geo-political reasons. The coronavirus (COVID-19) might accelerate some of these trends, though it appears premature to draw firm conclusions about the consequences for globalisation and inflation.

Statistics

Contents

Further information

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

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 [1] (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 [2] (HICP)
							Total	excluding food and energy					
	1	2	3	4	5	6	7	8	9	10	11	12	13
2018	3.7	3.0	1.3	0.6	6.7	1.9	2.6	2.1	2.4	2.5	1.0	2.1	1.8
2019	2.8	2.2	1.4	0.0	6.0	1.3	2.1	2.2	1.8	1.8	0.5	2.9	1.2
2020	-3.3	-3.3	-9.8	-4.7	2.3	-6.5	1.4	1.8	1.2	0.9	0.0	2.5	0.3
2020 Q2	-6.6	-9.0	-19.5	-8.1	11.6	-11.5	0.9	1.6	0.4	0.2	0.1	2.7	0.2
Q3	7.8	7.5	16.9	5.3	3.0	12.6	1.3	1.7	1.2	0.2	0.2	2.3	0.0
Q4	2.1	1.1	1.3	2.8	2.6	-0.6	1.2	1.6	1.2	0.2	-0.8	0.1	-0.3
2021 Q1	.	1.6	-1.5	-1.0	0.6	-0.3	1.9	1.7	1.9	.	-0.4	.	1.1
2020 Dec.	-	-	-	-	-	-	1.2	1.6	1.4	0.6	-1.2	0.2	-0.3
2021 Jan.	-	-	-	-	-	-	1.6	1.7	1.4	0.7	-0.6	-0.3	0.9
Feb.	-	-	-	-	-	-	1.7	1.7	1.7	0.4	-0.4	-0.2	0.9
Mar.	-	-	-	-	-	-	2.4	1.8	2.6	0.7	-0.2	.	1.3
Apr.	-	-	-	-	-	-	.	.	4.2	1.5	-0.4	.	1.6
May [3]	-	-	-	-	-	-	.	.	.	.	.	.	2.0

Sources: Eurostat (col. 6, 13); BIS (col. 9, 10, 11, 12); OECD (col. 1, 2, 3, 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 [1]		
	Composite Purchasing Managers' Index						Global Purchasing Managers' Index [2]					
	Global [2]	United States	United Kingdom	Japan	China	Memo item: euro area	Manufacturing	Services	New export orders	Global	Advanced economies	Emerging market economies
	1	2	3	4	5	6	7	8	9	10	11	12
2018	53.4	55.0	53.3	52.1	52.3	54.6	53.1	53.8	50.8	4.3	3.2	5.5
2019	51.7	52.5	50.2	50.5	51.8	51.3	50.3	52.2	48.8	-0.4	-0.3	-0.5
2020	47.5	48.8	46.5	42.4	51.4	44.0	48.5	46.3	45.3	-4.5	-4.7	-4.3
2020 Q2	37.9	37.3	30.5	31.5	52.6	31.3	40.6	36.9	35.0	-8.6	-8.6	-8.6
Q3	51.9	53.1	57.5	45.6	54.7	52.4	52.6	51.7	49.0	8.1	8.9	7.2
Q4	54.2	56.8	50.5	48.2	56.3	48.1	54.6	54.0	50.8	4.5	4.9	4.1
2021 Q1	54.3	59.3	49.1	48.4	52.3	49.9	53.8	54.5	50.3	4.8	1.8	8.1
2020 Dec.	53.5	55.3	50.5	48.5	55.8	49.1	54.7	53.1	50.5	4.5	4.9	4.1
2021 Jan.	53.3	58.7	41.2	47.1	52.2	47.8	54.0	53.0	49.3	4.7	4.3	5.1
Feb.	54.3	59.5	49.6	48.2	51.7	48.8	53.7	54.4	49.8	3.8	2.2	5.6
Mar.	55.3	59.7	56.4	49.9	53.1	53.2	53.6	55.9	51.7	4.8	1.8	8.1
Apr.	57.5	63.5	60.7	51.0	54.7	53.8	54.4	58.6	53.3	.	.	.
May	58.8	68.7	62.9	48.8	53.8	57.1	54.5	60.4	53.6	.	.	.

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 [1]						United States	Japan
	Euro short-term rate (€STR) [2]	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	8
2018	-0.45	-0.36	-0.37	-0.32	-0.27	-0.17	2.31	-0.05
2019	-0.48	-0.39	-0.40	-0.36	-0.30	-0.22	2.33	-0.08
2020	-0.55	-0.46	-0.50	-0.43	-0.37	-0.31	0.64	-0.07
2020 Nov.	-0.56	-0.47	-0.54	-0.52	-0.51	-0.48	0.22	-0.10
Dec.	-0.56	-0.47	-0.56	-0.54	-0.52	-0.50	0.23	-0.10
2021 Jan.	-0.56	-0.48	-0.56	-0.55	-0.53	-0.50	0.22	-0.08
Feb.	-0.56	-0.48	-0.55	-0.54	-0.52	-0.50	0.19	-0.09
Mar.	-0.56	-0.48	-0.55	-0.54	-0.52	-0.49	0.19	-0.08
Apr.	-0.57	-0.48	-0.56	-0.54	-0.52	-0.48	0.19	-0.07
May	-0.56	-0.48	-0.56	-0.54	-0.51	-0.48	0.15	-0.09

Source: Refinitiv and ECB calculations.
1) Data refer to the changing composition of the euro area, see the General Notes.
2) The ECB published the euro short-term rate (€STR) for the first time on 2 October 2019, reflecting trading activity on 1 October 2019. Data on previous periods refer to the pre-€STR, which was published for information purposes only and not intended for use as a benchmark or reference rate in any market transactions.

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

	Spot rates					Spreads			Instantaneous forward rates			
	Euro area [1], [2]					Euro area [1], [2]	United States	United Kingdom	Euro area [1], [2]			
	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
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	-0.68	-0.66	-0.62	-0.45	-0.14	0.52	0.34	0.24	-0.62	-0.52	-0.13	0.41
2020	-0.75	-0.76	-0.77	-0.72	-0.57	0.19	0.80	0.32	-0.77	-0.77	-0.60	-0.24
2020 Nov.	-0.72	-0.72	-0.75	-0.75	-0.55	0.17	0.73	0.32	-0.75	-0.81	-0.62	-0.13
Dec.	-0.75	-0.76	-0.77	-0.72	-0.57	0.19	0.80	0.32	-0.77	-0.77	-0.60	-0.24
2021 Jan.	-0.62	-0.70	-0.75	-0.74	-0.51	0.19	0.99	0.46	-0.78	-0.82	-0.58	-0.04
Feb.	-0.61	-0.65	-0.67	-0.55	-0.25	0.41	1.33	0.78	-0.69	-0.66	-0.26	0.32
Mar.	-0.64	-0.69	-0.72	-0.62	-0.28	0.41	1.68	0.82	-0.75	-0.73	-0.32	0.37
Apr.	-0.63	-0.68	-0.70	-0.57	-0.18	0.50	1.57	0.80	-0.73	-0.70	-0.21	0.53
May	-0.63	-0.68	-0.69	-0.54	-0.15	0.53	1.54	0.75	-0.72	-0.67	-0.16	0.57

Source: ECB calculations.
1) Data refer to the changing composition of the euro area, see the General Notes.
2) ECB calculations based on underlying data provided by Euro MTS Ltd 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											
	Broad index	50	Basic materials	Consumer services	Consumer goods	Oil and gas	Financials	Industrials	Technology	Utilities	Telecoms	Health care	Standard & Poor's 500	Nikkei 225
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2018	375.5	3,386.6	766.3	264.9	172.6	115.8	173.1	629.5	502.5	278.8	292.9	800.5	2,746.2	22,310.7
2019	373.6	3,435.2	731.7	270.8	183.7	111.9	155.8	650.9	528.2	322.0	294.2	772.7	2,915.5	21,697.2
2020	360.0	3,274.3	758.9	226.8	163.2	83.1	128.6	631.4	630.2	347.1	257.6	831.9	3,217.3	22,703.5
2020 Nov.	377.7	3,391.8	824.1	238.4	167.0	80.5	130.3	692.7	653.1	364.4	249.2	820.1	3,549.0	25,384.9
Dec.	394.0	3,530.9	852.2	249.1	170.2	88.6	140.6	718.0	697.6	373.2	252.2	814.8	3,695.3	26,773.0
2021 Jan.	403.1	3,592.2	877.5	251.5	170.7	91.6	140.8	734.6	743.4	391.6	254.3	835.5	3,793.7	28,189.1
Feb.	410.0	3,667.1	873.5	258.5	168.5	90.7	146.1	751.4	785.6	372.8	253.9	851.8	3,883.4	29,458.8
Mar.	422.4	3,813.3	911.1	271.6	168.4	97.0	159.1	774.6	770.1	367.2	264.5	838.1	3,910.5	29,315.3
Apr.	440.1	3,987.3	952.7	286.0	177.2	93.2	161.5	807.2	835.4	387.5	267.3	874.0	4,141.2	29,426.8
May	443.8	4,003.6	959.5	290.0	183.0	94.8	167.8	808.7	811.7	384.1	278.3	870.2	4,169.6	28,517.1

Source: Refinitiv.

2 Financial developments

2.4 MFI interest rates on loans to and deposits from households (new business) [1), 2)]

(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					
	Overnight	Redeemable at notice of up to 3 months	With an agreed maturity of:				By initial period of rate fixation		APRC [3)]		By initial period of rate fixation				APRC [3)]	Composite cost-of-borrowing indicator
			Up to 2 years	Over 2 years			Floating rate and up to 1 year	Over 1 year			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
2020 May	0.02	0.36	0.24	0.69	5.26	16.07	4.12	5.30	5.64	1.83	1.47	1.58	1.40	1.41	1.70	1.42
June	0.02	0.35	0.23	0.71	5.28	16.02	4.41	5.14	5.57	1.87	1.44	1.64	1.38	1.39	1.68	1.42
July	0.02	0.35	0.22	0.74	5.16	15.92	4.73	5.27	5.70	2.00	1.43	1.59	1.34	1.38	1.67	1.40
Aug.	0.02	0.35	0.19	0.71	5.20	15.88	5.33	5.35	5.88	1.91	1.42	1.61	1.31	1.40	1.67	1.40
Sep.	0.02	0.35	0.19	0.70	5.23	15.86	5.08	5.25	5.75	1.94	1.39	1.61	1.31	1.37	1.66	1.38
Oct.	0.02	0.35	0.20	0.69	5.18	15.82	5.14	5.26	5.80	2.03	1.37	1.56	1.27	1.36	1.64	1.36
Nov.	0.02	0.35	0.20	0.71	5.11	15.78	5.01	5.25	5.90	2.04	1.37	1.54	1.29	1.35	1.63	1.35
Dec.	0.01	0.35	0.17	0.72	4.99	15.78	4.93	5.08	5.71	1.93	1.35	1.52	1.27	1.33	1.62	1.32
2021 Jan.	0.01	0.35	0.22	0.68	5.01	15.81	4.84	5.32	5.87	1.91	1.35	1.50	1.29	1.35	1.60	1.33
Feb.	0.01	0.35	0.23	0.66	5.02	15.74	5.05	5.24	5.86	1.98	1.30	1.49	1.27	1.32	1.58	1.31
Mar.	0.01	0.35	0.20	0.61	4.99	15.77	4.88	5.12	5.72	1.93	1.32	1.44	1.24	1.32	1.58	1.31
Apr. [(p)]	0.01	0.35	0.21	0.62	4.89	15.75	5.13	5.17	5.78	1.98	1.32	1.48	1.27	1.31	1.59	1.31

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) [1), 2)]

(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
	Overnight	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
2020 May	0.00	-0.10	0.39	1.89	1.84	1.21	1.62	1.54	0.86	1.56	1.23	1.07	1.31	1.46
June	0.00	-0.12	0.32	1.94	1.86	1.50	1.79	1.55	1.13	1.50	1.23	1.17	1.42	1.49
July	0.00	-0.18	0.27	1.86	1.95	1.86	1.87	1.60	1.30	1.51	1.24	1.17	1.38	1.51
Aug.	0.00	-0.20	0.39	1.83	1.84	1.90	1.94	1.56	1.39	1.49	1.29	1.31	1.20	1.51
Sep.	0.00	-0.20	0.26	1.88	1.91	2.10	1.94	1.54	1.43	1.49	1.22	1.31	1.31	1.51
Oct.	0.00	-0.21	0.26	1.82	1.91	2.20	1.96	1.55	1.46	1.50	1.22	1.42	1.40	1.53
Nov.	-0.01	-0.20	0.42	1.83	1.97	2.00	1.98	1.57	1.41	1.47	1.22	1.29	1.30	1.51
Dec.	-0.01	-0.18	0.25	1.83	2.01	1.94	1.94	1.61	1.42	1.44	1.34	1.23	1.27	1.51
2021 Jan.	-0.01	-0.14	0.39	1.84	2.14	2.00	1.92	1.61	1.44	1.41	1.17	1.18	1.29	1.50
Feb.	-0.01	-0.21	0.25	1.84	1.96	2.01	1.95	1.58	1.44	1.43	1.15	1.22	1.23	1.48
Mar.	-0.01	-0.11	0.22	1.82	1.91	1.97	2.01	1.56	1.45	1.40	1.09	0.71	1.23	1.39
Apr. [(p)]	-0.01	-0.18	0.25	1.80	2.04	1.96	1.99	1.57	1.44	1.38	1.32	1.33	1.38	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 [1]						
	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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Short-term														
2018	1,215	503	170	.	72	424	47	389	171	66	.	41	76	35
2019	1,283	550	181	.	85	406	61	415	177	80	.	47	73	38
2020	1,527	454	144	.	97	714	118	458	181	70	.	45	114	49
2020 Oct.	1,662	504	161	.	114	742	141	417	202	46	.	36	93	40
Nov.	1,630	493	158	.	116	731	132	419	217	40	.	37	83	41
Dec.	1,527	454	144	.	97	714	118	339	168	60	.	30	51	31
2021 Jan.	1,582	495	139	.	99	718	131	464	217	45	.	37	121	43
Feb.	1,539	475	139	.	102	702	121	373	168	42	.	32	103	27
Mar.	1,579	485	145	.	94	726	130	449	208	50	.	30	118	43
Long-term														
2018	15,745	3,687	3,162	.	1,247	7,022	627	228	64	68	.	15	75	6
2019	16,312	3,816	3,398	.	1,321	7,151	626	247	69	74	.	20	78	7
2020	17,242	3,892	3,172	.	1,450	8,003	725	295	68	71	.	27	114	16
2020 Oct.	17,286	3,936	3,203	.	1,456	7,977	713	275	47	78	.	27	91	32
Nov.	17,266	3,915	3,187	.	1,456	7,986	722	219	42	63	.	18	79	17
Dec.	17,242	3,892	3,172	.	1,450	8,003	725	204	40	104	.	17	36	7
2021 Jan.	17,358	3,897	3,177	.	1,458	8,090	736	318	90	55	.	21	133	19
Feb.	17,492	3,904	3,173	.	1,458	8,206	751	307	57	66	.	20	144	19
Mar.	17,694	3,969	3,213	.	1,479	8,271	763	358	106	82	.	27	125	17

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				
	1	2	3	4	5	6	7	8	9	10	11
Oustanding amount											
2018	16,959.9	4,189.8	3,332.3	.	1,318.5	7,445.8	673.5	7,024.3	465.0	1,099.2	5,460.1
2019	17,595.0	4,366.8	3,578.6	.	1,405.9	7,557.2	686.5	8,587.9	538.4	1,410.6	6,638.9
2020	18,769.0	4,345.8	3,315.9	.	1,546.7	8,717.5	843.1	8,448.8	469.3	1,321.5	6,658.0
2020 Oct.	18,947.5	4,440.1	3,364.3	.	1,570.0	8,719.0	854.1	7,225.5	348.2	1,077.5	5,799.7
Nov.	18,896.0	4,407.8	3,344.6	.	1,572.7	8,716.8	854.2	8,235.9	448.2	1,296.9	6,490.8
Dec.	18,769.0	4,345.8	3,315.9	.	1,546.7	8,717.5	843.1	8,448.8	469.3	1,321.5	6,658.0
2021 Jan.	18,940.3	4,391.9	3,316.3	.	1,557.3	8,808.1	866.7	8,331.9	446.6	1,317.5	6,567.8
Feb.	19,031.9	4,379.1	3,312.1	.	1,560.1	8,908.5	872.1	8,649.1	520.6	1,407.7	6,720.8
Mar.	19,272.9	4,453.5	3,358.4	.	1,572.5	8,996.2	892.3	9,238.8	542.9	1,468.9	7,227.1
Growth rate											
2018	1.9	1.7	3.0	.	3.2	1.9	-4.3	0.7	0.3	2.4	0.4
2019	3.1	3.8	5.0	.	5.6	1.5	1.8	0.0	0.5	0.0	0.0
2020	7.4	1.2	2.7	.	12.3	10.9	24.3	1.3	0.0	3.1	1.1
2020 Oct.	8.2	2.5	4.5	.	12.0	11.0	24.2	1.0	0.1	2.2	0.8
Nov.	7.5	1.7	2.6	.	11.7	10.7	24.4	1.2	0.0	2.2	1.1
Dec.	7.4	1.2	2.7	.	12.3	10.9	24.3	1.3	0.0	3.1	1.1
2021 Jan.	7.4	0.3	2.8	.	11.6	11.2	25.4	1.5	-0.1	4.5	1.0
Feb.	7.5	-0.3	3.4	.	10.8	11.8	25.1	1.7	-0.1	4.7	1.2
Mar.	8.4	2.2	3.8	.	11.9	11.9	24.5	2.0	1.4	5.0	1.4

Source: ECB.

2 Financial developments

2.8 Effective exchange rates [1)]

(period averages; index: 1999 Q1=100)

	EER-19						EER-42	
	Nominal	Real CPI	Real PPI	Real GDP deflator	Real ULCM	Real ULCT	Nominal	Real CPI
	1	2	3	4	5	6	7	8
2018	100.0	95.7	94.0	90.5	80.8	89.1	117.3	95.1
2019	98.2	93.3	92.9	88.7	79.0	86.6	115.5	92.4
2020	99.7	93.7	94.1	89.1	78.8	87.4	119.4	94.0
2020 Q2	98.8	93.1	93.2	88.5	82.0	87.4	118.1	93.3
Q3	101.2	94.9	95.3	89.9	79.0	87.8	121.7	95.6
Q4	101.3	94.9	95.3	90.2	75.8	87.8	122.3	95.7
2021 Q1	100.9	94.9	95.3	.	.	.	121.7	95.5
2020 Dec.	101.9	95.4	95.9	-	-	-	123.0	96.1
2021 Jan.	101.4	95.6	95.7	-	-	-	122.4	96.2
Feb.	100.8	94.8	95.3	-	-	-	121.5	95.3
Mar.	100.4	94.3	94.8	-	-	-	121.3	94.9
Apr.	100.7	94.4	94.9	-	-	-	121.9	95.2
May	100.9	94.5	95.0	-	-	-	122.3	95.3
	Percentage change versus previous month							
2021 May	0.2	0.1	0.1	-	-	-	0.3	0.1
	Percentage change versus previous year							
2021 May	2.6	1.9	2.4	-	-	-	4.0	2.5

Source: ECB.

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

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
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
2019	7.735	7.418	25.670	7.466	325.297	122.006	4.298	0.878	4.7453	10.589	1.112	1.119
2020	7.875	7.538	26.455	7.454	351.249	121.846	4.443	0.890	4.8383	10.485	1.071	1.142
2020 Q2	7.808	7.578	27.058	7.458	351.582	118.410	4.503	0.887	4.8378	10.651	1.061	1.101
Q3	8.086	7.527	26.479	7.445	353.600	124.049	4.441	0.905	4.8454	10.364	1.075	1.169
Q4	7.901	7.559	26.667	7.443	360.472	124.607	4.505	0.903	4.8718	10.268	1.078	1.193
2021 Q1	7.808	7.572	26.070	7.437	361.206	127.806	4.546	0.874	4.8793	10.120	1.091	1.205
2020 Dec.	7.960	7.542	26.311	7.441	359.016	126.278	4.479	0.906	4.8703	10.174	1.081	1.217
2021 Jan.	7.873	7.565	26.141	7.439	359.194	126.308	4.533	0.893	4.8732	10.095	1.079	1.217
Feb.	7.814	7.573	25.876	7.437	358.151	127.493	4.497	0.873	4.8750	10.089	1.086	1.210
Mar.	7.747	7.578	26.178	7.436	365.612	129.380	4.599	0.859	4.8884	10.169	1.106	1.190
Apr.	7.805	7.568	25.924	7.437	360.583	130.489	4.561	0.865	4.9231	10.162	1.103	1.198
May	7.811	7.523	25.558	7.436	353.647	132.569	4.528	0.863	4.9250	10.147	1.097	1.215
	Percentage change versus previous month											
2021 May	0.1	-0.6	-1.4	0.0	-1.9	1.6	-0.7	-0.3	0.0	-0.1	-0.6	1.4
	Percentage change versus previous year											
2021 May	0.8	-0.7	-6.3	-0.3	0.8	13.4	0.1	-2.7	1.8	-4.2	3.7	11.4

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 [1]			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
Outstanding amounts (international investment position)												
2020 Q1	27,543.9	27,617.6	-73.7	11,321.4	9,344.7	8,906.1	11,168.3	-98.6	6,548.6	7,104.6	866.3	15,535.9
Q2	28,197.7	28,206.3	-8.5	11,372.0	9,477.9	9,860.0	11,935.5	-71.0	6,131.8	6,792.9	905.0	15,289.1
Q3	28,109.8	28,049.0	60.8	11,175.1	9,326.8	9,998.3	12,030.1	-97.0	6,123.9	6,692.1	909.6	15,127.9
Q4	28,403.2	28,312.0	91.1	11,065.0	9,292.4	10,685.8	12,286.4	-86.2	5,858.8	6,733.2	879.8	14,846.5
Outstanding amounts as a percentage of GDP												
2020 Q4	250.7	249.9	0.8	97.7	82.0	94.3	108.5	-0.8	51.7	59.4	7.8	131.1
Transactions												
2020 Q2	140.1	113.0	27.1	68.9	178.3	380.5	200.4	40.8	-353.3	-265.7	3.2	-
Q3	182.1	83.1	98.9	23.8	-0.7	96.2	74.7	-31.8	90.5	9.1	3.4	-
Q4	-7.2	-129.9	122.7	-119.2	3.8	342.5	-259.6	-19.2	-213.4	125.9	2.1	-
2021 Q1	468.9	372.1	96.8	39.7	30.4	283.0	107.6	12.9	136.4	234.2	-3.0	-
2020 Oct.	91.3	39.5	51.8	-7.1	-65.4	74.8	-11.3	2.4	18.2	116.1	2.9	-
Nov.	131.6	133.6	-2.0	6.9	122.0	100.7	-97.0	8.9	17.7	108.5	-2.6	-
Dec.	-230.1	-302.9	72.9	-119.0	-52.8	167.0	-151.3	-30.5	-249.3	-98.8	1.7	-
2021 Jan.	304.0	294.4	9.6	50.9	37.6	107.2	78.8	5.1	141.7	178.1	-0.9	-
Feb.	112.0	67.0	45.0	13.6	7.0	81.4	-16.0	4.7	13.8	76.0	-1.6	-
Mar.	53.0	10.7	42.3	-24.8	-14.2	94.4	44.8	3.0	-19.1	-19.9	-0.5	-
12-month cumulated transactions												
2021 Mar.	783.9	438.4	345.5	13.2	211.8	1,102.3	123.1	2.8	-339.8	103.5	5.6	-
12-month cumulated transactions as a percentage of GDP												
2021 Mar.	6.9	3.9	3.0	0.1	1.9	9.7	1.1	0.0	-3.0	0.9	0.0	-

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 [1]		
		Total	Private consumption	Government consumption	Gross fixed capital formation				Changes in inventories [2]	Total	Exports [1]	Imports [1]
						Total construction	Total machinery	Intellectual property products				
	1	2	3	4	5	6	7	8	9	10	11	12
	Current prices (EUR billions)											
2018	11,588.1	11,120.1	6,222.8	2,369.1	2,431.4	1,178.1	746.0	500.6	96.8	468.0	5,575.9	5,107.9
2019	11,937.3	11,489.6	6,376.5	2,454.4	2,622.9	1,258.2	771.0	586.9	35.8	447.7	5,759.1	5,311.3
2020	11,328.8	10,878.8	5,900.0	2,560.0	2,439.3	1,210.5	679.8	541.9	-20.6	450.0	5,159.9	4,709.9
2020 Q2	2,603.4	2,522.1	1,344.6	631.2	541.5	273.0	142.2	124.6	4.7	81.3	1,109.4	1,028.2
Q3	2,897.9	2,760.8	1,527.4	645.3	614.4	308.4	179.4	124.8	-26.3	137.2	1,297.5	1,160.4
Q4	2,906.1	2,766.8	1,487.4	656.1	630.6	314.8	181.8	132.2	-7.4	139.4	1,358.6	1,219.2
2021 Q1	2,916.4	2,779.5	1,469.6	661.5	638.6	322.6	184.3	130.0	9.8	136.9	1,396.9	1,260.1
	as a percentage of GDP											
2020	100.0	96.0	52.1	22.6	21.5	10.7	6.0	4.8	-0.2	4.0	-	-
	Chain-linked volumes (prices for the previous year)											
	quarter-on-quarter percentage changes											
2020 Q2	-11.5	-11.2	-12.7	-2.6	-16.1	-12.4	-18.7	-20.6	-	-	-18.6	-18.5
Q3	12.6	10.4	14.2	5.3	13.7	13.2	26.0	0.8	-	-	16.8	11.9
Q4	-0.6	-0.5	-2.9	0.4	2.5	1.7	1.5	5.8	-	-	3.8	4.5
2021 Q1	-0.3	-0.5	-2.3	0.0	0.2	0.9	1.2	-2.6	-	-	1.0	0.9
	annual percentage changes											
2018	1.9	1.9	1.5	1.2	3.2	3.8	3.7	1.2	-	-	3.6	3.7
2019	1.3	1.9	1.3	1.8	5.7	3.5	2.1	16.4	-	-	2.5	3.9
2020	-6.5	-6.3	-7.9	1.4	-8.2	-5.4	-12.7	-8.3	-	-	-9.3	-9.0
2020 Q2	-14.6	-14.1	-16.2	-1.6	-20.9	-14.5	-27.3	-25.6	-	-	-21.4	-20.6
Q3	-4.1	-4.0	-4.6	3.0	-4.7	-4.0	-8.2	-1.6	-	-	-8.7	-9.1
Q4	-4.7	-5.7	-7.4	3.0	-7.9	-1.6	-5.9	-21.8	-	-	-5.1	-7.1
2021 Q1	-1.3	-2.9	-5.4	3.0	-2.0	1.7	5.3	-17.5	-	-	-0.3	-3.8
	contributions to quarter-on-quarter percentage changes in GDP; percentage points											
2020 Q2	-11.5	-10.9	-6.7	-0.6	-3.6	-1.3	-1.1	-1.1	-0.1	-0.6	-	-
Q3	12.6	10.2	7.4	1.3	2.9	1.4	1.4	0.0	-1.4	2.4	-	-
Q4	-0.6	-0.5	-1.6	0.1	0.5	0.2	0.1	0.3	0.4	-0.1	-	-
2021 Q1	-0.3	-0.4	-1.2	0.0	0.1	0.1	0.1	-0.1	0.7	0.1	-	-
	contributions to annual percentage changes in GDP; percentage points											
2018	1.9	1.8	0.8	0.2	0.6	0.4	0.2	0.0	0.1	0.1	-	-
2019	1.3	1.8	0.7	0.4	1.2	0.4	0.1	0.7	-0.5	-0.5	-	-
2020	-6.5	-6.0	-4.2	0.3	-1.8	-0.6	-0.8	-0.4	-0.3	-0.5	-	-
2020 Q2	-14.6	-13.6	-8.6	-0.3	-4.7	-1.5	-1.8	-1.4	0.0	-1.0	-	-
Q3	-4.1	-3.9	-2.4	0.6	-1.0	-0.4	-0.5	-0.1	-1.0	-0.2	-	-
Q4	-4.7	-5.5	-4.0	0.6	-1.8	-0.2	-0.4	-1.2	-0.3	0.7	-	-
2021 Q1	-1.3	-2.8	-2.8	0.6	-0.4	0.2	0.3	-0.9	-0.2	1.5	-	-

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	Const-ruction	Trade, transport, accom-modation and food services	Infor-mation and com-munica-tion	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
	Current prices (EUR billions)											
2018	10,384.0	174.5	2,052.2	528.1	1,963.9	500.5	477.0	1,167.2	1,207.0	1,957.5	356.2	1,204.0
2019	10,695.5	178.8	2,064.2	569.7	2,028.4	530.7	481.8	1,204.7	1,252.5	2,020.0	364.8	1,241.9
2020	10,197.6	177.6	1,931.6	561.5	1,784.1	535.9	473.5	1,215.0	1,158.9	2,046.2	313.2	1,131.2
2020 Q2	2,344.8	45.5	427.3	125.8	380.6	127.5	115.1	295.6	262.5	495.0	70.0	258.6
Q3	2,605.7	44.3	494.8	144.0	470.2	137.2	118.5	305.9	292.0	517.7	81.1	292.2
Q4	2,615.2	43.9	512.7	148.5	453.8	136.8	118.2	307.4	298.5	520.6	74.8	290.9
2021 Q1	2,630.5	43.6	523.3	148.0	447.1	139.6	122.9	309.3	299.4	522.9	74.4	285.9
	as a percentage of value added											
2020	100.0	1.7	18.9	5.5	17.5	5.3	4.6	11.9	11.4	20.1	3.1	-
	Chain-linked volumes (prices for the previous year)											
	quarter-on-quarter percentage changes											
2020 Q2	-11.7	0.3	-15.0	-12.4	-20.8	-3.9	-2.7	-2.4	-14.9	-6.3	-24.2	-9.5
Q3	12.4	0.3	16.5	13.9	22.9	7.5	3.8	3.0	11.6	9.2	23.1	14.2
Q4	-0.5	0.2	2.9	2.2	-3.8	-0.7	-0.5	0.0	1.5	-1.3	-11.6	-1.6
2021 Q1	0.0	-0.8	1.3	-1.1	-1.6	2.1	0.8	0.0	0.2	0.0	-0.9	-3.6
	annual percentage changes											
2018	1.9	-0.2	1.6	2.4	1.8	6.4	0.9	1.3	3.7	1.0	0.9	1.6
2019	1.3	1.0	-0.9	3.0	2.0	4.7	1.3	1.5	1.7	1.0	1.3	1.6
2020	-6.4	-0.5	-7.6	-5.2	-12.9	0.3	-1.2	-0.8	-8.8	-2.4	-17.9	-7.5
2020 Q2	-14.6	-0.4	-19.1	-14.8	-25.6	-4.7	-3.7	-2.6	-17.6	-7.8	-29.3	-15.1
Q3	-4.1	0.0	-5.6	-3.5	-8.7	2.3	-0.3	-0.1	-8.2	0.5	-12.8	-3.7
Q4	-4.7	-0.9	-2.3	-1.3	-12.2	0.9	-0.6	-0.8	-6.9	-1.1	-23.1	-5.1
2021 Q1	-1.2	-0.1	3.2	0.8	-7.9	4.7	1.4	0.5	-3.3	1.1	-18.2	-1.8
	contributions to quarter-on-quarter percentage changes in value added; percentage points											
2020 Q2	-11.7	0.0	-2.9	-0.7	-3.8	-0.2	-0.1	-0.3	-1.8	-1.2	-0.8	-
Q3	12.4	0.0	3.0	0.7	3.8	0.4	0.2	0.4	1.3	1.9	0.7	-
Q4	-0.5	0.0	0.6	0.1	-0.7	0.0	0.0	0.0	0.2	-0.2	-0.4	-
2021 Q1	0.0	0.0	0.2	-0.1	-0.3	0.1	0.0	0.0	0.0	0.0	0.0	-
	contributions to annual percentage changes in value added; percentage points											
2018	1.9	0.0	0.3	0.1	0.3	0.3	0.0	0.1	0.4	0.2	0.0	-
2019	1.3	0.0	-0.2	0.2	0.4	0.2	0.1	0.2	0.2	0.2	0.0	-
2020	-6.4	0.0	-1.5	-0.3	-2.4	0.0	-0.1	-0.1	-1.0	-0.4	-0.6	-
2020 Q2	-14.6	0.0	-3.7	-0.8	-4.9	-0.2	-0.2	-0.3	-2.1	-1.5	-1.0	-
Q3	-4.1	0.0	-1.1	-0.2	-1.7	0.1	0.0	0.0	-1.0	0.1	-0.4	-
Q4	-4.7	0.0	-0.4	-0.1	-2.3	0.0	0.0	-0.1	-0.8	-0.2	-0.8	-
2021 Q1	-1.2	0.0	0.6	0.0	-1.4	0.2	0.1	0.1	-0.4	0.2	-0.6	-

Sources: Eurostat and ECB calculations.

3 Economic activity

3.3 Employment [1)]

(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													
as a percentage of total persons employed													
2018	100.0	85.8	14.2	3.1	14.6	6.0	25.0	2.9	2.4	1.0	14.0	24.2	6.8
2019	100.0	86.0	14.0	3.0	14.5	6.0	25.0	2.9	2.4	1.0	14.0	24.3	6.7
2020	100.0	86.0	14.0	3.0	14.5	6.2	24.5	3.0	2.4	1.0	13.9	24.9	6.6
annual percentage changes													
2018	1.6	1.8	0.1	-0.4	1.5	2.7	1.5	3.9	-1.1	2.0	2.8	1.3	0.1
2019	1.2	1.4	0.0	-2.0	0.8	2.0	1.3	3.6	-0.4	1.5	1.3	1.5	0.6
2020	-1.6	-1.5	-2.0	-3.1	-1.9	0.4	-3.6	1.4	-0.7	-0.2	-2.4	0.7	-3.4
2020 Q2	-2.9	-3.0	-2.6	-3.8	-2.2	-0.9	-5.7	0.7	-1.1	-1.5	-4.6	0.1	-5.9
Q3	-2.1	-2.0	-2.3	-2.9	-2.7	0.8	-4.2	1.0	-0.9	0.3	-3.5	0.6	-3.7
Q4	-1.8	-1.8	-1.8	-2.4	-2.3	0.7	-4.6	1.4	-0.7	0.9	-2.1	0.9	-3.8
2021 Q1	-1.9	-1.9	-1.6	-0.4	-2.2	1.3	-5.6	1.9	-0.5	0.2	-1.8	1.2	-5.0
Hours worked													
as a percentage of total hours worked													
2018	100.0	81.1	18.9	4.3	15.0	6.8	25.8	3.0	2.5	1.0	13.8	21.7	6.1
2019	100.0	81.3	18.7	4.1	14.9	6.8	25.8	3.1	2.4	1.0	13.9	21.8	6.1
2020	100.0	81.9	18.1	4.3	14.9	7.0	24.2	3.3	2.5	1.1	13.9	23.2	5.7
annual percentage changes													
2018	1.7	2.1	0.0	0.1	1.4	3.3	1.5	4.1	-0.9	2.7	3.2	1.4	0.5
2019	0.9	1.2	-0.4	-2.6	0.2	1.8	0.9	3.7	-0.2	1.4	1.1	1.3	0.4
2020	-7.7	-7.0	-10.6	-3.5	-7.6	-5.9	-13.5	-1.6	-3.2	-6.5	-7.7	-2.0	-13.4
2020 Q2	-17.0	-15.8	-22.2	-6.7	-16.4	-18.0	-27.3	-6.0	-6.8	-17.0	-17.1	-6.5	-28.0
Q3	-4.8	-4.6	-5.6	-1.9	-5.8	-0.9	-8.8	-1.9	-2.4	-3.2	-6.6	-0.2	-6.5
Q4	-6.2	-5.8	-8.3	-2.4	-5.5	-2.4	-13.2	-0.5	-2.1	-2.5	-5.3	-0.7	-12.5
2021 Q1	-3.2	-3.1	-3.5	1.3	-1.5	4.7	-11.5	1.7	0.6	1.9	-2.2	1.6	-9.8
Hours worked per person employed													
annual percentage changes													
2018	0.1	0.3	-0.1	0.6	-0.1	0.6	-0.1	0.2	0.2	0.7	0.4	0.1	0.3
2019	-0.3	-0.2	-0.4	-0.6	-0.6	-0.2	-0.4	0.1	0.2	-0.1	-0.2	-0.2	-0.1
2020	-6.2	-5.6	-8.8	-0.4	-5.8	-6.3	-10.3	-3.0	-2.5	-6.3	-5.4	-2.7	-10.3
2020 Q2	-14.5	-13.2	-20.2	-3.0	-14.5	-17.2	-23.0	-6.7	-5.7	-15.7	-13.1	-6.7	-23.5
Q3	-2.8	-2.6	-3.5	1.1	-3.2	-1.7	-4.8	-2.9	-1.6	-3.5	-3.3	-0.8	-2.9
Q4	-4.5	-4.0	-6.6	0.0	-3.3	-3.0	-9.0	-1.8	-1.4	-3.4	-3.3	-1.6	-9.1
2021 Q1	-1.3	-1.2	-2.0	1.8	0.7	3.3	-6.2	-0.3	1.1	1.7	-0.4	0.4	-5.0

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	Under-employ-ment, % of labour force	Unemployment [1]												Job vacancy rate [3]
			Total		Long-term unemploy-ment, % of labour force [2]	By age				By gender					
						Adult		Youth		Male		Female			
			Millions	% of labour force		Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	% of total posts	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
% of total in 2020			100.0			80.9		19.1		51.5		48.5			
2018	162.443	3.7	13.204	8.1	3.8	10.814	7.3	2.390	16.8	6.805	7.8	6.400	8.5	2.1	
2019	163.198	3.5	12.215	7.5	3.3	9.984	6.7	2.231	15.6	6.266	7.2	5.949	7.9	2.3	
2020	161.377	3.5	12.593	7.8	3.0	10.185	6.9	2.408	17.4	6.487	7.5	6.106	8.1	1.8	
2020 Q2	159.216	3.6	12.056	7.6	2.5	9.744	6.7	2.312	17.3	6.313	7.4	5.743	7.8	1.6	
Q3	161.621	3.6	13.412	8.3	3.1	10.785	7.3	2.627	18.8	6.827	7.9	6.586	8.7	1.7	
Q4	161.911	3.5	12.903	8.0	3.2	10.482	7.1	2.422	17.6	6.676	7.7	6.228	8.3	1.9	
2021 Q1	.	.	13.314	8.2	.	10.925	7.3	2.388	17.3	6.765	7.8	6.549	8.6	2.0	
2020 Nov.	-	-	13.512	8.3	-	11.110	7.4	2.402	17.4	6.823	7.8	6.689	8.8	-	
Dec.	-	-	13.413	8.2	-	11.008	7.4	2.405	17.5	6.789	7.8	6.624	8.7	-	
2021 Jan.	-	-	13.406	8.2	-	11.003	7.4	2.403	17.4	6.810	7.8	6.596	8.7	-	
Feb.	-	-	13.371	8.2	-	10.974	7.3	2.396	17.4	6.796	7.8	6.575	8.7	-	
Mar.	-	-	13.164	8.1	-	10.799	7.2	2.366	17.2	6.689	7.7	6.476	8.5	-	
Apr.	-	-	13.030	8.0	-	10.682	7.2	2.348	17.2	6.685	7.7	6.345	8.4	-	

Sources: Eurostat and ECB calculations.

1) Where annual and quarterly Labour Force Survey data have not yet been published, they are estimated as simple averages of the monthly data. Owing to technical issues with the introduction of the new German system of integrated household surveys, including the Labour Force Survey, the figures for the euro area include data from Germany, starting in Q1 2020, which are not direct estimates from Labour Force Survey microdata, but based on a larger sample including data from other integrated household surveys.

2) Not seasonally adjusted.

3) 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. Data are non-seasonally adjusted and cover industry, construction and services (excluding households as employers and extra-territorial organisations and bodies).

3.5 Short-term business statistics

	Industrial production						Con-struction produc-tion	ECB indicator on industrial new orders	Retail sales				New passenger car regis-trations
	Total (excluding construction)	Main Industrial Groupings							Total	Food, beverages, tobacco	Non-food	Fuel	
		Manu-facturing	Inter-mediate 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													
2018	0.8	1.0	0.6	1.2	1.5	-1.4	1.7	2.7	1.6	1.4	2.0	0.7	0.9
2019	-1.3	-1.3	-2.4	-1.8	1.4	-2.1	2.1	-4.3	2.4	0.9	3.7	0.9	1.8
2020	-8.6	-9.1	-7.4	-13.2	-4.6	-5.3	-5.7	-10.7	-0.9	3.6	-2.5	-14.4	-25.0
2020 Q2	-20.1	-21.2	-19.4	-28.2	-13.2	-10.5	-15.3	-26.7	-6.5	2.9	-10.6	-29.1	-50.8
Q3	-6.8	-7.2	-5.7	-11.8	-2.0	-4.1	-2.2	-7.7	2.4	2.5	3.4	-4.9	-6.9
Q4	-1.6	-1.7	1.4	-3.3	-2.6	-1.8	-0.9	-1.7	1.4	4.5	1.2	-13.8	-9.2
2021 Q1	3.1	3.1	4.8	4.6	-0.8	0.8	3.1	6.7	2.1	2.5	2.8	-5.5	3.4
2020 Nov.	-0.6	-0.4	1.4	-0.1	-2.5	-4.4	-0.7	-1.6	-1.5	2.5	-2.0	-18.4	-14.9
Dec.	-0.1	-0.2	4.4	-1.3	-3.5	-0.9	-0.1	-0.8	1.3	5.6	0.1	-14.6	-8.0
2021 Jan.	0.3	0.0	1.6	1.5	-3.3	0.8	-2.4	-1.8	-4.8	6.1	-10.8	-17.0	-18.8
Feb.	-1.8	-2.2	-0.5	-2.9	-3.5	-1.6	-5.4	1.3	-1.4	2.6	-3.4	-12.0	-20.8
Mar.	10.9	11.6	13.3	16.1	4.1	3.3	18.3	23.3	13.1	-0.6	26.9	17.7	88.2
Apr.	.	.	.	.	.	.	.	69.2	23.9	3.3	42.6	65.5	262.5
month-on-month percentage changes (s.a.)													
2020 Nov.	2.2	2.8	1.8	7.5	-1.2	-3.3	2.5	0.8	-5.2	-2.0	-6.9	-11.2	-7.2
Dec.	-0.1	-0.2	1.4	-1.2	-0.6	1.7	-1.1	0.2	1.9	2.0	1.4	4.4	10.4
2021 Jan.	0.9	0.8	0.2	1.1	0.2	0.5	0.7	2.0	-5.1	1.0	-9.7	-0.8	-22.5
Feb.	-1.2	-1.2	-0.9	-2.5	0.1	-1.6	-2.0	1.3	4.2	-0.4	8.6	4.6	-1.1
Mar.	0.1	0.0	0.6	-1.0	1.6	1.2	2.7	3.6	3.3	1.4	5.5	-1.9	0.2
Apr.	.	.	.	.	.	.	.	3.2	-3.1	-2.0	-5.1	0.4	-0.4

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	99.3	-5.2	80.6	-11.6	-15.4	-8.6	7.3	-	51.2	52.5	53.0	52.8
2018	111.8	6.7	83.7	-4.8	7.2	1.3	15.2	90.4	54.9	54.7	54.5	54.6
2019	103.6	-5.2	82.0	-6.9	6.7	-0.5	10.8	90.5	47.4	47.8	52.7	51.3
2020	88.2	-14.4	74.0	-14.3	-7.4	-12.9	-16.5	86.3	48.6	48.0	42.5	44.0
2020 Q2	72.0	-27.3	70.2	-18.5	-14.5	-26.4	-39.2	85.6	40.1	34.2	30.3	31.3
Q3	88.5	-13.6	74.2	-14.4	-10.6	-11.3	-18.0	85.9	52.4	56.0	51.1	52.4
Q4	91.4	-8.8	76.9	-15.6	-8.3	-10.9	-15.4	85.7	54.6	56.7	45.0	48.1
2021 Q1	95.3	-2.4	80.0	-13.7	-5.9	-16.6	-14.8	85.8	58.4	58.5	46.9	49.9
2020 Dec.	92.4	-6.8	-	-13.8	-8.0	-13.2	-17.1	-	55.2	56.3	46.4	49.1
2021 Jan.	91.5	-6.1	77.5	-15.5	-7.7	-18.5	-17.7	85.2	54.8	54.6	45.4	47.8
Feb.	93.4	-3.2	-	-14.8	-7.5	-19.1	-17.0	-	57.9	57.6	45.7	48.8
Mar.	100.9	2.1	-	-10.8	-2.3	-12.2	-9.6	-	62.5	63.3	49.6	53.2
Apr.	110.5	10.9	82.5	-8.1	3.0	-3.0	2.2	86.4	62.9	63.2	50.5	53.8
May	114.5	11.5	-	-5.1	4.9	0.4	11.3	-	63.1	62.2	55.2	57.1

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)	Debt ratio	Real gross disposable income	Financial investment	Non-financial investment (gross)	Net worth [2]	Housing wealth	Profit share [3]	Saving ratio (net)	Debt ratio [4]	Financial investment	Non-financial investment (gross)	Financing
	Percentage of gross disposable income (adjusted) [1]		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
2017	12.3	93.7	1.6	2.3	5.4	4.3	4.2	35.0	7.0	77.0	4.0	9.4	2.6
2018	12.5	93.3	1.8	2.0	6.0	2.7	4.7	35.4	5.8	77.0	2.1	7.1	1.6
2019	12.9	93.8	1.8	2.6	4.8	6.1	3.8	34.5	5.7	76.8	2.3	3.3	1.9
2020 Q1	13.9	93.6	0.6	2.5	-1.5	3.1	4.5	33.6	4.7	77.8	2.3	0.1	2.1
Q2	16.7	94.9	-3.3	3.2	-15.2	4.2	4.5	31.2	4.2	82.5	2.5	-27.5	1.8
Q3	17.9	95.6	1.2	3.6	-3.4	3.9	4.6	30.8	3.7	83.4	2.9	-13.9	1.9
Q4	19.7	96.3	0.6	4.1	0.2	5.3	5.1	30.4	3.4	84.0	3.1	-13.0	1.9

Sources: ECB and Eurostat.
1) Based on four-quarter cumulated sums of saving, debt and gross disposable income (adjusted for the change in pension entitlements).
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) Defined as consolidated loans and debt securities 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 [1]	
	Total			Goods		Services		Primary income		Secondary income			
	Credit	Debit	Balance	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
	1	2	3	4	5	6	7	8	9	10	11	12	13
2020 Q2	870.4	841.4	29.0	466.0	412.2	192.5	182.6	185.2	176.5	26.6	70.1	11.2	15.8
Q3	952.1	884.3	67.8	548.2	455.6	192.5	186.4	182.9	179.7	28.5	62.6	11.5	10.4
Q4	1,013.7	922.8	90.9	581.8	478.7	220.1	194.6	182.8	171.8	29.1	77.6	23.5	24.4
2021 Q1	1,035.3	955.7	79.7	596.1	502.1	235.0	201.5	173.3	178.6	30.8	73.5	14.4	11.0
2020 Oct.	334.0	306.0	28.1	191.1	156.5	73.2	65.6	59.9	60.5	9.8	23.4	4.4	5.1
Nov.	339.1	313.7	25.4	194.8	162.1	73.3	64.7	61.1	57.2	9.8	29.7	4.3	6.0
Dec.	340.6	303.2	37.4	195.9	160.1	73.5	64.4	61.7	54.1	9.5	24.6	14.8	13.3
2021 Jan.	346.4	310.4	36.0	196.7	158.9	79.3	65.6	60.6	61.4	9.8	24.5	3.4	3.4
Feb.	343.9	318.1	25.9	197.9	165.4	78.4	66.9	57.5	59.8	10.1	26.0	3.8	3.5
Mar.	345.0	327.2	17.8	201.5	177.7	77.3	69.0	55.3	57.4	10.9	23.1	7.2	4.1
12-month cumulated transactions													
2021 Mar.	3,871.5	3,604.2	267.3	2,192.1	1,848.6	840.1	765.1	724.2	706.7	115.1	283.8	60.5	61.7
12-month cumulated transactions as a percentage of GDP													
2021 Mar.	34.2	31.8	2.4	19.4	16.3	7.4	6.8	6.4	6.2	1.0	2.5	0.5	0.5

1) The capital account is not seasonally adjusted.

3.9 Euro area external trade in goods [1] , values and volumes by product group [2]

(seasonally adjusted, unless otherwise indicated)

	Total (n.s.a.)		Exports (f.o.b.)					Imports (c.i.f.)					
			Total				Memo item:	Total				Memo items:	
	Exports	Imports		Intermediate goods	Capital goods	Consumption goods	Manufacturing		Intermediate goods	Capital goods	Consumption goods	Manufacturing	Oil
	1	2	3	4	5	6	7	8	9	10	11	12	13
Values (EUR billions; annual percentage changes for columns 1 and 2)													
2020 Q2	-23.6	-21.6	446.7	217.7	87.6	132.9	370.2	421.2	219.0	77.3	119.0	319.9	26.1
Q3	-8.8	-11.5	531.3	248.4	108.3	164.7	447.9	469.2	242.9	84.6	133.7	359.3	34.1
Q4	-2.8	-6.0	567.7	264.9	113.9	177.9	477.5	491.5	261.1	86.5	134.9	377.7	35.3
2021 Q1	-0.6	0.3	575.0	.	.	.	464.1	510.9	.	.	.	369.6	.
2020 Oct.	-9.0	-11.8	186.2	86.0	37.7	58.9	157.3	160.9	85.7	27.3	44.9	122.1	11.0
Nov.	-1.1	-4.1	189.6	89.1	37.2	59.8	160.1	165.5	87.5	29.6	45.5	127.8	11.2
Dec.	2.5	-1.2	191.9	89.8	39.0	59.2	160.2	165.1	87.8	29.6	44.5	127.9	13.0
2021 Jan.	-9.0	-14.1	191.2	92.0	37.4	57.7	155.1	163.3	89.2	29.2	41.8	118.7	13.9
Feb.	-2.3	-2.5	192.2	91.8	39.1	57.5	161.8	169.1	92.8	30.6	42.8	126.1	15.7
Mar.	9.0	19.1	191.6	.	.	.	147.3	178.6	.	.	.	124.8	.
Volume indices (2000 = 100; annual percentage changes for columns 1 and 2)													
2020 Q2	-23.6	-16.3	81.6	86.4	76.1	78.9	79.3	91.9	89.7	94.5	97.0	91.2	81.9
Q3	-7.2	-7.0	98.4	100.1	95.4	99.3	97.8	101.8	97.1	105.8	110.3	104.1	81.0
Q4	-1.5	-1.2	104.2	105.7	99.4	106.3	103.3	105.3	102.3	107.4	110.9	108.7	84.6
2021 Q1	.	.	.	.	.	.	.	.	.	.	.	.	.
2020 Sep.	-1.1	-1.0	102.0	104.6	98.8	101.2	101.9	104.5	100.2	107.7	113.1	107.0	81.8
Oct.	-7.6	-6.8	103.1	103.3	99.8	106.4	102.9	104.7	102.1	103.7	111.1	106.3	83.6
Nov.	0.2	0.8	104.6	107.3	97.2	107.1	104.0	106.5	103.6	109.6	112.2	110.3	83.8
Dec.	3.8	3.4	104.8	106.4	101.1	105.3	103.0	104.7	101.3	108.9	109.3	109.4	86.4
2021 Jan.	-8.0	-10.9	103.3	106.8	97.9	101.9	99.1	102.0	100.1	106.8	103.1	101.3	83.9
Feb.	-2.0	-3.1	103.9	107.1	103.3	100.7	103.9	103.7	100.9	112.7	104.2	106.7	85.7

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 [1)]

(annual percentage changes, unless otherwise indicated)

	Total					Total (s.a.; percentage change vis-à-vis previous period) [2)]						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 2021	100.0	100.0	68.7	58.2	41.8	100.0	16.7	5.1	26.9	9.5	41.8	86.7	13.3
2018	103.6	1.8	1.0	2.0	1.5	-	-	-	-	-	-	1.7	2.1
2019	104.8	1.2	1.0	1.0	1.5	-	-	-	-	-	-	1.1	1.9
2020	105.1	0.3	0.7	-0.4	1.0	-	-	-	-	-	-	0.2	0.6
2020 Q2	105.5	0.2	0.9	-0.6	1.2	-0.4	0.7	3.3	-0.2	-7.9	0.4	0.2	0.5
Q3	105.1	0.0	0.6	-0.7	0.7	0.0	-0.2	-1.9	0.4	0.9	-0.1	-0.1	0.4
Q4	105.0	-0.3	0.2	-0.9	0.5	0.1	0.1	0.6	-0.6	0.5	0.3	-0.4	0.5
2021 Q1	105.8	1.1	1.2	0.8	1.3	1.3	0.6	-0.3	1.3	6.5	0.6	1.0	1.4
2020 Dec.	105.2	-0.3	0.2	-1.0	0.7	0.1	0.0	-1.6	-0.1	1.6	0.2	-0.4	0.5
2021 Jan.	105.3	0.9	1.4	0.5	1.4	1.1	0.4	0.3	2.0	3.8	0.3	0.8	1.3
Feb.	105.5	0.9	1.1	0.7	1.2	0.0	0.2	0.2	-0.5	0.9	0.0	0.8	1.5
Mar.	106.5	1.3	0.9	1.3	1.3	0.2	0.0	0.2	-0.5	2.6	0.1	1.3	1.4
Apr.	107.1	1.6	0.7	2.1	0.9	0.1	0.1	1.2	-0.2	0.7	0.0	1.5	2.2
May [3)]	107.4	2.0	0.9	.	1.1	0.2	0.2	0.0	0.3	0.7	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 2021	21.8	16.7	5.1	36.4	26.9	9.5	12.2	7.5	6.5	2.7	11.4	9.0
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
2019	1.8	1.9	1.4	0.5	0.3	1.1	1.4	1.3	2.0	-0.7	1.7	1.5
2020	2.3	1.8	4.0	-1.8	0.2	-6.8	1.4	1.3	0.5	-0.6	1.0	1.4
2020 Q2	3.4	2.3	6.7	-2.7	0.2	-10.3	1.4	1.3	1.1	0.1	1.2	1.5
Q3	1.8	1.5	2.8	-2.0	0.4	-8.1	1.3	1.2	-0.4	-0.7	0.6	1.4
Q4	1.7	1.2	3.5	-2.4	-0.3	-7.8	1.2	1.2	-0.6	-1.5	0.6	1.3
2021 Q1	1.3	1.2	1.7	0.5	0.9	-0.6	1.3	1.2	1.1	-0.4	1.4	1.5
2020 Dec.	1.3	1.1	2.1	-2.3	-0.5	-6.9	1.2	1.2	-0.3	-1.4	0.7	1.3
2021 Jan.	1.5	1.3	2.0	-0.1	1.5	-4.2	1.2	1.1	1.0	-0.3	1.8	1.5
Feb.	1.3	1.3	1.5	0.3	1.0	-1.7	1.3	1.2	0.8	-0.3	1.2	1.5
Mar.	1.1	1.0	1.6	1.4	0.3	4.3	1.3	1.2	1.5	-0.7	1.3	1.4
Apr.	0.6	0.9	-0.3	3.0	0.4	10.4	1.4	1.3	0.5	0.1	0.6	1.4
May [3)]	0.6	0.8	0.0	.	0.7	13.1	.	.	.	.	.	.

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 [1]										Con-struction [2]	Residential property prices [3]	Experimental indicator of commercial property prices [3]
	Total (index: 2015 = 100)	Total		Industry excluding construction and energy						Energy			
			Manu-facturing	Total	Intermediate 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			
2018	104.1	3.3	2.4	1.5	2.7	1.0	0.4	0.1	0.6	8.4	2.5	4.9	4.1
2019	104.7	0.6	0.6	0.8	0.1	1.5	1.0	1.1	0.9	-0.1	2.0	4.2	4.5
2020	102.0	-2.6	-1.7	-0.1	-1.6	0.9	1.0	1.1	0.6	-9.7	1.2	5.3	2.5
2020 Q2	100.2	-4.5	-3.0	-0.5	-2.7	1.0	1.1	1.5	0.6	-15.5	0.8	5.0	4.8
Q3	101.4	-2.7	-2.0	-0.3	-1.8	0.8	0.5	0.3	0.6	-9.3	0.9	5.2	1.5
Q4	102.6	-1.7	-1.7	0.0	-0.6	0.8	0.0	-0.5	0.7	-6.7	1.6	5.9	-0.1
2021 Q1	105.8	2.1	1.3	1.4	2.6	0.9	0.0	-0.7	0.7	3.8	.	.	.
2020 Nov.	102.4	-2.0	-1.7	0.0	-0.6	0.8	0.1	-0.4	0.7	-7.6	-	-	-
Dec.	103.3	-1.1	-1.3	0.2	-0.1	0.8	-0.3	-1.0	0.6	-4.8	-	-	-
2021 Jan.	105.1	0.4	-0.6	0.7	1.1	0.8	-0.4	-1.0	0.7	-0.7	-	-	-
Feb.	105.6	1.5	1.0	1.2	2.5	0.9	-0.2	-0.9	0.6	2.3	-	-	-
Mar.	106.8	4.3	3.5	2.3	4.4	1.1	0.5	-0.1	0.9	10.3	-	-	-
Apr.	107.9	7.6	5.7	3.5	6.9	1.3	1.0	0.8	1.0	20.4	-	-	-

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 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: 2015 = 100)	Total	Domestic demand				Exports [1]	Imports [1]		Import-weighted [2]			Use-weighted [2]		
			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
2018	103.4	1.4	1.7	1.5	1.7	1.9	1.5	2.2	60.4	-0.9	-6.4	4.3	-0.6	-6.2	5.7
2019	105.2	1.7	1.4	1.1	1.8	2.1	0.7	0.1	57.2	2.0	4.4	-0.1	3.0	8.3	-2.3
2020	106.8	1.5	1.1	0.5	2.9	1.2	-1.3	-2.6	37.0	1.5	3.4	-0.3	-0.9	-0.2	-1.8
2020 Q2	107.5	2.4	1.5	0.8	5.1	1.2	-2.0	-4.3	28.5	-2.4	3.9	-8.1	-4.4	0.0	-9.2
Q3	106.3	0.8	0.6	0.0	1.6	0.6	-2.0	-2.9	36.5	1.9	1.5	2.4	-0.7	-2.2	1.0
Q4	107.2	1.3	1.0	0.0	2.5	1.3	-1.3	-2.2	37.4	4.1	0.1	7.9	-0.5	-6.0	6.2
2021 Q1	108.0	1.5	1.6	1.0	2.3	0.8	0.9	0.9	50.4	18.3	9.1	27.3	14.0	5.2	24.6
2020 Dec.	-	-	-	-	-	-	-	-	41.0	6.3	-1.5	14.0	1.0	-8.0	12.0
2021 Jan.	-	-	-	-	-	-	-	-	44.8	10.5	3.7	17.0	5.8	-1.9	14.8
Feb.	-	-	-	-	-	-	-	-	51.2	16.7	7.8	25.5	12.7	4.0	22.9
Mar.	-	-	-	-	-	-	-	-	54.8	28.3	16.2	40.4	24.4	13.9	36.9
Apr.	-	-	-	-	-	-	-	-	54.1	35.4	17.4	54.0	33.8	19.4	51.4
May	-	-	-	-	-	-	-	-	56.0	41.2	20.8	61.9	37.2	19.3	59.5

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	4.3	5.6	-	-4.5	32.3	56.7	56.3	-	49.7
2018	11.5	7.5	9.6	12.6	20.6	65.4	57.9	56.1	52.7
2019	4.2	7.3	9.1	7.5	18.2	48.8	57.1	50.4	52.4
2020	-1.3	1.6	-0.8	-5.8	10.9	49.0	52.1	48.7	47.2
2020 Q2	-6.9	-3.6	-7.4	-11.6	11.0	44.2	48.1	46.1	43.3
Q3	-1.7	0.9	-0.6	-7.8	12.4	49.4	52.9	49.3	47.7
Q4	1.6	2.6	-2.7	-7.8	7.0	56.7	52.6	51.6	48.3
2021 Q1	10.7	5.0	-1.8	-3.8	8.1	74.0	54.0	56.5	48.6
2020 Dec.	4.1	3.3	-2.0	-8.3	4.7	61.4	53.1	52.6	48.4
2021 Jan.	4.8	2.8	-3.1	-6.0	5.3	68.3	53.2	52.2	47.3
Feb.	9.8	3.9	-3.2	-5.6	7.2	73.9	53.2	56.5	48.1
Mar.	17.5	8.2	1.0	0.3	11.8	79.7	55.6	60.9	50.5
Apr.	24.2	14.1	5.2	8.4	17.2	82.2	57.6	64.3	50.9
May	29.9	17.6	9.4	16.7	19.2	87.1	59.6	69.1	52.6

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 [1]
			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	
2018	104.3	2.4	2.3	2.7	2.6	2.1	2.0
2019	106.7	2.4	2.6	1.8	2.3	2.7	2.2
2020	110.1	3.1	3.7	1.4	2.8	3.8	1.8
2020 Q2	115.5	4.1	4.9	1.2	4.0	4.1	1.7
Q3	104.9	1.5	2.2	-0.3	1.3	2.2	1.7
Q4	116.6	3.1	3.5	1.6	2.6	4.1	2.0
2021 Q1	.	.	.	.	.	.	1.4

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 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: 2015 =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						
2018	103.4	1.9	1.0	1.8	2.2	1.9	-0.1	0.3	4.4	1.9	2.4	2.4
2019	105.3	1.9	-1.1	3.3	1.0	1.4	0.7	0.5	2.4	1.1	2.6	1.9
2020	110.2	4.6	-2.3	3.5	4.1	5.9	1.4	0.4	0.5	6.4	5.8	15.6
2020 Q2	113.8	8.4	-3.9	11.4	7.1	11.3	3.6	2.0	-4.5	9.4	10.4	21.4
Q3	108.6	2.9	-2.0	1.4	5.5	3.8	-1.0	-0.8	2.5	6.2	2.7	12.3
Q4	110.1	4.0	-1.0	-0.3	3.4	4.7	1.8	0.9	2.8	6.4	5.8	25.4
2021 Q1	110.4	1.3	1.5	-3.3	4.0	1.2	-1.1	0.6	3.0	3.7	2.3	18.1
						Compensation per employee						
2018	105.3	2.2	1.2	1.9	1.9	2.1	2.3	2.4	3.7	2.8	2.1	3.2
2019	107.3	1.9	1.8	1.6	2.0	2.1	1.8	2.2	2.4	1.4	2.1	2.6
2020	106.7	-0.6	0.5	-2.5	-1.8	-4.4	0.3	0.0	-0.1	-0.6	2.6	-1.7
2020 Q2	102.0	-4.7	-0.4	-7.8	-8.0	-12.2	-1.9	-0.6	-5.6	-5.6	1.7	-8.9
Q3	108.6	0.7	0.9	-1.7	1.0	-1.1	0.2	-0.2	2.1	1.0	2.7	1.6
Q4	109.0	1.0	0.5	-0.2	1.4	-3.6	1.3	1.0	1.0	1.2	3.7	0.2
2021 Q1	109.2	1.9	1.9	2.0	3.4	-1.3	1.6	2.5	3.3	2.1	2.2	1.7
						Labour productivity per person employed						
2018	101.8	0.3	0.2	0.2	-0.3	0.3	2.4	2.1	-0.7	0.9	-0.3	0.8
2019	101.9	0.1	3.0	-1.7	0.9	0.7	1.0	1.7	0.0	0.3	-0.5	0.7
2020	96.8	-5.0	2.8	-5.8	-5.6	-9.7	-1.1	-0.5	-0.6	-6.5	-3.1	-15.0
2020 Q2	89.7	-12.0	3.6	-17.2	-14.1	-21.1	-5.4	-2.6	-1.1	-13.7	-7.9	-24.9
Q3	100.0	-2.1	3.0	-3.0	-4.3	-4.7	1.3	0.5	-0.4	-4.9	-0.1	-9.5
Q4	99.0	-3.0	1.6	0.1	-1.9	-7.9	-0.5	0.0	-1.7	-4.9	-2.0	-20.1
2021 Q1	98.9	0.6	0.4	5.5	-0.5	-2.4	2.7	1.9	0.3	-1.6	-0.1	-13.9
						Compensation per hour worked						
2018	105.0	1.9	0.8	2.0	0.9	1.9	2.0	2.3	2.8	2.1	2.0	2.8
2019	107.2	2.2	2.0	2.1	2.2	2.3	1.7	1.8	2.8	1.6	2.3	2.9
2020	112.9	5.3	2.6	3.0	3.8	6.1	3.0	2.1	5.1	4.6	5.0	7.4
2020 Q2	117.3	9.9	4.1	6.9	8.9	12.8	4.4	4.7	6.5	7.3	7.8	13.7
Q3	111.4	3.5	0.9	1.4	2.2	4.2	3.3	1.0	5.0	4.4	3.1	4.0
Q4	113.5	5.2	2.2	2.9	3.5	5.6	2.6	2.2	5.2	4.2	5.2	7.7
2021 Q1	114.4	3.2	0.2	1.0	-0.4	5.7	2.0	1.4	3.8	2.9	1.7	4.3
						Hourly labour productivity						
2018	102.0	0.2	-0.4	0.3	-0.9	0.3	2.2	1.9	-1.4	0.5	-0.4	0.4
2019	102.4	0.4	3.7	-1.1	1.1	1.1	0.9	1.5	0.1	0.5	-0.3	0.9
2020	103.7	1.3	3.1	0.0	0.7	0.7	2.0	2.1	6.1	-1.2	-0.3	-5.2
2020 Q2	105.3	2.9	6.7	-3.2	3.8	2.4	1.4	3.3	17.3	-0.6	-1.4	-1.9
Q3	103.3	0.7	1.9	0.2	-2.6	0.1	4.4	2.1	3.1	-1.7	0.8	-6.8
Q4	104.3	1.6	1.5	3.4	1.1	1.2	1.4	1.5	1.8	-1.6	-0.4	-12.1
2021 Q1	104.8	2.0	-1.4	4.7	-3.7	4.1	3.0	0.7	-1.4	-1.2	-0.5	-9.3

Sources: Eurostat and ECB calculations.

5 Money and credit

5.1 Monetary aggregates [1)]

(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								
	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	7	8	9	10	11	12
Outstanding amounts												
2018	1,164.2	7,114.7	8,278.9	1,128.3	2,298.9	3,427.2	11,706.1	74.4	521.8	82.0	678.2	12,384.3
2019	1,221.5	7,726.9	8,948.4	1,073.1	2,362.4	3,435.5	12,383.9	78.7	529.1	19.4	627.1	13,011.0
2020	1,359.2	8,898.3	10,257.4	1,039.9	2,447.2	3,487.2	13,744.6	100.6	647.0	32.5	780.2	14,524.7
2020 Q2	1,302.8	8,425.2	9,728.0	1,075.3	2,400.8	3,476.1	13,204.1	95.2	579.7	20.1	695.1	13,899.2
Q3	1,330.6	8,617.0	9,947.6	1,076.9	2,423.3	3,500.3	13,447.9	100.3	610.3	7.1	717.7	14,165.5
Q4	1,359.2	8,898.3	10,257.4	1,039.9	2,447.2	3,487.2	13,744.6	100.6	647.0	32.5	780.2	14,524.7
2021 Q1	1,391.8	9,144.6	10,536.4	985.1	2,483.7	3,468.8	14,005.2	109.8	612.4	16.8	738.9	14,744.1
2020 Nov.	1,351.2	8,781.6	10,132.7	1,029.5	2,446.3	3,475.8	13,608.5	101.2	611.9	19.7	732.8	14,341.4
Dec.	1,359.2	8,898.3	10,257.4	1,039.9	2,447.2	3,487.2	13,744.6	100.6	647.0	32.5	780.2	14,524.7
2021 Jan.	1,380.4	8,995.2	10,375.6	1,004.0	2,456.8	3,460.7	13,836.3	111.3	630.0	29.1	770.5	14,606.8
Feb.	1,390.5	9,068.2	10,458.7	984.3	2,472.3	3,456.6	13,915.3	108.8	608.8	34.2	751.8	14,667.1
Mar.	1,391.8	9,144.6	10,536.4	985.1	2,483.7	3,468.8	14,005.2	109.8	612.4	16.8	738.9	14,744.1
Apr. [p]	1,402.4	9,180.0	10,582.4	965.5	2,485.8	3,451.3	14,033.7	109.3	605.0	26.8	741.1	14,774.8
Transactions												
2018	50.6	468.0	518.6	-73.2	44.8	-28.5	490.1	-0.9	12.6	-0.9	10.8	500.9
2019	57.3	605.8	663.2	-59.7	61.5	1.8	664.9	4.1	-2.1	-56.6	-54.6	610.3
2020	137.6	1,255.7	1,393.3	-27.2	85.7	58.5	1,451.8	19.2	124.0	13.0	156.3	1,608.1
2020 Q2	37.5	343.0	380.5	2.1	32.6	34.8	415.3	-14.1	43.7	-28.8	0.8	416.0
Q3	27.7	269.0	296.8	5.6	22.9	28.5	325.3	5.9	29.9	-11.7	24.2	349.5
Q4	28.6	295.9	324.5	-34.9	24.0	-10.9	313.6	-3.5	41.3	26.7	64.6	378.2
2021 Q1	32.6	233.9	266.5	-58.4	38.0	-20.4	246.1	8.0	-34.6	-14.2	-40.8	205.3
2020 Nov.	13.0	108.1	121.1	-29.3	14.5	-14.7	106.4	0.8	0.6	1.5	2.9	109.4
Dec.	8.0	122.4	130.4	12.1	1.0	13.1	143.5	-0.3	39.6	13.3	52.6	196.1
2021 Jan.	21.2	94.0	115.2	-36.8	11.2	-25.6	89.5	10.4	-17.0	-3.0	-9.6	80.0
Feb.	10.2	72.3	82.4	-19.8	15.5	-4.3	78.1	-2.7	-21.2	5.6	-18.3	59.8
Mar.	1.2	67.7	68.9	-1.7	11.2	9.5	78.5	0.3	3.6	-16.8	-12.9	65.6
Apr. [p]	10.6	44.6	55.2	-17.2	2.2	-15.0	40.2	0.3	-7.4	10.0	2.9	43.1
Growth rates												
2018	4.5	7.0	6.7	-6.1	2.0	-0.8	4.4	-1.3	2.5	-1.6	1.6	4.2
2019	4.9	8.5	8.0	-5.3	2.7	0.1	5.7	5.4	-0.4	-71.4	-8.0	4.9
2020	11.3	16.3	15.6	-2.5	3.6	1.7	11.7	24.2	23.5	70.9	24.9	12.4
2020 Q2	9.7	13.2	12.7	-3.3	2.6	0.7	9.3	28.2	11.0	-45.8	9.4	9.3
Q3	10.5	14.4	13.8	-2.1	3.0	1.4	10.3	36.7	12.6	-66.7	12.7	10.4
Q4	11.3	16.3	15.6	-2.5	3.6	1.7	11.7	24.2	23.5	70.9	24.9	12.4
2021 Q1	10.0	14.2	13.6	-8.0	5.0	0.9	10.2	-3.6	14.9	-60.7	7.0	10.0
2020 Nov.	11.1	15.1	14.5	-4.4	3.8	1.2	10.8	31.9	14.7	-15.9	15.5	11.0
Dec.	11.3	16.3	15.6	-2.5	3.6	1.7	11.7	24.2	23.5	70.9	24.9	12.4
2021 Jan.	12.2	17.1	16.5	-5.4	4.0	1.1	12.2	40.1	16.3	3.4	18.4	12.5
Feb.	12.4	17.1	16.4	-7.2	4.6	1.0	12.2	24.6	11.7	30.3	14.0	12.3
Mar.	10.0	14.2	13.6	-8.0	5.0	0.9	10.2	-3.6	14.9	-60.7	7.0	10.0
Apr. [p]	9.8	12.7	12.3	-9.2	4.6	0.3	9.1	13.5	11.0	-6.9	10.6	9.2

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
Outstanding amounts													
2018	2,334.0	1,901.2	277.3	147.9	7.6	6,645.3	4,035.6	517.8	2,090.6	1.3	996.1	204.8	436.2
2019	2,482.3	2,068.7	256.9	150.2	6.5	7,041.2	4,397.1	492.3	2,151.0	0.8	1,032.6	217.1	468.0
2020	2,985.2	2,528.6	310.3	143.1	3.3	7,647.6	4,954.6	437.5	2,254.7	0.8	1,106.8	237.8	508.7
2020 Q2	2,869.9	2,396.8	318.7	148.3	6.2	7,349.4	4,683.7	462.8	2,202.0	0.9	1,084.7	226.5	466.0
Q3	2,958.3	2,481.3	323.3	146.9	6.9	7,491.0	4,816.7	446.5	2,226.9	1.0	1,058.2	240.4	469.6
Q4	2,985.2	2,528.6	310.3	143.1	3.3	7,647.6	4,954.6	437.5	2,254.7	0.8	1,106.8	237.8	508.7
2021 Q1	3,070.8	2,618.1	301.0	143.8	7.8	7,825.2	5,109.3	422.2	2,292.9	0.8	1,126.2	209.1	491.9
2020 Nov.	2,966.7	2,502.1	312.7	146.4	5.5	7,595.0	4,903.6	441.0	2,249.2	1.1	1,074.5	238.9	483.5
Dec.	2,985.2	2,528.6	310.3	143.1	3.3	7,647.6	4,954.6	437.5	2,254.7	0.8	1,106.8	237.8	508.7
2021 Jan.	3,007.8	2,557.2	301.8	142.2	6.6	7,707.2	5,009.0	431.1	2,266.2	0.8	1,114.8	229.5	508.0
Feb.	3,028.1	2,587.0	292.3	143.2	5.7	7,761.3	5,052.0	426.5	2,281.8	1.0	1,120.0	226.9	497.2
Mar.	3,070.8	2,618.1	301.0	143.8	7.8	7,825.2	5,109.3	422.2	2,292.9	0.8	1,126.2	209.1	491.9
Apr. [p]	3,050.6	2,605.3	294.9	142.9	7.4	7,843.0	5,128.8	417.6	2,295.6	0.9	1,127.2	225.1	494.7
Transactions													
2018	94.6	106.8	-9.7	-1.0	-1.4	326.6	325.4	-45.0	45.6	0.5	1.7	-3.6	19.2
2019	149.6	167.1	-18.9	1.7	-0.4	394.5	360.2	-26.2	61.0	-0.5	26.9	11.0	29.7
2020	513.9	468.0	55.8	-6.9	-3.0	611.6	561.1	-53.8	104.4	-0.1	144.6	22.1	41.0
2020 Q2	261.2	206.7	55.4	0.4	-1.3	177.6	149.0	-9.1	37.4	0.3	-71.4	2.7	-6.5
Q3	94.7	88.6	6.5	-1.3	0.9	144.3	134.8	-15.6	25.0	0.1	46.1	14.6	3.9
Q4	32.1	51.8	-12.5	-3.7	-3.5	158.4	139.2	-8.5	27.9	-0.2	53.9	-2.0	39.2
2021 Q1	80.7	84.8	-9.2	0.7	4.4	176.2	152.4	-16.0	39.7	0.0	10.8	-29.3	-16.7
2020 Nov.	1.1	16.3	-15.1	-0.5	0.5	61.2	47.4	-2.1	15.8	0.1	25.5	2.2	4.2
Dec.	21.8	28.8	-1.5	-3.3	-2.2	53.6	51.7	-3.2	5.5	-0.3	35.4	-0.8	25.2
2021 Jan.	22.0	27.3	-7.6	-1.0	3.3	60.3	53.5	-6.5	13.3	0.1	5.7	-8.6	-0.7
Feb.	20.1	29.6	-9.5	1.0	-1.0	53.5	42.7	-4.7	15.4	0.2	4.8	-2.6	-10.6
Mar.	38.5	27.9	8.0	0.6	2.1	62.3	56.2	-4.7	11.0	-0.2	0.3	-18.1	-5.4
Apr. [p]	-15.7	-9.2	-5.3	-0.8	-0.3	19.3	20.5	-4.2	2.8	0.1	6.9	16.5	3.0
Growth rates													
2018	4.2	5.9	-3.4	-0.7	-16.2	5.2	8.8	-8.0	2.2	66.7	0.2	-1.7	4.6
2019	6.4	8.8	-6.8	1.2	-6.8	5.9	8.9	-5.1	2.9	-36.8	2.7	5.3	6.8
2020	20.7	22.6	21.6	-4.6	-46.9	8.7	12.8	-10.9	4.9	-6.5	14.5	10.2	8.8
2020 Q2	19.2	20.7	21.1	-1.8	-13.8	7.4	11.3	-9.4	3.6	-48.0	5.0	3.7	0.6
Q3	21.1	22.4	24.9	-3.3	23.4	7.7	11.7	-11.3	4.2	-0.2	8.2	9.9	0.9
Q4	20.7	22.6	21.6	-4.6	-46.9	8.7	12.8	-10.9	4.9	-6.5	14.5	10.2	8.8
2021 Q1	18.0	19.7	15.1	-2.7	9.4	9.2	12.7	-10.4	6.0	39.5	4.0	-6.4	4.2
2020 Nov.	20.3	21.5	24.6	-3.1	2.4	8.3	12.2	-11.1	4.9	-32.9	11.0	6.7	3.2
Dec.	20.7	22.6	21.6	-4.6	-46.9	8.7	12.8	-10.9	4.9	-6.5	14.5	10.2	8.8
2021 Jan.	21.8	24.1	18.8	-5.3	65.1	9.2	13.3	-11.3	5.3	-6.3	15.6	5.3	8.4
Feb.	21.2	23.8	15.7	-4.4	9.1	9.5	13.4	-11.4	5.9	15.4	14.6	4.9	4.6
Mar.	18.0	19.7	15.1	-2.7	9.4	9.2	12.7	-10.4	6.0	39.5	4.0	-6.4	4.2
Apr. [p]	12.8	14.8	4.8	-2.8	26.2	8.3	11.5	-10.4	5.4	5.5	8.7	-0.8	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 [1)]

(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								
					Loans						Debt securities	Equity and non-money market fund investment fund shares
					Total		To non-financial corporations [3)]	To households [4)]	To financial corporations other than MFIs and ICPFs [3)]	To insurance corporations and pension funds		
	Total	Loans	Debt securities	Total		Adjusted loans [2)]						
	1	2	3	4	5	6	7	8	9	10	11	12
Outstanding amounts												
2018	4,684.1	1,008.4	3,664.3	13,416.5	11,123.0	11,483.4	4,404.9	5,741.9	849.8	126.4	1,519.9	773.6
2019	4,660.7	986.8	3,662.2	13,865.5	11,452.4	11,839.6	4,475.8	5,931.1	893.5	152.0	1,562.5	850.6
2020	5,925.4	996.1	4,917.3	14,343.4	11,927.3	12,301.1	4,723.6	6,119.9	916.1	167.7	1,549.9	866.2
2020 Q2	5,279.2	1,005.9	4,261.6	14,245.0	11,781.8	12,163.6	4,718.5	5,995.4	912.6	155.2	1,646.7	816.6
Q3	5,737.2	1,003.1	4,722.3	14,200.5	11,868.4	12,226.5	4,731.8	6,066.0	912.6	157.9	1,517.9	814.2
Q4	5,925.4	996.1	4,917.3	14,343.4	11,927.3	12,301.1	4,723.6	6,119.9	916.1	167.7	1,549.9	866.2
2021 Q1	6,092.3	993.8	5,096.8	14,463.8	12,061.8	12,421.9	4,784.0	6,173.5	949.1	155.2	1,521.2	880.8
2020 Nov.	5,850.2	1,006.4	4,831.6	14,288.6	11,926.9	12,285.8	4,736.0	6,106.6	927.5	156.7	1,541.0	820.7
Dec.	5,925.4	996.1	4,917.3	14,343.4	11,927.3	12,301.1	4,723.6	6,119.9	916.1	167.7	1,549.9	866.2
2021 Jan.	5,950.3	989.0	4,959.7	14,358.4	11,945.9	12,311.0	4,721.2	6,136.3	939.9	148.6	1,548.4	864.1
Feb.	5,986.6	993.7	4,991.3	14,392.1	11,971.2	12,334.9	4,729.5	6,153.5	941.6	146.5	1,549.4	871.5
Mar.	6,092.3	993.8	5,096.8	14,463.8	12,061.8	12,421.9	4,784.0	6,173.5	949.1	155.2	1,521.2	880.8
Apr. [p]	6,099.8	1,002.2	5,095.4	14,418.4	12,039.6	12,395.5	4,751.8	6,191.2	942.7	153.9	1,505.0	873.8
Transactions												
2018	91.5	-28.2	119.7	375.0	307.5	382.6	124.1	166.1	-0.3	17.7	88.5	-21.1
2019	-87.2	-23.3	-64.3	452.1	378.3	425.4	115.6	200.4	41.2	21.1	30.5	43.4
2020	1,050.4	13.3	1,037.0	735.7	540.2	561.2	288.9	209.2	26.3	15.8	167.1	28.4
2020 Q2	465.6	-1.9	467.4	185.0	97.6	104.8	120.7	35.8	-53.3	-5.6	76.3	11.2
Q3	262.5	-2.8	265.2	150.8	105.1	86.8	29.0	72.1	1.1	2.9	40.7	5.0
Q4	177.0	-1.9	178.7	157.3	84.1	120.4	3.5	60.8	10.1	9.7	29.9	43.3
2021 Q1	162.2	-1.7	174.4	153.2	134.2	116.1	60.7	56.6	29.5	-12.6	10.9	8.1
2020 Nov.	42.8	2.9	39.6	47.5	34.8	40.3	2.1	15.2	19.6	-2.1	6.7	6.1
Dec.	79.3	-5.8	85.3	73.1	16.9	43.1	-6.2	19.0	-6.9	11.0	11.4	44.7
2021 Jan.	34.3	-7.4	52.1	17.3	19.5	11.7	-1.8	17.2	23.3	-19.2	-0.9	-1.3
Feb.	60.9	5.1	55.8	33.1	27.8	27.8	9.8	18.9	1.1	-2.0	0.2	5.2
Mar.	67.1	0.6	66.5	102.7	86.9	76.6	52.6	20.6	5.2	8.6	11.6	4.2
Apr. [p]	26.7	8.1	17.9	-22.0	-1.5	-9.5	-23.8	27.3	-3.9	-1.2	-13.2	-7.3
Growth rates												
2018	2.0	-2.7	3.4	2.9	2.8	3.4	2.9	3.0	0.0	16.3	6.1	-2.6
2019	-1.9	-2.3	-1.8	3.4	3.4	3.7	2.6	3.5	4.8	16.1	2.0	5.5
2020	22.3	1.3	27.9	5.4	4.7	4.7	6.5	3.5	2.9	10.4	11.2	3.4
2020 Q2	13.5	0.4	17.2	4.8	4.7	4.9	6.5	3.2	3.9	17.1	7.2	0.7
Q3	19.0	0.1	24.2	4.9	4.7	4.7	6.5	3.5	2.7	8.2	9.0	0.1
Q4	22.3	1.3	27.9	5.4	4.7	4.7	6.5	3.5	2.9	10.4	11.2	3.4
2021 Q1	21.9	-0.8	28.1	4.6	3.6	3.6	4.7	3.8	-1.3	-3.5	10.5	8.4
2020 Nov.	21.3	0.4	27.1	5.0	4.8	4.8	6.3	3.6	4.3	7.3	10.1	-1.4
Dec.	22.3	1.3	27.9	5.4	4.7	4.7	6.5	3.5	2.9	10.4	11.2	3.4
2021 Jan.	23.0	0.0	29.5	5.1	4.4	4.5	6.2	3.3	3.7	-2.6	11.7	3.1
Feb.	24.0	0.5	30.6	5.0	4.4	4.5	6.3	3.3	3.6	-2.5	10.4	3.8
Mar.	21.9	-0.8	28.1	4.6	3.6	3.6	4.7	3.8	-1.3	-3.5	10.5	8.4
Apr. [p]	18.0	-0.6	23.0	4.0	3.3	3.2	2.6	4.3	0.6	-1.2	6.9	9.0

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 [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)]				
	Total		Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total		Loans for consumption	Loans for house purchase	Other loans
		Adjusted loans [4)]					Adjusted loans [4)]			
	1	2	3	4	5	6	7	8	9	10
Outstanding amounts										
2018	4,404.9	4,489.0	991.4	844.2	2,569.4	5,741.9	6,024.9	682.6	4,356.4	702.9
2019	4,475.8	4,577.9	967.4	878.0	2,630.4	5,931.1	6,224.0	720.1	4,524.6	686.4
2020	4,723.6	4,841.3	898.9	1,012.0	2,812.7	6,119.9	6,390.1	700.2	4,725.1	694.6
2020 Q2	4,718.5	4,829.9	957.8	993.4	2,767.3	5,995.4	6,276.5	701.0	4,603.9	690.6
Q3	4,731.8	4,845.5	930.0	1,014.7	2,787.2	6,066.0	6,334.0	702.4	4,667.6	696.0
Q4	4,723.6	4,841.3	898.9	1,012.0	2,812.7	6,119.9	6,390.1	700.2	4,725.1	694.6
2021 Q1	4,784.0	4,902.0	895.8	1,017.7	2,870.5	6,173.5	6,435.8	694.8	4,785.0	693.7
2020 Nov.	4,736.0	4,842.4	911.8	1,004.9	2,819.4	6,106.6	6,376.2	701.7	4,708.6	696.3
Dec.	4,723.6	4,841.3	898.9	1,012.0	2,812.7	6,119.9	6,390.1	700.2	4,725.1	694.6
2021 Jan.	4,721.2	4,837.0	888.9	1,006.0	2,826.3	6,136.3	6,403.5	697.2	4,745.6	693.6
Feb.	4,729.5	4,846.3	890.4	1,005.0	2,834.1	6,153.5	6,421.5	698.2	4,761.7	693.7
Mar.	4,784.0	4,902.0	895.8	1,017.7	2,870.5	6,173.5	6,435.8	694.8	4,785.0	693.7
Apr. [p)]	4,751.8	4,870.8	869.1	996.4	2,886.3	6,191.2	6,451.4	689.9	4,808.6	692.7
Transactions										
2018	124.1	176.3	18.0	32.8	73.3	166.1	188.4	41.2	134.2	-9.3
2019	115.6	143.9	-13.2	43.6	85.3	200.4	217.2	41.0	168.6	-9.2
2020	288.9	325.3	-53.9	138.9	203.9	209.2	195.0	-11.8	210.9	10.2
2020 Q2	120.7	131.0	-39.1	80.4	79.4	35.8	29.1	-12.2	39.2	8.8
Q3	29.0	33.9	-22.5	15.9	35.6	72.1	59.7	5.8	65.0	1.3
Q4	3.5	22.5	-25.4	-1.4	30.4	60.8	68.0	-1.7	61.6	0.9
2021 Q1	60.7	60.1	-3.3	6.0	58.0	56.6	51.0	-3.7	60.5	-0.1
2020 Nov.	2.1	7.4	-2.7	-5.2	10.0	15.2	17.8	-3.6	19.3	-0.5
Dec.	-6.2	12.9	-9.5	6.7	-3.4	19.0	23.9	-0.4	19.6	-0.2
2021 Jan.	-1.8	-3.0	-10.1	-5.8	14.1	17.2	14.4	-2.3	20.5	-1.0
Feb.	9.8	12.0	2.1	-0.6	8.3	18.9	19.9	1.6	16.7	0.6
Mar.	52.6	51.1	4.7	12.4	35.5	20.6	16.7	-2.9	23.2	0.3
Apr. [p)]	-23.8	-26.8	-23.2	-19.3	18.8	27.3	25.4	-0.8	27.8	0.3
Growth rates										
2018	2.9	4.1	1.8	4.0	2.9	3.0	3.2	6.3	3.2	-1.3
2019	2.6	3.2	-1.3	5.2	3.3	3.5	3.6	6.0	3.9	-1.3
2020	6.5	7.1	-5.6	15.9	7.8	3.5	3.1	-1.6	4.7	1.5
2020 Q2	6.5	7.2	-1.2	16.1	6.2	3.2	3.1	0.3	4.1	0.4
Q3	6.5	7.1	-3.9	17.3	6.9	3.5	3.1	-0.1	4.5	1.0
Q4	6.5	7.1	-5.6	15.9	7.8	3.5	3.1	-1.6	4.7	1.5
2021 Q1	4.7	5.3	-9.1	11.0	7.6	3.8	3.3	-1.7	5.0	1.6
2020 Nov.	6.3	6.9	-4.6	15.1	7.4	3.6	3.1	-1.1	4.7	1.3
Dec.	6.5	7.1	-5.6	15.9	7.8	3.5	3.1	-1.6	4.7	1.5
2021 Jan.	6.2	6.9	-6.0	14.9	7.7	3.3	3.0	-2.5	4.5	1.3
Feb.	6.3	7.0	-5.0	14.2	7.8	3.3	3.0	-2.8	4.5	1.3
Mar.	4.7	5.3	-9.1	11.0	7.6	3.8	3.3	-1.7	5.0	1.6
Apr. [p)]	2.6	3.2	-10.0	3.6	6.9	4.3	3.8	0.3	5.4	1.5

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 [1)]

(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 [2)]	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 counter-parties [3)]	Reverse repos to central counter-parties [3)]
	1	2	3	4	5	6	7	8	9	10
					Outstanding amounts					
2018	389.2	6,817.4	1,940.0	56.1	2,099.7	2,721.6	1,030.0	460.2	187.0	194.9
2019	364.2	7,058.9	1,946.1	50.1	2,156.5	2,906.1	1,455.5	452.3	178.9	187.2
2020	749.0	6,967.4	1,916.7	42.1	1,994.9	3,013.7	1,432.7	539.6	130.1	139.2
2020 Q2	673.3	7,042.9	1,934.5	44.1	2,080.4	2,983.8	1,562.4	528.7	159.2	174.3
Q3	806.2	7,039.6	1,934.3	43.0	2,059.7	3,002.6	1,574.1	499.6	139.9	147.3
Q4	749.0	6,967.4	1,916.7	42.1	1,994.9	3,013.7	1,432.7	539.6	130.1	139.2
2021 Q1	699.6	6,894.3	1,898.3	41.2	1,984.7	2,970.1	1,398.2	383.7	127.3	130.3
2020 Nov.	753.6	6,973.2	1,938.1	42.4	2,012.4	2,980.2	1,469.3	460.2	148.2	147.1
Dec.	749.0	6,967.4	1,916.7	42.1	1,994.9	3,013.7	1,432.7	539.6	130.1	139.2
2021 Jan.	678.9	6,925.5	1,912.4	42.0	1,970.4	3,000.8	1,472.5	430.0	147.4	146.7
Feb.	684.8	6,880.4	1,905.2	41.4	1,971.9	2,961.9	1,433.5	420.1	145.4	145.7
Mar.	699.6	6,894.3	1,898.3	41.2	1,984.7	2,970.1	1,398.2	383.7	127.3	130.3
Apr. [p]	727.1	6,840.4	1,869.2	41.2	1,968.7	2,961.4	1,445.8	378.2	134.2	131.3
					Transactions					
2018	45.5	51.0	-37.8	-4.9	16.1	77.6	88.4	42.6	16.2	23.6
2019	-24.3	107.7	-5.3	-3.3	27.3	89.0	309.4	19.4	-2.7	-2.5
2020	321.6	-32.7	-14.6	-8.0	-99.3	89.2	-45.1	155.9	-48.8	-48.0
2020 Q2	264.0	-0.3	-0.7	-3.1	-13.9	17.5	-28.9	58.0	-24.5	-22.2
Q3	69.2	10.8	-3.2	-1.1	6.0	9.0	27.4	-11.2	-19.3	-27.1
Q4	-57.1	2.2	-4.0	-0.9	-43.9	51.0	-111.1	100.1	-9.8	-8.1
2021 Q1	-49.6	-30.4	-21.9	-0.9	-33.5	25.9	4.3	-194.3	-2.8	-8.8
2020 Nov.	-110.7	-0.8	13.4	-0.2	-13.8	-0.2	-54.9	-37.5	-0.5	-7.3
Dec.	-4.7	14.7	-17.4	-0.4	-5.8	38.4	-57.7	111.5	-18.1	-7.9
2021 Jan.	-70.2	-38.4	-5.8	-0.1	-30.6	-1.8	37.5	-117.6	17.3	7.5
Feb.	5.9	4.4	-7.3	-0.5	-1.8	13.9	-3.2	-20.9	-2.0	-1.0
Mar.	14.7	3.6	-8.8	-0.3	-1.1	13.8	-30.0	-55.8	-18.1	-15.4
Apr. [p]	27.4	-18.3	-21.4	0.0	-2.5	5.6	47.0	0.6	6.9	1.0
					Growth rates					
2018	13.0	0.8	-1.9	-8.0	0.8	2.9	-	-	8.1	7.7
2019	-6.3	1.6	-0.3	-5.9	1.3	3.2	-	-	-1.5	-1.5
2020	88.5	-0.5	-0.8	-15.9	-4.6	3.0	-	-	-27.3	-25.7
2020 Q2	81.0	-0.4	-1.3	-19.6	-3.3	2.6	-	-	-10.5	-8.8
Q3	91.8	-0.4	-0.6	-19.4	-3.1	2.1	-	-	-24.1	-25.6
Q4	88.5	-0.5	-0.8	-15.9	-4.6	3.0	-	-	-27.3	-25.7
2021 Q1	56.5	-0.3	-1.5	-12.7	-4.1	3.5	-	-	-30.7	-33.7
2020 Nov.	85.3	-0.7	-0.1	-17.1	-4.3	1.8	-	-	-30.0	-34.6
Dec.	88.5	-0.5	-0.8	-15.9	-4.6	3.0	-	-	-27.3	-25.7
2021 Jan.	65.1	-0.9	-0.9	-14.0	-6.1	3.0	-	-	-13.9	-19.5
Feb.	52.7	-0.9	-1.1	-13.9	-6.0	3.2	-	-	-18.3	-23.8
Mar.	56.5	-0.3	-1.5	-12.7	-4.1	3.5	-	-	-30.7	-33.7
Apr. [p]	27.8	-0.3	-2.4	-10.9	-4.2	4.0	-	-	-28.5	-35.4

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
2017	-0.9	-1.4	0.1	0.2	0.1	1.0
2018	-0.5	-1.0	0.1	0.2	0.3	1.4
2019	-0.6	-1.0	0.1	0.0	0.2	1.0
2020	-7.2	-6.0	-0.3	-0.1	-0.9	-5.7
2020 Q1	-1.2	.	.	.	.	0.4
Q2	-3.9	.	.	.	.	-2.3
Q3	-5.3	.	.	.	.	-3.7
Q4	-7.2	.	.	.	.	-5.7

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				Compen-sation of employees	Intermediate consumption	Interest	Social benefits	
	1	2	3	4	5	6	7	8	9	10	11	12	13
2017	46.2	45.8	12.8	13.0	15.2	0.4	47.2	43.3	9.9	5.3	1.9	22.4	3.8
2018	46.5	46.0	13.0	13.0	15.2	0.5	46.9	43.2	9.9	5.3	1.8	22.3	3.7
2019	46.4	45.9	12.9	13.1	15.0	0.5	47.0	43.3	9.9	5.3	1.6	22.5	3.8
2020	46.8	46.4	13.0	12.8	15.7	0.5	54.1	49.5	10.7	5.9	1.5	25.7	4.6
2020 Q1	46.6	46.1	13.1	13.0	15.1	0.5	47.7	44.0	10.0	5.4	1.6	22.9	3.8
Q2	46.8	46.4	13.1	13.0	15.4	0.4	50.7	46.8	10.4	5.7	1.6	24.3	3.9
Q3	46.8	46.4	13.1	12.9	15.6	0.4	52.1	48.0	10.6	5.8	1.6	25.0	4.2
Q4	46.9	46.4	13.0	12.9	15.7	0.5	54.1	49.5	10.7	5.9	1.5	25.7	4.6

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	MFIs	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 curren-cies
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2017	87.7	3.2	14.6	70.0	48.2	32.1	39.5	8.6	79.1	16.5	29.0	42.3	85.8	1.9
2018	85.7	3.1	13.8	68.8	48.0	32.4	37.8	8.1	77.7	16.0	28.4	41.3	84.2	1.5
2019	83.9	3.0	13.1	67.8	45.4	30.6	38.5	7.7	76.3	15.7	27.8	40.4	82.5	1.4
2020	98.0	3.2	14.3	80.5	54.9	39.4	43.1	11.6	86.4	19.7	31.7	46.6	95.9	2.1
2020 Q1	86.2	3.1	13.4	69.8	.	.	.	.	.	.	.	.	.	.
Q2	95.0	3.2	14.3	77.5	.	.	.	.	.	.	.	.	.	.
Q3	97.3	3.2	14.1	80.1	.	.	.	.	.	.	.	.	.	.
Q4	98.1	3.2	14.3	80.5	.	.	.	.	.	.	.	.	.	.

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 [1)]

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

	Change in debt-to-GDP ratio [2)]	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
2017	-2.4	-1.0	-0.1	0.4	0.5	0.0	-0.2	0.1	-0.1	-0.4	-1.3	1.0
2018	-2.0	-1.4	0.4	0.5	0.4	-0.1	0.0	0.2	0.1	-0.1	-1.0	0.8
2019	-1.8	-1.0	0.1	0.3	0.0	0.0	0.0	0.2	-0.2	0.0	-0.9	0.9
2020	14.1	5.7	2.3	2.4	2.0	0.4	-0.1	0.1	0.0	-0.1	6.1	9.5
2020 Q1	-0.1	-0.4	0.4	0.6	0.5	0.0	0.0	0.1	-0.2	-0.1	0.0	1.7
Q2	8.9	2.3	3.2	3.0	2.8	0.2	-0.1	0.2	-0.2	0.4	3.3	7.3
Q3	11.5	3.7	3.0	3.2	2.9	0.3	-0.1	0.1	-0.3	0.1	4.8	8.5
Q4	14.1	5.7	2.3	2.4	2.0	0.4	-0.1	0.1	0.0	-0.1	6.1	9.6

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 [1)]

(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 [2)]					Average residual maturity in years [3)]	Average nominal yields [4)]						
	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		Issuance	Redemption
											Maturities of up to 1 year		
	1	2	3	4	5	6	7	8	9	10	11	12	13
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
2019	12.2	10.8	3.6	1.4	0.4	7.5	2.2	1.3	-0.1	2.5	2.1	0.3	1.1
2020	15.0	13.7	4.2	1.4	0.3	7.6	1.9	1.1	-0.2	2.2	2.3	0.0	0.8
2020 Q1	12.9	11.5	4.3	1.4	0.4	7.5	2.1	1.2	-0.2	2.4	2.0	0.1	1.0
Q2	15.4	14.0	5.0	1.4	0.4	7.5	2.0	1.1	-0.2	2.3	2.0	0.1	0.9
Q3	15.9	14.5	4.7	1.4	0.3	7.5	1.9	1.1	-0.2	2.3	2.2	0.1	0.8
Q4	15.0	13.7	4.2	1.4	0.3	7.6	1.9	1.1	-0.2	2.2	2.3	0.0	0.8
2020 Nov.	15.4	14.0	3.9	1.4	0.3	7.7	1.9	1.1	-0.2	2.2	2.1	0.0	0.8
Dec.	15.0	13.7	4.2	1.4	0.3	7.6	1.9	1.1	-0.2	2.2	2.3	0.0	0.8
2021 Jan.	15.3	14.0	5.0	1.4	0.3	7.7	1.8	1.1	-0.2	2.2	2.3	0.0	0.7
Feb.	15.4	14.0	5.2	1.4	0.4	7.8	1.8	1.1	-0.2	2.2	2.3	0.0	0.6
Mar.	15.8	14.3	5.5	1.4	0.4	7.8	1.8	1.1	-0.2	2.1	2.1	0.0	0.5
Apr.	15.8	14.3	5.1	1.4	0.4	7.9	1.7	1.1	-0.3	2.1	2.1	0.0	0.6

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	Germany	Estonia	Ireland	Greece	Spain	France	Italy	Cyprus
	1	2	3	4	5	6	7	8	9
	Government deficit (-)/surplus (+)								
2017	-0.7	1.4	-0.7	-0.3	0.6	-3.0	-3.0	-2.4	1.9
2018	-0.8	1.8	-0.6	0.1	0.9	-2.5	-2.3	-2.2	-3.5
2019	-1.9	1.5	0.1	0.5	1.1	-2.9	-3.1	-1.6	1.5
2020	-9.4	-4.2	-4.9	-5.0	-9.7	-11.0	-9.2	-9.5	-5.7
2020 Q1	-2.9	1.1	-0.9	0.0	0.6	-3.4	-3.8	-2.4	2.1
Q2	-6.1	-1.4	-3.1	-1.9	-2.7	-6.9	-6.3	-5.4	-2.4
Q3	-7.3	-3.0	-3.6	-3.5	-5.7	-8.2	-7.1	-7.4	-4.3
Q4	-9.4	-4.2	-4.9	-5.0	-9.7	-11.0	-9.3	-9.5	-5.7
	Government debt								
2017	102.0	65.1	9.1	67.0	179.2	98.6	98.3	134.1	93.5
2018	99.8	61.8	8.2	63.0	186.2	97.4	98.0	134.4	99.2
2019	98.1	59.7	8.4	57.4	180.5	95.5	97.6	134.6	94.0
2020	114.1	69.8	18.2	59.5	205.6	120.0	115.7	155.8	118.2
2020 Q1	103.4	60.9	8.9	59.0	180.7	99.1	101.3	137.8	96.2
Q2	114.0	67.3	18.5	62.8	191.3	110.2	113.9	149.5	113.0
Q3	113.1	70.0	18.5	62.3	199.8	114.0	116.4	154.5	119.2
Q4	114.1	69.8	18.2	59.5	205.6	120.0	116.3	155.8	118.2

	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovenia	Slovakia	Finland
	10	11	12	13	14	15	16	17	18	19
	Government deficit (-)/surplus (+)									
2017	-0.8	0.5	1.3	3.2	1.3	-0.8	-3.0	-0.1	-1.0	-0.7
2018	-0.8	0.6	3.0	1.9	1.4	0.2	-0.3	0.7	-1.0	-0.9
2019	-0.6	0.5	2.4	0.4	1.8	0.6	0.1	0.4	-1.3	-0.9
2020	-4.5	-7.4	-4.1	-10.1	-4.3	-8.9	-5.7	-8.4	-6.2	-5.4
2020 Q1	-0.7	-0.4	1.1	-2.0	1.5	0.5	-0.2	-1.0	-1.9	-1.1
Q2	-1.6	-2.4	-2.1	-5.1	-1.2	-2.8	-1.9	-4.7	-3.4	-3.2
Q3	-3.4	-4.1	-2.7	-7.0	-2.5	-4.7	-4.2	-5.8	-4.5	-4.2
Q4	-4.5	-7.4	-4.1	-10.1	-4.3	-8.9	-5.7	-8.4	-6.2	-5.4
	Government debt									
2017	39.0	39.1	22.3	48.5	56.9	78.5	126.1	74.1	51.5	61.2
2018	37.1	33.7	21.0	44.8	52.4	74.0	121.5	70.3	49.6	59.7
2019	37.0	35.9	22.0	42.0	48.7	70.5	116.8	65.6	48.2	59.5
2020	43.5	47.3	24.9	54.3	54.5	83.9	133.6	80.8	60.6	69.2
2020 Q1	37.1	33.0	22.2	43.3	49.5	73.2	119.2	68.9	49.5	64.4
Q2	43.0	41.4	23.9	50.1	55.2	82.4	125.7	78.2	60.1	68.7
Q3	44.7	45.9	26.0	52.6	55.2	78.9	130.5	78.4	60.5	67.0
Q4	43.5	47.3	24.9	54.3	54.5	83.9	133.6	80.8	60.6	69.2

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