

THE ECB'S NEW MONETARY POLICY STRATEGY

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1. Introduction

On 8th July 2021, European Central Bank (ECB) President Lagarde announced the new monetary policy strategy of the ECB. This followed a thorough review of the experience with the existing strategy, which dated from 2003, and of the profound structural changes that had taken place since then, including the declining trend in equilibrium real interest rates. The review took the ECB's mandate conferred by the Treaty on the Functioning of the European Union as given. The primary objective of the ECB is to maintain price stability in the euro area. Under the Treaty, without prejudice to the price stability objective, the ECB shall also support the general economic policies in the EU with a view of contributing to the achievement of the Union's objectives such as balanced economic growth, full employment and social progress, and a high level of protection and improvement of the quality of the environment. The ECB shall also contribute to the smooth conduct of policies pursued by the competent authorities relating to the stability of the financial system.

The main elements of the new strategy are summarized in twelve points in the ECB's monetary policy strategy statement and explained in an overview article published in the ECB's Economic Bulletin.¹ This article is based on the overview article and the background work collected in 18 ECB

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¹ See

https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_statement.en.html

and

https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_overview.en.html. See also Lagarde (2021) and Lane (2022).

Occasional Papers.² In Section 2, we expand on the factors behind the quantitative formulation of the price stability objective as a symmetric 2 percent inflation target. In Section 3, we explain how other considerations, such as balanced growth, employment, financial stability and environmental sustainability that are relevant to the pursuit of price stability, are taken into account.

2. The price stability objective

Until recently, the ECB defined price stability as “a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2 percent”. Within that definition of price stability, the ECB aimed at an inflation rate of “below, but close to 2 percent” (ECB, 2003). While this double-key formulation of the price stability objective was effective in maintaining long-term inflation expectations close to 2 percent in the inflationary environment of the first decade of EMU, the ambiguity around the precise inflation aim and its perceived asymmetric nature made it less effective when disinflationary forces prevailed following the Global Financial Crisis (GFC) in 2008–09 and the euro area sovereign debt crisis in 2010–12. Indeed, HICP inflation averaged 1 percent from 2013 to 2019, substantially below 2 percent.³ In the new ECB monetary policy strategy, the double-key formulation is therefore replaced by a simpler and explicitly symmetric 2 percent inflation target (ECB, 2021), to be achieved over the medium term. The review concluded that the headline HICP remains the appropriate index for quantifying the price stability objective for the euro area based on the HICP’s timeliness, reliability, comparability across time and euro area countries, and credibility.⁴

² These Occasional Papers were published on the ECB’s website on 21 September 2021: https://www.ecb.europa.eu/pub/html/strategy_review.en.html. Thirteen papers are based on the reports of dedicated Eurosystem Work streams, while the remaining five papers summarise other staff input feeding into the Governing Council’s deliberations.

³ See Koester et al. (2021) for an analysis of the drivers behind the low inflation environment.

⁴ In order to enhance further the representativeness of the HICP and its cross-country comparability, the Governing Council of the ECB decided to recommend a roadmap

With the adoption of a 2 percent target, the ECB joins many central banks in advanced economies that flexibly target an inflation rate of 2 percent, such as the US Federal Reserve Board, the Bank of Japan and the Bank of England. In the following section, we explain, first, why the ECB decided on a target level of 2 percent, and second, why it took the form of a symmetric point target, rather than a range.

2.1 The target level of 2 percent

The ECB considers that price stability is best maintained by aiming for a 2 percent inflation target over the medium term. Four main reasons were given for having a small inflation buffer above zero. First, the target level of 2 percent provides an adequate safety margin to guard against the risk of deflation and protect the effectiveness of monetary policy in responding to disinflationary shocks in an environment where a low equilibrium real interest rate has limited conventional interest rate policy space. Second, an inflation buffer greases the wheels of the labour market and reduces the risk of macroeconomic downturns being predominantly reflected in an excessive and persistent rise in unemployment in the presence of downward nominal rigidities. Third, and related, an inflation buffer allows for a smoother adjustment of macroeconomic imbalances across euro area countries, avoiding inflation in individual countries falling into negative territory. Finally, such a buffer allows for the presence of measurement bias in the HICP, with a positive measurement bias implying that the “true” rate of inflation is lower than the measured level. In what follows we expand mainly on the first and second reasons.⁵

The level of the equilibrium real interest rate, the level of the inflation target and the effective lower bound (ELB) on nominal interest rates jointly determine the available interest rate policy space. Since the previous review of the ECB strategy in 2003, this monetary policy space has shrunk due to the gradual fall in the natural real interest rate, frequently called r^* . This has

to include owner-occupied housing in the HICP. Currently the HICP only partially includes the housing service costs of homeowners associated with owning, maintaining and living in their own home. During the transition period the main reference index for monetary policy remains the current HICP.

⁵ See also Gaspar and Smets (2022).

been a global phenomenon driven by a combination of factors, such as lower population and productivity growth, rising inequality, and higher demand for safe assets following the GFC. Brand et al. (2018) survey a range of estimates of r^* for the euro area from 1999 to 2017. While the estimated level of r^* differs across methodologies, all estimates point to a significant decline over this period from a range of 2 to 3 percent to one of 0 to -2 percent.

A lower natural rate implies that the ELB is more likely to keep the central bank from lowering real rates to offset disinflationary forces. On the basis of stochastic simulations using a variety of macroeconomic models for the euro area, the report of the Work stream on the price stability objective (2021, p. 36) shows that, for an inflation target of 2 percent, the time spent at the effective lower bound increases from 10 percent to more than 30 percent as the equilibrium real interest rate falls from 2 to 0 percent. The likelihood of a binding ELB has also increased due to changes in estimated macro volatility. In 2003, the variance of the demand and supply shocks affecting the economy was assumed to be relatively low, consistent with the experience in the Great Moderation period. Following the GFC, the volatility of the economy has increased. This higher volatility may be related to the fall in the equilibrium real interest rate. Adam (2020) finds that with a low r^* the sensitivity of the business cycle to asset price bubbles increases, which in turn increases the volatility of the economy, the time spent at the ELB, and the optimal inflation target. A higher inflation target reduces the relevance of this constraint as, for example, also shown in Andrade et al. (2019), who find that the optimal inflation target increases by 0.9 pp for each 1 pp fall in r^* . An additional factor that may have contributed to an increase in the optimal inflation target is increased inequality. It not only may have contributed to the fall in the equilibrium real rate (Mian et al., 2021), but can also make the economy more sensitive to the real interest rate increases that occur at the ELB, as low-income households typically are more affected and have a larger propensity to consume than richer ones (Fernández-Villaverde et al., 2020).

Without a change in the conventional interest rate reaction function and the use of non-standard monetary policy measures such as forward guidance or asset purchases, a 2 percent inflation target is likely not enough to avoid

a disinflationary bias when the equilibrium rate is zero. Depending on the model used, this disinflation bias can be sizeable, even with a 2 percent inflation target (Work stream on the price stability objective, 2021, p. 37). Forward guidance and other non-standard policy measures such as asset purchases and targeted long-term lending operations can, however, help to overcome this bias, as, for example, shown in Coenen et al. (2020, 2021b), Gerke et al. (2021) and Mazelis et al. (2021).

The ECB's new monetary policy strategy consequently takes into account the implications of the effective lower bound for its reaction function (ECB, 2021). In particular, when the economy is close to the lower bound, the commitment to the symmetry of its 2 percent inflation target requires especially forceful and persistent monetary policy measures to avoid negative deviations of inflation from the target becoming entrenched. Such forceful action includes the use of large-scale asset purchases or targeted long-term refinancing operations, which are now an integral part of the central bank's instrument set and were implemented in response to the pandemic crisis. In addition, closer to the effective lower bound, more persistent use of such instruments may be necessary, which could lead to a transitory period in which inflation is moderately above target. The Fed implemented the more persistent use of its instruments through an asymmetric average inflation targeting framework. By contrast, the ECB implemented the need for persistence and patience through a strengthened threshold-based interest rate forward guidance.⁶

The ECB also acknowledges that fiscal and other policies are important for macroeconomic stabilization, especially in the proximity of the effective

⁶ See the ECB Governing Council's monetary policy decisions published on 22 July 2021 (<https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.mp210722~48dc3b436b.en.html>). The forward guidance adopted on that date stated that "in support of its symmetric two per cent inflation target and in line with its monetary policy strategy, the Governing Council expects the key ECB interest rates to remain at their present or lower levels until it sees inflation reaching two per cent well ahead of the end of its projection horizon and durably for the rest of the projection horizon, and it judges that realised progress in underlying inflation is sufficiently advanced to be consistent with inflation stabilising at two per cent over the medium term. This may also imply a transitory period in which inflation is moderately above target."

lower bound. By stabilizing the economy in large recessions, while ensuring debt sustainability, fiscal policy also makes its best contribution to price stability and amplifies the effectiveness of monetary policy. At the same time, expansionary fiscal policy is particularly effective when interest rates are near the lower bound.⁷

A second important reason for having a positive inflation buffer is the importance of downward nominal wage rigidity (DNWR), following the work of Akerlof et al. (1996). DNWR leads to a non-vertical long-run Phillips curve and introduces an exploitable monetary policy tradeoff at low levels of inflation. Since 2001, considerable empirical evidence has been collected on the relevance of price and wage rigidities in the euro area and beyond. Consolo et al. (2021) review the accumulated evidence on price and wage rigidities in the euro area since the early 2000s: they find evidence of both price and wage rigidities in the euro area. Price flexibility may have increased during the EMU period, in particular in the more traded non-energy industrial goods category, and there is little evidence of pervasive downward price rigidity. By itself, this would suggest that a zero inflation target is optimal to avoid misallocations due to inefficient relative price changes when inflation is positive.⁸ In contrast, evidence from the ECB's Wage Dynamics Network (WDN) surveys suggest that the length of wage contracts may have increased, and more importantly, that nominal base wages are very sticky downward. According to the WDN surveys, nominal base wage cuts are very rare among euro area firms. Remarkably, this was the case even during the period 2010–13 despite the length and severity of the sovereign debt crisis (see Consolo et al., 2021, Section 2.2). Downward nominal rigidity during the crisis is further suggested by the fact that the percentage of firms freezing base wages increased dramatically, reaching its peak during 2008–09, before declining over the period 2010–13. The WDN

⁷ See the report of the Work stream on monetary-fiscal policy interactions (2021).

⁸ Note, however, that studies combining the frequency of price changes with the fact that goods prices tend to decrease over their life cycle suggest that a substantial positive inflation target would still be needed to minimize misallocations over time. Adam et al. (2021) estimate that the positive inflation buffer needed to account for these effects alone ranges from 1.1 to 1.7 percent in the euro area, while stressing that other considerations not accounted for in the analysis may further push up optimal inflation targets.

surveys also find that the wages of new hires are closely related to those of incumbents, suggesting that wages do play an allocative role (see, e.g., Galuscak et al., 2012).⁹

DNWR provides a rationale for a positive inflation buffer as it “greases the wheels” of the labour market. New Keynesian DSGE models with exogenous growth that embed DNWR find that the optimal inflation rate is positive, although it is usually below 2 percent. Specifically, the calibrated DSGE model developed in Consolo et al. (2021) provides a point estimate for the optimal inflation rate of about 1.2 percent with a confidence band ranging from 0.2 to 1.6 percent. A conclusion, at first sight surprising, of some recent research is that the introduction of DNWR in a model with the ELB reduces the optimal inflation rate (Billi and Galí, 2020 and Amano and Gnocchi, 2021). The mechanism is that wage rigidities limit the frequency and the persistence of being stuck at the ELB by keeping marginal costs relatively higher. In the quantitative analysis of Consolo et al. (2021), discussed earlier, the introduction of the ELB lowers the optimal inflation rate from 1.2 to 0.3 percent. These results are, however, overturned in DSGE models that feature equilibrium unemployment and endogenous growth, as in Abritti et al. (2021). Such models support a symmetric inflation buffer around 2 percent (see also Work stream on the price stability objective, 2021, p. 34). From a welfare perspective, the optimal rate of inflation balances welfare costs of price inflation distortions and hysteresis effects on output and unemployment. Overall, recent empirical studies and investigations with quantitative models have come to a robust conclusion that downward nominal wage rigidity leads to a positive average optimal inflation rate, even in the presence of the ELB, reinforcing the logic that has led the ECB to choose a 2 percent target.

A third and related reason for having a 2 percent target is the finding that over the EMU period inflation differentials across countries have typically

⁹ For the US economy, using high quality administrative data, Grisgby et al. (2021) find that downward wage rigidity is more pervasive than previously measured, with nominal base wages declining only for 2 percent of job stayers. These researchers also find that the flexibility of base wages of new hires is similar to that of incumbent workers.

been within a 2 percentage point interval around the average inflation rate.¹⁰ In a monetary union, such temporary inflation differentials facilitate necessary changes in competitiveness in the wake of asymmetric shocks. Maintaining inflation at 2 percent will then imply that deflation in specific countries, which may be costly in view of the DNWR discussed above, is typically avoided. Conversely, for those countries that have inflation rates that are higher than the average euro area level, it will reduce the probability that the inflation rate is higher than 4 percent, a level at which arguably the welfare costs of inflation would start rising. Finally, maintaining an inflation target similar to those of the most important trading partners of the euro area should contribute to the stability of the nominal exchange rate.

2.2 A symmetric point target

The new strategy implements the price stability objective in terms of a symmetric point target for inflation to be achieved over the medium term. This provides a clear anchor for medium-term inflation expectations, which is essential for maintaining price stability. Symmetry means that the Governing Council of the ECB considers negative and positive deviations of inflation from the target to be equally undesirable. It makes clear that 2 percent is not a ceiling and ensures that sustained deviations of inflation from the target in either direction are counteracted by a forceful monetary policy response, thereby firmly anchoring longer-term inflation expectations at the point target.

In principle, the inflation objective could be formulated using a point, a range or a combination of both formats.¹¹ The international experience is diverse. The central banks that have point target objectives include the US Federal Reserve System, the Bank of Japan, and Norges Bank. They all define their objective in terms of a single number: 2 percent. The Bank of England is classified as having a point target, although the formulation of its objective is more complex and can be described as “a point with triggers”. Other central banks have opted for a range without indicating a desired aim

¹⁰ See Consolo et al. (2021).

¹¹ This section is based on Chapter 3.1. of the report of the Work stream on the price stability objective (2021).

or focal point within it. The most notable examples are the Reserve Bank of Australia, which aims for an inflation range that is “2–3 percent on average, over time”, and the Bank of Israel, with an annual target range set at 1–3 percent. Finally, a number of central banks have chosen a mix, namely a point target with bands to underline the varying short-term inflation realisations (Bank of Canada, Česká národní banka and Sveriges Riksbank) or a range with a well-defined focal midpoint within it (Reserve Bank of New Zealand). This review of the international experience suggests that large economies tend to have focal points (Federal Reserve, Bank of Japan), while small open economies with more volatile exchange rates tend to add uncertainty bands or ranges.

Point targets are justified on the grounds of their simplicity. Their main advantage is that, by providing a single focal point, they are simpler to communicate to the public and easier for the public to remember; they provide a more precise benchmark for the setting of prices and wages, helping agents to form expectations and coordinate their actions. Point targets with a band around them are conceptually close, as they also provide an explicit focal point to guide expectations. The central bank will have to work toward bringing inflation back to the specified focal point, even if this is equipped with a band. Bands signal transparently that any inflation target is pursued with the flexibility required for absorbing temporary shocks. They are also a way for the central bank to be held accountable to its stakeholders in real time. With a target range, there is no requirement for the central bank to aim for a specific focal point, but any level of inflation within the range is in principle consistent with price stability. Inflation ranges and bands around a point target might be employed to serve different purposes. Chung et al. (2020) distinguish between three concepts: uncertainty, indifference, and operational ranges. Uncertainty ranges or bands are aimed at helping to communicate that the central bank has imprecise and uncertain control over the inflation process. Formulating the objective with a range is a way to convey information about the span of admissible inflation variability. They illustrate the impossibility of fine-tuning inflation to a specific number over the short term. Indifference ranges indicate that the central bank will not respond to deviations of inflation within that range. Such a range would be justified in a case where moving the interest rates in

response to small deviations of inflation would entail significant costs. Operational bands or ranges allow a central bank with a focal point to signal that, under certain conditions, it would prefer inflation to be away from its objective for a time, for example to allow for inflation overshooting after a period of undershooting (Galati et al., 2020). In contrast to uncertainty bands, operational bands would define the scope for intentional deviations of inflation from, for instance, the midpoint of the range.

All central banks that use ranges or bands interpret them as uncertainty ranges. They are a way of communicating the extent to which central banks are able and willing to control inflation and what they expect the volatility of inflation to be under normal conditions. A symmetric band around the focal target could also reinforce the symmetric nature of the reaction function toward the inflation objective.

There are three criteria that may be applied when choosing among different formulations of targets: (i) their effectiveness in anchoring inflation expectations, (ii) their ability to stabilise the economy and (iii) the flexibility they provide to the monetary policy framework. Regarding the first criterion, the limited empirical evidence suggests that advanced and emerging economy central banks with a band or a range have a marginally weaker commitment to the midpoint over the longer run, while still making inflation expectations less responsive to incoming news. However, focal points with or without bands do not seem to yield significantly different results in terms of anchoring inflation expectations (e.g., Cecioni et al., 2021). Regarding the second criterion, in simulation studies, indifference or inaction bands typically are costly in terms of stabilization of inflation and output compared to a point target, in particular when the ELB is frequently binding (Coenen et al. 2021a, Cecioni et al. 2021, and Haavio and Laine, 2021). Less forceful action within the range comes at the cost of needing to be more aggressive to shocks that push inflation outside the range. In this regard, Le Bihan et al. (2021) provide formal evidence that ranges and bands should not be synonymous with “inaction”: if the reaction to inflation within the bands is non-existent or too weak, then there may be “sunspots” (for example, increases in expected inflation for no fundamental reason) triggering an arbitrary degree of volatility. Finally, regarding the third criterion, uncertainty ranges or bands allow monetary policy to be more flexible in a

context of limited controllability of near-term inflation, uncertainty about inflation dynamics, and other considerations such as full employment or financial stability that may affect the speed of convergence to the inflation target. Such flexibility can, however, also be gained by the medium-term orientation of monetary policy. This allows the policymaker to tailor the response to the nature and size of the shocks and to look through those that are large but transitory.

Overall, the Governing Council of the ECB judged that a simple point target serves best at anchoring medium-term inflation expectations and thereby stabilizing inflation and the economy, particularly after having undershot its stated inflation objective for some time. At the same time, the confirmation of the medium-term orientation of monetary policy was seen as important to account for uncertainties in the inflation process and the transmission mechanism and to provide policy flexibility catering to other considerations such as full employment and financial stability in the pursuit of price stability. We turn to these other considerations in the next section.

3. Other considerations relevant for price stability

The Treaty requires the ECB, without prejudice to price stability, to support the general economic policies in the European Union with a view of contributing to the achievement of the Union's objectives, which include balanced growth, full employment, and environmental sustainability.¹² The ECB shall also contribute to the smooth conduct of policies pursued by the competent authorities relating to the stability of the financial system. When taking these other considerations into account, the ECB bases its assessment in particular on their relevance for the ECB's primary objective of price stability and the ECB's ability to make a contribution to the attainment of these objectives. Often contributing to those objectives will help maintain price stability over the medium term. In other cases, when adjusting its monetary policy instruments, the ECB will choose the configuration that best supports the general economic policies of the Union related to growth

¹² See Ioannidis et al. (2021) for a discussion of legal considerations relevant for the ECB's strategy review.

and employment, which protects financial stability and helps to mitigate the impact of climate change, provided that two configurations of the instrument set are equally conducive to price stability. In this section, we consider the objectives of balanced growth and full employment, financial stability, and environmental sustainability in turn.

3.1 Balanced growth and full employment

To a large extent, balanced economic growth, full employment, and price stability are mutually consistent objectives. If longer-term inflation expectations are anchored, inflation will be at the target level if economic activity and employment are equal to their potential levels. In many circumstances, inflation and employment move together, and pursuing price stability is conducive to supporting economic activity and employment. For example, this will be the case in response to recessionary demand shocks that create an output gap and unemployment, and through the Phillips curve relationship put downward pressure on price and wage inflation. Easing the monetary policy stance in response to such shocks will contribute to a recovery in economic activity, a decline in unemployment and a return of inflation to the inflation target. As low-skilled workers and poorer households are typically more negatively affected by downturns in economic activity, such policy response also helps in avoiding a rise in inequality (Work stream on employment, 2021). Similarly, in response to positive supply developments that increase the potential and productivity of the economy and put downward pressure on inflation, an easing of monetary policy can ensure that inflation stabilizes around its target, demand catches up with increased supply and short-term unemployment effects are reversed. In this case, structural policies that enhance the level of economic activity are complementary with monetary policy that maintains price stability.

However, there are also shocks, typically cost-push shocks, that drive a wedge between output, employment and inflation. The simple textbook New Keynesian framework (Woodford, 2003, and Galí, 2008) implies a trade-off between stabilising inflation and the output gap (employment gap) in the case of cost-push shocks, notably price and wage mark-up shocks. For such shocks, it is optimal for the central bank to tolerate some fluctuations of inflation around its inflation target in order to reduce fluctuations of the

output gap (employment gap). Extensions of the simple New Keynesian framework, accounting, for example, for real wage rigidities, reinforce this conclusion (Blanchard and Galí, 2010).

This is where the medium-term orientation of monetary policy comes in handy. In the presence of material tradeoffs, a medium-term policy horizon which caters for employment without compromising the primacy of price stability can lead to more favourable outcomes in terms of welfare than a short-term horizon focused on strict inflation stabilisation (Work stream on employment, 2021, box 6). Based on these considerations, the ECB's new strategy confirms the medium-term orientation of monetary policy, which has served the Governing Council well in responding flexibly to economic shocks since the start of EMU. The medium-term orientation provides the policy flexibility to assess the origin of shocks and look through temporary shocks that may dissipate on their own accord without endangering medium-term price stability, thus avoiding unnecessary volatility in activity and unemployment.

3.2 Financial stability

Financial stability considerations have grown significantly in importance since the start of EMU, especially in the period starting with the Great Financial Crisis. While the comprehensive analysis of a wide range of economic and financial variables has always been part of the ECB's strategy, the assessment of financial conditions has become increasingly important over time. In line with this evolution, the ECB's new strategy fully internalises that financial stability is a precondition for price stability and vice versa. Price stability contributes to financial stability by eliminating inflation-related distortions in financial markets, by containing the propagation of shocks via well-anchored inflation expectations and by mitigating procyclicality in the economy. Financial stability, in turn, is a prerequisite for price stability in that it supports the smooth transmission of monetary policy through the financial sector. Under stressed financial market conditions, monetary policy measures aimed at maintaining price stability typically help to restore financial stability by addressing

impairments to the monetary policy transmission mechanism and averting negative macro-financial feedback effects and debt-deflation phenomena.

Macroprudential policy, along with microprudential supervision, is the first line of defence against the build-up of financial imbalances. Both dimensions have been strengthened in the euro area after the Great Financial Crisis, with the establishment of the European System Risk Board in 2010 and the Single Supervisory Mechanism in 2014. By building resilience in the financial system and reducing the likelihood of financial crises, macroprudential policy can strengthen the role of monetary policy in ensuring price stability. At the same time, the interactions and spillovers between macroprudential policy and monetary policy can at times give rise to tradeoffs (Laeven et al., 2022, and Van der Groot, 2021). The scope for interaction between these two policy domains is large, for three reasons. First, by each pursuing their own objectives they can each have an impact—intended or unintended—on the other’s policy target; second, they work through common transmission channels, thereby affecting the same outcome variables; and third, some of the instruments used by both policies are very similar (Smets, 2014). While there is by now clear evidence that macroprudential policies help in containing financial stability risks (see, e.g., Ampudia et al., 2021), it remains the case that the macroprudential policy framework in the euro area may still not be fully effective (Work stream on macroprudential policy, monetary policy and financial stability, 2021). Reasons include that the framework does not sufficiently encompass nonbank financial intermediaries, which make up an increasingly large share of the financial system, but also political-economy considerations resulting in an inaction bias.¹³

Against this background, and in view of the price stability risks generated by financial crises, there is thus a clear conceptual case for the ECB to take financial stability considerations into account in its monetary policy deliberations. At the same time, it is important to avoid the misperception that monetary policy is responsible for guaranteeing financial stability. Any monetary policy reaction to financial stability concerns will depend on

¹³ For an analysis of the euro area non-bank financial sector, see the report of the Work stream on non-bank financial intermediation (2021).

prevailing circumstances and the implications for medium-term price stability. One option to take financial stability considerations into account is to exploit the flexible length of the medium-term horizon over which price stability is to be achieved, provided this does not result in a de-anchoring of inflation expectations.

At a practical level, the new ECB strategy recognises the interdependencies between the economic analysis and the monetary and financial analysis. The pervasive role of macro-financial linkages requires that these interdependencies are fully incorporated in the ECB's analytical framework (Holm-Hadulla et al., 2021). In December 2021, the ECB's monetary policy statement reported for the first time on the interrelation between monetary policy and financial stability. The statement stressed that an accommodative monetary policy underpinned growth, which supported the balance sheets of companies and financial institutions, as well as preventing risks of market fragmentation. At the same time, it noted that the impact of accommodative monetary policy on property markets and financial markets warranted close monitoring as a number of medium-term vulnerabilities had intensified. Such assessments will from now on feature twice a year in the ECB's monetary policy statement.

3.3 Environmental sustainability

Addressing climate change and the carbon transition is a major global challenge and a policy priority for the European Union. In December 2019, the European Commission presented the so-called "European Green Deal" with the political ambition to make the European Union climate neutral by 2050. In July 2021, it followed up with a package of proposals in the areas of climate, energy, land use, transport and taxation policies aimed at reducing net greenhouse gas emissions by at least 55 percent by 2030, compared to 1990 levels. While governments have the primary responsibility and tools for addressing climate change, the ECB's mandate requires the ECB to assess the impact of climate change and to further incorporate climate considerations into its policy framework, since physical and transition risks related to climate change have implications for both

price and financial stability, and affect the value and the risk profile of the assets held on the Eurosystem's balance sheet.

Climate change affects macroeconomic outcomes, financial markets and institutions primarily through two channels: physical risk and transition risk (Work stream on climate change, 2021). The transition toward a low-carbon economy could potentially cause large swings in asset prices and generate substantial volumes of stranded assets. Results from the ECB's economy-wide climate stress test conducted in 2021 show that there are clear benefits in acting early to ensure an orderly transition (Alogoskoufis et al., 2021). In order to better understand the implications of climate change and the carbon transition for macroeconomic and inflation dynamics, the Eurosystem plans to enhance its analytical capacity in macroeconomic modelling (Work stream on Eurosystem modelling, 2021, chapter 4.4) and to enhance statistics by developing new indicators covering green financial instruments and the carbon footprint of financial institutions, as well as their exposures to climate-related physical risks.

In addition, the ECB's Governing Council in July 2021 decided to include climate change considerations in monetary policy operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases.¹⁴ As part of a comprehensive action plan, the ECB will: (i) introduce disclosure requirements for private sector assets as a new eligibility criterion or as a basis for a differentiated treatment for collateral and asset purchases; (ii) among others, will start conducting climate stress tests of the Eurosystem balance sheet; (iii) consider relevant climate change risks when reviewing the valuation and risk control frameworks for assets mobilised as collateral by counterparties for Eurosystem credit operations; and (iv) adjust the framework guiding the allocation of corporate bond purchases to incorporate climate change criteria, which will include the alignment of issuers with, at a minimum, EU legislation implementing the Paris agreement through climate change-related metrics or commitments of the issuers to such goals.

¹⁴ See the ECB press release of 8 July 2021 ([link](#)) and the related annex providing a detailed roadmap of climate change-related actions ([link](#)).

4. Conclusions

The ECB's new monetary policy strategy internalises the lessons learned from the institution's first twenty years of operation and provides a robust framework for facing upcoming developments and challenges. Inevitably, some of these developments and challenges will require new analysis and possibly adjustments to the framework along the way. In a rapidly changing world, the ECB's monetary policy strategy will need to be reviewed and adapted more regularly than in the past. While such changes are difficult to predict, some areas where developments are foreseeable in the coming years and that could alter the economic and financial landscape include possible advances toward a digital currency, improvements in the EMU architecture, further structural changes in the euro area financial system, further major economic or financial shocks to the euro area and/or global economies, as well as structural changes that affect the inflation process, the natural interest rate or the growth potential. Against this background, the ECB's Governing Council intends to assess periodically the appropriateness of its monetary policy strategy, with the next assessment expected in 2025.

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