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Is it 'green' domination or just a 'green' narrative? The case of the ECB

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Abstract

In recent years, there has been a growing awareness of the risks that climate change poses to the wider economy. One can also notice a growing interest in the topic among other central bank representatives.

This article aims to characterize the changes that have taken place in the ECB's narrative on 'green' central bank policies over the last few years. It will outline how ECB Executive Board members perceive the impact of climate change on the ECB's objectives, as well as what solutions have been and are being proposed in this context. Finally, it will be indicated which proposals have been transferred from the narrative level to the action level. The speeches of the ECB Executive Board members from 2018 to 2024 posted on the ECB website, in which 'climate change' appears as one of the keywords, are analysed. In addition, it will be indicated which 'green monetary policy' measures have been included in official ECB documents such as annual reports.

Keywords: climate policy, climate change, central banks, 'green' monetary policy

JEL: E52, E58, Q54

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1. Introduction

Today, climate change appears to be one of the key global challenges facing governments, central banks, financial markets or the wider economy as a whole. For this reason, it is not surprising that various institutions are making efforts to combat the threats posed by climate change. These initiatives often have a global dimension, for example the signing of the Paris Treaties in 2015, which legally obliges signatories to reduce carbon emissions (UN 2024). Such circumstances mean that the commitment to combating climate change should be complete. Central banks must find their way in this new environment.

Representatives of many central banks have been increasingly raising the possible impact of climate change on the conduct of monetary policy for several years now (BoJ 2021; BoE 2024; FRS 2023; Sveriges Riksbank 2023). Even so, it is difficult to pinpoint a moment that can be considered the start of the discussion on the 'greening' of monetary policy. However, the creation of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) can be seen as one of the most important developments. Although there is a lack of consensus among NGFS members on the type of actions that should be taken, there is a consensus on the very impact of climate change on monetary policy (Kotecki 2023).

The widely cited speech by Isabel Schnabel (2021a), *From Green Ignorance to Green Dominance*, can be seen as a one of turning point in ECB policy. Since then, the ECB authorities have increasingly considered the so-called 'green' aspects of monetary policy. These were considered, among other things, during the 2021 review of the ECB's strategy. Lagarde and Guindos (2021) called climate change an existential challenge for the world, and a key one for the ECB's mandate. Some members of the ECB Executive Board increasingly point out that climate change has implications for price stability, which is the ECB's main objective. Schnabel (2021a) openly states that since (in her view) it is indisputable that climate change affects the price level, the logical conclusion is for the ECB to behave in such a way as to contain these changes, as otherwise the ECB's main objective could not be achieved.

The purpose of this article is to characterize the evolution of the ECB's approach to 'green central bank policy' over recent years. Speeches on the European Central Bank's website with the keyword climate change for the period 2018–2024 are being analysed. The postulated assumptions of the European Central Bank in the fight against climate change will be presented, and how the ECB has changed its perception of the main and second objectives in the context of climate change. In addition, it will be indicated which proposals have moved from the level of rhetoric to real action and which have not moved beyond it. For this purpose, the ECB annual reports for the period 2018–2024 were also analyzed.

Part two reviews the literature on 'green' central banking, pointing out the connections between climate change and monetary policy objectives, the possible role of central banks in the fight against climate change, and discusses the potential instruments that can be used for this purpose. Part three outlines the evolution of perceptions of 'green central bank policy' in the statements of ECB members and presents the mechanism suggested by some members of the ECB Executive Board in relation to the impact of climate change on price stability and financial stability, among other things. Part four describes the ECB members' reflections on how climate change may affect the achievement of monetary policy objectives. The fifth part indicates which proposals for changes in the implementation

of objectives, strategies and use of instruments were raised in the speeches. The sixth section summarises how the theses advocated in the speeches have influenced the ECB's monetary policy. The entire article concludes with a summary.

2. Research directions on the links between climate and central banking

There seems to be a broad consensus on the reality of climate change today. The IPCC (2014, 2019, 2021) or the BoE (2024) point not only to the rising average temperature of the earth, but also to human responsibility for this fact. The impact of climate change on economic variables (such as inflation) is also widely reported in the literature. For example, Kotz et al. (2023) present a model in which they estimate that climate change could raise food prices between 0.92 and 3.23 percentage points each year, while core inflation could rise between 0.32 and 1.18. Ciccarelli, Kuik and Hernández (2023) further point out that the distributions of the impact of climate change on inflation are asymmetric. Their study focused on the European Union and showed a larger-than-average effect of climate change on food prices during the summer months and for countries in the South (Spain and Italy). These authors also show how weather shocks can affect price levels. For example, high temperatures in summer can increase energy demand for businesses and households. Reviews of studies indicating the impact of climate change on inflation and economic growth can also be found in, for example, reports by the European Parliament (Beckmann et al. 2023, pp. 29–30) and the NGFS (Ranger et al. 2023). Consequently, in various studies, economists have been trying to answer the question of whether it is possible to introduce green targets into central banks' objectives for several years now.

As early as 2015, Mark Carney, then Governor of the Bank of England, argued that climate change could impact financial stability. While he paid particular attention to the insurance sector in his speech, his observations on the tragedy of the horizon can also be applied to monetary policy. He concludes that the main effects of climate change (which we can already minimize today) will be noticeable in the future. However, it is so distant that it is beyond the horizon of monetary policymakers (Carney 2015). Figure 1 illustrates the essence of the argument. Today's decisions shape both future price stability and financial stability. As climate change affects both objectives, the central bank needs to broaden the horizon and see beyond it.

Moreover, Carney (2015) points to three main channels through which climate change can hit financial stability: physical risk, transition risk, and liability risk. The latter mainly relates to the insurance sector; however, the first two have an inextricable link to central bank objectives. It is these two channels of interaction that are analysed in numerous central bank materials (BoJ 2021; BoE 2024; FRS 2023; Sveriges Riksbank 2023), and reports (Beckmann et al. 2023; IMF 2019; NGFS 2020). They indicate how the impact of climate change on central banks' objectives (primarily financial stability) can play out through each of these channels.[1]

Physical risk manifests itself primarily through damage to physical assets, reduction in the value of assets, and the need to pay insurance claims – all as a result of severe weather events (droughts, hurricanes, floods) or also environmental incidents (e.g. oil spills). Such events can lead to a deterioration in the performance of banks and other financial institutions and thus threaten

[1] Many sources (Caldecatt et al. 2013; Clapp et al. 2017; ECB 2021a; NGFS 2019, RBNZ 2024) also present subcategories of the concepts discussed.

financial stability. Transition risk, on the other hand, can be referred to as action risk and is associated with a mismatch between the response of policymakers (both fiscal and monetary policy) and the current situation, and thus an excessive reduction in current demand. This can lead to a similar situation in financial markets with the same effect as the first risk (ECB 2020a; NGFS 2020).

In connection with the identification of climate risks, studies are being produced to indicate how climate change may affect the conduct of monetary policy. According to the ECB (2021a), climate change affects monetary transmission channels, can lower the real interest rate (which will negatively affect monetary policy options), and make it more difficult to correctly identify shocks that hit the economy, without which it will be impossible to achieve the inflation target in the medium term.

There have also been several studies indicating the form of action that central banks can take to combat climate change. Most of these assume the existence of certain energy markets that are either 'clean' or 'dirty' depending on the source. For example, Nakov and Tomas (2023) assume that the government can introduce a tax on non-renewable energy. According to their assumption, it is not possible to introduce the tax immediately in an optimal form, which will lead to the continued presence of fossil fuels in the economy and will put the central bank in a dilemma of staying with the price stability target or implementing the climate target and trying to reduce greenhouse emissions by negatively affecting the demand side. The conclusion is that the central bank should stay with its current target. Abiry et al. (2022), show the possibility for the monetary authorities to influence the fight against climate change through green quantitative easing (GQE) and a carbon tax. Using GQEs, they can tilt the central bank's portfolio towards a more sustainable one and thus reduce the cost of 'clean energy'. According to their assumptions, they estimate that the maximum emission reduction that can be achieved through QE is four times less than the reduction achieved through a carbon tax. Monetary policy as a stand-alone tool to combat climate change is therefore ineffective. It can, however, mitigate the costs of the energy transition. Its role can be to stabilize the economy after the government has implemented climate policy. It minimizes the social costs of increased volatility in inflation and production. A coordinated monetary and fiscal policy is necessary to effectively combat climate change (Ferrari, Pagliari 2021).

Climate taxonomies have also been developed in the past years. One of these is presented by Baer, Campiglio and Deyris (2021). It aims to give an overview of the possible reasons why central banks may use climate policy and which instruments may be used for this purpose. From the point of view of the ECB measures under discussion, it is worth mentioning that Baer, Campiglio and Deyris (2021) provide the following breakdown, dividing them into (i) informational, (ii) incentive, and (iii) quantitative. Informational instruments consist of widespread public awareness of climate change issues, data sharing or the creation of taxonomies and definitions and are widely reported in the literature. Incentive instruments are designed to apply such interventions in the price level of financial assets to convince investors to allocate capital to greener instruments, while quantitative instruments may already be direct investments in specific instruments (for example GQE). A broader description of this type of instrument can also be found in other items (Boneva, Ferrucci, Mongelli 2021, 2022a, 2022b; McConnell, Yanovski, Lessmann 2022; Schoenmaker 2021; Zaleska 2022).

There seems to be a consensus, both on the impact of climate change on monetary policy and on the possibility of using the latter to minimize the negative effects of the former. However, despite this, a frequently raised issue is whether central banks should be concerned with climate change at all, and where the boundary of their mandate lies.

Claveau et al. (2022) highlights the problem of central bank legitimacy when it comes to conducting 'green monetary policy'. They highlight the issue of input legitimacy and output legitimacy. The authors point out that climate policy can generate winners and losers, and thus the central bank, as an independent institution, should not be involved in such an exercise. The lack of input legitimacy thus implies the absence of a mandate from society to carry out certain actions. On the other hand, there is the problem of output legitimacy. Claveau et al. (2022) note that a society wishing to avoid the consequences of climate change may also demand that central banks become involved in the fight against it. However, the lack of a clear objective, strategy, and instruments to help combat climate change means that the central bank may not be able to pursue green objectives. This undermines baseline legitimacy. The lack of legitimacy is often mentioned in ECB's Executive Board speeches as one of the key obstacles to adapting climate targets to monetary policy.

In the frequent absence of a direct mandate for green monetary policy, central banks may adopt different strategies for action. Boneva, Ferrucci, and Mongelli (2022a) distinguish the following forms of central bank approaches to climate change: (i) defensive, (ii) awareness-raising, and (iii) proactive. The former can be considered activities related to analytical work: trying to incorporate climate change into predictive models, taking it into account in some monetary policy decisions, or cleaning balance sheets of poisonous financial assets. Awareness-raising activities are related to declarations against climate change, public awareness, or the narrative supporting climate initiatives. Among the last group, Boneva, Ferrucci, and Mongelli (2022a) include such broad actions as green quantitative easing, greening of monetary policy, and, finally, an open green mandate. A description of the forms of green measures presented is given in Table 1. As the authors point out, some of the measures may be controversial from the point of view of classical monetary policy and the primary objective of a large part of central banks, which is a stable price level.

Issues of counting green targets as part of monetary policy may arise from political pressure. Deyris (2023) points out that the evolution of perceptions of the impact of climate change on monetary policy was due to both internal (some new members of the ECB's Executive Board) and external pressures (he stresses that we can only speak of the ECB's non-affiliation de jure, not de facto, which affects external pressures that can be created by both politicians and the public), which led to greater attention to climate change issues. The article presents the divisions that have emerged in the Governing Council and the conclusion that the consensus on the correct approach to climate change is not unequivocal.

The greening of the operational framework by the ECB as part of the abandonment of so-called 'market neutrality' is reported by Thiemann, Büttner and Kessler (2023), and Preunkert (2022). They point to a growing awareness of climate change among ECB Executive Board members, which has led to a shift in the burden of discussion and an attempt to change certain operational activities. The consequences are the abandonment of the principle of market neutrality and its replacement by the principle of market efficiency. This means that under the CSPP (Corporate Sector Purchase Programme), the ECB no longer buys assets by imitating the market portfolio, but influences it by conducting purchases in line with its agenda.

Based on the literature review presented, there appears to be a consensus on the negative effect that climate change has on the conduct of monetary policy. Moreover, the literature discussed indicates what actions can be taken by a central bank wishing to tackle climate change. It is therefore reasonable to present the ECB's perceptions of climate change and to indicate what actions the ECB intended to take and what actions it has been taken.

3. Climate change awareness in the speeches of ECB members

The European Central Bank has increasingly emphasized the risks of climate change in recent years. Several articles and studies addressing this issue have been written as part of this research (Giannetti et al. 2023; Behn, Forletta, Reghezza 2024; Fabisik et al. 2023). These topics have also been addressed extensively in speeches by members of the ECB's Executive Board who, over the last few years, have indicated in forward guidance the challenges the ECB faces and how it intends to address them. In their speeches, the number of those to which the keyword 'climate change' has been assigned increases from 3 in 2018 to successively: 5 in 2019, 8 in 2020, 30 in 2021, and then decreases to 17 in 2022, 13 in 2023 and 11 in 2024[2] (ECB 2024b). Additionally, Figure 2 shows the percentage of the aforementioned speeches among all ECB board member speeches in a given year. Despite the reduced frequency of speeches on this topic (and the percentage), the issue remains important to the ECB and is an important part of its agenda. It is also significant that ECB board members referred to climate change much more frequently than their counterparts at other key central banks[3] during the period under review. Between 2018 and 2024, the number of speeches with the keyword 'climate change' was 5 in the Reserve Bank of New Zealand (RBNZ 2025), 12 in Bank of Japan (BoJ 2025), and 23 in the Bank of England (BoE 2025).

Table 2 shows the number (and percentage of all climate change speeches) of speeches on one of the five topics. As can be seen, almost every year, climate change risks were mostly addressed in the context of central banking and monetary policy in general (the speech was assigned one of these two keywords). The second major topic is banking supervision. Although it was the broader impact of climate change on central banking that the ECB Executive Board representatives devoted more time to, it was the issue of banking and macro-prudential supervision that seems more relevant because, as will be shown later, it is mainly through its impact on commercial banks that the ECB seeks to tackle climate change.

Lautenschläger (2018), in her speech *10 years after the crisis – risks, rules, and supervision,* the first ECB speech to highlight the issue discussed in the article, identifies among the challenges that she believes central bankers are facing and will continue to face, the supervision of credit and non-credit financial institutions, digitization and the fourth industrial revolution, but also climate change. She lists three climate risks (see Table 4) and highlights their negative impact on financial stability.[4] This is what supports the argument for central banks, including the ECB, to collect information and conduct further research on climate change. In addition, Lautenschläger (2019a, 2019b) points out that it is the ECB that can lead the green revolution.

Climate change is also a major topic of consideration in Cœuré's speech *Monetary policy and climate change*. Cœuré (2018, p. 1) states that 'climate change is not a theory, it is a fact' and points out that although fiscal policy is considered to be the one that should be responsible for correcting environmental change, the ECB should also consider a possible response to climate change. The same stance towards climate change is taken by Lagarde (2020a), who was the first ECB president to point out that climate change also poses a risk to price stability. Moreover, she emphasized her readiness to fight climate change; however, in such a way that this does not violate the mandate of fighting price

[2] ECB, All news & publications, https://www.ecb.europa.eu/press/pubbydate/html/index.en.html?topic=Climate%20change.
[3] For the compilation, the central banks that give the speech keywords were selected. Therefore, important central banks such as the People's Bank of China, the Bank of Switzerland and the Federal Reserve System were not included.
[4] It should be mentioned that although financial stability is not an objective of the ECB under the TFEU, the ECB recognizes it as essential to achieving price stability and, in line with the new strategy, will strive to achieve it (Lagrade 2022).

stability. This declaration has been repeated several times (Lagarde 2020b, 2020c, 2021a, 2021b, 2022, 2023, 2024a).

Cœuré (2018, 2019) comprehensively brings together many areas of real economic policy and climate impact. He argues that since every aspect of economic policy can be affected by climate change, central bankers conducting monetary policy cannot remain inactive either. Among other things, he pointed to migration trends as a cause of wage stagnation in Germany, which made it difficult to achieve the inflation target. As he stressed, the key to monetary policy is to identify the type of shock so that the central bank's response is tailored. He noted that climate shocks will mostly fall into the category of supply-side shocks, and thus central banks will face the problem of choosing between stabilising inflation and stabilising output fluctuations.

The COVID-19 pandemic proved to be helpful for the ECB in intensifying its climate action. Its effects, such as a reduction in global production and lockdowns, and thus an overall decrease in greenhouse gas emissions, were used as an example of how the climate crisis could be tackled. However, Schnabel (2020a) emphasized that even the emission decreases resulting from the effects of the COVID-19 pandemic were not large enough to achieve the goals of the Paris Agreement. These, in turn, are taken very seriously by the ECB, as part of the economic policy of the European Union. According to the Treaties, the ECB is to (without prejudice to its primary objective) implement the economic policy of the EU and thus strive to fulfil the Paris Agreement. Therefore, even stronger action is required. In a subsequent speech, Schnabel (2021b) even states that not only can the ECB act on climate protection, but it must also do so. The long horizon, mentioned by Carney in his speech, over which central banks have no influence, has become, in her view, a tragedy of no time. The effects of climate change have become coincident with the monetary policy conduct window (Schnabel 2021b; Cipollone 2024).

As Schnabel (2021c) explained, the objectives of central banks have evolved and the discussion on what objectives should look like is not closed. She notices that, according to the ECB survey, a significant proportion of respondents see the role of the ECB more broadly than through the narrow scope of their mandate. For example, young respondents, when discussing inflation, primarily take into consideration rising house prices, which are not a component of the inflation indicators that central banks use. Other respondents also mention broader problems that lie outside the classical mandate of monetary policy, such as climate change. In her speech, Schnabel raises the question of the social responsibility of central banks. Moreover, she notes that the independence of the ECB requires them to take all measures to respond to social concerns in line with the mandate.

Elderson (2022b) draws attention to the new European Climate Law (ECL). In his point of view, in line with this law, EU bodies must achieve the goals of the Paris Agreement. Elderson believes that the ECL, which imposes on European bodies the pursuit of climate neutrality, may also oblige the ECB to do so. At the same time, he stresses that the Treaty on the Functioning of the European Union (TFEU) imposes certain duties and objectives on the ECB. He concludes that, while the ECL does not directly impose the pursuit of climate neutrality, as this would require a change in the objectives that are set out in the Treaties, it may suggest such action, which the ECB cannot ignore.

Although ECB Executive Board members dissociate themselves from pursuing climate policy by clearly indicating that this is a governmental competence (Schnabel 2021c, 2023), at the same time they acknowledge the inextricable impact of climate change on monetary policy in many statements (Schnabel 2021a). Therefore, the ECB considers itself compelled to take climate change into account

when implementing its mandates (Endelson 2021a, 2024a, 2024b). This means that a comprehensive indication of how the ECB views the link between climate change and its monetary policy objectives is needed.

Figure 3 shows an abbreviated version of the main theses of the speeches presented.

A significant change that must be mentioned has also occurred in official documents such as annual reports. Until 2018, the issue of climate change was mentioned sporadically (ECB 2018, 2019). In later reports, the issue of climate change was already widely described, e.g. as a threat to financial stability (ECB 2020b, 2021b), in the context of the new monetary policy strategy (ECB 2021b, 2022b), the publication of new indicators related to their effects (ECB 2022b, 2023a, 2024b) and as part of the tightening of monetary policy in the face of high inflation (ECB 2024b). At the same time, the way in which the impact of climate change on monetary policy is described in the annual reports is narrow and does not present the for example: transmission mechanisms. It is in the speeches that the ECB Executive Board members can express, in a much more accurate and comprehensive way, how they perceive the threat from climate change and what solutions are being considered and implemented.

4. The impact of climate change on the ECB's objectives – an ECB perspective

The European Central Bank's main objective is price stability and assumes a symmetric inflation target of 2%. At the same time, in addition to stabilizing the price level, the ECB supports the policies of the European Union, which consist of, among other things, sustainable economic growth, a social market economy aiming at full employment, social progress, and a high level of protection and improvement of the quality of the environment (ECB 2024a). It is this second objective that is often cited as one of the direct reasons why the ECB has to take climate change into account. Above this, ECB Executive Board members emphasise another reason for action, which is financial stability.

Table 3 shows selected statements by ECB members indicating the impact of climate change on the ECB's primary objective, second objective, and objective as a supervisor. It can be noted that only in the case of the first of these was there not complete consensus. In the other cases, ECB members agree on the risks of climate change.

In his analysis of the impact of climate change on price stability, a separate voice was presented by Mersch (2018). He argued that the effects of climate events on the long-term stability of the price level are negligible and that trends caused by climate change often reverse within a year. Even if their impact will affect some prices, the ECB's mandate is based on taking care of the overall price level. In his view, climate change is therefore not a threat to the ECB's core mandate.

Climate risks are central to the perception of the impact of climate change on monetary policy. They are well described in the literature and, more importantly, ECB Executive Board members frequently refer to them in speeches.

Table 4 shows the types of climate risk discussed in the ECB members' speeches. They largely overlap with those described in the literature review. What stands out, however, is the risk of 'green finance'. It rarely appeared as a mentioned risk, only in the speeches of Lautenschläger (2018) and Mersch (2018). They note that clear definitions of the terms sustainable or green are lacking. Mersch (2018) even stated that this threat is a *Ponzi channel risk* – there is, in his opinion, a huge risk of a new speculative bubble being created. The ECB should therefore ensure that a speculative bubble is not created,

the bursting of which could have catastrophic consequences. The burgeoning green finance market must therefore be treated by banking supervision like any other and be subject to the same regulations. It should be noted that this is the only speech in which the problem of fast-growing green finance markets was so strongly emphasized. In the other speeches analysed, ECB representatives tended to emphasize the need to support the development of green markets (Schnabel 2020a) and to welcome the leading role of European markets in this regard.

The other types of risks do not differ in definition from those presented in the literature review. Physical risks can threaten both price stability and financial stability through damage to assets held by banks (and companies) (Mersch 2018; Schnabel 2020b; Endelson 2021d; Guidnos 2021), while transition risks can shake the current position of these companies, and have a direct impact on financial stability when new climate-related legislation is implanted (Mersch 2018; Schanbel 2020b; Endelson 2021d; Guidnos 2021). Lagarde (2024b) also emphasizes that the risks from climate change are unique in that they are difficult to predict and the risk factors further reinforce each other. Both types of risks described were also mentioned in annual reports, e.g. ECB (2020b).

Another major part of the discussion of the impact of climate change on central banks objectives is the perception of inflation. The HICP used by the ECB may not reflect key climate change concerns. Schnabel (2022b), commenting on rising energy prices as a result of Russia's launched invasion of Ukraine, indicated that the path to energy independence could be disrupted by three different shocks that would prolong inflationary pressures – and thus move the ECB away from achieving its primary objective.

Each of the shocks could occur during the green transition. The first is defined as a climate inflation shock. It is directly related to the realization of climate risks. Droughts, heavy rains, or flooding will create inflationary pressure. The central bank cannot predict or control it. The only way to mitigate it is therefore to combat climate change. We can see the realisation of the second shock in the Ukrainian--Russian war. This is the cost of dependence on energy resources. The rise in the price of fossil fuels has resulted in a significant increase in inflation rates across Europe. As Schnabel (2022a, 2022b) emphasized in her speech, Europe's dependence on gas and oil should be one of the catalysts leading to a rapid greening of energy sources. This, however, could lead to a third shock – greenflation. It is derived from the rising prices of materials needed to build or maintain green power plants. Schnabel (2022b) makes it clear, however, that the more the energy transition is neglected, the more noticeable the costs will become, both in terms of independence from energy resources and those arising from the need for rapid and rapid transitions.

An important change in nomenclature should be highlighted. Whereas in the speeches of Lautenschläger (2018) and Mersch (2018) the phrase combined with the word 'green' denoted the risk of unknown actions resulting from unknown consequences of, for example, new instruments, in the speeches of Schnabel the prefix 'green' was rather reserved for the consequences of the energy transition. Thus, in the first case, it is the consequence of a failure to act appropriately (especially as a regulator), in the second case, it is the consequence of climate events.

The discussion on different forms of climate inflation leads to a relationship between the price stability and the transformation of the economy to a carbon-neutral level. Schnabel (2021b) highlighted that the ECB stress tests showed that the costs of inaction (the realization of long-term climate risks) are much higher than the costs of action (the costs of a rigorous energy transition). Cipollone (2024) additionally points out that price stability provides less uncertainty about cost developments and

thus provides a more stable environment for 'green' investments. At the same time, it is important to consider the costs of transition risks that are already indicated. The above caveats can be presented in synthetic form as in Figure 4.

The conclusion of the above synthesis is again, the need for ECB action. Price stability is a precondition for the transformation of the economy, and this is essential for price stability in the future. The ECB therefore has no choice but to take action in support of climate goals.

From the above arguments, the question may arise as to whether, since economic policy objectives seem to be directed towards the climate, the objective of monetary policy should also change. With the ECB's increasingly strong emphasis on climate change and the green transition, there were also the first suggestions from some members of its Executive Board that the ECB's objectives were not in line with the current situation. Consequently, calls for a change in strategy and a mismatch between instruments and the new potential tasks were also discussed.

5. ECB's proposed action on climate change

In their speeches, members of the ECB's Executive Board proposed several potential solutions for the institution to contribute to the fight against climate change. Some of these are related to the operational framework of the ECB itself, others to the level of the European Union, and some would need to gain international consensus. Some of the actions advocated are intended to be purely advisory or research. Others pertain to the conduct that the ECB must adopt in its supervision of credit institutions and, finally, some may concern monetary policy instruments.

In speeches highlighting the impact of climate change on ECB action, Lautenschläger (2019a; 2019b) and Guindos (2019a) suggested the need for new taxonomies and extensive international cooperation, including coordination between central banks and financial institutions, to properly assess climate risks. They mainly emphasized the impact of climate change on financial stability and the risks it poses to the banking sector. The demands therefore mostly concerned better identification of risks. There was no call for new instruments and strategies – and even less so for targets – that take climate change risks into account. In this regard, it should be noted that the ECB already started to buy so-called 'green bonds' in 2019. However, these were part of so-called non-monetary portfolios,[5] assets purchased by the central bank for needs other than conducting monetary policy (Lautenschläger 2019b).

In the following years, new suggestions emerged on how to green central bank policy. Schnabel (2020a) put forward, among others, the following demands, which in her view are complementary to each other: (i) the introduction of a global carbon price, (ii) the start of a public investment programme; among other things, as a remedy for the possible price increase caused by the implementation of point (i), and (iii) the development of a market for green bonds and other financial instruments. However, neither the implementation of the first nor the second demand is within the ECB's power. Therefore, Schnabel (2020a), focusing on the third, suggested that the Eurosystem could be proactive in greening assets buying during CSPP. One method would be to introduce eligibility of securities depending on disclosure by issuing firms. This means linking purchases to climate risk assessments. As she points out, two views should be taken into account. The first is that such action is a violation of the mandate

[5] Detailed technical and quantitative information on this issue can be found under the following headings ECB (2023c) and ECB (2024d).

because it would discriminate against investors and violate the mandate of fiscal policy. With this perspective, market neutrality is the overriding principle. The second viewpoint is to market failures and the need for the ECB to act, in particular, because of the threat that climate change poses to the objective, not only the second, but also the first.[6]

This 'exchange of views' is continued in the subsequent statements of Schnabel (2021a), who considered whether the ECB, in constructing its bond portfolio, should not modify, or even abandon, the principle of market neutrality in favour of a more climate-sensitive principle – the principle of market efficiency. The argument was the high share of so-called carbon-intensive bonds in the ECB's portfolio. It should be noted that Schnabel (2021a) and Elderson (2023) emphasized a hierarchy of objectives. The ECB, given a choice between two identical scenarios under the rigor of the price stabilization objective, will always choose the one that is better for the second objective – EU economic policy. However, if further purchases of securities were to work against the realization of price stability, such purchases would have to be discontinued (Schnabel 2021a; Schnabel 2021b). Eventually, the ECB introduced a methodology that provides the possibility to 'tilt' the portfolio when buying or reinvesting maturing corporate bonds towards the greener side. This allows for a 'greening' of monetary policy, even while limiting the size of the bond portfolio (Schnabel 2022b). In addition, the ECB is considering introducing limits on assets that are issued by entities with a large carbon footprint. The principle of market neutrality has been abandoned (Endelson 2024a).

As the ECB acknowledged that climate change could have a negative impact on monetary policy objectives and strategies, it also seemed necessary to discuss how the conduct of monetary policy might affect a green transition to reduce climate risks.[7] The ECB speeches pointed to concerns that monetary policy could slow down or even prevent the construction of a less carbon-intensive economy. The mechanism is described by Schnabel (2022b). Raising interest rates will lead to an increase in the price of capital, and this could lead to lower returns on green investments. Taking this into account, the ECB Governing Council considered two options when discussing changes to the strategy: raising the inflation target and excluding energy prices from core inflation. Both ideas were rejected because of the risk of loss of confidence in the ECB in the long term. Despite possible conflicts between the primary objective and the fight against climate change, the primary objective was chosen.

In addition to presenting demands related to monetary policy strategy and objectives, the ECB Executive Board members also paid a lot of attention to the issue of credit sector supervision. However, the proposed measures to protect the banking sector from the effects of climate change were mainly informative, and sometimes encouraging. The necessity for the banking sector to disclose climate--related information, such as the need to consider the impact of climate risks in their balance sheets, was pointed out in speeches by Lautenschläger (2019a, 2019b), Lagarde (2020a, 2020b), Endelson (2021c) and Schnabel (2022b), among others. ECB members will emphasize the need to move away from viewing climate change as a societal risk to considering it as a purely financial risk. As part of its supervisory work, the ECB announced, among other things, the preparation of a special guide on the risks of climate change, the preparation of a stress test, and measures leading to disclosure by banks of information related to climate risks. The issue of the need for a stress test was also raised in annual reports (ECB 2021b, 2022b).

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[6] For a more extensive description of this issue, see Theimann et al. (2023) and Preunkert (2022).

[7] This was also taken into account in the review of the ECB strategy (ECB 2021c, pp. 44, 50–51; ECB 2022b, p. 55, 56).

It should be noted that within their statements, ECB members proposed several ways to adapt the framework for conducting monetary policy to the challenges of climate change. Many ideas ranged from strategies (such as revising the inflation target), and instruments (e.g. GQE) to measures not directly related to monetary policy, e.g. disclosure methods, research on factors influencing monetary policy, etc. The ECB has also paid considerable attention to how climate change will affect credit institutions. It should be emphasized that, despite various proposals, there were none concerning a change in the objective. This, as has been said repeatedly by ECB members, remains unchanged, in line with the treaties. However, as it may be under threat, the ECB felt it had to act to protect it.

6. The ECB's action to combat climate change

Of the proposals outlined in the previous section, the most significant actions were taken on the issue of bank supervision. Actions were underway to ensure that banks took a comprehensive and strategic approach to disclosing and managing information related to climate and environmental risks (climate--related and environmental risks – C&E). Already in its *Annual Report 2019*, the ECB indicated that, as part of its mandate, it is through, among other things, financial stability monitoring and banking supervision that they intend to tackle climate change (ECB 2020b, pp. 47–49).

Elderson (2021e) notes that in 2021 less than half of banks had started to consider carbon risks. Moreover, as he noted, more than 90% of banks' practices were not in line with the ECB's expectations in 2021 (Elderson 2021e, 2022a). This is problematic as the forward-looking nature of C&E risk means that this type of analysis should be a core practice (Elderson 2021e). In 2022, C&E risk analysis was incorporated into the ECB's supervisory activities (Elderson 2022a). As Elderson (2022a) emphasized, climate and environmental risks are unavoidable. C&E risks should be treated the same as any other risk. Awareness among banks is high, but not complete. Of those who surveyed their credit positions, all acknowledged the materiality of C&E risk. Elderson pointed out that among the ECB's expectations of the commercial sector are that portfolios should be aligned with the supervisor's requirements, that risk aversion levels should be set, that risk mitigation strategies should be developed, and that credit criteria should be qualitatively defined. Importantly, the speech noted that the ECB's expectation is not that commercial banks divest themselves of carbon-intensive assets, but only that they include the risks associated with them in their analysis. New actions such as stress testing and helping commercial banks review their C&E risk management were also announced. As also noted in the *Annual Report 2022* (ECB 2023a), the banking sector has been too slow to meet ECB expectations. A stress test is performed every year (ECB 2024c). In his most recent speeches, Elderson (2024a, 2024c, 2024d) indicates that no bank yet meets all the requirements expected by the ECB, but that each requirement is met by at least one bank. This is supposed to mean that banks are slowly but effectively complying with the indicated requirements. This process should be completed by the end of 2024, otherwise banks may face financial penalties.

The ECL is also touched upon in the analysis of banking sector supervision. Elderson (2022b) points out that, while the ECL does not directly oblige ECB to act as a supervisor, it does set out a possible framework for action. Therefore, despite the lack of a direct link, the ECL is present in the ECB's supervisory activities. This is because, although the ECB is not an environmental agency, it is a reasonable realist that is aware of macroeconomic risks (Elderson 2022b).

As indicated in the previous section, the ECB abandoned the principle of market neutrality and began to green its portfolio as part of its 'portfolio tilt'.[8] However, with the onset of Russia's invasion of Ukraine, the ECB was faced with rapidly rising inflation and a new dilemma of choice. Schnabel (2023) notes that the cost of renewable energy in the initial phases of investment is higher than energy from conventional sources. A low interest rate environment encourages investment in the former and supports the decarbonization of economies. Raising interest rates could therefore make the fight against climate change more difficult. In her speech, Schnabel points out that the central bank may face a new dilemma. For a determined fight against current high inflation could lead to a weakening of decarbonization, and this could expose the economy to the risks of 'climateflation' and 'fossilflation' in the future. Schnabel (2023) also presented counterarguments, arguing that it is necessary to combat current inflation immediately. As she points out, high inflation leads to price distortions and increases uncertainty and, if not reduced in time, can become burdensome and difficult to bring down to the target level. Such a situation will be more damaging in the long term, not only to the stability of the price level, but also to the fight against climate change. It is therefore imperative to act immediately. In the end, as part of its fight against inflation, the ECB not only raised interest rates, but also stopped net asset purchases.

The dilemma outlined above was thus resolved in favour of the ECB's target. However, it cannot be overlooked that, according to the logic presented, price stability is a component, even a prerequisite, of the fight against climate change. It was chosen not because it is more important, but because, in Schnabel's view, it is essential for an effective fight against climate change. Although, at the level of real action, the ECB discontinued the 'green target' in favour of price stability, at the rhetorical level the action taken was presented as full support for both objectives in question. Moreover, in the same speech, Schnabel (2023) indicated that the ECB is not stopping the green transition and will continue to tilt its bond portfolio or green the collateral in its lending operations whenever possible and that the ECB's long--term goal remains to act in line with the objectives of the Paris Agreement. A similar view was expressed by Elderson (2024d), indicating that if the ECB were to revert to a securities-buying programme, the path forward is already set and known. The ECB will conduct the buyback with a focus on 'green securities'.

7. Conclusions

The conclusions of the speeches review are mixed. The ECB provides a comprehensive overview of the possible impact of climate change on the implementation of monetary policy, including in particular the impact on the objectives of financial stability and price stability. Among other things, climate risks are presented in detail. Several proposals on how the strategy and instruments can be modified between 2018 and 2022 are also discussed. Elements of this discussion are raised in the annual reports, among others. However, despite the review of the strategy that took place in 2021, no revolutionary changes were decided upon. The inflation target was not raised, nor was the inflation index changed. It seems that the key factor that prevented this from happening was the sudden return of high inflation, triggered in large part by Russia's invasion of Ukraine. Thus, the burden of discussion at the ECB returned to the key (according to the treaties) problem of preserving price stability.

[8] Detailed technical and quantitative information on this issue can be found under the following headings: ECB (2023b, 2024d).

Things are quite different from the point of view of the other important task performed by the ECB, namely the supervision of credit institutions. Here, the changes are much more far-reaching. The ECB has introduced new supervision requirements and banks are gradually beginning to meet them. Whether meeting the requirements set by the supervisor will help to minimize so-called climate risks remains an open question.

As a final point, there have been shifts in the narrative between 2018 and 2024, with the first significant one occurring in 2020 after Izabel Schnabel and Frank Endelson joined the ECB's Executive Board and Christine Lagrande took over the ECB presidency. The number of speeches on climate change has increased dramatically. Speeches no longer cited the risk of green investments among the climate risks; moreover, they boasted of Europe's participation in them and asserted the need to develop green markets. Above and beyond this, the principle of market neutrality was negated (irretrievably, as it happens) between 2020 and 2022. The ECB is 'tilting' its portfolio towards 'green bonds' and introducing new requirements for issuers with a high carbon footprint.

However, the number of speeches on climate change is declining due to high inflation. As has been highlighted, the CSPP programme has been halted to help bring inflation down to target. According to the ECB's narrative, governments, central banks, businesses, and citizens are faced with the choice of elevated inflation resulting from the accelerated transition today or high inflation resulting from the realization of climate risks in the future. By temporarily halting its green bond purchases, the ECB appears to have chosen the latter. This choice was based on the legal obligation to act by treaty requirements, i.e. to ensure stable price levels. There is a clear disconnect between emphasizing the need for a green transition and real action.

What is unfortunately missing from the speeches is attention to the underlying problems of the multiplicity of objectives. In their speeches, the ECB Executive Board members do not propose any new tools to support the green transition. What is more, they remove a tool from the pool already available. Tilting the portfolio and abandoning market neutrality means using QE only for the green transition. This raises two controversies. Firstly, the ECB, by adopting a *de facto* new target, may face the Tinbergen problem, i.e. a mismatch between the number of instruments and the number of targets. And secondly, how will the ECB deal with conflicting targets? The first controversy seems to be unanswered for now; however, the second case is resolved for today. The ECB has stopped CSPP to fight inflation. As of today, the hierarchy of objectives seems to be intact. Although for the time being, green transition issues are not so important for the ECB, it can be expected that with inflation returning to target in the euro area, the ECB's Executive Board will again face the dilemma of supporting the green transition.

Similar conclusions can be drawn from an analysis of the annual reports. The most information on the evolution of the impact of climate change on monetary policy can be found in the 2019–2021 documents. These reports devote a lot of attention to the potential actions the ECB is planning and the causal links between climate change and monetary policy. Later documents already focus mainly on the implementation of announced policies, and the reporting of their effects, such as the creation of new indicators related to climate change. No new 'strategies' appear, and the fight against climate change seems to be linked mainly to financial stability.

A separate issue arising from the ECB's actions is the recommendations to other central banks in the European Union, in particular those outside the Eurozone. While it seems certain that other central banks should also take climate change risks into account in their policies, extending (let alone changing) targets seems a very far-reaching intervention. However, other EU central banks should look at the ECB's actions to identify risks to monetary policy better.

References

Abiry R., Ferdinandusse M., Ludwig A., Nerlich C. (2022), *Climate change mitigation: How effective is green quantitative easing?*, ZEW-Centre for European Economic Research Discussion Paper, 22-027.

Baer M., Campiglio E., Deyris J. (2021), It takes two to dance: institutional dynamics and climate-related financial policies, *Ecological Economics*, 190, December, 107210.

Beckmann J., Gern K., Jannsen N., Sonnenberg N. (2023), *Climate Change and Monetary Policy in the Euro Area*, Monetary Dialogue Papers, November, European Parliament.

Behn M., Forletta M., Reghezza A. (2024), *Buying insurance at low economic cost – the effects of bank capital buffer increases since the pandemic*, Working Paper Series, 2951, European Central Bank.

BoE (2024), *Climate change*, Bank of England, https://www.bankofengland.co.uk/climate-change.

BoJ (2021), *The Bank of Japan's strategy on climate change*, Bank of Japan, https://www.boj.or.jp/en/about/release_2021/rel210716b.pdf.

Boneva L., Ferrucci G., Mongelli F.P. (2021), *To be or not to be "green": How can monetary policy react to climate change?*, ECB Occasional Paper, 285.

Boneva L., Ferrucci G., Mongelli F.P. (2022a), Climate change and central banks: what role for monetary policy?, *Climate Policy*, 22(6), 770–787.

Boneva L., Ferrucci G., Mongelli F. (2022b), *Monetary policy and the green transition*, SUERF Policy Brief, 268, The European Money and Finance Forum.

Ciccarelli M., Kuik F., Hernández C.M. (2023), *The asymmetric effects of weather shocks on euro area inflation*, Working Paper Series, 2789/March, European Central Bank.

Clapp Ch., Lund H.F., Aamaas B., Lannoo E. (2017), *Shades of climate risk. Categorizing climate risk for investors*, CICERO, https://pub.cicero.oslo.no/cicero-xmlui/handle/11250/2430660.

Claveau F., Dietsch P., Dion J., Fontan C. (2022), Green central banking, in: J. Sandberg, L. Warenski (eds.), *The Philosophy of Money and Finance*, Oxford University Press.

Deyris J. (2023), Too green to be true? Forging a climate consensus at the European Central Bank, *New Political Economy*, 28(5), 713–730.

ECB (2018), *Annual Report 2017*, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ar2017.en.html.

ECB (2019), *Annual Report 2018*, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ar2018~d08cb4c623.en.html.

ECB (2020a), *Guide on climate-related and environmental risks supervisory expectations relating to risk management and disclosure*, European Central Bank.

ECB (2020b), *Annual Report 2019*, European Central Bank, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ar2019~c199d3633e.en.html.

ECB (2021a), *Climate change and monetary policy in the euro area*, Occasional Paper Series, 271, European Central Bank.

ECB (2021b), *Annual Report 2020*, European Central Bank, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ar2020~4960fb81ae.en.html.

ECB (2022a), *Good practices for climate-related and environmental risk management. Observations from the 2022 thematic review*, European Central Bank, https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.thematicreviewcercompendiumgoodpractices112022~b474fb8ed0.en.pdf.

ECB (2022b), *Annual Report 2021*, European Central Bank, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ecb.ar2021~14d7439b2d.en.html.

ECB (2023a), *Annual Report 2022*, European Central Bank, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ecb.ar2022~8ae51d163b.en.html.

ECB (2023b), *Climate-related financial disclosures of the Eurosystem's corporate sector holdings for monetary policy purposes*, European Central Bank.

ECB (2023c), *Climate-related financial disclosures of the ECB's non-monetary policy portfolios*, European Central Bank.

ECB (2024a), *The ECB's monetary policy strategy statement*, European Central Bank, https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_statement.en.html.

ECB (2024b), *Annual Report 2023*, European Central Bank, https://www.ecb.europa.eu/press/annual-reports-financial-statements/annual/html/ecb.ar2023~d033c21ac2.en.html.

ECB (2024c), *Climate-related financial disclosures of the Eurosystem's corporate sector holdings for monetary policy purposes*, European Central Bank.

ECB (2024d), *Climate-related financial disclosures of the ECB's non-monetary policy portfolios,* European Central Bank.

Fabisik K., Ryf M., Schäfer L., Steffen S. (2023), *Do debt investors care about ESG ratings?* Working Paper Series, 2878, European Central Bank.

FRS (2023), *Agencies issue principles for climate-related financial risk management for large financial institutions,* Federal Reserve System, https://www.federalreserve.gov/newsevents/pressreleases/bcreg20231024b.htm.

Ferrari M., Pagliari M.S. (2021), *No country is an island: international cooperation and climate change*, Working Paper Series, 2568, European Central Bank.

Giannetti M., Jasova M., Loumioti M., Mendicino C. (2023), *"Glossy green" banks: the disconnect between environmental disclosures and lending activitie*s, Working Paper Series, 2882, European Central Bank.

IPCC (2014), *Climate Change 2014. Synthesis Report*, Intergovernmental Panel on Climate Change.

IPCC (2019), *Global Warming of 1.5°C*, Intergovernmental Panel on Climate Change.

IPCC (2021), *Climate Change 2021. The Physical Science Basis*, Intergovernmental Panel on Climate Change.

IMF (2019), *Global Financial Stability Report*, International Monetary Fund.

Kotecki L. (2023), Potencjalny wpływ celów i ryzyk klimatycznych na prowadzenie polityki pieniężnej i działalność banku centralnego, *Studia BAS*, 2(74), 25–41.

Kotz M., Kuik F., Lis E., Nickel C. (2023), *The impact of global warming on inflation: averages, seasonality and extremes*, Working Paper Series, 2821, European Central Bank.

McConnell A., Yanovski B., Lessmann K. (2022), Central bank collateral as a green monetary policy instrument, *Climate Policy*, 22(3), 339–355, DOI: 10.1080/14693062.2021.2012112.

Nakov A., Thomas C. (2023), *Climate-conscious monetary policy*, ECB Working Paper Series, 2845.

NGFS (2019), *A call for action. Climate change as a source of financial risk*, Network for Greening the Financial System, https://www.ngfs.net/system/files/import/ngfs/medias/documents/ngfs_first_comprehensive_report_-_17042019_0.pdf.

NGFS (2020), *Overview of Environmental Risk Analysis by Financial Institutions,* Network for Greening the Financial System, https://www.ngfs.net/system/files/import/ngfs/medias/documents/overview_of_environmental_risk_analysis_by_financial_institutions.pdf.

Schoenmaker D. (2021), Greening monetary policy, *Climate Policy*, 21(4), 581–592, DOI: 10.1080/14693062.2020.1868392.

Preunkert J. (2022), European monetary policy: between market neutrality and climate change, *Culture, Practice & Europeanization*, 7(2), 192–208.

Ranger N., Alvarez J., Freeman A., Harwood T., Obersteiner M., Paulus E., Sabuco J. (2023), *The Green Scorpion: the Macro-Criticality of Nature for Finance. Foundations for scenario-based analysis of complex and cascading physical nature-related risks,* University of Oxford.

RBNZ (2024), *Climate-related disclosure*, https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/publications/climate-related-disclosures/rbnz-climate-related-disclosure-2024.pdf.

Sveriges Riksbank (2023), *Central banks and climate change*, https://www.riksbank.se/en-gb/about-the-riksbank/the-tasks-of-the-riksbank/the-riksbanks-work-on-sustainability/climate-report/the-riksbanks-climate-report2/central-banks-and-climate-change.

Thiemann M., Büttner T., Kessler O. (2023), Beyond market neutrality? Central banks and the problem of climate change, *Finance and Society*, 9(1), 14–34.

UN (2024), *The Paris Agreement*, United Nations, https://unfccc.int/process-and-meetings/the-paris-agreement.

Zaleska M. (2022), Wybrane trendy w bankowości centralnej, *Bank i Kredyt*, 53(3), 279–294.

Speeches

BoE (2025), *Speeches from the Bank of England*, https://www.bankofengland.co.uk/news/speeches.

BoJ (2025), *Speeches and statements,* Bank of Japan, https://www.boj.or.jp/en/about/press/index.htm.

Carney M. (2015), *Breaking the tragedy of the horizon – climate change and financial stability*, https://www.bankofengland.co.uk/-/media/boe/files/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability.pdf.

Cœuré B. (2018), *Monetary policy and climate change*, https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181108.en.html.

Cœuré B. (2019), *Economics as a profession: from science to practice*, https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp191128~9216194199.en.html.

Cipollone P. (2024), *Europe's tragedy of the horizon: the green transition and the role of the ECB*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240526~ef011def12.en.html.

Guindos L. (2019a), *Speaking notes on climate-related risks*, https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp191017~8c8b08be0d.en.html.

Guindos L. (2019b), *Implications of the transition to a low-carbon economy for the euro area financial system*, https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp191121_1~af63c4de7d.en.html.

Guindos L. (2021), *Climate change and financial integration*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210527~6500964615.en.html.

Elderson F. (2021a), *All the way to zero: guiding banks towards a carbon-neutral Europe*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210429~3f8606edca.en.html.

Elderson F. (2021b), *The embrace of the horizon: forcefully moving with the changing tide for climate action in financial sector policies*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210603~2da57607e2.en.html.

Elderson F. (2021c), *Patchy data is a good start: from Kuznets and Clark to supervisors and climate*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210616~44c5a95300.en.html.

Elderson F. (2021d), *The role of supervisors and central banks in the climate crisis*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp211019~84d1b39bcb.en.html.

Elderson F. (2021e), *Overcoming the tragedy of the horizon: requiring banks to translate 2050 targets into milestone*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp211020~03fba70983.en.html.

Elderson F. (2022a), *Towards an immersive supervisory approach to the management of climate-related and environmental risks in the banking sect*or, https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220218~c55e646426.en.html.

Elderson F. (2022b), The European climate law and the European Central Bank, https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp221201_1~435e6ea81a.en.html.

Elderson F. (2023), *Monetary policy in the climate and nature crises: preserving a "Stabilitätskultur"*, https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp231122~e12db02da3.en.html.

Elderson F. (2024a), *Taking into account climate and nature in monetary policy and banking supervision around the world*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240327_1~000d88f066.en.html.

Elderson F. (2024b), *"Know thyself" – avoiding policy mistakes in light of the prevailing climate science*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240412~0d4a2636db.en.html.

Elderson F. (2024c), *Nature-related risk: legal implications for central banks, supervisors and financial institutions*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240906~54436f6891.en.html.

Elderson F. (2024d), *Sustainable finance: from "eureka!" to action*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp241004~e2c8a5aae1.en.html.

Mersch Y. (2018), *Climate change and central banking*, https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181127.en.html.

Lagarde Ch. (2020a), *Remarks on the occasion of receiving the Grand Prix de l'Économie 2019 from Les Echos*, https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200205_1~cc8a8787f6.en.html.

Lagarde Ch. (2020b), *Climate change and the financial sector*, https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200227_1~5eac0ce39a.en.html.

Lagarde Ch. (2020c), *Hearing at the Committee on Economic and Monetary Affairs of the European Parliament*, https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200608~4225ba8a1b.en.html.

Lagarde Ch. (2021a), *Climate change and central banking*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210125~f87e826ca5.en.html.

Lagarde Ch. (2021b), *European Parliament plenary debate on the ECB Annual Report*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210208~296c27d246.en.html.

Lagarde Ch., Guindos L. (2021), *Press conference*, https://www.ecb.europa.eu/press/pressconf/2021/html/ecb.sp210708~ab68c3bd9d.pl.html#qa.

Lagarde Ch. (2022), *European Parliament plenary debate on the ECB Annual Report*, https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220214_1~ec87ef8c3a.en.html.

Lagarde Ch. (2023), *Remarks at the Summit for a new global financing pact*, https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230623~3e2a3aaa82.en.html.

Lagarde Ch. (2024a), *Central banks in a changing world: the role of the ECB in the face of climate and environmental risks*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240607_1~faecc95713.en.html.

Lagarde Ch. (2024b), *Policymaking in a new risk environment*, https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240614~baa283d69a.en.html.

Lautenschläger S. (2018), *Ten years after the crisis – risks, rules and supervision*, https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp181030.en.html.

Lautenschläger S. (2019a), *Central bankers, supervisors and climate-related risks*, https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp190417~efcf14da2a.en.html.

Lautenschläger S. (2019b), *A call for Europe*, https://www.ecb.europa.eu/press/key/date/2019/html/ecb.sp191030~c6127fd888.en.html.

RBNZ (2025), *News, events and speeches*, Reserve Bank of New Zealand, https://www.rbnz.govt.nz/news-and-events/speeches#sort=%40computedsortdate%20descending.

Schnabel I. (2020a), *Never waste a crisis: COVID-19, climate change and monetary policy*, https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200717~1556b0f988.en.html.

Schnabel I. (2020b), *When markets fail – the need for collective action in tackling climate change*, https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200928_1~268b0b672f.en.html.

Schnabel I. (2021a), *From green neglect to green dominance?*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210303_1~f3df48854e.en.html.

Schnabel I. (2021b), *From market neutrality to market efficiency*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210614~162bd7c253.en.html.

Schnabel I. (2021c), *Societal responsibility and central bank independence*, https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210527_1~ae50e2be97.en.html.

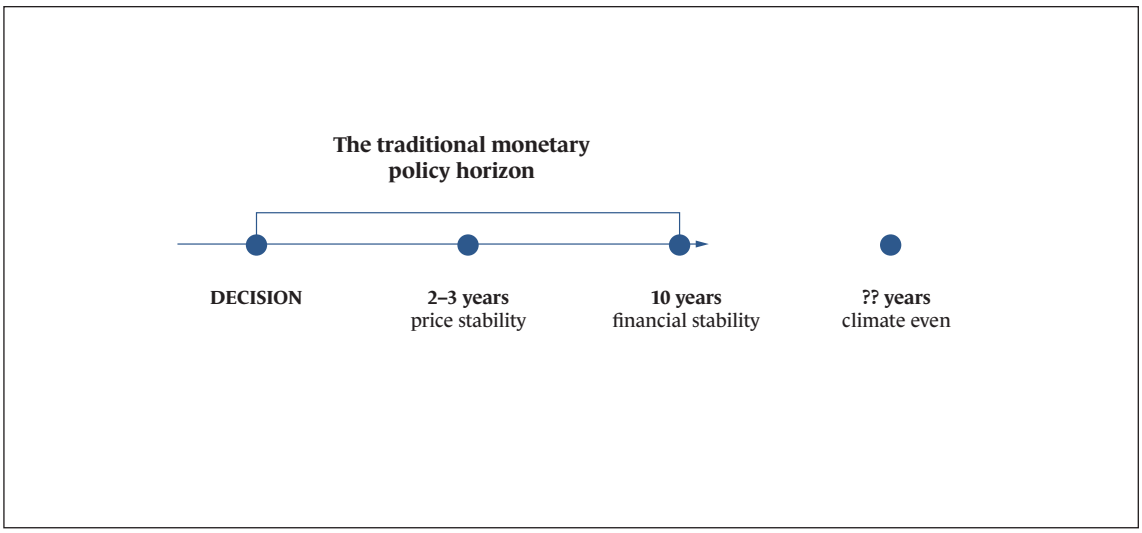
Schnabel I. (2022a), *Looking through higher energy prices? Monetary policy and the green transition*, https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220108~0425a24eb7.en.html.

Schnabel I. (2022b), *A new age of energy inflation: climateflation, fossilflation and greenflation*, https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220317_2~dbb3582f0a.en.html.

Schnabel I. (2023), *Monetary policy tightening and the green transition*, https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230110~21c89bef1b.en.html.

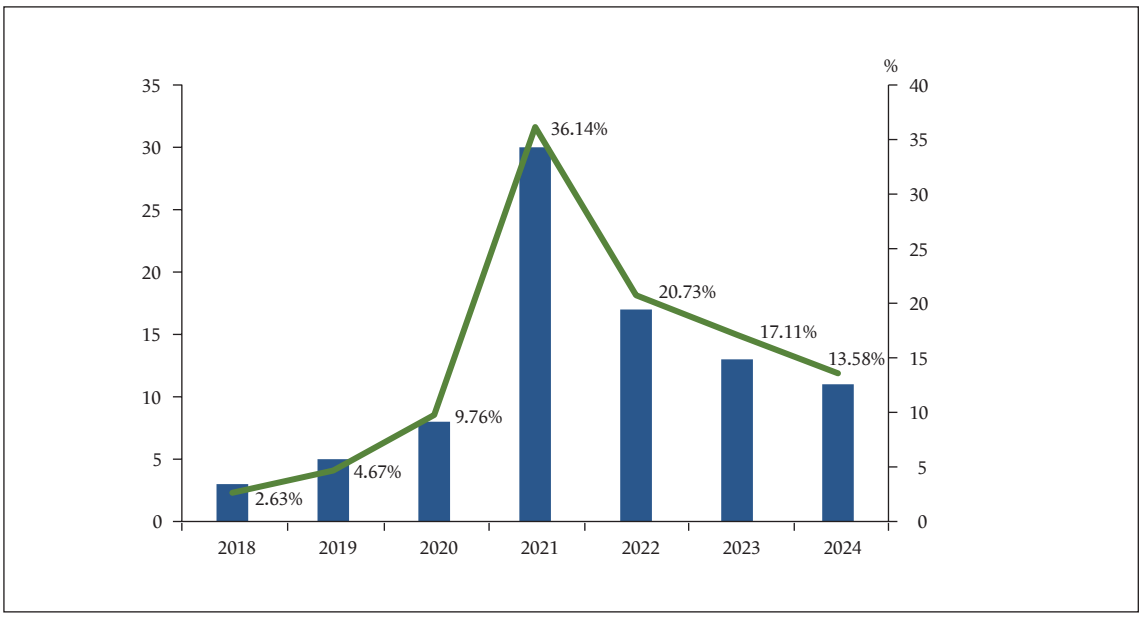
Appendix

Figure 1
Tragedy of horizon



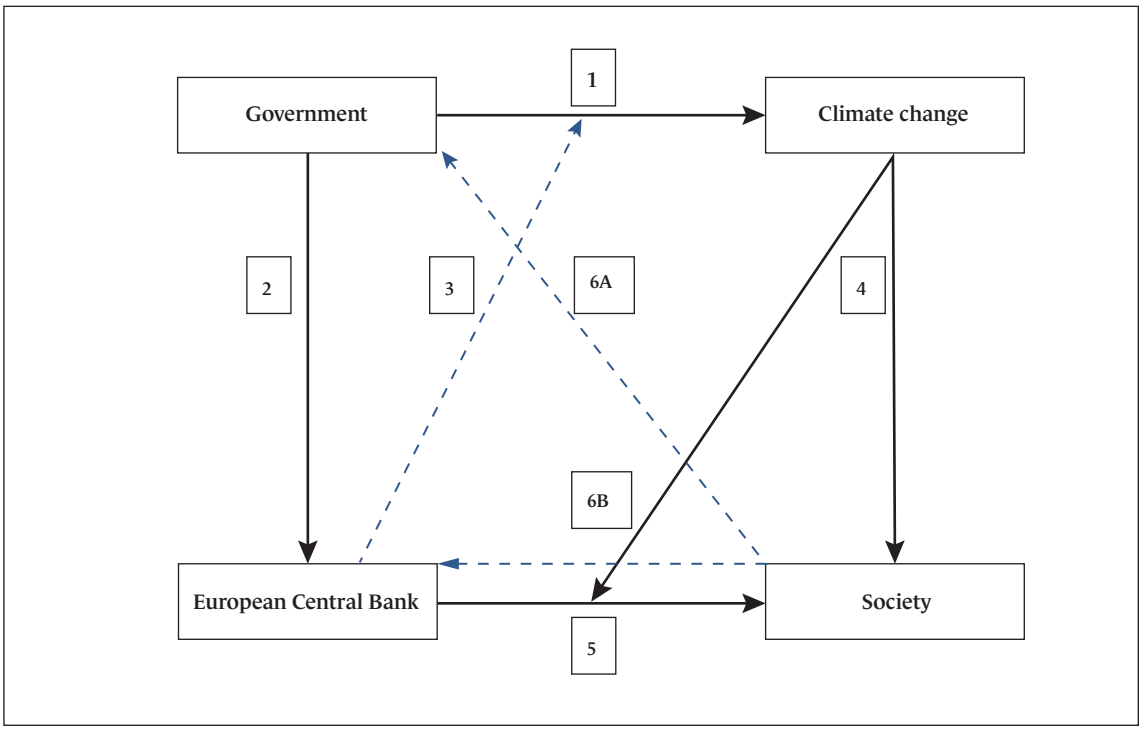
Source: own elaboration based on Carney (2015).

Figure 2
Number and percentage of total speeches with the keyword 'climate change'



Source: own elaboration based on ECB speech database (ECB 2024b).

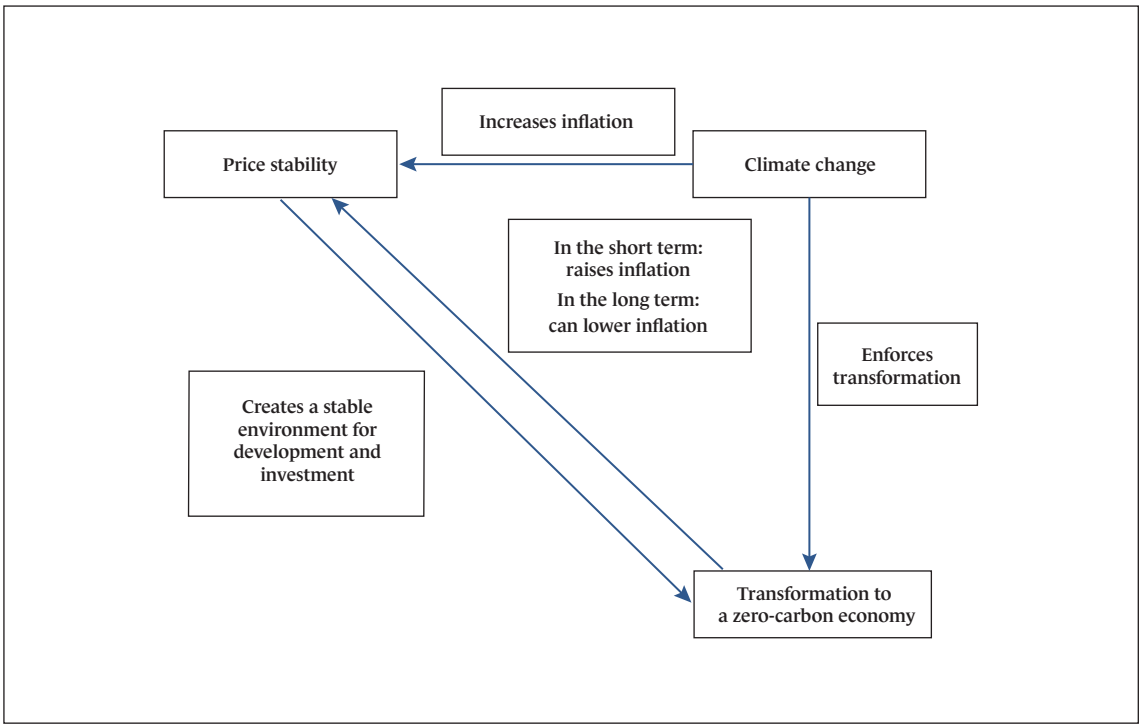
Figure 3
The ECB and climate change – a pattern of relationships



1 – government undertakes the fight against climate change (e.g. Paris targets)
2 – government assigns responsibilities to the central bank (e.g. price stability in treaties)
3 – the central bank supports the government's fight against climate change (e.g. in line with a second objective)
4 – climate change poses a threat to price stability and to society
5 – ECB commits to treaty objectives
6A – the public gives a mandate to the government to fight climate change
6B – the public does not give the ECB a mandate directly, it can exert pressure

Source: own elaboration based on ECB speeches.

Figure 4
Price stability and green transition



Source: own compilation based on speeches by ECB members.

Table 1
Forms of active 'green' action by central banks

From of action	Description	Justification/impact
Greening non--monetary policy portfolios	Investment in green bonds and instruments through central bank assets excluded from monetary policy, e.g. wage fund, pension fund	As these funds remain outside the use of the monetary authorities, they can be used for green investments without violating the central bank's mandate. Such a policy has been introduced by central banks in France, Italy and Finland, among others
Greening foreign reserve management	Purchasing green assets, e.g. denominated in that currency, using foreign exchange reserves	Possible decrease in central bank liquidity. Greater diversification of assets
Greening of outright asset purchase programmes	Purchase of securities by the central bank of those companies or institutions whose production is climate-neutral or pursues pro-climate objectives	Change in the structure of central bank assets, maturity swap of debt securities, decline in yields. Negation of the market neutrality of the central bank
Greening central bank refinancing operations	The central bank can only extend credit or finance investments (e.g. through share purchases) to corporations with a low carbon footprint	Possible improvement in the financial situation of so-called 'green' companies. However, direct action on the capital market will make central banks shareholders in companies. Moreover, they expose themselves to a capital loss

Source: own elaboration based on Boneva, Ferrucci, Mongelli (2022a).

Table 2
Number of speeches on climate change in the selected topic

Keywords	2018–2019	2020	2021	2022	2023	2024	Total
Central banking, monetary policy	5 (63%)	4 (50%)	18 (60%)	11 (65%)	5 (38%)	7 (54%)	50 (57%)
Price stability	0	0	5 (17%)	4 (24%)	1 (8%)	0	10 (11%)
Strategy review	0	1 (13%)	3 (10%)	1 (6%)	0	0	5 (6%)
Financial stability	2 (25%)	0	4 (13%)	2 (12%)	3 (23%)	1 (9%)	12 (14%)
Banking sector, banking supervision	3 (38%)	2 (25%)	16 (54%)	5 (30%)	2 (16%)	3 (28%)	31 (36%)

Note: each speech could be assigned zero, one or many of the keywords indicated in Table 2.

Source: own elaboration based on ECB speech database (ECB 2024b).

Table 3
Selected statements linking climate change to ECB objectives

It influences	Examples of statements suggesting a relationship	Statements suggesting no connection
Price stability	Cœuré (2018); Lagarde (2020b, 2020c, 2021a); Schnabel (2020a)	Mersch (2018)
Second objective (understood as top-level economic growth)	Cœuré (2018, 2019); Lagarde (2020b); Schnabel (2020a)	No statement
Financial stability	Mersch (2018); Lautenschläger (2019a, 2019b); Guindos (2019a, 2019b); Lagarde (2021a)	No statement

Source: own elaboration based on analysed speeches of ECB members.

Table 4
Risks arising from climate change

	Description	Type of risk
Physical risks	It relies on losses resulting from unexpected or extreme weather events such as droughts, floods, hurricanes, landslides. Uninsured assets affected by such events can have a negative impact on banks if the asset was, for example, part of the collateral for some liability	Exogenous
Transition to a low-carbon economy	It relies on the immediate costs that companies will incur to comply with the new legal requirements*	Endogenous
Green finance risks	The growing market for so-called green finance could grow out of control and thus be a threat to the stability of the financial markets	Exogenous

* However, some (e.g. Lautenschläger 2018) emphasise that the risk of omission is much more serious than the risk of action.

Source: own elaboration based on analysed speeches of ECB members.

Table 5
New types of climate-related inflation

Type of shock	Description	Link to climate change risk
Climateflation	Results from the realization of physical risk. It consists of an increase in product prices due to the occurrence of destructive climatic events	Physical risk
Fossilflation	This is due to the turbulence in the energy commodity markets	Unspecified link
Greenflation	It stems from the realization of the transition risk. The transition towards renewable energy requires the construction of resource-intensive power plants	Risk of transition

Source: compiled from Schnbel (2022b).

Table 6
Proposed ECB actions and their implementation

Proposal	Source of proposals	Implementation	Sources of implementation
Development of tools, indicators and methods that can be used to analyse climate risk in the financial system	Lautenschläger (2019b); ECB (2022b, p. 57)	Models and indicators have been developed to help assess analyses of the impact of the energy transition in the euro area	Elderson (2023); ECB (2023a, p. 72)
Greening of the ECB's financial portfolio (with market portfolio neutrality)	Cœuré (2018); Lautenschläger (2019b); ECB (2022b, p. 57)	The ECB has systematically greened its asset portfolio, abandoning the principle of market portfolio neutrality. From July 2023, buying stopped in order to carry out disinflation in the euro area. Assurance of purchases with a tilted wallet if asset re--acquisitions occur	Schnabel (2021a); Elderson (2023, 2024d) ECB (2024b, p. 86)
Investigating the impact of climate change on the conduct of monetary policy. Building stress test models	Cœuré (2018); Lautenschläger (2019a, 2019b); Lagarde (2020a)	Preparation of a set of macroeconomic models to analyse the effects of the energy transition	Lagarde (2021a); Elderson (2023), ECB (2024b, p. 69)
Getting commercial banks to take climate risk into account through banking supervisory action	Lautenschläger (2019a, 2019b); ECB (2022b, p. 57)	In 2021, more than half of the banks surveyed did not include climate risk in their analyses. In 2024 all banks should be fully aligned with supervisory expectations	Elderson (2021c, 2024a)
Getting commercial banks to disclose information related to climate risk	Lagarde (2020a); ECB (2022b, p. 57)	The ECB has issued a guide for commercial banks to help them identify and correctly disclose climate risks	Lagarde (2021a); Elderson (2021b); ECB (2022a, 2021c, p. 51)

Source: own elaboration based on ECB speeches analysed.

Czy to „zielona" dominacja czy tylko „zielona" narracja? Przypadek EBC

Streszczenie

Wydaje się, że istnieje naukowy konsensus zarówno w sprawie rosnących zagrożeń wynikających ze zmian klimatu (IPCC 2021), jak i ich wpływu na warunki prowadzenia polityki banku centralnego (Kotz i in. 2023; Ciccarelli, Kuik, Hernández 2023; Beckmann i in. 2023, s. 29–30). Już w 2015 r. Mark Carney, ówczesny prezes Banku Anglii, argumentował, że zmiany klimatu mogą oddziaływać na stabilność finansową. Wskazywał zagrożenia, które mogą wpłynąć na sektor bankowy i zakłócić realizację celów przez bank centralny. Od tego czasu członkowie zarządów banków centralnych mają coraz większą świadomość zagrożeń płynących ze zmian klimatu (BoE 2024; BoJ 2021; FRS 2023; Sveriges Riksbank 2023). Co więcej, rządy państw narodowych również zapowiadają walkę ze zmianami klimatu, czego przykładem może być porozumienie paryskie. W tym nowym środowisku muszą się odnaleźć banki centralne, w tym Europejski Bank Centralny.

Celem artykułu było przedstawienie zmian w narracji EBC dotyczących „zielonej" polityki banku centralnego w ostatnich latach. Opisano, jak członkowie zarządu EBC postrzegają wpływ zmian klimatu na cele EBC, a także jakie rozwiązania były i są proponowane w tym kontekście. Wskazano też, które propozycje przeniesiono z poziomu retoryki na poziom działania. Analizie poddano zamieszczone na stronie EBC przemówienia członków zarządu EBC z lat 2018–2024, stosując jako słowo kluczowe sformułowanie „zmiany klimatu" (*climate change*). W artykule wykorzystano podejście oparte na krytyce źródeł.

Artykuł składa się z sześciu głównych części. Jako tło przedstawiono przegląd badań związanych ze zmianami klimatu i bankowością centralną. Następnie zamieszczono części badawcze. W pierwszej kolejności opisano, jak wśród członków zarządu EBC rozwijała się świadomość zmian klimatu. Następnie przedstawiono, jak poszczególni członkowie zarządu EBC postrzegają główne związki między zmianami klimatu a celami EBC. Kolejno zaprezentowano główne postulaty dotyczące możliwego działania EBC na rzecz walki ze zmianami klimatu. W ostatniej części opisano, które z postulatów zostały zrealizowane i z jakim skutkiem.

Przeprowadzona analiza pozwoliła na sformułowanie kilku wniosków. Po pierwsze, część członków zarządu EBC uznaje, że zmiany klimatu mają negatywny wpływ zarówno na stabilność poziomu cen, jak i na stabilność finansową i, co za tym idzie, EBC musi uwzględniać to w swoich analizach. Jednocześnie zarząd EBC zaznacza, że realizacja celów porozumienia paryskiego jest zadaniem przede wszystkim polityki fiskalnej. EBC wyraźnie odżegnuje się od prowadzenia polityki klimatycznej, ale zapewnia gotowość do działania w celu jej realizacji tak długo, jak długo nie jest to sprzeczne z głównym celem EBC.

Z analizy materiałów źródłowych wynika również, że w zarządzie EBC toczy się szeroko zakrojona dyskusja, dotycząca dostosowania strategii i instrumentów do prowadzenia polityki klimatycznej. Należy podkreślić, że nie było postulatów dotyczących modyfikacji celu głównego EBC i na razie nie nastąpiła również żadna zmiana strategii.

Wnioski płynące z porównania narracji EBC z jego działaniami są zatem wyjątkowo niejednoznaczne. Widać, że działania pokrywają się z deklaracjami tylko w przypadku funkcjonowania EBC jako nadzorcy nad instytucjami kredytowym.

Istnieją wcześniejsze artykuły na ten temat. Wskazuje się w nich głównie polityczne aspekty wprowadzenia „zielonej narracji" w EBC (Deyris 2023). Inne poruszają tylko jeden z licznych problemów przedstawianych w wystąpieniach członków władz EBC. Jednym z nich jest neutralność rynkowa (Thiemann, Büttner, Kessler 2023; Preunkert 2022), zgodnie z którą podczas zakupu aktywów EBC nie powinien traktować preferencyjnie żadnego podmiotu. W niniejszym artykule przeanalizowano więcej wystąpień członków władz EBC, a także starano się bardziej kompleksowo przedstawić postrzeganie przez nich wpływu zmian klimatu na bankowość centralną.

Po analizie wystąpień wyłaniają się dwa pytania. Czy EBC będzie kontynuował „zazielenianie" swoich działań, przede wszystkim w zakresie celów polityki pieniężnej? A jeśli tak, to czy jest w stanie przedstawić nowe instrumenty, które będą temu służyły? Obecnie EBC nie proponuje nowych instrumentów, a jedynie „zielone" formy obecnych. Dochodzi *de facto* do zwiększania liczby celów, bez jednoczesnego zwiększenia liczby instrumentów. Co więcej, w żadnej z wypowiedzi nie doprecyzowano, na czym „zielony cel" miałby polegać i jak wyglądałaby strategia działania, gdyby obowiązywał.

Osobną kwestią wynikającą z działań EBC są rekomendacje dla innych banków centralnych Unii Europejskiej. Prawdopodobne jest, że pozostałe banki centralne również powinny brać pod uwagę zagrożenia wynikające ze zmian klimatu w swojej polityce, jednak rozszerzanie celów (nie mówiąc o ich zmianie) wydaje się bardzo silną interwencją. Pozostałe banki centralne UE, zwłaszcza NBP, powinny również przyglądać się działaniom EBC w celu lepszego identyfikowania zagrożeń dla polityki pieniężnej.

Słowa kluczowe: polityka klimatyczna, zmiany klimatu, bankowość centralna, „zielona" polityka pieniężna