Monetary Policy Review

A fragile recovery from the pandemic crisis has begun

International economy, Monetary policy | 09 November 2020

The global economic crisis caused by the coronavirus pandemic intensified in March 2020. The health crisis and the lockdown measures necessary to contain the epidemic led to an exceptionally sudden and sharp decline in output worldwide in the first half of the year. In 2020 as a whole, the global economy is expected to contract by about 4–6%, and the euro area economy by about 8–10%. The euro area economy would seem to be diving a little deeper this year than the United States, but the pace of recovery is very uncertain for both. China saw the most difficult phase of the epidemic and thus the sharpest economic contraction in the first quarter of 2020. China's recovery has been facilitated by the production and export of remote work equipment and protective equipment for the coronavirus disease. The pandemic shock has had a dampening effect on inflation. Unemployment is on the rise, but the euro area has avoided sudden mass unemployment through furloughs and government aid.



A comparison of forecasts and scenarios

Coronavirus pandemic led to sharp contraction in global economy

The global economic crisis caused by the coronavirus pandemic peaked in March 2020. The threat to health and the containment measures introduced to curb the spread of the virus resulted in a sudden, sharp decline in output worldwide. The global economy is predicted to contract this year by around 4–8% (Table 1). According to these estimates, it will recover in the second half of the year.

There is still immense uncertainty surround the economic outlook and a range of scenarios are possible. The forecasts for both the global economy and key countries are based on the notion that striking the right balance between controlling the spread of the virus and maintaining a viable economy will succeed: the economies will recover in the second half of the year and through next year. The sharpest economic contraction is thought to have occurred in the second quarter of 2020. If there is a widespread second wave of the pandemic in the second half of the year, according to the OECD, global GDP could shrink by almost 8%. All the estimates suggest that the coronavirus pandemic will affect the global economic situation for some time to come.

Global economy to contract by 4–6% in 2020, or by up to 8% if there is a significant second wave

Forecaster	Period	2019	2020	2021	2022
GDP					
IMF	June	2.9	–4.9	5.4	
Eurosystem*	October	3.0	–3.7	6.2	3.8
OECD: Double-hit Single-hit	June	2.7 2.7	–7.6 –6.0	2.8 5.2	
OECD	October	2.6	–4.5	5.0	
European Commission**	July	3.0	–3.9	4.9	
Consensus	August	2.5	–4.7	5.0	

** Global GDP excluding euro area*

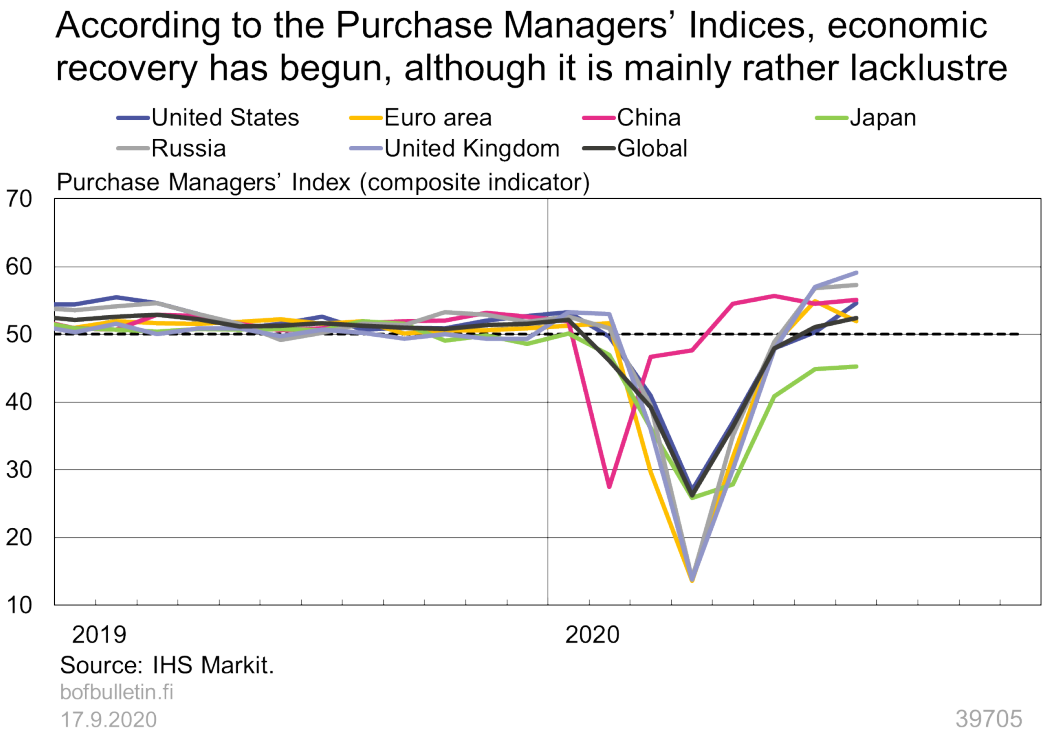
*** Global GDP excluding EU*

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

Euro area economy shrank by 15% in first half of year

In the second quarter of the current year GDP in the euro area fell by a record 11.8% compared with the previous quarter. In Germany, GDP decreased by 9.7%, France saw a fall of 13.8%, GDP in Italy was down by 12.8%, and in Spain it fell by 18.5%. Overall, in the first half of the year the euro area economy shrank by around 15%, which is more than in the USA, where the figure was closer to 10% (Chart 1). GDP has now plunged faster and more dramatically than during the worst period of the global financial crisis. Compared with that, the economic contraction in the euro area has been three times, and in the USA two and a half times, as great, and that is just in six months, i.e. three times as fast. In the period 2008–2009, GDP in the euro area shrank by 5.0% in 18 months. In the USA it fell by 4.0% over a period of 21 months.

Chart 1.



The coronavirus crisis differs from previous crises in recent times in that this time it has taken the form of a shock coming from outside the economic system. For example, the economic crisis in Japan at the start of the 1990s and the global financial crisis that broke out in 2008 were preceded by over-indebtedness and an accumulation of economic imbalances. In other words, these crises were the result of the behaviour of economic operators.

Although the pandemic is affecting everyone in the same way, there could be huge differences in its impact on individual countries. The severity of the crisis and how long it lasts will depend on

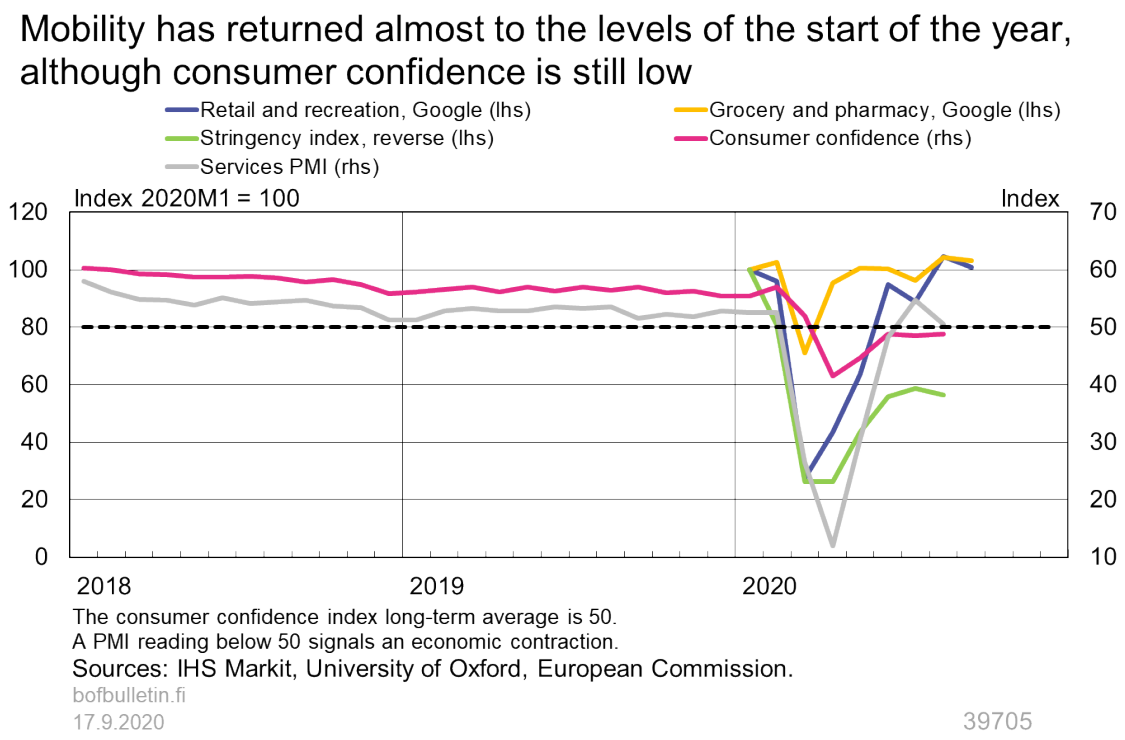
several factors: how long the restrictions remain in place and their effectiveness, the extent to which the mobility of economic actors is reduced because of a fear of the virus, how much government policy is able to reduce uncertainty and the harm done to employment and income, and the possible permanent changes to production capacity and domestic demand.

Forecast for economic growth in the euro area: -8–10% in 2020 and +5–7% in 2021

Given the very poor start to the year, the European Central Bank expects GDP in the euro area to fall by 8% in 2020 overall, and to grow by 5% in 2021 and 3.2% in 2022. In its September assessment, the Governing Council warned of a risk of a weaker trend than that projected in its September forecast. The IMF's July projection (2020: −10.2%, 2021: +6%), the Commission's July forecast update (−9.1% and +6.1%), and the OECD's June no-second-wave scenario (2020: −9.1%, 2021: +6.5%)[1] are more pessimistic for the current year than the ECB's September forecast, though slightly more optimistic for 2021. The general view in all these forecasts is that GDP figures for 2021 will be much lower than for 2019. The ECB predicts a contraction of 3.4% and the IMF, 4.8% (Chart 2).

According to the ECB, the data that became available in the summer suggest that the euro area will see an upward trend in economic growth in the current quarter, up 8.4% on the previous quarter. The assumption is that the virus will largely be successfully isolated. Containment measures less stringent than those imposed in the spring will continue over the coming months, or until a medical solution, i.e. a vaccine, is available, possibly in mid-2021. These restrictions, the growing uncertainty and the weakening labour market have put a brake on the rise in supply and demand. Nevertheless, the dramatic monetary and fiscal measures that became broader in scope during the summer will safeguard growth in the income of economic actors, limit the damage caused by the pandemic and prevent financial market shocks. All things considered, the ECB's September forecast has remained more or less unchanged since June.

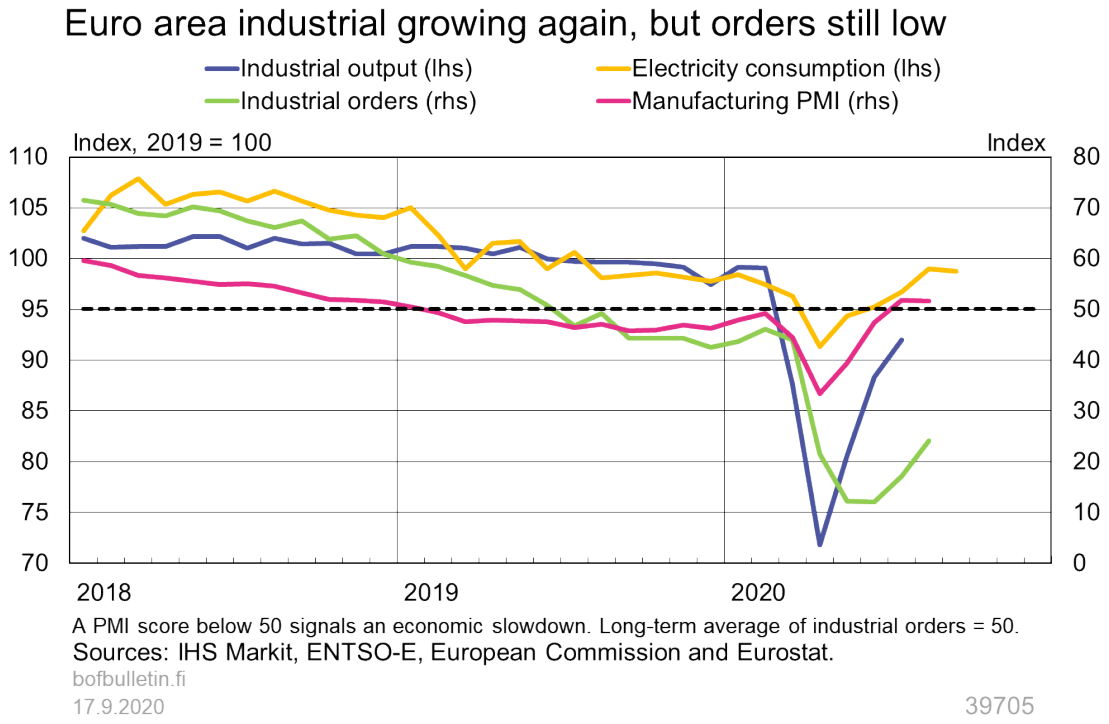
Chart 2.



There is also considerable uncertainty surrounding the economic outlook for the United States, and the crisis is expected to pose significant risks to the economy in the medium term. As a result of the corona crisis, the US economy shrank in the second quarter of the year by around 9% from the previous quarter. This was mainly due to the drop in private consumption and investment. In 2020, the US economy is expected to contract by between 5 and 8.5%, and in 2021, to grow by 2–5%.[2] The Federal Open Market Committee expects the US economy to contract by between 4 and 10 % in 2020 and to grow by -1–7% in 2021.[3]

China's economic growth, on the other hand, remains favourable in the current year (BOFIT Forecast for China 2/2020). The economy recovered swiftly from the coronavirus shock in the second quarter of the year, and GDP grew by 3% compared with the previous year, according to official statistics. The alternative scenarios also point to a rapid recovery. The economy continued to bounce back in July and August, although the rate of recovery has levelled out. The favourable trend is due to strict control of the coronavirus pandemic, stimulus measures and the fact that industry has been able to respond to needs that have changed because of the pandemic. For example, there has been a considerable increase in the production and export of the materials and remote working equipment necessary for protection from the virus.

Chart 3.



Risk scenarios represent an assessment of the effects of a second wave of the pandemic

As there is still considerable uncertainty attached to the development of the real economy both globally and within the euro area, there are good arguments for examining future trends on the basis of alternative scenarios.

The ECB has proposed two scenarios (see Chart 2: mild and severe). The mild scenario sees the shock caused by the pandemic as temporary, and a medical solution – a vaccine – would make it possible to lift the containment measures more widely than predicted. In this scenario, GDP would decline by 7.2% this year, to be followed by a strong rebound next year and a growth rate of 8.9%. By the end of 2022, GDP would be higher than forecast in December 2019. A severe scenario, with a strong resurgence of infections, would lead to more stringent containment measures. This would slow down economic activity considerably and result in permanent production losses. In this scenario, GDP in the euro area would fall by 10.0% in the current year and by the end of 2022 would be significantly below its level at the end of 2019.

Scenarios have also been prepared by the IMF and the OECD. Both organisations also propose scenarios in which the epidemic worsens again and growth in 2021 is sluggish. According to the OECD's double-hit scenario, where a second wave occurs in the last quarter of the current year,

growth in the euro area would decrease to -11.5% in 2020 and 3.5% in 2021. The IMF's negative risk scenario has a second global wave of the pandemic occurring at the start of 2021. In addition, financing conditions tighten, mainly in the emerging economies. The IMF assumes that any second wave of the pandemic would have roughly half the impact on the global economy of the first wave. On the other hand, it also puts forward a scenario where recovery is swifter than predicted – faster than the baseline projection as from the second half of 2020, as effective containment measures bolster confidence among economic actors and demand is normalised more quickly. In all the scenarios that are gloomier than the predicted trend, inflation slows over the next few years, unemployment increases over the long term, and public debt rises sharply, although the actual figures vary slightly. The various scenarios are possible, not just because of the virus's assumed behaviour, but also because economic policy measures significantly affect the way things develop. There is uncertainty regarding how to assess the impact of exceptional monetary and fiscal policies (see section 3 for more details).

Although the coronavirus is probably the most significant influence on the global economy until the virus is brought under control by means of an effective vaccine or treatment, other risks do exist. For the euro area, Brexit is one. The trade talks between the EU and the UK have so far not made any appreciable progress. If no agreement is reached, recovery in the euro area will take longer and there will be greater uncertainty over its future economic situation. In addition, trade tensions between the United States and China have not gone away.

Current assessment

Predictive indicators suggest that recovery will be slow

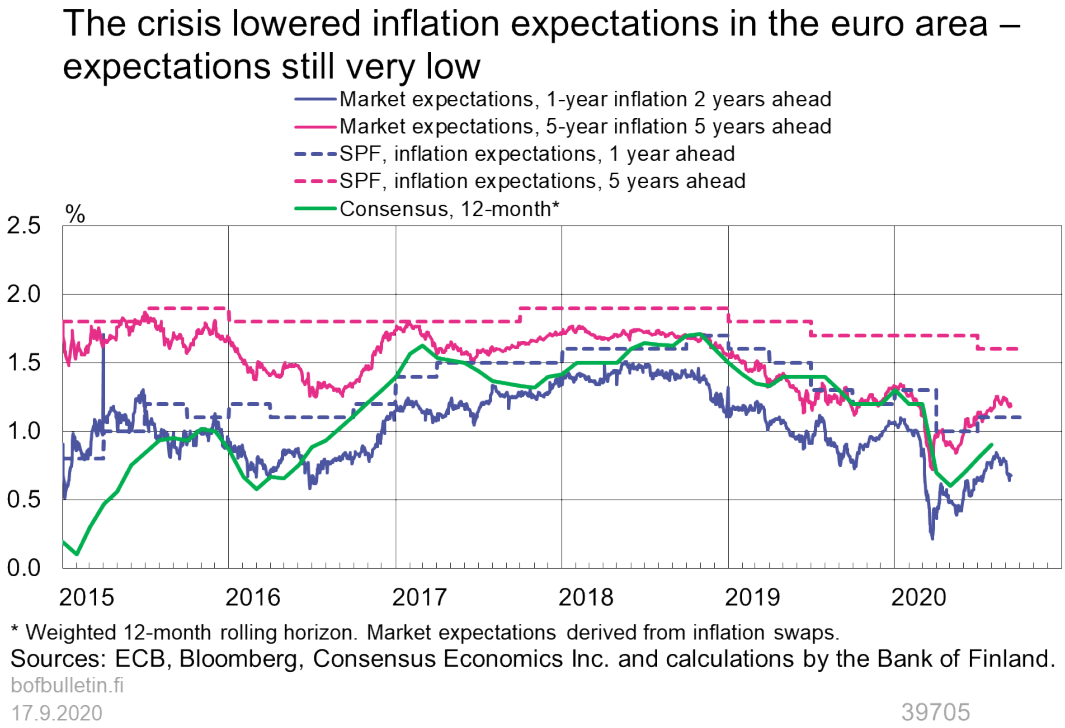
Any assessment of the state of the economy and the direction it will take means carefully monitoring various predictive indicators to help judge what scenario seems the most likely. Since the key statistical publications will only appear later, we have referred to several alternative sets of indicators to evaluate the economic situation in what is an acute and exceptional crisis.

The dramatic decline in GDP (Chart 1) everywhere in the world was also reflected in the Purchasing Managers' Indices (PMI) (Chart 4). The global PMI fell to an all-time low during the coronavirus crisis, almost 10 points lower than during the financial crisis that affected the world in 2008. The decrease was mainly due to performance in the service sector, but the Manufacturing PMI also declined substantially. By contrast, the fall in the PMI during the financial crisis was the result of a dramatic drop in industrial confidence.

Because the actual statistics will only come later, the PMI may be used to assess the state of the economy and the economic outlook. The PMIs and figures for GDP suggest that the Chinese

economy has recovered from the crisis far more quickly than the rest of the world, as the crisis hit there in the first quarter of the year. The PMIs for July and August also show economic growth elsewhere in the world. However, the rather dismal figures for the second quarter would suggest that economic recovery will only be moderate, at least on the basis of these indicators.[4]

Chart 4.

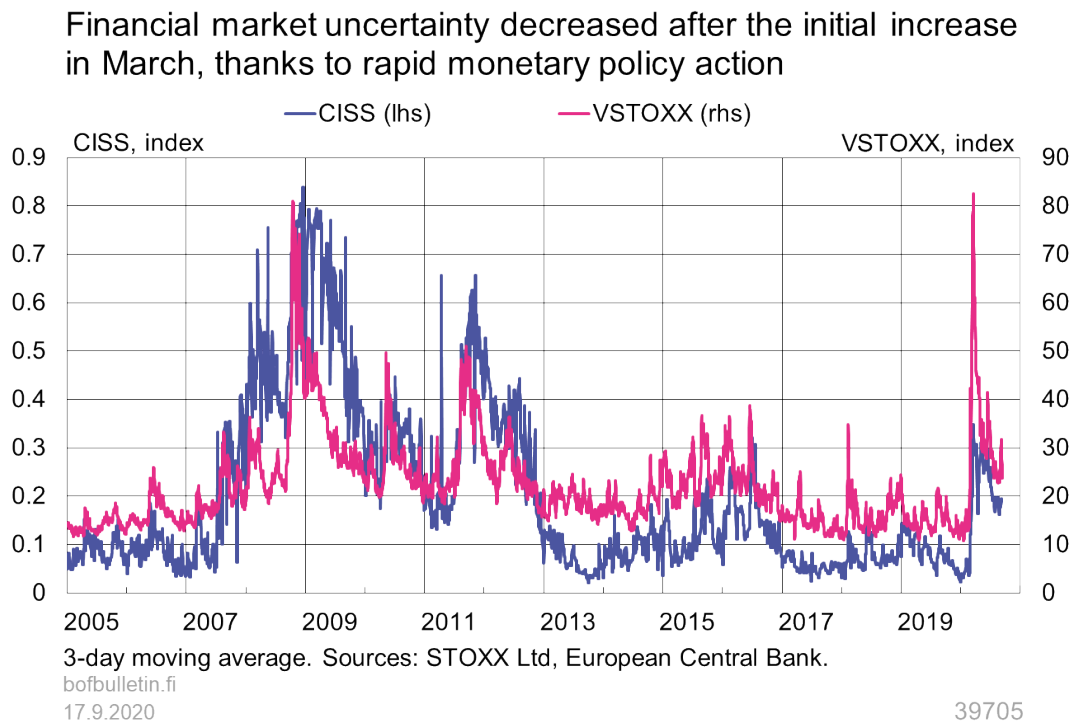


Impact of crisis on service sector exceptionally severe

There have also been significant differences between sectors in the area of economic development. The coronavirus brought the service sector to an almost complete standstill, on account of unprecedented containment measures and a general atmosphere of uncertainty. In this respect, the crisis differed noticeably from previous economic recessions, where industry tended to react the most strongly and the slowdown in domestic demand was less dramatic. With the coronavirus crisis came a drastic fall in consumption. The containment measures, which were at their strictest in April and May, were targeted in particular at shops, restaurants and entertainment venues, but also other services. In the early spring, retail sales dropped by approximately 20% in the euro area (Chart 5), and other sectors also experienced a big decrease in business activity. Retail sales in the summer saw a return to normal in the advanced economies. However, the recovery in industrial production has been slower. All the same, according to the PMI representing economic development as a whole, growth has shown a positive trend in the

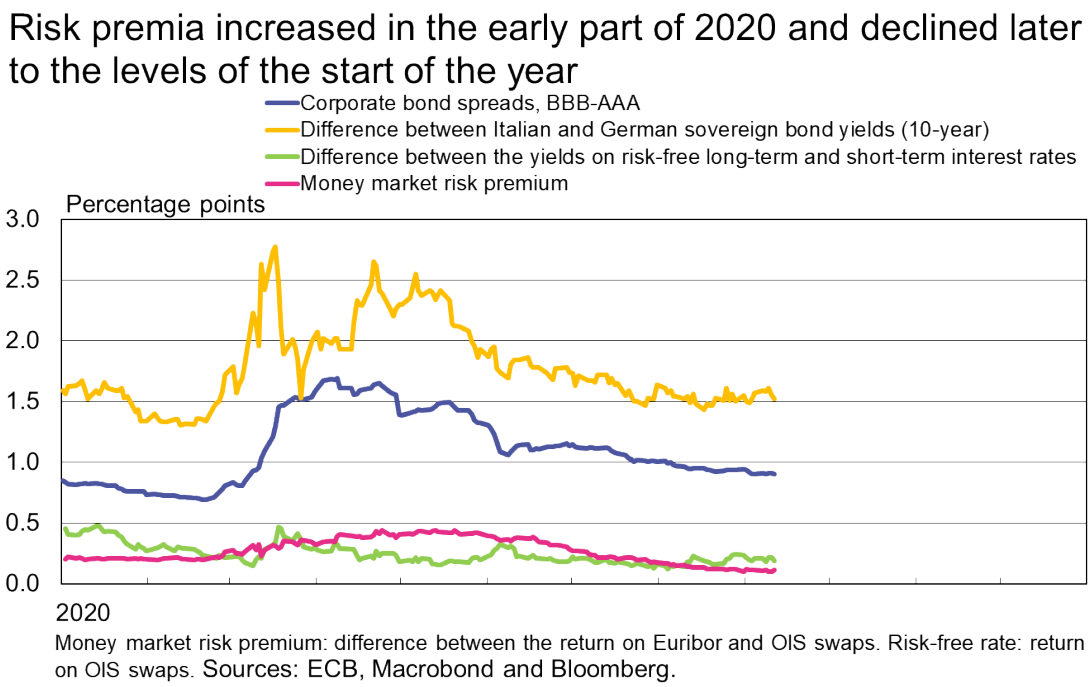
euro area since the summer.

Chart 5.



The deepening coronavirus crisis pushed the Services PMI to a record low in the euro area (Chart 6). Consumer confidence also weakened substantially. It is possible that it will still take some time for consumption to recover fully, not just because of the containment measures but also due to a major decline in overall demand.[5] Increased demand is possibly being constrained at present by the preparations that households are making for an uncertain future, one that draws ever near. Households that have been affected by the restrictions the most may have very uncertain expectations about the future.[6] Uncertainties about the future are reflected in the household savings rate, which in the euro area has now reached a record high.[7]

Chart 6.



Real-time data show output is recovering, but it will take time to get back to where it was

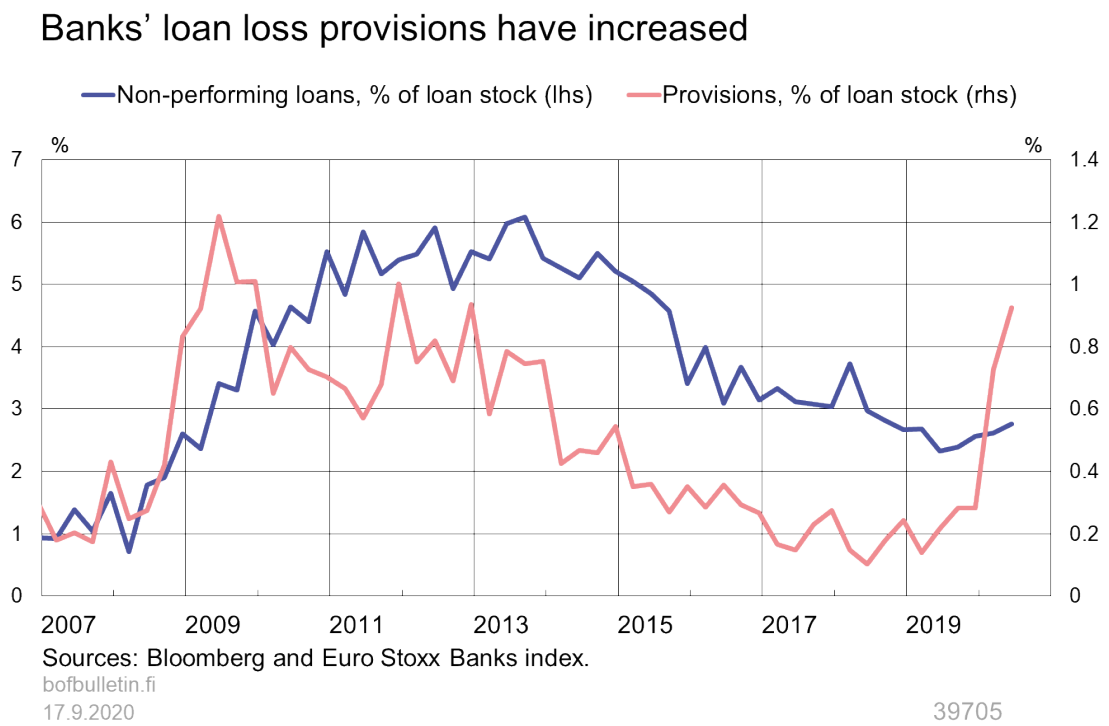
Up-to-date analyses of the coronavirus crisis use both conventional economic indicators and alternative data. Because the economic downturn has been exceptional and very sudden, there has been an urgent need to access real-time data. To measure economic activity during the coronavirus crisis, greater use has been made of e.g. the following: mobility indicators, the number of unemployment benefit claims, payment card data, freight volumes at ports and electricity consumption. These kinds of indicator update quickly, and they make it possible to obtain what is virtually real-time data on economic activity.[8] On the other hand, there is uncertainty regarding the reliability of the new indicators, as household behaviour during the crisis has varied enormously, owing to which earlier statistical linkages are not necessarily valid any longer. For example, households may well have switched increasingly to online consumption, which obviously does not show up in the indicators for mobility.

Chart 6 gathers together indicators that measure consumption. The decline in people's mobility is reflected in the mobility indicators collected by Google for the euro area.[9] The number of leisure time visits – for example to restaurants, coffee bars and museums – and visits to shops fell sharply. According to an index constructed by the University of Oxford, since the summer containment

measures have eased and are roughly half what they were in the spring.[10] At the same time, though, mobility has increased. In July, the Services PMI clearly exceeded the limit value of 50, although in August the score showed only a slight rise. Consumer confidence in the euro area is still very subdued, so domestic demand might well be slow to recover. Recovery may also be slowed once again by an increase in the number of infections, continuing restrictions, and uncertainty over the future due to a weak employment situation and continuation of the epidemic.

The widespread containment measures introduced in spring to slow the progress of the epidemic did not just affect services: industrial production came to a halt in several sectors. In spring, in fact, industrial output declined globally, although the more stringent restrictions in advanced economies meant that the downward trend was sharper in these regions. Industrial production in the advanced economies was down by 20% on the previous year, whereas the decline was more moderate in the emerging economies, at around 5%. For example, production in China is back to its pre-crisis levels. The crisis has also caused a significant global trade slowdown: the figure for June was 10% lower than that for January (Chart 7). The restrictions imposed and poor demand globally resulted in roughly a 10% drop in exports from the euro area in June compared with January.

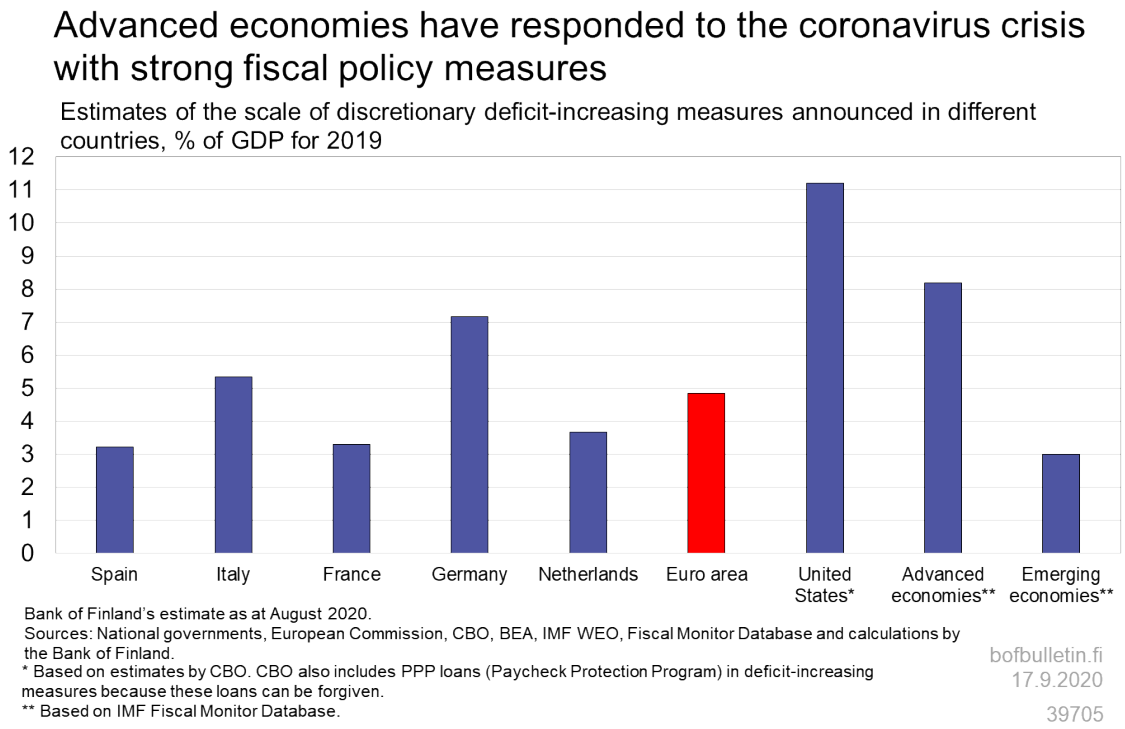
Chart 7.



Industrial output in the euro area decreased substantially during the spring (Chart 8). All non-essential production was prohibited, for example in Spain and Italy, and in several countries

factories were closed because of the disease, poor demand, and supply chain disruptions. In the period May–June, production picked up rapidly, but the increase was more subdued in July, rising 4.1% from the June figure. Production levels in July were still around 8% lower than in the previous year. The Manufacturing PMI and electricity consumption (closely linked to economic activity) tend to suggest that production will only grow moderately in the months to come.[11] Orders in industry are still down, so it could take some time for production to reach its previous levels. Growth in industrial output in the euro area will be hampered for the foreseeable future by low global demand, poor investment prospects and the uncertain economic outlook.

Chart 8.



The euro area economy has begun to recover since the contraction in the spring, broadly in line with expectations. According to the latest economic indicators, however, the recovery rate is levelling off, especially in the service sector. The economic indicators for August and September now suggest that there is an increased risk of a setback, i.e. there may be another decline in activity. The easing of restrictions has not continued, and this will have an adverse impact on consumption. After what was initially a swift recovery, industry is suffering from poor demand, reflected in a scarcity of orders, relatively poor confidence indicators, and a levelling-off in electricity consumption. This trend increases the likelihood of certain scenarios playing out, with recovery a very slow process in the second half of the year or economic activity declining again somewhat.

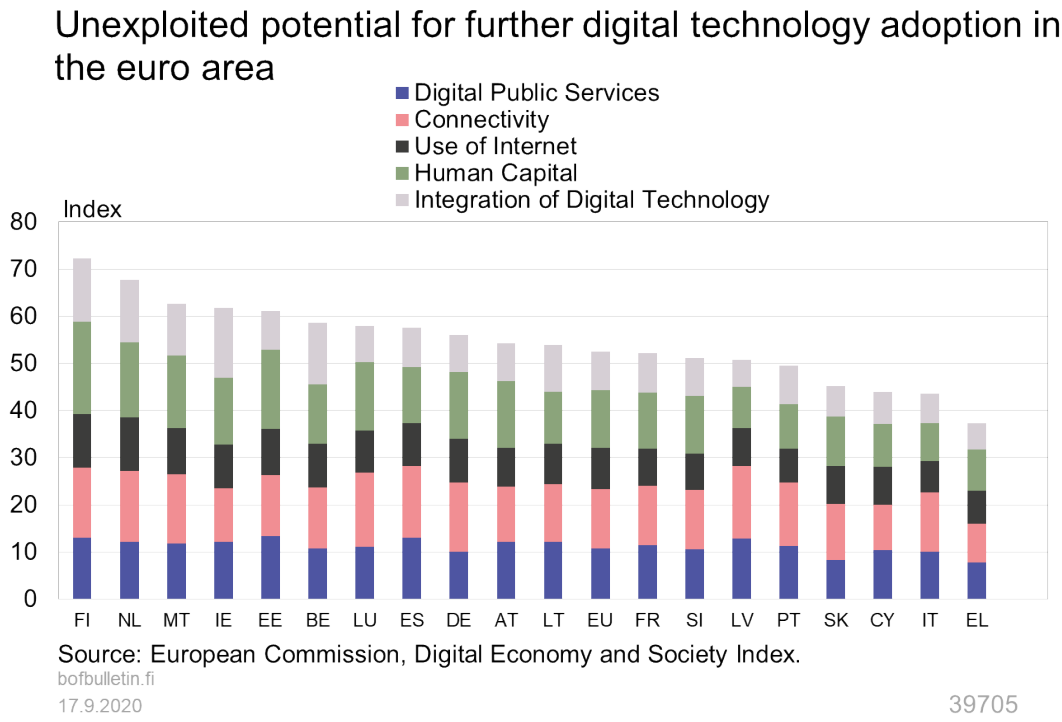
For now, the response to the coronavirus crisis is furloughs – but unemployment is expected to rise going forward

The coronavirus crisis has so far affected the unemployment rate in the euro area only slightly. In March, the unemployment figure was 7.2%; it rose gradually to 7.9% in July (Chart 9). The unemployment rate has remained fairly stable mainly because people are only considered unemployed if they are available and looking for work. However, the restrictions imposed have meant that this criterion of being available for work was not necessarily met, especially in the period March–May. Furthermore, the coronavirus crisis may have made some people give up looking for work. And in some countries, like Italy and Spain, redundancies were restricted or even completely prevented in response to the crisis.

The main reason for the small rise in unemployment in the euro area, however, is that there has been a large number of furloughs (temporary lay-offs). Employees who are furloughed in the euro area are not included in the statistics on the number of jobless people. The weakening labour market situation is indicated particularly in the reduction in the number of hours worked by 3.2% compared with the previous year in the first quarter of 2020, and by 16% in the second quarter. If the crisis persists, however, unemployment is also expected to increase. In May, when the acute effect of the crisis on the job market was at its most critical stage, approximately 20% of the labour force in the euro area were officially furloughed. During the coronavirus crisis, shortened working hours were in effect for 13% of the workforce in Germany, for example, and for around 20% in Spain, 25% in Italy, and as much as 40% in France.[12] Meanwhile, neither the number of unemployed nor the outflow from the workforce increased significantly during the acute phase of the crisis.

In contrast, the unemployment rate in the United States increased from around 4% in February–March to 14.7% in April, and the number of jobs decreased mainly in private services. Since May, however, the labour market situation has improved, and in August unemployment stood at 8.4%. Nevertheless, in the USA, most of the increase in unemployment is due to the fact that the number of jobless people has grown only temporarily, in some respects mirroring the furloughs in the euro area. Furthermore, one of the actions in response to the coronavirus pandemic in the USA was the introduction of the Paycheck Protection Program. The labour market situation thus deteriorated significantly both in the euro area and in the United States in a way other than might be judged merely from the unemployment rates. The unemployment rate in the USA is expected to be between 7 and 14% by the end of 2020 and between 4.5 and 12% in 2021. The ECB's projection for unemployment in the euro area is an average of 8.5% this year, rising to 9.5% in 2021. The OECD and European Commission predict similar trends for unemployment.

Chart 9.



Nevertheless, there is rapidly growing pessimism in unemployment expectations in the euro area, although the trend has now eased slightly (Chart 9). The number of employed people in the euro area, which rose substantially over several years leading up to the coronavirus crisis, fell in the second quarter of the current year by 2.9% compared with the previous quarter. That was a decrease of historic proportions.[13] The increase in employment in the largest countries in the euro area slowed from around 1% to -2% in July (Chart 9). The number of those in work is expected to fall further and the unemployment rate is predicted to rise, as some of those currently on furlough become officially unemployed. In France and Germany, however, the shortened working hours scheme may last as long as two years; in Italy and Spain the scheme will end earlier if no new decisions are taken. On the other hand, fiscal support measures should be gradually reduced, with the labour market adjusting to the new situation.

A high unemployment rate also has an effect on the outlook for prices in the euro area. When there are so many people out of work, labour force is more readily available, and pay pressures ease. Slow wage growth means reduced inflationary pressures.

The corona crisis has slowed inflation and lowered inflation expectations

The corona crisis has dampened global inflationary pressures, reflecting a decline in aggregate

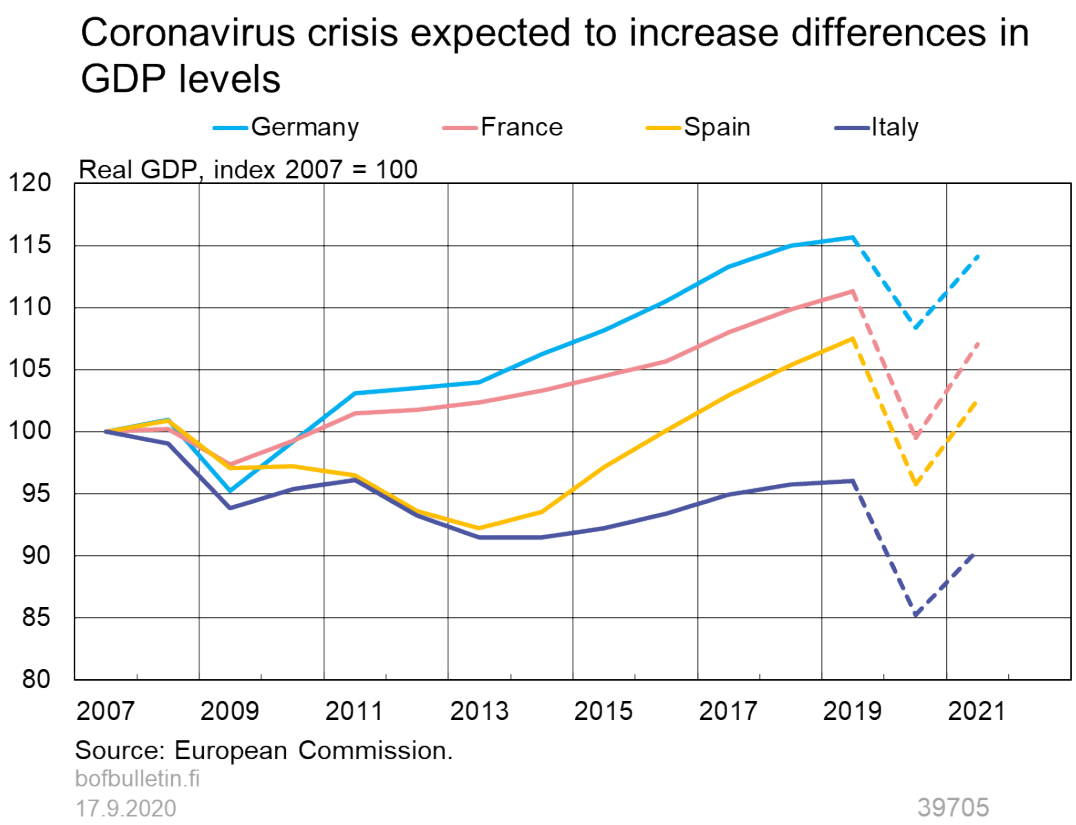
demand and a general fall in commodity prices. Only the prices of fresh food rose slightly between March and July as a result of the crisis. The price of oil declined significantly in the spring and was at its lowest close to USD 20/barrel. The price has since started to increase gradually, but it is still much lower than a year ago and there are no signs of significant upward pressure. The crisis-induced disruptions in the production chain may constrain supply and thus push up the prices of some products, but in light of current information, it is more likely that the downward effects on inflation from the decrease in aggregate demand will at least in the near term be stronger than the upward pressure on prices.

Euro area inflation has slowed slightly since the onset of the corona crisis. According to preliminary data, headline inflation fell into negative territory in August and stood at -0.2%. Since the beginning of 2020, inflation has averaged at 0.5%. Inflation has been depressed particularly by its energy component. A temporary decline in inflation into negative territory does not, however, indicate deflation. Deflation refers to a more permanent decline in prices so that the rate of inflation is negative in the medium term. While there are no signs of this type of trend, euro area inflation is expected to remain very moderate during the period under review.

The September 2020 ECB staff macroeconomic projections for the euro area foresee annual inflation at 0.3% in 2020, 1.0% in 2021 and 1.3% in 2022. Underlying inflation (inflation excluding energy and food prices) has remained stable at close to 1%. In July, there was a brief and slight pick-up in underlying inflation, but in August it slowed to 0.4%. The September 2020 ECB staff macroeconomic projections foresee underlying inflation at 0.8% in 2020, 0.9% in 2021 and 1.1% in 2022. Inflation is projected to decline in the coming months, due to oil price effects, appreciation of the euro and a temporary reduction in the VAT rate in Germany. Inflation is expected to pick up gradually as these base effects fade away. Underlying inflation will be dampened in a more persistent manner by the decline in demand and the slack in the economy caused by the corona crisis.

In the United States, too, consumer price inflation has slowed from close to 2% before the crisis to slightly over 1%, reflecting developments in energy prices and underlying inflation. Underlying inflation was in August 1.7%. Before the crisis, it was close to 2.3%. US Inflation is expected to be 0.5–1.5% in 2020 and 1.1–2.2% in 2021.

Chart 10.



Assessments of the inflation outlook are currently hampered by difficulties in the measurement of underlying inflation, as well as challenges related to estimates of unused production resources, i.e. the output gap. The inflation outlook is subject to higher uncertainty, reflected in, for example, the significant increase in the distribution of respondents' inflation expectations in various surveys.

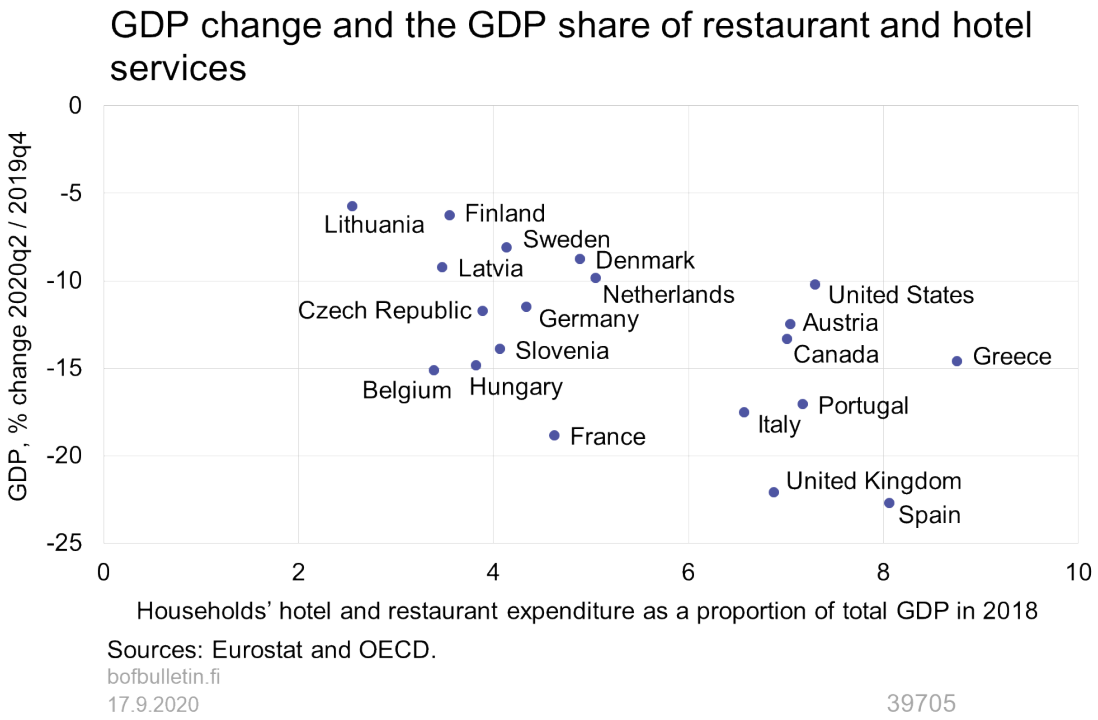
Difficulties in the measurement of underlying inflation are due, in particular, to the drying up of the supply of and demand for services in some industries as a result of corona-related lockdown measures. In the case of unobserved prices, statistical authorities in the euro area have used prices in the previous month or in the case of seasonal products (e.g. package holidays) price changes in the same period a year earlier. Services inflation in the euro area in recent months probably does not, therefore, reflect actual price pressures. The real effects of the corona crisis on services inflation will become visible only once the exceptional circumstances unwind. Services inflation has slowed since May, which may provide some indication of the downward impact of the corona crisis on inflation. Countries outside the euro area, too, are currently affected by the same difficulties of measuring services inflation, and differences in statistical compilation practices during the corona crisis therefore make it challenging to compare inflation statistics.

Based on several expert assessments, it is clear that there are currently unused resources in the

economy, i.e. output is below its potential level. As demand is estimated to remain subdued, there will be unused resources in the economy for quite some time, which will dampen inflation. Assessments of the inflation outlook are, however, challenged by the fact that it is currently exceptionally difficult to estimate the precise size of unused capacity.

Inflation expectations dropped drastically following the onset of the corona crisis. In the euro area, expectations declined based on both long-term market expectations and survey results (Chart 11). Of particular concern was the decline in longer-term expectations. During the summer, inflation expectations reversed, but they are still very low.

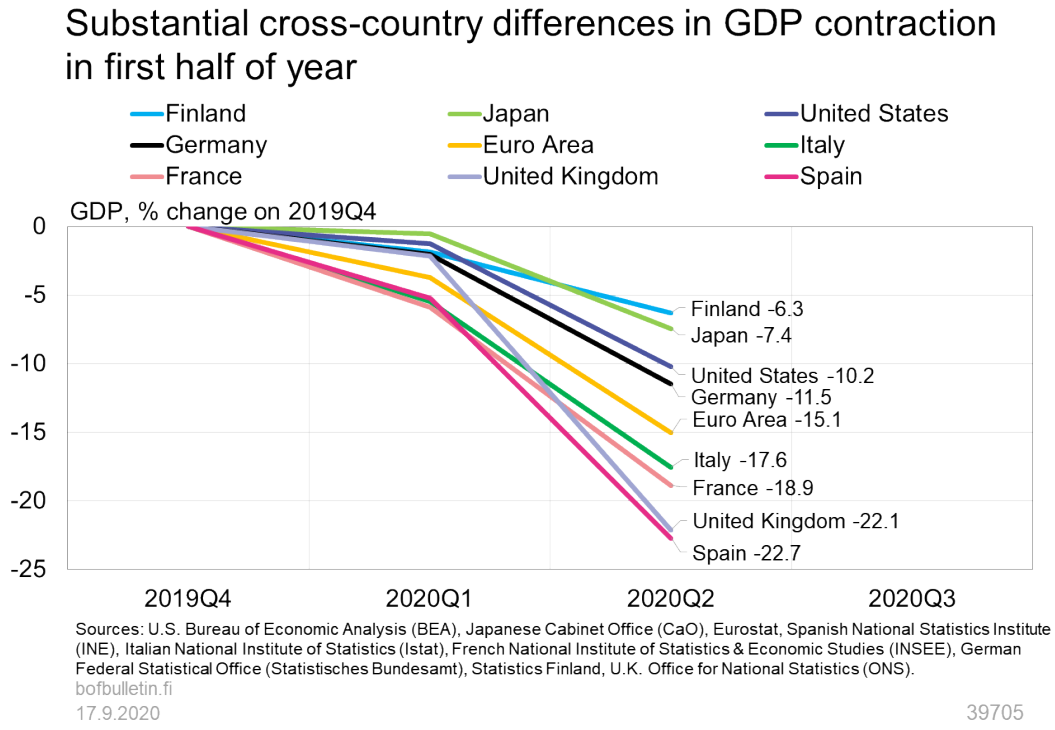
Chart 11.



As a result of the decrease in inflation expectations, the probability of deflation, derived from market information, increased rapidly and was significantly higher than at the turn of the year 2015. At that time, the ECB launched the expanded asset purchase programme (EAPP). Following the initial shock of the corona crisis, and in response to decisive, massive policy measures, the probability of deflation decreased rapidly and returned close to pre-crisis levels. Uncertainties related to the development of the corona crisis have, however, until recently been reflected also in inflation expectations and the probability of deflation has risen again slightly. As shown in Chart 12, the probability of negative average inflation 5 years ahead, derived from market information, increased at the turn of 2015 to approximately 40%, and at the onset of the corona crisis it was as high as 55%. The corresponding probabilities for average inflation 10 years ahead were some 15%

and 35%. By the turn of September, the probability of deflation decreased to below 10% for both the 5- and 10-year horizons. In mid-September, the average deflation probability for a 5-year period increased to some 15%, and that for a 10-year period to some 10%.[14] According to market expectations, the period of slow inflation will persist for some time yet, and a rapid pick-up is considered unlikely (see also the section on longer-term effects).

Chart 12.



Monetary policy and other economic policy measures and their effects

Measures in various policy areas support each other in mitigating the short- and longer-term adverse effects of the corona crisis

The policy measures in response to the corona crisis have been exceptionally strong globally, thus far successfully preventing a collapse of the economy via the financial markets, similar to the financial crisis. Measures in various policy areas have supported each other. Besides providing stimulus, the monetary policy measures have lowered risk premia and safeguarded market liquidity. Companies' access to finance and the transmission of monetary policy have been supported by significant fiscal policy measures and loan guarantees, whereas the easing of bank regulation and macroprudential policy has supported banks' ability to act as financial

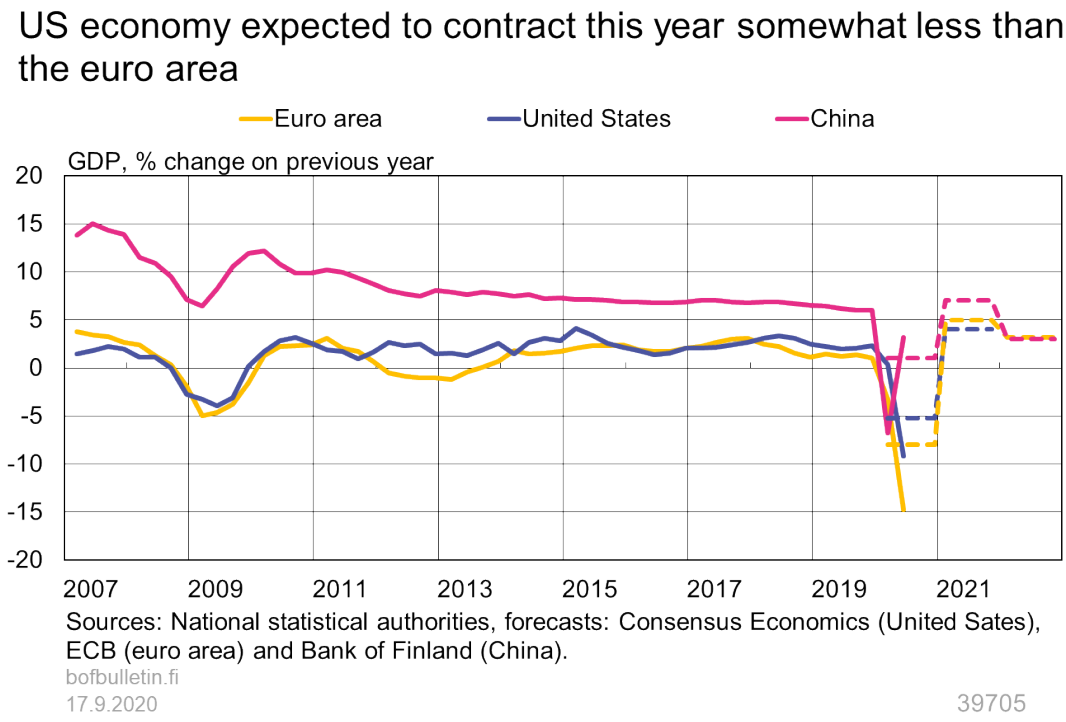
intermediaries. On the supranational level, actions by the EU have supported the financing of Member States' policy measures, and emergency financing provided by the IMF has responded to the funding needs of emerging economies.

The purpose of economic policy measures is to mitigate the adverse effects of the corona crisis in the short and longer term. The policy measures have thus far succeeded in stabilising the economy in the acute phase of the crisis, even to the extent that the exceptional weakness of the real economy has since the initial phase hardly been reflected on the financial markets. Economic policy support is, however, necessary at least for as long as we continue to balance between containment measures and the spreading of the epidemic. The nature of economic policy measures required after the acute phase of the crisis is, however, changing towards supporting economic recovery, adjustment and reconstruction.

Strong monetary policy measures have lowered risk premia

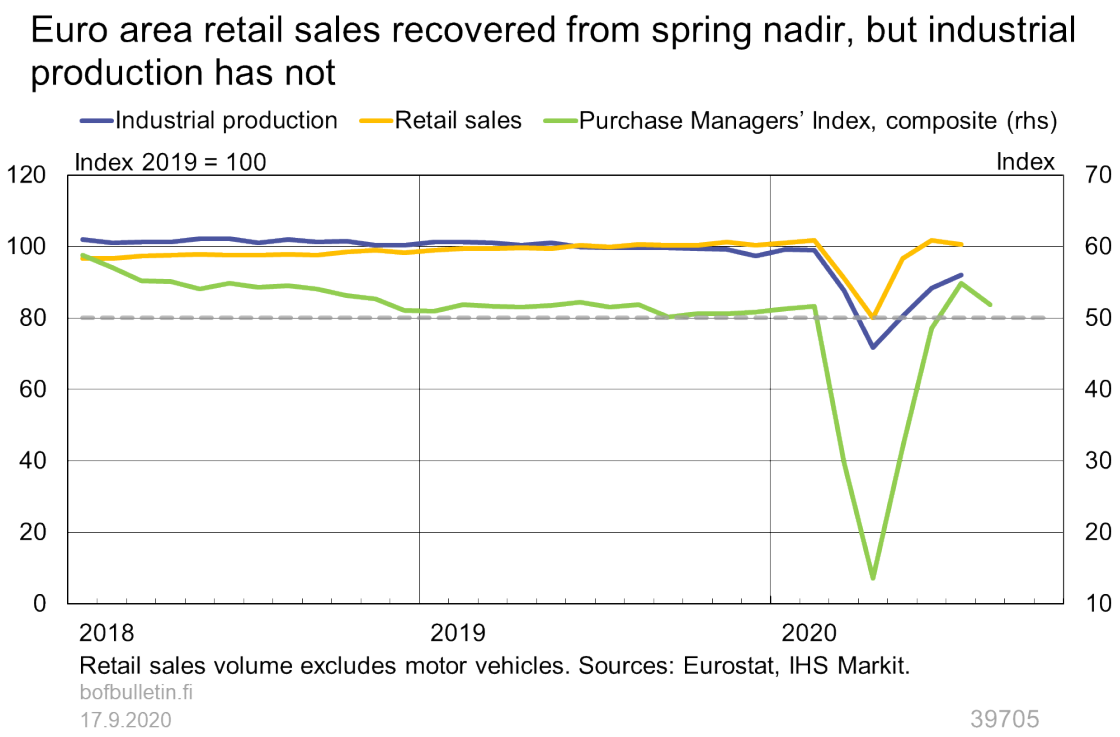
The deepening of the epidemic in March increased uncertainty on the financial markets (Chart 13).[15] Global stock indices plummeted in March. The uncertainty was transmitted to long-term interest rates, halting a decline that had been ongoing since autumn 2019. In the first weeks of March, the yields on long-term sovereign bonds rose sharply in the euro area, in particular (Chart 14). The rise in long-term interest rates reflected mainly the growth in risk premia, as the weaker outlook for the economy had lowered the expectations for short-term interest rates. The higher risk premia were reflected on the corporate bond market, in the spread between long- and short-term interest rates, on the interbank loan market, and in the spreads between the yields on euro area sovereign bonds (Chart 15). For example, the spread between the yields on Spanish and Italian sovereign bonds relative to German sovereign bonds widened sharply in March.

Chart 13.



Since March, interest rates and risk premia have declined close to the levels at the beginning of the year (Charts 14 and 15). The decline in interest rates and decrease in risk premia are driven by both views that the pandemic is past its worst phase and the extensive monetary and fiscal policy measures announced in several countries in the spring. The purpose of the policy measures was to mitigate the growth of risks and smoothen the economic effects of the pandemic. Long-term interest rates have been dampened particularly by accommodative monetary policy and low interest rate expectations.

Chart 14.



Euro area interest rates will remain low for a long time still

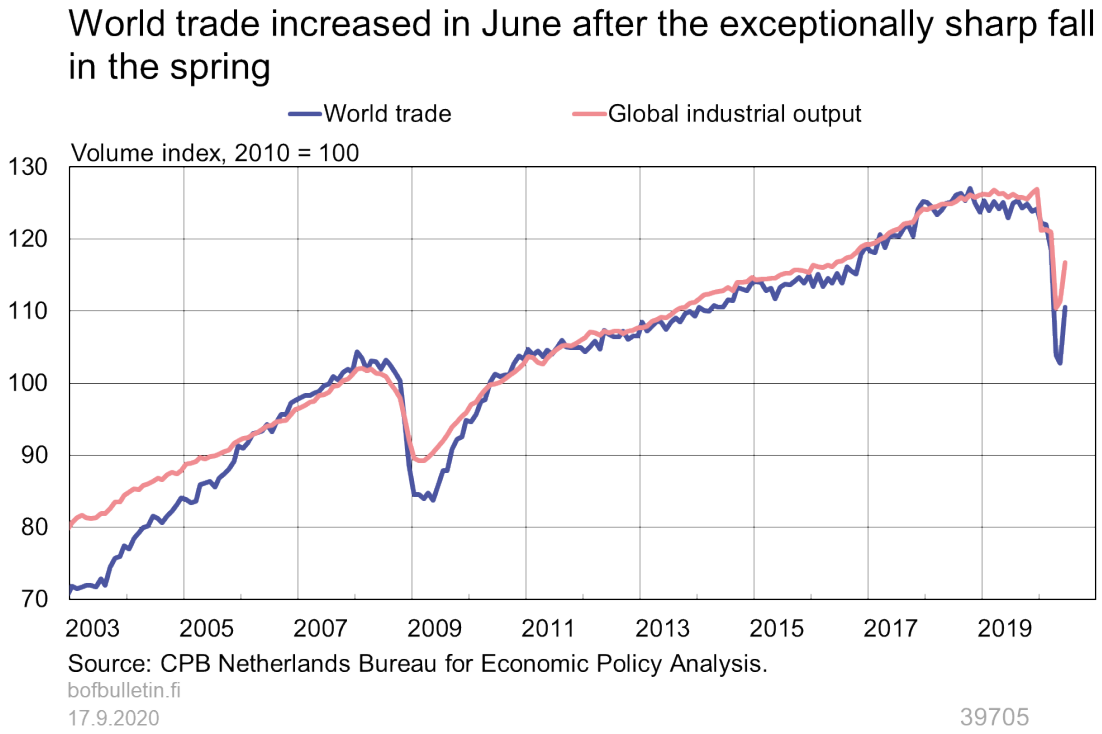
Central banks globally have responded to the crisis by strongly easing their monetary policy stance. The US Federal Reserve has lowered its benchmark interest rate close to zero and purchased a significant amount of securities on the markets. The Fed has also announced the establishment of various financial facilities to safeguard the flow of credit and stabilise the markets. These facilities are targeted at financial institutions, non-financial corporations, and state and local governments. The Fed also expanded its central bank liquidity swap lines to enable central banks to provide dollar funding to their counterparties. The purpose of the measures was to safeguard liquidity on the global financial markets. Of the G20 central banks, 15 have lowered their policy rate since February; short-term rates in particular, have been lowered in many emerging economies where the space for rate cuts was larger than in the advanced economies before the crisis. In the advanced economies, the monetary policy response has focused on non-standard measures, some of which have resulted in a significant increase in central banks' balance sheets.[16] As a result of the increase in monetary policy operations since the start of the year, the ECB's balance sheet has expanded from over 40% to some 60% of GDP, i.e. by approximately EUR 1,700 billion (see Chart 9, theme article). The Fed's balance sheet too, has grown during the crisis, by some 15%, to over 35% of GDP.

During the crisis, the European Central Bank has eased its accommodative monetary policy further, to mitigate the effects of the pandemic on financial stability and to maintain price stability. The policy measures were targeted at maintaining favourable financing conditions, stabilising the financial markets and supporting bank lending via the provision of liquidity.[17] In its meetings in March, the Governing Council announced its decision to add to the asset purchase programme (APP) a temporary envelope of additional net asset purchases of EUR 120 billion until the end of the year 2020, and to launch a new pandemic emergency purchase programme (PEPP). The ECB announced that the PEPP will initially have an overall envelope of EUR 750 billion. In June, the envelope for the PEPP was increased to a total of EUR 1,350 billion. At the same time, the ECB has kept the interest rate on the deposit facility in negative territory, at -0.5%, and bank lending has been facilitated by longer-term refinancing operations. The Governing Council announced that the horizon for net purchases under the PEPP will be extended to at least the end of June 2021. In any case, it will conduct net asset purchases under the PEPP until it judges that the coronavirus crisis phase is over. Net purchases under the asset purchase programme (APP) will continue at a monthly pace of EUR 20 billion, in accordance with the Governing Council decision in September 2019. The Governing Council continues to expect monthly net asset purchases under the APP to run for as long as necessary to reinforce the accommodative impact of its policy rates, and to end shortly before it starts raising the key ECB interest rates. The key ECB interest rates are expected to remain at their present or lower levels until the Governing Council has seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2%, and such convergence has been consistently reflected in underlying inflation dynamics. At its meeting in September, the Governing Council decided to keep unchanged the monetary policy measures it had decided on earlier.

In its asset purchase programmes, the ECB purchases both public and corporate sector debt securities. Thereby, the ECB eases financing conditions in all jurisdictions and ensures the smooth transmission of monetary policy. In March, the ECB extended the range of eligible assets under the purchase programmes to cover commercial paper and Greek government debt securities.[18] Purchases under the PEPP will be conducted in a flexible manner. This allows for fluctuations in the distribution of purchase flows over time, across asset classes and among jurisdictions. The benchmark allocation across jurisdictions is the capital key of the national central banks.[19] With the PEPP, the ECB has sought to stabilise the financial markets and prevent fragmentation of euro area financial markets, while simultaneously easing its monetary policy stance during the crisis. The programme ensures the smooth transmission of risk-free market rates to the financial markets. This enables monetary policy to lower, via various effect channels, financing costs in many asset classes.[20] The ECB's measures have a direct and an indirect impact on the market for corporate bonds. Under the PEPP and the CSPP (which is part of the APP), the ECB purchases

corporate bonds on the markets, which lowers their interest rates. Purchases under the corporate sector programme account for some 8% of the APP.[21] The interest rates on corporate bonds are indirectly affected by the fact that the ECB's purchases of public sector debt securities lower the duration risk and thereby risk premia on the market. Measures by the ECB have contributed to the return of risk premia close to the levels of the start of 2020 (Chart 15). The ECB estimates that the PEPP will moderately push up inflation and GDP growth in the near term, compared with a situation in which the purchase programmes had not been implemented.[22]

Chart 15.



Measures supporting bank lending maintain favourable financing conditions for businesses and households, despite higher credit risks

During the crisis, the ECB has also announced new longer-term refinancing operations (bridge LTRO and PELTRO) and has eased the conditions for the third series of the longer-term refinancing operations (TLTRO III) announced earlier. The purpose of TLTROs is to stimulate bank lending to households and businesses by offering banks long-term funding at attractive conditions. The interest rate to be applied is linked to the participating banks' lending patterns. The operations increase bank lending by lowering banks' funding costs (provided the lending patterns fulfil the pre-defined criteria[23]), thereby making the provision of credit increasingly profitable. Following the onset of the crisis, the ECB made the TLTROs even more attractive, as the interest

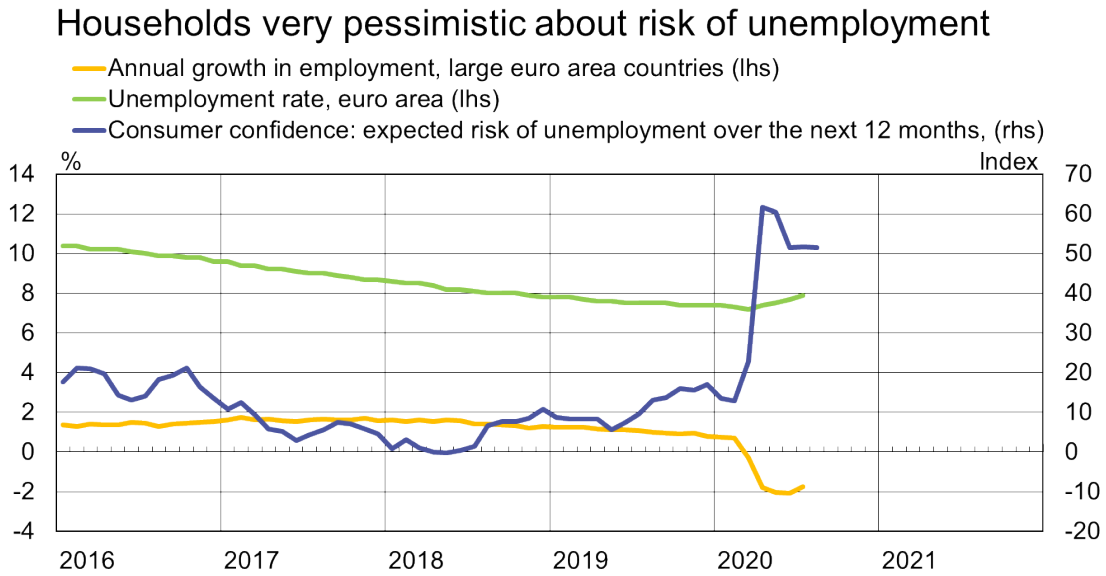
rate on the TLTROs can be as low as 50 basis points below the average on the deposit facility for banks that maintain their levels of credit provision.[24] Empirical studies show that the targeted refinancing operations have increased bank lending to businesses and benefited particularly small firms.[25,26,27]

The onset of the crisis considerably weakened the cash flow of many companies. This, in turn, was reflected as a significant increase in the demand for corporate credit in the second quarter of the year.[28] At the same time, however, interest rates on new corporate loans have remained low and banks have reported that their corporate credit policies have remained unchanged on average (Chart 16). This favourable trend has also been supported by the ECB's TLTROs. A key role has also been played by government guarantees to businesses in response to the crisis. Developments on the housing loan markets have been very different. The crisis decreased demand for housing loans and tightened banks' credit policies.

Monetary policy measures in the acute phase of the crisis were significant in size, scope and speed. Before the onset of the corona crisis, both the US Federal Reserve (Fed) and the ECB had launched a strategy review, due, in particular, to the changes in the operating environment already before the crisis. In August 2020, the Fed finalised its review, resulting in significant revisions to its monetary policy strategy. In its new strategy, the Fed seeks to achieve inflation that averages 2% over time (a flexible form of average inflation targeting). Therefore, following periods when inflation has been running below 2%, an appropriate monetary policy will likely aim to achieve inflation moderately above 2% for some time.

The objective of the new strategy is the stronger anchoring of long-term inflation expectations to the target level in the current monetary policy environment (see feature article). In the new strategy, policy decision will be informed by the Fed's assessments of the shortfalls of employment from 'full employment' rather than by deviations therefrom. In other words, the Fed no longer responds to a situation in which employment exceeds the level of 'full employment'.[29] The ECB's strategy review is still ongoing.[30] The review encompasses the quantitative formulation of price stability, the monetary policy toolkit, and economic and monetary analyses.

Chart 16.



The growth in unemployment is calculated as a weighted average of the figures for the largest euro area countries (DE, FR, IT, ES, NL). Sources: National statistical authorities, European Commission, Eurostat and calculations by the Bank of Finland.

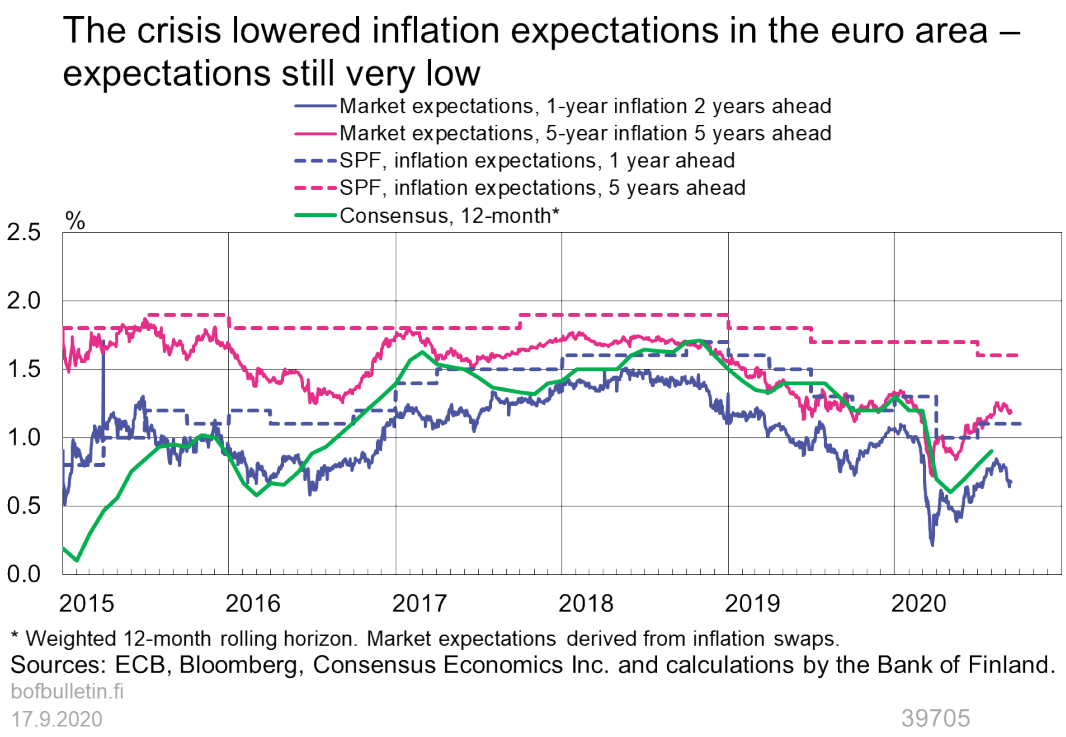
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Stress tests indicate that the euro area banking sector is, on average, resilient to the coronavirus pandemic-related growth in credit risks

The short-term profitability prospects of euro area banks have deteriorated as a consequence of the coronavirus pandemic, and the risks related to banks' operating environment have increased. Bank profitability is under pressure notably because of preparations for future loan losses given the sharp weakening of the economy (Chart 17). Revenue growth is also expected to remain muted. The challenging operating environment has eroded banks' net interest income, in particular, and credit growth is expected to slow due to the weaker economic outlook. Banks are also suffering from many long-term structural issues. Many euro area banks are operating with a heavy cost structure, and the coronavirus pandemic may postpone the completion of their cost-savings programmes.

Chart 17.



Banking sector exposures to individual industries vary by country, which will be reflected in the credit losses of banks in different countries. The risks are particularly high in countries where banks already have significant amounts of non-performing loans on their balance sheets, and private-sector actors are the most vulnerable to the pandemic-related deterioration of economic growth. The prolongation of the crisis may also be reflected on the housing and real estate markets, where banks have traditionally high exposures in Europe.

The risk resilience of euro area banks has improved, however, reflecting the regulatory reforms implemented following the global financial crisis. Compared with previous crises, banks are now more solvent and therefore better positioned to face potential downturns. In addition, supervisors have reacted to the pandemic by e.g. granting credit institutions flexibility with regard to the treatment of loan losses, which should provide some relief to banks in the short term. Banks' credit risks are also being reduced by government guarantee schemes, as these transfer some of the credit risks from banks to the public sector. The ECB's refinancing operations, in turn, have supported bank liquidity and lowered the cost of funding.

According to the results of the stress test[31] published in July 2020 by the banking supervision system in Europe, the Single Supervisory Mechanism (SSM), the euro area banking sector is, on average, resilient to the coronavirus pandemic-related growth in credit risks. Based on the COVID-19 central scenario of the exercise, banks' Common Equity Tier 1 (CET1 ratio) would

decline cumulatively by 1.9 percentage points, to 12.6%, by 2022. However, if economic developments remain weaker than assumed in the baseline of the ECB's June 2020 projections, this would have a material negative impact on euro area bank capital. In the severe scenario of the exercise, the CET 1 ratio would decline by 5.7 percentage points, to 8.8%, by the end of 2022. If the situation weakens, the ECB finds that authorities should stand ready to implement further measures to ensure the smooth flow of bank credit to the real economy. This notwithstanding, the ECB sees that even in the severe scenario the banking sector's overall capital shortfall would be restricted and contained.

Supervisory and macroprudential measures to support the real economy in the crisis

Authorities have also taken a range of measures in the area of banking supervision and regulation, and macroprudential policy to mitigate the negative economic impacts of the pandemic. These measures have aimed at maintaining the flow of credit to businesses and households, thereby helping them to cope with sudden income losses. The purpose has also been to strengthen the effectiveness of monetary and fiscal policy measures and to prevent the adverse longer-term economic effects of the pandemic.

Thanks to the post-financial crisis regulatory reforms, banks entered the coronavirus pandemic with considerably more and better-quality capital and with a better liquidity position than during the outbreak of the financial crisis. Larger capital buffers and the possibility of using them have improved banks' capacity to absorb loan losses and continue lending to households and businesses despite the sharp deterioration in the economic outlook.

European banking and macroprudential supervisors acted swiftly in the spring. The Single Supervisory Mechanism (SSM) allowed its directly supervised banks to operate temporarily below certain statutory liquidity and capital levels. Banks were also given flexibility regarding, for example, the treatment of loan loss provisions. National supervisors provided similar flexibility to smaller banks under their supervision. European banks have also extensively followed supervisors' recommendations to temporarily suspend payment of dividends. Furthermore, implementation of the final Basel III standards was deferred by a year.

The coronavirus crisis has been the first test for the macroprudential policy adopted actively after the global financial crisis. Many national macroprudential authorities in Europe eased banks' capital buffer requirements or revoked previously announced constraints. According to the ECB, the measures of the micro- and macroprudential supervisors released around EUR 140 billion of capital from euro area banks to loss absorption and continued bank lending.[32] However, the willingness and opportunities of banks to take advantage of the capital released may be reduced

by, for example, fears of market reactions and the potential other restrictions in case of a weakening of banks' capital adequacy.

Without the policy interventions, the financial sector would probably have intensified the impact of the pandemic on the real economy, as a noticeable contraction in lending would have driven the real economy into a deeper recession. The ECB's model calculations suggest that the measures by the micro- and macroprudential supervisors will indirectly increase euro area GDP by almost 2 percentage points over a two-year period compared with a situation where these measures had not been taken.[33]

Supported by the policy interventions, the financial system has weathered the recent turmoil. In the medium term, however, the weaker economic outlook is likely to lead to higher loan losses, although subsidies and public guarantees to firms are expected to cushion some of the impact. The downside of public guarantees is that they reinforce the negative feedback loop between banks and their sovereigns which authorities have sought to weaken since the sovereign and financial crisis. The coronavirus crisis has highlighted the need to further develop and strengthen the European banking system. In order to diversify the bank-centred financial system, it is also important to continue developing the capital markets.

Strong fiscal policy measures have offset the impact of the crisis

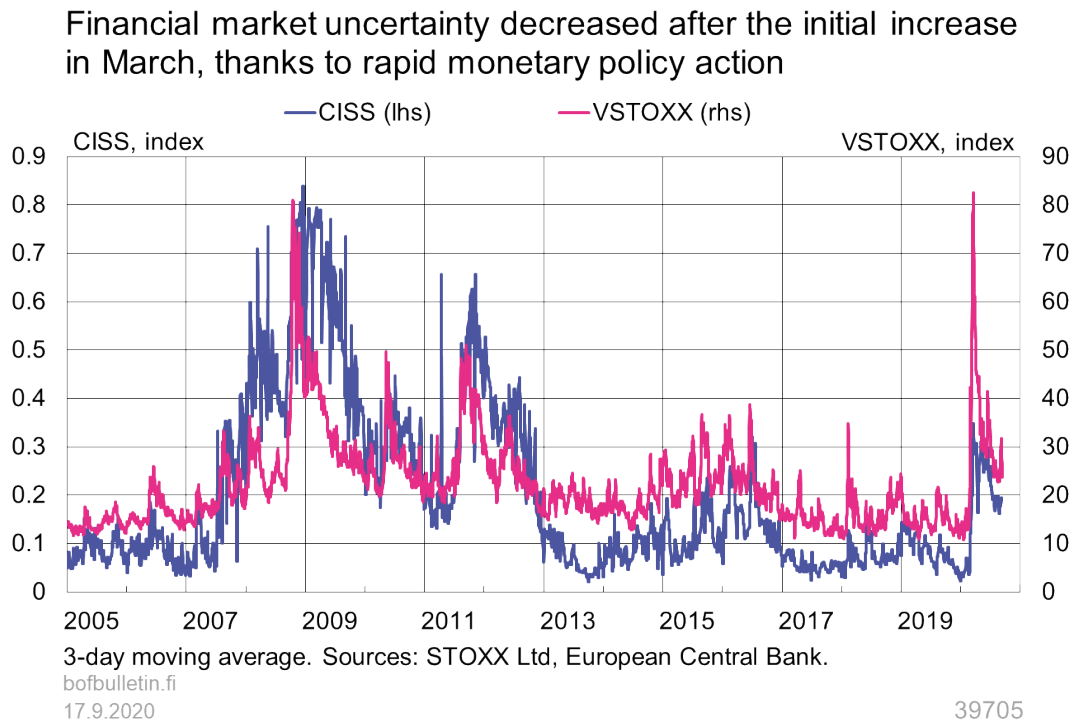
Countries around the globe have taken strong fiscal policy measures in response to the coronavirus pandemic-related sharp deterioration in economic conditions. The IMF estimates[34] that the combined fiscal support in G20 economies has amounted to as much as USD 10 trillion, which is estimated to account for almost 10% of the G20 countries' GDP for 2019. The measures have focused on securing economic structures. Firms' survival from the crisis has been supported by direct business subsidies, loans and loan guarantees. Various short-time work schemes have been introduced to preserve jobs and maintain consumer purchasing power. The eligibility conditions for unemployment benefits have also been eased, and households have received direct subsidies.

As a result of these measures, the euro area general government debt is expected to increase from 84% to about 101% relative to GDP in 2020 (Chart 18). Over the next few years, the debt ratio is expected to decrease only slightly. In 2020, the debt ratio is expected to rise to 77% in Germany, to over 120% in France and Spain, to 166% in Italy and to 141% in the United States.[35] Consequently, public debt will grow by almost 20 percentage points in Germany and by roughly 30 percentage points in the other countries mentioned.

The euro area aggregate general government deficit is expected to climb from 0.6% to 8.8%

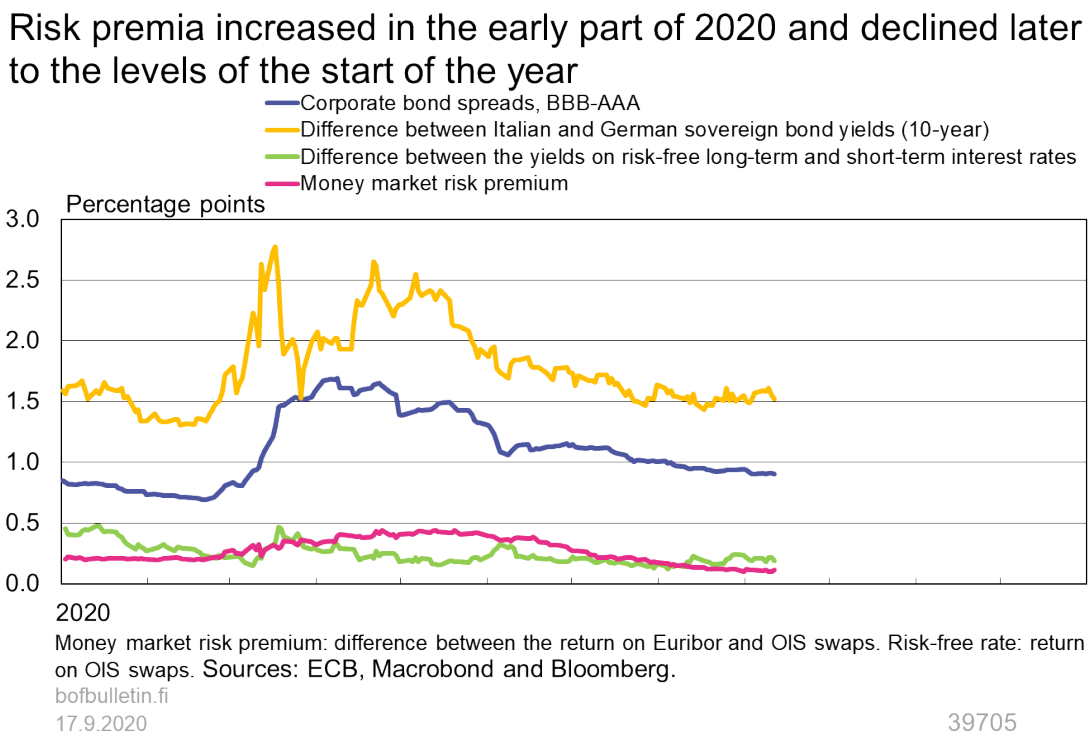
relative to GDP in 2020, meaning the deficit would be over 2.5 percentage points higher than during the financial crisis. The strong increase in deficit reflects the contraction of GDP and fiscal stimulus measures. In the subsequent years, the deficit ratio is projected to decline as the economy returns to growth and the effects of the stimulus measures dissipate (Chart 18). The euro area general government balance will deteriorate in structural terms, creating adjustment pressures from 2022 onwards. In making future decisions, attention should be given to the strengthening of fiscal space and the improvement of long-term fiscal sustainability. In the United States, the overall fiscal deficit is expected to rise steeply, from 6.3% to 23.8% relative to GDP in 2020.[36] Given the much larger deficit in the United States, public debt will grow more in the United States than in the euro area (see Chart 8 in the feature article).

Chart 18.



The various stimulus measures will be reflected in the public sector deficit and debt ratios in divergent ways. Subsidies and tax cuts will immediately enlarge the public deficit and debt. Direct loans and capital injections into companies will not deepen the public deficit in the short term, but will increase public debt. To the extent that loans will not be repaid or capital injections lose their value, however, the loans and capital injections may deepen the public deficit in the future. Loan guarantees will not be immediately reflected in deficit, nor in public debt. If loan guarantees are called on, however, they will increase both the deficit and the debt in the future.

Chart 19.



The most sizeable measures have so far been announced by the advanced economies, while in the emerging economies the effectiveness of fiscal policy in stimulating the economy has been weaker on average. The United States has implemented substantial deficit-increasing support measures, estimated at around 11% of GDP for 2019. In the euro area, discretionary measures have so far been smaller in scale, on average about 5% of GDP. However, the size of the fiscal stimulus varies substantially across euro area countries (Chart 19). In addition to discretionary measures, economies have also derived support from the operation of automatic stabilisers. Although automatic stabilisers are generally estimated to be larger in the euro area than in the United States, this difference is being reduced during the coronavirus crisis by, for example, the introduction of short-time work schemes, which has dampened unemployment expenditure growth in the euro area. As a whole, the US public finances will respond to the coronavirus crisis more strongly than the euro area public finances, which is reflected in the larger change expected for the US overall deficit.

Up to date, only a few euro area countries have announced traditional stimulus measures, such as public investments or tax cuts. These will be more important in the recovery phase as the effects of the exceptional measures dissipate. At that stage, countries can also gradually phase out the support measures introduced during the coronavirus crisis. In doing so, however, they should avoid any sudden changes in, for example, the availability of financing for firms. On the other hand,

if the support measures remain in place for too long, this will increase the government debt burden and could also hamper the adjustment of the economy to the changed situation, thus slowing productivity growth.[37]

Authorities at the EU-level have decided on substantial financial packages amounting to around EUR 1,200 billion. The measures will be phased over several years, focusing above all on securing Member States' access to finance. The most significant measures have been the Next Generation EU (NGEU) recovery instrument of EUR 750 billion; a credit line of EUR 240 billion under the European Stability Mechanism (ESM) to Member States for health expenditure; a loan of EUR 100 billion under the SURE instrument[38] to Member States for financing measures in support of employment; and additional capital for the European Investment Bank (EIB) for granting guarantees for corporate loans. The NGEU programme is the largest of these, consisting of both direct grants (EUR 390 billion) and loans to Member States (EUR 360 billion).

The programmes through the EIB and the ESM have already been launched. In addition, at the end of August, the European Commission submitted a proposal for loans totalling EUR 87.3 billion provided to Member States under the SURE instrument. Legislation on the Recovery and Resilience Facility (RRF), which constitutes the core of NGEU, is under preparation, and financial support under the RRF will be available as of 2021, once countries' national investment and reform agendas have been prepared and approved.

A prerequisite for receiving support under the RRF is that Member States commit to their investment and reform agendas, particularly supporting the green and digital transitions in their economies. The positive effects expected from the reform agendas are important for economic growth and debt sustainability in Member States. At their best, the reform agendas could support longer-term economic growth throughout the euro area and reduce divergence between countries.

International financial institutions have responded to the need for an unprecedented amount of emergency funding for emerging and developing economies

In addition to the domestic and global shock caused by the pandemic, the shock to raw material prices and the sudden stagnation of tourism have been particularly felt in many emerging and developing economies. According to the IMF[39], the economies in this country group will contract by 3% in 2020 and will grow at an average rate of 5.9% in 2021. The economic shock caused by the coronavirus pandemic will be considerably larger than the shock from the global financial crisis. At that time, the lowest growth rate recorded for the country group was 2.8%.

Global financial conditions tightened substantially due to the coronavirus crisis, and there was particular pressure on emerging markets and developing economies. In March–May 2020, capital outflows from these countries amounted to a record 0.5% of GDP.[40] However, supported by the extensive global policy interventions, financial conditions eased and capital outflows from these economies stabilised overall. Nevertheless, financing conditions have remained tight in most economies with a low credit rating.

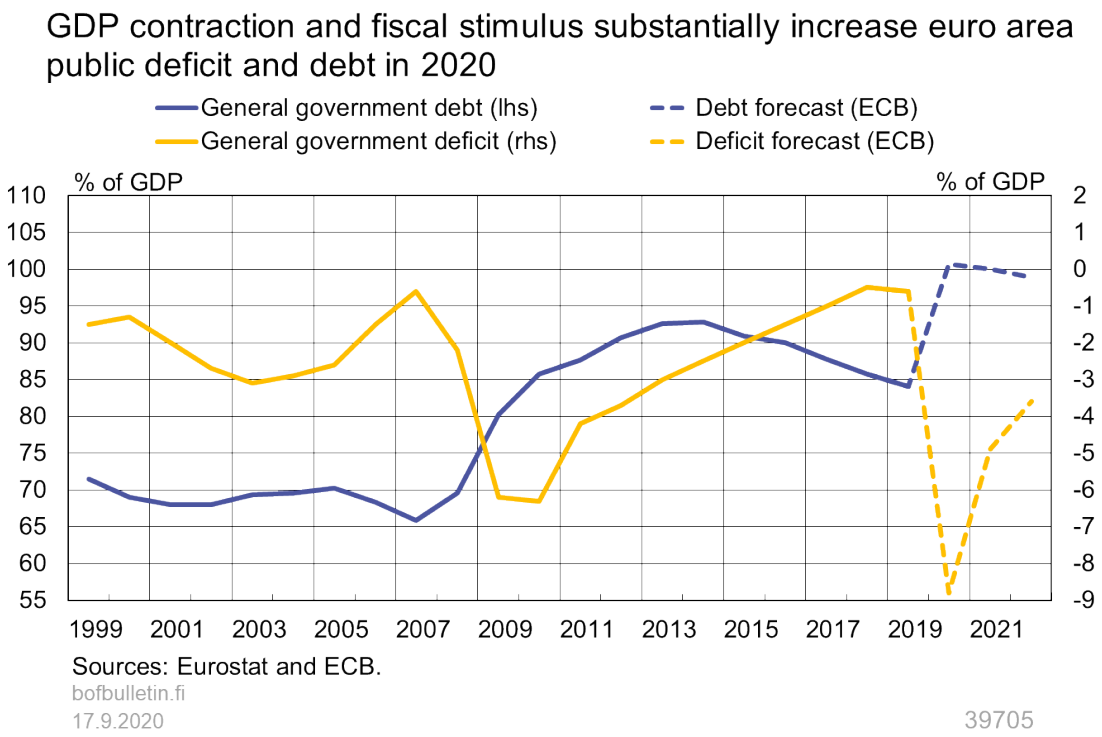
The strong growth shock faced by the most vulnerable emerging and developing economies, as well as these countries' limited opportunities for policy measures to support the economy, together with the challenges of accessing external financing, have led to an unprecedentedly high demand for emergency finance from international financial institutions. The international community has responded swiftly. By the end of July 2020, the IMF had granted almost USD 90 billion of emergency finance to 80 countries.[41] In addition, development banks[42] have accepted new commitments amounting to over USD 80 billion within the same time period.[43] The international community has also supported the poorest countries through relief from debt service obligations. The G20 countries have pledged to freeze bilateral debt service payments for the poorest countries from May until the end of 2020. Through this initiative, 42 countries have been able to defer loan repayments to a total amount of USD 5.3 billion.[44] In addition, the IMF has forgiven debt repayment falling due to it over the same period.

Longer-term effects of the coronavirus crisis

Past crises suggest a weakening of long-term growth prospects

Growth forecasts have been revised downward significantly due to the COVID-19 crisis (see section 1). The forecast for potential output growth in 2020 was also adjusted towards the downside in the European Commission's latest assessment (Chart 20).

Chart 20.



Based on the Commission's assessment, potential output has undergone a level shift and the euro area's potential output is not expected to return to pre-crisis levels. However, according to the Commission, the growth rate of potential output will return to the pre-crisis trend in 2021. However, it should be noted that at this stage there is great uncertainty about the estimates of the long-term effects of the coronavirus crisis on the level of potential output as well as about its growth rate.

The corona crisis may also have a long-lasting impact on productivity and, consequently, on long-term economic growth. Evidence from the Great Recession suggests a crisis-induced deceleration of productivity growth, and the same is likely to be expected for the corona crisis.[45] The coronavirus crisis may decrease capital investments over the longer term. In the early stages of an economic crisis, investment tends to decrease due to factors such as heightened uncertainty and the corresponding precautionary savings motive, but also due to financial frictions and potential constraints to borrowing.

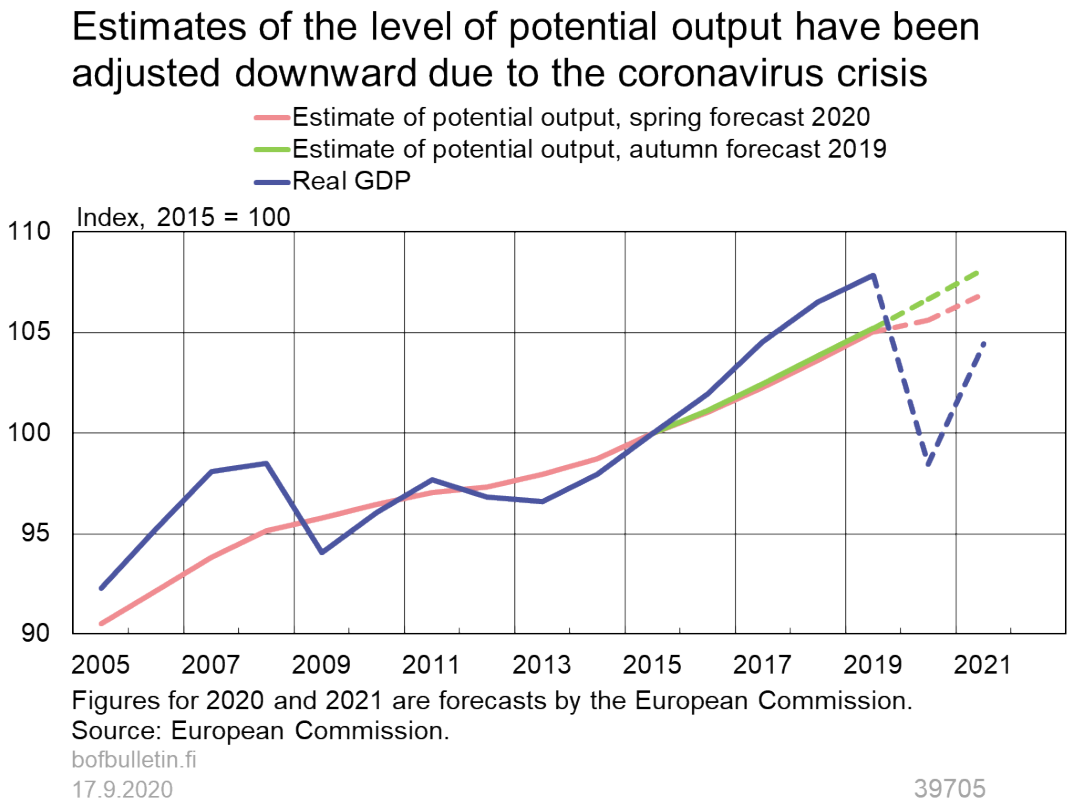
Due to scarring effects (hysteresis), investments may remain subdued for a long time after the crisis has passed.[46] A large-scale crisis may cause economic agents to re-evaluate economic tail-risk, i.e. the likelihood of generally improbable events, leading them to re-assess the risk underlying investment and causing them to lower investment in the future as well.[47] According to

some studies, scarring effects in investments could be particularly pronounced in the COVID-19 crisis.[48] However, productivity growth may also slow down. Hysteresis has been shown to have contributed to the slowing of productivity growth during the Great Recession.[49] According to these studies, investments that increase total factor productivity, such as investments in R&D and technology adoption, tend to decrease during recessions, leading to a slowdown in productivity growth. Epidemiological studies also support the assessment that the coronavirus crisis will weaken long-term growth prospects. According to these studies, epidemics have a negative impact on productivity and the level of the natural rate of interest.[50]

Increased digitalisation may surprise on the upside and improve productivity

Due to the important role of digital technologies in the covid-19 crisis, there could also be positive surprises with respect to productivity. The shift from the physical workplace to the digital sphere may foster remote working possibilities in a regular manner after the pandemic. This could significantly alter working life and working practices, which in turn may improve the efficiency of time allocation and help balance working life. These are all factors that improve labour productivity. Moreover, digital technologies are a key enabler of teleworking, which may imply that a substantial increase in digital technology adoption is currently taking place, especially in the area of digital communication technologies. Chart 21 demonstrates the degree of digital technology diffusion across the euro area by means of the Digital Economy and Society Index (DESI) issued by the European Commission. DESI measures countries' digital performance by means of progress along the categories Connectivity, Human capital, Use of the Internet, Integration of digital technology and Digital public services. Higher index values can be interpreted as more progress in the field of digitalisation.

Chart 21.



Lockdowns and social distancing efforts have also forced firms to change business models and practices to keep operating in the new environment. For example, companies have started using digital sales channels. These changes may even foster productivity in a more permanent manner. Moreover, the forced need for digitalisation may lead firms to abandon inefficient practices, which in turn improves productivity. To the extent that digital technologies have been argued to constitute general-purpose technologies,[51] the potential gains from their wider diffusion may be sizeable and thus have the power to reverse the potentially adverse crisis-induced effects. Going forward, the relative strengths of these channels is going to be very important for the growth outlook over the long-run.

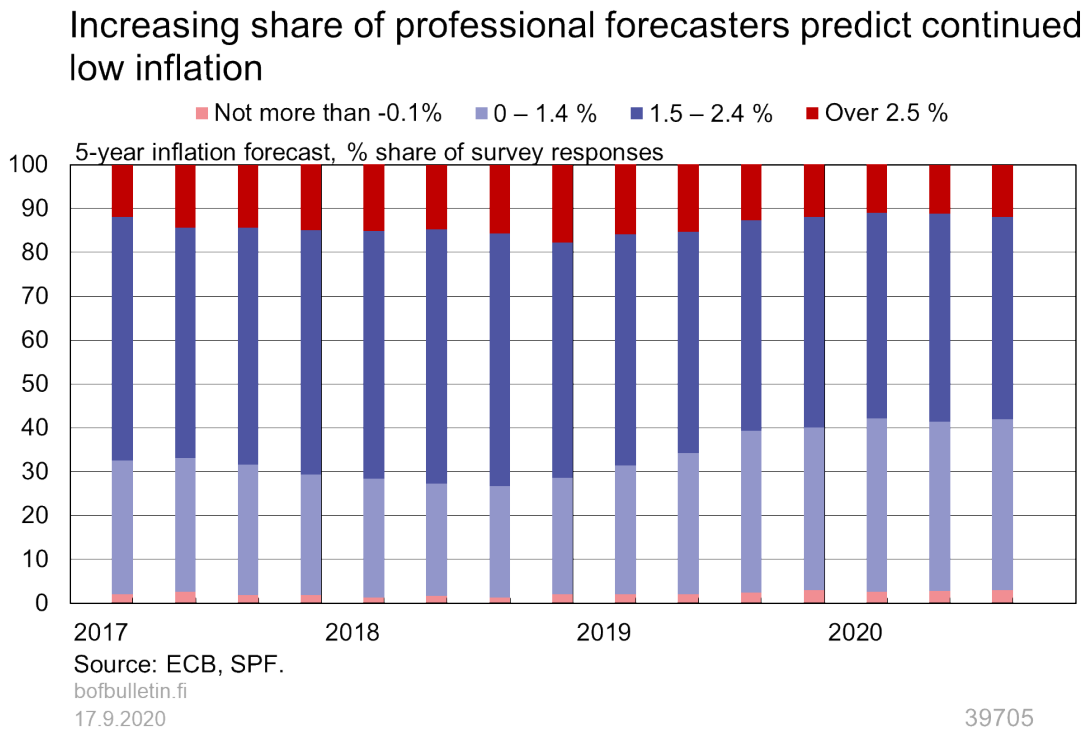
Longer-term effects of the corona crisis are concentrated on slower inflation, but the possibility of acceleration should also be examined

As the economic crisis caused by the corona pandemic differs significantly from other crises in recent decades, its longer-term effects on inflation should be examined carefully. In the short term, there are considerable problems with measuring inflation, but right now it appears that the longer term effects will weaken rather than boost inflation. However, conflicting assessments

have also been made.[52]

At the moment, professional forecasters estimate that inflation will be slower in the longer term (i.e. five years from now) than they estimated before the pandemic. According to the ECB Survey of Professional Forecasters from the third quarter of 2020, the trend among professional forecasters has moved slightly towards a lower long term inflation rate of 0–1.4%, while forecasts of inflation over 2.5% have decreased (Chart 22). However, the changes in the distribution of forecasts are small. About 40% of professional forecasters expect inflation to be 0–1.4% and about 10% to be above 2.5% five years from now.

Chart 22.



Lower aggregate demand is likely to weigh down overall inflation over the longer term as well. The larger and longer the impact of the crisis on long-term unemployment, companies' investment sentiment and bankruptcy rates, the greater the impact will be on aggregate demand. The development of internal cost pressures is also affected by globally weakened aggregate demand, which is likely to reduce cost pressures from outside the euro area. A third factor potentially weighing down inflation in the long term may be that the crisis will lower inflation expectations, which means that actual inflation will also remain below the central bank's objective for a longer period of time. This trend is driven by the possible negative effects of the corona crisis on the long-term equilibrium real interest rate, which may also have an impact on inflation expectations (see

feature article).[53]

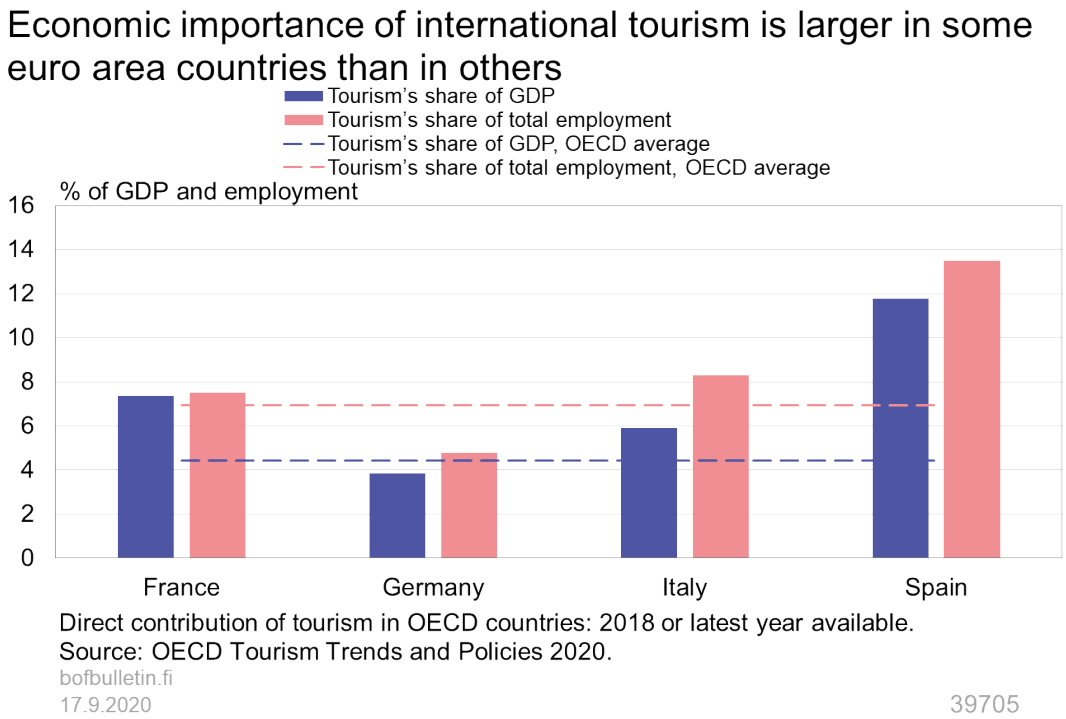
Debate and analysis have brought forward potential factors that may actually boost inflation in the crisis. Disturbances in production chains may increase the prices of some products, but current data suggest that disturbances have remained temporary and only concern individual products. Some of the arguments for the increase in inflation are based on post-war experiences, when demand rose quickly while supply remained unchanged.[54] However, the corona crisis differs from wars in the sense that production capacity has not been destroyed or directed to military purposes, and the labour force is also available as the situation normalises.[55]

In the longer term, prices may also be increased by reduced competition if the corona crisis significantly increases company bankruptcies or increases protectionism and shifts production chains closer to demand. During the financial crisis, some argued that inflation will accelerate as a result of the strongly increased general government debt.[56] The arguments were based on a phenomenon called fiscal dominance, where the central bank is forced to finance a high public debt, thereby renouncing its inflation target and independence.[57] Similar arguments have been put forward in connection with the coronavirus crisis. However, the scenarios of rapidly rising inflation did not materialise after the financial crisis.[58] The independence of central banks is crucial for ensuring their ability to continue to maintain price stability.

The coronavirus crisis may increase previously observed divergence between euro countries

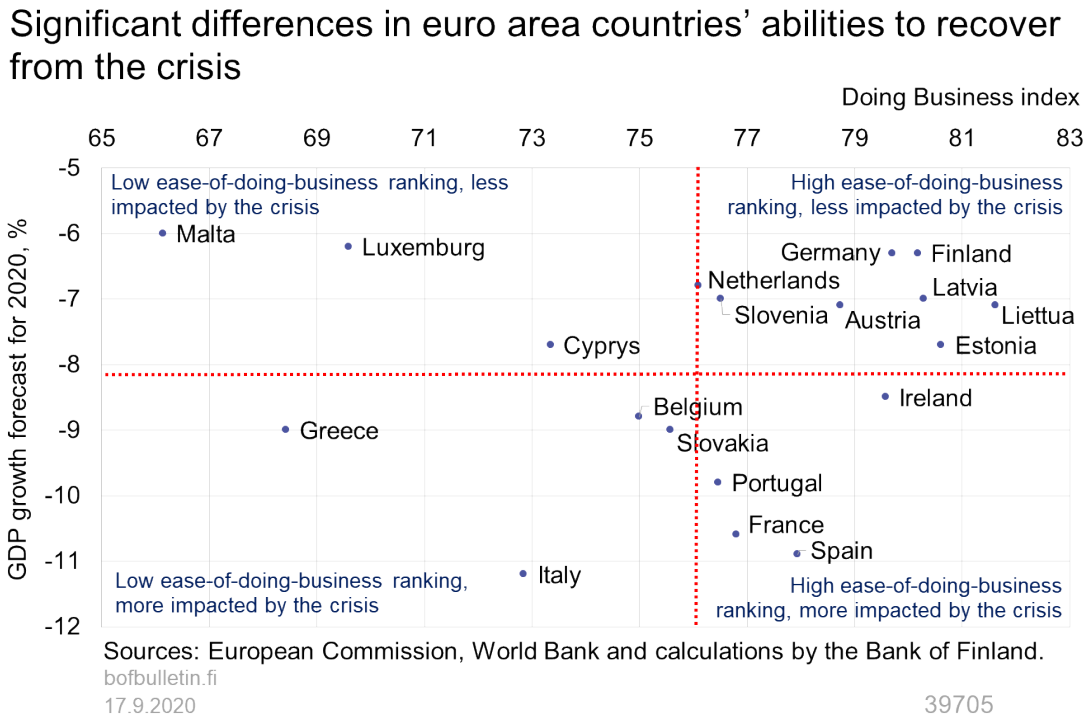
The coronavirus crisis hit euro area countries simultaneously, but with varying intensity. This is evident from recent growth forecasts for the large euro countries. The European Commission estimates that GDP will fall by 6.3% in Germany, 10.6% in France, 10.9% in Spain and 11.2% in Italy in 2020 (Chart 23).

Chart 23.



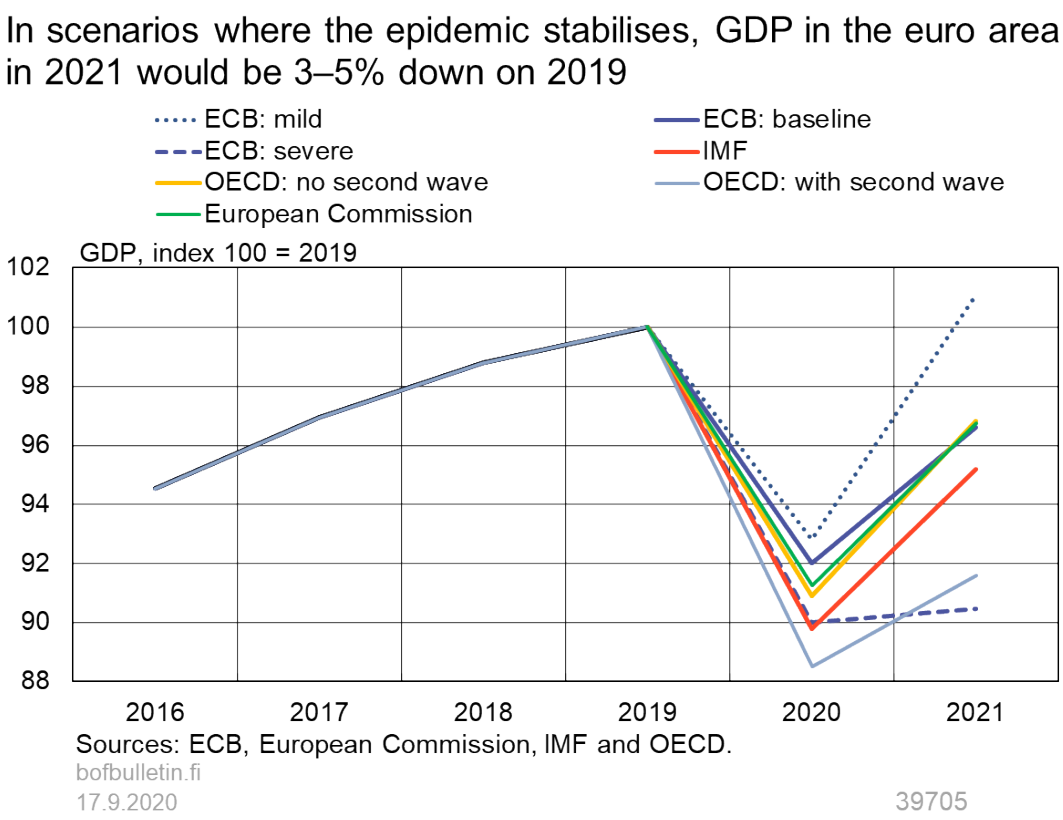
In Italy and Spain, the epidemic broke out early, which meant that they had slightly less time to react to the crisis than other countries. Similarly, some countries faced a more severe health care crisis in spring than others: the number of deaths per capita was high in France, Spain and Italy, while in Germany it was considerably smaller. The dramatic spread of the virus also led to stricter and longer-term restrictive measures in countries more strongly affected, which in turn hampered economic activity.[59] A more severe health care crisis than in other countries may also cause a deeper and longer-term economic crisis. In particular, permanent changes in consumer perceptions of the risks associated with the consumption of goods and services could deepen and prolong the recession.[60]

Chart 24.



The vulnerability of some countries is also increased by the importance of services and tourism to their economies. As shown in chart 24, the importance of the particularly crisis-affected tourism industry to the economy is considerably greater in some countries than in others. The negative GDP shock caused by the corona pandemic in the second quarter appears to have been higher in countries where viral infection rates, the share of employment in virus-sensitive sectors and consumption of non-essential household services were high. For example, there seems to have been a strong correlation between the share of GDP in households' restaurant and hotel services and the decline in GDP (Chart 25).

Chart 25.



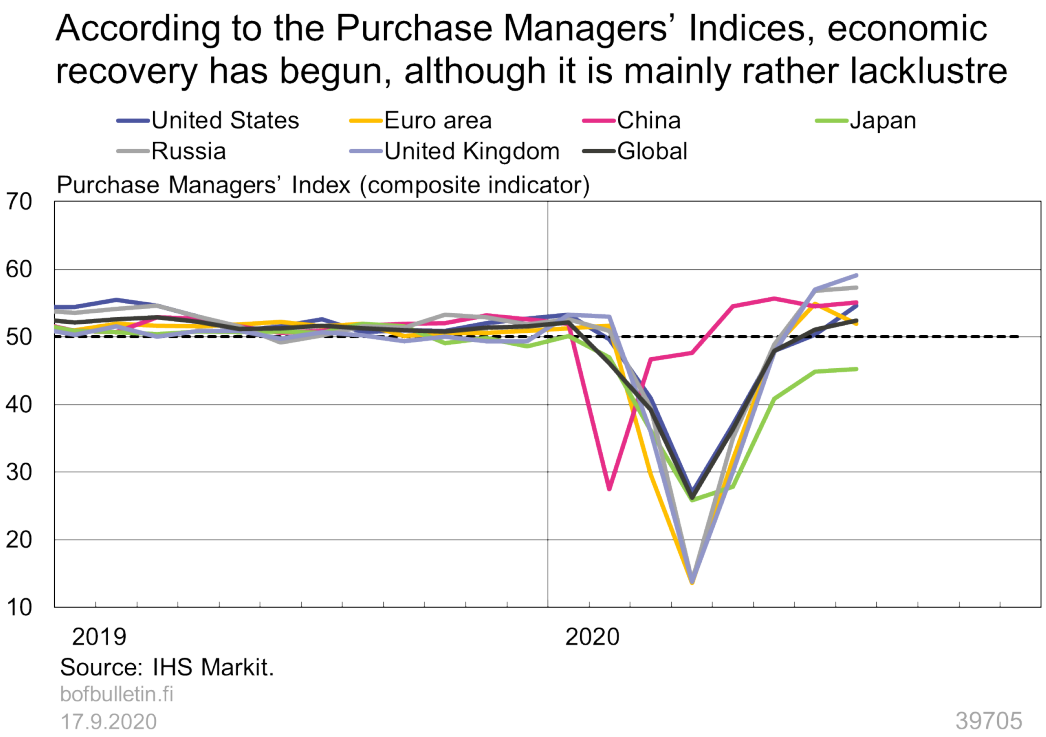
The readiness of euro area Member States to recover from economic crises also differ due to their different economic structures, economic fundamentals and indebtedness. Countries where private or public debt was high before the crisis may have limited potential to increase their indebtedness. This would make it more difficult for different actors to cope with the crisis in these countries. Similarly, the weakened income prospects caused by the corona crisis may weaken especially the most indebted companies' and households' ability to cope with their debt burden. Out of large euro area countries, in France the debt levels of companies and households have increased steadily in recent years and are well above those of other large euro area countries. In Germany, on the other hand, the indebtedness of companies and households is very moderate, as is the indebtedness of Italian households. Differences in the solvency of the banking sector also affect the ability of banks to support the economy through lending, consequently affecting how different countries recover from the crisis.

For a long time there have been significant differences in the economic fundamentals of euro area Member States. Of the large euro area countries, labour productivity has been much weaker in Italy and Spain than in Germany and France. The same developments are also reflected in investments in product development expenditure. The share of long-term unemployment in total unemployment has been very high in Italy for a long time. If the pre-crisis differences in indicators

for economic structure remain unchanged, it will be difficult for countries with the weakest structures to create new productive business in the wake of the coronavirus crisis and to reduce long-term unemployment. The coronavirus crisis may have long-term and even permanent effects on the structure of demand, and hence on the structure of production. In some countries, the crisis may lead to a major need for structural reforms in a situation with constrained adaptability.

In the context of the financial crisis, observations showed that the most flexible economies are generally able to recover faster from economic crises.[61] For example, it has been observed that economies with a high ease-of-doing-business index as measured by the World Bank's Doing Business index were also the swiftest to recover from the financial crisis.[62] In Chart 26, countries are divided into four groups on the basis of their ease-of-doing-business score and the direct impact of the crisis as estimated in the Commission's summer forecast. According to this assessment, the Baltic States, Austria, Finland and Germany would have the best chances of recovering from the coronavirus crisis, as they are projected to suffer the smallest initial economic decline caused by the crisis and to rank the highest in ease of doing business.[63] Malta and Cyprus, for example, belong to the group of countries where the contraction caused by the crisis has been mild but where the ease of doing business index is below the euro area average. And while Ireland and Spain belong to a group where the ease of doing business supports the recovery of the economy better than average, the impact of the coronavirus crisis has hit them harder than average. According to this comparison, recovery will be especially challenging in countries such as Belgium, Italy and Greece, where predictions show that the coronavirus has had a major impact on the economy in 2020 and these countries have a lower-than-average ease-of-doing business ranking.

Chart 26.



The challenge of the coronavirus crisis is that in some countries the initial situation was more difficult, the need for adjustment of the economic structure may be greater and the ability to adapt is weaker than in others. In the euro area, differences in the abilities of Member States to recover from the crisis have been offset by EU-level financing measures that both support their access to finance and create incentives to strengthen their economic structures.[64] However, countries' own economic policy measures are crucial to the recovery of the economy from the coronavirus crisis.

Increased convergence within the euro area could also be facilitated by the positive effects of the coronavirus crisis on economic structures or technological development, such as technological leaps in countries where the benefits of digitalisation have so far been utilised the least (see Chart 21). Currently, the coronavirus crisis appears rather to be intensifying the internal divergence of the euro area, but if economies succeed in reforming, convergence is also possible.

Notes

1. In its September update, the OECD raised its growth forecast for the euro area to -7.9% for 2020, and lowered it to 5.1% for 2021. ↑
2. Range based on the IMF, European Commission, CBO and consensus forecasts and the OECD's two scenarios. ↑

3. See https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20200610.pdf. ↑
4. The PMI benchmark is 50. This means that when the index exceeds this value, economic growth is indicated. During the crisis, however, there was uncertainty regarding this limit value owing to the dramatic fall it saw in the spring. For example, industrial production grew significantly in May and June, despite the fact that the Manufacturing PMI was below the 50 benchmark. ↑
5. According to Guerreri et al (2020), the acute supply shock originally associated with the coronavirus may lead to a sharp fall in overall demand. This happens when restrictions impact economic sectors asymmetrically, which in turn makes it harder for everyone to consume goods and services. If households also make contingency savings, demand falls even further. See Guerreri et al (2020) Macroeconomic implications of Covid-19: can negative supply shocks cause demand shortages? NBER Working Papers, 26918. ↑
6. Expectations about the future have become most negative in the United States in areas where containment measures have been most stringent. See Coibion et al (2020) The cost of the Covid-19 crisis: lockdowns, macroeconomic expectations, and consumer spending. NBER Working Papers 27141. ↑
7. See Philip R. Lane's blog post: 'The outlook for the euro area' https://www.ecb.europa.eu/press/blog/date/2020/html/ecb.blog200911~9864e7ae6d.en.html. ↑
8. Using new data, new types of indices of economic activity have been constructed. See, for example, the US Weekly Economic Index, https://www.dallasfed.org/research/wei and https://tracktherecovery.org/, which tracks the situation in different sectors. ↑
9. Google calculates mobility from geographic data, and the indicators measure visits and how long they last. For more information, see https://www.google.com/covid19/mobility/. The figures are aggregated to the euro area using shares of GDP. ↑
10. This is the University of Oxford's Stringency Index, which is GDP-weighted for the euro area. For more information, see https://covidtracker.bsg.ox.ac.uk/ for the index variables. ↑
11. The consumption of electricity has been calculated from Member States' seasonally adjusted monthly series. ↑
12. The data are based on Bank of Finland calculations. The data for Germany are based on the number of those in a short-time working arrangement (Kurzarbeit) but not on hours worked. The estimate for employees in France receiving a wage subsidy is based on the number of employees for whom employers applied for wage subsidies in advance. According to the French Ministry of Labour, however, not all applications for wage subsidies have resulted in furloughs. The figures for Italy are given as the number of hours worked by all employees on wage subsidies as a proportion of all hours worked in the country. The figure for Spain is that reported by the Ministry of Labour (3.4 million people), which applies to those included in Spain's ERTE job furlough scheme. ↑
13. The monthly growth figure for employed people is based on Bank of Finland calculations using the employment indicators of the national statistical authorities. ↑
14. To be precise, the probabilities derived from inflation options measure the probabilities of average inflation 5 or 10 years ahead, with a 3-month lag in inflation indexation. In other words, the probability indicator of inflation 10 years ahead at the start of September ↑

measures the probabilities of inflation in a period between June 2020 and June 2030. This calendar effect hampers the interpretation of the measure and increases its volatility for example in periods of strong volatility in oil prices.

15. VSTOXX measures the expected volatility on stock markets, implied by the Euro Stoxx 50 options. The CISS measures the systemic stress on the euro area financial markets. For a more detailed discussion, see Hollo, D., Kremer, M. and Lo Duca, M. (2012) CISS – a composite indicator of systemic stress in the financial system. Working Paper Series, No 1426. ↑

16. For a more detailed discussion, see IMF (2020) Implementation of the G-20 Action Plan. G-20 Background Note. ↑

17. Monetary policy implementation was discussed in the previous issue of the Bank of Finland Bulletin (4/2020): https://eurojatalous.studio.crasman.fi/file/dl/a/BNccdQ/wz_qkvo0dMQMbN0KH3cg9Q/ET420.pdf. See also article by Niko Herrala and Jarmo Kontulainen on measures implemented during the crisis, https://www.eurojatalous.fi/fi/2020/1/ekp-n-rahapolitiikan-toimet-koronapandemian-aikana/. ↑

18. Commercial papers are now also eligible for purchase under CSPP, which eases the short-term financing conditions of firms. Greek government securities are eligible for purchases under PEPP. ↑

19. More detailed information on purchases under the PEPP is available at https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html. ↑

20. For a more detailed discussion on the effects of the purchase programmes and non-standard monetary policy measures, see Chapter 6, Rostagno et al. (2019) A tale of two decades: the ECB's monetary policy at 20. ECB Working Paper No. 2346. ↑

21. The ECB publishes regularly the volume of purchases under the various programmes of the APP as well as the PEPP, at https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html and https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html. ↑

22. According to a recent estimate (see pp. 37–43 of the ECB Economic Bulletin 5/2020), the PEPP is estimated to have reduced the euro area GDP-weighted ten-year sovereign yield by almost 45 basis points. The PEPP is estimated to contribute 0.2 percentage points cumulatively to the annual inflation in 2020 and to add around 0.4 percentage points to euro area real GDP growth in 2020. The impacts are expected to be slightly stronger in 2021. The macroeconomic impact of the programme is however much more significant if in the alternative scenario and under continued uncertainty risk premia had risen to considerably higher levels. ↑

23. The terms and conditions of TLTROs are described in detail at https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.htmlhttps://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html. ↑

24. In addition to the targeted operations, the ECB provides refinancing to banks also via other longer-term operations, e.g. the PELTRO. Over 90% of outstanding central bank credit is however in TLTROs. ↑

25. Laine, O. (2019) The effect of TLTRO-II on bank lending. Bank of Finland Research Discussion Paper (7). ↑

26. Esposito, L., Fantino, D. and Sung, Y. (2020) The impact of TLTRO2 on the Italian credit market: some econometric evidence. Bank of Italy Temi di Discussione No. 1264. ↑
27. Altavilla, C., Barbiero, F., Boucinha, M., Burlon, L. (2020) The great lockdown: pandemic response policies and bank lending conditions. Working Paper Series, No. 2465. ↑
28. See the latest Bank Lending Survey (BLS Q2/2020). ↑
29. See Jerome Powell's speech at Jackson Hole on 27 August 2020. ↑
30. See https://www.ecb.europa.eu/home/search/review/html/index.en.html. ↑
31. See https://www.bankingsupervision.europa.eu/press/pr/date/2020/html/ssm.pr200728~7df9502348.en.html. ↑
32. ECB (2020) Financial Stability Review, May 2020, Chart 5.1, https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202005~1b75555f66.en.html#toc34. ↑
33. ECB (2020) Financial Stability Review, May 2020, Box 8: Macroeconomic impact of financial policy measures and synergies with other policy responses, https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202005~1b75555f66.en.html#toc35. ↑
34. IMF (2020) G-20 Surveillance Note, July 2020, and IMF (2020) Implementation of the G-20 Action Plan, July 2020. ↑
35. IMF (2020) World Economic Outlook Update, June 2020. ↑
36. Ibid. ↑
37. If support measures remain in place for too long, the risk is of an emergence of zombie companies, which will weaken the growth opportunities for the most productive companies. See e.g. Caballero – Hoshi – Kashyap (2008) Zombie Lending and Depressed Restructuring in Japan. American Economic Review 98 (5), 1943–1977. ↑
38. SURE is the European instrument for temporary Support to mitigate Unemployment Risks in an Emergency, established to tackle the consequences of the coronavirus pandemic. ↑
39. IMF (2020) G-20 Surveillance Note, June 2020. ↑
40. https://www.imf.org/en/Topics/imf-and-covid19/COVID-Lending-Tracker. ↑
41. The World Bank and regional development banks. ↑
42. https://g20.org/en/media/Documents/Final%20G20%20FMCBG%20Communiqu%C3%A9%20-%20July%202020.pdf. ↑
43. For more information, see Schmöller (2019): "Euro area productivity growth could slow further in the event of a downturn", Bank of Finland Bulletin 4/2019, and Schmöller (2018): "Secular stagnation: A false alarm in the euro area?", Bank of Finland Bulletin 4/2018. ↑
44. In the contemporary literature, the term hysteresis is often replaced with the term 'scarring effects'. ↑
45. Regarding the impact of uncertainty on investments, see e.g. Faigelbaum et al. (2017) Uncertainty Traps, Quarterly Journal of Economics, vol. 132 (4), p. 1641–1692, and Kozlowski et al. (2020a) The Tail That Wags the Economy: Beliefs and Persistent Stagnation, Journal of Political Economy, vol. 128 (8), p. 2839–2879. ↑
46. See Kozlowski et al. (2020b) Scarring Body and Mind: The Long-Term Belief-Scarring ↑

Effects of COVID-19, NBER Working Paper 27439.

47. For studies concerning the United States, see Anzoategui et al. (2019) Endogenous Technology Adoption and R&D as Sources of Business Cycle Persistence, American Economic Journal: Macroeconomics, vol. 11(3), 67–110, and Bianchi et al. (2019) Growth, slowdowns, and recoveries, Journal of Monetary Economics, vol. 101(C), 47–63, for studies on the euro area see Schmöller – Spitzer (2020) Endogenous TFP, business cycle persistence and the productivity slowdown in the euro area, ECB Working Paper No. 2401. Jorda et al. (2020a) The Long-Run Effects of Monetary Policy, NBER Working Paper 26666 present empirical evidence of the impact of hysteresis on productivity. ↑
48. For data on the impact of past epidemics on the natural rate of interest, see Jorda et al. (2020b). Longer-Run Economic Consequences of Pandemics, NBER Working Paper 26934. For data on the effects of recent SARS, MERS, ebola and zika epidemics on productivity, see Vorisek (2020) COVID-19 will leave lasting economic scars around the world, World Bank Blog. ↑
49. See Mühleisen (2018) The Long and Short of The Digital Revolution, IMF Finance & Development, vol. 55(2). ↑
50. See Goodhart, C. and Pradhan, M. (2020) Future imperfect after coronavirus. VoxEU.org, 27 March 2020. ↑
51. Both the Fed and the ECB had started to review their monetary policy strategies before the corona crisis, due in particular to changes in the monetary policy environment before the onset of the coronavirus crisis. ↑
52. See Goodhart, C. and Pradhan, M. (2020). ↑
53. See Miles, D & Scott A (2020) Will inflation make a comeback after the crisis ends? VoxEU.org, 4 April 2020. ↑
54. For example Asness, C. et al. (2010) An Open Letter to Ben Bernanke, 15 November 2010. ↑
55. BIS Papers (2011) Threat of fiscal dominance, No 65. 2 December 2011, Basel. ↑
56. Schnabel, I. (2020). The shadow of fiscal dominance: Misconceptions, perceptions and perspectives. Speech in Berlin, 11 September 2020. ↑
57. See Government response stringency index, Oxford Economics. ↑
58. See Eichenbaum et al. (2020) The Macroeconomics of Epidemics, NBER Working Paper 26882. ↑
59. Draghi (2017) Structural Reforms in the euro area. Presentation at the Structural Reforms in the euro area conference, 18 October 2017; Koopman, Gert-Jan (2017) Product market reforms, the business environment and state interventions in the Euro area. Presentation at the Structural Reforms in the euro area conference, 18 October 2017. ↑
60. On 27 August 2020, the World Bank reported on the problems in the most recent reports of the index and is working to correct them. See the World Bank's statement 'Doing Business – Data Irregularities Statement' on the potential issues in the index. Due to these problems, there is reason to be cautious about the data. However, as far as the euro area is concerned and in the context of the financial crisis, the index has provided a fairly accurate explanation for countries' ability to recover from the crisis. However, using the World ↑

Economic Forum Competitiveness Index in the figure instead of the Doing Business index would result in a very similar overall picture of the situation.

61. A high index alone, however, does not guarantee a rapid economic recovery. For example, after the financial crisis, Finland recovered rather slowly despite a high ranking in the Doing Business index. ↑

62. See subsection 'Monetary policy and other economic policy measures and their effects' for a more detailed description of EU-level measures. ↑

Keywords

COVID-19, COVID-19 crisis, euro area, inflation, international economy, monetary policy