



BANK OF FINLAND BULLETIN

BANK OF FINLAND ARTICLES ON THE ECONOMY

Bank of Finland Bulletin 4 • 2021

Publication dates 16 Sep and 12 Oct 2021.

Vol. 95

The Bank of Finland Bulletin is published five times in 2021.

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Charts and tables

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Articles

were prepared in the Monetary Policy and Research Department under the supervision of Hanna Freystätter.

Translated and edited

by the Bank of Finland Language Services and Communications

Authors

Hanna Freystätter

Juhana Hukkinen

Pasi Ikonen

Miia Janatuinen

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ISSN 1456-5870 (online)

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EDITORIAL

Monetary policy supporting sustainable economic recovery and a brighter outlook for inflation

16 Sep 2021 – Bank of Finland Bulletin 4/2021 – International economy, Monetary policy

Growth in the euro area economy is expected to be brisk this year and in 2022 as economies are opened up, strong support is provided by economic policies and the global economy recovers. The rebound from an exceptionally severe and sudden crisis has been quick. The COVID-19 pandemic is not over yet though, and the spread of the Delta variant appears to have dampened the upward economic trend over the summer. But in developed economies with a high vaccination coverage the impact is not expected to be prolonged or of great significance.



Inflation slowed during the early phase of the COVID-19 crisis. In the current year, however, it has been rising. This has broadly been the case across the world's developed economies and especially in the United States. Inflation has risen in the euro area, too, reaching 3% in August. Factors contributing to the rise in inflation are the low price level of a year ago, which is the reference point for the comparison, and the increase in prices of raw materials, as well as various pandemic-related production bottlenecks. These are expected to be largely temporary factors.

Attaining the objective of price stability would be easier if the rising rate of inflation seen recently were not to prove temporary overall, but instead if, as the economy picks up, there were to be an increase in inflationary pressures in comparison with the pre-pandemic period. This would require a robust level of aggregate demand in the economy, underpinned by monetary policy.

To help combat inflation levels that are too low the European Central Bank has a new monetary policy strategy, which we approved in the ECB's Governing Council in July. The most significant change in the monetary policy strategy is the newly defined inflation target together with how it is to be applied in decision-making.

Under the new strategy, price stability can best be maintained by aiming for a symmetric 2% inflation target over the medium term. Inflation may also be moderately above the target for a transitory period. The new strategy supports the aim that inflation will not return to the excessively low level at which it had long remained. The symmetric inflation target defined for the medium term will also better allow decision-making to emphasise sustainable growth and full employment, though without compromising price stability.

Based on this new strategy the monetary policy stance continues to be strongly accommodative. This has, additionally, now allowed both fiscal and monetary policy to provide a stimulus to recovery in all countries of the euro area, at a time when their economies are still feeling the weight of the COVID-19 crisis. From the very start of the crisis, considerable amounts of public funding have been used in the euro area not only for healthcare but also for supporting those households and businesses which have found themselves in difficulty. Measures taken have also supported the economy in general.

The growth in public spending to tackle the pandemic and its effects has been justified. But the consequences of major deficits should also be understood. General government debt in the euro countries has increased, and this represents a risk for the sustainable development of the economy. Even though a rise in interest rates is not yet in sight, we will nevertheless have to face it one day. This should be considered in budgetary planning by all the euro area countries.

Good use should be made of the space opened up by a strongly accommodative monetary policy and positive cyclical conditions to engage in reforms that encourage profitable activity and employment in businesses. This applies to the entire euro area, including Finland. When the economy is growing and the labour market performing well, even reforms which are difficult but unavoidable become less painful.

Helsinki 15 September 2021

Olli Rehn
Governor of the Bank of Finland

Tags

[COVID-19](#), [COVID-19 pandemic](#), [inflation](#), [monetary policy](#), [monetary policy strategy](#), [price stability](#)

International economy making swift recovery from COVID-19 crisis, but there's still some way to go

Today – Bank of Finland Bulletin 4/2021 – International economy

The international economy is recovering from the COVID-19 crisis. Recovery is underpinned by the rising vaccination coverage and accommodative monetary policies. The steep contraction in the international economy last year is now giving way to growth of 6% for 2021. In the euro area, the economy will close the COVID-19 gap by the end of the year, posting growth of 5% for 2021. The euro area's recovery is nevertheless still in progress and remains reliant on economic policy support. Furthermore, the Delta variant of coronavirus brings uncertainty to the euro area's short-term outlook. As the vaccination coverage increases and restrictive measures become more targeted, the spread of the virus presents a lower health risk and the economic impacts will become less significant than before. Nevertheless, for some time to come the outlook will be overshadowed by the low vaccination coverage in developing countries and the threat of new variants of the virus.



The crisis was exceptionally sudden and severe, but the recovery has also been swift. According to the latest forecasts, the euro area and the United States are recovering towards their pre-crisis growth track at a pace significantly faster than was the case after the global financial crisis. Current estimates indicate that this level will be reached in the United States in 2022 and in the euro area by the end of the same year. Therefore, in the euro area and especially in the United States, post-pandemic output is not set to remain persistently and substantially below the level anticipated prior to the crisis. This means the recovery will differ significantly from what happened after the global financial crisis.

This exceptional COVID-19 health crisis has led to sharp changes in the economy's performance,

a contraction in private consumption, and variability in recovery rates. The impact on private consumption has been substantial, and this has been accompanied by a rise in household savings rates. Private consumption has also been recovering more slowly than investment. Unlike the financial crisis, the service sector has been particularly adversely affected by the COVID-19 crisis, although the effects vary among the different segments of the sector. Thanks to the support measures undertaken, the number of bankruptcies has nevertheless so far been very moderate, with the exception of the worst hit sectors. Employment is also climbing faster than after the financial crisis, but the recovery in the euro area labour market is still in progress.

The forceful economic policy measures taken during the pandemic would seem to have mitigated the longer term economic scarring that was initially feared. The use of non-standard monetary policy measures has ensured that financing conditions have remained accommodative. This has also expanded central banks' balance sheets. With the accommodative financing environment and with the support measures pursued by different countries, the ability of businesses and households to obtain credit has improved, facilitating the euro area's recovery from the crisis. During the pandemic, general government debt has grown by significantly more than the average for crisis situations, and reducing this debt will be a long-term challenge.

Inflation expectations weakened at the start of the crisis, but now, as the economy is opening up, inflation has temporarily gathered momentum, even rising more quickly than anticipated, and expectations of future inflation have grown somewhat, too. A rise in raw material prices and problems with the availability of production inputs have fuelled inflation worldwide, but there are signs of this levelling off. The spike in inflation stemming from the reopening and recovery of the economy is expected to be largely temporary. The acceleration in the inflation rate in the euro area and the United States is largely attributable to particular sub-categories, such as energy and fuel prices. Underlying inflation has risen exceptionally rapidly in the United States, climbing to about 3.5% according to the measure of underlying inflation monitored by the Federal Reserve; in the euro area the rise has been more moderate. Euro area inflation climbed to 3%, and underlying inflation to 1.6%, in August.

The inflation rate in the euro area is expected to slow next year as the exceptional effects of the COVID-19 crisis on prices become more muted. Although euro area inflation forecasts have recently been revised upwards, inflation is set to remain below 2% in 2022–2023. Over the medium term, the euro area inflation rate will still be dampened by a number of factors, including economic slack and moderate wage pressures. In addition, long-term inflation expectations in the euro area remain below the inflation target of the European Central Bank (ECB).

Although the euro area still has some way to go towards the inflation target, the prospects for a sustainable return to a rate of 2% in the medium term have improved as a result of the ongoing recovery in the economy. This is also supported by the ECB's new monetary policy strategy published by the Governing Council in July. The strategy anchors euro area inflation expectations more firmly in the symmetric 2% target.

International economy recovering from pandemic crisis, bolstered by increasing vaccination coverage and support from economic policy

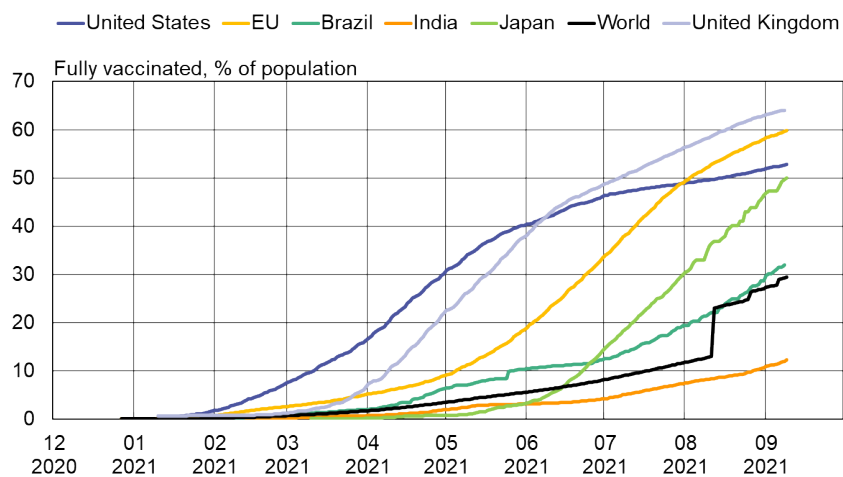
The international economy is making a recovery from the sudden and severe economic crisis

brought about by the COVID-19 pandemic, but the pandemic is still affecting the economic outlook. As vaccination coverage increases, the spread of the virus presents a lower health risk and the economic impacts are less significant than before. Nevertheless, for some time to come the outlook will be overshadowed by the low vaccination coverage in developing countries and the threat of new variants of the virus (Chart 1).

The COVID-19 crisis has led to sharper economic fluctuations than in previous crises, and the recovery has been uneven among different countries and sectors. Private consumption has also fallen by an exceptional amount. There is still uncertainty over the longer term effects of the pandemic on output and on the structure of the economy. But despite what was feared in the early stages of the crisis, the forceful economic policy measures taken are expected to mitigate the longer term economic scarring considerably, especially in the advanced economies. Nevertheless, general government debt has grown and central bank balance sheets have expanded as a consequence of the necessary support measures taken. As the recovery progresses, it will be essential to ensure a phased dismantling, at a fitting scale and with appropriate timing, of the exceptionally expansionary economic policy.

Chart 1.

Increase in vaccination coverage is easing the health crisis



Source: Our World in Data.
eurojatalous.fi / bofbulletin.fi
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The international economy has continued to make a rapid recovery from the COVID-19 crisis, but the outlook, particularly in developing economies, is overshadowed by the increase in infections due to the Delta variant. In the advanced economies, vaccination roll-outs have proceeded swiftly. The proportion of the population that is fully vaccinated in the United Kingdom and the European Union has reached around 60% or more. In the United States, and in Japan, too, the corresponding figure is more than 50%, but worldwide it is only about 30%. In the advanced economies, the rising vaccination coverage and the lifting of restrictions have improved the outlook especially for service sectors.

The international economy is forecast to grow this year by approximately 6%; the corresponding growth figures for the United States and the euro area are about 6% and 5%, respectively (Table 1). Nevertheless, there is still uncertainty over the outlook, as the health crisis has not yet receded.

The main risks are a prolonged presence of production bottlenecks, the emergence of new coronavirus variants, the effectiveness of medical solutions, the performance of recovery packages, and the effective timing and implementation of the cessation of pandemic-related support arrangements. However, the economic outlook could become brighter than at present if households decide to engage in a spending spree, particularly using savings accumulated during the pandemic, thereby producing a rise in private consumption.

Table 1.

Steep contraction in international economy in 2020, giving way to 6% growth in 2021

| Global GDP, % growth | Date | 2020 | 2021 | 2022 | 2023 |
|----------------------------|------------------------|------|--------------|--------------|--------------|
| ECB* | Sep 2021 (Jun 2021) | -2.3 | 6.3 (6.2) | 4.5 (4.2) | 3.7 (3.7) |
| IMF | Jul 2021 (Apr 2021) | -3.2 | 6.0 (6.0) | 4.9 (4.4) | - |
| OECD | May 2021 (Mar 2021) | -3.5 | 5.8 (5.6) | 4.4 (4.0) | - |
| European Commission | May 2021 (Nov 2020) | -3.4 | 5.6 (4.6) | 4.3 (3.6) | - |
| Consensus | Aug 2021 (Jul 2021) | -3.3 | 5.8 (5.9) | 4.4 (4.4) | - |

*Global GDP, excl. euro area.

Previous forecast in brackets.

Sources: Consensus Economics, IMF, OECD, ECB/Eurosystem and European Commission.

The recovery in the euro area economy has gathered pace, but the number of people in work is still more than two million fewer than the pre-pandemic level. The economy grew by 2.2% in the second quarter of 2021. In the euro area, confidence has remained strong and the economic recovery appears to be continuing. However, the Delta variant may delay the lifting of restrictions and slow the recovery. According to the ECB's September forecast, output is expected to exceed pre-pandemic levels by the end of the year (Table 2). The financing conditions for businesses, households and the public sector have remained favourable, which is essential for the continued recovery in the economy.

Table 2.

Euro area economy closes COVID-19 gap with 5% growth in 2021

| Euro area GDP, % growth | Date | 2020 | 2021 | 2022 | 2023 |
|----------------------------|------------------------|------|--------------|--------------|--------------|
| ECB | Sep 2021 (Jun 2021) | -6.5 | 5.0 (4.6) | 4.6 (4.7) | 2.1 (2.1) |
| European Commission | Jul 2021 (May 2021) | -6.5 | 4.8 (4.3) | 4.5 (4.4) | - |
| IMF | Jul 2021 (Apr 2021) | -6.5 | 4.6 (4.4) | 4.3 (3.8) | - |
| OECD | May 2021 (Mar 2021) | -6.7 | 4.3 (3.9) | 4.4 (3.8) | - |
| Consensus | Aug 2021 (Jul 2021) | -6.5 | 4.8 (4.6) | 4.4 (4.4) | - |

Previous forecast in brackets.

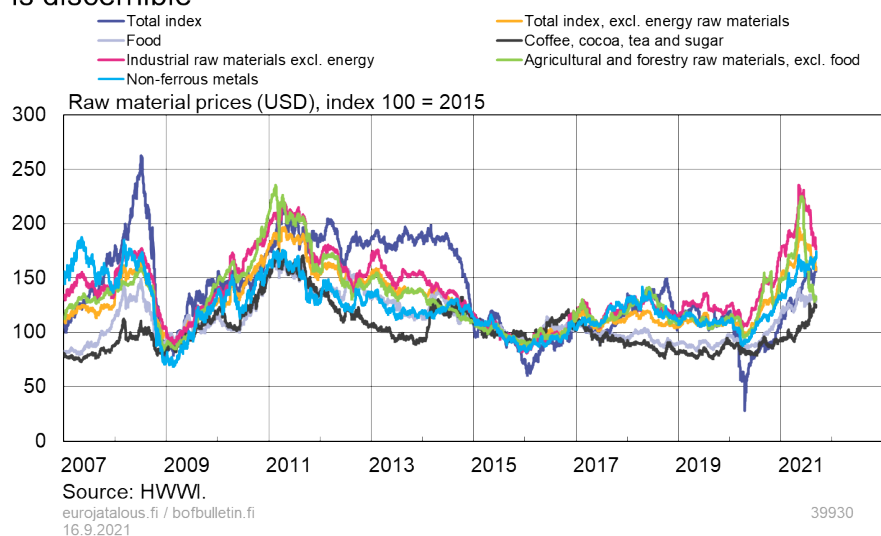
Sources: Consensus Economics, IMF, OECD, ECB/Eurosystem and European Commission.

Inflation accelerated globally during recovery phase

Following the start of the COVID-19 crisis the outlook for prices also deteriorated rapidly. Inflation in the euro area, for example, turned negative from August to December 2020. Now, with the gradual opening of the economy, prices, too, have risen, driving up inflation and adding to inflation expectations. Inflation has been temporarily boosted by the ‘base effect’ of the lower price level that prevailed in the reference period a year earlier, and by the rise in raw material prices and the production bottlenecks that have occurred as a consequence of lockdowns and subsequent reopening (Chart 2). Inflation has increased more quickly than anticipated, but the pace is expected to level off in the euro area next year, staying below the 2% target.

Chart 2.

Recovery has pushed up raw material prices, but a levelling off is discernible



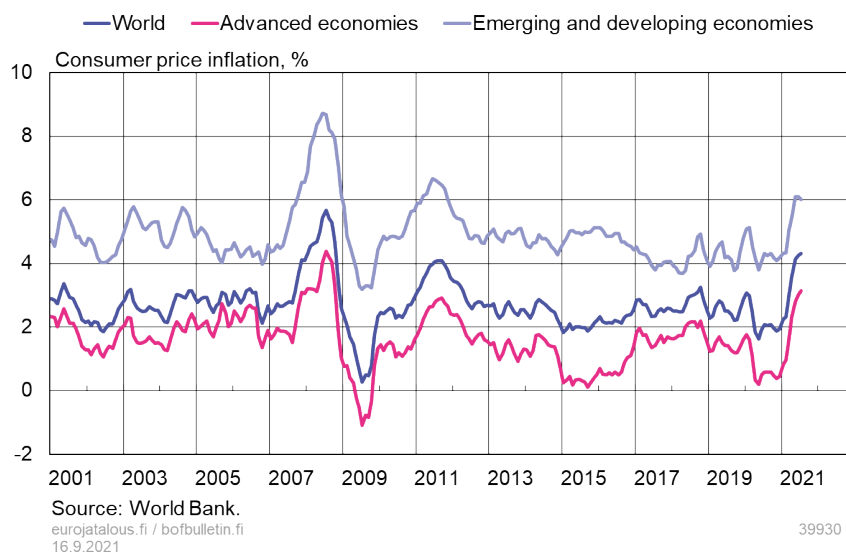
The global inflation rate has gained momentum to approximately 4%, which is about the same as the 2011 rate following the financial crisis (Chart 3). Contributing to this rise in inflation have been the increase in raw material prices and problems with the availability of production components, such as semiconductors in the electronics industry, but there are signs that inflation will level off. Euro area headline inflation in August was 3%; as in the United States and the United Kingdom, this rise in inflation has been fuelled by temporary factors (e.g. the rise in raw material prices, production bottlenecks and post-crisis pricing adjustments for certain items).

Over the medium term, US inflation is forecast to return to 2% or slightly above, and UK inflation to 2%. The medium-term outlook for the euro area is more muted. The likelihood of a euro area medium-term inflation rate of less than 2% is reinforced by the lacklustre pace of underlying inflation, the slack in the economy, the continued moderation in pay settlements and the subdued inflation expectations in relation to the inflation target. Nevertheless, although the euro area still has some way to go towards achieving the inflation target, the prospects for its sustainable return to a rate of 2% in the medium term have improved as a result of the ongoing recovery in the economy. This is also supported by the ECB's new monetary policy strategy published by the Governing Council in July. The strategy anchors euro area inflation expectations more firmly in the symmetric 2% target (see [ECB revised its monetary policy strategy – what's changed?](#)).

The most significant change in the ECB's monetary policy strategy is the newly defined inflation target, together with how it is to be applied in decision-making in the future. Under the new strategy, price stability can best be maintained by aiming for a 2% inflation target over the medium term. The inflation target is symmetric: the Governing Council considers that both negative and positive deviations from this 2% target are equally undesirable. The symmetric inflation target provides an anchor for inflation expectations, which is essential for maintaining price stability. The new strategy will help to ensure that the economy does not get stuck for long in a position where inflation is too low. Inflation may also be moderately above the target for a transitory period. Following the revision of the strategy, the Governing Council also took a decision concerning forward guidance on interest rates,^[1] which it confirmed at its September meeting.

Chart 3.

Consumer price inflation has accelerated globally



Crisis recovery still needs support from economic policy

The task of monetary policy in this type of crisis situation is to maintain financing conditions that are favourable to recovery for a sufficiently long period. In this way, monetary policy will foster growth and gradually drive up inflation especially in the euro area, where it has long been excessively low in relation to the price stability objective. The economic crisis caused by the pandemic has been exceptional in that the measures taken to restrict the spread of the disease and the caution exercised by the general public have together directly curbed production in many sectors, especially private services. Although monetary policy is unable to prevent such effects, it can nonetheless help businesses and households through the worst phase of the crisis and provide support for the subsequent recovery in the economy. At its September meeting, the Governing Council of the ECB decided to continue with the stance and magnitude of its strongly accommodative monetary policy. The Governing Council took the view that, thanks to a faint improvement in the medium-term inflation outlook, favourable financing conditions can be maintained even if net purchases under the pandemic emergency purchase programme (PEPP) were to be made at a moderately slower pace in the final quarter of the year. The revised forward guidance on key ECB interest rates along with other monetary policy measures will foster recovery and the sustainable return of inflation to 2%, in line with the target.

During the present crisis it has been important that the stimulus measures taken in the euro area and elsewhere through monetary policy and through fiscal policy have served to support each other. The need to assist households and businesses in the pandemic has compelled countries around the world to take on substantial amounts of additional debt. Without this, businesses

1. Based on its symmetric 2% target and its monetary policy strategy, the ECB Governing Council expects policy rates to remain at or below the present level until inflation rises durably to 2% well ahead of the end of the projection horizon and the Governing Council considers the progress in underlying inflation to be sufficiently advanced to be consistent with inflation stabilizing at 2% over the medium term. Inflation may also be moderately above the target for a transitory period.

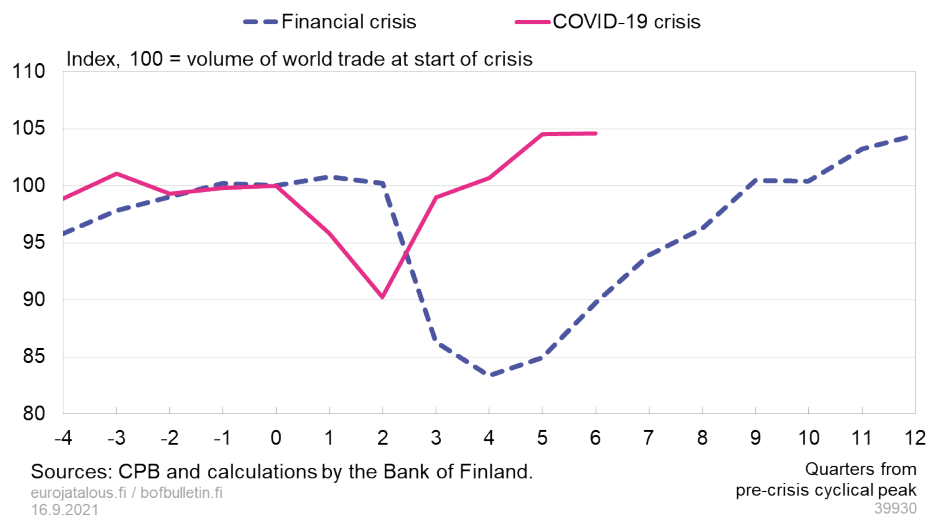
would have collapsed and jobs been lost at a scale quite different to that which has transpired. The long-term economic impact of the pandemic will become clear only when it is possible to gradually abandon the substantial support measures and when economic policy can be normalised.

The COVID-19 crisis struck suddenly and globally

The nature of the COVID-19 crisis differs from other economic crises of recent decades in that its source was external to the economy. The recovery phase and associated challenges consequently include elements that are new. The crisis struck suddenly and globally, with a collapse of the world trade in goods in the first quarter of 2020 (Chart 4).^[2] The global goods trade shrank in the early phase of the crisis by as much as around 10% from its pre-crisis level. However, this contraction was less severe than in the financial crisis of 2008–2009 (more than 15%).^[3] In the present crisis, world trade also began to recover distinctly more quickly than after the financial crisis. This time, industrial plants have managed to restart their operations around the world once the pandemic-related restrictive measures were refocused in a more targeted way than during the early stages of the crisis. Financing conditions have remained accommodative, which has also supported the recovery. The swift recovery in the economies of China and the United States through substantial stimulus measures also contributed to the early recovery of world trade.

Chart 4.

World trade in goods fell by less than in the financial crisis and recovered more quickly



2. In the chart, the zero point selected for each crisis is the final quarter before GDP turned onto a declining path, i.e. the pre-downturn or pre-recession peak in output.

3. It should nevertheless be noted that the collapse which occurred in the financial crisis could have been attributable not only to the crisis itself but to the concurrent effects of structural changes. See e.g. Cabrillac, B. et al (2016) Understanding the weakness in global trade-What is the new normal?, ECB Occasional Paper No. 178.

Recovery in euro area GDP more rapid than after the financial crisis

The COVID-19 crisis has been exceptionally severe and sudden in the euro area, but the recovery in gross domestic product (GDP) is also proving more rapid than after the financial crisis (Chart 5). Following the financial crisis the euro area economy did not return to its pre-crisis growth track; instead, the crisis left a deep and prolonged imprint on GDP.

Now, after the COVID-19 crisis, euro area GDP is forecast to recover to almost its earlier growth track by the end of 2022. This would mean that GDP will not remain clearly and persistently below the growth track feared prior to the pandemic, in contrast to what occurred after the financial crisis.^[4] The pandemic would not then have led to a permanent slowing of the rate of GDP growth.

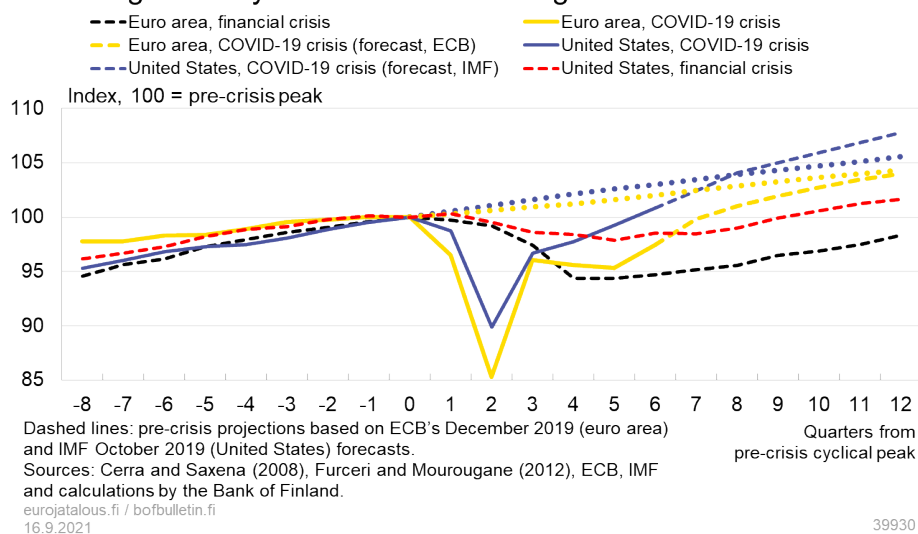
In the United States the recovery in the economy has been faster than in the euro area. The country's GDP returned to its pre-crisis level in the second quarter of 2021, when euro area GDP was still 2.5% below its pre-crisis peak. The IMF's updated forecast in July indicates that during 2022 the United States' GDP is expected to reach or even exceed the level forecast before the pandemic. Nevertheless, uncertainty surrounds the long-term effects of the crisis presented in these forecasts, and significant long-term effects of the pandemic are still possible. The factors determining the long-term effects of economic crises include the recovery in total factor productivity, the extent to which the labour market recovers and, especially in the case of financial crises, the pace of recovery in capital stock and in investment.^[5]

Chart 5.

4. The IMF assesses that the international economy will experience significant, lasting adverse effects on the level of total output, though these effects are likely to be smaller than what was seen during the global financial crisis. The extent of permanent damage will also vary from one country to another and is likely to be greater in emerging economies than in advanced economies. See IMF WEO (2021) Managing Divergent Recoveries, Chapter 2, April 2021.

5. Barrett, P., Das, S., Magistretti, G., Pugacheva, E., Wingender, P. (2021) After-Effects of the COVID-19 Pandemic: Prospects for Medium-Term Economic Damage, IMF Working Paper No. /21/203.

Euro area and United States will recover towards pre-crisis growth levels significantly faster than after the global financial crisis



The initial phase of the COVID-19 crisis does not resemble past economic crises

The COVID crisis can be compared not only with the financial crisis but also with a large number of past crises. Barrett et al. (2021) and Cerra & Saxena (2008) have noted that, in the past, economic crises have typically been associated with significant and persistent negative impacts. On average, the permanent impact of a crisis on GDP has ranged from approximately -4 to -16% .^[6] In the past, the effects of an economic crisis have been aggravated especially by the simultaneous onset of a banking crisis. On the other hand, economies have been found to recover faster from civil wars than from other crises. For example, after a typical crisis, productivity growth is weakened by the reallocation of resources to less productive sectors. However, with the COVID crisis, it is still too early to assess the effects of sectoral reallocation of resources on aggregate productivity. Through appropriately targeted policy measures, it is possible to facilitate the effective reallocation of resources^[7].

Chart 6 shows the development of GDP in the euro area and the United States at the time of the financial crisis, during the COVID-19 crisis and in economic crises on average. The chart also shows the impact range for most crises (80%) based on Cerra & Saxena (2008).^[8]

At the beginning of the COVID crisis, the decline in GDP was significantly more sudden and sharper than in previous economic crises. Recovery from the crisis began rapidly both in the euro

6. Cerra, V., Saxena, S. C. (2008) Growth dynamics: the myth of economic recovery, *American Economic Review*, 98(1), 439–57.

7. See Furceri, D., Celik, S. K., Jalles, J., T., Koloskova, K. (2021) Recessions and total factor productivity: Evidence from sectoral data, *Economic Modelling*, Volume 94, pages 130–138.

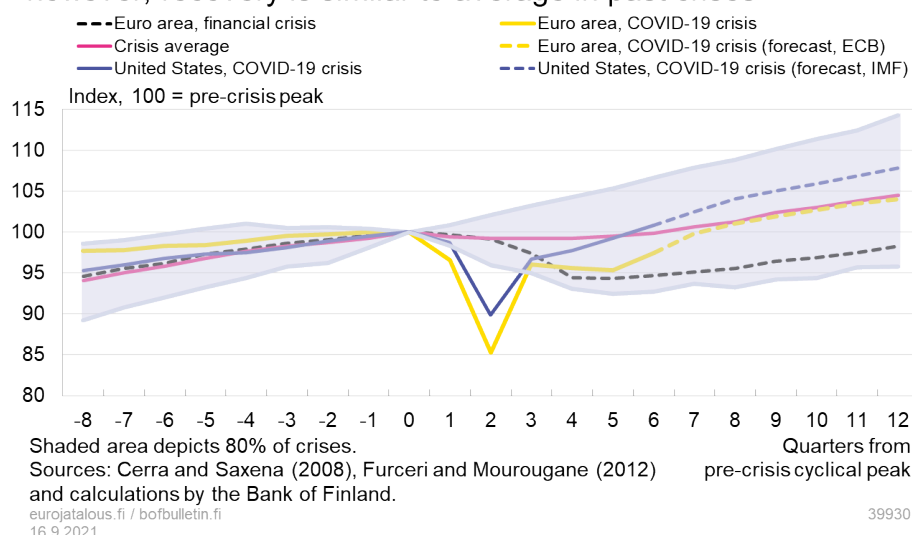
8. The data consists of 119 economic crises in OECD countries before the COVID-19 crisis, based on the data used in Cerra & Saxena (2008) and Furceri & Mourougane (2012), supplemented with data from the latest economic crises. The last quarter before GDP turned down has been chosen as the starting point for each crisis, i.e. the GDP peak preceding the recession or depression.

area and in the United States, supported by fiscal and monetary policy measures. GDP began to recover as early as the third quarter of 2020, but the recovery reversed due to the containment measures imposed to curb new waves of the virus, particularly in the euro area. The recovery strengthened again in the second quarter of 2021 as vaccination coverage increased and containment measures were relaxed. What also helped was the improved targeting of the containment measures and how society adapted to the restrictions, which reduced their adverse effects.

But while recovery has been better than feared, it is still under way, and euro area GDP is still recovering considerably more weakly than in economic crises on average (Chart 6).^[9] However, according to the baseline scenario in the ECB’s September projections, GDP will reach pre-crisis levels at the end of 2021 and recover close to an average post-economic crisis path before the end of 2022. So far, the COVID crisis has caused neither significant problems in financial intermeditation nor a widespread bankruptcy wave among businesses. However, as a result of the crisis, corporate indebtedness has increased in all major countries, which increases long-term downside risks to recovery from the current crisis.

Chart 6.

COVID crisis has been exceptionally sudden and deep – however, recovery is similar to average in past crises



COVID crisis hit private consumption exceptionally hard, investments recovering faster

In a typical economic crisis, private consumption follows a fairly steady path, like it did in the euro area during the financial crisis.^[10] With the COVID-19 crisis, however, private consumption

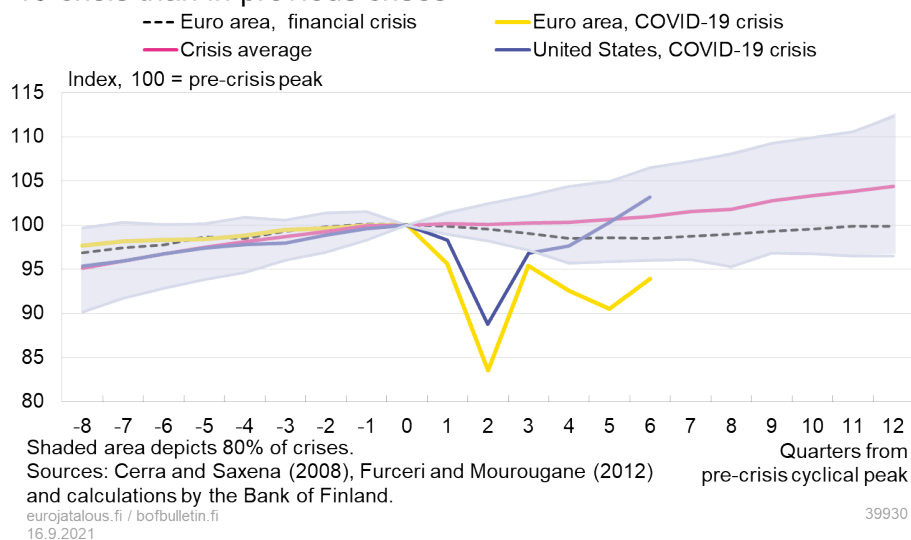
9. When forecasting the recovery from the COVID-19 crisis, it is worth noting that economic growth in the euro area had already slowed slightly pre-COVID, especially due to the economic slowdown caused by Brexit and the trade war between China and the United States. Economic growth in the euro area before the COVID crisis was, in fact, considerably slower than before the global financial crisis, when the economy was essentially overheated.

10. For example, Kose, M; Sugawara, N; Terrones, M (2020) Global Recessions, Policy Research Working Paper No. 9172, World Bank, Washington, DC.

collapsed due to uncertainty, restrictions, health-related fears and people's reduced mobility (Chart 7). In the second quarter of 2021, private consumption in the euro area was still a good 5% below pre-pandemic levels, when, on average, economic crises have had virtually no post-crisis effects on private consumption.

Chart 7.

The collapse of private consumption was deeper in the COVID-19 crisis than in previous crises

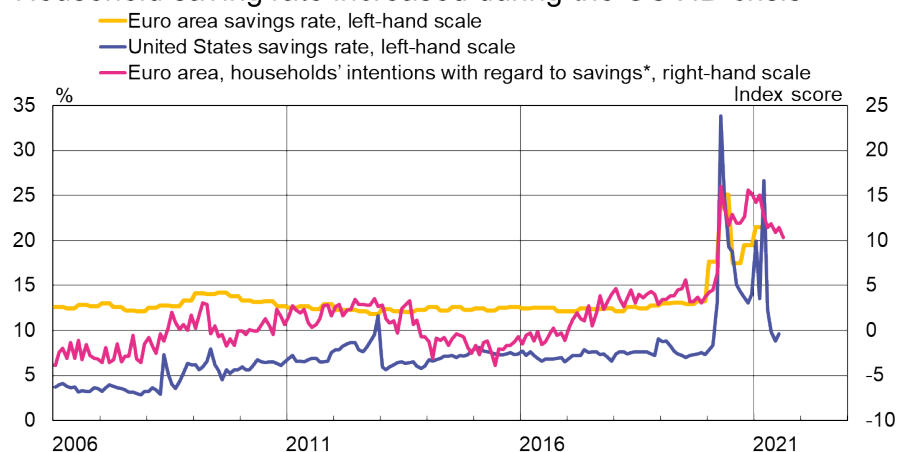


In the United States, private consumption has received considerable support, for example through rounds of stimulus payments to households, even to the extent that US household income levels have increased during the pandemic. These measures, combined with faster normalisation of mobility than in the euro area, have supported a strong recovery of private consumption in the United States from the deep slump caused by COVID-19.

Both in the euro area and in the United States, the savings rate increased markedly in the wake of the crisis due to precautionary saving, limited consumption possibilities and policy measures supporting household income growth. In the United States, support measures notably increased household disposable income, whereas in the euro area, growth in disposable income somewhat slowed. In the United States, the household savings rate began to normalise in May 2021, reflecting a strong recovery in private consumption. Indicators show that in the euro area, savings rates are still relatively high (Chart 8). Due to the elevated savings rates, households have accumulated wealth which, upon release, would support recovery. However, the intensity at which these pent-up savings can be released is limited by several factors. Firstly, savings have been accumulated unevenly and mostly among the high-income households. Contrarily, income levels may have declined among low-income earners, especially among those working in services. Typically, marginal propensity to consume is higher among low-income earners than among the high-income population. Secondly, accumulated savings can also be used to repay debts. Thirdly, household income levels have been maintained through massive public subsidies. After the support measures are wound down, growth in disposable income may be sluggish. The exceptional effects of the COVID crisis on household saving behaviour also make it difficult to forecast the recovery of private consumption, and consequently, GDP.

Chart 8.

Household saving rate increased during the COVID crisis



* This variable has been calculated as the difference between households' expectations regarding savings and the financial situation over the next 12 months.

Sources: BEA, Eurostat, DG ECFIN and calculations by the Bank of Finland.

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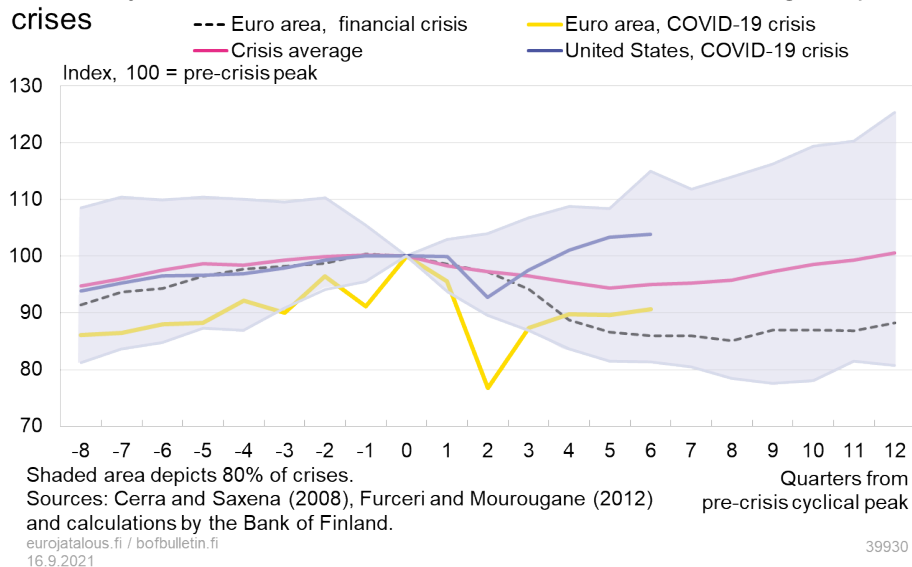
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Crises typically have a stronger impact on investment than on private consumption. Right after the outbreak of the COVID crisis, investment declined even more significantly than in a typical crisis (Chart 9). However, private investment began to recover significantly faster than private consumption, underpinned by strengthening export demand and growth in industrial output. In the COVID crisis, it appears that the persistent investment recession that took place after the financial crisis is being avoided, although growth in private investment has been slightly weaker than in the history of economic crises in general. Meanwhile in the United States, growth in private investment has been exceptionally strong compared with previous economic crises.

Robust economic policy support measures have been essential to the development of investments, as they have, for instance, reduced uncertainty related to the outlook and maintained companies' access to finance, thus preventing large-scale financial market disturbances. Fixed investments will directly increase future production capacity, and their strong recovery in the euro area will also reduce the risk of long-term adverse effects from the crisis. The recovery of investments will be supported by continued favourable financing conditions.

Chart 9.

Recovery of investments in the euro area close to average in past crises



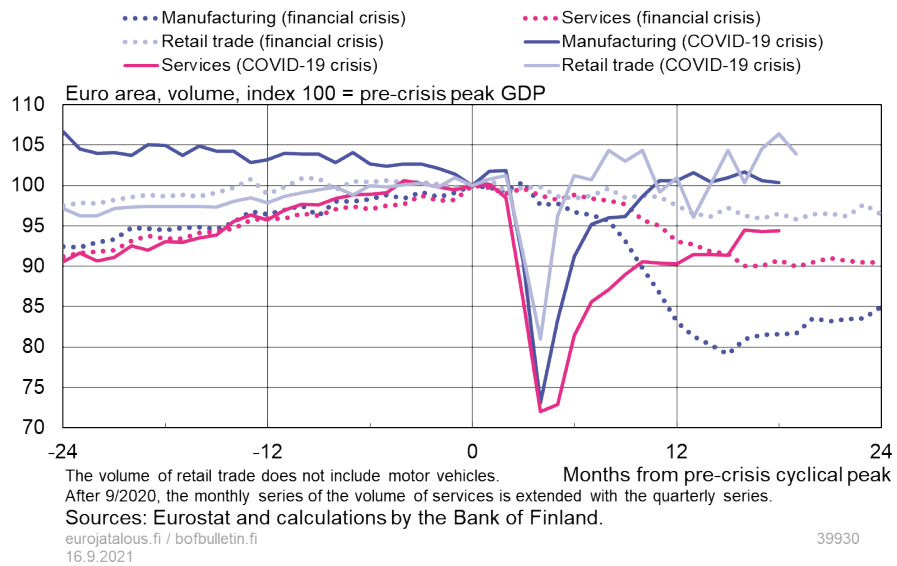
Unlike the global financial crisis, the COVID crisis has hit services exceptionally hard

In a sectoral comparison, the COVID-19 crisis is clearly different from past crises, such as the global financial crisis. In the financial crisis, manufacturing was hit the hardest, both in the euro area and elsewhere, but in the early stages of the COVID crisis, services and retail trade also suffered a notable impact (Chart 10). In contrast to the financial crisis, the rebound in retail trade and manufacturing has been strong, and output volumes have already recovered close to pre-crisis levels. On the other hand, the containment measures imposed to prevent the spread of the virus and consumer caution are still reflected in the weak output of the service sector. During the COVID crisis, consumption shifted from services to goods.^[11]

Chart 10.

11. The IMF (2021) and Rungcharoenkitkul (2021) have also noted that recovery is slower in services than in other sectors. See IMF WEO (2021) Managing Divergent Recoveries, chapter 1, April 2021, and Rungcharoenkitkul, P. (2021) Macroeconomic effects of Covid-19: a mid-term review, BIS Working Papers No. 959, August 2021.

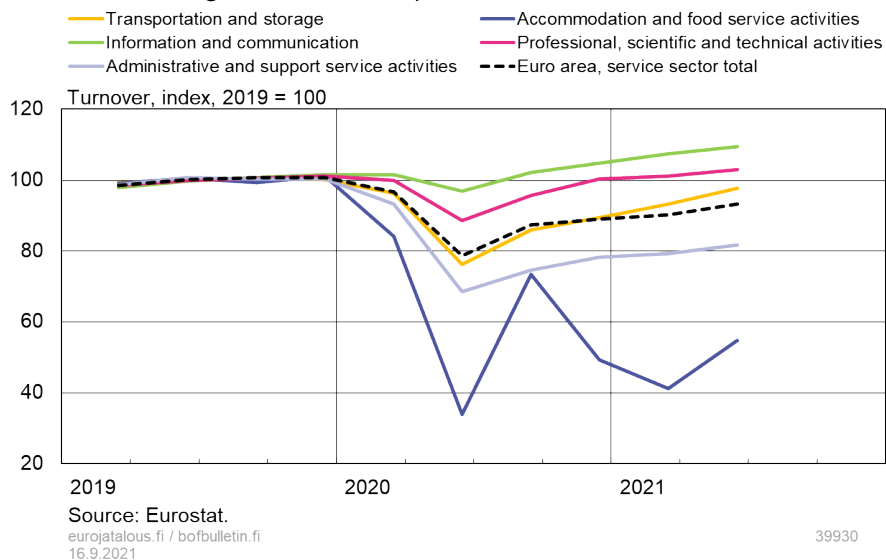
COVID crisis hit particularly services



The differences are significant also within the service sector. The crisis has had a particularly noticeable impact on accommodation and food services (Chart 11), whereas in other sectors, such as information and communication services, the effects have been only minor. As the effects of the COVID crisis differ from past crises, its long-term effects may also be different.

Chart 11.

Sectoral divergence in the impact of COVID on turnover



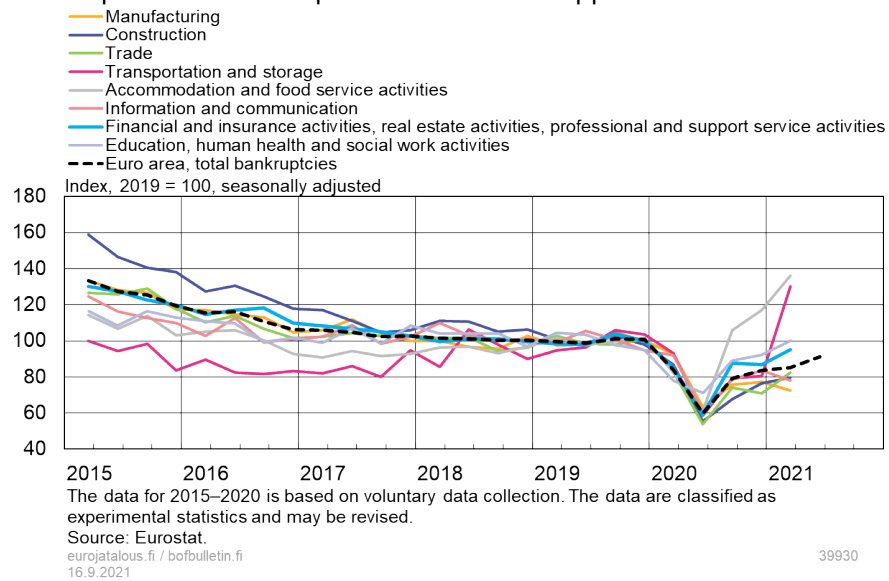
Number of bankruptcies has remained moderate except in sectors most affected by the crisis

In addition to damage from subdued investment, long-term damage may occur in a crisis if the capital stock is destroyed due to bankruptcies, closures and dampened new business entries, i.e. business dynamics. The number of bankruptcies varies significantly between sectors, as the

number of bankruptcies in the euro area has increased sharply in the sectors most affected by the crisis, particularly in accommodation and catering. While some sectors have suffered considerable difficulties, data from the second quarter of 2021 (Chart 12) shows that so far, there has been no large wave of bankruptcies. Businesses have been supported and bankruptcies prevented by favourable financial conditions, strong public sector support and amendments to the Bankruptcy Act. These explain the decline in bankruptcies during the crisis. Some of the relaxations made to the bankruptcy legislation are still in force. Therefore, the final effects of the COVID crisis on business dynamics will not be seen until after the exceptional measures are wound down. Registrations of new companies have bounced back strongly from the collapse in the second quarter of 2020.

Chart 12.

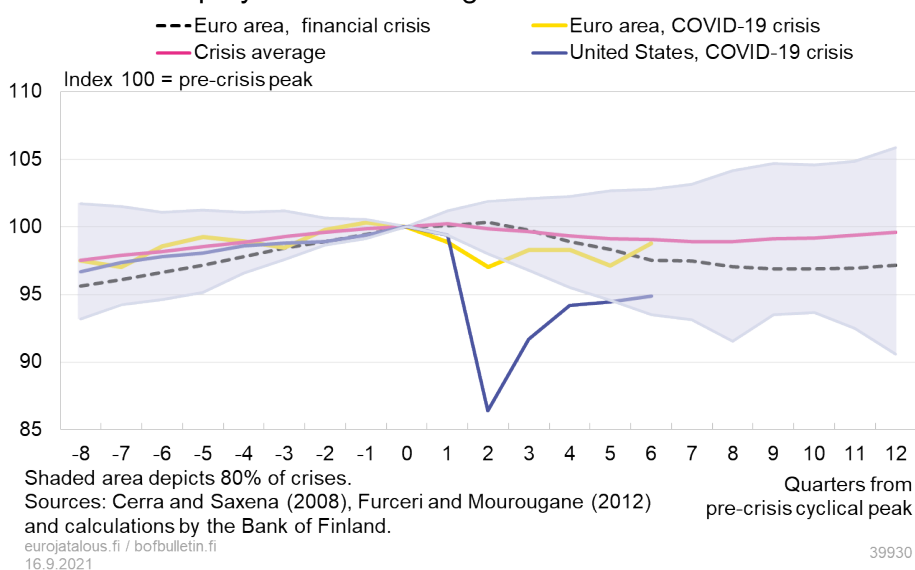
Bankruptcies at an exceptional low due to support measures



Moreover, employment trends do not look as gloomy as they did after the financial crisis, and employment in the euro area has started to grow since the initial collapse (Chart 13). In the second quarter of 2021, employment was around 1.5% below the pre-crisis peak. It appears that the sharp decline in employment typical of past crises has been avoided through the support measures, and the number of employed people has already recovered close to typical crisis figures. However, the recovery of the labour market is still under way, and the number of employed persons in the euro area in the second quarter of 2021 was 2.5 million less than before the COVID crisis.

Chart 13.

Euro area employment recovering better than after financial crisis



Divergent recoveries in the euro area

There has been significant variation in the economic impact of the COVID-19 crisis on euro area countries' economies. For example, in Italy and Spain, where the service-intensive tourism sector is of particular importance for the national economy,^[12] income losses caused by the containment measures led to a larger drop in GDP than in other countries (Chart 14). The varying designs of the containment measures, their effectiveness and the regional variation in the intensity of the pandemic have also affected economic developments. Of the large euro area countries, in Spain in particular, total output remains considerably below the pre-pandemic growth trend. Differences in economic structures, such as labour market dynamics, also contribute to the divergent recovery rates. The protracted crisis is weakening the recovery, particularly in the service sector. Nonetheless, financial conditions are still accommodative in all Member States, and fiscal policy measures have also helped households and businesses manage through the crisis. However, the size of the fiscal support in proportion to the impact of the crisis differs across countries,^[13] and the EU has sought to reduce this divergence through a number of Union-level initiatives.^[14]

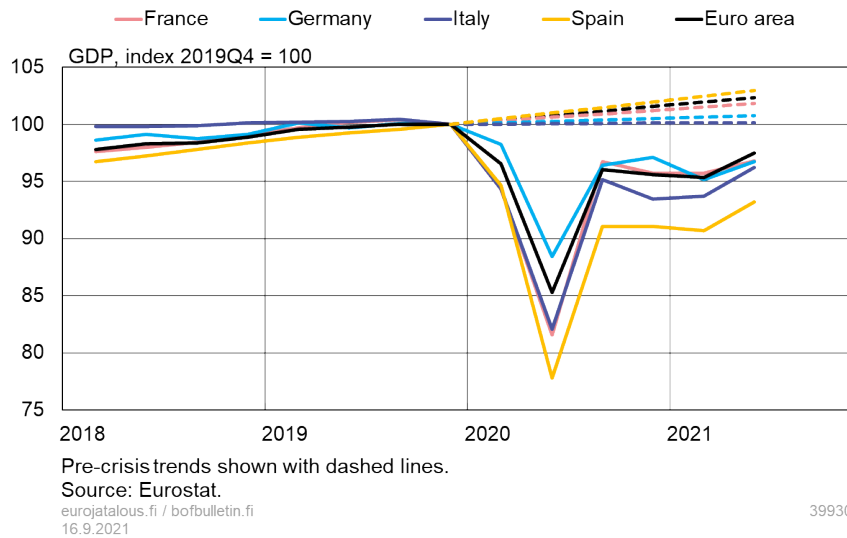
Chart 14.

12. Before the crisis, the GDP share of tourism in large euro area countries was the largest in Spain (more than 10% of GDP), whereas in Germany it accounted for around 4% of GDP.

13. ECB (2021) The heterogeneous economic impact of the pandemic across euro area countries, ECB Economic Bulletin 5/2021.

14. The most important measures at EU level have been the Next Generation EU (NGEU) programme, European Stability Mechanism (ESM) loans to Member States to support the financing of healthcare, loans to Member States under the SURE initiative to support employment and increasing the capital of the European Investment Bank (EIB) for providing corporate loan guarantees.

Effects of COVID-19 crisis in euro area differ across countries

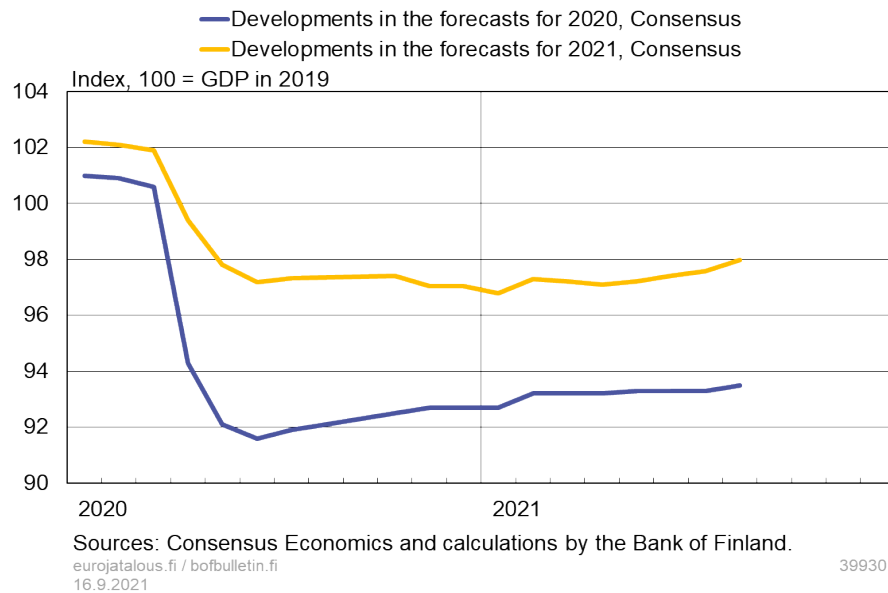


Stronger understanding of the crucial importance of economic policy

The COVID-19 crisis caused an extremely rapid change in the economic outlook (Chart 15). The Chart shows the forecasts for the level of GDP for the years 2020 (blue line) and 2021 (yellow line) and their development between January 2020 and August 2021, derived from the results of the Consensus Survey. Forecasts for the average level of GDP in 2020 collapsed in the wake of spring 2020, reflecting the strengthened understanding of the exceptional depth of the crisis. The forecast figures were at their lowest level in June 2020, but started to improve in the second half of 2020, i.e. the dip caused by COVID-19 turned out to be slightly smaller than in the worst-case scenario. Forecasts for the level of GDP in 2021 also weakened significantly in spring 2020 and were at their lowest in January 2021. These estimates have thus far improved only slightly.

Chart 15.

COVID-19 dip in euro area output was slightly smaller than in the worst-case scenario



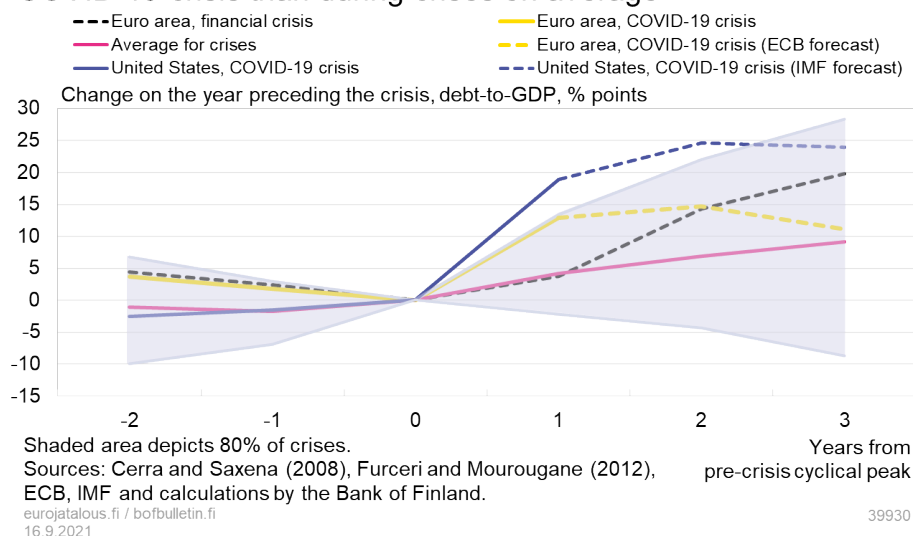
Aggregate output collapsed less than feared in a worst case scenario, and estimates of the recovery have also improved slightly. The understanding of the crucial importance of economic policy in these developments has strengthened. The alternative scenarios would have been very severe: a loss of financial stability, slower pace of recovery and inflation and a further weakening in inflation expectations relative to the central bank's target. Strong economic policy measures seem to have reduced the feared longer-term scars.

One of the key monetary policy instruments used by the ECB is the Pandemic Emergency Purchase Programme (PEPP). The central bank has also taken other measures; it has for example adjusted the terms of the targeted longer-term refinancing operations (TLTROs), making them even more incentivising and favourable.^[15] The ECB's monetary policy measures during the pandemic and their effects are discussed in the article '[Monetary policy measures taken during pandemic revived euro area economy](#)'. The results show that just without the asset purchases, aggregate output at the end of 2021 would be some 3.5% lower and consumer prices some 1% lower. In the same period, the adjustments in the terms of the TLTROs increased aggregate output by some 1% and the level of prices by some 0.3%.

Chart 16.

15. In TLTROs, banks are provided secured loans with long maturities, with the aim of incentivising banks to increase lending to the private sector, i.e. households and firms (excl. loans for house purchase). If banks' lending patterns develop favourably, the borrowing rate in these refinancing operations can be as low as -1%.

Significantly stronger growth in general government debt during COVID-19 crisis than during crises on average



Fiscal policy, too, has played a key role particularly in advanced economies in preventing a deep recession.^[16] In the euro area, companies' ability to cope with the crisis has been supported by, for example, direct business subsidies, loans and loan guarantees. In 2020, the COVID support programmes amounted at their height to EUR 2,507 billion.^[17] Preservation of jobs and consumer purchasing power has been supported with a variety of short-time-working schemes. Due to the measures taken by governments, growth in public debt particularly in the United States but also in the euro area has been significantly stronger than in earlier economic crises in general (Chart 16). A similar growth in public debt was experienced in just some countries during the financial crisis.^[18] The extensive and strong economic policy response to the COVID crisis can be considered as a success, as the negative impact of the pandemic on aggregate output will not be as significant and long-term as feared in a worst-case scenario. The scar on the public finances will, however, be long-term.

The economy is, however, still recovering from the crisis, and appropriately targeted, dimensioned and timed policy measures can still help reduce the long-term scars to the economy. Measures supporting the recovery of productivity, employment and investment, in particular, can contribute to the return of economic growth to the pre-crisis trend. During the COVID crisis, the EU adopted the recovery instrument NextGenerationEU (NGEU). This reduces the risk of a decrease in fiscal space in the Member States that have suffered most from the pandemic. At the same time, it channels resources to investments, reform, and to green and digital transition, which

16. Chudik, Mohaddes and Raissi (2021) estimate that the growth impact of discretionary fiscal measures on GDP in the acute phase of the crisis (in Q2 and Q3 2020) was 4.5 percentage points in the euro area and 7.1 percentage points in the United States. In addition, a variety of measures for safeguarding funding conditions for businesses (loans, loan guarantees, equity injections) contributed to maintaining business activity and economic recovery. See Chudik, A., Mohaddes, K., Raissi, M. (2021) Covid-19 fiscal support and its effectiveness, *Economics Letters*, Volume 205.

17. For a more detailed analysis of the measures taken in 2020, see Kauko, K. - Räsänen, T. (2021). *The national COVID-19 support granted in Europe totalled some EUR 1,300 billion in 2020*, Bank of Finland Bulletin: analysis. Available only in Finnish.

18. The increase in the debt ratio in 2020 is also explained by the temporary effect of the collapse in GDP, which will fade as the economy recovers.

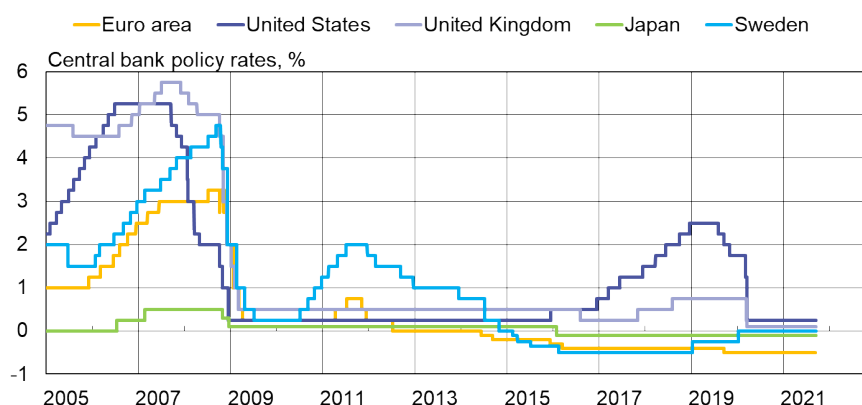
will all play a key role in the public interest and future economic growth of the EU. As the recovery proceeds, the first step is the appropriately timed and calibrated gradual unwinding of economic stimulus measures, followed only thereafter by the reduction of the high debt levels caused by the crisis.

Non-standard monetary policy measures maintain favourable financing conditions and increase central banks' balance sheets

The policy rates of many key central banks were at or below zero already before the onset of the COVID-19 crisis (Chart 17). Only in the United States was the central bank able to lower the key policy rate significantly. In March 2020, the Fed lowered its policy rate by a total of 1.5 percentage points, leaving the target range at 0–0.25%. In the United Kingdom, too, the Bank of England was able to lower its policy rate in March 2020, by 0.65 percentage points, to 0.1%. In the euro area, the rate on the deposit facility has been negative already since mid-2014, and it was already lowered to the current level of -0.5 per cent in early autumn 2019.

Chart 17.

The policy rates of many central banks were at or below zero already before the onset of the COVID-19 crisis



The Bank of Japan stopped the reporting of the uncollateralized overnight call rate on 4 April 2013 when it changed the main operating target for money market operations from the uncollateralized overnight call rate to the monetary base, and more recently to the yield curve control. For Japan and the euro area, the chart shows the rates on the deposit facility.

Source: National central banks.

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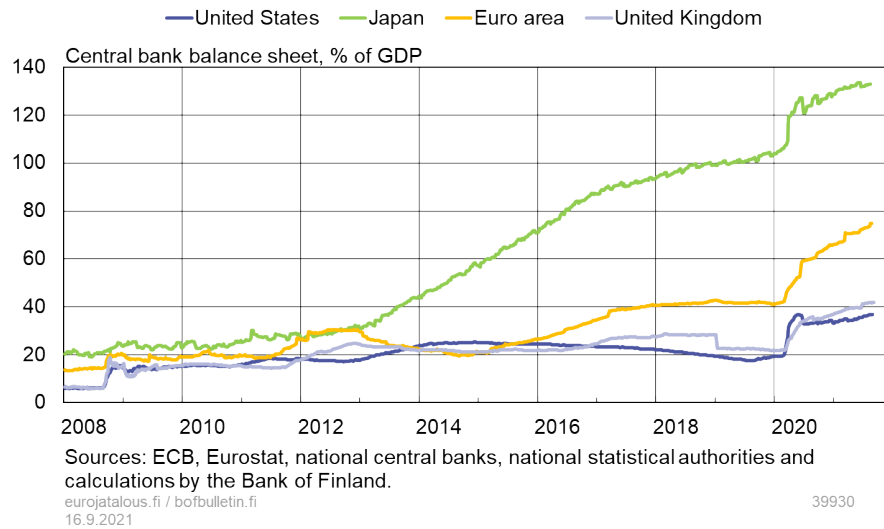
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Due to the limited room for manoeuvre in the policy rates, central banks have responded to the COVID-19 crisis with non-standard monetary policy measures, for example securities purchases on the secondary markets. As a result of the securities purchases, central banks' holdings of government bonds have grown significantly. In addition to the asset purchases, central banks have mitigated the blow caused by the COVID-19 crisis to the economy by also conducting other monetary policy measures that have expanded their balance sheets. By August 2021, the Bank of England's balance sheet had expanded to over 40%, the ECB's to over 70% and the Bank of Japan's to over 130% of GDP (Chart 18). The Fed's balance sheet was below 40% of GDP. The recent developments in the Fed's balance sheet relative to GDP have been dampened by the strong growth in US nominal GDP. The economic recovery and improvements in the inflation outlook

have started a debate on whether the net securities purchases should be decreased or ended, particularly in the United States.

Chart 18.

Central banks have responded to the COVID-19 crisis with non-standard monetary policy measures that have expanded their balance sheets



Long-term interest rates were globally already at very low levels before the outbreak of the pandemic. The strong measures by central banks prevented the COVID-19 crisis from spilling over onto the financial markets, and the risk premia on sovereign bonds rose moderately in the early phase of the crisis and then began to decrease rapidly. Due to their low initial level, long-term interest rates have thus not declined significantly, but central banks have succeeded in maintaining favourable financing conditions. For a more detailed analysis, see for example the article '[Monetary policy measures taken during pandemic revived euro area economy](#)'. Share prices, too, began to recover rapidly after the early phase of the COVID-19 crisis (Chart 19). The stock market has been especially strong in the United States, but developments have differed notably between industries. In 2021, stock markets have been robust in the euro area, too.

Chart 19.

Share prices recovered rapidly from the dip at the beginning of the COVID-19 crisis



Sources: Shanghai Stock Exchange, STOXX, S&P Dow Jones Indices, Nikkei Inc., MSCI, FTSE and Macrobond.

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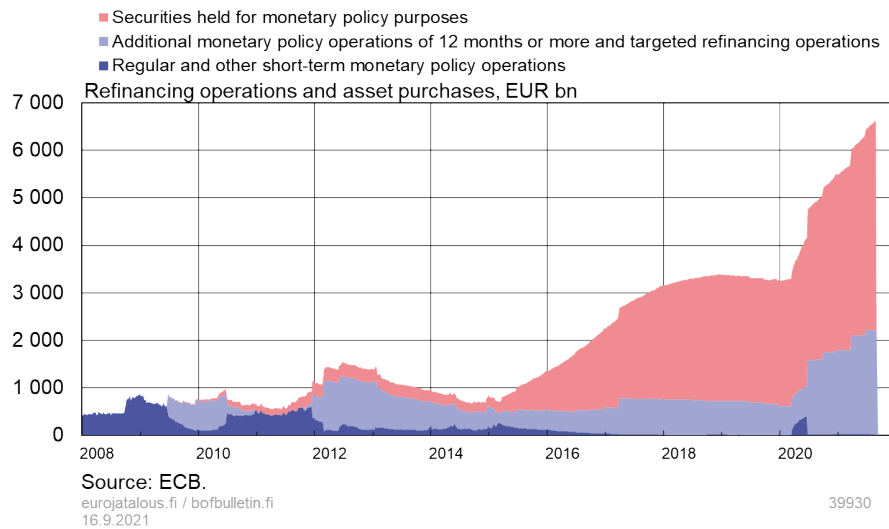
The ECB will maintain favourable financing conditions for economic recovery for as long as necessary

The ECB's measures during the COVID-19 crisis are reflected on the Eurosystem balance sheet particularly as an increase in the volume of securities held for monetary policy purposes and the volume of refinancing operations (Chart 20). As a result of the Pandemic Emergency Purchase Programme (PEPP) and the Asset Purchase Programme (APP) launched earlier, the volume of securities held for monetary policy purposes has increased and is now clearly over EUR 4,000 billion. Moreover, banks have to date borrowed over EUR 2,000 billion in targeted longer-term refinancing operations (TLTRO III). The strong growth of borrowing under the TLTRO programme is explained by the reduction of the interest rate applied to these operations, as well as by the increase in the bank-specific maximum entitlement during the crisis, and the lowering of the lending performance target that is a criterion for a low borrowing rate.^[19] The increase in the ECB's balance sheet has been notably stronger than during the years following the onset of the financial crisis in 2008.

Chart 20.

19. In December 2020, the Governing Council of the ECB decided to raise the total amount that counterparties will be entitled to borrow in TLTRO III operations from 50% to 55% of their stock of eligible loans. The Governing Council also decided to extend the period over which considerably more favourable terms will apply, and to increase the number of operations to be conducted by three. For more information on the decision, see the monetary policy decisions published on 10 December 2020. The target levels of credit provision were lowered already with the decision of 12 March 2020.

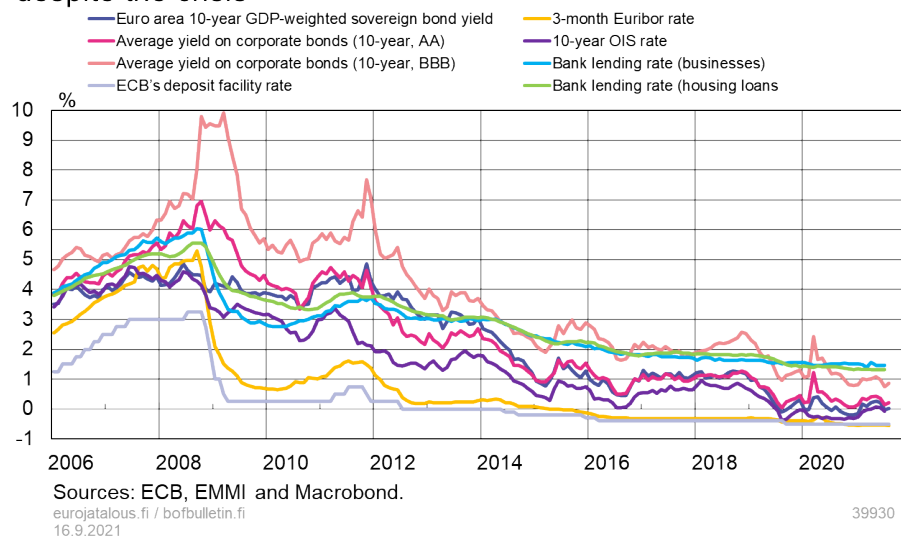
Asset purchases and refinancing operations have expanded Eurosystem balance sheet significantly during COVID-19 crisis



Financial conditions have remained very accommodative throughout the COVID-19 crisis, reflecting the ECB's monetary policy measures, as well as fiscal support measures and the easing of regulations related to bank lending during the crisis. In the early phase of the crisis, the rise in risk premia required by investors pushed up the interest rates on both government and corporate bonds. This rise was, however, temporary. Banks' credit channel has also operated smoothly during the pandemic: lending rates have remained stable throughout the crisis (Chart 21) and banks have been able to continue or even increase their provision of credit (Chart 22). In contrast to the financial crisis, financial intermediation in the euro area has been even, without significant cross-country differences in bank lending rates. In 2021, long-term interest rates have risen slightly, reflecting, for example, the stronger economic outlook and the increase in inflation expectations.

Chart 21.

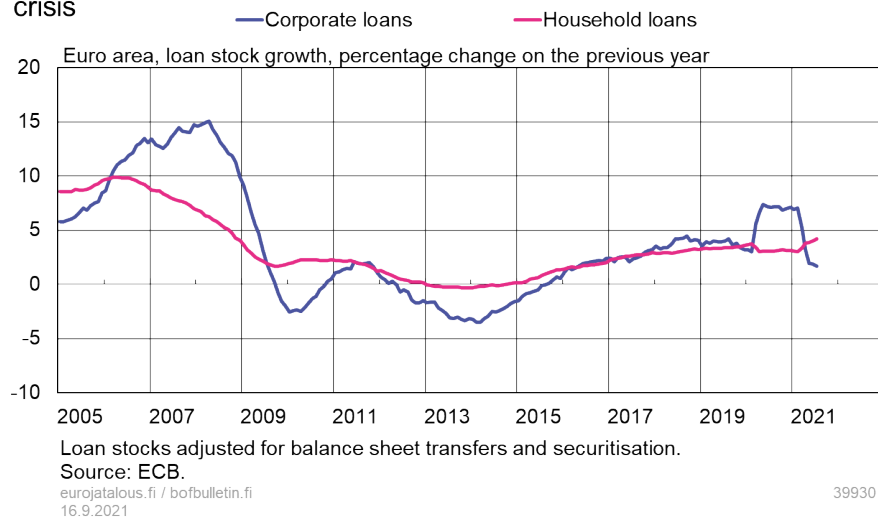
Euro area financing conditions have remained accommodative despite the crisis



Following the onset of the crisis, annual growth in the stock of corporate credit picked up notably, in response to the stronger demand for loans caused by the drying up of companies' cash flows (Chart 22). Banks' lending policies and credit terms have remained fairly relaxed throughout the crisis. Results of the euro area Bank Lending Survey (BLS) show that banks tightened their credit standards considerably less than during the global financial crisis.^[20] This is partly explained by COVID-19-related government guarantees and the ECB's targeted longer-term refinancing operations (TLTROs) that encourage banks to provide credit to businesses. The recent slowdown in growth in the stock of corporate loans reflects the fact that the exceptional demand for finance in the acute phase of the crisis has levelled off. The stock of housing loans has also grown throughout the crisis. According to the BLS, this is explained by not only the continuation of favourable credit standards but also growth in demand, which in turn is due to, in particular, the low level of interest rates as well as borrowers' confidence in the outlook for the housing market and the general economic situation.

Chart 22.

Accommodative financing conditions and government support measures have helped ensure access to credit and euro area recovery from the crisis



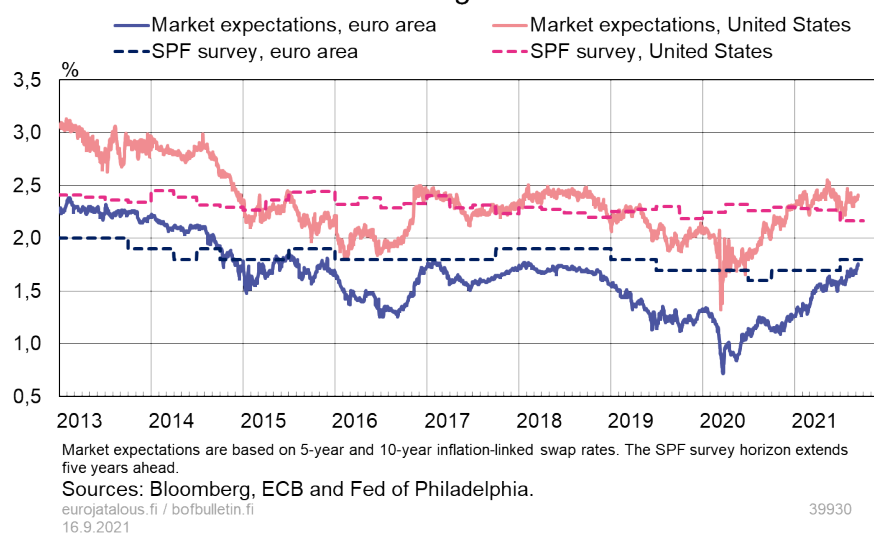
Inflation expectations have strengthened since the worst phase of the COVID-19 crisis

After the COVID-19 crisis erupted, inflation slowed globally, as overall demand decreased and commodity prices fell sharply. The weaker outlook and growing uncertainty meant that expectations regarding the future development of inflation were widely subdued. It is understandable that short term inflation expectations should have been dampened, since the COVID-19 crisis weakened the economy. More worrying, however, was the fact that longer-term inflation expectations declined significantly. Both in the euro area and the United States, long-term inflation expectations for the next five to ten years have fallen to exceptionally low numbers: 0.73% in the euro area and 1.39% in the USA.

Chart 23.

20. For more information, see https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/index.en.html.

Long-term inflation expectations in euro area continue to be muted relative to the ECB's inflation target



The dramatic decline in inflation expectations measured from the financial markets nevertheless proved to be short-term. Expectations gradually strengthened as uncertainty began to fade and the worst fears concerning the economic crisis eased. Furthermore, the accommodative monetary policy boosting recovery and providing the much-needed stimulus that has been witnessed worldwide also helped significantly, putting a stop to the decline in inflation expectations and allowing them to return to previous levels. The recovery of inflation expectations has also contributed to the development of actual inflation and improved the inflation outlook (see [Inflation expectations help in analysing the euro area inflation outlook](#)). Assumptions about future inflation levels affect the behaviour of economic agents, and if they rise/dip sustainably over/below the central bank's inflation target, the result can be a self-perpetuating cycle where strengthened/weakened inflation expectations lead to an acceleration/slow-down in actual inflation. At present, long-term inflation expectations in the United States have stabilised at slightly over 2%. In the euro area too, expectations have returned to the level preceding the COVID-19 crisis, although they are still well below the inflation target of 2% announced by the ECB in July. (see [ECB revised its monetary policy strategy – what's changed?](#),).

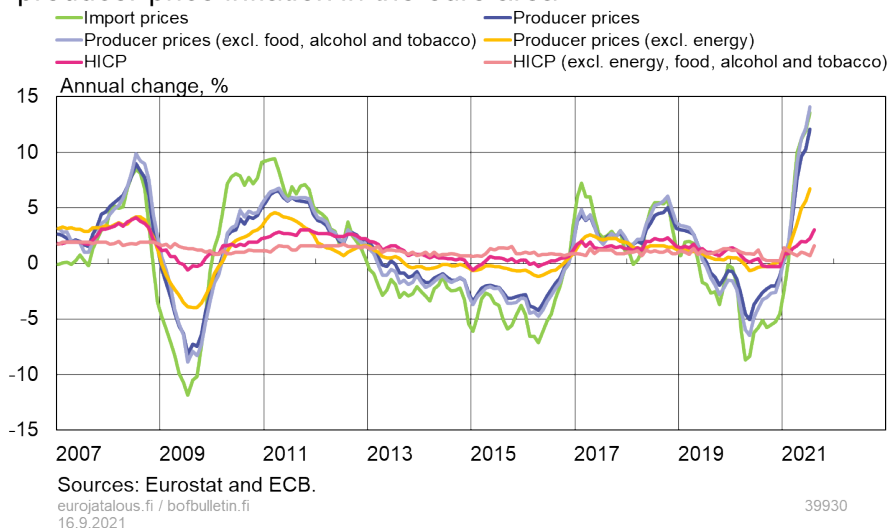
The inflation peak due to the opening-up of the economy and economic recovery is thought to be mainly temporary

As the economy has gradually opened up and signs of recovery become visible, so inflation has accelerated. Commodity prices have risen substantially across the board. At the same time, in some production sectors supply has failed to keep up with the rapid increase in demand. For example, there is now a serious shortage of microchips around the world, which is causing disruptions in production, e.g. in the car industry. Moreover, increased demand has pushed up the cost of transport, as there is a shortage of transport capacity. All this has resulted in markedly higher import and producer prices in the euro area. Import and producer prices rose by a good 10% in June and July compared with last year. Compared with the end of 2019, import prices are up by at least 4% and producer prices by around 8.5%. Although this largely represents an

adjustment resulting from the recovery from the COVID-19 crisis, cost pressures are expected to keep inflation rising at least through the current year. Thereafter, consumer price inflation is predicted to gradually slow to below 2%. For example, sales prices in the near future in manufacturing and the service sectors are currently expected to be quite high.

Chart 24.

Rising commodity prices and supply chain bottlenecks have driven producer price inflation in the euro area



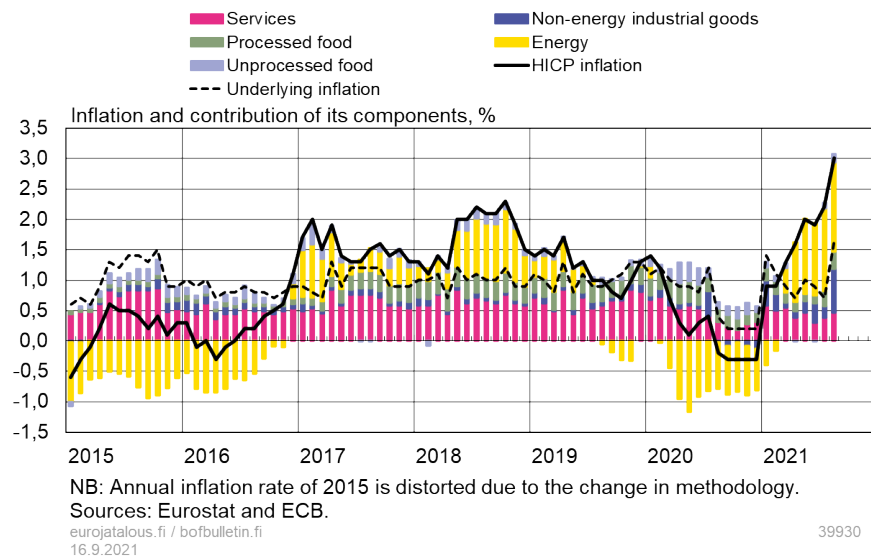
Consumer price inflation since the start of the year has gradually accelerated in both the euro area and the United States. Inflation in the euro area was 0.3% last year (see chart). From the beginning of the current year, however, inflation increased rapidly to 0.9% and by August already stood at 3.0%. In the United States, consumer price inflation (CPI) rose especially swiftly from March, reaching 5.4% in July.

The acceleration in consumer price inflation, however, has mainly been due to individual, one-off factors. The main explanatory factor has been energy inflation, which has speeded up significantly as a result of the changes in oil prices. The price per barrel of oil fell to a low of USD 20 and has now climbed to around USD 70. Thus, the price of oil has risen substantially since last year, although it is now more or less what it was prior to the pandemic.

Inflation in the euro area also increased as a result of the reduction in the VAT rate in July–December 2020 in Germany coming to an end at the end of the year. Ending the cut in VAT caused prices to return to their previous levels, which in turn led to a one-off acceleration in inflation in January. In addition, the VAT reduction will have the effect of increasing the inflation rate for the period July–December this year, as the now normalised prices will be compared against those the year before during the time of the tax cut. Inflation in August also accelerated temporarily because the usual seasonal sales were held at different times due to the COVID restrictions last year, and this was reflected in higher non-energy industrial goods inflation.

Chart 25.

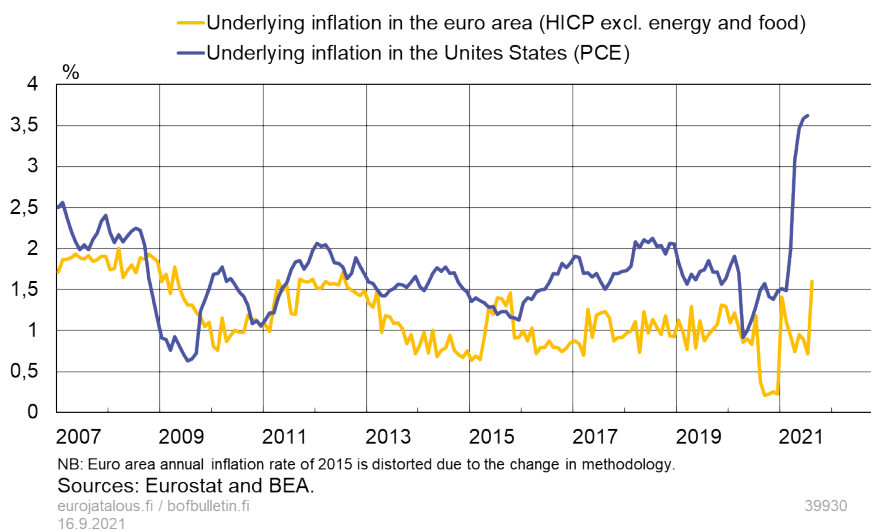
Acceleration in euro area inflation largely due to energy prices



The development in the measure of underlying inflation monitored by the Fed^[21] appears to be exceptional compared with previous years (including the financial crisis years) and with the situation in the euro area (see Chart 26). Underlying inflation in the USA has apparently risen to a level of 3.6%. The shortage of components in the US car industry and the production and delivery problems that this has caused have pushed up the prices for used cars significantly. Increased mobility has also caused other items related to transport, travel and tourism to increase. In general, the gradual easing of the COVID situation and the end of restrictions have to some extent led to a resurgence in demand for services, which is very evident in, for example, the travel and accommodation sector.

Chart 26.

Underlying inflation increased dramatically in United States; no such trend discernible in euro area

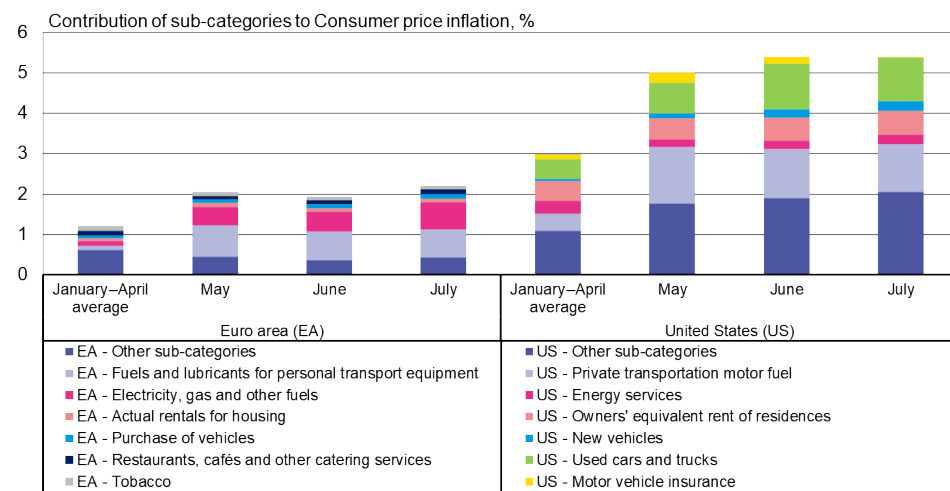


21. Annual change in personal consumption expenditure (PCE) price index (excluding food and energy).

A detailed examination of the inflation components reveals that in both the euro area and the United States energy and fuel are a major explanatory factor in the increase in inflation. That is especially true of the euro area, where these components account for approximately two-thirds of the inflation rate for the May–July period. Additional significant explanatory factors in the United States^[22] are items related to motor vehicle sales and owner-occupied housing. It is nevertheless worth noting that, when these exceptional individual price shocks caused by the COVID crisis are omitted, the combined impact of all the remaining sub-categories of inflation in the euro area and the USA is still quite moderate. In the USA, inflation, without these very few sub-categories that have caused the acceleration, is more or less on target, while in the euro area it is still a good 2% under target.

Chart 27.

Inflation acceleration in the euro area and United States mainly attributable to individual sub-categories



NB: Sub-categories of inflation data in the euro area and the United States are not mutually comparable.
Sources: Eurostat, BLS and calculations by the Bank of Finland.

Inflation in the euro area is predicted to moderate when the exceptional impact on prices due to the COVID crisis ends

Overall, rising inflation has been due to individual, one-off factors and largely reflects the normalisation of exceptional circumstances. In the euro area, underlying inflation, from which is omitted energy and food prices, is still well below 2%, and there are no major price pressures in sight. If temporary inflation spikes were to transfer to wage pressures, this could have a more lasting effect on inflation. However, wage inflation in the euro area has been very modest. The indicator of negotiated wage rates, which proactively measures wage pressures, has remained moderate and predicts wage inflation rates of less than 2%.

Upward pressure on wages and prices is dampened by spare capacity in the euro area, which increased as a result of the COVID crisis, from which the labour market in the euro area has not yet recovered. Unemployment increased substantially due to the pandemic and has not yet

22. Here we have used the annual change in the US consumer price index (CPI).

returned to pre-COVID levels. The unemployment rate was 7.6% in July. The number of persons employed also decreased significantly in the spring of 2020 and is still significantly lower than before the crisis (Chart 13). The output gap, which is a measure of spare capacity in the euro area – i.e. the difference between the actual output of an economy and its estimated potential output – remains negative. According to the latest estimates from key international institutions, it is expected to close no earlier than the end of next year, or not until 2023. The euro area economy is thus still not operating at full capacity. However, the challenge for assessing the outlook for inflation is that it is exceptionally difficult to estimate the full extent of the under-utilisation. The varying rates at which different sectors of the economy recover may also result in inflation divergence compared with the pre-crisis period. The effects of longer-term trends, such as globalisation and technological development, will dampen the outlook for inflation even after the pandemic ends.

Thanks to the brighter outlook for the economy and the improved situation with regard to COVID, the outlook for inflation has nevertheless obviously improved, and all the main forecasters have raised their euro area inflation forecasts. There may be slight differences in their views, but euro area inflation is expected to increase to around 2% this year. With the end in sight of the unusual impact that the COVID crisis has had on prices, inflation in 2022 and 2023 is predicted to settle around 1.5%. If it takes longer to ease production bottlenecks and achieve a balance of supply and demand, inflation may accelerate slightly faster than this over the forecast horizon. In September the ECB raised its inflation forecast compared with June and now predicts that inflation will increase to 2.2% this year and then slow gradually to 1.7% in 2022 and 1.5% in 2023. The preconditions in the euro area for a sustainable return in the medium term to an inflation rate of 2% have nevertheless improved. Economic recovery in the euro area and the ECB's new monetary policy strategy will prevent the economy from being beset for a prolonged period by inflation that is too low.

Table 3.

Euro area inflation forecasts have recently been raised but inflation will still remain below 2% in the period 2022–23

| HICP, euro area, % change | Date | 2020 | 2021 | 2022 | 2023 |
|----------------------------|----------------------|------|--------------|--------------|--------------|
| ECB | 09/2021 (06/2021) | 0.3 | 2.2 (1.9) | 1.7 (1.5) | 1.5 (1.4) |
| European Commission | 07/2021 (05/2021) | 0.3 | 1.9 (1.7) | 1.4 (1.3) | - |
| IMF | 04/2021 (10/2020) | 0.3 | 1.4 (0.9) | 1.2 (1.2) | - |
| OECD | 05/2021 (12/2020) | 0.3 | 1.8 (0.7) | 1.3 (1.0) | - |
| SPF | 07/2021 (04/2021) | 0.3 | 1.9 (1.6) | 1.5 (1.3) | 1.5 (1.5) |
| Consensus | 08/2021 (07/2021) | 0.3 | 2.1 (1.9) | 1.5 (1.4) | - |

Previous forecast in brackets.

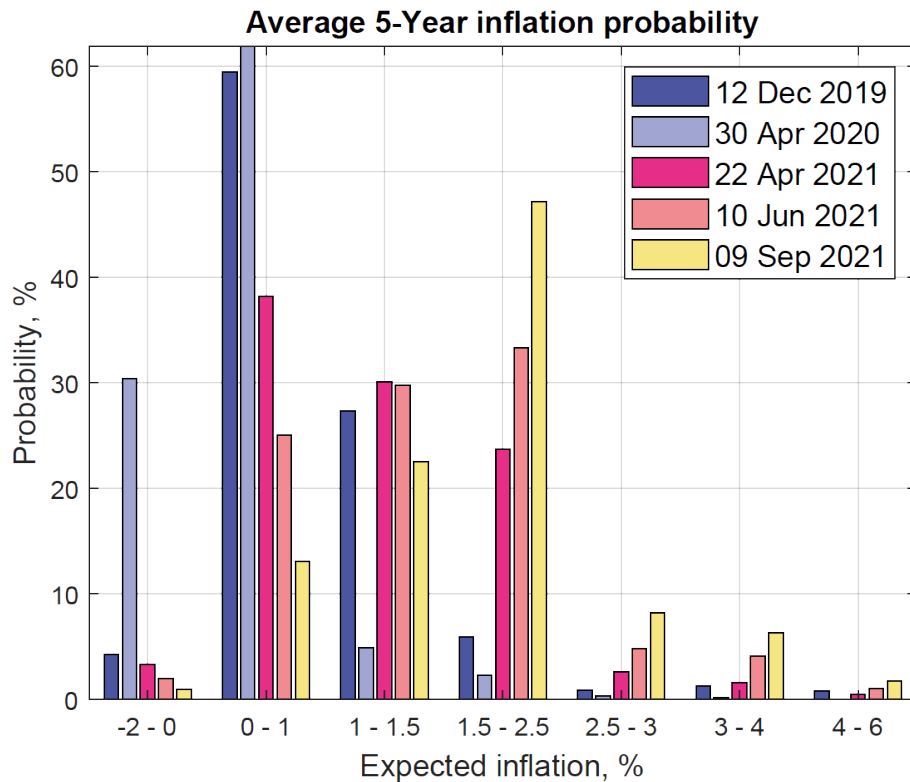
Sources: ECB/Eurosystem, European Commission, IMF, OECD, Consensus Economics.

Reform of the monetary policy strategy has anchored inflation expectations for the euro area more firmly than before at 2%

Inflation expectations derived from market-based inflation options suggest that the market expects inflation in the euro area to settle increasingly around 1.5–2.5% for a five-year period. Thus, the markets view the recent acceleration in inflation as temporary and see the inflation rate settling close to the ECB's new symmetric inflation target of 2%. The ECB's SPF survey among professional forecasters reveals that inflation is expected to be at 1.8% in five years' time.

Chart 28.

Market expectations over the longer term is for inflation to settle at 1.5–2.5%



Sources: Bloomberg and calculations by the Bank of Finland.

12 Oct 2020

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Although the recent rise in inflation is generally thought to be short-term and mainly due to the economic disruption caused by the COVID crisis, it may turn out to be longer-term in nature than currently predicted. If prolonged, the increase in the costs of raw materials and disruptions to global supply chains may be reflected in inflation expectations, upward pressures on wages and, ultimately, accelerating inflation. For now, however, no such trend is visible in the euro area and inflation expectations are anchored to or somewhat below the inflation target. Inflation in the euro area has long been too low when compared with the ECB's target, and thus a sustained rise of inflation to its target of 2% is desirable as the COVID crisis eases and the economic outlook improves.

Reducing public sector indebtedness will be a long-term challenge

The COVID crisis has caused public sector debt to increase significantly. Of three key economic areas, the increase in indebtedness is greatest in the United States, where public sector debt relative to GDP will have grown by around 25 percentage points in the period 2020–2021. The corresponding figure for Japan is approximately 20 percentage points, and for the euro area around 15. Of the countries in the euro area, Germany's public sector debt relative to GDP is predicted to increase by 13 percentage points during the COVID crisis, which is significantly less than the figure for France, Italy and Spain, which is between 20 and 25 percentage points. Public

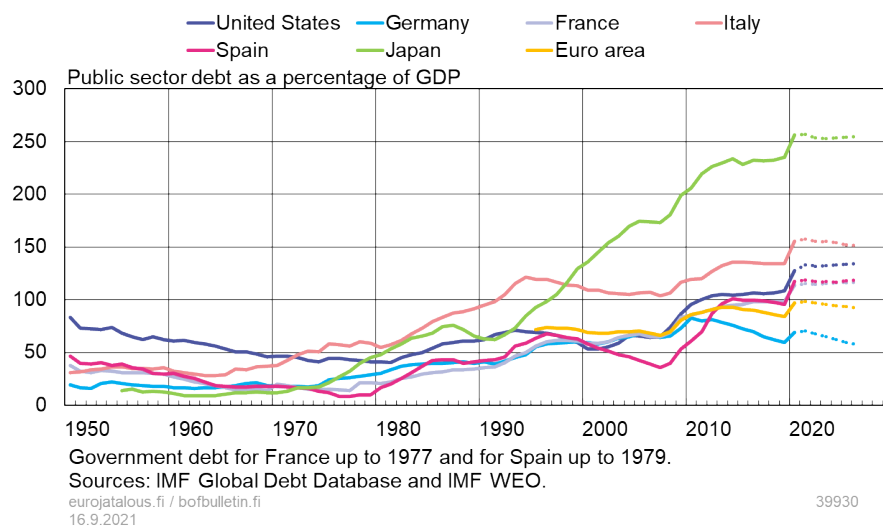
sector debt in the euro area is expected to rise to 99% relative to GDP in 2021. Current forecasts suggest that the debt-to-GDP ratio will decline slightly over the next few years, mainly as a result of the trend in Germany.^[23]

There are considerable differences between the countries in the euro area. In 2021, public sector debt relative to GDP is expected to grow to 73% in Germany, 117% in France, 120% in Spain and 158% in Italy. In the USA it is expected to increase to around 135%, and in Japan to approximately 257% relative to GDP in 2021. There is some uncertainty attached to the forecasts, however, and, for example, new fiscal policy measures could alter the picture quite significantly.

The dramatic increase in public indebtedness is not just a phenomenon associated with the COVID crisis: public sector debt relative to GDP has seen an upward trend for several decades now in the United States, in Japan and in the largest economies of the euro area, with the exception of Germany. It has not always been this way. After the Second World War, public sector indebtedness fell in some of these countries for a period of several decades, and in others it remained relatively stable, at least for some time, from the start of the 1950s. The decrease in indebtedness was the result of strong economic growth, inflation and regulation of the financial markets restricting the cost of public sector debt (financial repression)^[24]. Public sector debt relative to GDP began to rise in all these economies by at least the start of the 1980s, and the trend has continued ever since. Only Germany succeeded in reversing the trend after the financial crisis, and public sector debt there began to fall. This was the result of strong economic growth, low rates of interest and compliance with fiscal policy rules (what is called the ‘debt brake’).

Chart 29.

Public sector debt has been growing for several decades, but there are considerable differences between countries



Low interest rates keep public sector debt interest expenditure in the key economic areas at a low level, despite the growth in public debt. In the euro area, the interest payable on public sector debt

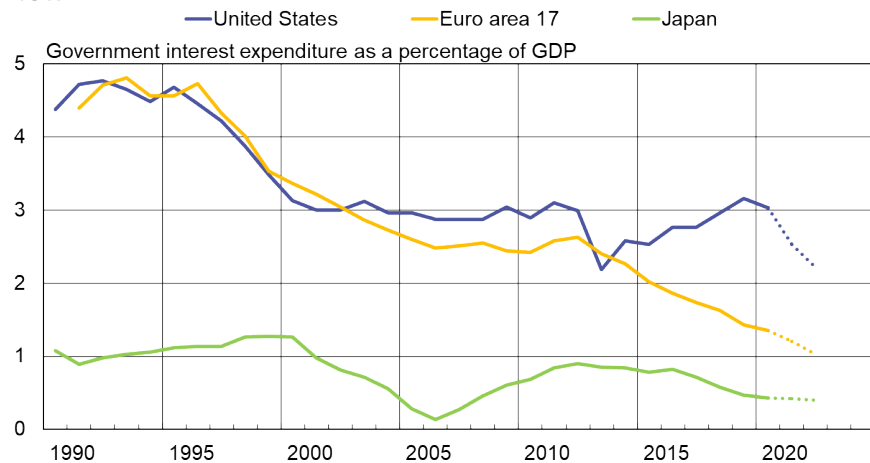
23. The figures for public sector debt and the public deficit in the euro area given in this section are based on the ECB's September forecast. Those for individual euro area countries, the USA and Japan are based on the IMF's July forecast.

24. Financial market regulation can, however, inhibit the efficient allocation of economic resources.

relative to GDP has decreased sharply since the start of Economic and Monetary Union. In the United States, interest expenditure declined sharply in the 1990s and since the turn of the millennium has remained more stable. Public debt expenditure relative to GDP in Japan has long been low. During the COVID crisis, fiscal and monetary policy have both contributed to the recovery, as the crisis has dampened economic growth in the euro area.

Chart 30.

Low interest rates keep public sector debt interest expenditure low

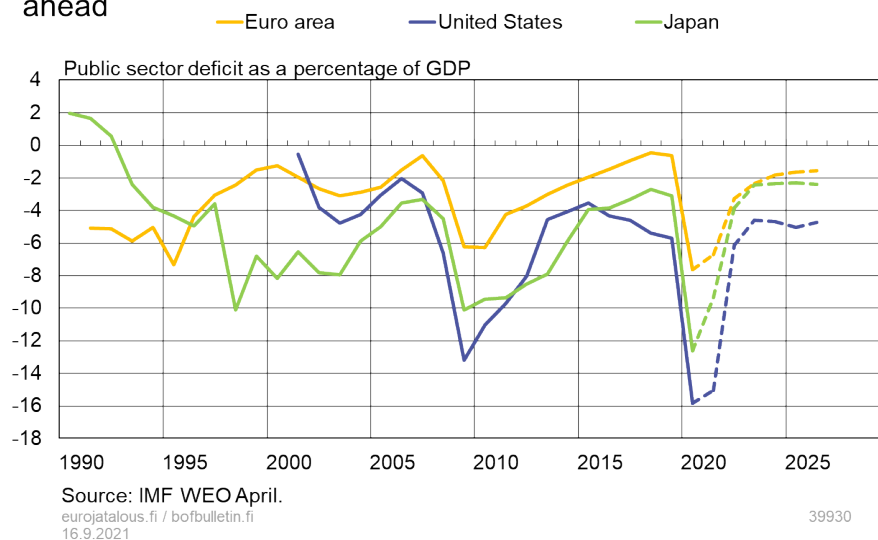


Source: OECD.
eurojatalous.fi / bofbulletin.fi
16.9.2021 39930

The overall public sector deficit in the euro area has remained a good deal smaller than in the United States or Japan since the early 2000s. The public sector deficit as a whole is expected to remain considerable in the key economic areas in 2021 and to continue in subsequent years. In the euro area, the ECB predicts that the deficit will be 7.1% relative to GDP in 2021. The continued high deficit in the euro area will be due to a continuation of the fiscal stimulus and the fact that GDP will be less than potential output, despite the commencement of economic growth. The deficit is predicted to narrow over the next few years as economic growth continues and the economic recovery tails off. The overall government deficit in the USA is expected to be 13.3% and in Japan, 9.2% relative to GDP in 2021.

Chart 31.

Public sector expected to remain in deficit in immediate years ahead



Monetary policy measures taken during pandemic revived euro area economy

Today – Bank of Finland Bulletin 4/2021 – International economy, Monetary policy



Olli-Matti Laine
Economist



Jaakko Nelimarkka
Economist

During the COVID-19 pandemic, monetary policy securities purchases and policies to support bank lending have helped us avoid a deeper recession and deflation in the euro area. As a consequence of the securities purchases, GDP has, based on our model calculations, grown around 2 percentage points faster annually and inflation has been around 0.5 of a percentage point faster in 2020 and 2021. In a similar manner, refinancing operations to support bank lending during the pandemic have boosted annual GDP growth by around 0.5 of a percentage point and inflation by around 0.2 of a percentage point. Without the securities purchases, GDP would at the end of 2021 be around 3.5% and consumer prices around 1% lower. By the end of 2021, the refinancing operations will have boosted GDP by around 1% and consumer prices by around 0.3%.



Following the outbreak of the COVID-19 crisis, the ECB eased its monetary policy through a number of measures aimed at reassuring the financial markets, supporting bank lending and sustaining relaxed financial conditions. Among the most important measures have been the expansion of the purchase programmes and the longer-term refinancing operations. In March 2020, the ECB expanded the Asset Purchase Programme (APP) it had been operating since 2014 and launched a new Pandemic Emergency Purchase Programme (PEPP), which has been further expanded during the course of the pandemic. The ECB has also made changes to its targeted

longer-term refinancing operations (TLTROs) in order to support bank lending.^[1]

How do the non-standard measures affect the economy?

The instruments the ECB has utilised during the pandemic are all different in character, and therefore they also differ in their impacts. TLTROs reduce banks' funding costs and boost lending to the private sector.^[2] Through these operations, banks receive credit from the central bank at an interest rate that depends on the bank's lending to non-financial corporations and households (excl. housing loans). If the amounts lent exceed the target, the interest on the central bank credit is reduced. At its lowest, the interest rate can be -1%.

For their part, the purchase programmes lowered particularly long-term interest rates and further reduced funding costs on a number of markets. Central bank purchases of bonds with a long maturity reduce their availability on the markets. When investors do not consider other asset classes to be such a good alternative, bond prices rise and their yields decline. In this way, the difference in yield between short-term and long-term bonds narrows. Furthermore, central bank security purchases and lower long-term bond yields lead investors to reallocate their portfolios towards longer and more risky bonds in pursuit of a higher yield. Investors then demand a smaller premium on long-term bonds; in other words, the purchase programmes remove duration risk from the markets. Growing demand reduces the risk premia in several asset categories, reduces funding costs across the board and makes investment more attractive.

The mechanism described above is called the portfolio rebalancing channel, and it may be considered the most important impact channel for the securities purchase programmes – both the APP and the PEPP. The mechanism is based on the fact that the different securities categories are not perfect substitutes, but their yields would be similar. This market imperfection could be due to, for example, legislative reasons or the views of investors.^[3]

The key difference between the earlier purchase programme (APP) and the new pandemic-related purchase programme (PEPP) is that in the latter the securities purchases can be carried out flexibly over time and different asset categories and also, in respect of government bond purchases, diverging temporarily from the capital key.^[4] Due to this flexibility it has been possible to use PEPP purchases to in a more targeted way prevent disintegration and instability on the euro area financial markets, which could have made harder the efficient transmission of risk-free market interest rates to the financial markets. The programme can also be seen as having narrowed yield differentials between government bonds in the euro area, which had increased significantly during the uncertainty on the markets in March 2020.^[5]

1. This article is based on another by the same authors: 'The effects of the ECB's pandemic-related policies', published in the BoF Economics Review, 4/2021.

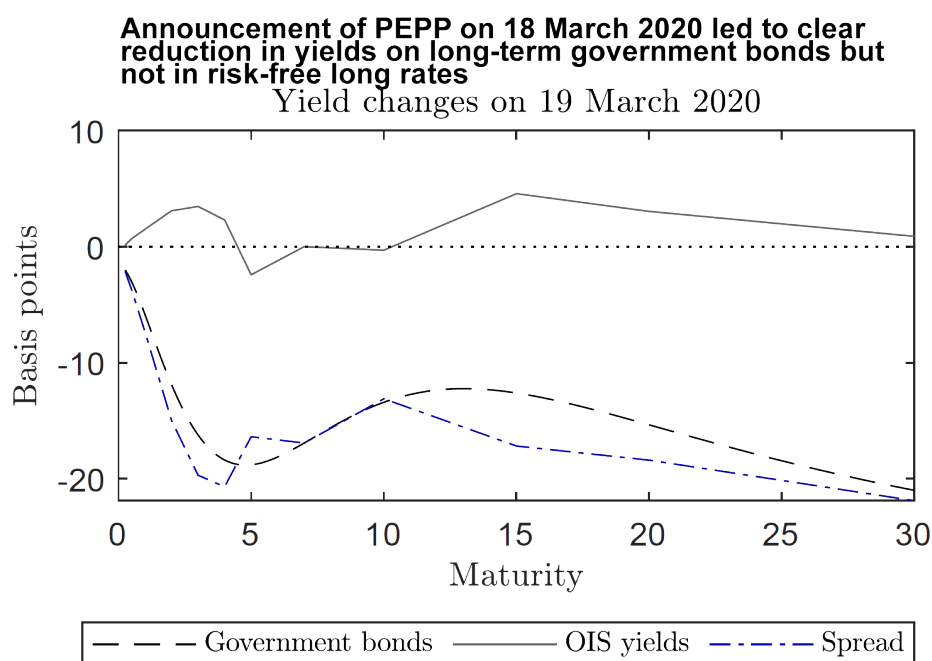
2. See also Kristian Tötterman's blog entry 'Pankit nostaneet ennätyskellisen määrän edullisia kohdennettuja luottoja' published in Finnish on 11 March 2021.

3. Such reasons can be, for example, that institutional investors are under a regulatory compulsion to hold in their portfolios certain types of securities, or that investors favour domestic securities over investment objects from other markets (home bias). The imperfections have been examined forensically by e.g. Vayanos and Vila (2009): 'A Preferred-Habitat Model of the Term Structure of Interest Rates', NBER Working Papers 15487.

4. The capital key is a multiplier calculated from the size of the economy and populations of euro area countries: see <https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html>.

The nature of how PEPP purchases influence yield differentials is shown in Chart 1, which presents the yields of Overnight Index Swaps (OIS) of different durations, the average yields of euro area GDP-weighted government bonds and the changes in their yield differentials at the moment the launch of the PEPP was announced on 18 March 2020.^[6] The chart shows that specifically the yields on government bonds declined on the day following the announcement, while the OIS yields (considered to be risk-free) remained almost unchanged. Thus, initially the PEPP above all narrowed the yield differentials.

Chart 32.



Source: Bank of Finland.

The chart shows the immediate reaction of euro area government bond and risk-free OIS yields of different maturities (x-axis) to the announcement of the PEPP. Government bonds: average yield on euro area government bonds; OIS yield: trajectory of the EONIA rate in line with euro area risk-free OISs; Yield differential: the yield on government bonds minus the OIS yield. Sources: Bloomberg and ECB.

Pandemic-related securities purchases and targeted refinancing operations accelerate growth and inflation

The macroeconomic impacts of securities purchases and targeted longer-term refinancing operations (TLTROs) conducted during the pandemic can be measured via interest rates and risk

5. See Moessner and de Haan (2021): Effects of monetary policy announcements on term premia in the euro area during the Covid-19 pandemic. *Finance Research Letters*, pending.

6. The PEPP was announced late in the evening of 18 March 2020, wherefore the chart shows the daily change in yields that occurred on 19 March 2020.

premia.^[7] The purchase programmes have probably reduced both the risk premia on government bonds and risk-free long-term interest rates in the euro area. The calculation assumes that without the expended securities purchases (PEPP and APP) the average yield on 10-year government bonds in the euro area would have gradually risen to 0.4–0.8 percentage points above the observed level. The risk premia on government bonds and the yields on long government bonds would then have been more or less at the level of March 2020, when the uncertainty on the financial markets was at its height.^[8] Similarly, we also assume that without the extraordinary TLTROs the average interest rate on banks' new loans to non-financial corporations would have been approximately 0.1 of a percentage point higher.^[9] In this case, the lending rate would have begun a slight rise to the level of early 2019.

The macroeconomic impacts are derived from a structural vector autoregression (SVAR) model such that the policy impacts on yields and risk premia are of the magnitude assumed above. The macroeconomic impacts have been measured by separating out from the model's unexplained part the variation due to unexpected changes in monetary policy.^[10] These changes are suited to measuring the direct impacts of monetary policy, as they do not reflect actions through which the central bank would react to an endogenously changing situation in the economy, such as supply and demand shocks. Instead, the impacts measured are from the central bank's surprising, non-standard measures that are not in line with market expectations and hence reflect exogenous variation. When calculating the impacts, we also note that the central bank has at the same time held the normal policy rates unchanged and reinforced this through its forward guidance.^[11]

Charts 2 and 3 present the estimates, made using the model, of the impacts on inflation and real GDP of policy changes related to the PEPP and the targeted long-term refinancing operations. From the charts we can see that the PEPP and the TLTROs have accelerated growth in GDP and

7. It is harder to draw conclusions regarding the amounts purchased and the macroeconomic impacts of the different programmes. This is because the impact of the amounts purchased on interest rates depends on factors such as the structure of the programmes, the credibility of monetary policy and the volume of bonds on the markets. See on the APP's impacts on the yield curve, Eser et al (2019): Tracing the impact of the ECB's asset purchase programme on the yield curve. ECB Working Paper Series, 2293.

8. The estimated impacts on interest rates are in line with other empirical observations: see e.g. Aguilar et al (2020): The ECB monetary policy response to the covid-19 crisis. Documentos Ocasionales 2026, Banco de España and the [ECB Economic Bulletin 5/2020](#), box 3. The pre-pandemic APP is estimated as having reduced the euro area 10-year government bond yield by around 1 percentage point: see more closely Rostagno et al (2019). A tale of two decades: the ECB's monetary policy at 20. ECB Working Paper Series, 2346.

9. For example, the first TLTRO is estimated to have reduced the interest rate on corporate lending by the banks by 0.2 of a percentage point: see Benetton and Fantino (2021): Targeted monetary policy and bank lending behavior. *Journal of Financial Economics* (forthcoming). Also Rostagno et al (2019) estimate the TLTROs to have reduced the lending rate by 0.2. of a percentage point by 2019.

10. The model includes euro area interest rates, and financial market and macroeconomic variables and is estimated using Bayesian analysis on monthly data. The SVAR model allowed us to identify five different policy shocks that affect euro area interest rates and risk premia in various ways. In identifying the shocks, we have drawn on zero-value and signed delineators and tight interval effects at those moments when the ECB has announced its monetary policy measures. The impacts of the purchase programmes are analysed via shocks that affect the risk-free long-term interest rate and the risk premia on government bonds. TLTRO impacts are analysed via shocks that change the lending rate and the stock of loans.

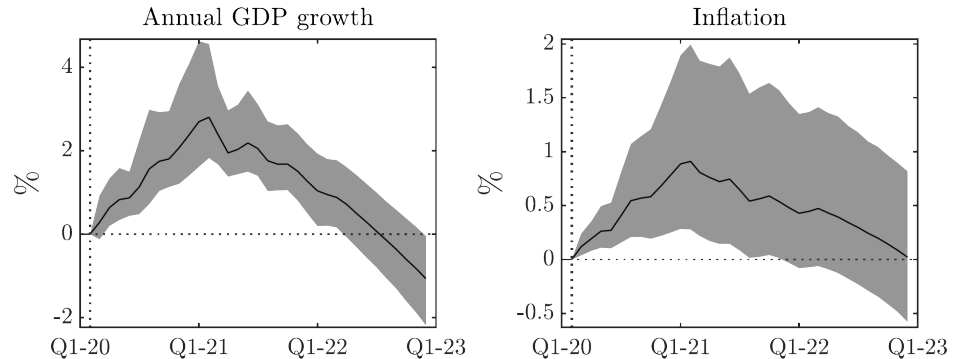
11. Otherwise the expansion of the purchase programmes, for example, could lead after a delay to a rise in policy interest rates, as the central bank responds to accelerating inflation. The purchase programmes are, however, accompanied by forward guidance such that the policy rates will be held at their current or lower levels until the inflation outlook returns sustainably to a level sufficiently close to 2%. In the calculation, the policy rate and expectations regarding it are fixed at zero with monetary policy shocks reflecting forward guidance and short interest policy.

the general level of prices. As a consequence of the securities purchases, annual growth in GDP has been around 2 percentage points, and inflation around 0.5 of a percentage point faster than they otherwise would have been in 2020 and 2021.^[12] At the end of 2021, GDP would be around 3.5%, and the general index of consumer prices around 1% higher than in the absence of the policy measures.^[13] In similar vein, the TLTROs conducted during the pandemic have accelerated the pace of GDP growth by around 0.5 of a percentage point annually, and inflation by around 0.2 of a percentage point. In the absence of these measures, the level of GDP would have been around 1%, and consumer prices around 0.3% lower at the end of 2021.

The results demonstrate that monetary policy has been used successfully to alleviate the economic losses caused by the pandemic and supported achievement of the ECB’s price stability objective. The PEPP, in particular, has had positive impacts on the economy. The securities purchases and refinancing operations have ensured that financing conditions have remained favourable both on the bond markets and in respect of bank funding, which has in turn supported the real economy, e.g. via increased corporate lending. Finally, the policy has fed through into inflation and GDP, thereby helping to prevent a deep recession and avoid deflation. It is also worth noting that the calculations do not take into account the possibility of an alternative train of events in which a lack of monetary policy intervention at the start of the pandemic would have led to a deterioration in the situation on the financial markets and considerable growth in uncertainty. Viewed thus, the macroeconomic effects of the programmes would be still more significant.

Chart 33.

The purchase programmes’ impact on GDP and inflation has been markedly positive



Source: Bank of Finland.

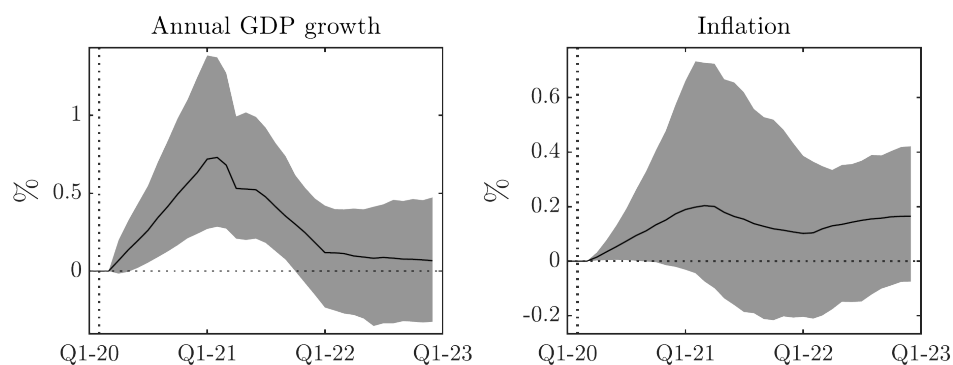
The impact of the purchase programmes implemented during the pandemic has been entered on the chart as percentage points of the variables compared with a situation in which said purchase programmes had not been implemented. The calculation has been based on a SVAR model such that in the alternative scenario the euro area long interest rate would have been around 0.6 of a percentage point higher. The grey areas depict the 68% confidence interval given by the model.

12. The estimated impacts of the purchase programmes are slightly more positive than in the calculations by e.g. Aguilar et al (2020) and ECB (2020) (footnote 6). This is due to the different approach to identifying the impacts and the taking into account of later additions to the programmes.

13. The impacts on GDP are temporary and GDP will return to its baseline trajectory at the end of the forecast horizon.

Chart 34.

TLTROs conducted during the pandemic have been moderately supportive of economic growth and inflation



Source: Bank of Finland.

The impact of the longer-term targeted refinancing operations (TLTROs) implemented during the pandemic has been entered on the chart as percentage points of the variables compared with a situation in which said additional purchase programmes had not been implemented. In the alternative scenario the interest rate on new corporate loans issued by the banks would be around 0.1 of a percentage point higher. The grey areas depict the 68% confidence interval given by the model.

Tags

asset purchase programme, ECB, monetary policy,
pandemic emergency purchase programme (PEPP), TLTRO, policy evaluation

Inflation expectations help in analysing the euro area inflation outlook

16 Sep 2021 – Bank of Finland Bulletin 4/2021 – International economy



Sami Oinonen
Economist



Lauri Vilmi
Senior Adviser

Inflation is recovering from an exceptional decline caused by the COVID-19 crisis. For monetary policy and price stability, it is more important to assess inflation developments over the medium term rather than short-term fluctuations. According to the latest research, inflation expectations play a key role in inflation projections and thus contribute to understanding inflation developments over the medium term. At present, different measures of inflation expectations rather consistently point towards inflation remaining below the ECB's target in the coming years. Different measures of expectations should nonetheless be monitored widely; for example, during the depths of the COVID-19 crisis in 2020, market-based inflation expectations pointed towards a substantially more subdued inflation outlook than survey-based expectations.



Inflation expectations reveal information about the medium-term inflation outlook

It is typical for consumer price inflation in the euro area to fluctuate significantly in the short term—as has been the case in 2021—in response to, for example, volatility in the price of oil and food prices and changes in taxation. Yet factors such as these are temporary and their impact on

inflation gradually fades. What is left is the so-called persistent component of inflation ^[1], which represents changes in inflation over the medium term. ^[2]

The medium-term inflation outlook is the most important variable for a central bank's monetary policy decision making, as the objective of monetary policy is to keep inflation at the central bank's target over the medium term. Here longer-term inflation expectations must fall in line with the central bank's inflation aim, i.e. inflation expectations must be anchored at the central bank's target. As a result of the ECB's monetary policy strategy review which concluded in July 2021, the Governing Council of the ECB changed its definition of price stability as two per cent inflation over the medium term. The target is symmetric, which means that the Governing Council considers negative and positive deviations from this target as equally undesirable.

The persistent component of inflation is unobservable; however, it can be estimated, for example by using various statistical filters, decomposing slow-moving components of inflation, or by examining measures of inflation expectations directly. New research has recently been published on the role of inflation expectations in inflation forecasting ^[3], which serves as the basis for this article.

Inflation expectations help predict actual inflation

The Phillips curve is a central equation in macroeconomics. It states that current inflation is primarily determined by inflation expectations and the cost pressures faced by firms, which, in turn, are determined by the business cycle and the prices of inputs, such as commodities. The business cycle is often described in terms of the output gap, which measures the degree of capacity utilisation in the economy. When the economy is in recession, firms have spare capacity. When the economy is in an upswing, the opposite is true. ^[4]

Inflation expectations play an important role in the Phillips curve because they influence the price-setting of firms. Future price pressures affect the levels at which prices are set today. Inflation expectations can also have an impact on future cost levels, particularly through wage negotiations. In addition to expectations having an immediate bearing on prices, different measures of inflation expectations also contain information about the future path of inflation. Inflation expectations therefore not only reveal information about the medium-term inflation outlook, but also influence price-setting today.

The Phillips curve augmented with measured inflation expectations appears to perform well at forecasting euro area inflation. In particular, the addition of inflation expectations improves the model's fit substantially. ^[5] Based on the study underpinning this article, it would seem that

1. The literature refers to this as trend inflation, and it can be measured by different indicators of underlying inflation.

2. For further information on the definition and measuring of trend inflation, see Ehrmann M., Ferrucci M., Lenza, M. and O'Brien, D. (2018). Measures of underlying inflation for the euro area. ECB Economic Bulletin, published 4/2018

3. Oinonen, S. and Vilmi, L. (2021). [Analysing euro area inflation outlook with the Phillips curve](#). BoF Economic Review 5/2021.

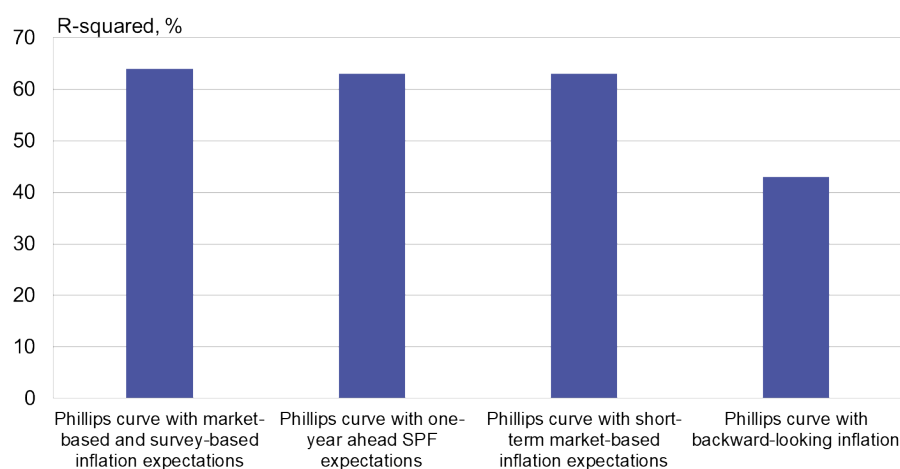
4. The Phillips curve can be derived from microfoundations and is thus consistent with economic theory. See, for example, Mavroeidis, S., Plagborg-Møller, M. and Stock, J. (2014). Empirical Evidence on Inflation Expectations in the New Keynesian Phillips Curve. *Journal of Economic Literature*, Vol. 52 No. 1 March 2014, 124–188.

5. For the specifics of the model and its results: Oinonen, S. and Vilmi, L. (2021). [Analysing euro area inflation outlook with the Phillips curve](#). BoF Economic Review 5/2021.

measured inflation expectations contain information about the medium-term path of inflation. The study compares the ability of different measures of inflation expectations and New Keynesian Phillips curves based on these to explain actual inflation in the euro area. The measures of inflation expectations examined are the Survey of Professional Forecasters (SPF) conducted by the ECB, market-based expectations derived from inflation swaps ^[6], and a combination of the two. In addition, a purely backward-looking Phillips curve is included as a reference. The backward-looking Phillips curve does not contain inflation expectations and is instead based on past inflation.

Chart 35.

Ability of different expectations-augmented Phillips curves to explain variation in inflation from June 2004 to year-end 2020



Source: Calculations by the Bank of Finland.

Chart 1 illustrates the Phillips curve’s ability to explain variation in euro area inflation from mid-2004 to year-end 2020 when augmented with different measures of inflation expectations. The backward-looking model in which expectations are omitted explains about 40% of the variation in inflation. By contrast, the models that include inflation expectations explain over 60% of the variation in inflation. If the unusual period spanning the COVID-19 crisis is ignored, then the expectations-augmented models explain over 70% of the variation in actual inflation.

The model’s ability to explain about 70% of the variation in inflation is especially good given that the simple specification of the Phillips curve ignores numerous factors which influence inflation over the short term, including changes in taxation, weather fluctuations and other natural events, and technical, measurement-related issues, particularly during the COVID-19 crisis.

6. Inflation swaps are financial instruments traded by market participants to hedge against future inflation. Inflation expectations derived from inflation swaps are a commonly used measure of markets’ inflation expectations.

Inflation expectations must be examined comprehensively

Both market-based and survey-based measures of inflation expectations do well in predicting past actual inflation.^[7] It is in fact difficult to determine whether one statistically outperforms the other. In addition to the expected rate of inflation itself, market-based measures are affected by a risk premium.^[8] The risk premium is the additional return demanded by an investor for investing in a risky asset instead of a risk-free one. Risk premia are generally incorporated in all market prices, and they can often lead to market-based measures overreacting to changes in the economic environment. By contrast, survey-based measures have been demonstrated in the literature to underreact to changes in the inflation outlook.^[9] This is because first, there is a lag in the collection and publication of data, and secondly because there are information rigidities.^[10] For these reasons a broad range of measures of inflation expectations should be assessed when examining inflation dynamics. Chart 2 illustrates short-term and long-term inflation expectations for both market-based and survey-based measures. Market-based measures reacted more forcefully during the COVID-19 crisis than survey-based measures and, beginning from the end of last year, their recovery has also been stronger.

Chart 36.

7. In addition to survey-based and market-based measures of inflation expectations, assessments of inflation should also draw on other measures of expectations, such as consumer and business survey data. These indicators however have two shortcomings when modelling and forecasting inflation dynamics: short forecast horizons, and their being based on balance figures instead of a quantitative figure of inflation.

8. Cœuré, B. (2019). Inflation expectations and the conduct of monetary policy. Speech, 11 July 2019.

9. See, for example, Coibion, O. and Gorodnichenko, Y. (2012). What can survey forecasts tell us about information rigidities? *Journal of Political Economy* Vol. 120, No. 1 (February 2012), pp. 116-159; Coibion, O. and Gorodnichenko, Y. (2015). Is the Phillips Curve Alive and Well after All? Inflation Expectations and the Missing Disinflation. *American Economic Journal: Macroeconomics* 7(1), 197 – 232 and Angeletos, G.-M., Huo, Z. and Sastry, K., A. (2020). Imperfect Macroeconomic Expectations: Evidence and Theory. NBER Working Paper 27308.

10. For example, collecting and compiling economic data incurs economic costs that survey respondents may lack the incentive to fully commit to.

Inflation expectations have recovered from the trough caused by the COVID-19 crisis but still remain low



* Derived from inflation swaps.

Sources: ECB, Bloomberg and calculations by the Bank of Finland.

Inflation can be forecasted with inflation expectations

The forecasting ability of the model based on the relatively simple, expectations-augmented Phillips curve is quite good (Oinonen and Vilmi, 2021). The model forecasts inflation based on oil future prices, the Eurosystem's estimate of the output gap, and different measures of inflation expectations. The exchange rate is assumed to remain constant over the entire forecast period.

The New Keynesian Phillips curve augmented with direct measures of inflation expectations appears to perform well at forecasting inflation both over the short term and the medium term. In the short term the oil price has a significant impact on inflation, whereas over the medium term inflation expectations are the main determinant of inflation. Grothe and Meyler (2015) and Banbura et al. (2021) also find that measured inflation expectations improve the forecasting ability of various models.^[11] Indeed, inflation expectations appear to contain key information about longer-term inflationary pressures and the prevailing inflation trend.

The Phillips curve can thus produce forecasts of inflation that are conditioned on the tacit information available in markets. At present different measures of short-term inflation expectations give results that are very close to one another, so they create a rather uniform picture of the medium-term inflation outlook. This has not always been the case, and in 2020, for example, survey-based and market-based measures of inflation expectations deviated substantially from one another. The COVID-19 crisis had already demonstrated its force and markets faced powerful uncertainty at the time. This was also reflected in inflation expectations, as is illustrated in Chart 2. Short-term and longer-term market-based expectations reacted quickly and fell to very low levels. Survey-based expectations also declined, but much more moderately,

11. Grothe, M. and Meyler, A. (2015). Inflation Forecasts: Are Market-Based and Survey-Based Measures Informative? Working Paper Series 1865, European Central Bank and Banbura, M., Brenna, F., Paredes, J., and Ravazzolo, F. (2021). Combining Bayesian VARs with survey density forecasts. Does it pay off? Working Paper Series 2543, European Central Bank.

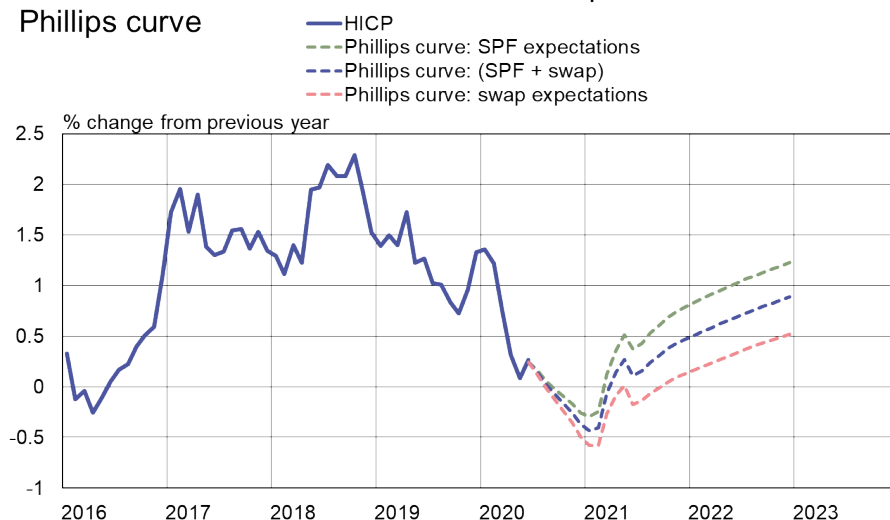
and longer-term expectations in particular declined only by relatively little.

The significance of inflation expectations for assessing the medium-term inflation outlook is illustrated in the paths of inflation estimated by the model for June 2020. In Chart 3 the blue dotted line represents inflation in the immediate years ahead when expectations are calculated by taking the mean of the survey-based and market-based measures. The other two lines represent inflation when expectations are based separately on market-based expectations (pink dotted line) and survey-based expectations (green dotted line).

The paths of inflation estimated by the model clearly diverge over the medium term depending on which measure of inflation expectations is chosen. Different inflation expectations can thus have a significant role in inflation projections. For this reason, it is important that different measures of inflation expectations are examined and considered when assessing the future path of inflation.

Chart 37.

Conditional forecasts based on different specifications of the Phillips curve



Sources: Bloomberg, ECB, Eurostat and calculations by the Bank of Finland.

Tags

[euroarea inflation](#), [inflation expectations](#), [inflation projection](#)

ECB revised its monetary policy strategy – what’s changed?

Today – Bank of Finland Bulletin 4/2021 – Monetary policy



Juha Kilponen
Head of Monetary Policy and Research



Jarmo Kontulainen
Adviser to the Board

The ECB’s revised monetary policy strategy has now been adopted. The new 2% inflation target is clear and unambiguous. The target is symmetric, meaning both negative and positive deviations of inflation from the target are considered as equally undesirable. Commitment to the symmetric inflation target requires especially forceful or persistent monetary policy measures when interest rates are close to their effective lower bound. This may imply a transitory period in which inflation is moderately above target. A medium-term orientation with the inflation target also allows the ECB to emphasise sustainable growth and full employment in its decision-making. In its monetary policy, the ECB also takes into account environmental sustainability, in line with the new climate-related action plan.



The monetary policy strategy of the European Central Bank (ECB) outlines how the ECB maintains price stability in the euro area and what objectives it sets for its monetary policy. The strategy also provides a coherent analytical framework for monetary policy decision-making and communication. The ECB’s monetary policy strategy is based on the Treaty on European Union and the mandate conferred by it to the ECB. It is within this mandate that the Governing Council of the ECB determines its strategy.

The ECB’s first monetary policy strategy was adopted in 1988, when the European Central Bank

began its operations, but it was clarified already in 2003. The strategy contained three key elements: 1) a quantitative definition of price stability; 2) a time frame for achieving price stability; and 3) a two-pillar strategy for analysing risks to price stability.

At that time, the strategy made a distinction between the short and medium term and the long term. Monetary policy decisions were to be based, on one hand, on an analysis focusing on the short-term demand and supply factors in the economy and, on the other hand, on a monetary analysis focusing especially on developments in monetary and credit aggregates. The purpose was to provide information on short and longer-term inflationary pressures in the euro area for the calibration of the monetary policy stance.

[The Governing Council published its new monetary policy strategy and the related principles on 8 July 2021.](#) The new strategy is the result of a thorough review of the economic environment for monetary policy, which was launched in January 2020. It draws on an extensive analysis by Eurosystem experts, including important contributions by the Bank of Finland.^[1] In connection with the strategy review, a number of listening events and seminars were organised for the academia, civil society organisations, the general public as well as national parliaments and the European Parliament. The ECB intends to continue with similar outreach events to improve its interaction with the public.

A stable and predictable outlook for prices and hence public confidence in the preservation of purchasing power are key prerequisites for sustainable economic growth and high employment. The strategy is based on the premise that, at the level of the economy as a whole, price stability, balanced growth and high employment are mutually consistent objectives. Successful monetary policy contributes to ensuring that the central bank's monetary policy maintains price stability and promotes citizens' welfare in the optimal way. Targeted monetary-policy communication can significantly reduce the uncertainty associated with monetary policy and improve citizens' and market participants' understanding of how monetary policy decisions relate to actual and expected economic developments.

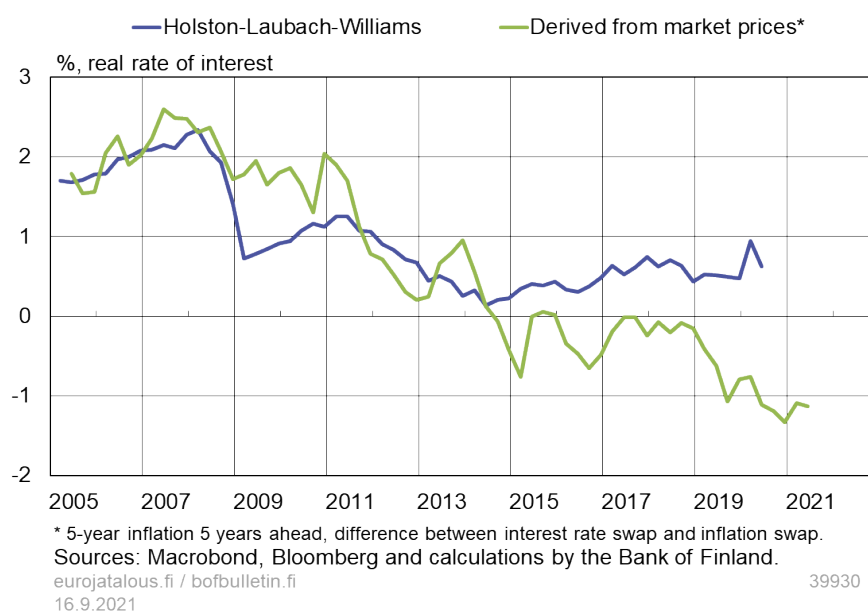
A key motivation for the strategy review was that the operating environment for monetary policy has changed since the Governing Council previously revisited its strategy in 2003. The long-term natural rate of interest, or the equilibrium real interest rate has declined for structural reasons in the euro area and also globally (Chart 1).^[2] One of the major structural factors is demographic change. Population ageing has boosted savings and liquidity demand and lowered the level of interest rates. It may also have slowed economic growth, through lower productivity and declining investment. At the same time, demand for loans has decreased and interest rates have trended downward.

Chart 38.

1. The ECB published a wide range of articles related to the strategy review on September 21, 2021.

2. The level of interest rate consistent with inflation at its target and where economic resources are in full use, see e.g. Laubach and Williams (2003), Holston et al. (2016) and Vilmi (2017). Estimates of the level of the equilibrium interest rate vary and are subject to uncertainty.

Equilibrium real interest rate in the euro area, 2005–2021



As a result of the global financial crisis and the euro area sovereign debt crisis, inflation has also slowed in the euro area. Globalisation and digital technologies have, in turn, influenced the composition of goods and services production, the labour market and possibly also inflation over the longer term. Inflation has also been affected by demographic factors, but researchers disagree about the direction of the effects of shrinking population and demographic change.^[3] In general, however, economists consider demographic factors deflationary due to the related contraction in aggregate demand. Financing structures have also experienced substantial changes since the financial crisis, for example owing to the rise in non-bank financial intermediation.

These changes have reduced the possibilities for the ECB and other central banks to respond to economic downturns by easing monetary policy using conventional instruments. In economics literature, this phenomenon is known as the zero (or effective) lower bound constraint on monetary policy.^[4]

Inflation has long been below the ECB's price stability target. The period of low inflation and negative monetary policy rates has lasted over a decade. The persistent slower-than-targeted rise in prices has been reflected in inflation expectations and has lowered them substantially. As a consequence, inflation expectations have become less well anchored to the ECB's price stability target.^[5]

Threats to environmental sustainability have also become a major global and political challenge. Addressing climate change is now also one of the European Union's policy priorities. While governments and parliaments have the primary responsibility to act on climate change, within its mandate, the ECB recognises the need to incorporate more climate considerations into its

3. See e.g. Juselius and Takáts (2018) and Goodhart and Pradhan (2020).

4. A level of interest rates below which further rate cuts would lead to more negative than positive effects (see e.g. Altavilla et al. 2021).

5. See Rostagno et al. (2019) and Hartmann and Smets (2018).

monetary policy framework.^[6]

Successful monetary policy requires transparency and accountability. Monetary policy communication – i.e. the provision of information on monetary policy decisions to the media, general public, businesses and financial market participants – plays a key role in terms of the transmission of these decisions to the economy. This is why monetary policy communication was included in the strategy review. The role and importance of direct information channels and social media have increased at the expense of the traditional press and news channels. This requires a new type of communication policy from central banks that takes into account the target audience and the media.

The ECB's inflation target raised to 2%

The most important revision to the strategy concerns the definition of price stability and the ECB's inflation target. The new strategy introduces a symmetric inflation target of 2% over the medium term (Chart 2). The Governing Council also confirmed that the Harmonised Index of Consumer Prices (HICP) remains the appropriate price measure^[7] and recommends that the costs related to owner-occupied housing be included in the HICP at a later stage (Chart 3).^[8]

Chart 39.

Inflation target

THE NEW MONETARY POLICY STRATEGY aims for 2% inflation over the medium term.

The target is symmetric, meaning that negative and positive deviations from the target are considered as equally undesirable.



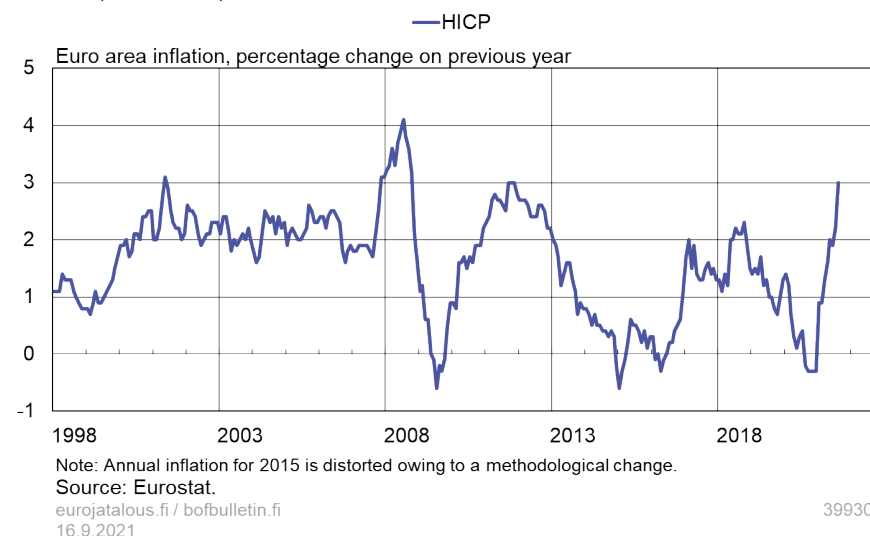
6. Climate change and the transition towards a more sustainable economy affect the outlook for price stability through their impact on macroeconomic indicators such as inflation, total output, employment, interest rates, investment and productivity, financial stability, and the transmission of monetary policy. Moreover, climate change and the carbon transition will affect the value and the risk profile of the assets held on the Eurosystem's balance sheet, potentially leading to an undesirable accumulation of climate-related financial risks. The Governing Council has decided on an ambitious climate change action plan.

7. The consumer price index (CPI) is a measure of changes over time in prices of goods and services purchased by consumers. In addition to their national CPI, the EU Member States each produce an HICP. The EU's statistical authority Eurostat calculates common indices for the EU and EMU countries (European Index of Consumer Prices and Monetary Union Index of Consumer Prices) based on the HICPs calculated by the Member States. The calculation of the HICP is guided by EU regulations, which enables comparisons of inflation between the EU Member States.

8. This will be possible when the Eurosystem has harmonised and comprehensive data on the costs of owner-occupied housing are available for all euro area countries.

Chart 40.

Harmonised Index of Consumer Prices (HICP) in the euro area, 1998Q1–2021Q2



In its 2003 strategy review, the ECB decided to keep the definition of price stability unchanged, as an increase in prices at a rate below 2%. However, the definition was supplemented by an inflation target of ‘below, but close to, two per cent’, with the aim of creating a safety margin against deflation. The ECB’s double-key formulation of the price stability objective has since proved problematic; in principle, it allowed inflation to temporarily decline even close to zero. On the other hand, it was perceived as setting a 2% ceiling for inflation.

The previous strategy could well be justified at the time of the establishment of the monetary union, when the primary monetary policy concern related to inflation being too high and the ECB had to demonstrate its credibility in safeguarding price stability. The 2% inflation ceiling functioned well in a situation where inflationary pressures were predominantly elevated and the zero lower bound did not constrain monetary policy. Under those circumstances it was successful in anchoring inflation expectations at levels consistent with the inflation target.

The situation has changed since the global financial crisis, however, as inflationary pressures have been subdued and inflation has persisted at levels below the target. The 2% inflation ceiling may have contributed to lowering inflation expectations and inflation itself in an environment of contractionary monetary policy (Rostagno et al. 2019).

The new 2% inflation target is unambiguous, clear and easy to communicate. An inflation target of 2% underlines the ECB’s commitment to providing an adequate safety margin against the risk of deflation and ensuring sufficient room for monetary policy to counter too low inflation rates. The new inflation target is expected to influence long-term inflation expectations and to anchor them more solidly to the ECB’s inflation aim.

The 2% target is estimated to limit excessive fluctuations in inflation and ultimately reduce the prevalence of periods when inflation is low and monetary policy is constrained by the zero lower bound on interest rates. Compared with the conditions during the 2003 strategy review, the risk of monetary policy rates hitting a level at which further substantial rate cuts are no longer possible, has increased, as has the risk of such episodes becoming longer (see e.g. Haavio and Laine

(2021)). As stated above, this is primarily due to the fall in the equilibrium real interest rate.

The 2% inflation buffer allows for a smoother adjustment of macroeconomic imbalances across euro area countries. It also mitigates the rise in unemployment stemming from downward nominal wage rigidities and the risk of deflation during economic downturns. Furthermore, such a buffer takes into account the possibility of positive measurement bias in inflation, implying that the ‘true’ rate of inflation may be lower than the measured level.

Symmetry in the inflation target means that the Governing Council views both negative and positive deviations of inflation from the target as equally undesirable. This is a significant change to the ECB’s monetary policy strategy. Paloviita et al. (2021a, b) suggest that, prior to the strategy review, the ECB’s de facto inflation aim was considerably below 2% (1.6%–1.8%) and that its objective with respect to inflation was asymmetric: the ECB was more averse to inflation above 2% than below 2%. Hence, this change in the strategy means that the ECB’s actual inflation target is slightly higher than in the past.

Lower bound episodes necessitate especially forceful measures

Temporary fluctuations of inflation above and below the target are unavoidable. However, large and sustained deviations may be reflected in inflation expectations, and it is therefore important for monetary policy to respond equally forcefully to deviations of inflation from the target in either direction. The effective lower bound on interest rates and the low equilibrium real interest rate mean that persistent negative deviations are especially detrimental. The Governing Council’s commitment to the symmetric 2% inflation target explicitly omits the below-2% bias related to the previous definition and, in particular, any remaining perception of 2% constituting a ceiling for inflation.

The Governing Council emphasises that the commitment to the symmetric inflation target requires especially forceful or persistent monetary policy measures based on a thorough impact assessment when the economy is operating close to the effective lower bound. This commitment is warranted by the need to support the anchoring of longer-term inflation expectations at 2%. In addition, close to the effective lower bound, the ECB stands ready to pursue accommodative monetary policy for a longer period for the stabilisation of economic developments and inflation. This may also imply a transitory period in which inflation is moderately above target.

The new strategy continues the medium-term orientation of the ECB’s monetary policy. It is an important element of monetary policy that has served the Governing Council well in responding flexibly to different economic shocks. Flexibility is also needed as there is always uncertainty associated with the monetary policy transmission process, inflation developments and the determinants of inflation. In calibrating the appropriate stance of monetary policy, the identification of demand and supply shocks is of major importance. The ongoing COVID-19 crisis serves as a good example in this respect. As the crisis has eased, inflation has picked up, but it remains highly uncertain to what extent this is explained by supply problems and to what extent by the strong rebound in demand. If the main contributory factor to the faster pace of inflation is supply constraints on production, monetary policy should overlook the temporary upswing in inflation and allow inflation to rise even well above the target.

Asset purchases, longer-term refinancing operations and forward guidance remain in the monetary policy toolkit

Due to the decline in the equilibrium real interest rate and the zero lower bound constraint on monetary policy, central banks have resorted to, for example, extensive asset purchases and longer-term refinancing operations to halt the slowing of inflation. In the euro area, the need for these measures has been reinforced not only by global trends but also by the increasing divergence in the euro area economy as a result of the European debt crisis, the weakening of monetary policy transmission in the euro area and slower productivity growth.

After the financial crisis, the ECB gradually introduced new monetary policy instruments to complement its conventional interest rate policy. They proved to be effective in an environment of low inflationary pressures and have become permanent instruments in the ECB's monetary policy toolkit.

In addition, the space of the ECB's primary monetary policy instrument, i.e. the set of policy rates, has been extended into negative territory. The ECB's policy rate was at its highest level (4.75%) in the period between October 2000 and May 2001, and at its lowest (-0.5%) since September 2019 (Chart 4). The policy rate was set at zero already in July 2012. Only thereafter, in January 2015, did the ECB launch its expanded asset purchase programme. Negative policy rates have lowered short-term market rates, and the asset purchase programmes have resulted in a decline in long-term rates. For example, the yield on 10-year German government bonds declined in 2015–2019 from some 1.5% to some -0.25%. After 2019, the yield declined and was on average close to -0.5% (Chart 5).

The impact of interest rate policy and the purchase programme on market interest rates and related expectations has been enhanced by decisions on the duration and volume of the purchases.^[9] Bank lending and lending rates have been influenced via targeted longer-term refinancing operations. In recent years, interest rate expectations have remained low typically 2–3 years ahead (Chart 6).

Chart 41.

9. The Governing Council's commitment to continue its accommodative monetary policy stance also in future is in economic literature referred to as 'forward guidance of monetary policy'.

Monetary policy rates in the euro area, 1999–2021

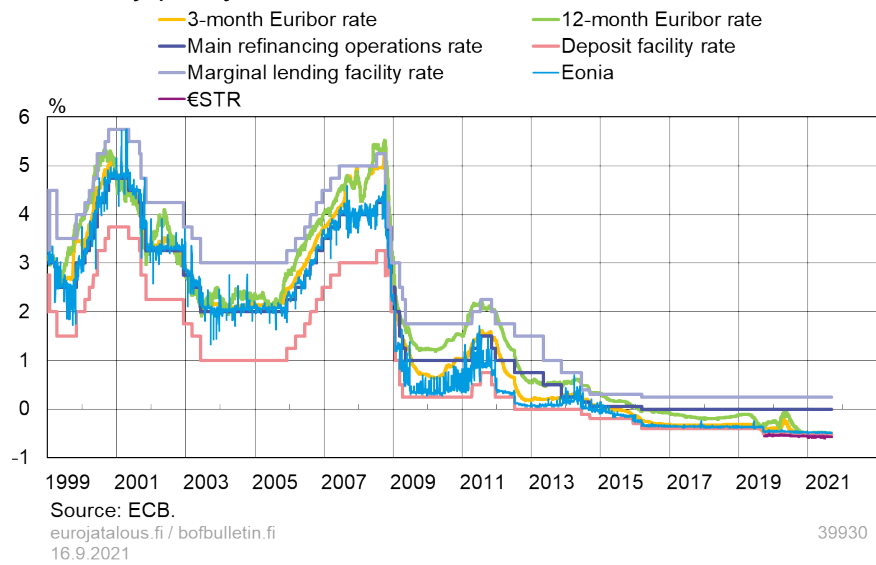


Chart 42.

Long-term interest rates in the euro area, 1998–2021

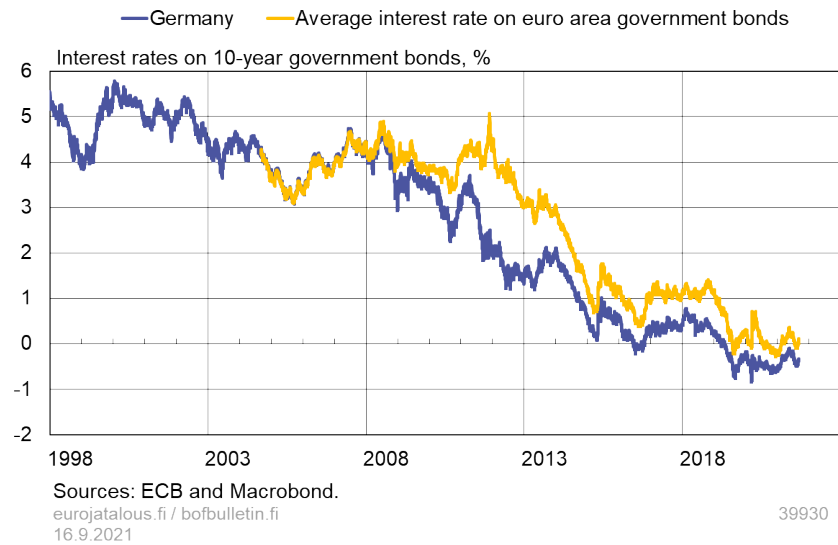
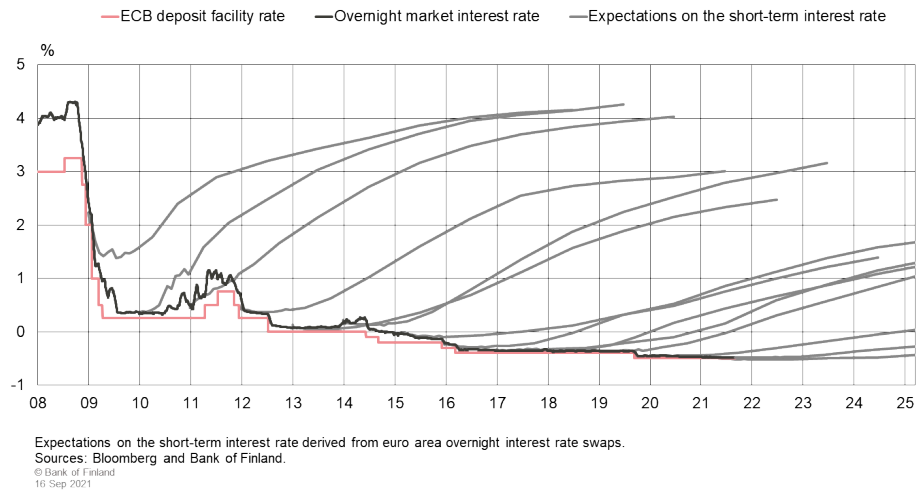


Chart 43.

Monetary policy expectations

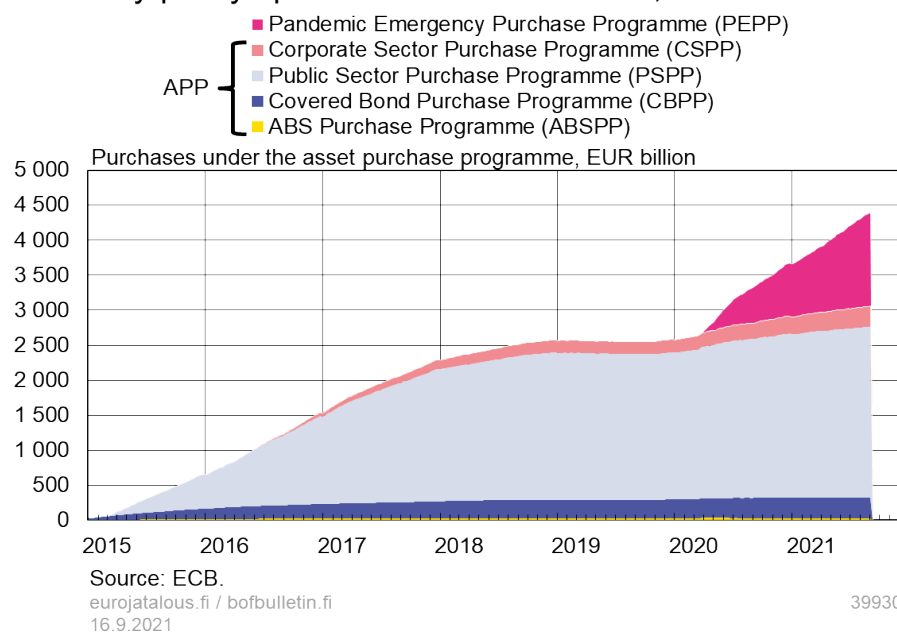


The ECB has extended and amplified its monetary policy significantly in the pursuit of its medium-term inflation target. For example Rostagno et al. (2019), Nelimarkka and Laine (2021) and Laine (2021) estimate that the new monetary policy instruments have had a significant positive impact on bank lending, economic growth and inflation in the euro area.

On the other hand, these new policy instruments may have side effects and constraints from the perspective of financial stability, for example. Therefore, the Governing Council stresses in its revised strategy that it remains committed to continuing to perform careful proportionality assessments and to adapting the design of measures related to these instruments with a view to minimising side effects without prejudice to price stability.

Chart 44.

Monetary policy operations in the euro area, 2015–2021



Macroeconomic stability-oriented fiscal policy taken into consideration in monetary policy

In proximity to the effective lower bound, the role of other economic policies than monetary policy becomes more important. Countercyclical fiscal policy may during deep recessions amplify the effectiveness of monetary policy.^[10] During such times, monetary policy and discretionary fiscal policy may complement and amplify each other, which promotes economic recovery.

The experience gained in the financial crisis, the euro area sovereign debt crisis and the global pandemic suggests that effective macroeconomic stabilisation requires fiscal policy and monetary policy to complement each other in times of crisis. Moreover, there is ample empirical evidence suggesting that an expansionary fiscal policy is particularly effective when interest rates are near the lower bound. Fiscal and structural policies can also support productivity and labour supply growth, helping to reverse the trend in the equilibrium real interest rate and thereby create monetary policy space.

The ECB continues to support the EU's economic policy

Without prejudice to price stability, in its monetary policy decisions the Governing Council of the ECB caters to other considerations relevant to the conduct of monetary policy.

The Treaty on European Union states that the primary objective of the European System of Central Banks (ESCB) is to maintain price stability. The ESCB supports the general economic

10. The use of countercyclical fiscal policy during recessions requires correspondingly that buffers are built up during upswings to safeguard fiscal sustainability.

policies in the European Union with a view to contributing to the achievement of the Union's objectives as laid down in Article 3 of the Treaty on European Union, without prejudice to the objective of price stability. These objectives include sustainable development that is based on balanced economic growth and price stability, a highly competitive social market economy aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment.

The ESCB contributes to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system. In addition, the ESCB acts in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources.

For example, when adjusting its monetary policy instruments, the Governing Council will choose the configuration that best supports the general economic policies of the Union related to growth, employment and social inclusion, and that protects financial stability and helps to mitigate the impact of climate change.

Price stability, balanced economic growth and full employment are mutually consistent objectives

Price stability, balanced economic growth and full employment are to a large extent mutually consistent economic policy objectives. As defined in its strategy, the ECB is pursuing price stability in the medium term. This enables a flexible monetary policy response to various economic shocks, as described below.

Flexibility means that the Governing Council may decide to lengthen the horizon over which inflation returns to the target level. For example, in the presence of an adverse supply shock, the Governing Council may decide not to tighten its monetary policy in order to avoid pronounced falls in economic activity and employment. The shock, if persistent, could jeopardise price stability. The challenge of monetary policy is thus that the assessment of long-term risks to price stability requires information on the level of potential output and equilibrium employment relative to current activity and employment.

Due to these challenges, the ECB did not commit in its new strategy to any particular estimate of potential output or equilibrium employment. The Governing Council decisions seek to account for the uncertainty and heterogeneity related to these unobservable variables. It also considers the ongoing structural changes shaping the outlook for economic activity and employment in the euro area and its member countries. The Governing Council continues to assess the interaction between monetary policy and the distribution of income and wealth.

Financial stability is a precondition for price stability, and vice versa

Under stressed financial market conditions, monetary policy measures aimed at maintaining price stability typically seek to safeguard financial market liquidity but also to support the monetary policy transmission mechanism and to avert the weakening of bank balance sheets and lending capacity^[11] as well as debt deflation.^[12]

In the maintaining of financial stability, the primary responsibility lies with macroprudential and microprudential policy decision-makers. Price stability is also improved by the prevention of financial imbalances and excessive risk-taking and the enhancement of supervisory and macroprudential policies related to balance sheets and risk buffers.

Monetary policy loosening during recessions and tightening during upswings supports financial stability. On the other hand, an accommodative monetary policy stance for too long may increase the build-up of leverage and fuel a rise in asset prices, whereas a too tight or incorrectly calibrated monetary policy stance may push the economy into recession.

While it is reasonable for the ECB to take financial stability considerations into account in its monetary policy deliberations, it is important to note that monetary policy does not have the primary responsibility for guaranteeing financial stability. Monetary policy is not systematically tightened when systemic risk builds up or systematically loosened when systemic risk materialises.

Financial stability considerations are taken into account flexibly in monetary policy, and any monetary policy response will depend on prevailing circumstances, without prejudice to medium-term price stability. To this end, the preparation of monetary policy deliberations will be enhanced with additional information on financial stability considerations, in the context of overhauling the ECB's analytical framework.

The ECB contributes to the mitigation of climate change

The Governing Council of the ECB also decided on an [action plan](#) to include climate change considerations in its monetary policy framework. With this decision, the Governing Council underlines its commitment to more systematically reflect environmental sustainability considerations in its monetary policy.

Climate change is a global challenge and a policy priority for the European Union. While governments and parliaments have the primary responsibility for climate policy, the ECB, within its mandate, seeks to promote climate change objectives. The ECB is expanding its analytical capacity in macroeconomic modelling with regard to climate change and promotes the disclosure and assessment of risks related to climate change so that they can be taken into account in risk management, investment activities and monetary policy operations.

The ECB revised its integrated analytical framework for monetary policy

The structural changes in the economy that have had consequences for the growth potential of the euro area economy, the equilibrium real interest rate, the inflation process and the transmission of monetary policy are continuously reflected in the analytical tools and framework of the euro area monetary policy preparation process. These factors were also among the reasons underlying the strategy review. The ECB has considered these changes gradually and analysed their effects from

11. In economic literature, this phenomenon is referred to as 'negative macro-financial feedback effects'.

12. In debt deflation, a fall in prices increases the real value of the debt.

the perspective of monetary policy. The previous monetary policy strategy, which was based on two pillars – economic analysis and monetary analysis – has become more comprehensive and robust.

Changes to the economic analysis, which focuses on real economic developments and price developments, reflect the diversification of statistical and economic indicators as well as modelling and computational developments. Changes to the economic analysis reflect the increasing importance of the Eurosystem and ECB staff macroeconomic projections in forming a view on the medium-term outlook for economic activity and inflation, and the more systematic analysis of (changes to) structural trends.

The monetary analysis has shifted from its main role of detecting risks to price stability over medium to longer-term horizons based on monetary aggregates, towards an extensive analysis for assessing monetary policy transmission. This shift in focus reflects a weakening of the empirical link between monetary aggregates and inflation, growing impairments in monetary policy transmission during the global financial crisis and the broadening of the ECB's monetary policy toolkit.

Given these changes, the ECB's monetary policy deliberations will be based on a revised integrated analytical framework that brings together two analyses: the economic analysis (that focuses on the real economy and price developments) and the monetary and financial analysis. The new framework will replace the previous two-pillar framework and discontinue the cross-checking of the information derived from the monetary analysis with the information from the economic analysis. The analytical tools and models will be subject to continuous development.

Monetary policy communication more understandable

The importance of monetary policy communication has increased significantly over time. The better monetary policy is understood, not only by experts but also by the general public, the more effective it will be.

Monetary policy communication also plays a key role in ensuring that the ECB as an independent central bank fulfils its duty of accountability towards the public and retains credibility and legitimacy. Consistent, transparent and clear communication to as wide an audience as possible is essential.

The Governing Council is committed to explaining its monetary policy strategy and decisions as clearly as possible to all audiences. Communication of monetary policy decisions will continue to build on four products that have proven their value: the press release, the introductory statement, which will be renamed the 'monetary policy statement', the Economic Bulletin and the monetary policy accounts. These products will be complemented by a layered and more visual version of policy communication geared towards the wider public.

During the strategy review period, the ECB and national central banks listened to citizens' views on inflation, employment and sustainable economic growth. The dialogue and interaction with the public will be continued on a regular basis, to enable the Eurosystem to communicate in an understandable manner on its decisions, which have an impact on nearly all the aspects of economic activity.

The Governing Council of the ECB also estimates that, in a rapidly changing world, its monetary policy strategy is likely to need a regular review. It is already foreseeable that the digital central bank currency, expected changes in the architecture of EMU, rapid developments on the financial markets, the increasing role of financial intermediation by non-banks, and other structural changes in the economy will alter the landscape in which monetary policy operates. The Governing Council intends to assess the appropriateness of its monetary policy strategy again in 2025.

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Tags

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