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The new monetary policy strategy of the European Central Bank – continuity and change

Abstract

The ECB's original monetary policy strategy was adopted in 1998 and updated in 2003. Since then, there have been several important developments and shocks experienced by the European economy (financial and economic crises, periods of very low inflation and unconventional monetary policy, COVID-19 pandemic, etc.). Moreover, in the meantime, climate change has become an issue of growing importance in the EU. All those issues have prompted and influenced a review of the ECB's strategy. The new strategy was published in July 2021.

This article focuses on several new elements of the ECB's strategy. The first one is the issue of the costs of living in private homes (owner-occupied housing – OOH) and their planned integration into the coverage of the ECB's inflation index (HICP). This is aimed at improving cross-country comparability as well as the representativeness of the HICP, as OOH costs represent an important share of household consumption. The second element is climate change and its economic consequences, which are to be taken into account when making monetary policy decisions by the Governing Council. Different views, pros and cons, advantages and disadvantages, etc., have been presented with regard to the above issues. The last part of the article provides some concluding remarks and recommendations.

Key words: central bank, strategy, monetary policy, inflation, owner-occupied housing / housing costs, climate change, stress test

JEL codes: E52, E58, Q54

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The article expresses only the personal views of the author.

Nowa strategia polityki pieniężnej Europejskiego Banku Centralnego – kontynuacja i zmiana

Streszczenie

Pierwotna strategia polityki pieniężnej EBC została przyjęta w 1998 r., a następnie zaktualizowana w 2003 r. Od tamtego czasu nastąpiło wiele istotnych zdarzeń, których doświadczył europejski system ekonomiczno-społeczny (kryzysy finansowe i gospodarcze, okresy bardzo niskiej inflacji i niekonwencjonalnej polityki pieniężnej, pandemia COVID-19 itp.). Ponadto, sprawą o rosnącym znaczeniu w UE stały się zmiany klimatyczne. Wszystko to skłoniło do przeglądu i weryfikacji strategii EBC. Nowa strategia została opublikowana w lipcu 2021 r.

Artykuł koncentruje się na nowych elementach strategii EBC. Pierwszym z nich jest kwestia kosztów mieszkaniowych (ang. *owner-occupied housing*) i ich planowanego włączenia do zakresu wskaźnika inflacji stosowanego przez EBC (HICP). Ma to poprawić transgraniczną porównywalność wskaźnika HICP, a także jego reprezentatywność, gdyż koszty mieszkaniowe stanowią istotną część konsumpcji gospodarstw domowych. Drugim elementem są zmiany klimatyczne i ich konsekwencje gospodarcze, które należy brać pod uwagę w polityce pieniężnej EBC. W artykule przedstawiono różne poglądy, argumenty za i przeciw, zalety i wady itp. Ostatnia część artykułu zawiera wnioski i rekomendacje.

Słowa kluczowe: bank centralny, strategia, polityka pieniężna, inflacja, koszty mieszkaniowe, zmiany klimatyczne, test warunków skrajnych

Introduction

The original monetary policy strategy of the European Central Bank (ECB) was adopted in 1998 (just before the introduction of the euro in 1999) and was reviewed in 2003. Since then, the European economy and its environment have changed significantly, prompting the ECB to revise its strategy. In the meantime, climate change and environmental challenges have become issues of growing importance in the European Union (EU).

The central bank's strategy should be relatively stable, but at the same time, it should take into account the changing economic environment to avoid the risk of obsolescence. Therefore, updating the strategy should incorporate elements of both continuity and change. The purpose of this article is to discuss some of the new elements of the ECB's strategy and make their preliminary assessment. The elements of continuity will be presented very briefly as a background for further discussion.

1. Reasons and results of the review of the ECB's monetary policy strategy

The original ECB's monetary policy strategy consisted of the following elements¹:

- The price stability objective and its “double-key formulation” including both the definition (a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) of less than 2%) and the indication of desirable inflation level in the euro area (“below, but close to, 2%”);
- A medium-term orientation of monetary policy;
- The risks to price stability based on the two-pillar (economic/monetary) analysis approach – subject to cross-checking before formulating a unified overall judgement.

At that time, in the early 2000s, the macroeconomic environment in Europe, and in the world, looked substantially different than today. From the ECB's point of view, the most important issue was the fact that several structural developments (such as productivity growth, demand for safe and liquid assets, demographic factors etc.) had lowered the equilibrium real interest rate, i.e. the interest rate at which the economy is operating at its potential (Bundesbank 2017 and 2021; Brand et al. 2018; ECB 2021c).

Moreover, there have been several other developments and shocks experienced by the European economy and financial markets, such as the global financial crisis, the sovereign debt crisis in the euro area, persistently low inflation since 2013 (below the ECB's inflation objective), deployment of unconventional monetary policy measures since 2014 (in order to counter disinflationary pressures), etc. It is also argued that it was clear by the end of 2014 that the euro area had switched over to the so-called second regime, where negative demand shocks came to dominate, and in such circumstances, the 2% ceiling *de facto* ceased to bind and act as a stabilising factor (Rostagno et al. 2019). Last but not least, the COVID-19 pandemic has proved to be a major economic shock to the global economy due to interrupted supply chains (initially, the pandemic put downward pressure on inflation, while recently – strong upward pressure).

The above developments, combined with some other global phenomena (globalisation, digitalisation, climate change, evolving financial structures, communication landscape etc.), have required adequate policy responses. Therefore, in early 2020, the ECB Governing Council decided to launch a review of the ECB's monetary policy strategy. The discussion on the strategy benefited from the broad public consultation process that included several stakeholders and was organized in various forms: listening events (both at the ECB and national central banks), online portals (surveys for the general public), specialist conferences (experts of the

¹ For more details on the original ECB strategy, see e.g. Duisenberg 1998; ECB 1998, 2000 and 2001; Szeląg 2003.

financial sector, academic and research institutions), dialogue with the European Parliament (hearings at the ECON committee²) etc. Moreover, the discussion on the strategy also benefited from the reports prepared by several work streams³. To some extent, the above consultation process was similar to the one conducted by the Federal Reserve in 2019–2020.

Following the completion of the consultation process, the new monetary policy strategy of the ECB was adopted and published on 8 July 2021. In comparison with the previous strategy of 2003, some elements have been maintained while others modified to some extent. The new ECB's strategy is based on the following elements (ECB 2021c):

- **Measurement of the price index:** The headline HICP remains the proper index to measure euro area inflation⁴, but it could be further improved by including some new elements in its scope (particularly owner-occupied housing).
- **Quantitative and symmetric inflation target:** A specific inflation target of 2% has been adopted⁵. The previous approach, i.e. double-key formulation, has been abandoned. It was perceived as asymmetric and led to some ambiguity about the actual level of the inflation objective (the level of 2% was interpreted as a ceiling). An inflation target must be unambiguous and this may be achieved if a symmetric target is applied.
- **Medium-term orientation of monetary policy:** This approach has proved its effectiveness and it will be maintained. It ensures flexibility in responding to economic shocks, eliminates temporary or one-off events, takes into account lags of monetary policy transmission, etc.
- **Proportionality assessment of monetary policy decisions:** As before, it will be based on two separate pillars (economic analysis / monetary analysis), but the scope of the second pillar will be broader (monetary and financial analysis) and there will be no longer cross-checking between both pillars.

² Committee on Economic and Monetary Affairs at the European Parliament.

³ Work stream on climate change, Work stream on digitalisation, Work stream on employment, Work stream on Eurosystem modelling, Work stream on globalisation, Work stream on inflation expectations, Work stream on inflation measurement, Work stream on macroprudential policy, monetary policy and financial stability, Work stream on monetary-fiscal policy interactions, Work stream on monetary policy communications, Work stream on non-bank financial intermediation, Work stream on productivity, innovation and technological progress, Work stream on the price stability objective.

⁴ The assessment of the appropriateness of the HICP was based on four criteria: timeliness, reliability (e.g. infrequent revisions), comparability (over time and across countries), and credibility. The same criteria were also applied in the previous strategy review conducted in 2003 (Issing 2003; ECB 2021c). See also the criteria used to adopt the original strategy of 1998 (EMI 1997a and 1997b; Szélag 2003).

⁵ It is also argued that the inflation objective should be slightly higher than 2% and the ECB should announce periodic reviews of its inflation objective (Reichlin et al. 2021). After the global financial crisis, some economists suggested that the inflation target should be raised to 4% (Blanchard et al. 2010), and recently, similar ideas have become popular again keeping in mind soaring inflation and current inflation expectations.

Apart from the above-mentioned issue of owner-occupied housing, another novelty is the decision of the Governing Council to involve the ECB in matters relating to climate change and its impact on the economy and monetary policy. Moreover, an important new element of the monetary policy strategy is also its periodical review (the next review is expected in 2025).

2. Improving the measurement of inflation – housing costs

As mentioned in the previous section, one of the conclusions from the review of the ECB's monetary policy strategy is that the headline HICP remains the proper index to measure euro area inflation for monetary policy purposes. At the same time, however, it has been concluded that the HICP should be enhanced by including some new components in this index – particularly, owner-occupied housing (OOH) since the costs of living in private homes represent an important element of household consumption (ECB 2021c and 2021e).

As a matter of fact, it should be noted that the OOH issue, which is currently under consideration, has a fairly long history. In 1997, when the HICP was published for the first time, there were also the first attempts to construct an OOH index based on the net acquisition approach (see Table 1), but some serious problems were identified as to the practical implementation of such an index in the Member States⁶. In 2000, Eurostat launched a pilot program aimed at encouraging the Member States to explore the feasibility of compiling such an index. In 2013 and 2016, the EU institutions adopted two regulations in this regard – one of them provided a legal basis for the compilation of a quarterly OOH index based on the net acquisition approach (Commission 2013), and the other one introduced requirements to compile and disseminate this index (European Parliament and Council 2016). The latter regulation also required the Commission to prepare, by the end of 2018, a report assessing the suitability of the OOH price index for integration into the coverage of the HICP (Commission 2018).

In the context of the planned integration of housing costs into the HICP, two aspects should be mentioned at the outset. First, legal requirements as to the HICP. According to the above-mentioned regulation of 2016, the HICP “*shall be based on the price changes and weights of products included in the household final monetary consumption expenditure*”, i.e. it should be focused on monetary transactions and consumption purposes. Moreover, the same regulation obliges Member States to provide Eurostat with the HICP and its respective sub-indices at monthly intervals.

⁶ The main problems behind this exclusion were the lack of a harmonised EU methodology and the lack of relevant data in all Member States. Housing costs are included in the national CPI in Germany, but they are not included in other countries, e.g. in Belgium, France, Italy and Spain. Germany has always advocated for harmonising the OOH measurement and integrating it into the HICP (Bundesbank 2021). On the other hand, it is argued that housing costs are included in the inflation rates of most developed countries in the world (Gros and Shamsfakhr 2021).

Second, the definition of housing costs and their significance. These costs are associated with various aspects of living in one's own home (purchasing, owning, maintaining, etc.). At the moment, the HICP includes only some price changes related to living expenses (costs of maintenance, minor repairs, and other running costs for both tenants and owners⁷), while in general housing costs represent a substantial share (about 13%) of households' consumption in the euro area (ECB 2021e). However, the opinions are divided as to the significance of housing costs. Some authors believe that such costs are very helpful and important in predicting consumers' inflation perceptions (Döhning and Mordonu 2007; Abildgren and Kuchler 2019; Zekaite 2020), while some others perceived housing costs as rather irrelevant in this regard (Aucremanne et al. 2007; Del Giovane et al. 2009). There are also views that the inclusion of housing costs into the HICP may have a different impact on individual euro area countries (Dany-Knedlik and Papadia 2021).

There are several approaches to the measurement of housing costs (OOH) in a consumer price index (see Table 1). The most important ones are:

- **the net acquisition approach,**
- **the use approach** (covering the user and rental equivalence approaches),
- **the payment approach.**

As argued by Eurostat, all these approaches are conceptually sound and based on economic theories. All of them have advantages and disadvantages depending on the formula of the index and user needs as to inflation measurement. Nevertheless, keeping in mind the key features of the net acquisition approach (expenditures associated with actual monetary transactions, no need for imputed prices, etc.), this approach has been regarded as the most relevant one for the HICP purposes (Eurostat 2017).

According to the European Commission, there are two key criteria for assessing the suitability of the OOH price index for inclusion into the HICP:

- conceptual – the need to cover actual monetary transactions and the issue of including assets into the scope of the HICP (dwelling structures, land⁸);
- practical – the feasibility of producing an index according to HICP standards of frequency and timeliness (at monthly intervals).

⁷ According to the ECB, the average weight of rents paid by tenants to owners amounts to about 7% in the euro area (and about 10% in the Netherlands and Germany).

⁸ Currently, the OOH price index takes into account the full transaction price related to purchasing dwellings, i.e. the dwelling structure and the underlying land. In theory, a potential solution for the OOH price index could be excluding the land component from the index weights and prices, but in practice it would be very difficult (Eurostat 2017; Commission 2018).

Table 1. Key approaches to the measurement of OOH costs

Primary purpose of the price index (CPI)	OOH price definition underlying the approach	Items included in the price indices	Comments
Acquisition			
Measure the change through time of the total expenditure associated with all monetary transactions made by households to acquire goods and services for consumption purposes	Acquisition cost of a dwelling made by a household for own occupancy	<ul style="list-style-type: none"> • Cash spent on the purchase of dwellings • Local authority and other fees related to purchase or construction • Major repairs and maintenance • Insurance connected with dwellings 	Approach more in accordance with the definition of an 'inflation index'. No need for imputed prices.
Use			
Measure the change through time of the total value of all goods and services consumed by households	The opportunity cost associated with the use of a dwelling by a household for its own purpose	<ul style="list-style-type: none"> • Repairs and maintenance • Insurance • Local authority and other fees related to purchase or construction • Mortgage interest payments • Depreciation of dwellings • The opportunity cost of alternative investments 	Approach more in accordance with the Cost-Of-Living Index (COLI) framework. Need for imputed prices.
Payment			
Measure the change through time of the total payments made for all goods and services by households	Cash outlays associated with the owner-occupied dwelling	<ul style="list-style-type: none"> • Cash spent on the purchase of dwellings • Local authority and other fees related to purchase or construction • Insurance connected with dwellings • Repairs and maintenance • Mortgage interest payments • Mortgage repayments 	Approach more appropriate for the evaluation of money income (as well as for COLI). No need for imputed prices.

Source: Own elaboration based on Eurostat (2017).

As to the first criterion, it is partially satisfied by the OOH price index, i.e. the index is focused on actual monetary transactions, but the inclusion of the cost of purchasing dwellings (both structures and underlying land) into the scope of HICP is quite controversial. Opinions on whether the cost of the structure and the cost of the land should be regarded as consumption expenditures (and thus included in a consumer price index) or as assets (and thus excluded from its coverage) are divided even in official national statistics. As far as the second criterion is concerned, the HICP is compiled every month and released 15 days after the end of the reference month, while the OOH price index is produced every quarter and released 100 days after the end of the reference quarter. All in all, the Commission assessed that the OOH price index was not suitable for integration into the scope of the HICP (Commission 2018).

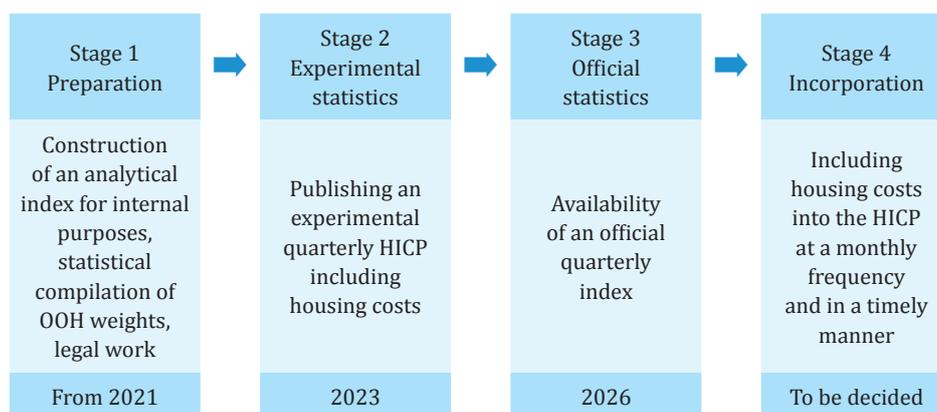
Being aware of the above opinion of the European Commission, and considering that the quality of HICP as an inflation measure has been continuously improved by Eurostat together with statistical offices of the EU Member States⁹, the ECB is of the view that the HICP needs to be further enhanced as there is no convincing evidence that the HICP measurement bias has been noticeably reduced since the last strategy review (ECB 2021e). In the Governing Council's opinion, this enhancement could be achieved by the inclusion of housing costs into the scope of the HICP, which would result in an augmented index (HICP-H). It would improve both representativeness of the HICP and its cross-country comparability (as the significance of OOH costs varies significantly across countries in the euro area).

As regards the new formula of the price index (HICP-H), two main options have been explored in the report prepared during the recent review of the ECB's monetary policy strategy, i.e. the NA approach (net acquisition) and the RE approach (rental equivalence). The former is based on actual transaction prices for the purchase of new dwellings while the latter uses imputed housing costs based on rents of other comparable dwellings. Having analysed the pros and cons for both options, the authors of the report concluded that the NA approach could be a good basis for including housing costs into the HICP – keeping in mind that Eurostat already publishes quarterly OOH price indices (OOHPs) based on this approach (for euro area countries). This could be a starting point for further work towards the above HICP-H (the HICP index augmented with Eurostat's OOHPs). However, it should also be noted that OOHPs do not match the quality of HICP in terms of frequency (as they are quarterly rather than monthly) and timeliness (much bigger publication lags in the case of OOHPs) (ECB 2021e). On the other hand, there are opinions that the rental equivalence approach – similar to the one used in the United States – would be better than the net acquisition approach (Whelan 2021).

⁹ The quality of HICP has been improved in several ways: representativeness of actual changes in prices, comparability across time and countries, publication in a timelier manner, data availability, etc. (ECB 2021e).

The Governing Council has recommended a four-stage roadmap to include housing costs into the HICP (see Figure 1). The final stage is expected to allow moving to a modified HICP (HICP-H) as the main index for monetary policy in the euro area. In the meantime, during the transition period, the quarterly OOH index would be treated as an important supplementary measure for assessing the impact of housing costs on inflation (ECB 2021c). It is expected that the OOH component would account for about 10% of the modified HICP (Bundesbank 2021). There are also opinions that the actions envisaged in the ECB's timetable should be accelerated due to the strong inflationary pressure resulting from the pandemic (Bonatti and Fracasso 2021).

Figure 1. Roadmap for including housing costs (OOH) into the HICP



Source: Own elaboration based on ECB (2021c).

3. Central banks and economic impact of climate change

A comparative analysis of the new ECB monetary policy strategy with the previous strategies of 1998 and 2003 shows that the changes introduced are mainly of an evolutionary rather than revolutionary nature. What is a significant novelty is the inclusion of climate issues in the monetary policy decision-making process (within the scope of the ECB's mandate¹⁰). Such an approach is in line with the EU climate policy but it is sometimes considered controversial.

¹⁰ Article 127 of the Treaty on the Functioning of the European Union (on the ESCB's primary objective of maintaining price stability) refers to Article 3 of the Treaty on European Union that indicates key objectives of the EU – one of them is “a high level of protection and improvement of the quality of the environment”. Therefore, contributing to this objective may be regarded as one of the secondary objectives of the ECB/ESCB (without prejudice to the primary objective).

As mentioned before, the discussion on the new monetary policy strategy of the ECB benefited from the reports prepared by several work streams. One of them was the Work stream on climate change. In their report (ECB 2021f), the experts of that work stream provided several arguments – both in favour and against the involvement of central banks in dealing with climate-related issues. As argued in this report, climate change may affect the overall macroeconomic situation (economic activity, inflation, financial markets, etc.) mainly through two channels:

- **physical risk** – from gradual global warming, extreme weather events, natural or environmental disasters (hurricanes, floods, heatwaves, droughts, etc.);
- **transition risk** – from reducing emissions and gradually increasing carbon prices (the latter may incentivise investment in low-carbon technologies).

As regards the impact of climate change on the EU economy, there is a high degree of uncertainty as well as diverse views and results of analyzes in this regard. Both empirical and theoretical studies suggest that economic losses stemming from climate change will increase over time (notably, in the long term) and they will be unevenly distributed across the population, regions, industries, etc. Theoretical studies on the physical effects of climate change indicate stronger negative effects on global GDP, but their results vary significantly depending on the scenario – long-term losses in global GDP are estimated between 1% and 62% (Dietz and Stern 2015; Nordhaus 2017). Empirical estimates suggest that climate change will likely have a limited impact on Europe and its economy over the next few decades, although the impact will differ for individual countries. Estimates indicate that climate change would generate some welfare/income losses or real GDP per capita losses – from about 1% to 7% depending on the scenario (Tol 2018; Kahn et al. 2019 and 2021). The regional distribution of losses is expected to be several times greater in southern Europe than in its northern part (ECB 2021f).

As far as the impact on inflation is concerned, extreme weather events affect mainly food prices, but also energy demand and supply, which in turn also affect prices. Some authors argue that natural disasters have had a limited impact on advanced countries and substantial on developing countries (Parker 2018). Other authors find that very hot summers have a substantial impact on prices in the medium-term perspective (ECB 2021f).

Climate change may lead to migration with effects on health and mortality, which, in turn, may have implications for labour supply and productivity or structural unemployment (Seppänen et al. 2006; Heal and Park 2016; Hsiang et al. 2017; Bamber et al. 2019). Other authors, however, do not find a strong connection between climate change (e.g. temperature shocks) and labour productivity (Letta and Tol 2019).

Extreme weather events may also put a burden on public finances, but empirical studies suggest rather limited budgetary effects (Heipertz and Nickel 2008; Lis and Nickel 2010; Melecky and Raddatz 2011). Those effects could be noticeably reduced by taking precautionary measures (Catalano et al. 2020). In addition to extreme

weather events, delayed transition is also a factor that may result in a negative impact on public finances in the long term in comparison with orderly transition (ECB 2021f).

Experts identify several channels of impact through which climate change may potentially affect the European economy. In this context, they indicate potential supply shocks (food, energy, capital stock, technology), demand shocks (energy, investment, consumption, trade), and aggregate impact on output and nominal variables (GDP, wages, inflation) (Batten 2018). It is also argued that climate risks may affect the transmission of monetary policy via financial markets and the banking sector. The main channels in this respect are interest rate, credit (bank and non-bank lending), asset prices, exchange rate, and expectations (see Table 2).

Table 2. Monetary policy transmission: potential impact of climate change

Channels	Physical risk from more common extreme weather events and persistent warming	Transition risk from carbon pricing and reducing emissions
Interest rate channel	Non-interest cost factors become more relevant, lowering investment and saving response to interest rate changes.	Uncertainty about timing and speed of policy response raises risk premia and volatility. Natural rate of interest affected.
Credit channel	Financial losses reduce borrower net worth, bank collateral and profitability. Non-performing loans constrain credit supply. Uncertainty reduces market funding of banks.	Financial losses reduce borrower net worth, bank collateral and profitability. Non-performing loans constrain credit supply. Uncertainty reduces market funding of banks.
Asset price channel	Physical risks destroy capital and residential property. Financial losses lower firm valuations.	Demand shifts across sectors and regions. Stranded assets.
Exchange rate channel	Devaluation incentive for short-term competitiveness gain. Higher volatility.	Carbon border adjustment may disrupt trade routes and global value chains.
Expectations channel	Monetary policy less predictable since shock persistence uncertain, blurring supply/demand.	Time-inconsistent transition policies reduce monetary policy credibility and effectiveness of forward guidance.

Source: ECB (2021f).

There are several constraints faced by central banks when tackling climate change. The most important ones can be summarised as follows (Boneva et al. 2021):

- **Risk of interference with the primary mandate.** Most central banks do not have any explicit reference to environmental sustainability in their mandates, which raises doubts about whether they have the legitimacy to use their monetary policy tools to support sustainability-related objectives (Dikau and Volz 2021). Several central banks have an indirect mandate to support the policy objectives of their governments, but there are doubts of whether this is sufficient for central banks to play an active role related to climate change (Solana 2018; Schoenmaker 2021).
- **Endangering independence or overstepping competence.** Challenges stemming from climate change have a clear political dimension and therefore politicians (who are elected and accountable to their voters) are better placed than central banks to deal with climate-related issues, organize necessary debates in civil society (e.g. on changes in production and consumption habits), etc.
- **Distortions in the financial markets.** It is argued that “greening” monetary policy may distort financial markets, notably keeping in mind the current shortage of so-called green bonds (Schnabel 2020 and 2021). There is a lack of commonly accepted market standards of what is “green” or “polluting” investment. Central banks could develop their internal definitions and classifications, but they could be accused of arbitrarily discriminating or favouring some sectors over others.
- **Public criticism on granting excessive power to the central bank.** If central banks communicate publicly on the urgency of “greening” the financial system, it may be perceived as an attempt to accumulate more tasks and powers by them.
- **Fuelling excessive expectations.** If central banks publicly present themselves as leaders in climate matters, they risk fuelling excessive expectations about what they can actually achieve. There are doubts of whether the monetary policy could help tackle climate change. Some recent papers suggest that actions taken by central banks have a very limited impact on reducing emissions and achieving climate goals (Ferrari and Nispi Landi 2020; Ferrari and Pagliari 2021).

The awareness of the above constraints could lead to agreeing that governments should play a leading role on climate matters while central banks could play a supporting role. It is argued that even if monetary policy alone cannot contribute to tackling climate change, it could help accelerate the “green transition” – notably, if supported by fiscal policy, regulation, etc. (Annicchiarico and Di Dio 2015; Ferrari and Pagliari 2021; Benmir and Roman 2020; Boneva et al. 2021).

4. Commitment of the ECB to climate matters

Keeping in mind the above pros and cons, the Governing Council believes that the ECB and the Eurosystem should be involved in climate-related issues since this is currently a key global challenge and a priority area of the EU policy (notably, after the adoption of the European Green Deal in December 2019). At the same time, the

Governing Council admits that governments have the primary responsibility and relevant tools for addressing climate change and its effects. Nevertheless, the ECB and national central banks should not be excluded from the implementation of the adopted programs as physical and transition risks related to climate change may affect price stability, monetary policy transmission, financial stability, assets of the Eurosystem's balance sheet, etc. (ECB 2021c).

The ECB intends to improve its macroeconomic models – rich in economy-related data but lacking climate-related ones and operating over much shorter horizons than is needed for climate analyses. In this context, it should be added that most central banks do not have frameworks that integrate macroeconomic and climate models in a single tool, but some of them¹¹ have started to develop such tools in order to better understand the macroeconomic effects of climate risks (ECB 2021f).

In July 2021 – together with the new monetary policy strategy of the ECB – the Governing Council announced its climate-related action plan accompanied by a detailed roadmap for 2021–2024 (ECB 2021d). The action plan and roadmap outline the most important actions of the ECB aimed at appropriately reflecting climate change considerations in its monetary policy. Moreover, at the beginning of 2021, the ECB set up a climate change centre (ECB 2021a). The centre is to coordinate the relevant climate-related activities both internally (within the ECB) and externally (within the Eurosystem). These activities of the centre will focus on the following issues:

- macroeconomic modelling and assessing effects for monetary policy transmission,
- statistical data for risk analyses on climate change,
- disclosures as a prerequisite for eligibility as collateral and asset purchases,
- enhancement of risk assessment capabilities,
- collateral framework¹²,
- corporate sector asset purchases¹³.

One of the key elements of the above-mentioned action plan and roadmap is the ECB's economy-wide climate stress test – aimed at assessing the resilience of European and global firms and banks to physical and transition risks (on the basis of several assumptions on future climate policies). The scope of the stress test has substantially expanded in comparison with the previous tests – this year it covered 4 million firms worldwide and 1600 consolidated banking groups in

¹¹ For example, the Bank of England, Bank of Canada, De Nederlandsche Bank, Banque de France (see Scott et al. 2017; Ens and Johnston 2020; Vermeulen et al. 2018; Allen et al. 2020).

¹² In September 2020, the ECB decided that bonds with coupons linked to sustainability performance targets would become eligible as central bank collateral from 1 January 2021 (ECB 2020).

¹³ In February 2021, the Eurosystem central banks (including the ECB) agreed on common stance for climate-related sustainable and responsible investment principles for euro-denominated non-monetary policy portfolios (ECB 2021b). It will be complemented by the first quarter of 2023, when the ECB is to start disclosing climate-related information of the corporate sector purchase programme (CSPP).

the euro area. Its results were published by the ECB in September 2021. They may be summarised as follows: there are benefits for the early preparation for climate change, the effects of climate risks may concentrate in some geographical areas and sectors, physical risks are to increase over time if policies on the transition towards a greener economy are not introduced, the impact on banks' expected losses may be rather severe and mostly driven by physical risk (Alogoskoufis et al. 2021).

The methodology and results of the ECB's economy-wide climate stress test will be beneficial for two important events in 2022. One of them is the climate stress test of the Eurosystem's balance sheet – aimed at assessing its risk exposure to climate change. Another event that is to benefit from the ECB's economy-wide climate stress test is the supervisory climate stress test for individual banks (those directly supervised by the ECB) – called the Climate Risk Stress Test (CST)¹⁴. One of its main goals is to develop the capacity of banks and supervisors to identify and assess climate risk. According to the methodology announced by the ECB in October 2021 (ECB 2021g; Walter 2021), the exercise will be conducted from March to July 2022 and it will consist of three separate modules:

- an overarching qualitative questionnaire,
- climate risk metrics (peer benchmark analysis),
- bottom-up stress test projections.

The modules have been presented in more detail in Table 3.

The implementation of the ECB's action plan will be in line with progress on the EU policies and some recent initiatives on information disclosure and classification as well as reporting on environmental sustainability. In particular, it takes into account:

- Disclosures Regulation (adopted in November 2019) – laying down sustainability-related disclosure obligations in the financial services sector (Commission 2019);
- Taxonomy Regulation (adopted in July 2020) – setting out conditions that an economic activity has to meet to be qualified as environmentally sustainable (Commission 2020);
- Corporate Sustainability Reporting Directive (proposal adopted in April 2021¹⁵) – laying down EU rules requiring large companies to publish regular reports on the social and environmental impacts of their activities (Commission 2021).

¹⁴ It is also called the 2022 ECB Climate Risk Stress Test (since the ECB is to be a coordinator of the exercise) or the 2022 SSM Climate Risk Stress Test (since the exercise is to be conducted within the Single Supervisory Mechanism). The SSM is the system of banking supervision that comprises the ECB and the national supervisory authorities of the euro area countries. The ECB directly supervises 113 significant banks of the euro area countries, and these banks hold about 82% of banking assets in these countries (ECB 2021h).

¹⁵ In December 2021, the Commission's proposal was discussed in the European Parliament. The CSRD is to be adopted by the end of 2022 and enter into force in 2023 (provisional timetable).

Table 3. Methodology and scope of the 2022 Climate Risk Stress Test

Module 1 Overarching qualitative questionnaire	Module 2 Climate risk metrics (peer benchmark analysis)	Module 3 Bottom-up stress test pro- jections
<p>Aimed at assessing how banks build their climate stress test capabilities for use as a risk management tool.</p> <p>In principle, the questions in this survey concern qualitative information on the institution's current practices, i.e. based on the bank's <i>status quo</i> at the point in time when the stress test is performed.</p> <p>The questionnaire comprises 11 blocks. Blocks 1 to 10 concern the day-to-day internal stress testing framework of the bank. Block 11 concerns the assumptions developed by the bank in the context of the 2022 CST exercise.</p>	<p>Aimed at comparing banks across a common set of climate risk metrics.</p> <p>The metrics are to assess exposures of banks to emission-intensive companies (how much banks rely on income from carbon-intensive industries and what volume of greenhouse gas emissions are financed by banks).</p> <p>Banks are asked to split their corporate exposures between 22 industries. They are also asked to provide information in an accompanying explanatory note on actions the bank has taken in the past to finance the green transition.</p>	<p>Concerning physical and transition risks.</p> <p>Aimed at assessing how extreme weather events would affect banks over the next year, how vulnerable banks are to a sharp increase in the price of carbon emissions over the next 3 years, how banks would respond to transition scenarios over the next 30 years, etc.</p> <p>The stress test considers the impact of transition risk based on credit risk and market risk. A static balance sheet is to assess the short-term vulnerabilities, while a dynamic balance sheet is for the long-term strategy.</p>

Source: Own elaboration based on ECB (2021g) and Walter (2021).

Concluding remarks

The previous review of the ECB's monetary policy strategy was carried out 18 years ago. During that period of time, many important economic events took place in the world and the macroeconomic environment has considerably changed. The 18-year period of implementing the strategy in the context of turbulent economic events naturally required its review and verification. It also constitutes a premise for more frequent reviews in the future, e.g. at about 5-year intervals, which does not exclude *ad hoc* reviews due to the occurrence of critical events in the economy. This would be in line with the approach of the Federal Reserve, which – having completed a review of its monetary policy strategy – announced in 2020 that it would publicly review it roughly every 5 years.

The changes made to the ECB's monetary policy strategy in 2021 imply a balanced approach that combines both continuity and change. The key elements of the strategy have been maintained or slightly modified while some improvements and novelties have been proposed too.

As regards the changes, a very important one is the decision of the Governing Council to integrate the costs of living in private homes (owner-occupied housing – OOH) into the coverage of the HICP. Housing costs represent a substantial share of households' consumption in the euro area, but the HICP includes only some price changes related to living expenses. Therefore, the inclusion of housing costs into the HICP would improve both representativeness of the HICP (as spending on housing is a substantial part of consumer expenses) and its cross-country comparability (as the importance of housing costs differs markedly across euro area countries).

This is a challenging task given the lack of relevant data in some Member States, which are needed for a harmonised EU methodology. However, Eurostat already publishes quarterly OOH price indices (OOHPIs), which could be a starting point for further work towards the augmented HICP as well as on the procedures for its calculation and publication (frequency and timeliness). Due to methodological and organizational challenges, the ECB proposed a 5-year roadmap for work on this issue. Housing costs should be included not only in the euro area's HICP but also in the national CPIs, notably in those Member States where they have not been included yet. It would ensure better harmonisation between the HICP and CPIs.

Despite the indicated balanced approach to updating the monetary policy strategy, the inclusion of climate issues in the scope of this policy is a completely new or even innovative element. It enhances the coherence of EU and ECB policies in this area, although it is sometimes considered quite controversial since monetary policy itself cannot affect greenhouse gas emissions. Moreover, there are opinions that challenges stemming from climate change have a clear political dimension and thereby politicians (who are elected and accountable to their voters) are better placed than central banks to deal with climate-related issues. There are also other constraints faced by central banks when deciding to tackle climate change, such as the risk of interference with the primary mandate, generating distortions in the financial markets, fuelling excessive expectations, etc. Therefore, central banks should be careful as to their involvement in climate matters.

On the other hand, environmental and climate challenges increasingly affect the overall macroeconomic situation and even the existence of the population of specific regions or continents. Reaching a consensus on these issues is hampered by the lack of agreement as to the scale of threats, the pace of their materialization, and the diverse situation of individual countries or continents in terms of their potential to counter those threats. This also applies to the lack of a single position of the EU Member States. Regardless of the disagreement on the above issues, two specific channels of impact are being indicated – physical risk (extreme weather events, natural or environmental disasters, etc.) and transition risk (growing regulatory costs of greenhouse gas emissions). Against this background, the role of

the national central banks and the ECB needs to be defined in terms of supporting relevant government actions.

The subsidiary nature of the functions and tasks of central banks and the ECB may be based, *inter alia*, on their substantial research and analytical potential, including their databases. It is worth mentioning that the ECB intends to improve its macroeconomic models, develop its climate models, and integrate these two types of models in a single tool. This is important since most central banks do not have such integrated tools. Another interesting undertaking is the climate-related stress tests planned for 2022 – to be conducted among banks supervised by the ECB. Such exercises look interesting provided that they are not too burdensome for participating entities. It is worth considering whether the results of this exercise would be useful for other stakeholders (the EU institutions, national parliaments and governments, universities and research institutions, etc.).

There is a specific climate-related issue that should be carefully examined by the ECB and national central banks, i.e. the actual and potential impact of EU climate policy on inflation (European Green Deal, Fit for 55, etc.). The consequences of EU programs and actions to tackle climate change must be properly assessed – taking into account not only ecological aspects but also social and economic capacity to absorb the required expenditures as well as their appropriate distribution in time and space. This is related to the scale of inflationary processes as a result of the implementation of the so-called green transformation (rising costs of emissions, pressure on introducing green technologies, ban on using fossil fuels, etc.). This phenomenon is known as “green inflation” or “greenflation”. In this context, it is especially important to highlight the problem of the rapidly growing prices of emission allowances, which significantly affect a large part of the retail and wholesale prices of goods and services in the EU Member States.

Proper communication is the issue of utmost importance for central banks. In the new strategy, the ECB has recognised the need to communicate and explain its decisions and activities as clearly as possible to various audiences – both experts and the general public. The latter are usually not prepared to understand the complicated aspects of monetary policy, but this policy affects their day-to-day life. In this context, some practical examples where proper communication by central banks is necessary should be indicated. First, it should be explained to the general public why the ECB has decided to be involved in climate matters. In particular, the ECB should explain in an accessible way the potential impact of climate change on prices and remind that maintaining price stability is a primary objective of the ECB and other central banks. Second, careful communication will be indispensable in the context of integrating housing costs into the HICP – as it is planned that an experimental quarterly HICP (encompassing housing costs) will be published during the transition period in parallel to the headline HICP, which may be confusing.

Last but not least, it seems that the current review of the ECB’s strategy could be an inspiration for other central banks – including those outside the euro area. One of them is the National Bank of Poland (NBP), whose monetary policy strategy

was adopted in 2003 and has not been reviewed since then despite considerable changes in the macroeconomic and political environment. Moreover, the NBP strategy includes numerous references to the then planned Poland's membership in the euro area, which does not reflect the current position of the Polish government. A review of the NBP's strategy would also be advisable due to the currently high inflation that may turn out to be a longer-term trend (as a result of both the pandemic and EU climate policy). Therefore, during the review of the NBP strategy, it would be worth discussing the adequacy of the NBP's inflation target to the current and projected economic situation, as well as other important issues, such as the scope of competences of the Monetary Policy Council and its interactions with the Management Board of the NBP, interdependence of central bank's monetary policy and the economic policy of the government, etc. The strategy review would be a task for the new Monetary Policy Council, whose members (most of them) will be appointed for 6-year terms in early 2022.

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