MONETARY POLICY REVIEW

Energy will dominate euro area's economic outlook for a long time yet

International economy, Monetary policy | 28.10.2022

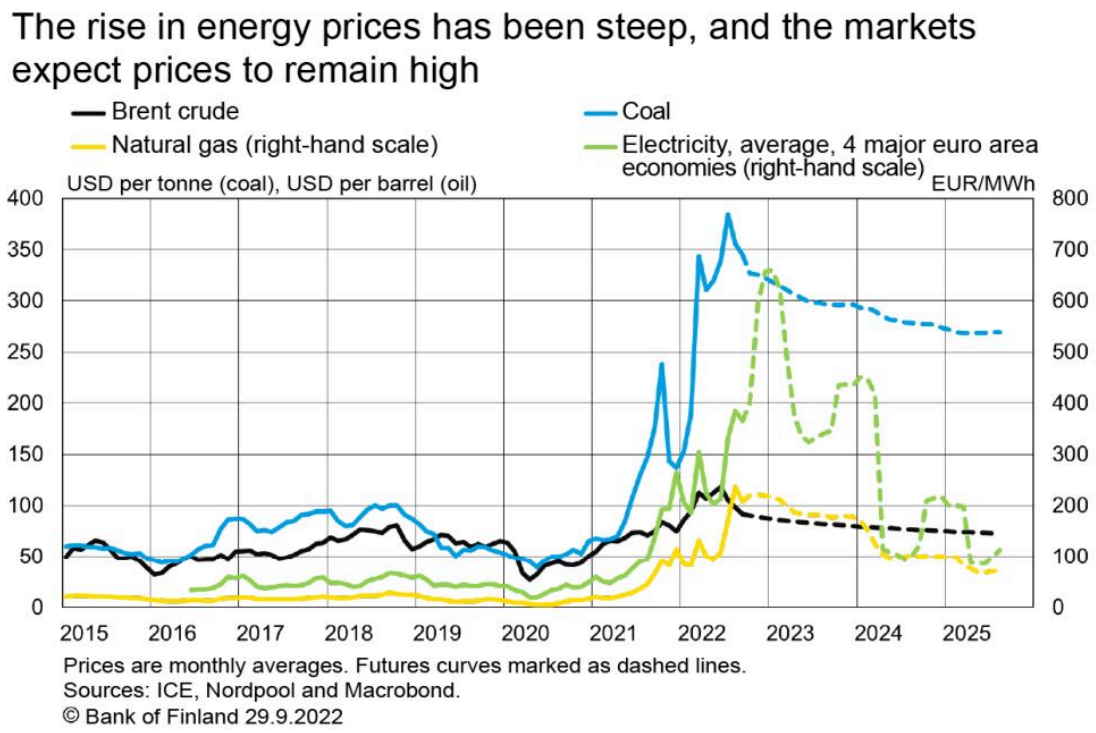
The euro area has been drawn into an energy crisis that could have a long-term impact on the area's economy. The escalating price of energy is increasing euro area import prices, weakening the current account and further adding to business and household costs as well as public expenditures. The effects are already visible in inflation, but forecasts indicate that the growth impact of the energy crisis on the euro area economy is yet to come. Growth in the rest of the global economy beyond the euro area also appears to be slowing, especially on account of the situation in the economies of the United States and China. There is considerable uncertainty surrounding the future availability and price of energy and the ability of the euro area economy to adjust to the transformation of the energy market, and this is darkening the economic outlook for the immediate years ahead. Since inflation is already too high and could stay above target for an extended period, the ECB Governing Council has begun a cycle of monetary policy tightening, making two successive increases in policy rates, in July and September.

The energy crisis is threatening to increase the euro area's energy bill many times over

The growth outlook for the euro area economy deteriorated markedly towards the end of the summer. Imports of natural gas from Russia have all but ceased, which has pushed up energy prices even further.[1] Driven notably by energy prices, inflation is now rising rapidly, which has prompted the European Central Bank (ECB) to tighten its monetary policy. On top of this, the detrimental growth impact of the energy crisis is only just beginning. The euro area finds itself on the brink of a recession.

A major share of the energy consumed in the euro area is imported from outside the area. Europe is therefore affected very powerfully by the soaring energy prices: the price of natural gas has risen by almost a factor of ten, and that of coal and of Central European electricity by roughly a factor of five in relation to early 2021 prices (Chart 1). The elevated demand for liquefied natural gas (LNG) has meant an increase in the price of natural gas outside Europe, too, but this has been noticeably more moderate than within Europe. For example, the price of natural gas in Europe is five to ten times higher than the Henry Hub reference price for natural gas in the United States.

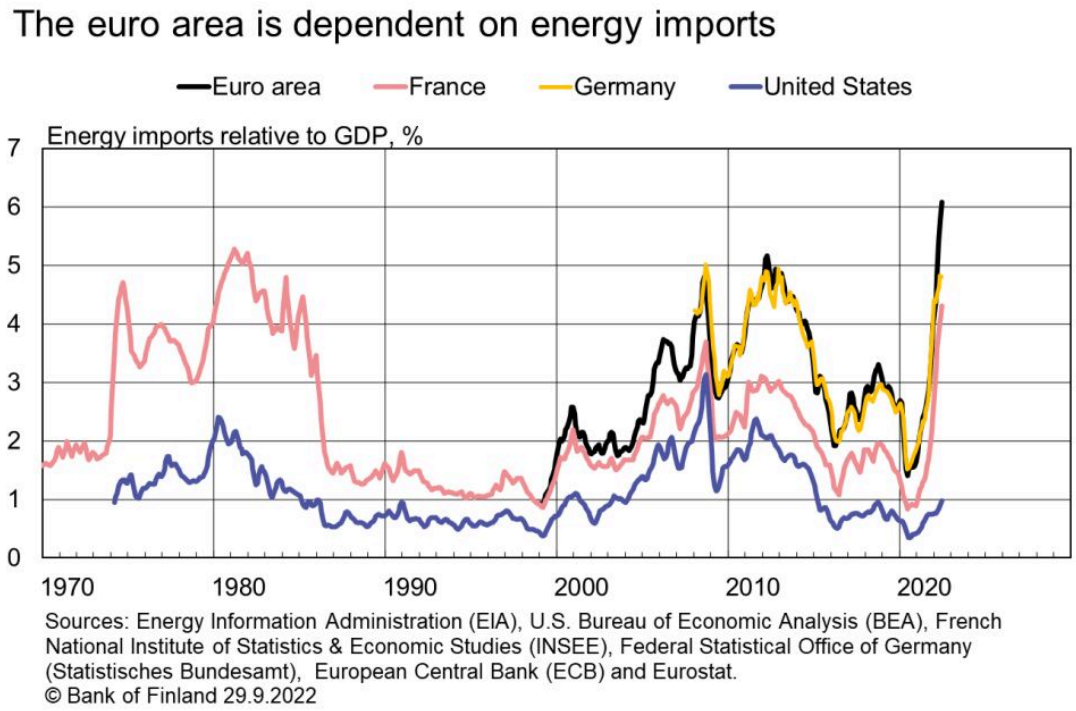
Chart 1.



The energy crisis is threatening to increase the euro area's energy bill many times over. The euro area's imports of energy in 2019 amounted in value to EUR 328 billion, corresponding to about 3% of GDP. In 2022, this figure was already surpassed in the first six months (EUR 351 billion in January–June 2022). During the second quarter of 2022, energy imports rose to as high as about 6% of GDP, on a seasonally adjusted basis (Chart 2). By comparison, expenditure on energy imports in the United States only increased to 1% of GDP. In addition, the United States has been a net energy exporter since 2019, so the rise in energy prices has had less of an impact there than in the euro area.

The rise in costs of imported energy has been steeper and much more rapid than at any time since the 1970s and 1980s. Costs have increased greatly in all the major euro area economies. The magnitude of the resulting economic effects on the euro area's constituent economies will hinge ultimately on each economy's ability to adapt to the situation. Structural changes and technological progress may have altered the ability of economies to adapt compared with the 1970s.

Chart 2.



The price of natural gas, which is all-important for central Europe, has remained high during the latter half of 2022, in spite of a slight decline over recent weeks; the risk of extremely high energy prices is now becoming a reality this winter at least. Higher energy import prices are detrimental

to the euro area's terms of trade, as only a part of the rise in import prices can be carried over to export prices.

The bill will be met by consumers, businesses and the government sector, with the government also softening the impact through support measures. There is also a risk that the particularly sharp rise in energy prices in Europe will diminish the global competitiveness of European companies and erode the output potential of the EU countries.

Swift action has been taken to increase Europe's natural gas reserves from the low levels of early 2022, and by the end of August the EU had already reached its minimum joint target of filling reserves to 80% of capacity by the beginning of November. At the end of September, Europe's gas reserves were filled to an average of 87% of their full capacity. According to a rough estimate[2], the reserves when full to capacity would last for 2.5–3 months at best, so there is a looming risk of central Europe experiencing gas rationing this winter.

In 2021, Russian natural gas still met about 40% of Europe's natural gas demand. By summer 2022 this share had fallen to only 20%. According to estimates by McWilliams and Zachmann (2022), Europe will have to reduce its gas consumption by about 15% in the period up to spring 2023 if the halting of Russian gas imports is permanent. There are major differences between countries, however, and the estimate is based on a variety of assumptions, such as the weather this winter.[3] In July, the EU countries agreed to reduce their natural gas consumption by 15% this winter relative to their average consumption for 2017–2021. The reduction is intended to be implemented by countries on a voluntary basis, but in emergency situations it can be enforced.

If the cessation of Russian gas imports is permanent, this will have a significant impact on the outlook for the euro area economy over the immediate years ahead. The magnitude of the impact will be determined by, among other things, the weather this coming winter, the adaptability of consumers and businesses, the extent to which pipeline gas can be replaced by liquefied natural gas, and the success of energy policy coordination between EU Member States. According to published estimates, the EU economy may contract by about 0.5%–3.0%.[4] Estimates of the impact on the German economy are of a similar magnitude, at about 0.5–3.0 percentage points over the near term.[5] The Bundesbank (2022) has published impact assessments that are even more severe than this.[6]

The price of crude oil has fallen recently on the back of recession concerns and an appreciating US dollar. Brent crude was still trading at about USD 100 per barrel at the end of August, but its price has since slipped below pre-war levels, to less than USD 90 per barrel. Yet there are several risk factors explaining why oil prices may remain high. In early September, OPEC+, the alliance that

combines the OPEC oil-producing countries and allies such as Russia, agreed to cut oil production as from October, in its first cut since the height of the COVID-19 pandemic. Although the production cut was small, it does signal that OPEC+ wishes to maintain a high oil price. The release of oil from the United States' Strategic Petroleum Reserve will bolster supply until October, but the oil supply outlook may be weakened by what could be a potentially significant contraction in Russian oil production due to international sanctions. On the other hand, the weakening of global demand is applying downward pressure on oil prices. Shale oil production in the United States has picked up somewhat, though slowly.

The prices of other raw materials have fallen over the spring and summer as global growth prospects have weakened. Raw material prices (excluding energy) were about 10% lower at the end of September compared with the beginning of the year, matching the same level as in early 2021. Prices of food raw materials have also receded from peak levels, but less so than for other raw materials. At the end of September they were over 25% higher than at the beginning of 2021 and about 5% higher than in early 2022.

Energy crisis will have delayed impact on growth

Growth projections for the euro area economy for 2023 have been revised downwards across a broad front due to the energy crisis (Table 1). According to the European Central Bank's projections, the euro area economy is forecast to grow by 3.1% over the full year 2022 and by 0.9% in 2023. In its December 2021 projections, the ECB was still forecasting euro area growth to be 4.2% in 2022 and 2.9% in 2023.

In September, Consensus Economics revised its Consensus forecast for 2023 downwards to just 0.2%, from 0.9% in August. This is an aggregate of forecasts from professional forecasters and investment banks. The economic outlook has thus deteriorated further, and the risk of recession in the euro area has grown. The ECB's macroeconomic projections also include an alternative scenario under which the euro area's real GDP contracts by -0.9% in 2023.

Forecasts for the euro area economy in 2023 are modest

Euro area real GDP, % change	**Publication date (month/year)**	**2021**	**2022**	**2023**	**2024**
ECB	09/2022 (06/2022)	5.2 (5.4)	3.1 (2.8)	0.9 (2.1)	1.9 (2.1)

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

Forecasts for the euro area economy in 2023 are modest					
European Commission	07/2022 (05/2022)	5.3 (5.4)	2.6 (2.7)	1.4 (2.3)	-
IMF	07/2022 (04/2022)	5.4 (5.3)	2.6 (2.8)	1.2 (2.3)	(1.8)
OECD	09/2022 (06/2022)	5.2 (5.3)	3.1 (2.6)	0.3 (1.6)	-
Consensus	09/2022 (08/2022)	5.2 (5.3)	2.9 (2.8)	0.2 (0.9)	-
Previous forecast in brackets.					

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

A considerable share of the EU's energy use is met by imports. Consequently, the global rise in energy prices has made euro area imports more expensive and weakened the terms of trade. It is estimated that a rise in import prices as experienced in early 2022 could shrink euro area real GDP by about 2% over a one-year period and by even more in the longer term (see feature article 'Rising import prices are hitting the real economy'). This is in line with the downside revisions made to growth projections published by major economic forecasters this year.

The strongest adverse growth impact of the energy crisis is likely to appear after a time lag, and will only be visible in real GDP figures in the coming quarters. Real GDP growth in the euro area is set to be weak in 2023.

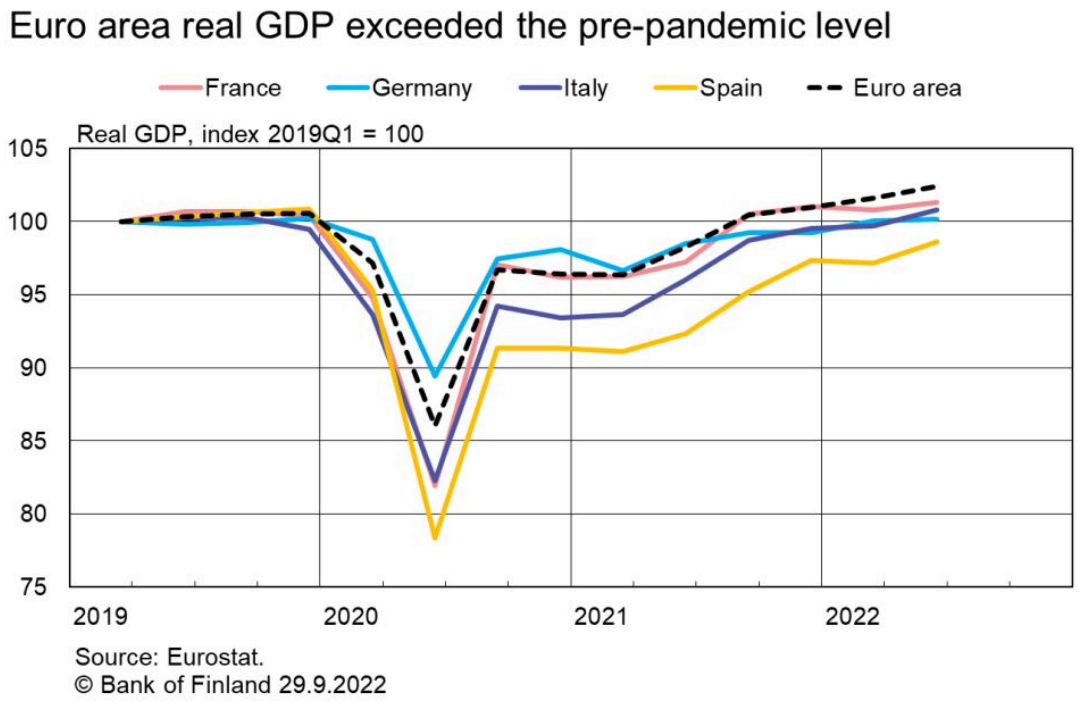
Euro area will not return to pre-pandemic growth trend

The euro area economy had been recovering well from the COVID-19 crisis, and the recovery was still continuing in the second quarter of 2022. Growth in the second quarter turned out to be higher than anticipated, due to both the easing of pandemic-related supply chain disruptions and the rebound in services demand caused by an increasing demand for leisure services. However, this growth spurt is expected to fade in the second half of 2022, when the adverse growth impact of higher energy raw material prices will begin to impede euro area growth ever more forcefully.

Real GDP in the euro area returned to its pre-pandemic level in late 2021 and exceeded this in the first half of 2022 (Chart 3). Nevertheless, the euro area's GDP growth is unlikely to reach the pre-pandemic growth trend.

Among the largest euro area economies, Germany and Italy have seen their GDP rebounding to the levels recorded at the end of 2019, while Spain's GDP is still about 3% lower than before the pandemic. France is the only large euro area economy whose GDP has surpassed the end-2019 level by a notable margin.

Chart 3.



The impact of rising import prices in the euro area was first seen in early 2022, when there was a sharp increase in euro area imports measured by value. The value of euro area exports has also increased, though by substantially less than that of imports. Consequently, the considerable surplus in the euro area current account began to shrink during the spring.

In 2021, the euro area current account still recorded a surplus of about EUR 300 billion, corresponding to approximately 2.5% of GDP. In March–May 2022, the euro area seasonally adjusted current account ran a deficit for the first time since 2012, and only a slight surplus was recorded for June. The most dramatic deterioration was seen in Germany where the current account has traditionally posted very large surpluses.

Confidence indicators point to a marked economic slowdown

The notable deterioration in confidence indicators during the summer provided support for the

view that economic growth was starting to dwindle. Higher prices and elevated uncertainty are reflected most clearly in the level of consumer confidence, which plummeted in the euro area in March, and over recent months has been at historically weak levels – below even the lowest point seen at the onset of the COVID-19 crisis.

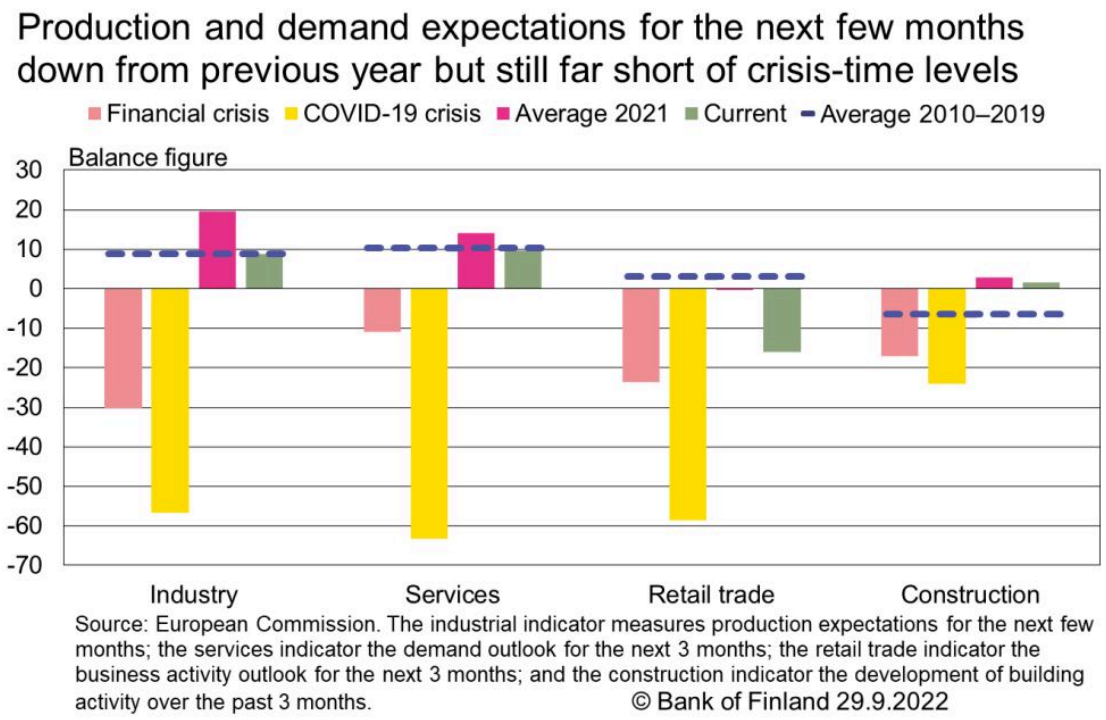
Consumers' expectations about their own financial situation and the economy are particularly weak. The rise in costs is also reflected in lower expectations about savings. These adverse developments may, however, be mitigated by the fact that wealthier households, in particular, accumulated considerable savings during the pandemic.

The subdued consumer outlook and deteriorating purchasing power have also been strongly reflected in retail confidence, which has fallen well below its historical average and has now sunk fairly close to the levels seen during the global financial crisis. Compared with last year, the outlook has also deteriorated for manufacturing, services and construction. However, the prospects for firms operating in these sectors remain close to the historical average and are considerably more positive than during the global financial crisis or the pandemic (Chart 4). Confidence across the services sector has so far been underpinned particularly by the recovery of tourism and accommodation services.

Although the gradual easing of supply chain disruptions will support the situation for manufacturing, there are large differences between its subsectors. In May and June, industrial production was still growing at a good pace and expectations were strong, but the outlook deteriorated towards the end of the summer, particularly for oil refining, the wood products industry and the chemical industry. Survey data also suggest that the level of stocks has normalised and order backlogs have been reduced.

The uncertainty caused by the energy crisis and the rise in prices and financing costs are having an adverse impact on the near-term investment outlook for businesses. Over the longer term, corporate fixed investment may be boosted by investment required for the green transition and by Next Generation EU grants for new private investment.

Chart 4.



Euro area economic growth has been underpinned by the strong employment situation. The unemployment rate has declined in the current year both in the euro area on average (stood at 6.6% in July) and in all the major euro area economies. The number of people in employment is already considerably higher than before the pandemic.

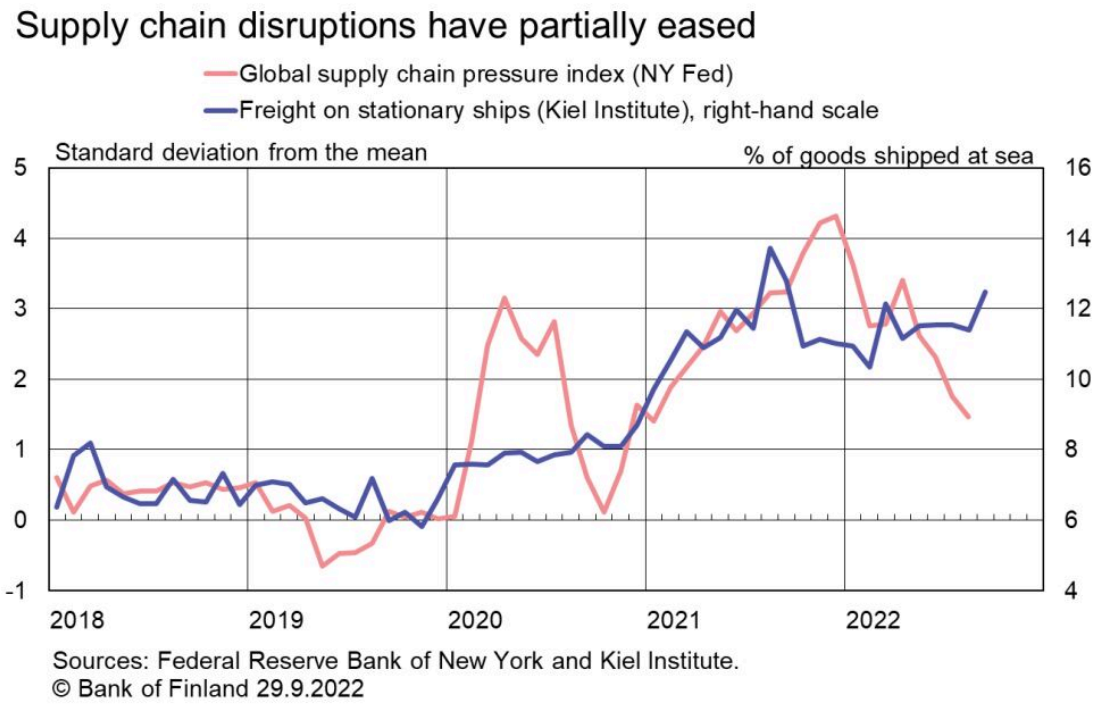
Hours worked in the euro area recovered at a slower pace than employment, reaching the pre-pandemic level in the second quarter of 2022. According to the European Commission's business surveys, there are still labour shortages, especially in the services sector but also in manufacturing. However, as there is typically a time lag between cyclical changes and the reaction in the labour market, the slowdown in the economy could begin to be reflected in employment during the autumn or winter.

No boost to be expected from global economy

Despite the gloomier economic outlook, the trend in international trade remained favourable in early summer. Even though supply chain disruptions are still noticeably more common than before the pandemic, they did ease slightly in the summer with, among other things, the opening of Chinese ports and better availability of semiconductors (Chart 5). However, container shipping in the North Sea continues to suffer from congestion and delays. Sea freight rates have decreased

from the extremely high levels seen in the summer, especially in container and dry cargo transportation, but remain higher than in previous years.

Chart 5.



Despite these developments, the global growth outlook has deteriorated markedly since the spring. For example, in the September 2022 ECB staff projections, global growth for 2023 outside the euro area was revised downwards by 0.4 percentage points (Table 2), mainly on account of slower growth in the United States and China. The slowdown in growth is also reflected in export orders placed with euro area manufacturers, which began to decline in the summer.

In July, the IMF made a significant downward revision to its growth forecasts for the United States in comparison with its January projections: growth for 2022 was revised downwards by 1.7 percentage points, to 2.3%, and for 2023 by 1.6 percentage points, to just 1.0%. The Consensus Economics September forecast for the US economy was even weaker than this: growth of only 1.7% in 2022 and 0.5% in 2023. In its July projections the IMF also downgraded its growth forecast for China from its January projections, reducing the 2022 and 2023 forecasts by 1.5 and 0.6 percentage points to 3.3% and 4.6%, respectively.

In the United States, economic growth has already contracted for two consecutive quarters, and consumer confidence is weak. Growth is being curbed by lower real wages, a fading of the fiscal

stimulus effects, the depletion of savings accumulated during the pandemic, and higher interest rates.

In China, strict lockdown measures and problems in the real estate sector pushed the official annual GDP growth down to close to 0% in the second quarter of 2022.[7] In July, China signalled that it was no longer pursuing its GDP growth target of about 5.5%. This is the first time that China has abandoned a declared growth target.

Global economic growth is also strained by monetary policy tightening across the world. Inflation has risen worldwide, and central banks need to address this trend. Central banks' interest rate hikes will rein in both economic growth and inflation.

Downward revisions to global growth forecasts

World real GDP growth, %	**Publication date (month/year)**	**2021**	**2022**	**2023**	**2024**
ECB*	09/2022 (06/2022)	6.4 (6.4)	2.9 (3.0)	3.0 (3.4)	3.4 (3.6)
IMF	07/2022 (04/2022)	6.1 (6.1)	3.2 (3.6)	2.9 (3.6)	 (3.4)
OECD	09/2022 (06/2022)	5.8 (5.8)	3.0 (3.0)	2.2 (2.8)	-
European Commission	05/2022 (11/2021)	5.8 (5.7)	3.2 (4.5)	3.5 (3.5)	-
Consensus	09/2022 (08/2022)	5.8 (5.8)	2.6 (2.6)	1.9 (2.3)	-

* World GDP excl. euro area.
Previous forecast in brackets.

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

Energy crisis increases sustainability concerns over countries that already had a high debt burden

The recovery of the euro area and the global economy from the COVID-19 pandemic has been cut short, and so the euro area now faces an energy crisis while being burdened with substantially

more debt than before. At the same time, a variety of policy measures have become necessary to soften the impact of the crisis (see information box 'Variety of policy measures in response to energy crisis'). In the ECB's projections published in September, euro area aggregate government debt in 2022 is expected to reach over 92% of GDP, some 8 percentage points above its 2019 pre-pandemic level. The general government deficits of euro area countries are also still significantly larger than before the pandemic.

Under the EU fiscal rules valid before the pandemic, the upper limit for the debt-to-GDP ratio was 60%, but compliance with the rule was low. Due to the pandemic and the war in Ukraine, the rules have been suspended until the end of 2023, and the plan is to reform them before that. In October 2022, the European Commission will publish its proposals for new fiscal rules.

ⓘ Variety of policy measures in response to energy crisis

EU countries have had to rapidly find ways of coping with the energy crisis and have sought replacement energy sources particularly for Russian natural gas. The key priority has been to increase imports of liquefied natural gas (LNG). However, the lack of transportation capacity and storage capacity has proved to be a problem. New LNG terminals have been completed recently, such as in the Baltic countries, and a number of terminals are under construction around Europe.

Energy saving is one of the key means of getting through the acute crisis. In the spring, the European Commission in its REPowerEU plan proposed that the binding energy efficiency target be increased from 9% to 13%, and also presented concrete responses to achieve the target.

As the year has progressed, individual euro area countries have been providing support to consumers for covering their increasing energy expenses. The forms of support have included direct income support to households, income tax reductions and increases in the lowest pensions. Minimum wages have also been raised. Authorities have also altered consumer prices of energy via measures such as reductions in indirect energy taxes, setting price ceilings and placing upper limits on price increases.

The EU has in recent years been active in climate issues (e.g. the Fit for 55 package) and

has sought to promote a green transition from fossil fuels to renewable energy (InvestEU), but it has not had an actual common energy policy. Individual EU countries have arrived at national energy solutions, which has led to differences in the degree of dependence on Russian energy. In recent months, the EU has, however, launched a number of initiatives concerning energy markets.

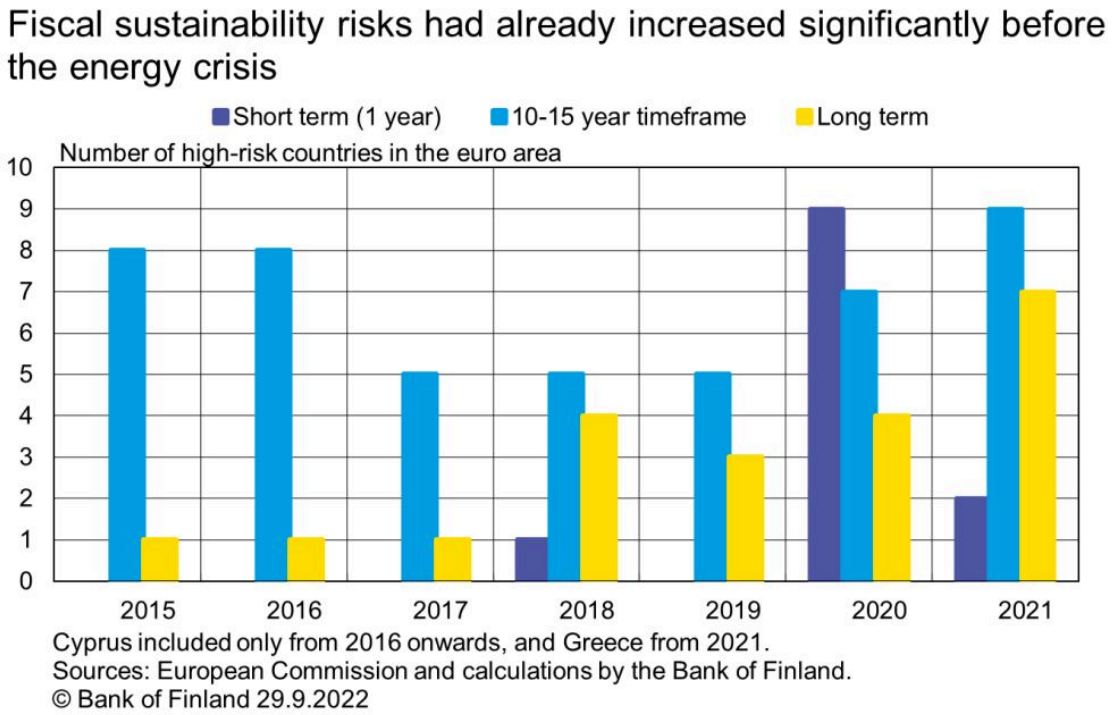
The Commission's proposal of 14 September 2022 includes a Member State-specific obligation to reduce electricity consumption during selected peak price hours, and a windfall tax to redirect the excess revenues of electricity producers and producers of fossil fuels to Member States to prevent the most adverse impacts of the crisis.

Even before the current energy crisis, the EU aimed to be carbon neutral by 2050. The EU's climate investment[8] in 2011–2020 totalled some EUR 700 billion per year (approx. 5% of GDP), and to reach the climate target this should rise to more than EUR 1,000 billion (7% of GDP) by 2030, and to even higher levels beyond that.[9] The energy crisis has now created an even more urgent need for investment. The Commission's REPowerEU plan estimated that additional investment in renewable energy of about EUR 210 billion across the EU is needed over the next five years.

The public measures to cushion the impacts of the energy crisis and the public investment to speed up the energy transition will increase fiscal deficits. To ease the pressures on public expenditure, windfall taxes on the substantial profits of energy companies have been proposed. The use of the Next Generation EU recovery package for enhancing the green transition and increasing energy self-sufficiency may partly contribute to decreasing the cost impact in individual Member States and accelerate the implementation of energy investments.

The fiscal sustainability of EU Member States has been assessed regularly following the global financial crisis, as part of the monitoring and coordination of Member States' fiscal policies.[10] The fiscal sustainability of each Member State is assessed across the short term, over a timeframe of 10–15 years and over decades. The risks are classified as low, medium or high.[11]

Chart 6.



The picture provided by the reports on the fiscal sustainability of euro area countries over the years shows that the positive trend was lost in 2018 and reversed significantly as a result of the pandemic. The number of euro area countries falling into the high-risk group in terms of their fiscal sustainability over a timeframe of 10–15 years and longer started to grow in 2020, and continued to grow in 2021 (Chart 6).

According to the most recent Fiscal Sustainability Report, for 2021, the fiscal sustainability risks of nine of the euro area countries are high for the coming 10–15-year period. Over a longer timespan of decades, the fiscal sustainability risks were high in seven euro area countries. The main factor driving the sustainability risks over the interval of decades is the additional costs brought by population ageing.

The Fiscal Sustainablity Report's debt sustainability outcomes are based on the economic situation in late October 2021 and forecasts published at that time. This is why the report's scenarios and assumptions are significantly more positive than the current economic circumstances would suggest. A major shift has also occurred in interest rates, increasing debt-servicing costs.

The fiscal policies of euro area countries are thus subject to increasingly strong pressure regarding

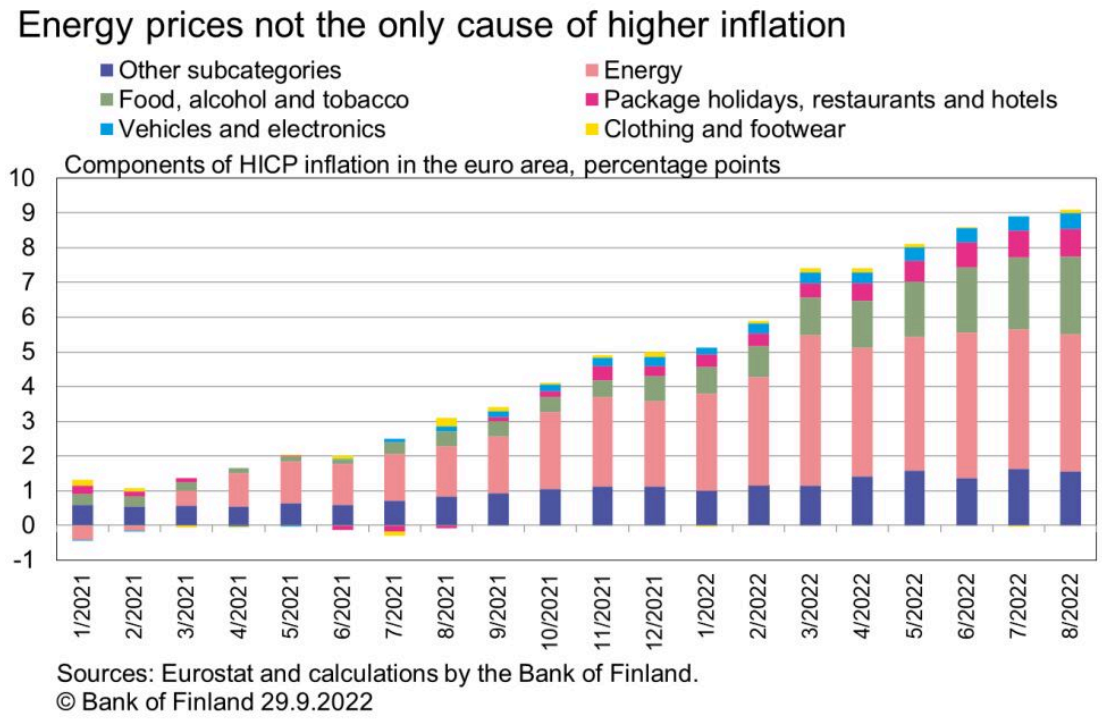
fiscal sustainability. Inflation is increasing public sector expenditure, and measures to resolve the energy crisis are widening general government deficits, and this may continue in the years to come.[12] The energy crisis has made the achieving of fiscal balance over the medium term in an environment of rising interest rates even more important – and challenging.

Rise in energy prices spilling over ever more widely to consumer prices

Inflation in the euro area and many other economic regions has increased dramatically this year. In August the annual inflation rate in the euro area was 9.1%. The increase was especially sharp in the Baltic countries. The energy crisis has meant that inflation differentials within the euro area have never been wider. Key factors explaining these include the different extent to which countries are exposed to energy price rises and differences in the proportion of the consumer basket that is accounted for by energy.

Inflation already began to rise in 2021, particularly as a result of the post-pandemic recovery and disruptions to supply chains. The war in Ukraine and the related imposition of economic sanctions then brought new problems, especially concerning the availability of energy and certain other raw materials and manufacturing components. This pushed up the prices of raw materials and, in particular, energy prices, which spilled over to consumer prices (Chart 7) and, with a time lag, to the price of food in particular. This year the energy and raw material price increases have started to be reflected in the prices of a growing number of products (dark blue bars in the chart).

Chart 7.



The rise in prices has steadily become more widespread during 2022. In August, the year-on-year increase in prices was above 3% in 61 of the 94 subcategories of the consumer basket used in the Harmonised Index of Consumer Prices (HICP). Thus, inflation is not linked only to the rise in food and energy prices. In August, the underlying rate of inflation, which excludes energy and food, was 4.3%.

A further indication of strong inflationary pressures is that the HICP-CT (HICP adjusted for tax changes, i.e. measured at constant taxes) has in recent months risen faster than the standard HICP index. The VAT cuts made and other support measures taken by countries on account of the energy crisis have therefore significantly lowered prices, for energy products especially.

The depreciation of the euro against other currencies has also stoked inflation. Since the start of the year, the euro has weakened against the US dollar by around 15%, and by some 4% against the nominal effective exchange rate (NEER). The research literature suggests, however, that the pass-through effect of the exchange rate is comparatively small, with a 1% weakening of the exchange rate (NEER) accelerating inflation by just under 0.1 percentage points.[13] Of course, in the context of the current dramatic cost shock, even this impact may be greater than conventional elasticities. Against the pound sterling, the euro has strengthened by around 6% this year.[14]

Production costs up as inflation pressures grow

The recent rapid rise in inflation worldwide surprised nearly all economic forecasters. Factors contributing to this inflation surge include not only the rise in raw material prices, the supply bottlenecks and a weakening currency, but also the indirect impact of energy prices on other consumer prices.[15] Higher prices for energy push up companies' production costs and ultimately the prices of their end products.

The rise in the price of energy has been reflected fastest and most evidently in the increase in food production costs and food prices. Historically, an unexpected increase in the price of oil has also affected underlying inflation after a time lag, even though changes in oil prices are excluded from the measures of underlying inflation.[16]

The spillover of energy-related inflationary pressures to other prices may be far greater than normal in present conditions.[17] When inflation is already rising fast, factors that increase costs might push the inflation rate up more rapidly than when inflation was slow to begin with.

The most crucial consideration from the standpoint of monetary policy is how expectations regarding future inflation develop. To achieve price stability, it is essential that people have confidence in the idea that inflation will be brought down to a level that is in line with the price stability objective. When inflation expectations are anchored to this objective, there is less uncertainty about future inflation, and businesses, employees and households do not have to plan for an extended period of continued high inflation when they make their decisions (on product pricing or in wage negotiations, for example).

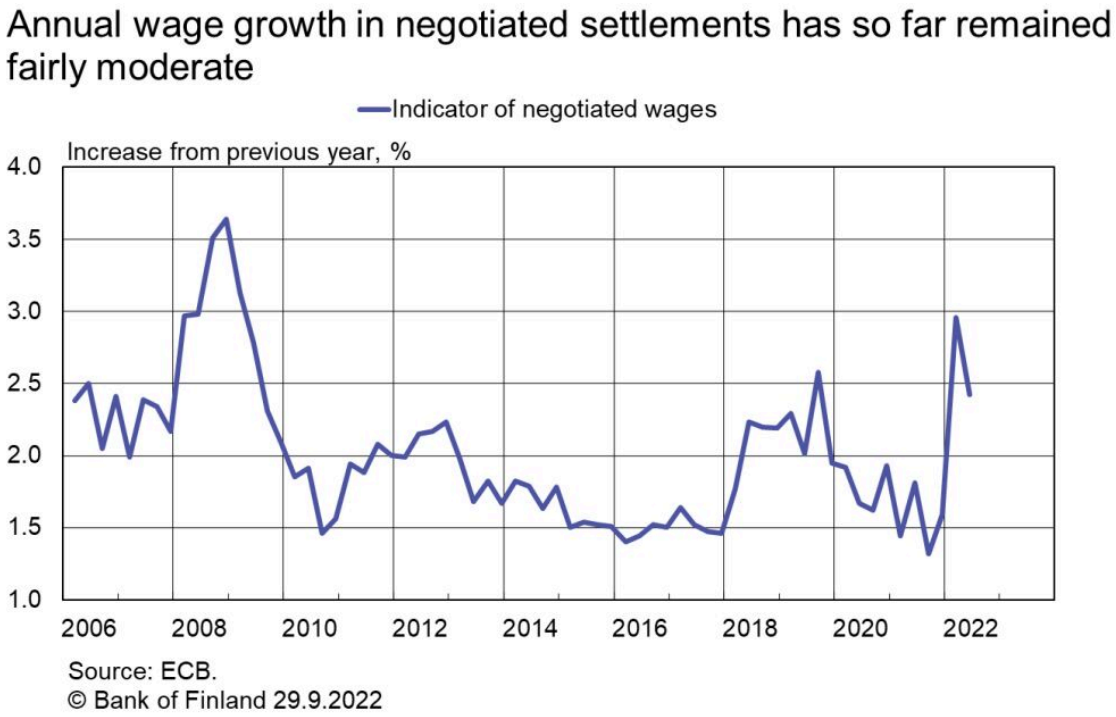
A period of rapid inflation in the wake of energy-related inflationary pressures has commonly been seen to influence inflation expectations, especially in emerging economies, where monetary policy is not necessarily so closely tied to a price stability objective.[18] By contrast, assessments have shown that in developed economies with a central bank committed to keeping inflation moderate, the effects of an energy price rise on underlying inflation, on inflation expectations and on wages have been less marked, at least in recent decades.[19]

How is inflation reflected in wages and inflation expectations?

Wage inflation in the euro area has been relatively moderate, and there have so far been no clear signs in wage negotiations of any considerable pay increases that could trigger a major wage-price spiral (Chart 8). The rate of annual wage growth in negotiated settlements rose to around 2.5% in

the first half of this year, having been 1.5% in 2021. This is close to the rate for the period 2018–2019. The rate of wage growth is expected to increase further in the latter part of this year. In the ECB's September forecast, wage growth per employee is projected to rise in 2023 to 4.8% from this year's 4.0%, and then to slow to about 4.0% in 2024.[20]

Chart 8.



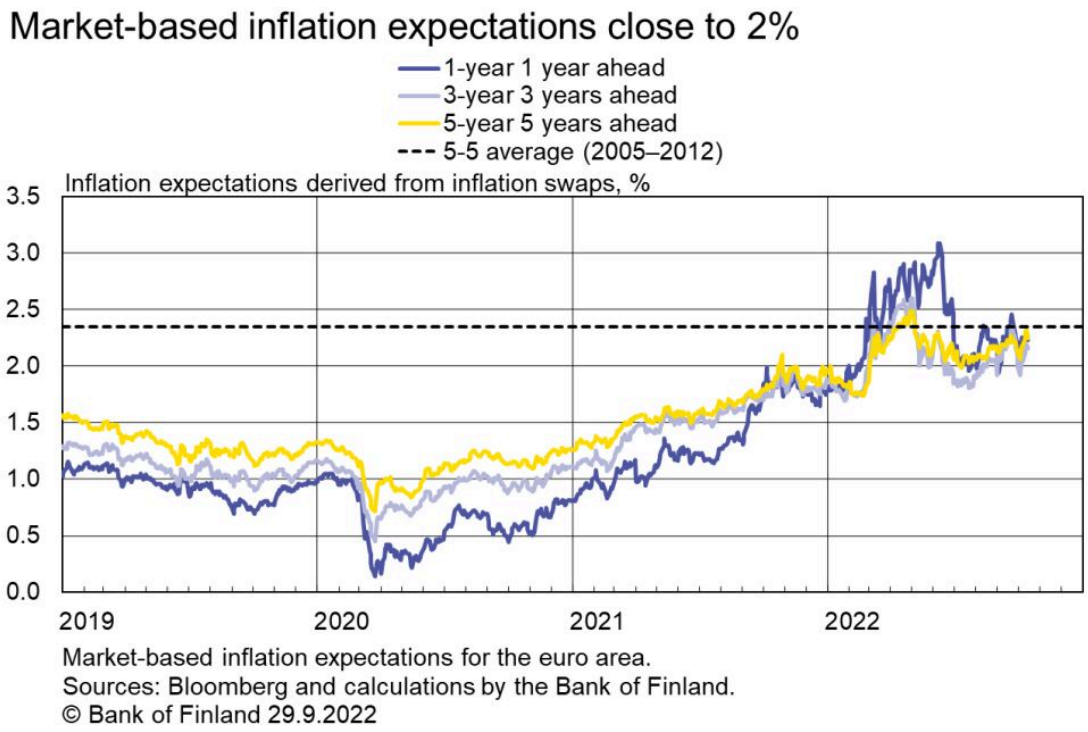
Historically, especially during the oil crisis in the 1970s, an unexpected rise in energy prices has also pushed up wages. This effect has been less significant in the past few decades, however, which is explained by the greater independence of the central banks and their commitment to an inflation target.[21] Furthermore, labour market structures have changed and wage indexation has declined. Similarly, energy consumption accounts for a smaller proportion of GDP compared to the 1970s.[22]

Medium-term and long-term inflation expectations have also remained moderate in the euro area (Chart 9). The market-based inflation expectation for a five-year period starting five years ahead has, despite a clear rise, remained all year very close to, or even below, the average for 2005–2012.

There are, therefore, no signs of a powerful longer term surge in inflation. Inflation expectations

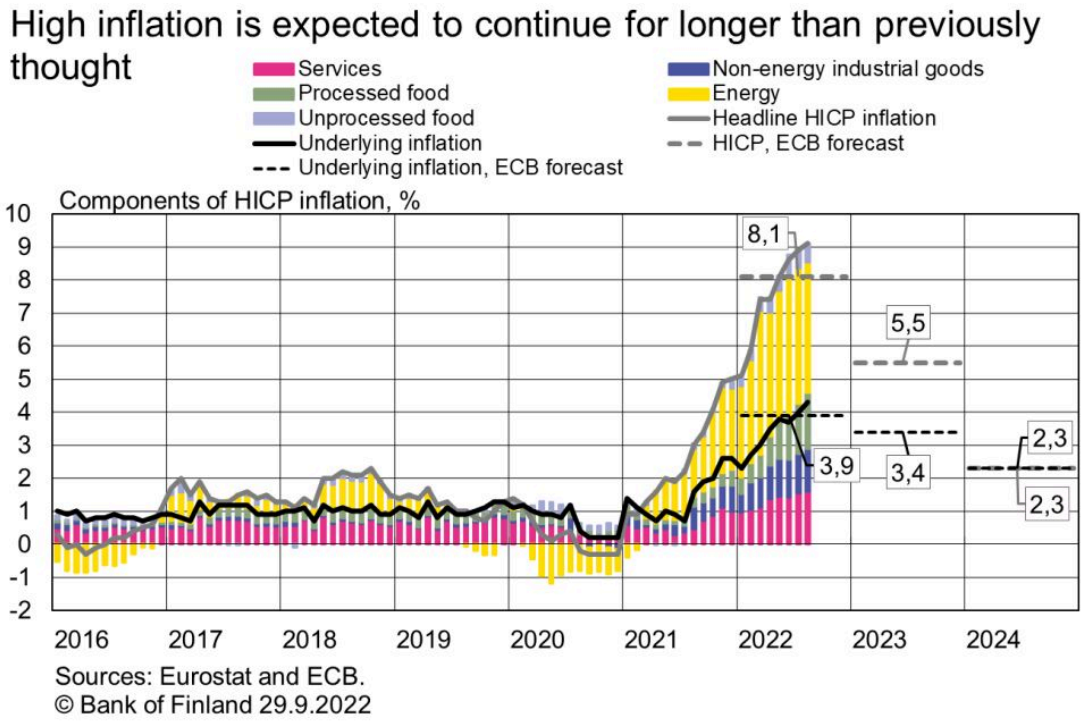
have moderated slightly since the summer, when progress with the normalisation of monetary policy made it clearer than ever that the ECB was reacting vigorously to changes in the inflation outlook. Furthermore, growing concerns about a recession have caused medium-term inflation expectations to level off.

Chart 9.



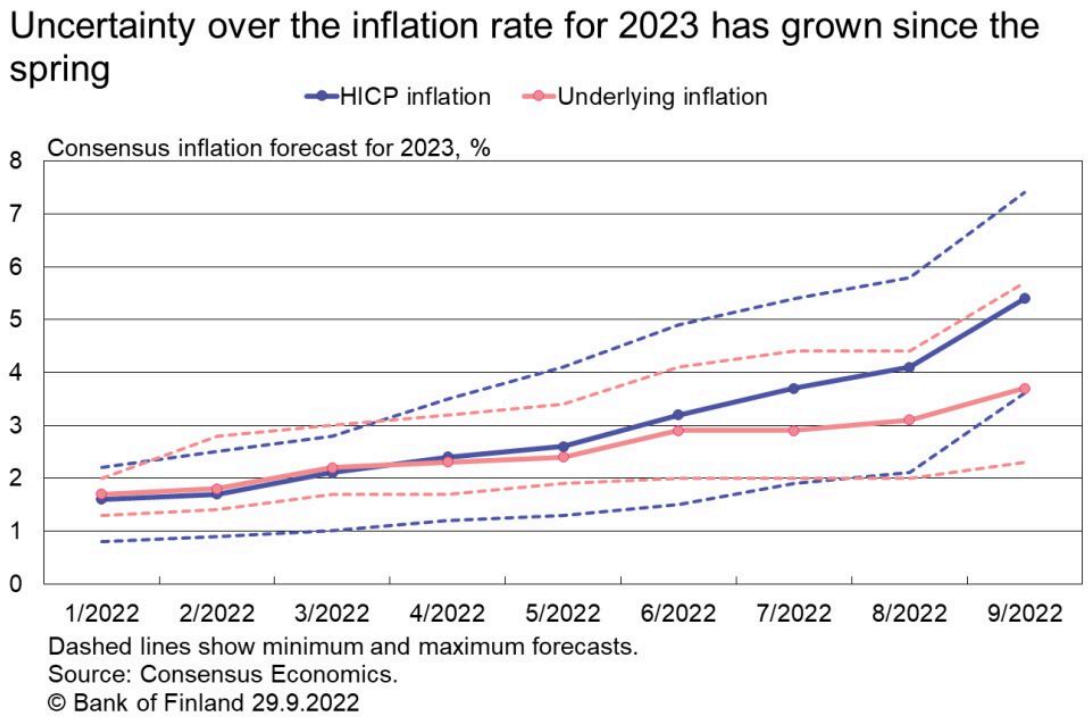
In September, the ECB forecast that inflation would remain high over the next few quarters, but would slow down significantly after that, because the futures curves for different energy prices are falling (Chart 10). Energy excepted, the prices of many raw materials have now fallen from their peak level in the spring. According to the ECB's September forecast, euro area inflation will be 8.1% in 2022, approximately 5.5% in 2023 and 2.3% in 2024.

Chart 10.



The uncertainty surrounding inflation forecasts is illustrated in Chart 11. This shows the minimum and maximum values for forecasts of headline HICP inflation and underlying inflation made by different research institutes and investment banks in the Consensus Economics forecast for 2023, plus the average values for the forecasts. The dispersion of forecasts for 2023 has clearly grown since April, and forecasts of higher inflation in particular have become more likely than previously. A similar widening of the distribution is also apparent in the market-based distributions for inflation expectations derived from inflation options.

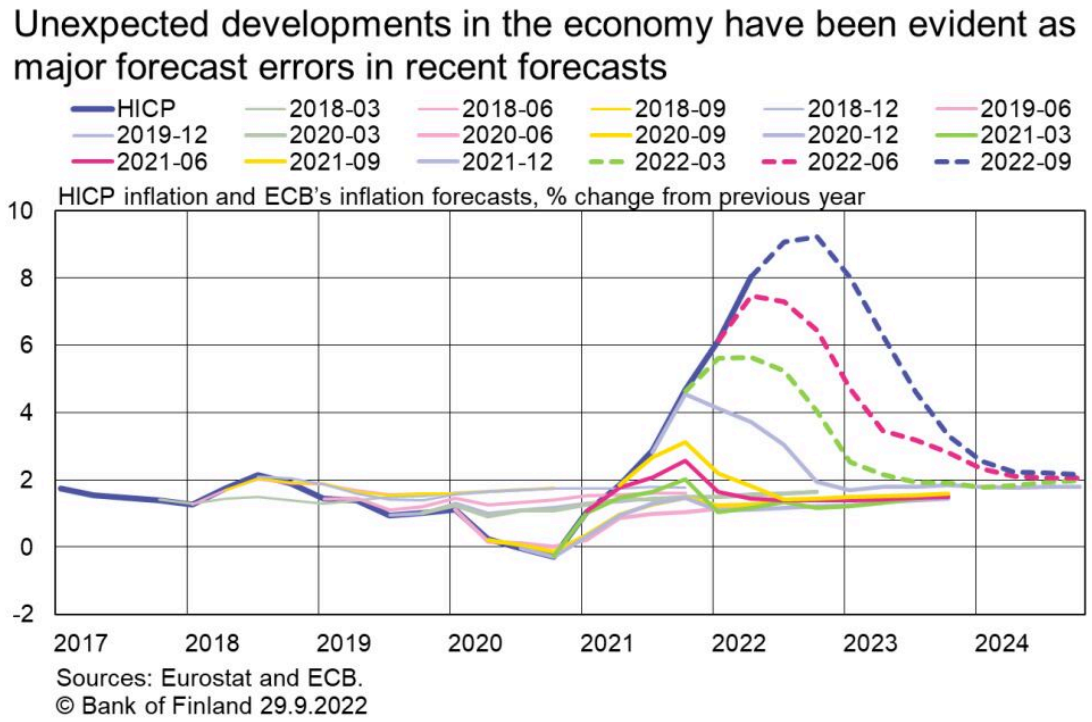
Chart 11.



Uncertainty over the outlook for inflation and growth is exceptionally high

The ECB's inflation forecasts, like those of many other forecasters, have been underestimating the rate of inflation since the first quarter of 2021.[23] By the third quarter of 2021, the extent of the forecast errors was already significant. The forecast error concerning the second quarter of 2022 was the greatest ever: euro area inflation was underestimated by 2.4 percentage points.

Chart 12.



The main reason for the ECB's recent forecast errors is the unexpectedly huge rise in energy prices. The ECB's projections assume that energy prices will reflect the trend in futures prices.[24] However, since the start of the energy crisis, these futures curves have continuously underestimated price trends in energy commodities. Other factors underestimated in the forecasts include the duration of supply disruptions, the pace of society's post-pandemic reopening and recovery, and the indirect effects of energy price increases on other prices.

There is now exceptional uncertainty attached to these factors and more generally to the global economy, which would suggest that significant forecast errors could also occur in the future. Investment in energy production also has implications for the inflation outlook. This investment and the speed at which new production capacity is made available will have a crucial impact on energy prices and, ultimately, inflation. Furthermore, the impact of inflation on wage growth and, in turn, on further price rises, may not follow the expected pattern, as the inflation rate has been exceptional.

The same uncertainty factors that are associated with inflation also dominate the risk outlook for the real economy. For example, the downside scenario of the ECB's September forecast foresees negative growth in 2023. That scenario assumes that the cessation of Russian energy supplies is

not followed by their successful replacement with other sources. Unexpected adverse changes to the economic outlook could result not only from twists and turns in the energy crisis and altered prospects for growth in the global economy, but also from elevated geopolitical tensions globally. The risks to growth are on the downside.

In recent years the global economy, and the euro area in particular, have faced exceptional changes. Factors causing the inflation outlook to fluctuate, both in the short and long term, include especially the need for increased defence expenditure as a consequence of Russia's war in Ukraine, the quickening pace of the energy transition, and the problems with global supply chains and potential changes in these. There are new risk factors associated with the output potential in the euro area.

How well the euro area comes through the energy transition will be of critical importance. Failure would threaten the euro area's international competitiveness and might reduce the output potential. Success, on the other hand, could brighten the economic outlook for the euro area. But this will require successful action from different policymakers and adaptability on the part of the private sector. Whatever the case, the turmoil faced by the euro area may have unforeseen implications for the inflation outlook. In particular, price-pressure risks affecting the inflation outlook have grown.

Continuation of monetary policy tightening to safeguard price stability

In response to increased inflationary pressures, the ECB began the normalisation of monetary policy in December 2021. The ECB Governing Council also announced that a reduction in net asset purchases under the pandemic emergency purchase programme (PEPP) would take place in the first quarter of 2022 and that net asset purchases would be discontinued at the end of March.[25]

Net purchases under the asset purchase programme (APP) were ended at the start of July. Prior to this, the ECB had announced that key central bank interest rates would be raised after the net asset purchases had ended.[26] For a more detailed discussion of the effects of monetary policy normalisation, see the feature article 'What is monetary policy normalisation?'.

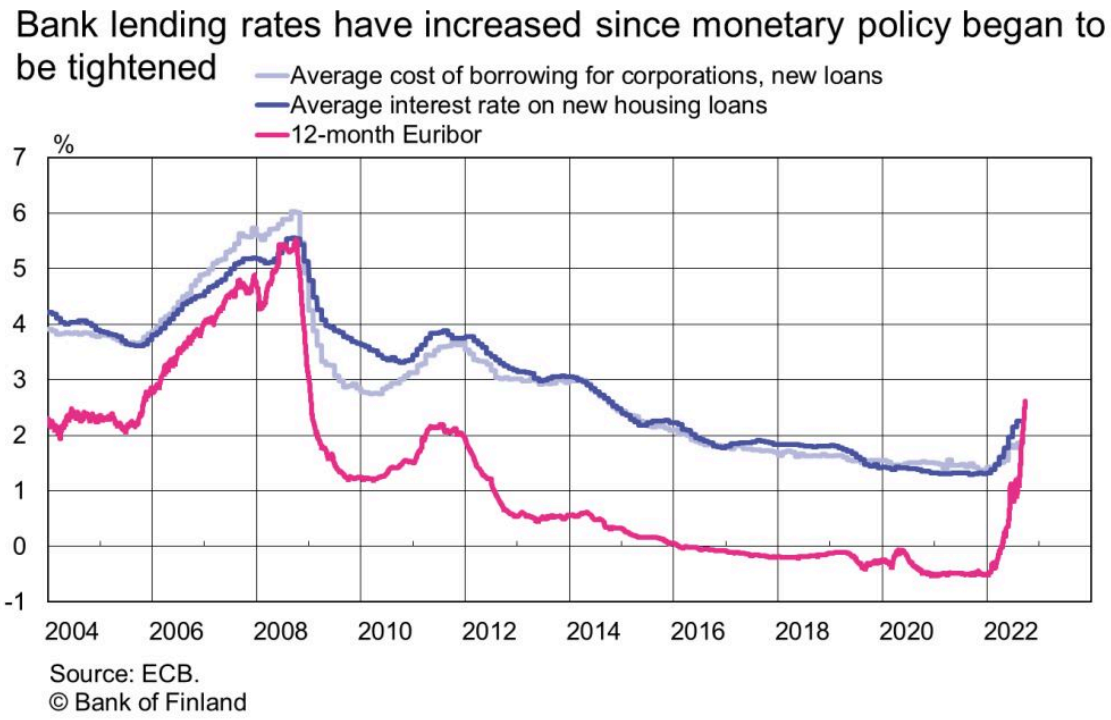
In July 2022, the ECB Governing Council decided to increase key ECB interest rates by half a percentage point. At the time, it also decided to introduce a new monetary policy instrument to support the effective transmission of monetary policy: the Transmission Protection Instrument (TPI).[27] The instrument may be activated if unwarranted or disorderly market dynamics pose a

serious threat to the transmission of monetary policy across the different countries of the euro area.

At its meeting in September 2022, the ECB Governing Council raised its key interest rates by an additional 0.75 percentage points. It expects to raise rates further at subsequent meetings. Decisions on interest rates will be taken on a meeting-by-meeting basis with reference to the economic outlook.

Market interest rates have risen in the euro area as the ECB has tightened its monetary policy. Rates on government and corporate bonds have risen due to a number of factors. The ending of net asset purchases and the expectations around purchase programmes mainly affect long-maturity rates. By contrast, the rise in policy rates and expectations of further increases in the future mainly serve to push up short-maturity rates, though long-term rates may rise, too. For example, the 12-month Euribor interest rate, which typically represents the reference rate for housing loans, has risen to about 2.6% (Chart 13).

Chart 13.



At the same time, the differences in interest rates between different countries have nevertheless remained moderate. This is partly explained by the existence of the ECB's new instrument, the TPI, which allows it to intervene if it considers the differences in interest rates to be unwarranted. The

difference in the cost of borrowing for corporations compared with the government has broadened slightly.

Interest rates are affected not only by the normalisation of monetary policy but also by inflation expectations. With the inflation outlook in the euro area having deteriorated following the outbreak of the war in Ukraine and the energy crisis, fixed-income investors are looking to counteract the impact of rapidly rising inflation. This is now apparent in the form of higher nominal interest rates.

Owing to the tightening of monetary policy and changes in the macroeconomic environment, bank lending rates have also started to increase (Chart 13). Despite this, bank loan portfolios have grown, and loans to businesses have even accelerated. The euro has weakened substantially against the US dollar over several months, partly due to the more robust tightening of monetary policy in the United States compared with the euro area.

Summary: energy crisis is at the heart of the economic outlook

The present energy crisis is affecting the euro area in particular, as it imports a considerable proportion of the energy it uses. The rise in energy prices has already led to a rapid increase in the inflation rate and this has gradually broadened to encompass other goods and services. The growth impact of the energy crisis will emerge more slowly than its effects on prices, but in the summer the outlook for growth was already weakening significantly. In the future, the growth and inflation outlook will depend very much on how well and by what means the energy crisis is managed. The possibility of a recession cannot be ruled out.

The ECB has reacted to the surge in inflation by tightening monetary policy. Future monetary policy decisions will depend on how the economy develops and what the inflation data looks like. If inflation is to be brought down in the immediate years ahead, a detrimental wage-price spiral must be avoided and inflation expectations must be stable. The objective of monetary policy in this situation must be to stabilise inflation at 2% over the medium term.

Notes

1. Energy production has been hampered not only by the decoupling from Russian energy supplies but also by exceptional weather conditions. ↑
2. The combined capacity of EU Member States' gas reserves is about 1,111 TWh, and the EU's total inland consumption of natural gas was about 4,400 TWh in 2021. Ignoring seasonal variation and assuming that the gas would be readily available at the point of

consumption, the reserves would last about three months. In actuality, demand is higher during the winter than it is during the summer, and the difficulty of natural gas transportation may limit its availability, especially to end-users inland. Sources: Eurostat and the European Commission. ↑

3. See McWilliams, B. & Zachmann, G. (2022) European Union demand reduction needs to cope with Russian gas cuts, Bruegel: https://www.bruegel.org/2022/07/european-union-demand-reduction-needs-to-cope-with-russian-gas-cuts. Retrieved: 24 August 2022. ↑
4. See Flanagan, M., Kammer, A., Pescatori, A. & Stuermer, M. (2022) How a Russian Natural Gas Cutoff Could Weigh on Europe's Economies, IMF Blog: https://blogs.imf.org/2022/07/19/how-a-russian-natural-gas-cutoff-could-weigh-on-europes-economies/. Retrieved: 24 August 2022. ↑
5. See Bachmann, R., Baqaee, D., Bayer, C., Kuhn, M., Löschel, A., Moll, B., Peichl, A., Pittel, K. & Schularick, M. (2022) What if? The economic effects for Germany of a stop of energy imports from Russia, EconPol Policy Report 36, and Bachmann, R., Baqaee, D., Bayer, C., Löschel, A., Kuhn, M., McWilliams, B., Peichl, A., Pittel, K., Schularick, M. & Zachmann, G. (2022) How it can be done, ECONtribute Policy Brief No. 034. See also: German Council of Economic Experts (2022) Effects of a possible end to energy supplies from Russia on energy security and economic output, March 2022. ↑
6. See Deutsche Bundesbank (2022) Monthly Report, June 2022. ↑
7. When calculated using the alternative GDP model developed by the Bank of Finland Institute for Emerging Economies (BOFIT), China's annual economic growth was negative in the second quarter of 2022. ↑
8. Climate investment also includes non-energy investments, and decoupling from Russian energy will increase these figures until at least 2027. ↑
9. See Darvas, Z. & Wolff, G. (2021) A green fiscal pact: climate investment in times of budget consolidation, Bruegel, Policy Contribution Issue no. 18/21, September 2021. https://www.bruegel.org/sites/default/files/wp_attachments/PC-2021-18-0909.pdf. ↑
10. Monitoring is performed as part of the European Semester. The data used in this analysis is based on the Fiscal Sustainability Report published every three years and the annual Debt Sustainability Monitor. The analysis covers the years 2015–2021. The latest report was published in spring 2022. ↑
11. European Commission, Fiscal Sustainability Report 2021, Volume 1, April 2022. For more on the methodology, see the latest report, p. 34. ↑
12. On the other hand, high inflation may partly support the debt sustainability of euro area countries, as the real value of the debt burden declines. ↑
13. The estimate is based on a meta-analysis of several studies that was conducted at the Bank of Finland. See e.g. Comunale, M. & Kunovac, D. (2017) Exchange rate pass-through

in the euro area, Working Paper Series 2003, European Central Bank, and Dieppe, A., Pandiella, A. G., Hall, S. & Willman, A. (2013) Limited information minimal state variable learning in a medium-scale multi-country model, Economic Modelling, Vol. 33, Issue C, (2013), pp. 808–825. ↑

14. The pound sterling has weakened against the euro since the end of summer. The end of September also saw a rapid weakening of the pound, when the United Kingdom announced a fiscal stimulus package. UK government bond yields have also risen sharply. ↑
15. See Box 3 ECB's Monthly Bulletin for December 2014: https://www.ecb.europa.eu/pub/pdf/other/mb201412_focus03.en.pdf. See also the ECB Monthly Bulletin for August 2010: Monthly Bulletin August 2010 (europa.eu). ↑
16. See Baba, C. & Lee, J. (2022) Second-Round Effects of Oil Price Shocks – Implications for Europe's Inflation Outlook, IMF working paper, No. 2022/173. ↑
17. See Harding, M., Linde, J. & Trabandt, M. (2022) Understanding Post-Covid Inflation Dynamics, unpublished paper, and Borio, C., Disyatat, P., Xia, D. & Zakrajsek, E. (2022) Second-round effects feature less prominently in inflation dynamics, BIS Quarterly Review, pp. 23–24. ↑
18. These conclusions are based on data for the period Q1 2000 – Q4 2019. See ibid. Chart 19, p. 21. ↑
19. Wages per employee differ from the indicator of negotiated wages in that they include 'wage drift', i.e. pay in addition to what has been agreed, and are also affected by changes in the number of hours worked per employee. ↑
20. See Baba, C. & Lee, J. (2022) Second-Round Effects of Oil Price Shocks – Implications for Europe's Inflation Outlook, IMF working paper, No. 2022/173, and Blanchard, O. J. & Gali, J. (2007) The Macroeconomic Effects of Oil Shocks: Why are the 2000s so different from the 1970s? ↑
21. See Ukraine war already reflected in euro area's confidence measures and energy prices – Is there a threat of low growth and high inflation? (in Finnish) Euro & talous, 7 April 2022. ↑
22. See the ECB's Economic Bulletin 3/2022, Box 5. ↑
23. The so-called risk-neutral assumption made in connection with the market expectations implied by futures means that the price of a futures contract is assumed directly to reflect the expected price of an energy commodity. In reality, investors are risk-averse, and some of the fluctuation in the prices of futures is explained by changes to risk premia. See e.g. Hamilton, J. D. & Wu, J. C. (2014) Risk premia in crude oil futures prices, Journal of International Money and Finance, 42, 9–37. ↑
24. The mechanisms of different monetary policy tools are discussed in more detail in e.g.

Nelimarkka, J. & Laine, O.-M. (2021) The effects of the ECB's pandemic-related monetary policy measures, BoF Economics Review, 4. ↑

25. The ECB issued forward guidance, stating that key interest rates would be raised after the net asset purchases had ceased. In March 2022, the ECB removed reference to a possible fall in interest rates. ↑
26. See the ECB's press release 21 July 2022. ↑

Key words

energy, euro area, inflation, monetary policy