2. Monetary policy in the euro area

2.1 Acceleration of monetary policy normalisation

Annual inflation in the euro area reached on average 8.4 % in 2022, the highest level since the creation of the Economic and Montary Union. For the best part of the year, the rate of price rises gained pace : while it had been 5.1 % back in January, it neared the 11 % mark in October before falling back to 9.2 % at the end of the year. Skyrocketing energy prices were largely responsible for this inflation and accounted for roughly half of it. Still, all major categories of goods and services recorded historic price rises and contributed to the escalation of inflation.

The rise in inflation was due to both supply shocks and monetary policy

The rise in inflation was initially caused by supply shocks, more specifically in relation to energy. Supply chains were unable to absorb the sharp increase in demand after the lockdown measures were lifted, and the situation was exacerbated by Russia's invasion of Ukraine in February, which notably disrupted the supply of energy and commodities. As a net energy importer, Europe – unlike the United States – was hit very hard by a deterioration of its terms of trade. The United States had to contend with a demand shock triggered by a much bigger fiscal stimulus implemented in the wake of the COVID-19 crisis than in Europe, which gave rise to higher domestic inflation.

Although monetary policy was not the cause of the sudden surge in prices, it fostered an environment conducive to the spread of inflation. The measures taken during the pandemic, such as the Pandemic Emergency Purchase Programme, led to extremely accommodative monetary policy. These monetary policy measures – as well as those of a fiscal and macroprudential nature – were necessary to prevent the euro area economies from collapsing. At the same time, the monetary policy stance shored up inflation by keeping the cost of financing the economy as a whole at a low level for an extended period of time. Likewise, it contributed to the depreciation of the euro against the US dollar and other currencies in 2021 and during the first half of 2022, which also brought about higher import prices, especially energy prices denominated in US dollars.

Inflation spread rapidly. On the one hand, measures of core inflation hit new records. Some of these exclude the most volatile price categories.

The yardstick normally used by the European Central Bank (ECB) leaves energy and food products out of the total price index. It went up from 2.3 % in January to 5.2 % in December. Depending on the excluded components, the range of inflation measures at the end of the year ran from 5.2 % to 7.9 %. On the other hand, under pressure from production costs, inflation rates for almost all categories of consumption turned positive and more similar in magnitude in 2022. For instance, roughly nine product categories out of ten posted an inflation rate above or equal to 2 % at the end of the year, while prices for almost one third of all products recorded increases of 8 % or more. Apart from energy and food prices, this was also the case for prices of services (especially travel and accommodation) and non-energy industrial goods (such as furnishings, maintenance materials and small domestic appliances).

Monetary policy response gained traction during the course of the year

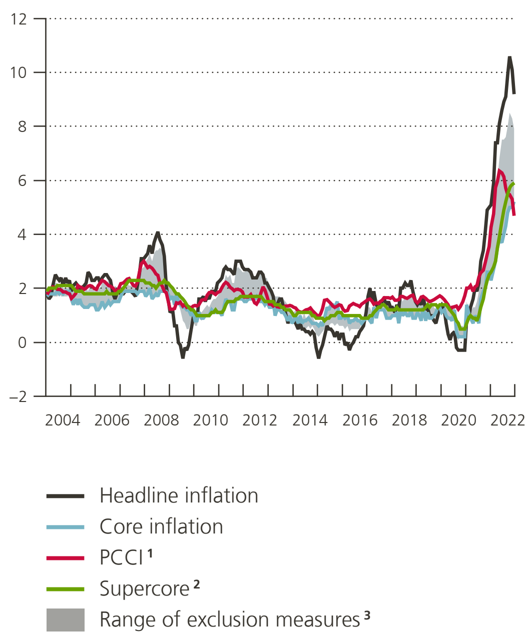
As the supply shocks were initially thought to be temporary, the monetary policy response to rising inflation in the euro area was not immediate. Determining the causes of inflation is crucial to defining the appropriate monetary policy response. When the effects of a supply shock are considered to be only short-lived, as was the case at the beginning of the post-COVID-19 recovery, monetary policy may look through the rise in inflation. In the case of a negative supply shock that tends to push prices and production in opposite directions, the central bank has to find a compromise between curbing inflation – with the attendant risk of causing a contraction in the economy – and supporting

Chart 2.1

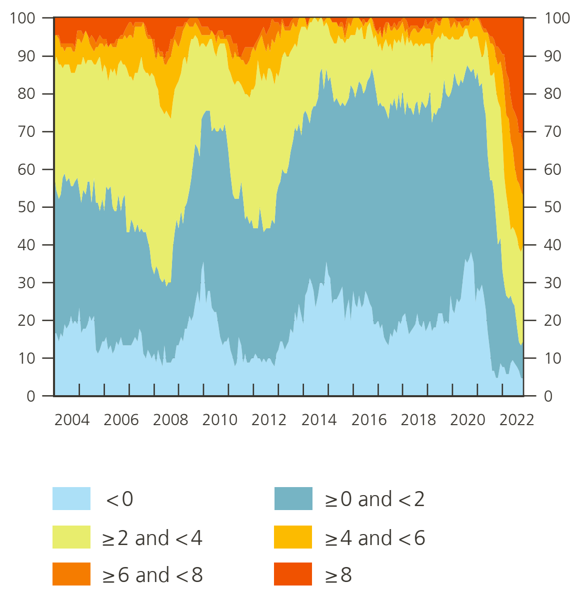
Inflation is no longer solely linked to energy and now has a wider base

(in %)

Inflation rate



Distribution of HICP categories of goods and services according to the level of inflation ⁴



Sources: ECB and Eurostat.

1 The PCCI (Persistent and Common Component of Inflation) measure is designed to take account of the persistent and common component of inflation rates for all euro area countries and sub-headings.

2 The "supercore" index is based on non-energy and non-food HICP items that are sensitive to the business cycle, measured by the output gap.

3 Measures that permanently remove certain volatile sub-components and temporarily remove certain large isolated price changes.

4 Based on the four-digit Classification of Individual Consumption According to Purpose (COICOP).

economic activity – by accepting a (temporarily) higher inflation rate. This dilemma is illustrated by the constant revisions of the quarterly macroeconomic projections compiled by the Eurosystem in 2022: average inflation over the period 2022-2023 was revised upwards at each forecasting round, while GDP growth over the same period was revised downwards. The United States did not face the same dilemma as the inflation it was dealing with was more demand-driven. In this case, monetary policy can be further tightened to counter the demand effects on both inflation and economic activity.

Another reason for the Governing Council's initially slow response in the face of accelerating inflation was the need to meet forward guidance conditions. In order to align this guidance to the ECB's new strategy published in July 2021, three conditions had to be met before the Governing Council could start raising its key interest rates. First of all, inflation had to reach its 2 % target well before the end of the ECB's projection horizon, which is two to three years. Secondly, to prevent monetary policy from reacting to a brief surge in inflation, the inflation target had to be reached sustainably for the rest of the projection horizon. Thirdly, core inflation had to have risen enough to be compatible with a stabilisation of inflation at 2 % over the medium term. Moreover, forward guidance suggested that these conditions could lead to a transition period during which inflation would be slightly above target. In June 2022, the Governing Council felt that these three conditions had been met.

But the effects of the supply shocks turned out to be more persistent than expected, which sped up the monetary policy response designed to align supply and demand at a level compatible with the desired price dynamics, notably to avoid the de-anchoring of inflation expectations and a wage-price spiral. As inflation continued its upward trend, the persistence of the supply shock effects became clear. Global value chains continued to be affected by the war in Ukraine and the restrictions associated with various coronavirus waves, leading to fears of a drop in growth potential. Likewise, there was a risk of the supply of energy and certain raw materials being jeopardised in the medium term. Ultimately, inflation that lasts longer than initially forecast risks triggering a surge in inflation expectations and, in turn, a wage-price spiral. More specifically, rising inflation expectations – which are therefore no longer anchored around the central bank's target – can generate self-perpetuating inflation dynamics. Then monetary policy has to come into play, ideally preventively, to keep the inflation outlook at 2 % over the medium term. If the monetary policy response is insufficient, greater tightening will be necessary later on, which could trigger high economic costs. The American experience of the 1980s is a good example in this regard.

While energy inflation slowed and supply bottlenecks were largely cleared up in the second half of the year, the euro area shifted towards a more domestic type of inflation, notably fuelling fears of a wage-price spiral. According to the latest Eurosystem projections, core inflation should remain above 2 % until 2025, reflecting in particular labour market tensions and accelerating wage growth to compensate for inflation. Core inflation is nevertheless expected to fall back from 4.2 % in 2023 to 2.4 % in 2025, against a backdrop of dwindling upward effects related to supplychain bottlenecks and the reopening of the economy.

The labour market situation and wage dynamics point to the risk of a wage-price spiral. The labour market once again proved resilient in 2022, with a historically low unemployment rate of 6.7 % on average and a record proportion (3.1 %) of vacancies to total jobs. In this context, workers are more likely to demand pay rises to offset their loss of purchasing power. Although nominal wages had been rising since the end of 2021, rampant inflation lopped 5 % off real wages between the third quarter of 2021 and the same period of 2022. In particular, the negotiated wage index, compiled by the ECB for the euro area, showed an average rise of 2.8 % over the first three quarters, a rate above the long-term average (2.1 %).

The Governing Council followed inflation expectation indicators closely

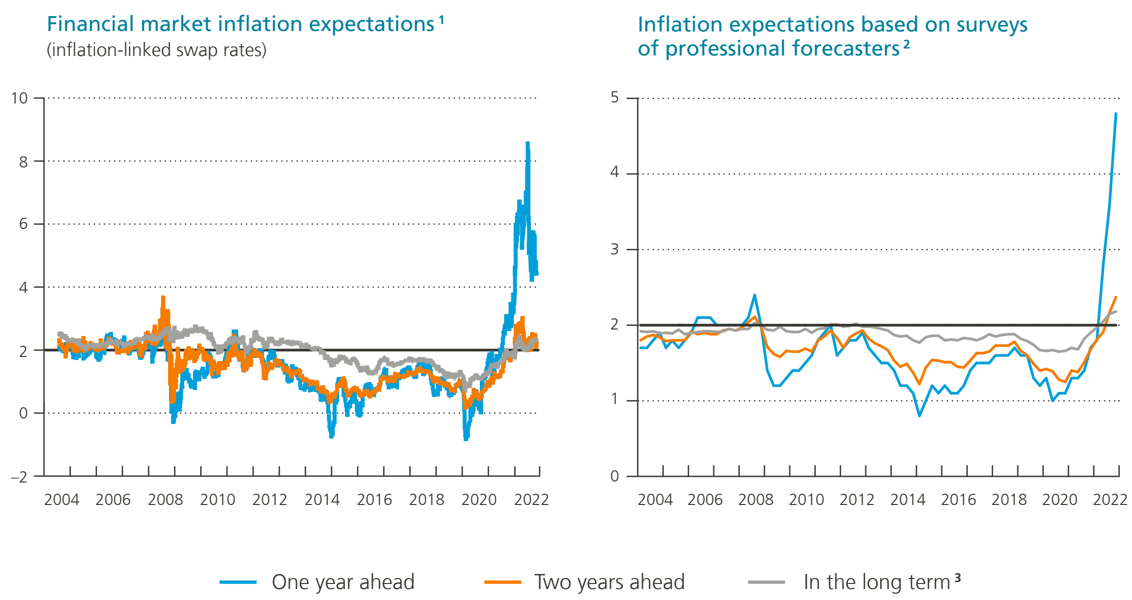
Financial market inflation expectations rose sharply in the short term, but have remained relatively well anchored in the longer term. These expectations are drawn from financial market derivatives (inflation-linked swaps). Inflation expectations one year ahead mainly reflect the latest inflation figures and the recent rise in wholesale energy prices. They peaked at more than 8 % in August 2022 before dropping back afterwards. On the other hand, inflation expectations two years ahead have remained much closer to the 2 % mark and only exceeded the 3 % threshold very briefly in 2022. They reacted to the tightening of monetary policy, falling back to around 2 % as soon as the prospect of a rise in interest rates became clear. In the longer term, inflation expectations are above all a measure of the credibility of the ECB's monetary policy. While the level of 2.5 % reached by long-term expectations – covering a five-year period starting in five years' time – in the first half of the year was worrying, they fell back once the monetary policy response became more definite.

Surveys of professional forecasters confirmed the inflation expectations dynamics. The ECB conducts a quarterly survey amongst professional forecasters. The fifty or so respondents are experts who use different forecasting methods. According to this survey, the rise in one-year-ahead inflation expectations gained pace in 2022. In the fourth quarter, they were close to 5 %. A surge in inflation expectations two years ahead was also observed, although the level remained closer to 2 %. The inflation projections compiled by the Eurosystem's services and published in December were in line with these expectations (6.3 % on average for 2023, 3.4 % for 2024 and 2.3 % at the end of the projection horizon in 2025). In the long term, which is about five years ahead, inflation expectations also showed a considerable increase, rising from 1.7 % in mid-2020 to 2.2 % at the end of 2022. In addition, the ECB carries out a survey every six weeks of thirty-odd monetary analysts. While the inflation expectations emerging from this survey were close to those revealed by the survey of professional forecasters, they also referred to a longer horizon, or that over which the effects of all shocks will vanish. For purposes of this survey, this can be interpreted, for the sake of simplicity, as around ten years. According to the survey, long-term inflation expectations remained anchored at 2 %.

Chart 2.2

Short-term inflation expectations rose sharply but longer-term expectations have remained relatively well anchored at 2 %

(in %)



Sources: Bloomberg and ECB.

1 Financial market inflation expectations are drawn from inflation-linked swaps. Apart from inflation expectations, the fixed rates for these swaps contain risk premia for inflation.

2 Averages of the aggregate probability distribution.

3 Long term refers to a five-year forward rate five years ahead for the financial markets and a horizon of more or less five years for the professional forecasters.

Nevertheless, consumer surveys and the distribution of survey responses revealed a risk of the de-anchoring of inflation expectations. Every month, the ECB conducts a survey in which it gathers information on the expectations of some 14 000 consumers in the euro area. According to this survey, the median inflation rate expected at a three-year horizon was relatively high and stood at 3 % in December 2022. In addition, the distribution of responses to the surveys of professional forecasters showed that the number of respondents predicting an inflation rate well above 2 % over the long term was up in 2022. Distributions can also be estimated around market expectations from inflation options. These also pointed to an increase in the expectation of seeing high inflation in future.

2.2 Monetary policy measures

Appraisal of the sources of inflation in the euro area and the persistence of inflation evolved throughout the year, which explains why the measures taken to normalise monetary policy were sped up. In the original context of the economic recovery and the upward revision of inflation forecasts, the Governing Council announced in December 2021 the discontinuation of net asset purchases under the Pandemic Emergency Purchase Programme (PEPP) and a gradual tapering of the pace of asset purchases (Asset Purchase Programme – APP).

Net asset purchases under the PEPP were discontinued at the end of March 2022, while those under the APP were gradually reduced and came to an end on 1 July. As far as the APP is concerned, no end date for net asset purchases was originally set (in December 2021); it had been planned to continue these purchases as long as necessary to reinforce the accommodative impact of the policy rates. But the steady rise in inflation and inflation forecasts meant that the gradual tapering of the pace of net purchases, initially quarterly, became monthly (in March 2022). As the medium-term inflation outlook had not weakened, it was decided (in June) to stop net asset purchases altogether. Nonetheless, the reinvestment of redemptions of securities held under both the PEPP and the APP continued for the rest of the year.

The discontinuation of net asset purchases was followed by a rise in key interest rates

When it decided to stop net asset purchases under the APP, the Governing Council also announced that the forward guidance conditions had been met and that interest rates would be raised. In June 2022, when the Eurosystem's inflation forecast for 2024 (the end of the projection horizon) exceeded the 2 % mark, the ECB changed the tone of its communication on interest rate policy, deeming that the forward guidance conditions had in fact been met. The ECB then signalled its intention to put up policy rates as early as the Governing Council meeting at the end of July and that a gradual but sustained rise in rates was to be expected. This decision stuck to the announced sequencing, which involved stopping net asset purchases just before starting to raise key interest rates.

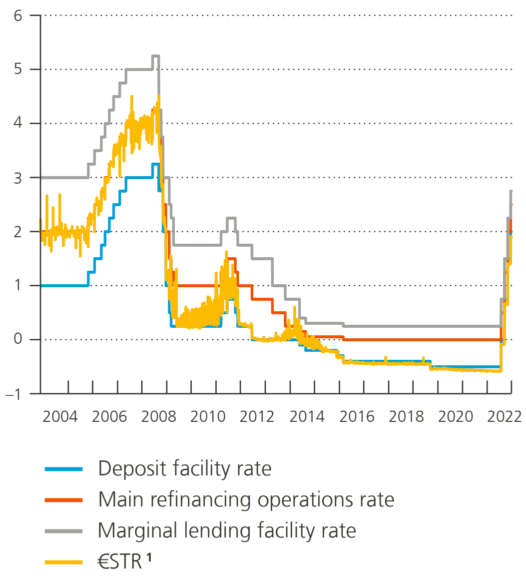
The ECB's policy rates were raised several times, each time substantially, starting in July. The first interest rate hike was 50 basis points. As inflation was still much too high and expected to remain above target for an extended period, the normalisation of interest rates continued, with increases of 75 basis points in September and October and 50 basis points in December. As surplus liquidity reserves held with the Eurosystem were still considerable, short-term money market rates were still evolving in a floor system, meaning they were determined by the deposit facility rate, i.e. the overnight rate banks receive for the funds they deposit with the ECB. The euro short-term rate (€STR) – the overnight money market rate – effectively remained close to this rate, albeit a few basis points below (given that the €STR takes account of banks' transactions with financial institutions that do not have access to the ECB's deposit facility). Owing to these successive rate hikes, at the end of the year, the deposit facility rate had been raised to 2 %, while the €STR had reached 1.9 %. Furthermore, the main refinancing operations rate – the rate at which banks can borrow funds from the ECB for a week – was raised to 2.5 % and the overnight marginal lending rate went up to 2.75 %.

It was also decided to set the remuneration for reserves required to be held by banks with the Eurosystem at the ECB's deposit facility rate and

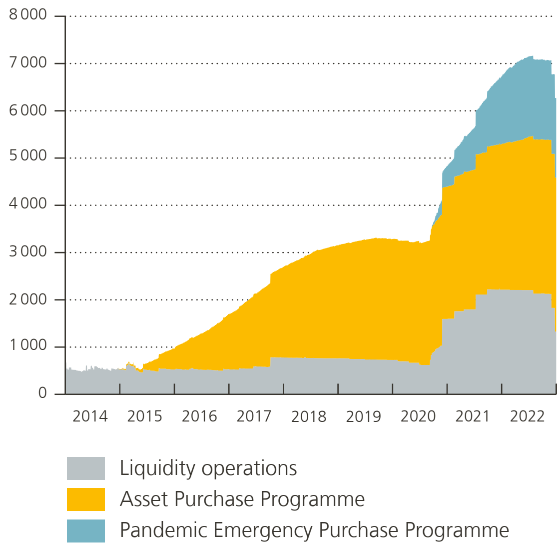
Chart 2.3

Key interest rates were raised and the Eurosystem's balance sheet started to shrink

Key interest rates and euro short-term rate (€STR)
(%)



Simplified Eurosystem balance sheet
(in € billion)



Source: ECB.
1 Until 1 October 2019, the €STR was estimated by subtracting 8.5 basis points from the euro overnight index average (EONIA).

no longer at the main refinancing operations rate. This decision aligned remuneration for mandatory reserves to current conditions on the money markets, as evidenced by the proximity of the €STR rate to the deposit facility rate.

Furthermore, the Governing Council decided to lift the specific conditions governing TLTRO III operations and adjust the interest rates applicable to these operations. During the pandemic, the interest rate on TLTRO III operations – the third series of targeted longer-term refinancing operations – was index-linked to an average of the key interest rate applicable for the entire duration of the operation, on top of which specific conditions in force until June 2022 made it possible to reach a financing rate of –1 %. However, the financing rate has been index-linked since 23 November 2022 based on the average applicable key ECB interest rates from that date onwards. The Governing Council also decided to offer banks three additional voluntary early repayment dates. These measures were intended to ensure consistency with the broader monetary policy normalisation process by contributing to the normalisation of banks' funding costs and reinforcement of the transmission of policy rate rises to bank lending conditions. The recalibration also removed deterrents to early voluntary repayment of funds borrowed under TLTRO III. The impact of TLTROs on the Eurosystem's balance sheet was less significant in 2022 owing to early redemptions. Banks repaid a total of €796 billion in November and December.

Bond portfolio reduction plans announced

Since the reduction in the portfolio of assets was an integral part of the normalisation process, the Governing Council decided to no longer fully reinvest the proceeds from assets reaching maturity. From a monetary policy viewpoint, a balance sheet contraction and a rise in policy rates are imperfect substitutes. The former has a much greater effect on long-term rates, while conventional interest rate policy tends to influence short-term rates. Consequently, a balanced combination of the two is justified to bring inflation back down to the 2 % target over the medium term. In December, the Governing Council decided to scale down the APP portfolio as from March 2023 by not fully reinvesting the proceeds from redemption of maturing assets. This compression will work out to €15 billion a month on average through the end of the second quarter of 2023, after which the pace will be gradually adjusted. As far as the PEPP is concerned, reinvestment is expected to continue at least through 2024.

2.3 Transmission of monetary policy measures to financing conditions

Monetary policy measures are fed through to the economy with time lags that differ depending on the variables. The influence on market expectations and financial market conditions is generally quite rapid, as seen following previous announcements of monetary policy normalisation and the implementation of measures. On the other hand, decisions take longer to feed through to the real economy.

Transmission has been quite smooth on the money markets, albeit with some turbulence on the secured loan market

Fluctuations in the €STR reflect deposit facility rate rises. The ECB's key interest rate changes are initially passed through to short-term money market rates. More specifically, the €STR is the implicit operational objective of the ECB's interest rate policy. This rate effectively serves as a reference for overnight indexed swaps whose fixed rates are considered to be risk-free. This swap rate curve therefore defines the monetary policy stance, not only in the short term but also in the longer term, insofar as it reflects policy rate expectations.

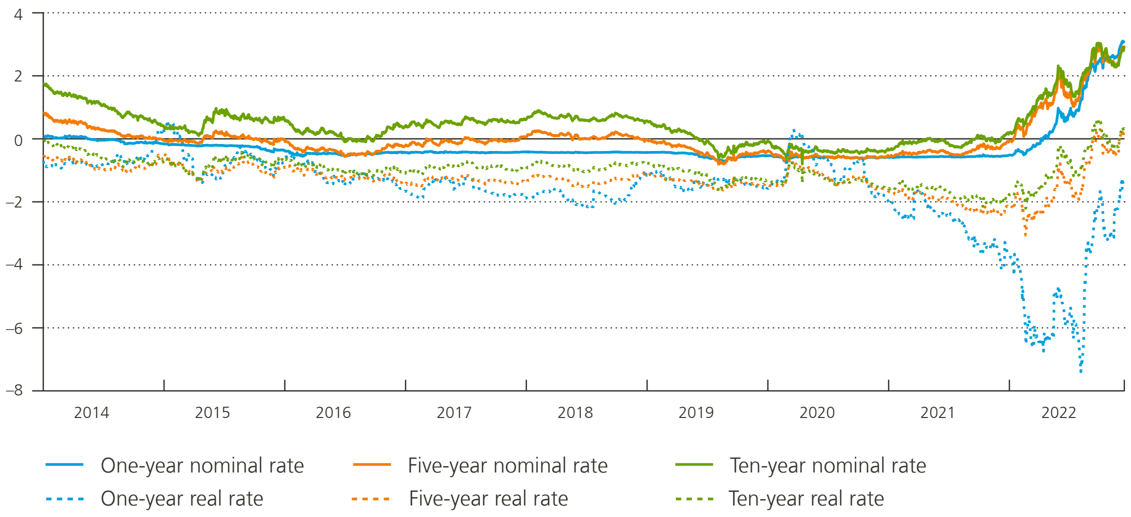
Despite the sound transmission of monetary policy to the €STR, tensions emerged on the secured loan market, which would have been even more pronounced had the Eurosystem not adjusted the interest rate ceiling in place for the remuneration for government deposits. Rates for different types of secured loans neither immediately nor fully reflected rises in the deposit facility rate. This lack of transmission could be attributed to several factors explaining the scarcity of high-quality liquid assets given as collateral. On the one hand, demand for collateral rose : the rise in interest rates eroded the value of collateral, meaning that, for the same nominal amount of secured loans, more securities were needed, while growing volatility on the markets also served to tighten up collateral requirements. On the other hand, the supply of bonds available on the market was lower as the Eurosystem had accumulated a hefty volume of sovereign debt under its asset purchase programmes. This scarcity of collateral would have been even worse had the ceiling of 0 % applicable to the remuneration for government deposits been maintained, as governments would then probably have sought to invest these deposits on the money market – against collateral, at least in part – with a view to obtaining a positive return. So as to not exacerbate these tensions, the Governing Council decided on 8 September 2022 that the ceiling applicable to remuneration for government deposits would temporarily (until 30 April 2023) remain at the deposit facility rate or the €STR, whichever was lower.

As the normalisation of monetary policy had been widely anticipated, long-term risk-free nominal interest rates turned positive again at the end of 2021 and continued to rise thereafter. For example, the ten-year rate exceeded the 2 % mark in September 2022 and reached 2.5 % on average in December. Real interest rates – that is, nominal rates adjusted for inflation – remained negative for a long time. In September, long-term real rates started to fluctuate around 0 %. But in view of the still very high short-term adjustment for inflation, short-term real rates remained clearly in negative territory, although at a gradually less pronounced level at the end of the year, after having plunged below the –7 % mark in August.

Chart 2.4

Risk-free nominal interest rates turned positive, while real rates approached zero[1]

(in %)



Sources: Bloomberg and Refinitiv.

1 Risk-free rates are approximated by using overnight €STR indexed swap rates. Inflation compensation is measured by rates for inflation-linked swaps.

The spread between sovereign and corporate bond yields and risk-free rates remained generally contained

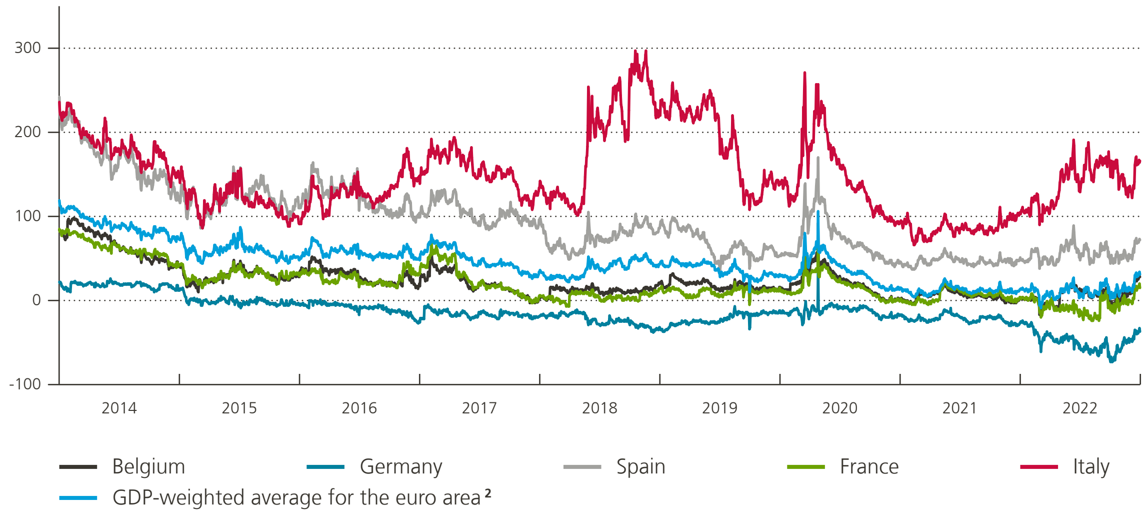
Overall, sovereign bond yields closely followed movements in risk-free rates, even though some signs of limited fragmentation emerged. The spread between the weighted average ten-year yield on sovereign bonds and the risk-free rate remained close to zero throughout 2022. Movements in risk-free rates – which reflect expectations of future changes in monetary policy rates – were therefore passed on almost entirely. However, some country-specific dynamics widened the dispersion of sovereign spreads. For example, the Italian spread rose from around 100 to 150 basis points between the beginning and the end of the year. At the same time, the German spread turned even more negative, widening from roughly –25 to –40 basis points, partly due to high demand for German bonds to be used as collateral for borrowings on the money market.

The fragmentation of financing conditions was curbed, partly thanks to announcements regarding the exercise of flexibility in PEPP reinvestments and the creation of a new instrument, the transmission protection instrument (TPI). These announcements were made after an *ad hoc* meeting of the Governing Council on 15 June 2022, while the TPI was further outlined at the regular meeting of the Governing Council in July. Flexibility in PEPP reinvestments means that the assets held can be reinvested in a more flexible manner over time, between asset categories and jurisdictions, so as to support a smooth transmission of monetary policy. In the case of public sector securities purchases, the benchmark for allocation between jurisdictions remains the Eurosystem capital key. As for the TPI, this enables the ECB, under certain conditions, to buy up financial securities to counter "disordered and unjustified market dynamics that constitute a serious threat to the transmission of monetary policy in the euro area". Countries that can benefit from bond purchases under the TPI must conduct sound and sustainable fiscal and macroeconomic policies. In any event, the purchases will be stopped if there is a lasting improvement in transmission or on the basis of an assessment attributing persistent tensions to the country's economic fundamentals. The TPI differs from the PEPP mainly in the fact that its activation does not depend on the evolution of the pandemic. It is also worth noting that outright monetary transactions (OMT) are still part of the Eurosystem's toolbox.

Chart 2.5

The weighted average of ten-year sovereign bond yields closely followed risk-free rate movements, although the yield spread by country widened slightly

(spread over the risk-free rate, basis points)[1]



Source: Refinitiv.

1 The risk-free rates are approximated by the 10-year €STR overnight indexed swaps.

2 The weighted average takes account of the following countries: Germany, France, Italy, Spain, the Netherlands, Belgium, Austria, Portugal, Finland, Ireland and Greece.

Further down in the monetary policy transmission chain, spreads between corporate bond yields and risk-free rates varied but on the whole remained moderate. These spreads widened temporarily following Russia's invasion of Ukraine and then took off again just before the summer, under the influence of monetary policy normalisation, especially the discontinuation of net purchases of corporate bonds. In the second half of the year, fears of the economy going into recession once again temporarily accentuated yield spreads.

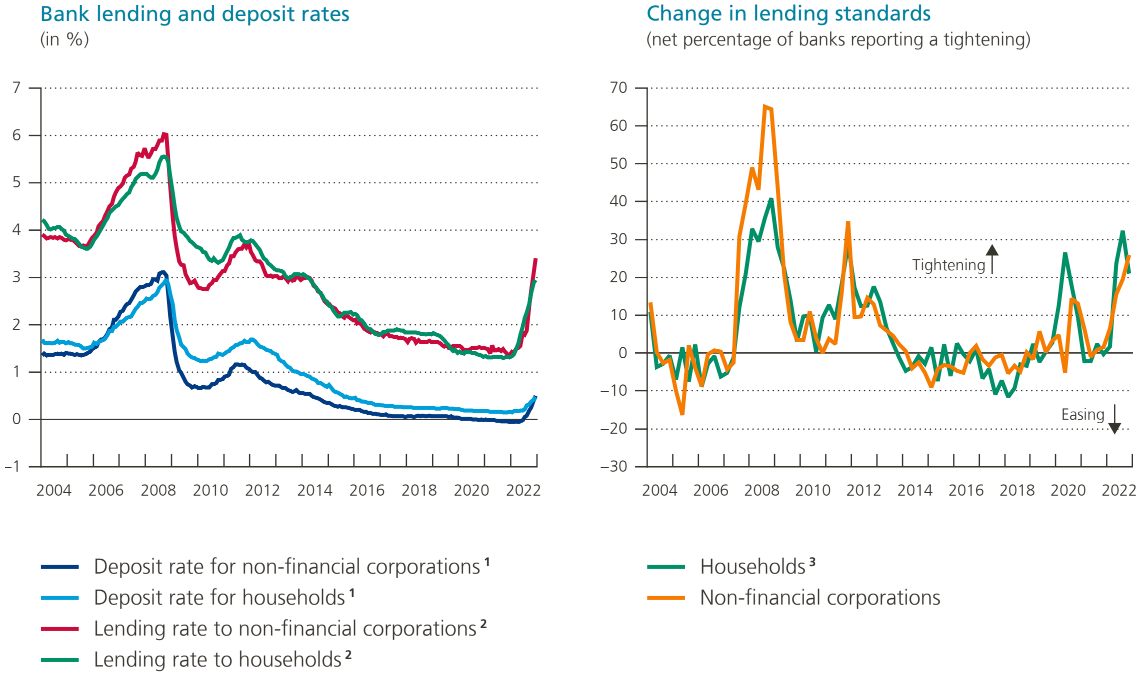
Bank financing costs also rose. Bank bond yields continued their sharp upward trajectory. On the other hand, rates on new deposits by non-financial corporations and households rose only very slightly and were still at a low level at the end of 2022. The average rate on deposits by households (which includes short-, medium- and long-term deposits) and non-financial corporations stood at 0.5 % in December. At the end of the year, outflows from overnight deposits and inflows to term deposits were observed in several euro area countries, signaling an active portfolio decision by firms and households to take advantage of the growing positive spread between the interest rates on term deposits and sight deposits.

Bank loans became more expensive

Bank interest rates on loans to households and businesses rose rapidly and steadily. The aggregate interest rate on bank loans to households and businesses reached, respectively, 2.9 % and 3.4 % in December 2022, while these rates had been around 1.3 % and 1.4 % at the beginning of the year. This noticeable increase in bank lending rates in relation to their financing costs (deposit rates in particular) reflected the beginning of a return to normal bank margins.

Chart 2.6

Bank lending rates rose and lending standards were tightened



Source: ECB.
1 Average interest rate on new deposits weighted by corresponding volume of outstanding amounts.
2 Average interest rate on new loans.
3 Mortgages only.

In line with rising borrowing costs, lending criteria were tightened for both non-financial corporations and households. The findings of the Eurosystem Bank Lending Survey indicate the reasons for this. In the context of an economic slowdown and given fears of a recession, it was above all the higher perception of risk and the reduction of banks' risk tolerance that impacted the tightening of conditions for lending to businesses and households. While the net tightening observed in 2022 was comparable to that seen during the COVID-19 crisis, it was much less marked than during the global financial crisis. Moreover, the survey points to a drop in household demand for loans for house purchases in 2022, mainly due to the rise in interest rates but also owing to a loss of buyer confidence and property market prospects. On the other hand, demand for business loans continued to rise for the best part of 2022, boosted by working capital borrowing requirements (related to such things as higher production costs and an increase in stock levels caused by the slowdown in demand).

2.4 Monetary policy in a time of uncertainty

The economic situation and outlook remain highly uncertain, which complicates the task of establishing inflation forecasts and drawing the consequences therefrom for monetary policy. As monetary policy influences inflation with a time lag, it is based primarily on inflation expectations, hence the need for accurate forecasts. However, over the last few quarters, there have been substantial forecasting errors. These errors can be explained by either the economic shocks that repeatedly impacted inflation or the limitations associated with the structure of the macroeconomic models on which expectations are based. For instance, the models have difficulty capturing regime changes and the consequences of rare events such as wars, pandemics and financial crises.

In this context, while monetary policy rates are clearly on the rise and the Eurosystem's balance sheet has started to shrink, the exact path of monetary policy is not known. Conceptually, the normalisation of conventional monetary policy implies a return to policy rates at the natural equilibrium rate (r*), which is the rate that keeps economic activity at its potential and inflation at the central bank's objective. Yet this natural rate is not observable and estimates of it are unclear: there are wide confidence intervals surrounding the estimates, which also depend on the model used. In view of the uncertainty as to the equilibrium rate, this benchmark alone cannot be used to set monetary policy response. Moreover, the reduction in the Eurosystem's balance sheet is also part of the normalisation process. The size and composition of the balance sheet depend on the system in which interest rate policy is implemented. A floor system – in which short-term rates remain close to the deposit facility rate – requires that central banks maintain a critical level of liquidity reserves with the ECB. This system differs from a corridor-type system, which is characterised by scarce liquidity reserves and the development of short-term money market rates more or less in the middle of a corridor defined by policy rates; in the ECB's case, these are the deposit facility and marginal lending rates.

In the second half of the year, the focus was on the fact that Governing Council decisions would be taken meeting-by-meeting based on the latest available data. Shortly after the forward guidance conditions had been met, it was effectively decided to adopt a meeting-by-meeting approach. Forward guidance had become less relevant as it could rapidly turn out to be binding in view of the high degree of economic uncertainty. Moreover, the Governing Council decided that policy rate decisions would be data-dependent. However, so as to avoid raising interest rates too much, monetary policy decisions cannot be based solely on observable inflation figures, which point to an inflation rate well above target. The transmission of monetary policy to the real economy takes time, and the full effect of the measures taken in 2022 may only reach the economy once inflation is on a downward path or close to target. At the other extreme, relying solely on inflation expectations runs the risk of under-reacting as these tend to show inflation returning to the 2 % target.

The Governing Council took the view that interest rates would have to be raised further, significantly and at a steady pace and also decided to scale down the APP at a measured and predictable pace. The ECB's policy rates are the main instrument by which the Governing Council determines the direction of monetary policy. They will be set at sufficiently restrictive rates to ensure that inflation returns as soon as possible to the 2 % target over the medium term. The pace of the APP portfolio reduction will be regularly reassessed to ensure that it remains consistent with the overall monetary policy strategy and stance, so as to preserve smooth market functioning and maintain firm control over short-term money market conditions. Between now and the end of 2023, the Governing Council will also revise its operational framework for steering short-term interest rates, which will provide information on the ending of the balance sheet normalisation process.

The choices of other policy-makers also determine the course of inflation

Effective monetary policy requires consistent decisions in various fields, in particular macroprudential and fiscal policies. Like monetary policy, these policies influence aggregate demand and therefore inflation. The impact of monetary policy measures can thus be reduced, or even offset, by more flexible fiscal and macroprudential policies.

Macroprudential policy will have to deal with increasing financial stability risks in an uncertain economic climate. If rates are raised too much or too quickly, the cost of private and public debt could rise to the point at which debt servicing and new borrowing are compromised, which could in turn trigger an unfavourable financial accelerator. That being said, persistently low interest rates – especially in real terms – may encourage excessive risk-taking, possibly leading to the creation of bubbles in some market segments, such as shares or the property market. Monetary policy can however take these risks into account as financial stability is a necessary prerequisite for price stability.

While monetary policy and fiscal policy were mutually supportive during the pandemic, the new macroeconomic environment requires a different combination to effectively tackle inflation. These two types of policy quickly managed to get the economy out of the deep recession that the pandemic had plunged it into, by countering the sharp drop in demand and preventing a downward price spiral. The ECB set up the PEPP and proposed new targeted longer-term refinancing operations. But because inflation has since taken off and become rampant, monetary policy has had to change course. Fiscal policy, for its part, has shored up demand via job retention programmes and general support measures at national and European levels.

Not only would excessively flexible fiscal policy lead to a faster rise in interest rates, but it would also increase the risk of fragmentation in the euro area. With high budget deficits supporting aggregate demand and thus inflation above target, monetary policy-makers have no choice but to further raise policy rates in order to dampen inflation. Moreover, the sustainability of public debt could be called into question if interest rates were to be

raised rapidly and sharply. In this case, lenders would request dissuasive risk premiums, thereby further tightening financing conditions for governments. The turbulence the United Kingdom faced last year was a good reminder that governments need to credibly commit to running responsible fiscal policies and, more generally, that an inconsistent policy mix can destabilise a country's economy.

The fiscal support measures designed to protect the economy from the consequences of high energy prices should be temporary, targeted and designed so as to preserve incentives to reduce energy consumption. More particularly, it is necessary to protect the most vulnerable households and businesses from the energy price shock, while encouraging potential growth and energy independence via public investment and structural reforms. Yet in the face of the energy crisis, there has been widespread implementation of non-targeted measures, with governments resorting to cuts in indirect taxation, subsidies or energy price caps.

Against a backdrop of skyrocketing energy prices, the question arises as to how to share the burden of the deterioration in the terms of trade between companies, workers and the government. For net energy importers, the rising cost of energy leads to a general impoverishment of the population. Governments can try to mitigate the impact on the most vulnerable segments through the use of targeted policies. For their part, companies try to protect their profit margins and workers their purchasing power through wage bargaining. In an extreme scenario in which companies attempt to keep their unit profit margins unchanged, any reduction in household purchasing power will lead to a drop in demand for firms' products. At the other extreme, maintaining full purchasing power threatens the ability of firms to raise sufficient funds to carry out their investment projects and, ultimately, jeopardises their survival, to the detriment of employment and well-being. Wage negotiations are closely linked to actual and expected inflation. Central banks are thus keeping a close eye on developments in this area.