IN-DEPTH ANALYSIS

European Parliament

EGOV
ECONOMIC GOVERNANCE AND EMU SCRUTINY UNIT

MONETARY POLICY

Euro area monetary policy: Quarterly overview, November 2023

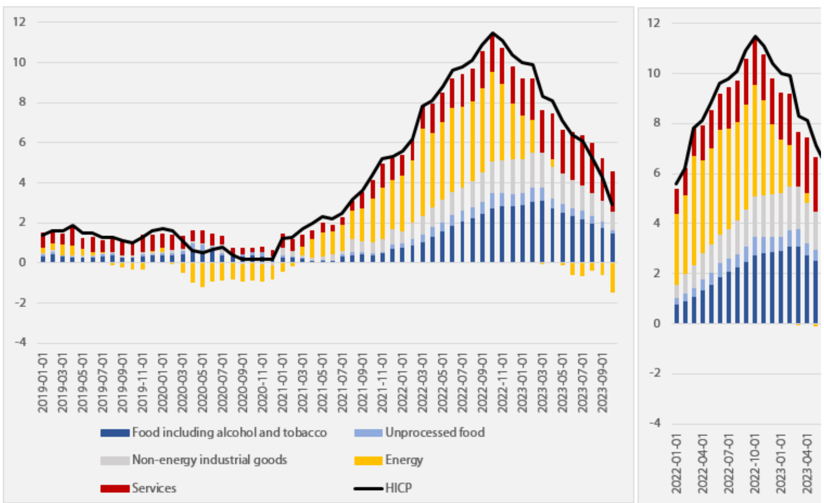
This briefing paper was prepared ahead of the Monetary Dialogue between the Committee on Economic and Monetary Affairs (ECON) and the European Central Bank (ECB) President on Monday, 27 November. It provides a summary of key monetary policy developments and decisions taken by the ECB's Governing Council.

1. Key developments

Current inflation dynamics

According to Eurostat, the euro area annual headline inflation rate (as measured by the harmonised index of consumer prices, HICP) slowed down markedly to 2.9% in October. Energy prices continued to significantly decrease in October (-11.1% compared to the same month in 2022). At the same time, food price increases slowed down further but remain high by historical standards, 7.5% on annual basis while non-energy industrial goods and services prices declined in addition and stood at 3.5% and 4.6% annually, respectively. **Figure 1** shows different contributions to headline inflation in the euro area.

Figure 1: Contributions to HICP inflation in euro area, percentage points



Source: EGOV elaboration based on Eurostat.

Economic Governance and EMU Scrutiny Unit (EGOV)
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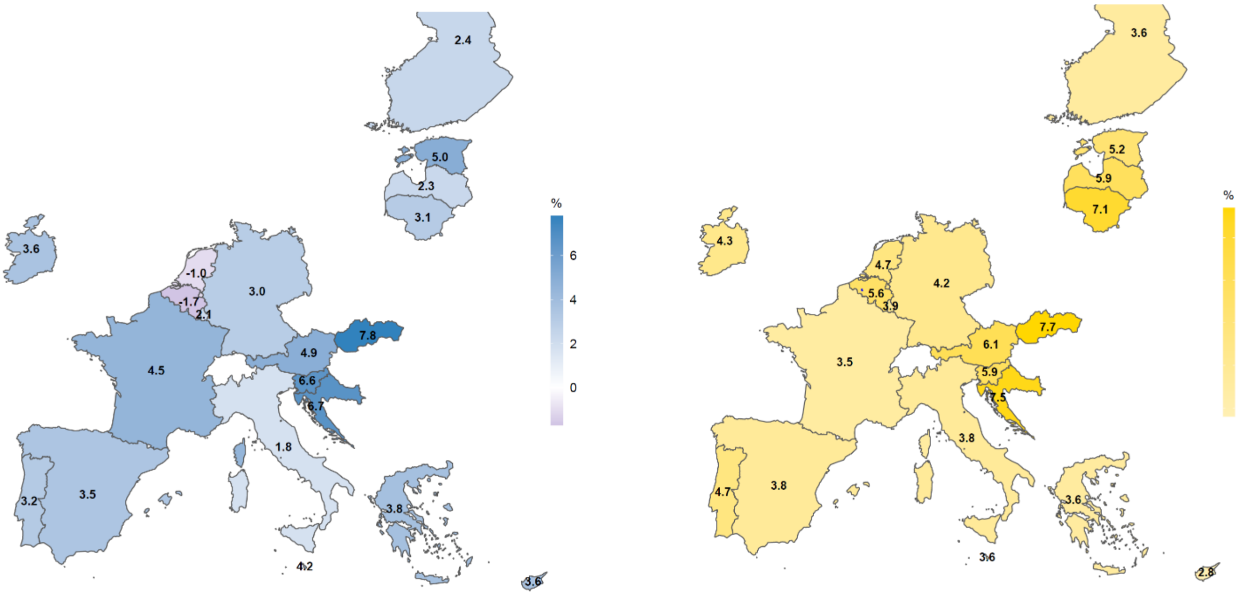
Core inflation, excluding energy and food, also slowed down further to 4.2% in October 2023, slightly decreasing from the previous month (4.5% in September). The decline has been mostly supported by enhanced supply conditions, the transmission of prior declines of energy costs, and impacts of the ECB's restrictive monetary policy. Overall, there is still a sustained strength in domestic price pressures. Large divergences between Member States remain, from a negative 1.7% in Belgium to positive 7.8% in Slovakia. See **Figure 2** for divergences in headline and core inflation rates across euro area countries in October, as well as Annex for headline (**Table 7**) and core (**Table 8**) inflation rates by Member State over the past 12 months.

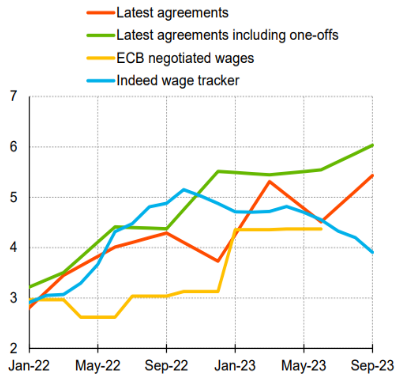
The ongoing conflict in Middle East can have implications for inflation and future ECB monetary policy decisions. Considering that the Middle East has historically been an important energy supplier and a key shipping route, the conflicts and potential escalation in the region can disrupt the global economy. An early analysis by Bloomberg from 13 October suggested different scenarios for global growth and inflation given the evolving conflict. For instance, if the situation were to escalate to a point where Israel comes into direct conflict with Iran (a key supporter of Hamas) **oil prices could soar to USD 150 per barrel**, potentially causing a **global recession with a drop in GDP of 1.7% or USD 1 trillion reduction in world output in 2024**. Excluding the impacts of both the COVID-19 pandemic and the global financial crisis, this would mark the most severe world economic downturn since 1982, the time when the Federal Reserve (Fed) had to aggressively raise interest rates to combat the high inflation resulting from the oil shocks of the 1970s. In the event of production disruptions among major oil producers or another conflict in an energy-producing region in the Middle East, further upward pressure on inflation can be expected (e.g., Bloomberg estimates a 6.7% increase in global inflation in 2024) which would complicate decisions related to ongoing monetary policy normalisation.

Figure 2: Headline (left) and core inflation rates (right) across euro area countries in October 2023, in %



Source: EGOV elaboration based on Eurostat.

Figure 3: Wage tracker, annual % change



Source: Isabel Schnabel, "The last mile" at the Annual Homer Jones Memorial Lecture, 2 November 2023.

Rising wage pressures will have important implications for restoring price stability. The forward-looking ECB wage tracker shows ongoing robust wage growth in a disinflationary environment (**Figure 3**)[1] pointing to possible unfolding of second-round effects. In addition, as noted by Executive Board Member Isabel Schnabel in her remarks at the Annual Homer Jones Memorial Lecture: "*Meagre productivity growth is putting additional pressure on firm's unit labour costs, which have been rising sharply since the beginning of 2022*". This means that demands to get back some of the purchasing power losses have translated in strengthening wage growth. These price and wage rigidities mean that underlying inflation is actually stickier than initially thought.

According to the ECB, inflation is expected to stay too high for too long. While headline inflation is slowing down mostly due to strong base effects and easing of measures of underlying inflation, thus safely approaching to the ECB's 2% target, expectations about the future path of inflation point to the fact that inflationary pressures may persist over a longer period of time. In her remarks, Isabel Schnabel focused on challenges associated with returning inflation from its current level to 2% in a timely manner. These stages of the disinflation process mostly depend on precise calibration and efficient monetary policy transmission which are under large uncertainty, coupled with a risk of new supply-side shocks on the other side of the spectrum. These stages also indicate that **the last mile might be hardest to reach,** meaning that the disinflationary process might be slower than expected. These findings are crucial if one also takes into account what lies ahead for the ECB, namely the latest statement by the ECB president Lagarde about expectations on inflation dynamics and future ECB decision on interest rates (see section 2).

Inflation forecasts

According to the September Eurosystem staff macroeconomic projections[2], the 2% inflation target would be reached in the third quarter of 2025. Energy prices were expected to continue with the negative contribution to inflation until the end of 2023, and then turn positive in 2024 due to unwinding of related fiscal measures, base effects and renewed increase of energy commodity prices.

Most recent IMF (October) and European Commission (November) forecasts are largely aligned on headline inflation with the ECB's September projections. The European Commission's core inflation forecasts for 2023 and 2024 have been revised downward compared to the Spring Forecast, while remaining above 5% and 3%, respectively. **Table 1** shows a summary of most recent official forecasts by the ECB, the European Commission and the IMF.

[1] According to the ECB, wage tracker is calculated based on micro data on wage agreements provided by Deutsche Bundesbank, Banco de España, the Dutch employer association (AWVN), Oesterreichische Nationalbank, Bank of Greece, Banca d'Italia and Banque de France. Indicator of latest wage agreements shows the wage growth implied by agreements reached in a quarter for 12 months ahead. Indeed tracker measures wage growth in online job ads, computed by the Central Bank of Ireland. Latest observations: September 2023 for Indeed Wage Tracker; Q3 2023 for indicators of latest agreements, Q2 2023 for ECB negotiated wages.

[2] New Eurosystem staff macroeconomic projections will be published on 14 December.

Table 1: Recent euro area headline and core inflation forecasts

Source		2023	2024	2025
ECB staff macroeconomic projections - September 2023 *Revision from June 2023*	**Headline**	**5.6%** ↑*0.2 p.p.*	**3.2%** ↑*0.2 p.p.*	**2.1%** ↓*0.1 p.p*
	Core[3]	**5.1%** =	**2.9%** ↓*0.1 p.p.*	**2.2%** ↓*0.1 p.p.*
European Commission - November 2023 *Revision from September 2023 (headline) and May 2023 (core)*	**Headline**	**5.6%** =	**3.2%** ↑*0.3 p.p.*	**2.2%** /
	Core[4]	**5.1%** ↓*0.1 p.p.*	**3.2%** ↓*0.2 p.p.*	**2.5%** /
IMF World Economic Outlook - October 2023 *Revision from July 2023*	**Headline**	**5.6%** ↑*0.4 p.p.*	**3.3%** ↑*0.5 p.p.*	**2.2%**

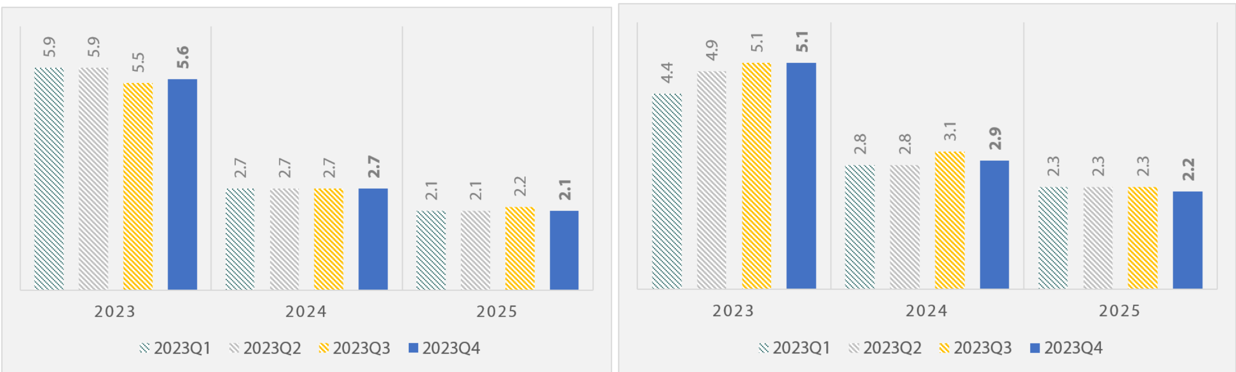
Sources: ECB staff macroeconomic projections September 2023; European Commission Autumn 2023 forecast; IMF World Economic Outlook, October 2023.

Inflation expectations

a. Survey-based

The latest Survey of Professional Forecasters (SPF) for the fourth quarter of 2023 shows only small revisions of headline and core[5] inflation forecasts compared to previous one. As shown in **Figure 4** (left side), survey respondents are forecasting inflation to reach 5.6% in 2023 (+ 0.1 p.p. revision), 2.7% in 2024 (unchanged) and 2.1% in 2025 (-0.1 p.p.). Core inflation (**Figure 4**, right side) is unchanged at 5.1% for 2023, while revised minimally for 2024 and 2025. While measured uncertainty remains high, the balance of risks on inflation has moved further to the upside, mainly due to energy price risks and possible wage-related developments from second-round effects. Longer-term inflation expectations (for 2028) remained at 2.1%.

Figure 4: Headline (left) and core (right) inflation forecasts 2023Q1-Q4 SPF, in %



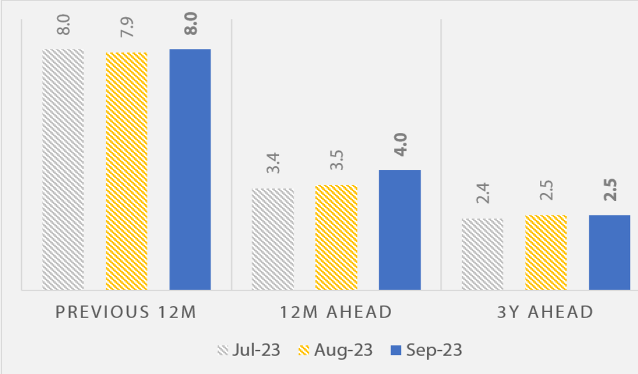
Source: EGOV elaboration based on ECB, SPF.

[3] HICP excluding food and energy.

[4] HICP excluding energy, food, alcohol and tobacco.

[5] HICP excluding energy, food, alcohol and tobacco.

Figure 5: Headline inflation expectations, July-September 2023 CES, median, in %

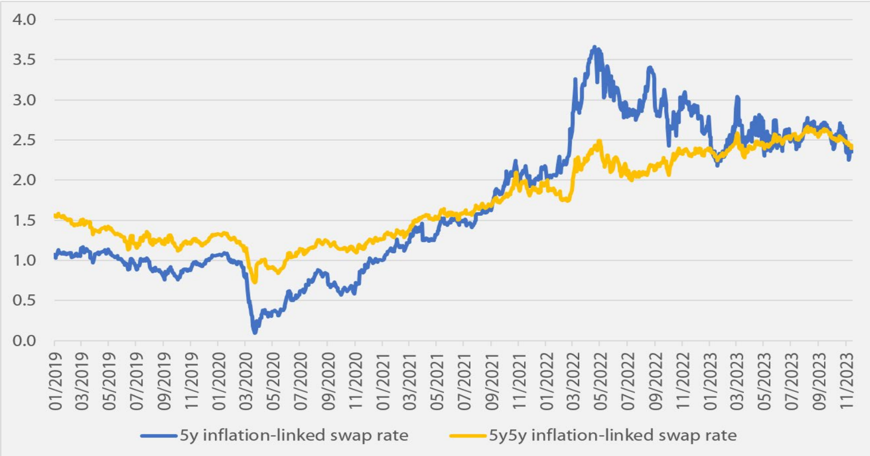


Source: EGOV elaboration based on ECB, [CES](#).

The [Consumer Expectations Survey (CES) for September 2023](#) was published in November, showing an upward revision of both backward- and forward-looking inflation perceptions. Most noticeably, headline inflation expectations for the next 12 months have increased by half a percentage point, to 4% (see **Figure 5**). For most of 2022, consumer inflation expectations hovered around 5%, then started decreasing since the beginning of 2023. Since June this year, however, consumers have become more concerned about the inflation outlook and have adjusted their expectations accordingly.

b. Market-based

Figure 6: Five-year (5y) and five-year-five year (5y5y) forward ILS, in %



Source: EGOV elaboration based on London Stock Exchange Group (LSEG) Datastream.
Notes: Data until 15 November 2023. 5y= expected average inflation over next 5 years. 5y5y= expected average inflation over the 5-year period beginning 5 years from now. ILS rates should not be taken at face value, since they include both inflation expectations and inflation risk premia.

Since the last Monetary Dialogue in September, market-based measures of inflation expectations have somewhat decreased. The five-year (5y)[6] and the longer-run five-year-five-year (5y5y)[7] inflation-linked swap (ILS) rates are currently around 2.4%, both down from 2.6% at the end of September. The 5y ILS rate, which implies expectations for average inflation over the next five years, has peaked in the first half of 2022 following the Russian invasion of Ukraine and resultant energy crisis when it exceeded 3.5%. From August 2022 until the end of the year, it has followed a downward trend, due to monetary policy tightening and easing supply-side pressures.[8] In the first three months of 2023, the rate has again increased due to high core inflation readings and uncertainty about further monetary policy tightening. Since the second quarter, it has fluctuated around 2.5%. The 5y5y ILS rate, which implies expected average inflation over a five-year period starting in five years (i.e. 2028-2033), has been steadily increasing since mid-2020 to reach a peak of 2.7% in August 2023. See **Figure 6** for an overview how both measures evolved since January 2019.

[6] Average inflation expectations over the next five years.
[7] Average inflation expectations over the five year period starting 5 years from now.
[8] See Höynck, C. and Rossi, L. (2023). "[The drivers of market-based inflation expectations in the euro area and in the US](#)", SUERF Policy Brief, No 663.

Monetary policy transmission: latest bank lending survey (BLS)

The ECB's latest euro area bank lending survey (BLS) shows a further tightening of credit standards in the third quarter of 2023. In line with the previous trend, this seems to indicate an effective transmission of the monetary policy stance, leading to a weakening in lending dynamics.

The BLS assesses the tightening in credit standards across different categories of loans: credit to enterprises, households and consumer credit.

1. **Credit standards for loans or credit standards to enterprises continued to tighten in Q3 2023.**

   The level of reported tightening remains above the historical average of 9% and, while moderating relative to the previous quarter, it is higher than what was originally expected by banks. Banks' risk perception, lower risk tolerance and the rise in credit risks, amid the rise of debt servicing costs and the worsening of the economic outlook, are highlighted as the main drivers of the tightening. The cost of funds and balance sheet constraints are also driving the tightening, although to a lesser extent. This seems to be related to a fall in aggregate deposit volumes, the increased competition for deposits among banks, the draining of excess liquidity in the euro area and, for some banks, the increase in interest rates. Overall term and conditions for new loans to enterprises have also tightened and the rejection rate for new loans has risen, currently sitting at one of the highest levels recorded though below the levels of the previous quarter. Firms' demand for new loans is on a substantial downward path, with a stronger decline than expected by banks. This is only marginally more contained than the all-time low registered in the second quarter of 2022. The drivers behind this contraction in demand are high interest rates and fall in fixed investment levels.

2. **Credit standards to households continued to tighten in the third quarter, even exceeding previous expectations with a pace that picked up in comparison to the previous quarter.**

   Once again, higher risk perception and risk tolerance by banks seem to drive the net tightening, whereas funding costs and balance sheet conditions seem to be neutral with respect to housing loans. Nevertheless, the latter seem to be driving the net tightening in overall terms and conditions for new loans, with a particular role being played by the cost of liquidity. The rejection rate for housing loans remains on an upward trend, higher than in Q2 2023 and above its long-run average of 5%. The demand for new housing loans continued to decline substantially and more than expected, though it remains smaller than the record low of the end of 2022. The main drivers are the increase in interest rates, which since the start of the hiking cycle in July 2022 contributed to lower demand, rising mortgage rates in the euro area, worsening prospects in the housing market, and lower levels of consumer confidence**.**

3. **Credit standards for consumer loans and other lending also continued to tighten though at a slightly lower pace.**

   Banks' higher risk perceptions and lower risk tolerance once again are the main drivers. The tightening in the terms and conditions applied for new consumer credit and other lending is also moderating. Rejection rates are higher than in the previous quarter while the decline in demand is in line with the previous trend, though larger than expected. The main drivers for the fall in demand for consumer credit are higher interest rates and low consumer confidence, with the fall in spending for consumer goods also contributing to lower demand. This is in line with the erosion of households' real disposable income due to high inflation.

This edition of the BLS also contained some ad hoc questions to assess access to funding, the impact of the quantitative tightening (QT) on banks and their lending policies, as well as the impact of the hiking cycle on bank profitability. Overall, the BLS finds that:

- **Access to funding has deteriorated across all market segments, in particular for retail funding**. This is the highest deterioration on record since the beginning of 2012. The pronounced deterioration in access to short-term retail funding is "*consistent with the higher competition for liquidity stemming from other banks and from alternative investment opportunities offering higher remuneration*".
- **The unwinding of the ECB's balance sheet is contributing to the deterioration in financing and liquidity conditions while also putting pressure to tighten the credit supply.** The survey notes the negative impact of the targeted longer-term refinancing operations (TLTRO) III repayments in the past six months, leading to strains in liquidity positions, profitability as well as in financing conditions, which turned negative for the first time. The large repayments in June 2023 particularly contributed to a strong negative impact on liquidity positions relative to the previous six months.
- **The tightening of key ECB interest rates had a "markedly positive impact" over interest margins in the past 6 months, but the effect is expected to gradually fade away**. The positive impact is mostly due to a positive effect on net interest margins, which is however "*expected to be considerably smaller over the next six months (at 20%) compared with the past six months (43%)*". An increasing number of banks is also reporting a negative impact on lending volumes as well as higher provisioning and impairing.

Financial Stability Review

On 22 November 2023, the ECB published its bi-annual [Financial Stability Review (FSR)] taking stock of the resilience of euro area financial markets and potential challenges ahead. From a monetary policy perspective, the ECB in this edition notes that:

1. **Monetary policy will be highly influential from a financial stability perspective**. In particular, the report notes that "*Risk sentiment in the markets remains fragile and highly sensitive to further surprises regarding the outlook for inflation, growth and, by extension, the path of monetary policy*". The FSR is introduced by Vice-President Luis De Guindos' remarks on the resilience of the euro area's financial markets in past months, reflecting "*expectations of a soft landing, with limited impacts on economic growth as inflation recedes to moderate levels*". Yet, the FSR concludes that financial markets remain exposed to macro-financial developments, particularly due to optimistic expectations on the economic outlook underpinning the current pricing, as well as deteriorating geopolitical tensions, particularly in the Middle East. These threats to financial stability could, in the ECB's view, be further amplified by vulnerabilities in the non-bank financial sector, thus prompting calls to strengthen the macroprudential toolbox.
2. **The impact of tighter financial conditions is yet to be felt in the real economy**, thus implicitly endorsing recent decisions to pause further hikes to await for the full effects of monetary policy to kick-in. The report notes that, in spite of higher debt servicing costs, the extension of loan maturities in both the financial system and the real economy during the "low-for-long" years led to an incomplete materialisation of the ongoing monetary tightening at this stage. This "*will pose future challenges for financial and non-financial sectors alike*".
3. **Fiscal policy will be crucial for the effective transmission of monetary policy**. While sovereign spreads remain contained, the FSR highlights that "*risks of fiscal slippage could reignite sovereign debt sustainability concerns and compel market participants to reassess sovereign risk*". The ECB nonetheless reiterates that its Transmission Protection Instrument (TPI)

could address this threats to the transmission if the conditions for activations are met. (See following section on government bond yields and spreads developments).

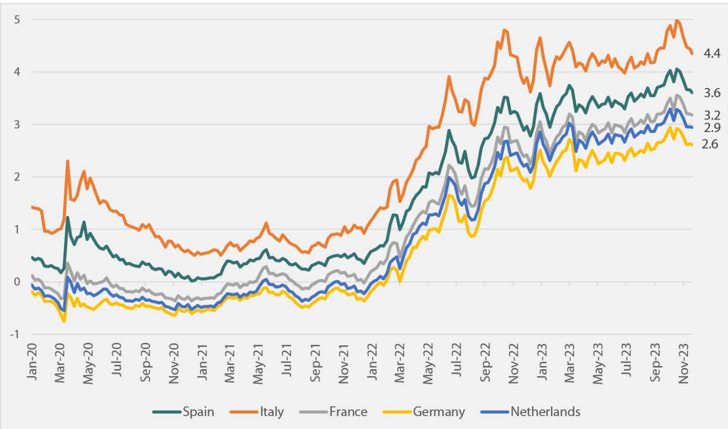
From a financial stability perspective, the FSR takes stock of the challenges increasingly posed by higher borrowing debt servicing costs to firms, households and sovereigns. Particularly, it warns that weakening macro-financial conditions have led to rising corporate insolvencies, which are now on aggregate above pre-pandemic trends. Should macroeconomic conditions deteriorate even more than expected, this could result in further challenges for firms.

Concerns on sovereign debt sustainability resurface among weak economic outlook, higher funding costs, a turning labour market, and disorderly real estate developments[9]. "*Medium-term sovereign vulnerabilities are rising, particularly for jurisdictions where debt levels are already high (...) [f]iscal fundamentals remain fragile in a number of countries in the light of weaker economic growth prospects, given elevated debt levels and continued high budget deficits".* The issuance of new bonds has been smoothly absorbed by the market, despite the retrenchment of the ECB as part of its QT. Yet, the FSR notes a risk related to the absorption of new debt by private actors as "*sentiment among such investors could change if fiscal policies in some euro area countries were perceived as detrimental to longer-term debt sustainability".* In particular, the tightening of financial conditions, putting pressure on sovereign interest payments, or the lack of sufficiently prudent fiscal policy could worsen the outlook for governments and raise worries on their debt sustainability.

Finally, the FSR notes that improved profitability for banks deriving from higher rates might be short-lived. A number of factors could in facts impact current profitability rates, namely: the pass on of higher rates to depositors, higher funding costs amid TLTRO repayments and the shift in the composition of funding from deposits to term deposits or bonds, worsening asset quality and contracting lending volumes.

Government bond yields and spreads

Figure 7: 10-year government bond yields, five largest euro area economies, in %



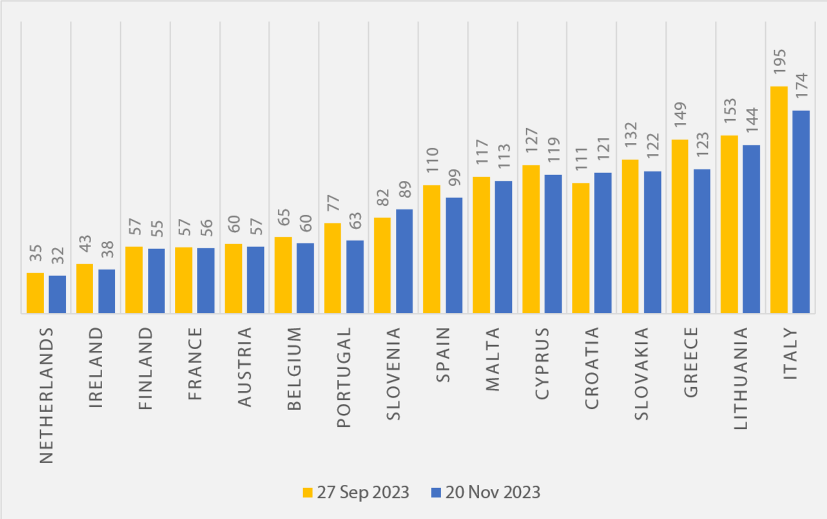
Source: EGOV elaboration based on LSEG Datastream.
Note: Last data from 20 November 2023.

Government bond yields have decreased since the last Monetary Dialogue in September. Since the beginning of 2022, yields had been steadily rising as monetary policy tightening by the ECB was first anticipated and then implemented. For instance, the German government bond yield went from -0.1% in January 2022 to 2.9% in October 2023. Since then, however, yields have decreased mainly due to falling inflation and worsening growth outlook. **Figure 7** shows the evolution in government bond yields of five largest euro area economies.

Spreads have decreased as well. **Figure 8** shows the change in spreads versus 10-year German government bonds for 16 euro area countries (data not available for Estonia, Latvia and Luxembourg) since end-September. Spreads have decreased for all countries, except Croatia and Slovenia. The median spread

[9] From a macroprudential perspective, the FSR highlights visible developments in real estate markets. The pass on of interests rates in the form of higher mortgage financing costs is leading to a fall in residential property prices. Commercial real estate continues to suffer by rising financing costs as the pandemic has led to sustained lower demand for office and retail property.

Figure 8: Euro area 10-year government bond yields, spreads with German bonds, in bps



Source: EGOV elaboration based on LSEG Datastream.

Notes: Data for Estonia, Latvia and Luxembourg is not included.

fell only marginally from 96 bps to 94 bps in that period, after a peak of this tightening cycle of 127 bps reached in October 2022. Looking at individual Member States, Greek and Italian bond spreads have narrowed most notably by 26 and 21 bps, respectively. On 20 October, Standard & Poor's (S&P) upgraded Greece's credit rating to investment grade, for the first time in 13 years. The S&P rating upgrade follows similar decisions taken by Scope Ratings in August and DBRS Morningstar in September.[10] Fitch is expected to reassess Greece's credit rating on 1 December.

Respondents to the latest Survey of Monetary Analysts (SMA) for October indicate an average probability of 7.3%, 11.6% and 30% that the TPI would be triggered within the next 0-3 months, between 4 and 6 months and after 6 months, respectively. 51% of respondents consider that TPI will never be triggered. The median response suggests German, French, Italian and Spanish 10-year government bond yields to remain broadly stable in the next 12 months and slightly falling over the next 2 years.

2. Governing Council's monetary policy decisions

Interest rates and forward guidance

In its last meeting on 26 October 2023 in Athens, the Governing Council decided to keep key interest rates unchanged. In the press conference following the meeting, President Lagarde stated that the inflation has dropped markedly in September (see Section 1) and that incoming information has confirmed Governing Council's previous assessment of the medium-term inflation outlook. Since July 2022, the ECB has delivered 10 consecutive hikes, making it by far the fastest hiking cycle in the history of the euro area. The ECB's main policy rate, the deposit facility rate (DFR), currently stands at 4%.

The latest monetary policy decision implies that the ECB is approaching the end of the hiking cycle. However, as it was communicated in the meeting in September, with a carefully-worded statement, a future change of course is not excluded if conditions would so require: *"[b]ased on its current assessment, the Governing Council considers that the key ECB interest rates have reached levels that, maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to the target."* In the meantime the ECB will continue to follow a data-dependent approach in determining the appropriate degree of restriction and its duration guided by its analysis of the inflation outlook, taking into account incoming economic and financial data, the dynamics of underlying inflation, and the effectiveness of monetary policy transmission. Comparison in the monetary policy statements and used wording about interest rate decisions are shown in **Table 3**.

[10] See Fioretti, P., Sanchis i Herrero, L. and Klaus, J. (2023). "Greece is investment grade again – why it matters to keep it", European Stability Mechanism (ESM) blog, 20 October.

Table 2: Wording used to describe Governing Council decisions on interest rates

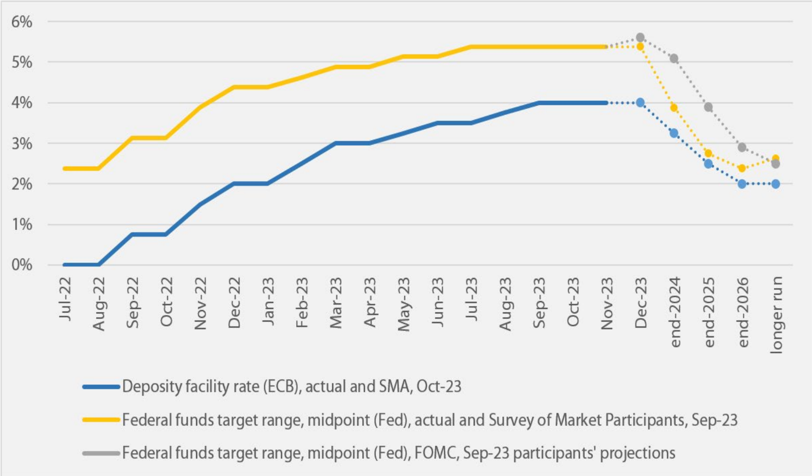
Governing Council meeting	Decision / wording
October 2023	= interest rates kept unchanged (DFR = 4.00%)
	"...**the Governing Council considers that the key ECB interest rates are at levels that, maintained for a sufficiently long duration, will make a substantial contribution to this goal.** The Governing Council's future decisions will ensure that its policy rates will be set at sufficiently restrictive levels for as long as necessary."
September 2023	↑ interest rate hike of 25 bps (DFR = 4.00%)
	"...the Governing Council considers that the key ECB interest rates have reached levels that, maintained for a sufficiently long duration, will make a substantial contribution to the timely return of inflation to the target. The Governing Council's future decisions will ensure that the key ECB interest rates will be set at sufficiently restrictive levels for as long as necessary. "
July 2023	↑ interest rate hike of 25 bps (DFR = 3.75%)
	"The Governing Council's future decisions will ensure that the **key ECB interest rates will be set at sufficiently restrictive levels for as long as necessary** to achieve a timely return of inflation to the 2% medium-term target.**"**
June 2023	↑ interest rate hike of 25 bps (DFR = 3.50%)
	"The Governing Council's future decisions will ensure that the **key ECB interest rates will be brought to levels sufficiently restrictive** to achieve a timely return of inflation to the 2% medium-term target and will be kept at those levels for as long as necessary."

Source: ECB Monetary policy decisions.
Note: In an environment of ample excess liquidity, ECB's main policy rate is the deposit facility rate (DFR).

The focus is shifting on the timing of interest rate cuts. While it is clear that the ECB has embraced the principle of "higher for longer" and will continue to follow a data-dependent approach to determine the appropriate level and duration of restriction, the economic situation in the euro area is deteriorating stronger and faster compared to the ECB's expectations. Furthermore, the recent conflict in the Middle East (see Section 1) and the ongoing Russian invasion of Ukraine might put upward pressures on inflation and thus complicate further ECB monetary policy decisions (both interest rate cuts and balance sheet reduction).

For now, the ECB continues to be on the side of cautious monetary tightening rather than going for premature easing. More recently, the ECB has highlighted its intention to have a clear understanding of the wage growth trajectory and possible second-round effects before signalling any potential future rate cuts. In that manner, on 10 November President Lagarde made a clear statement to the public that rate cuts are not currently under consideration for the next quarters, emphasising that "*long enough has to be long enough*". Lagarde suggested that inflation might resurge from its recent two-year low, particularly in the event of another supply shock from the energy sector. However, caution is warranted, as this direct statement might be premature considering elevated geopolitical uncertainty and rising risks of a stagflation in the euro area. Her statement aligns with thoughts of the ECB Vice-President de Guindos who noted, in a recent interview on 9 November, that any discussion about lowering interest rates is premature. In addition, when asked about the term "sufficiently long", de Guindos stated that: "*This means a period of time that takes into account the potential lags of monetary policy. [...] I would not define "sufficiently long" as used in our monetary policy statement as a concrete period of time. We will need to determine this on the basis of data.*"

Figure 9: ECB and Fed, actual and expected interest rate paths



Source: EGOV elaboration based on [ECB's Survey of Monetary Analysts, October 2023](), [Federal Reserve Bank of New York's Survey of Market Participants, September 2023]() and [FOMC Meeting 19-20 September 2023, Projection Materials]().

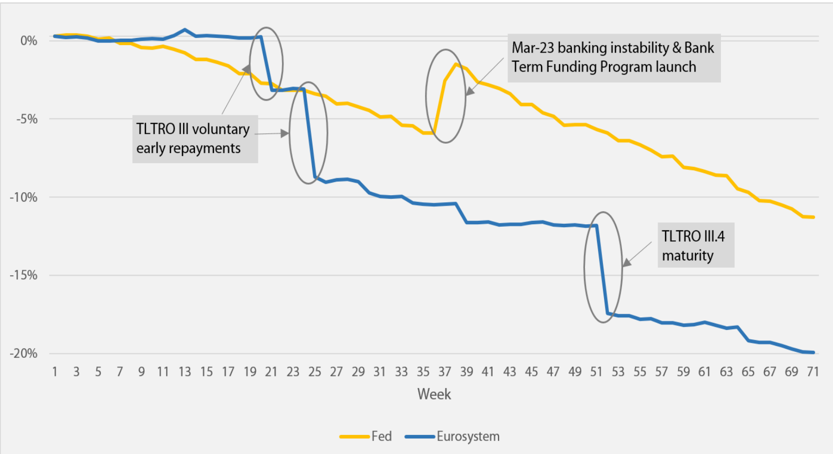
Notes: Dotted lines represent forecasts.

Turning to market expectations, the October 2023 SMA suggests that the ECB has reached the peak rate and is expected to maintain it until September 2024. From there, the deposit facility rate is expected to be cut by 25 bps in each of the three Governing Council meetings until the end of 2024, subsequently arriving to 2.5% at end-2025 and 2% at end- 2026. **Figure 9** shows the expected path of the deposit facility rate and, for comparison, the Fed's federal funds target range, as projected by market participants and members of the Federal Open Market Committee (FOMC).

However, more recent data suggests that markets have started to bet on earlier-than-expected interest rate cuts in the euro area. The Financial Times, based on market-implied data, reports that markets have largely discounted the likelihood of further monetary tightening and are now factoring in the first rate cuts in the euro area in June 2024, which represents a significant shift from the early days of October when investors did not anticipate the ECB implementing their initial cuts until September 2024. The November 2023 Reuters ECB Monetary Policy Poll indicates a median expectation that the ECB will cut rates in the third quarter of 2024. However, 32 out of 72 respondents expect it to happen already in the second quarter.[11]

Balance sheet reduction

Figure 10: Eurosystem and Federal Reserve, balance sheet reduction by week since July 2022



Source: EGOV elaboration based on ECB and Federal Reserve.

The reduction of Eurosystem's balance sheet is underway and implemented through QT and the repayments under TLTRO III. The reduction so far has been primarily driven by the latter. As shown in **Figure 10**, TLTRO III repayments and the launch of the Fed's Bank Term Funding Program in March are two principal reasons why the Eurosystem's balance sheet has been reduced relatively more than that of the Federal Reserve in this monetary policy tightening cycle.

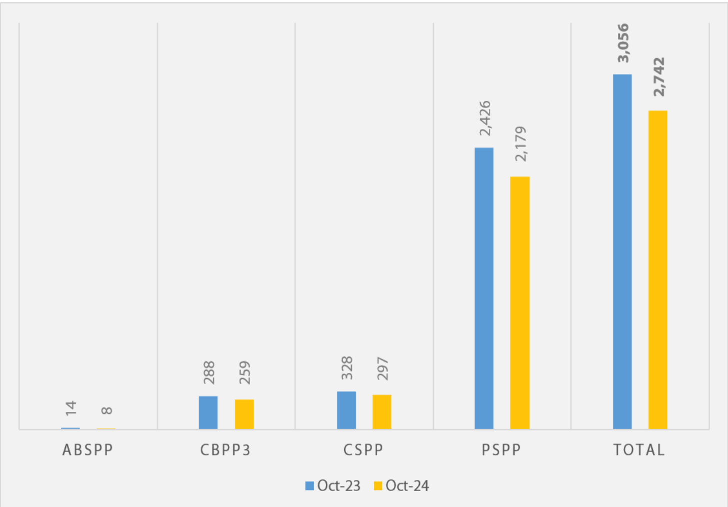
[11] Source: Reuters via LSEG.

a. Asset purchase programmes

The ECB is continuing with QT through a gradual unwinding of APP holdings, by stopping reinvestments of maturing assets and letting them "run off" the Eurosystem's balance sheet. In a first phase, between March and June 2023, the run-off was limited to EUR 15 billion per month. Then, from July 2023 onwards, the limits were removed and principal repayments were no longer reinvested. This means that the stock of assets held by the Eurosystem is reduced at a pace that depends on the monthly amount of redemptions. In the 12-month period between November 2023 and October 2024, the monthly average is EUR 26.2 billion, with large variations, from EUR 8.5 billion in December 2023 to EUR 38.3 billion in May 2024.

The current pace of QT will lead to a very gradual reduction of the Eurosystem's balance sheet. Over the next 12 months APP holdings are expected to decrease by EUR 314.7 billion, or by 10.3% (see **Figure 11** for an estimate of the reduction by programme). For reference, total Eurosystem asset holdings are currently in the range of EUR 4.7 trillion. As the end of October, APP holdings account for EUR 3.1 trillion, while pandemic emergency purchase programme (PEPP) (unaffected by QT and subject to full reinvestment at least until end-2024) for EUR 1.7 trillion. The aggregate Eurosystem balance sheet now stands at EUR 7 trillion. Therefore, in the bigger picture, QT at the current pace will contribute with only 4.5% to the reduction of the Eurosystem's balance sheet in the next 12 months. The remaining TLTRO III loans of around EUR 491 billion that will mature by the end of 2024 will have a far greater effect on the balance sheet in the near term.

Figure 11: Eurosystem QT by programme, EUR million

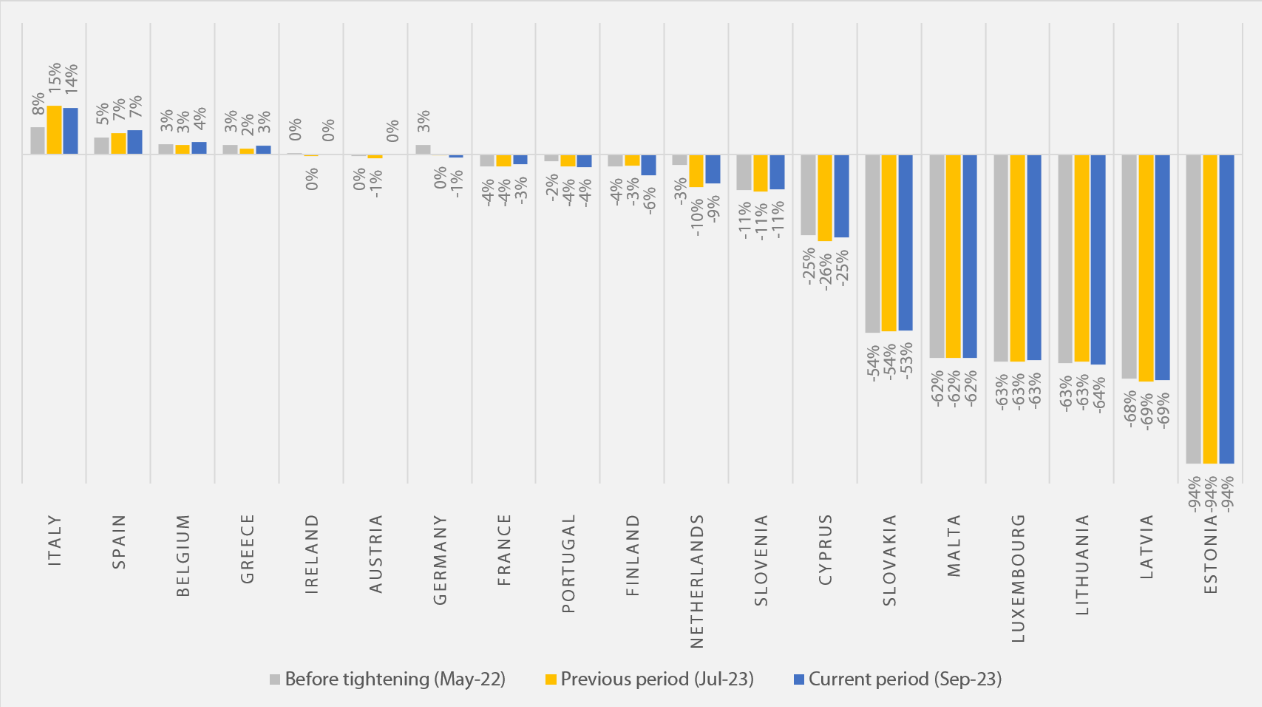


Source: EGOV elaboration based on ECB (APP holdings; APP redemptions).

The unwinding of the corporate sector purchase programme (CSPP) will interfere with the ECB's plan to decarbonise the Eurosystem's corporate bond holdings and support the EU's green transition objectives (see Section 3). According to the plan, the tilting of corporate sector asset holdings, started in October 2022, was to be done through reinvestment purchases. Now that reinvestments under the CSPP are discontinued, the ECB cannot use them to adjust the carbon profile of the Eurosystem's stock of corporate bonds. Corporate sector holdings under the PEPP are not part of QT and reinvestments will continue at least until end-2024. However, the PEPP's corporate sector holdings (around EUR 46 billion) are much smaller than under the APP (currently EUR 328 billion). In press conferences following the May, July and September 2023 Governing Council meetings, President Lagarde indicated that the ECB will consider options to ensure alignment with the Paris Agreement.

Concerning PEPP, the Governing Council maintained is earlier decision and confirmed that the Euroystem will keep reinvesting the principal repayments until at least the end of 2024. PEPP reinvestments are conducted flexibly across Member States, as a first line of defence against fragmentation. Using the ECB's bi-monthly reporting, **Figure 12** shows the latest (as of September 2023) deviation of PEPP public sector holdings from the capital key, with a comparison with the previous reporting period (July 2023) and with the last full period before the monetary policy tightening cycle began (May 2022).

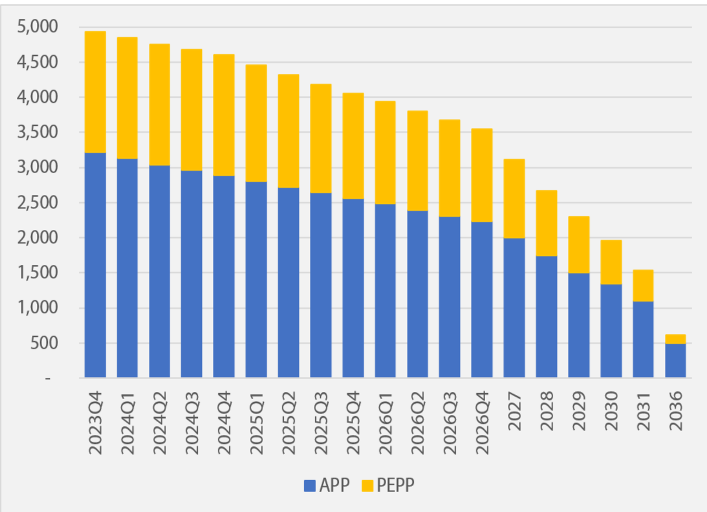
Figure 13: PEPP public sector holdings, deviation from the capital key, in %



Source: Authors' own elaboration based on ECB, bimonthly breakdown of public sector securities under the PEPP.

Notes: Croatia joined the euro area after the net purchases under the PEPP had stopped. The deviation from the capital key takes into account PEPP cumulative net purchases of public sector securities (excluding supranational) and uses the share of paid-up capital of Eurosystem NCBs (excluding the Croatian National Bank).

Figure 12: Market expectations for Eurosystem asset holdings under APP and PEPP, median, EUR billion



Source: EGOV elaboration from the SMA, October 2023.

It is interesting to note that the current SMA expectations suggest, from 2024 onwards, interest rate cuts going in parallel with QT. Market expectations of the future unwinding of the APP and PEPP portfolios suggest a moderate and stable reduction over the next 8 years, with a residual amount of holdings on the balance sheet still in 2036. **Figure 13** shows expected future APP and PEPP holdings, based on the October 2023 SMA. Respondents' APP indications suggest an average monthly reduction of EUR 28 billion until the end of 2026. Monthly reductions are then expected to drop to EUR 19 billion on average in the next five years, until 2031. Respondents predict a EUR 500 billion APP holding still in 2036. Concerning the PEPP, analysts seem to trust the ECB's commitment to maintain full reinvestment of the PEPP redemptions until the end of 2024. Afterwards, from 2025 to 2031, modest reductions of about EUR 16 billion per month on average are expected.

b. Targeted longer-term refinancing operations (TLTROs)

Through TLTROs, the ECB provides longer-term financing to euro area credit institutions at favourable terms, with incentives to encourage lending to the real economy. The TLTRO III programme started in September 2019 with 10 quarterly operations having a maturity of three years. Initial conditions applicable under TLTRO III were eased on several occasions: in September 2019, and then in response to the COVID-19 pandemic in March, April and December 2020. Banks achieving certain lending benchmarks could benefit from interest rates as low as -1%. With the steep and successive increases in the deposit facility rate, i.e. the rate that banks receive for overnight deposits at the ECB, that started in July 2022, the existing TLTRO III conditions became no longer tenable.

In October 2022, the Governing Council decided to update the TLTROs III conditions to complement the current tightening environment. From 23 November 2022 and until the operations maturity or the early repayment, the interest rate should be indexed to the average applicable key ECB interest rates over this period, thus incentivising banks to repay early. Three additional early repayment dates were made available.

The TLTRO III phase out has contributed significantly to shrinking the Eurosystem's balance sheet, with more than EUR 1.85 trillion repaid by euro area banks. Since the Governing Council's October 2022 decision, banks made early repayments amounting to almost EUR 1 trillion. The largest tranche of TLTROs (TLTRO III.4) of EUR 477 billion matured on 28 June 2023. As of November 2023, the outstanding amount under TLTRO III is EUR 491 billion. See **Table 4** for an overview of outstanding amount and voluntary early repayments since the October 2022 decision. The Governing Council maintains that that it will continue assessing how this impacts the ECB's monetary policy stance.

Table 3: Overview of TLTRO III outstanding amounts and early repayments, EUR billion

				Voluntary early repayments since the October 2022 decision							
TLTRO III operation	Maturity date	Alloted amount	Outstanding amount	23 Nov 2022	21 Dec 2022	25 Jan 2023	22 Feb 2023	29 Mar 2023	28 Jun 2023	27 Sep 2023	TOTAL
1	28-Sep-2022	3.40	0.00								**0.00**
2	21-Dec-2022	97.72	0.00	-11.16							**-11.16**
3	29-Mar-2023	114.98	0.00	-12.35	-36.36	-4.07	-2.90				**-55.68**
4	28-Jun-2023	1308.40	0.00	-212.41	-350.60	-52.23	-30.25	-71.95			**-717.44**
5	27-Sep-2023	174.46	0.00	-21.21	-42.98	-2.43	-2.22	-5.98	-17.07		**-91.89**
6	20-Dec-2023	50.41	37.25	-1.38	-0.55	-0.29	-0.24	-0.45	-4.34	-3.92	**-11.16**
7	27-Mar-2024	330.50	257.58	-23.69	-6.47	-3.21	-0.31	-5.92	-3.52	-23.15	**-66.27**
8	26-Jun-2024	109.83	64.24	-11.73	-8.64	-0.24	-0.41	-3.08	-3.45	-5.59	**-33.12**
9	25-Sep-2024	97.57	89.68	-1.58	-0.65	-0.05	-0.20	-0.06	-0.27	-0.92	**-3.72**
10	18-Dec-2024	51.97	42.43	-0.78	-1.24	-0.23	-0.07	-0.31	-0.81	-0.66	**-4.09**
TOTAL		**2,339.24**	**491.18**	**-296.29**	**-447.49**	**-62.75**	**-36.6**	**-87.73**	**-29.46**	**-34.23**	**-994.54**

Source: EGOV elaboration based on ECB, open market operations (outstanding amount), voluntary repayments.
Notes: Figures may not add up due to rounding.

3. Monetary policy and the green transition

Monetary policy has become increasingly interlinked with the ambition of the transition to a carbon neutral economy. International developments, including the energy crisis which followed Russia's invasion of Ukraine and potential spillovers from recent tensions in the Middle East on energy markets, have highlighted the need to accelerate the transition to a carbon neutral economy.

ECB President Lagarde herself has argued that the ECB can play a major role in the energy transition by ensuring price stability. This would facilitate the reorientation of retained earnings towards green investments that would provide returns only in the late future. Alternatively, such funds would lose value or would be addressed towards inflation-protected investments.

Recently, the ECB's economy wide climate stress tests have shown the importance of the transition to green energy to reduce risks over the medium-term horizon. Similarly, the June 2023 ECB Economic Bulletin noted the broad concern among euro area firms on climate change consequences in the next five years, reflecting in particular worries on the materialisation of physical risks such as wildfires and floods. ECB researchers have shown that, in the longer term horizon, climate change could dampen potential output. It would hinder the definition of a common monetary policy given its localised impact of on specific regions and sectors. Questions remain also on the effectiveness of monetary policy in the transition. Recent studies at the ECB have pointed out to the limited role that monetary policy could play due to the "*untargeted nature of conventional monetary and design restrictions of unconventional tools*"[12].

The **ECB has stepped up its actions by integrating monetary climate change considerations** at the heart of its monetary policy framework and financial stability monitoring:

- **In January 2021, a climate change centre was established** to coordinate activities within the ECB.
- **In July 2021, the Governing Council** decided, as part of the monetary policy strategy review, to incorporate climate change considerations in the ECB's policy framework and **committed to a number of actions[13], such as further embedding green considerations in the collateral framework**, macroeconomic models and the assessment of the policy transmission as well as introducing disclosures as a requirement for collateral eligibility and asset purchases.
- **In July 2022, the ECB agreed** on further measures to integrate climate change considerations in the monetary policy framework[14], notably by **tilting EU corporate bond holdings towards issuers with better climate performance** by means of the reinvestment of the redemptions as of October 2022 as well as by further embed climate change considerations in its collateral framework.[15]

The decision to unwind the corporate sector purchase programme (CSPP) is expected to slow down the ECB's ambitions to decarbonise the Eurosystem's bond portfolio. In particular, the discontinuation of the reinvestments under the CSPP implies that the ECB will not be able to use them as a way of adjusting its carbon profile. Since the decision was taken in May 2023, President Lagarde has reiterated that the ECB will assess options to ensure alignment with the Paris Agreement. She has also further committed to continuing assessing ways to address climate-related concerns in monetary policy from 2024 onwards.

4. Monetary policy in other jurisdictions

United States

On 1 November 2023, the US Federal Reserve (Fed) once again decided to maintain its target range for the federal funds rate between 5.25% and 5.5%. This target, first set in July and confirmed in September, represents the highest level in US interest rates in 22 years.

Jerome Powell, the Chair of the Fed, has indicated that the central bank is committed to achieving a sufficiently restrictive monetary stance, but it might not be there yet. He therefore dismissed

[12] Nakov, A. and Thomas, C., 2023, "Climate-conscious monetary policy", Working Paper Series No 2845.

[13] See press release and detailed roadmap of climate change-related actions.

[14] See press release of 4 July 2022, ECB climate agenda 2022 and President Lagarde's letter to the Chair of the ECON Committee.

[15] The ECB also committed from the first quarter of 2023 to disclose climate-related information of its own corporate bond holdings. It also introduced further changes to its collateral framework, in particular the Eurosystem committed to "*limit the share of assets issued by entities with a high carbon footprint that can be pledged as collateral by individual counterparties*" and "*consider climate change risks when reviewing haircuts applied to corporate bonds used as collateral*".

expectations for cuts in the near term, indicating instead that *"The question (...) is, should we hike more?".* By not providing any guidance on potential future hikes, this balanced approach seems to depart from Powell's own remarks after the September meeting. In that occasion, he had instead noted the broad consensus within the FOMC on the need to further raise interest rates once more before the end of the year.

The decision signals a cautious approach by the FOMC at times of uncertainty. The latest estimates show that annual headline inflation, as measured by the Consumer Price Index (CPI), fell to 3.2% in October 2023, after sitting at 3.7% in September and in August. Core inflation remains high and persistent at 4%, only 1 percentage points below the August estimate.[16] At the same time, recent economic data show a resilient labour market and strong growth amid a rise in consumer spending. Unemployment remains at historical low levels while growth exceeds previous expectations. All of this points to further inflationary pressures at the horizon.

At the same time, similarly to the euro area, financial conditions are tightening in the US with rising interest rates on long-term Treasury bonds. Also in this case, however, Powell invited to caution indicating that there is uncertainty on the persistence of such tightening and reiterating the Fed's commitment to continue to reduce its balance sheet.

United Kingdom

On 2 November 2023, the Monetary Policy Committee (MPC) of Bank of England (BoE), decided to hold its Bank Rate at 5.25% amid gloomy economic projections, pointing to subdued growth and more persistent inflation than previously expected. For the second time, after the September meeting, the MPC decided to keep rates at their highest level in 15 years. Among the members of the Committee, 6 opted to keep rates steady, while 3 advocated for an increase to 5.5%.

The MPC decision to hold the Bank rate at the current level seems to chime with decisions of major central banks, such as the ECB and the Fed, particularly signalling that it might be premature to think about cuts in the short term. The MPC explicitly recognises that "*monetary policy is likely to need to be restrictive for an extended period of time. Further tightening in monetary policy would be required if there were evidence of more persistent inflationary pressures".* At the same time, the UK economic outlook seems to be parting away from the trajectory of other major jurisdictions.

Headline inflation in the UK, as measure by the Consumer Price Index (CPI), has fallen to 4.6% from 6.7% in September 2023. Overall headline inflation in the UK grew by 6.7% in the third quarter of the year. This is below expectations, reflecting recent developments on core inflation, which remains persistent at 5.7% in October 2023, down from 6.1% in September. At the same time, the MPC is wary of upside risks to inflation due to rising energy prices following geopolitical tensions in the Middle East.

Economic growth seems to be stagnating and is forecasted to *"well below historical averages in the over the medium term".* GDP in the UK is set to remain flat in Q3 2023 and to only raise by 0.1% in the last quarter of the year, both representing weaker estimates than previously expected. Employment growth seems to be cooling off more than originally expected. Furthermore, according to the Monetary Policy Report, "*more than half of the impact of higher interest rates on the level of GDP is still to come through, although there is significant uncertainty around that estimate".*

[16] The Fed's preferred measure of inflation, the Personal Consumption Expenditures (PCE), stood at 4% (headline) and 3.7% (core) in September.

5. Upcoming Monetary Dialogue

The next Monetary Dialogue between the Committee on Economic and Monetary Affairs (ECON) and ECB President Christine Lagarde will take place on Monday, 27 November 2023. Two topics were selected by the coordinators of the ECON committee for discussion with President Lagarde:

1. Comparative analysis of monetary policy and inflation dynamics in the euro area and the United States, and
2. Climate change considerations in monetary policy implementation.

On 14 November 2023, the ECON Committee held a preparatory meeting ahead of the Monetary Dialogue. ECON Members were able to discuss the latest monetary policy developments and gather insights from leading experts (see **Table 5** and **Table 6** below for an overview of the papers prepared for the meeting). In the first part, Luigi Bonatti (University of Trento) presented a paper comparing inflation dynamics across the euro area and the US and assessing related monetary policy responses. This was followed by a discussion with Evi Pappa (Universidad Carlos III de Madrid), and questions and answers with ECON Committee Members. In the second part, Dirk Schoenmaker (Bruegel, Erasmus University Rotterdam) presented its papers on climate change implications for monetary policy, followed by Q&A with ECON committee Members.

Table 4: MD papers on "Comparative analysis of monetary policy and inflation dynamics in the euro area and the United States"

Comparative analysis of monetary policy and inflation dynamics in the euro area and the United States		
Authors	**Title**	**Abstract**
L. Bonatti, A. Fracasso & R. Tamborini	Inflation and monetary policy across the Atlantic: A comparison	Under the stress test of the inflation process, the two central banks' stances across the Atlantic share similarities but show also significant differences. Similarities and differences are reflected also in inflation dynamics in the US and the euro area. Differences are mainly due to the mix of factors that originated the take-off of inflation, some structural features of the economies, the institutional contexts and associated fiscal stances.
K. Whelan	Comparing Fed and ECB monetary policies	The European Central Bank and Federal Reserve have taken similar approaches to tightening monetary policy to tackle high inflation. However, relative to the US, euro area inflation has been driven more by supply shocks and less by strong demand. The euro area economy is also weakening while the US economy is still growing solidly. Markets expect the Fed to ease more than the ECB in 2024 but falling inflation and a weak euro area economy may see the opposite occur.
C. Wyplosz	The Inflation Episode: Similarities and differences in the euro area and the United States	Inflation has surged and then declined in broadly similar ways in the euro area and the United States, because it has been driven by the impact of the pandemic and its aftermath. Yet, specific differences reflect how monetary and fiscal policies responded as well as the impact of the Russian invasion of Ukraine. The central banks face whole new challenges as they prepare to navigate the next phase now that inflation has rapidly declined, but also further along.
M. Moschella & D. Romelli	Inflation dynamics and monetary policy in the euro area and the US	This paper compares the inflation dynamics and the monetary policy stance in the euro area and the United States. The paper also discusses the challenges that monetary authorities confront on the two sides of the Atlantic, also considering the uncertainties brought about by the ongoing crisis in the Middle East.
C. Blot & F. Geerolf	Are inflation dynamics different in the euro area and the United States?	The euro area and the United States have both experienced an episode of strong inflation post COVID-19 pandemic and after the Russian invasion of Ukraine. We highlight commonalities as well as differences in these episodes, in terms of headline and core inflation, inflation differentials and causes, and monetary policy between the euro area and the United States. We propose different scenarios for inflation and monetary policy.

Table 5: MD papers on "Climate change considerations in monetary policy implementation"

Climate change considerations in monetary policy implementation		
Authors	**Title**	**Abstract**
D. Schoenmaker	Low-carbon allocation in the implementation of monetary policy	This paper analyses how the European Central Bank (ECB) can incorporate climate change considerations into its implementation of monetary policy. It reviews the impact of climate shocks on inflation, and the instruments available to decarbonise the ECB's asset and collateral portfolio. The paper concludes with recommendations to the ECB that would increase the low-carbon allocation in its monetary policy framework. This will in turn speed up the green transition and reduce the euro area's fossil-fuel dependency.
D. Gros & F. Shamsfakhr	Shades of Green Monetary Policy: Would a green tilt help?	Any greening of monetary policy is likely to have at best a marginal effect on emissions given the very small spreads on the yields of green bonds and the cap on emissions inherent in the EU's emissions trading system. Trying to limit the supply of capital to brown industries could backfire as these industries are those most in need of financing for capital-intensive decarbonisation. These arguments apply both to the tilting of investments under the corporate sector purchase programme (CSPP) towards green industries/enterprises and to the potential greening of targeted long-term refinancing operations. Moreover, CSPP holdings will decline rapidly, so this prospective policy instrument will become irrelevant in a few years.
S. Dobkowitz, P. Hüttl, A. Kriwoluzky & J. Wittich	Climate Change and Monetary Policy: Risks, instruments, & chances	Rising inflation complicates the alignment of the ECB's policies with the Paris Agreement. This paper provides novel evidence for inflationary pressures arising from natural disasters. We then discuss the effectiveness of monetary instruments to boost a green transition, concluding that the scope of policy measures used thus far is limited. As additional measures, we advise active rebalancing of the ECB's bond holdings towards greener issuers, enforcing stricter disclosure standards, and differentiating lending facilities in favour of green investments.
J. Beckmann, K. Gern, N. Jannsen & N. Sonnenberg	Climate Change and Monetary Policy in the Euro Area	Climate considerations have entered the agenda of the ECB in recent years. The ECB has intensified its analyses of the macroeconomic impact of climate change and started to evaluate and implement more active approaches and best practices to support the green transition. In this paper we discuss how climate change could affect monetary policy, other policies available to the ECB to support the green transition, and potential trade-offs with its primary objective of price stability.

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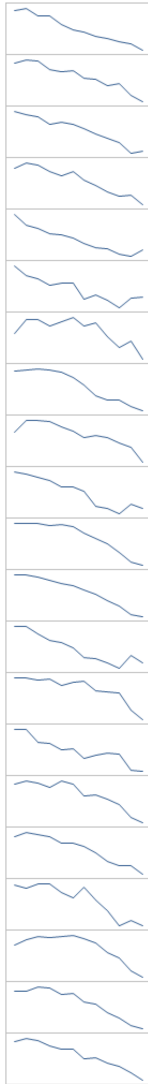
This document is available on the internet at: www.europarl.europa.eu/supporting-analyses

ANNEXES

Table 6: Headline HICP inflation rates by euro area Member State, %

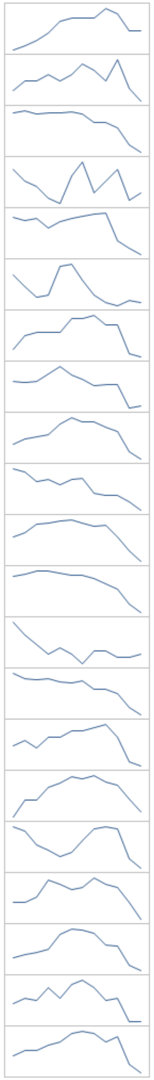
	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
BE	12.1	13.1	10.5	10.2	7.4	5.4	4.9	3.3	2.7	1.6	0.7	-1.7
DE	10.9	11.6	11.3	9.6	9.2	9.3	7.8	7.6	6.3	6.8	4.3	3.0
EE	24.1	22.5	21.4	17.5	18.6	17.8	15.6	13.2	11.2	9.0	3.9	5.0
IE	8.6	9.4	9.0	8.2	7.5	8.1	7.0	6.3	5.4	4.8	5.0	3.6
EL	12.1	9.5	8.8	7.6	7.3	6.5	5.4	4.5	4.1	2.8	2.4	3.8
ES	9.0	7.3	6.7	5.5	5.9	6.0	3.1	3.8	2.9	1.6	3.3	3.5
FR	6.2	7.1	7.1	6.7	7.0	7.3	6.7	6.9	6.0	5.3	5.7	4.5
HR	12.6	12.7	13.0	12.7	12.5	11.7	10.5	8.9	8.3	8.3	7.4	6.7
IT	9.4	12.6	12.6	12.3	10.7	9.8	8.1	8.6	8.0	6.7	5.6	1.8
CY	9.0	8.6	8.1	7.6	6.8	6.7	6.1	3.9	3.6	2.8	4.3	3.6
LV	22.0	21.7	21.7	20.7	21.4	20.1	17.2	15.0	12.3	8.1	3.6	2.3
LT	22.5	22.1	21.4	20.0	18.5	17.2	15.2	13.3	10.7	8.2	4.1	3.1
LU	8.8	8.8	7.3	6.2	5.8	4.8	2.9	2.7	2.0	1.0	3.4	2.1
MT	7.4	7.4	7.2	7.3	6.8	7.0	7.1	6.4	6.3	6.2	4.9	4.2
NL	17.1	16.8	11.3	11.0	8.4	8.9	4.5	5.8	6.8	6.4	-0.3	-1.0
AT	11.0	11.6	11.2	10.5	11.6	11.0	9.2	9.4	8.7	7.8	5.8	4.9
PT	9.8	10.6	10.2	9.8	8.6	8.6	8.0	6.9	5.4	4.7	4.8	3.2
SI	10.6	10.3	10.8	10.8	9.9	9.4	10.4	9.2	8.1	6.6	7.1	6.6
SK	13.6	14.5	15.1	15.0	15.1	15.4	14.8	14.0	12.3	11.3	9.0	7.8
FI	8.4	8.4	9.1	8.8	7.9	8.0	6.7	6.3	5.0	4.1	3.0	2.4
EA	**9.9**	**10.6**	**10.1**	**9.2**	**8.6**	**8.5**	**6.9**	**7.0**	**6.1**	**5.5**	**4.3**	**2.9**



Source: Eurostat.

Table 7: Core (excl. energy and food) HICP inflation rates by euro area Member State, %

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
BE	4.6	4.8	5.1	5.5	6.1	6.3	6.3	6.3	6.8	6.5	5.6	5.6
DE	4.7	5.1	5.1	5.4	5.1	5.4	5.9	5.6	5.1	6.1	4.8	4.2
EE	12.5	13.0	12.3	12.5	12.6	12.7	12.4	10.8	10.7	9.7	6.6	5.2
IE	5.1	4.7	4.5	4.1	3.9	4.9	5.4	4.3	4.7	5.1	4.0	4.3
EL	6.9	6.6	6.8	5.9	6.5	6.8	7.0	7.2	7.3	4.8	4.2	3.6
ES	4.8	4.4	4.0	4.1	5.1	5.2	4.6	4.1	3.8	3.7	3.9	3.8
FR	3.7	4.1	4.2	4.2	4.2	4.6	4.6	4.7	4.4	4.4	3.6	3.5
HR	9.8	9.7	9.8	10.5	11.3	10.4	10.0	9.4	9.5	9.5	7.3	7.5
IT	4.4	4.6	4.7	4.8	5.2	5.5	5.3	5.3	5.1	4.9	4.1	3.8
CY	6.2	5.9	5.1	5.3	4.9	5.3	5.4	4.2	4.0	4.0	3.5	2.8
LV	8.9	9.5	10.5	10.7	10.9	11.1	10.7	10.2	10.4	8.9	7.2	5.9
LT	11.9	12.2	12.7	12.6	12.3	12.1	12.1	11.7	10.9	10.2	8.2	7.1
LU	4.9	4.5	4.2	3.9	4.1	3.9	3.6	4.0	4.0	3.8	3.8	3.9
MT	7.2	6.7	6.6	6.7	6.4	6.3	6.5	5.8	5.8	5.4	4.2	3.6
NL	6.4	6.8	6.2	7.1	7.1	7.6	7.6	7.9	8.2	7.1	5.1	4.7
AT	5.8	6.8	6.8	7.6	7.8	8.2	8.1	8.3	7.9	7.7	6.9	6.1
PT	6.5	6.3	5.7	5.5	5.2	5.4	5.9	6.4	6.5	6.4	5.1	4.7
SI	6.6	6.6	6.8	7.5	7.3	7.1	7.2	7.6	7.3	7.2	6.6	5.9
SK	9.0	9.3	9.5	9.8	11.3	11.9	11.7	11.4	10.3	10.1	8.2	7.7
FI	4.3	4.5	4.4	4.9	4.5	5.0	5.2	4.9	4.4	4.5	3.6	3.6
EA	**4.8**	**5.0**	**5.0**	**5.2**	**5.3**	**5.6**	**5.7**	**5.6**	**5.3**	**5.5**	**4.5**	**4.2**



Source: Eurostat.

Table 8: Composite cost of borrowing, households for house purchase, %

	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
BE	2.7	2.9	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.6	3.7	3.8
DE	3.3	3.6	3.5	3.6	3.8	3.9	3.9	3.9	4.0	4.0	4.1	4.1
EE	3.6	4.0	4.1	4.6	4.8	4.9	5.0	5.2	5.4	5.7	5.7	5.8
IE	2.7	2.8	2.8	3.0	3.1	3.5	3.6	3.8	4.0	4.0	4.1	4.2
EL	3.7	3.5	3.7	3.8	3.8	3.8	3.9	3.9	4.1	4.2	4.2	4.3
ES	2.5	2.7	2.9	3.2	3.4	3.6	3.6	3.7	3.8	3.8	3.9	3.9
FR	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.3	3.4
HR	n/a	n/a	n/a	2.9	3.0	2.9	3.0	3.0	3.1	3.3	3.5	3.5
IT	3.1	3.4	3.3	3.7	3.8	4.0	4.2	4.2	4.2	4.2	4.4	4.3
CY	2.9	3.0	3.4	3.2	3.5	4.7	4.5	4.3	4.3	4.6	4.5	4.6
LV	3.7	4.0	4.3	4.6	5.0	5.1	5.3	5.5	5.6	5.7	5.8	5.9
LT	3.8	4.1	4.4	4.6	4.9	5.0	5.3	5.4	5.6	5.7	5.8	5.8
LU	2.8	3.0	3.1	3.6	3.7	3.8	4.0	4.1	4.0	4.1	4.2	4.3
MT	2.2	2.3	2.3	2.3	2.4	2.3	2.2	2.1	2.3	2.2	2.1	2.1
NL	3.1	3.2	3.4	3.5	3.5	3.5	3.6	3.7	3.9	3.9	3.9	4.0
AT	2.7	3.0	2.9	3.2	3.4	3.6	3.8	3.9	3.9	3.9	3.9	3.8
PT	2.9	3.2	3.3	3.3	3.5	3.9	4.0	4.2	4.3	4.3	4.4	4.5
SI	3.1	3.4	3.7	3.9	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.1
SK	2.8	3.0	3.1	3.2	3.4	3.7	3.7	3.8	3.9	3.9	3.9	3.9
FI	2.8	2.8	2.9	3.0	3.2	3.4	3.6	3.8	4.0	4.1	4.2	4.4
EA	**2.7**	**2.9**	**2.9**	**3.1**	**3.2**	**3.4**	**3.5**	**3.6**	**3.7**	**3.8**	**3.9**	**3.9**

Source: ECB Data Portal.

Table 9: Composite cost of borrowing, non-financial corporations, %

	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
BE	2.4	3.1	3.5	3.7	3.9	4.3	4.4	4.5	4.9	4.9	5.0	5.2
DE	3.0	3.3	3.5	3.7	4.0	4.5	4.6	4.8	5.0	5.2	5.3	5.3
EE	4.0	5.0	4.7	4.8	6.1	5.7	5.5	5.8	6.1	6.1	6.4	6.6
IE	3.6	4.4	4.6	4.3	4.8	5.5	5.5	5.9	5.5	5.8	5.8	6.2
EL	4.3	4.4	4.7	5.1	5.4	5.6	5.7	6.0	5.7	6.2	6.4	6.1
ES	2.8	3.0	3.3	3.6	3.9	4.0	4.2	4.4	4.5	4.7	4.9	4.8
FR	2.4	3.0	3.1	3.4	3.7	3.8	4.0	4.3	4.4	4.5	4.5	4.6
HR	n/a	n/a	n/a	3.3	3.9	3.9	4.5	4.6	4.8	4.7	4.9	4.8
IT	2.6	3.1	3.6	3.8	3.7	4.3	4.6	4.9	5.1	5.1	5.1	5.4
CY	3.6	4.3	3.9	5.1	4.6	5.3	5.3	6.0	5.6	6.0	5.8	5.6
LV	3.3	3.9	5.0	4.5	5.3	5.5	5.7	5.8	5.6	6.5	6.2	6.2
LT	3.9	4.3	4.7	4.6	5.0	5.1	5.4	6.1	6.1	6.0	6.4	6.4
LU	2.3	2.7	3.1	3.2	3.3	3.9	3.6	3.3	3.4	3.8	3.7	4.1
MT	3.8	4.2	4.4	4.1	4.6	4.5	4.3	4.7	4.4	5.0	5.6	3.4
NL	2.1	2.5	3.0	3.1	3.2	3.5	3.7	3.7	4.0	4.1	4.2	4.3
AT	2.6	2.8	3.0	3.4	3.7	3.9	4.3	4.3	4.6	4.8	5.1	5.0
PT	3.7	4.0	4.5	4.7	4.8	5.1	5.1	5.4	5.5	5.7	5.9	5.8
SI	3.0	3.2	3.8	4.4	4.1	4.4	4.7	5.0	5.1	5.0	5.0	5.2
SK	2.9	3.6	3.9	4.2	4.3	4.6	5.0	5.1	5.7	5.4	6.0	5.8
FI	2.8	3.0	3.5	3.9	4.2	4.4	4.4	4.8	4.8	5.0	5.1	5.3
EA	**2.7**	**3.1**	**3.4**	**3.6**	**3.9**	**4.2**	**4.4**	**4.6**	**4.8**	**4.9**	**5.0**	**5.1**

Source: ECB Data Portal.