

20 de marzo de 2024

Monetary Policy and its interaction with other economic policies*

Anuario del euro 2024

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* The views expressed in this article are those of the author and do not necessarily represent the views of the European Central Bank or the Euro system. The latest data available for this article refer to November 2023.

1 Introduction: the euro area context and the ECB's monetary policy decisions

At the end of 2021, in response to a context of high and rising inflation in the euro area, the Governing Council of the European Central Bank (ECB) embarked upon a rapid cycle of normalisation and subsequent tightening of monetary policy. In particular, the policy rate rise has been unprecedented in the history of the euro area. Since July 2022, the cumulative increase amounts to 450 bp, taking the deposit facility rate from a negative value of -0.5% to a positive rate of 4%.

In addition to raising our policy rates, we have also tightened our monetary policy by reducing the size of the Eurosystem balance sheet. Indeed, the speed of reduction of the balance sheet has so far been extraordinary, with its size shrinking by more than €2 tn since the end of 2021, largely due to the repayments of our targeted longer-term refinancing operations (TLTRO).

Our monetary policy tightening is currently being transmitted forcefully to the euro area economy. Tighter financing conditions are dampening demand, and this is helping to bring down inflation. Moreover, a significant part of the pass-through of monetary policy tightening is still pending. Ultimately, however, the effectiveness of monetary policy in achieving its goal depends on how other policies are being implemented at the same time. Indeed, policies are more effective when their stances are mutually supportive. In this regard, macropudential policies that support a resilient banking sector create the conditions for a smooth transmission of monetary policy actions. Likewise, fiscal actions that adopt a medium-run perspective not only reinforce euro area governments' commitment to public debt sustainability, but also help avoid additional inflationary pressures. In addition, the challenges posed by the low potential growth of the euro area economy and by the energy and digital transitions and geopolitical tensions call for a medium to long-run approach to policymaking, including policies aimed at completing the Economic and Monetary Union (EMU), and an ambitious programme of structural reforms to strengthen the supply side of the economy.

In the rest of this article I will discuss in detail the interactions between monetary and other policies, both from a short and medium-run perspective. In Section 2, I focus on the interaction with fiscal policy. In Section 3, I turn to the interaction with financial stability. Finally, in Section 4, I deal with the relationship between monetary policy and structural and longer-term policies.

2 Interaction with fiscal policy

When analysing the interaction between fiscal and monetary policy, it is useful to distinguish between the optimal combination of fiscal and monetary policies in the current context and the governance framework that maximises the likelihood of having an optimal policy mix in all circumstances.

The optimal policy mix in the current context

The interaction between monetary and fiscal policy has undergone significant changes in recent years. Before the pandemic, monetary policy faced the challenge of persistently low inflation, while being constrained by the effective lower bound of nominal interest rates. In this context, an expansionary fiscal policy would have helped to stimulate aggregate demand and inflation. However, as a result of the lack of coordination among euro area governments the appropriate aggregate fiscal stimulus to complement monetary policy action was not provided. More broadly, since the creation of the euro area, fiscal policy has tended to be pro-cyclical, both in times of economic booms and downturns.

The pandemic was a severe, albeit temporary, exogenous shock, probably the largest supply and demand shock we had faced in decades. In that context, a coordinated fiscal and monetary policy response was absolutely necessary to support the incomes of both households and firms, and to minimise the potential structural damage to employment, productive capacity and economic growth caused by the crisis, while avoiding deflationary pressures. In particular, the fiscal response had to rely on both national and supra-national policy actions (mainly through the Next Generation EU (NGEU) funds) of significant magnitude. The decisions taken to address such an exceptional situation were appropriate and helped to counteract the lack of a complete institutional architecture in the euro area, allowing monetary and fiscal policies to work together without overburdening each other.

Since then, the situation has been characterised by high inflation (mainly stemming from negative supply disturbances), subdued activity and high uncertainty. In this context, the priority of monetary policy has been, and should continue to be, to bring inflation back to its medium-term target. The decisive action of the ECB has been crucial in keeping inflation expectations anchored.

For its part, fiscal policy responded to the start of the war in Ukraine with measures to mitigate the impact of the energy and food price shock on households and businesses. These measures helped contain inflationary pressures in the initial phase, although their progressive withdrawal is having and will continue to have counteracting effects. However, many of these measures have not been sufficiently selective or targeted at the most vulnerable groups, resulting in an expansionary impulse that was broader than necessary, thus adding to inflationary pressures and further complicating the task of fulfilling the central bank's mandate. Accordingly, it is vital that governments continue to withdraw these

measures in line with falling energy and food prices. This would alleviate demand-driven inflationary pressures and avoid a more forceful monetary policy response. In the event of a new energy crisis, given the limited fiscal space available, the measures to be adopted should be more selective (targeted only at the most affected groups) and temporary.

Going forward, it should be taken into account that the fiscal support undertaken since the start of the pandemic has led to a significant increase in public debt levels and a reduction in fiscal space in many euro area member countries, precisely at a time when public investment needs in areas such as climate change, digitalisation and defence are significant. And the shift towards a restrictive monetary policy may prompt financial markets to pay more attention to debt sustainability concerns.

In this context, a more prudent fiscal policy would alleviate demand-driven inflationary pressures and make eventual additional interest rate increases less likely, thus helping to contain the impact of higher interest rates on the economy. A coherent policy mix would also provide a clear signal to all economic agents and improve the credibility of both policies, which in turn would help keep inflation expectations anchored and contain risks to debt sustainability and more generally to financial stability.

Consequently, a shift in fiscal policy is required this year, to a restrictive stance, in line with the Eurogroup statement of July 2023.¹ The degree of consolidation should depend on the fiscal soundness of each country and incorporate the European Commission's country-specific recommendations. Moreover, structural reforms and an improvement in the quality of public finances should be key factors in increasing potential output and mitigating the impact of negative supply-side disturbances (see Section 4). The funds from the Recovery and Resilience Facility should play an essential part in achieving these objectives.

The optimal governance framework

Apart from cyclical considerations, from a longer-term perspective an appropriate framework to achieve an optimal combination of macroeconomic policies in the euro area needs to be established.² The current framework, originally set up by the Maastricht Treaty, had two central elements: a single and independent central bank (the ECB), responsible for conducting monetary policy for the euro area as a whole with the main objective of price stability, and a framework for the coordination of national fiscal policies.

These institutional arrangements assigned the responsibility for fiscal policies to national governments. However, it was recognised that, within a monetary union, the fiscal policy of one member affects the rest and the functioning of the union as a whole. Therefore, the Treaty introduced a series of mechanisms taking into account such considerations. First, the prohibition of monetary financing and the "no bailout" clause. In addition, it stipulated that member countries should avoid excessive deficits and debt levels, requirements that were operationalised through two quantitative reference values: 60% for the public debt/GDP ratio and 3% for the budget deficit/GDP ratio.³ The European Commission was

¹ <https://www.consilium.europa.eu/en/press/press-releases/2023/07/13/euro-group-statement-on-the-euro-area-fiscal-stance-for-2024/>

² For more details, see Hernández de Cos (2023a).

³ These quantitative limits were set based on the economic developments at the end of the 1990s.

tasked with monitoring public finances to identify significant deviations that could endanger the macroeconomic and financial stability of the union. And countries that violated these rules would be subject to the corrective arm of the Stability and Growth Pact, to ensure that excessive deficits are addressed within a specified time frame.

These supranational mechanisms were expected to result in national fiscal policies that were consistent with the smooth functioning of the monetary union. However, over the years and as the euro area experienced various crises, particularly the global financial crisis and the European sovereign debt crisis, several shortcomings became evident.⁴

First, the original rules did not take into account the impact of the cyclical situation on the observed deficit, leading to pro-cyclical fiscal policies. In particular, the fiscal framework did not encourage the accumulation of buffers during boom times and induced unnecessary tightening during recessions. Subsequent reforms increased the complexity of the rules, but did not manage to solve the problem adequately.

Second, the framework did not prevent a general increase in public debt levels among euro area member countries. Indeed, this has been a common trend in most advanced economies worldwide.

Third, focusing on fiscal imbalances made it difficult to detect other imbalances, such as financial and current account imbalances, which ended up having a strong destabilising effect on the euro area. The European Semester and the Macroeconomic Imbalance Procedure were introduced to solve this problem by providing a framework to coordinate national economic policies and detect the accumulation of imbalances. However, so far, this framework has been used with limited success. Lastly, no supranational fiscal elements were considered to provide an aggregate fiscal stance at the union level as a counterpart to the single monetary policy, which has made it difficult to achieve the adequate policy mix.

All this generated a broad consensus on the need for a thorough reform of the euro area's fiscal governance framework, which led the European Commission to present a legislative initiative in April 2023 and the ECOFIN to reach an agreement on a new set of fiscal rules in December 2023. This reform seeks to simplify the fiscal governance framework, improve the involvement of national governments and ensure a differentiated treatment of national fiscal efforts according to each country's level of debt and fiscal risks. Its main goal is to ensure that the public debt/GDP ratio of each country follows a downward trajectory or remains at prudent levels, maintaining 60% of GDP as a reference value, as well as the 3% rule for budget deficits. To this end, member countries will be asked to present medium-term fiscal-structural plans ensuring that debt ratios remain below 60% of GDP over the medium term or, in the case of high debt levels, are gradually brought onto a sustainable path. Crucially, these medium-term plans will incorporate commitments to public investment and reforms aimed at improving growth potential and long-term fiscal sustainability, or addressing the EU's common strategic priorities, which could justify a more gradual fiscal adjustment.

The new agreement contains some important new elements. In particular, it recognises that structural reforms, growth-enhancing public investment, and fiscal sustainability mutually

⁴ See Alloza et al (2021).

reinforce each other and must be promoted through an integrated approach. Second, it anchors debt sustainability at the centre of the debate. Third, the use of an expenditure rule as an intermediate target is crucial since this is the one variable under the control of the fiscal authorities, allowing the extraordinary revenues that sometimes materialise, for reasons beyond their control, to be saved. Fourth, the focus on debt sustainability also makes it possible to include previously missing elements (specifically the macroeconomic environment, in addition to potential growth and the natural interest rate) that could encourage structural reforms. Finally, it allows for greater cross-country heterogeneity in the targets and the design of fiscal consolidation. At the same time, the new framework imposes a number of minimum consolidation requirements (safeguards) for countries with debt or deficits above the reference values, and seeks to avoid the backloading of the fiscal effort by ensuring a linear adjustment pace over the medium-term plan.

The success of the new framework will depend on its effective implementation by countries. In this regard, it will be crucial that the new rules are able to avoid the traditional pro-cyclical behaviour of public finances and, in particular, encourage a sufficient degree of fiscal consolidation during economic expansions. A key aspect is how the deadlines for the necessary fiscal adjustment will be calibrated. In particular, the credibility of the fiscal framework could be endangered if the deadlines are too lengthy or if exceptions from the no-backloading safeguard are frequently sought. The structural reforms and investment commitments that would justify the use of an extended period of adjustment should be strictly analysed *ex ante* and closely monitored *ex post*. Greater compliance will also require a more automatic application of the rules.

In any event, as I have already mentioned, it is very important that this new framework should result in a restrictive fiscal policy in the euro area in 2024, without delay, to be followed by a gradual fiscal adjustment in subsequent years, in particular in countries with significant fiscal imbalances, such as Spain. Effective and transparent implementation of the new framework is now of the essence.

Finally, it is worth mentioning some elements that have not been included in the reform, but which are, in my view, important to ensure a proper functioning of the policy mix in the euro area.

First, it is crucial to recognise that the choice of the optimal fiscal policy stance by each country does not necessarily guarantee an optimal stance at the aggregate level. To achieve this objective, it would be essential to have a central fiscal capacity, with an adequate size and sufficient and reliable funding, to allow for effective macroeconomic stabilisation at the union level.

Second, the fiscal efforts needed to meet upcoming public investment needs are considerable and will be very difficult to achieve with the fiscal space available at the national level in many member countries, even if the reform of the Stability and Growth Pact attempts to preserve national public investment. Consequently, a common, permanent, European financing instrument needs to be introduced, applying the lessons learned from the NGEU initiative. This instrument would allow the financing of large-scale projects that provide public goods at a European level, while avoiding any excessive or uneven impact on national public finances and disruptions of the single market.

But these efforts will also require a significant contribution from private investment, for which purpose it is crucial to first reduce the fragmentation of capital markets and improve the limited degree of risk-sharing that still characterises the monetary union. Thus, to ensure that the governance framework mitigates cross-border fragmentation it is crucial to complete the banking union and to press ahead with the capital markets union. A fundamental element of this framework would be the issuance of benchmark pan-European safe assets. This would allow the prices of equity and fixed-income instruments across the euro area to reflect their fundamental risk more clearly and thus limit flight-to-quality capital flows towards core countries. This would be especially relevant in times of market tensions and would help to ensure a smooth transmission of monetary policy in a context of market fragmentation. In this regard, the experience with the EU bond issues used to finance the SURE and NGEU programs can serve as a prototype for this European safe asset. Although relatively small in size, they have been successful in terms of market appetite and have helped the majority of member countries reduce costs thanks to joint financing.⁵

3 Interaction with Financial Stability

Interactions between monetary and macroprudential policies are potentially significant. In particular, given that their transmission channels are similar, by pursuing their own objectives such policies can have an impact on each other's goals. For instance, monetary policy has the capacity to alter the course of the credit cycle, indirectly increasing or reducing systemic financial vulnerabilities. In turn, macroprudential policy can modify banks' incentives to provide credit to the real economy, indirectly affecting demand and inflation.

One key conclusion from the ECB's 2021 monetary policy strategy review was that financial stability is a pre-condition for price stability and vice versa.⁶ Ensuring confidence in the value of our currency (i. e. guaranteeing price stability) is necessary for a stable and well-functioning financial system. An environment with stable prices also provides better conditions, particularly in terms of bank profitability, for the pre-emptive build-up of macroprudential buffers, while at the same time meaning they are less likely to be needed. Likewise, financial stability is required for price stability, given the role of financial intermediaries in the transmission of monetary policy and the potential for deflationary pressures caused by severe financial distress. Thus, a sound financial system is key to enabling monetary authorities to pursue price stability.

Furthermore, the ECB monetary policy strategy review identified macroprudential policy, together with microprudential supervision, as the first line of defence against financial instability. The goal of macroprudential policy is specifically to improve the resilience of the financial system against the materialisation of systemic risk, to curb the build-up of systemic risk and, ultimately, to smooth financial cycles. The macroprudential toolkit has been designed to meet these objectives, particularly in the form of capital buffer requirements and borrower-based measures in the banking sector, which can be defined with sufficient granularity to address specific risks and vulnerabilities. This is especially relevant in the euro

⁵ Burriel, Kataryniuk and Pérez (2022).

⁶ See section 3.3 of ECB (2021a). For a more detailed discussion of the role of financial stability considerations in the ECB's monetary policy, see ECB (2021b).

area, where financial cycles are not fully synchronised across countries and financial imbalances can emerge at the national level.

The pursuit of price stability through monetary policy, and of financial stability through macroprudential policy, are very often complementary.⁷ In normal times, the separation principle, whereby monetary and macroprudential policies can each focus on their own objectives, generally holds true. If, for example, financial stability and inflationary risks emerge in parallel, a tightening of monetary policy can supplement the activation of macroprudential tools. The aggregate negative effect of monetary policy tightening on demand through the various channels (income, wealth, etc.) will generally reinforce the incentives of economic agents to deleverage and reduce risk-taking, beyond the initial effects through the banking channel.

In stressed conditions in which a deflationary demand shock is present, financial stability risks might also materialise in a manner that does not create a trade-off with monetary policy. A case in point is the monetary policy response during the COVID-19 pandemic, when financial stability and deflationary risks were high. In this context, the pandemic emergency purchase programme (PEPP) was the right tool both to reach an expansionary monetary policy stance in the face of a deflationary shock and, and, in parallel, to provide liquidity, avoid fragmentation and guarantee financial stability. The transmission of monetary policy was also aided by the release of certain bank capital buffers by a number of macroprudential authorities.

But even if liquidity crises occur in high-inflation periods, tools can be skilfully designed to ensure separation. To this end, the tools must be targeted and temporary, and the underlying financial stability challenge must truly be one of liquidity rather than solvency. For instance, the intervention by the Bank of England in Autumn 2022 to stabilise the gilt market can be regarded as one instance in which monetary policy had to be applied to directly address a financial stability problem.

The announcement of the transmission protection mechanism (TPI) in July 2022 also took place in an environment of mounting inflationary pressures and a tightening monetary policy stance. At a time of rapidly rising interest rates, heightened concerns over sovereign debt dynamics led to sharp increases in sovereign bond yields that could have triggered severe financial distress and market fragmentation. Thanks to the decisive action of the ECB, the markets settled, helping to ensure the smooth functioning of financial markets needed to transmit the tighter monetary policy stance. Since its announcement, sovereign bond yields have broadly stabilised, despite the unprecedented sharp increase in monetary policy rates. The TPI has thus been crucial in allowing for a forceful monetary policy response to tackle inflation.

⁷ The interplay between monetary and macroprudential policies can vary depending on different structural and cyclical factors in the banking sector. For example, some research shows that the transmission of monetary policy tends to be slower in better capitalised banks, which react more calmly to increases in interest rates in terms of the amount and quality of the credit they provide. However, this apparent dampening effect of higher bank capital on the effects of monetary policy can be overcome by adjusting monetary policy to a level that is suitably restrictive, given the capitalisation of the banking sector. A better capitalised banking system is also less sensitive to interest rate cuts and, over the long run, the associated probability of systemic crises will be smaller. Thus, a better capitalised banking system can reduce the amplitude of financial cycles in line with one of the goals of macroprudential policy, without necessarily worsening the inflation-growth trade-off.

But there may be cases in which there is a trade-off between the two objectives. For instance, when solvency issues emerge in the banking sector in a high inflation environment. These solvency issues can be mitigated by a proper supervision and resolution framework and by the action of fiscal authorities. Nonetheless, monetary policy will have to react taking into account that a financial crisis is likely to lead to the emergence of disinflationary forces that should ease this trade-off between monetary and financial stability over time, albeit at a potentially high cost in terms of output loss. There is indeed a consensus on the need for aggressive monetary actions to restore financial stability and the functioning of the monetary policy transmission mechanism in the midst of a financial crisis, with possible distortions to *ex ante* incentives to be addressed by an effective macro- and micro-prudential framework.

Another instance in which such a trade-off may emerge is when a build-up of systemic risk occurs in a situation of subdued inflation. In such a context, a prolonged loosening of monetary policy could exacerbate financial stability risks, and the activation of macroprudential policy tools may not be enough to prevent the emergence of systemic risk. The prolonged low interest rate environment prevalent before the pandemic is often cited as a case in point, since it created incentives to engage in risk-taking, which may have become excessive and may in some cases have led to the build-up of systemic risk. In a low interest rate environment, the low returns on safe assets push banks into searching for yield and reinforce these risk-taking dynamics. In such a context, monetary policy could be designed to minimise the potential negative impact on financial stability. For example, the ECB's targeted longer-term refinancing operations (TLTROs), which set a lending target that excludes housing loans, were designed specifically so as not to contribute to the formation of real estate bubbles.

Financial stability in the ECB's monetary policy strategy

Given all of the above considerations, in its monetary strategy the ECB explicitly decided to take financial stability considerations into account in monetary policy deliberations. Under this framework, any monetary policy response to financial stability concerns will depend on prevailing circumstances and will be guided by the implications for price stability. In this regard, the medium-term horizon of the ECB's monetary policy objective could be used to cater for financial stability considerations. These considerations can also be part of the regular proportionality assessment that is made on any monetary policy decision taken by the ECB.

In practical terms, this means that an integrated framework of economic and monetary and financial analysis must be used to measure the evolution of financial vulnerabilities and their impact on output and inflation, including in the long-run, and the impact of macroprudential measures to mitigate financial vulnerabilities and, therefore, their implications for output and inflation.

Taking financial stability considerations into account in our monetary policy deliberations does not mean that monetary policy will consist of systematic policies of "leaning against the wind" (whereby monetary policy is systematically tightened when systemic risk builds up) or of "cleaning" (whereby monetary policy is systematically loosened when systemic risk materialises). It is rather a flexible approach.

Reinforcing the role of macroprudential policy as a stabilising tool

In terms of macroprudential policy, a more active stance to foster the accumulation of sufficient releasable macroprudential buffers in non-crisis periods could make it more consistent with monetary policy and reduce the need to resort to monetary policy measures during crises.

Thus, macroprudential policy can be seen as a complement to monetary and fiscal policies with regard to their macroeconomic stability objective.⁸ Moreover, the role of macroprudential policies in stabilising the economy may be particularly relevant in the euro area, where a common monetary policy is shared by countries whose economic and financial cycles are still heterogeneous and where, in the absence of a common permanent fiscal capacity, national fiscal policy is left alone to counteract the negative consequences of idiosyncratic shocks or common shocks that generate heterogeneous effects across member countries.

Looking ahead, this potential stabilisation role of macroprudential policy could be particularly relevant given the high levels of structural public deficit and debt in many countries, which have significantly reduced the space available for fiscal policy to play a stabilising role, as noted in section 2.

The outbreak of the COVID-19 pandemic, when fiscal, monetary and macroprudential policies acted jointly to support the real economy, illustrates this role. However, macroprudential policy was constrained by the fact that the accumulated macroprudential buffers existing at its onset were small or non-existent in many jurisdictions, given the pre-crisis context in which there were very few signs of any build-up of financial systemic risk.

A bigger role for macroprudential policy to effectively address adverse shocks that occur independently of the financial cycle (such as the COVID crisis) will therefore require expanding the policy space generated by macroprudential buffers. And, given the signs of a positive correlation between lending and the capital headroom of banks (i.e. the surplus of a bank's capital over and above all of the minimum regulatory requirements and buffers), there may be a case for increasing releasable buffers, particularly the countercyclical capital buffer (CCyB), and for taking a more flexible approach to this tool, considering its potential for helping other policies in macroeconomic stabilisation.

In this regard, an increasing number of jurisdictions have chosen to implement positive cycle-neutral CCyB rates. Under this approach, authorities aim for a positive CCyB rate when risks are judged to be neither subdued nor elevated. Authorities that have introduced positive cycle-neutral CCyB rates have found it helpful for banks in their jurisdictions to have capital buffers in place that can be released in the event of sudden shocks, including those unrelated to the credit cycle, such as the impact of the COVID-19 pandemic. This approach can help address concerns that banks in some jurisdictions may be reluctant to cross regulatory buffer thresholds in times of stress, but may be more willing to use their capital to support lending when buffers are explicitly released by authorities. In any event a decision on introducing a positive neutral CCyB should weigh up the different pros and cons of such an approach.

⁸ See Hernández de Cos (2023b).

Regarding the costs and benefits, the estimations of the elasticity of credit and GDP to changes in capital requirements during recessions and expansions could be useful. In the Spanish case, for example, the available evidence shows that an increase in an expansionary period of 1 percentage point (pp) in the capital-to-risk-weighted assets ratio, consistent with a tightening of credit requirements, would not have negative effects on total credit to the corporate sector, while it would lead to a reduction of 0.5 pp in credit to households and of 0.2 pp in GDP.⁹ By contrast, the same amount of capital being released during a crisis would lead to an increase of up to 3.5 pp in credit to households and the corporate sector and of 1.6 pp in GDP.¹⁰

This evidence supports the existence of an asymmetry between the costs of activating the CCyB in normal times, even in the absence of significant systemic imbalances, and the benefits of its release during downturns. The gradual activation of the buffer at an early stage makes capital planning easier for banks when conditions are good, reducing potential negative credit supply effects of the activation. It allows also to take into account uncertainty in the identification of risks, which can result in a delay and a more rapid activation later in the cycle thus reducing the inaction bias.

But the analysis of the pros and cons is more complex. In this regard, a key problem for a macroprudential policymaker is to decide whether we are in “normal times” at a particular time. In this regard, authorities can employ a broad range of indicators, including the credit-to-GDP gap and other financial and macroeconomic metrics, such as the output gap.

Furthermore, it is also necessary to assess the appropriate neutral level of the CCyB in normal times. This may depend on:

- The (cyclical and structural) characteristics of the domestic economy that can affect the estimated intensity of systemic crises.
- The desired level of macroeconomic stabilisation capacity afforded to national macroprudential policies in light of the available buffers in other policy instruments.
- The (cyclical and structural) characteristics of the banking system, such as the intensity of competition and sectoral composition of assets and liabilities, which can affect the capacity to withstand potential shocks, under both baseline and adverse scenarios.
- Other factors, such as the degree of domestic and cross-border interconnectedness of the financial system and the overall economy, also need to be considered. These factors have a significant impact on the vulnerability of the economy to internal and external shocks.

Authorities that have moved to a positive neutral CCyB have used different approach to calibrate the positive neutral rate, including analyses of historical losses, stress test models, assessments of the impact of buffer releases during the pandemic and expert judgement¹¹.

⁹ Bro to and Galán (2021).

¹⁰ These results are consistent with previous empirical estimations studying the impact of dynamic provisions during the global financial crisis, which besides the benefits in terms of provision of credit, suggest that a 1 pp increase in capital in good times would increase firm employment by 6 pp and the probability of survival of firms by 1 pp. See Jiménez, Ongena, Peydró and Saurina (2017).

¹¹ See Behn, Pereira, Pirovano and Testa (2023),

All these considerations, which may vary among jurisdictions and therefore could condition the desirability of moving to a positive neutral CCyB, justify the position of the BCBS, which supports and sees the benefits of the authorities' ability to set a positive cycle-neutral CCyB rate voluntarily.

Finally, the effective transmission of both monetary and macroprudential policies can be significantly enhanced by deepening integration within the EU banking union. Specifically, the completion of the banking union with the creation of a fully mutualised European Deposit Insurance Scheme (EDIS), together with the development of a European public budget with the capacity to accommodate asymmetric shocks across regions and countries, should in future allow for more macroprudential policy responsibilities to be assumed at the European level.

4 Monetary policy and structural policies

Structural and (monetary and fiscal) stabilisation policies are closely interrelated.¹² In particular, structural reforms have the capacity to increase potential output growth, while, in parallel, making the economy more resilient to shocks, which could be particularly key for the smooth functioning of monetary policy.

A flexible and more resilient economy is more likely to adjust to shocks through changes in prices, which are also expected to fade quickly, keeping inflation expectations anchored and thus facilitating the work of monetary policy. In a context of flexible markets and a high degree of competition, monetary policy actions will also be more effective, feeding through the economy more quickly. And these benefits are particularly relevant in a monetary union, since structural reforms can reduce cross-country economic divergence, making a single monetary policy more appropriate for all countries. By making national economies more flexible, structural reforms can also reduce the likelihood of macroeconomic imbalances, such as financial or current account imbalances, which is also key to the correct functioning of the euro area.

From the perspective of monetary policy, structural reforms that foster potential output would also involve the output gap (i.e. the gap between actual and potential output) closing at a higher level of output, at which point monetary policy would have to return to a neutral stance. This would make debt levels (both public and private) more sustainable at any given level of interest rate, ensuring that governments, households and firms have less need to make adjustments. It would also increase the equilibrium real interest rate, meaning that monetary policy is less likely to be constrained by the effective lower bound for interest rates and, by extension, reducing the likelihood of having to resort to unconventional policies.

Some of the interactions between monetary policy and structural reforms can be illustrated through the concept of the *natural interest rate*, or r^* , which is the short-term real interest rate at which investment fully absorbs saving at full employment.¹³ Alternatively, it can be defined as the real rate at which output equals its natural level and inflation is stabilized at its target. Therefore, it provides a benchmark for measuring the stance of monetary policy,

¹² Draghi (2015).

¹³ Rachel and Summers (2019).

with policy being expansionary (contractionary) if the short-term real interest rate lies below (above) the natural rate.¹⁴

This rate cannot be observed directly and can only be estimated, with some degree of uncertainty, using econometric techniques. According to the available estimates, the natural interest rate has been in progressive decline over recent decades in advanced economies, at least until the COVID-19 pandemic.¹⁵ Since then, estimates of r^* point to a certain increase, albeit still to relatively low levels.¹⁶

A natural rate standing at low levels, poses notable challenges for monetary policy. To achieve sufficiently low real interest rates, a combination of sufficiently high inflation expectations and low nominal interest rates is needed. The monetary authorities may find it hard to strike this balance in certain situations, such as a recession or a low inflation environment, as was the case during the years prior to the pandemic. This is because of the existence of a lower bound on nominal interest rates. The recent worldwide surge in inflation has eased these limitations somewhat, as monetary policy has raised nominal interest rates sharply and inflation expectations have increased. But the resulting uptick in real interest rates remains modest compared with the late 1970s.

Empirical studies attribute this secular drop in r^* mainly to the decline in trend productivity growth and demographic developments, but also find a role for other factors which affect the balance between the supply of savings and the demand for investment, such as fiscal policy or capital flows.¹⁷

Going forward, new factors (e.g. the green transition or a slowdown in the globalisation process) are likely to also play a role, since they have the potential to reduce the long-run level of output and income and hence the supply of savings, but also to mobilise a larger amount of investment.

In this context, structural reform policies that can raise potential output growth and the equilibrium real interest rates may play a crucial role in providing monetary policy with more room for manoeuvre.

The channels through which these factors affect r^* and the structural reforms that may help to reverse their trends are discussed in more detail below.

Productivity growth:

Since the seminal work by Solow, macroeconomic theory has taught us that the real interest rate increases with aggregate productivity growth. The idea is that the rate of interest paid by a borrower must compensate the lender for forgoing the alternative use of those funds. Higher productivity growth increases the marginal product of capital and drives up savers' opportunity cost, so a higher interest rate is required in order to induce them to lend.¹⁸

¹⁴ See Galesi, Nuño and Thomas (2017) or IMF (2023) for a thorough discussion of the concept, its determinants and its implications for monetary policy.

¹⁵ See the pre-pandemic evidence provided by Holston, Laubach and Williams (2017).

¹⁶ Armstrong and Wu (2023).

¹⁷ See IMF, 2023; Cesa-Bianchi, Harrison and Sajedi, 2023; Mankiw, 2022.

¹⁸ See Mankiw, 2022; Solow, 1956.

Productivity growth has been falling globally since the 1960s, while remaining relatively stagnant over the decade prior to the COVID-19 pandemic, explaining a large share of the decline in r^* over this period.

In addition to the general policy advice to increase the share of public and private spending on education and R&D, there is a wide range of structural reforms that may help improve this margin. A large number of regulations, as well as various regulatory thresholds in labour markets and taxation, associated with arbitrary levels of company size that negatively influence business growth, reduce aggregate productivity by distorting the allocation of capital among firms.¹⁹ In particular, regulations may unduly prevent capital from flowing to other more productive firms. There is also scope to review and improve the design of tax incentives and direct subsidies for R&D and innovation projects.²⁰ Furthermore, the uncertainty of the innovation process, together with the significant information asymmetries between innovator and financier, complicates the financing of this type of activity. In this respect, reducing the dependence on bank credit would help, as would, promoting pan-European initiatives to finance large investments in this area. With respect to investment in human capital, it is essential to adapt the educational and vocational training system to the new technological and demographic environment to ensure the complementarity of human capital with the profound structural changes under way.²¹

Finally, and even though much uncertainty surrounds the future course of artificial intelligence and big data, a potential surge in their use could reverse this global trend in productivity growth, leading to more demand for funding and, thus, a higher r^* .

Demographic trends:

The world is undergoing a dramatic demographic transition that can affect r^* through various channels.^{22 23} In most advanced economies people tend to live longer. At the same time, population growth rates are decreasing at a fast pace, and in some cases (e.g. Japan) they are becoming negative. The combination of these two forces entails a notable increase in the dependency ratio (the ratio of retirees to workers).

Demographic transition is a complex secular phenomenon which requires action on many fronts. First, measures aimed at fostering greater job stability, such as reducing the unemployment rate and temporary employment, or facilitating parental tasks (e.g. by subsidising nurseries) may help to stop birth rates from falling. Second, health is a key determinant of labour supply, especially at ages close to retirement. Given its importance, it is crucial to evaluate the efficiency of public health expenditure. In a similar vein, it is essential to strengthen training policies that allow these older workers to remain up to date and keep up with the development of new technologies. Both policies would alleviate the

¹⁹ Mora-Sanguinetti and Pérez-Valls (2020), Almunia and López-Rodríguez (2018) and Almunia, Jimeno, López-Rodríguez and Petit (2024).

²⁰ Almunia and López-Rodríguez (2024).

²¹ Auciello, Lacuesta and Segú (2021).

²² Carvalho, Ferrero and Nechio, 2023.

²³ Goodhart and Pradhan (2020) argue that the demographic reversal and the very expansionary monetary and fiscal policies put in place to combat COVID-19 will lead – sooner rather than later – to less saving and more investment, which will push the natural rate up.

future increase in the capital-labour ratio by increasing the return on capital. The latter would also occur with a migration policy that achieves the goal of addressing the observed and expected shortage of labour in some productive sectors. Finally, it is crucial to evaluate and guarantee the sustainability of public pension systems to address the future challenges posed by population ageing, since it is key to reducing the need to accumulate savings for precautionary reasons and, thus, to mitigating further reductions in r^* .

Global savings:

Global drivers have also been a factor behind the drop in the natural rate. As global capital markets opened up and fast-growing emerging market economies entered the scene in the 1980s and 1990s, external factors increasingly shaped long-term trends in interest rates in advanced economies. Two counteracting mechanisms are at work. On the one hand, high-growth emerging markets provide alternative investment opportunities, resulting in capital outflows and raising the natural rate in advanced economies.²⁴ On the other, the supply of safe and liquid assets, primarily US government bonds, has not kept pace with fast-rising demand, especially from emerging markets. Their ensuing scarcity may have driven up their price and lowered their return.²⁵ However, these forces seem to have had broadly offsetting effects on capital flows and a moderate impact on natural rates over the past half-century.

From the perspective of the euro area, there are two ways to contribute to the expansion of the supply of (euro-denominated) safe assets. Euro area countries with a less sound fiscal position should focus on reducing their idiosyncratic sovereign risk, in particular by implementing credible medium-term fiscal consolidation plans (see Section 2 above). However, this strategy may not be enough to ensure a sufficiently stable and ample supply of safe assets. Its success depends on the capacity of the less safe countries to become safer. This has become even harder after the general increase in debt levels as a consequence of the fiscal policy response to the COVID-19 pandemic and the recent inflation surge. Moreover, this strategy will not suffice to disentangle financing conditions for firms and households in a given country from the status of its sovereign. This is why we need a pan-European safe asset.

As noted in Section 2, two recent examples of this are the common EU debt issuances used to finance the SURE and NGEU programmes in the context of the pandemic. These euro-denominated safe assets can buttress financial stability and European integration. Moreover, as common EU debt is considered safe and, therefore, attracts favourable financing conditions, it boosts the provision of public goods related to the green and digital transitions and European defence policy, which are likely to involve large-scale investments.

However, these financial integration trends observed over the last few decades may be threatened by the increase in geopolitical tensions and the potential emergence of international trade and financial fragmentation. The effect of financial fragmentation on real interest rates will depend on countries' initial external position – deficit countries will find it more difficult to finance their current accounts, while surplus countries will repatriate excess savings – with an uncertain overall effect on the natural rate.

²⁴ Obstfeld (2021).

²⁵ Caballero, Farhi, and Gourinchas (2016, 2017) and Krishnamurthy and Vissing-Jorgensen (2012).

Climate change:

Finally, climate change may also affect the natural interest rate. More generally, it may potentially affect monetary policy through its effect on the level and volatility of inflation, and on the financial institutions that transmit monetary policy.

First, climate change and transition policies to mitigate it may affect r^* , but the overall effect is uncertain. The materialisation of physical risks would push the level of r^* down, as a result of capital destruction,²⁶ lower labour productivity and greater mortality, as well as a possible increase in precautionary saving. However, increased investment for reconstruction or to mitigate the impact of climate change would increase the demand for loanable funds, pushing r^* up.

Second, according to existing empirical evidence, physical risks linked to climate change tend to be inflationary, especially in developing economies, given the weight of food in the consumption basket.²⁷ Furthermore, inflation volatility and heterogeneity may increase as a result of more frequent and severe climatic shocks.²⁸ In addition, carbon pricing, the main climate-change mitigation policy, increases the relative prices of greenhouse gas-intensive goods and services and thus temporarily affects the level of inflation and its volatility,²⁹ especially under emission trading systems.³⁰

Finally, physical and transition risks could lead to credit losses that would deteriorate credit institutions' balance sheets, affecting the bank-based transmission of monetary policy decisions. These adverse effects would be even greater if there were also sudden increases in credit risk premia, which, among other implications, would negatively affect the collateral provided by institutions in monetary policy operations.

All in all, these factors justify the need to put more emphasis on structural policies in the coming years to facilitate resilience and increase the growth potential of our economies.³¹ Indeed, in a context in which several supply factors might head in the direction of reducing the growth capacity, aggregate demand policies could result in higher inflation. Instead, structural reforms and investments to enhance the euro area's supply capacity can help reduce price pressures in the medium term, while supporting the green and digital transitions and allowing our economies to better face the challenges posed by the ageing of our societies and potential deglobalisation trends.

²⁶ Extreme temperatures may have important effects on mortality, health and, in turn, labour supply and productivity. Day, Fankhauser, Kingsmill, Costa and Mavrogianni (2019) find substantial reductions in productivity for temperature increases above certain thresholds.

²⁷ Parker, 2018; Faccia, Parker and Stracca, 2021.

²⁸ Cicarelli, Kuik and Martínez Hernández, 2023; Kotz, Kuik, Lis and Nickel, 2023.

²⁹ McKibbin, Konradt and Weder di Mauro (2021), Drudi et al. (2021), Känzig (2021) and Moessner (2022).

³⁰ Santabábara and Suárez-Varela, 2022.

³¹ Carstens (2022).

5 Conclusions

Economic policies are more effective when they are complementary and create room for manoeuvre for one another. This is even more important in a monetary union like the euro area, where a common inflation goal is shared by countries with heterogeneous public debt levels, fiscal space and financial cycles.

To achieve the optimal policy mix at the current juncture, the ECB's efforts to bring down inflation would greatly benefit from a fiscal policy with a medium-term orientation. This would not only make further interest rate increases less likely, but also help boost credibility, keep inflation expectations anchored and alleviate concerns about debt sustainability. In turn, macroprudential policies that support a resilient banking sector can create room for the transmission of monetary policy and smooth the impact of the tightening cycle on financial stability and on the supply of credit to the real economy. The policy mix would also greatly benefit from an ambitious plan of structural reforms to strengthen the supply side of the economy.

From a European perspective, it is also necessary to make headway in the completion of the EMU on several fronts. First, supranational fiscal elements would help provide an aggregate fiscal stance at the euro area level as a counterpart to the single monetary policy. Second, deepening the banking union could significantly enhance the effective transmission of both monetary and macroprudential policy. Third, the completion of the capital markets union would help to mitigate cross-border fragmentation. A fundamental element of this framework would be the issuance of benchmark pan-European safe assets.

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