

## Sustainability Objectives and Central Banks

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This article examines how addressing climate-related risks and supporting mitigation and adaptation policies fit into central bank mandates. According to this goal, the research conducts an empirical examination of current central bank mandates to investigate the extent to which central banks are equipped with objectives that task them to enhance sustainability and mainstream green finance. The analysis of mandates and objectives using the IMF's Central Bank Legislation Database. Out of 159 IMF member countries and monetary unions, only 12 % have explicit sustainability mandates, while 33 % are mandated to support the government's policy priorities, which mostly include sustainability goals. The research concludes that it should be clear that climate change and mitigation policies will have very profound impacts on economies, with potentially significant implications for price, macroeconomic, and financial stability. These need to be tackled by central banks as part of their core responsibilities. A central bank that does not address climate risks is failing to do its job.

### 1. Introduction

Central banks are important because they function as key regulatory and monetary authorities with significant influence on a country's economic and financial systems (Koetter et al., 2014). Central banks act as regulatory entities that maintain the stability of the economic and financial systems. Through various monetary policy tools, they regulate the money supply, interest rates, and credit availability to prevent inflation, deflation, and financial crises (Gunningham, 2020). Central banks control important economic variables such as interest rates, reserve requirements, and open market operations. By adjusting these variables, they can influence economic outcomes, such as inflation, unemployment, and economic growth. Central banks use economic models based on mathematical and statistical principles to analyze and predict economic trends and outcomes. These models help them make informed decisions about monetary policy and its potential impact on the economy. Central banks also conduct empirical research and analysis to study historical economic data, identify patterns, and draw conclusions about the relationships between various economic factors. Central banks base their monetary policy decisions on data and economic indicators, such as inflation rates, GDP growth, and employment figures. Data-driven decision-making is a fundamental principle, as it relies on objective and verifiable information (Herger, 2016).

Also, central banks play a pivotal role in advancing sustainability within the global economy and financial system. As guardians of monetary policy and financial stability, they wield considerable influence over economic activities and investment decisions. Recognizing the pressing challenges posed by climate change and environmental degradation, central banks (e.g., Czech Republic, France, Hungary, Italy, India, and Singapore) are increasingly incorporating sustainability considerations into their mandates and policies (Lastra, 2015).

The importance of central banks in the context of sustainability arises from several key factors. First, their systemic influence empowers them to shape financial flows toward environmentally and socially sustainable projects. By integrating sustainability into their policies, they incentivize financial institutions and businesses to adopt greener practices, ultimately driving a more sustainable economic landscape. Secondly, central banks are entrusted with ensuring financial stability, making them responsible for identifying and mitigating climate-related risks. As climate change causes some really serious and interconnected risks (physical risks, transition risks, liability risks, market risks, and also systemic risks) in the financial system (Monasterolo, 2020), it

increasingly threatens the stability of the financial system, addressing environmental risks becomes a vital component of their mandate. Thirdly, central banks' long-term planning horizon aligns naturally with sustainability goals. With the foresight to consider challenges that may unfold over decades, they can help steer the economy towards a more resilient and sustainable path.

Moreover, central banks' actions send strong signals to financial markets and investors. By promoting sustainability and engaging with green finance initiatives, they encourage the development of sustainable financial instruments such as green bonds, fostering investments in environmentally responsible projects (Boneva et al., 2022).

Furthermore, central banks can play a key role in global coordination efforts. As many sustainability challenges transcend national borders, international collaboration becomes imperative. Initiatives like the Network for Greening the Financial System enable central banks to work together, driving concerted action towards common sustainability objectives (Hinselmann, 2023).

This paper aims to examine the objectives of the central banks in the context of sustainability. Section 2 provides an analysis of the theoretical background of central bank core objectives and sustainability. Section 3 describes the methodology of the empirical study of the central banks' objectives. Section 4 provides the empirical data, describes the green monetary policy, and diverts to the National Bank of Hungary's exceptional policy mandate. Section 5 summarises the conclusions of the research.

## **2. Theoretical background**

### **2.1 Central bank's core objectives**

The core objectives of most central banks – often specified in the mandate as the singular or primary objective of a central bank – are safeguarding low and stable inflation or maintaining price stability. Price stability refers to a situation in which the general level of prices for goods and services in an economy remains relatively constant or experiences only minor fluctuations over time. In other words, it means that there is little or no significant inflation or deflation in the economy. Price stability is a desirable goal for central banks and policymakers because it provides several important benefits for the economy and society. With price stability, the value of money remains relatively constant over time. Consumers and businesses can make economic decisions and plan for the future with more confidence, knowing that the purchasing power of their money will not erode rapidly due to high inflation. Inflation and deflation introduce uncertainty into the economy, making it challenging for individuals, businesses, and investors to make long-term financial decisions. Price stability reduces this uncertainty and promotes a more stable economic environment. When prices are stable, it becomes easier for businesses to set prices for their products and services, and wage negotiations can be more straightforward. This stability can contribute to a more balanced and sustainable economic growth path. Inflation erodes the value of money over time, leading to higher transaction costs as prices change frequently. Price stability reduces the need for frequent price adjustments, lowering transaction costs for businesses and consumers. In an environment of price stability, investors can make more informed decisions about allocating their resources and funding long-term projects without the added risk of unpredictable inflation or deflation (Ugolini, 2017).

Although there has been a trend since the 1990s to assign responsibility for financial stability to dedicated financial supervisory authorities, it has received renewed attention as a crucial central banking objective against the background of the Global Financial Crisis (Dikau and Volz, 2021). Financial stability – often specified in the mandate as a secondary objective of a central bank – is the condition of the financial system in which the financial system can sustainably contribute to economic development by fulfilling its functions. There is no systemic risk in the financial system that would cause significant harm to those who are not clients or counterparties to financial institutions by interfering with the performance of the functions of the financial system, and participants in the financial system are resilient to endogenous and exogenous economic shocks (Kálmán, 2023).

A further goal of central banking – without prejudice to its primary objective – is supporting the government's economic policy in general or wider economic policy objectives such as sustainable growth or, in some cases, maximum employment and consumer protection (Vallet, 2021).

### **2.2 Central bank's core objectives and sustainability**

Since the past decade, central banks have played a growing role in promoting sustainability and addressing environmental and social challenges (D'Orazio and Popoyan, 2023). Central banks recognize that sustainability is not just an environmental issue but also a critical economic and financial consideration. By promoting sustainability, they are taking proactive steps to address long-term risks and opportunities, contribute to a more stable and prosperous economy, and fulfill their mandates to promote the overall well-being of the society they serve (Cullen, 2023).

A strong argument for central banks to take environmental factors into account is derived from how the financial system is affected by climate change and other environmental risks (Fisher and Alexander, 2018). Climate change poses various risks to the financial system, impacting both financial institutions and financial markets. Some of the key types of risk through which climate change may affect financial systems include physical risks, transition risks, liability risks, market risks, and systemic risks (Carney, 2015).

Physical risks are arising from the direct and indirect physical impacts of climate change. Extreme weather events, such as hurricanes, floods, wildfires, and storms, can damage physical assets and disrupt economic activities, leading to losses for businesses and financial institutions.

Transition risks refer to the potential economic and financial impacts of the transition to a low-carbon economy. As countries and businesses take steps to reduce greenhouse gas emissions and move towards cleaner energy sources, there may be changes in policy, regulations, and market dynamics that can affect the value of assets and lead to stranded assets. Industries heavily reliant on fossil fuels or energy-intensive practices may face declines in value as the transition progresses (Semieniuk et al., 2021).

Climate change can give rise to legal and liability risks for companies and institutions. For example, companies may face lawsuits or litigation related to their contribution to climate change or failure to disclose climate risks adequately. Liability risks can also impact insurance companies and financial institutions providing coverage to entities affected by climate-related events.

Climate change can introduce market risks related to shifts in asset prices and investment values. For example, investments in carbon-intensive industries may suffer as the transition to a low-carbon economy progresses, while sustainable and climate-resilient investments may perform better. Market risks can also arise from changes in consumer preferences and the demand for sustainable products and services.

The accumulation of climate-related risks across the financial system can lead to systemic risks, where disturbances in one sector or region can spread and impact the broader financial system. This interconnectedness can create vulnerabilities and amplify the overall impact of climate risks on the economy.

### 3. Methodology

The research conducts an empirical examination of current central bank mandates to investigate the extent to which central banks are equipped with objectives that task them to enhance sustainability. To this end, the research examines the IMF Central Bank Legislation Database (CBLD), which is the largest legal database for central bank legislation. The research examined the entire CBLD database, including data for the years 2010, 2015, and 2020. It overall included the analysis of the legal instruments of 157 institutions, four of which are the central banks of monetary unions.

The research has looked separately at the direct and indirect representation of sustainability in central banks' objective settings. Direct representation means that the central bank's mandate explicitly includes the promotion of sustainable (economic) growth, sustainable development, or sustainable economy. Indirect representation means that sustainability is not an explicit part of the central bank's mandate, but the central bank is mandated to support general economic policy or government policy. The general economic policy or government policy objectives or goals – according to the United Nations' Sustainable Development Goals and the Paris Agreement – may comprise sustainability objectives or climate-neutrality targets. The results of the investigation of a total of 157 central bank mandates provide a starting point for the ensuing discussion of whether it is necessary for central banks to incorporate sustainability or environmental objectives into their core activities.

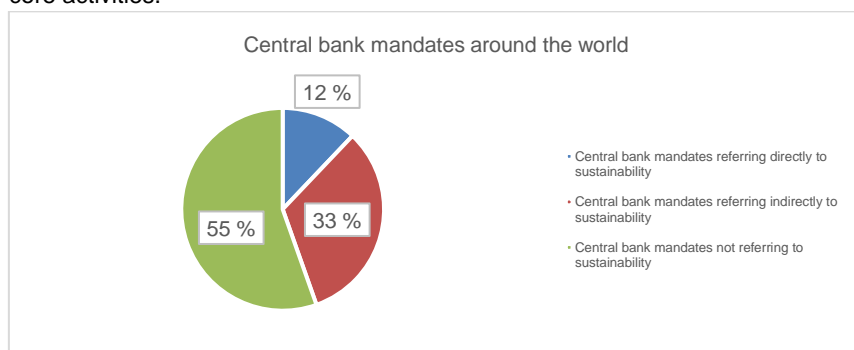


Figure 1: Central bank mandates around the world

## 4. Results and discussion

### 4.1 Data

The analysis of 159 central bank mandates shows that only 19 central banks operate under a mandate that explicitly includes the promotion of sustainable (economic) growth, sustainable development, or a sustainable economy. This means only 12 % of the analyzed central banks have the direct legal mandate to assume an active "greening" or sustainability promoter role. Other 51 central banks – 33 % of the analyzed central banks – are tasked to support their government's policy or general economic policy. The mandates of 87 central banks – more than 50 % of the analyzed central banks – on the other hand, include neither a direct nor indirect sustainability objective. (Table 1 and Figure 1)

*Table 1: Mandates and sustainability*

Mandates and sustainability	Central banks number	Central Banks
Central bank mandates directly refer to sustainability.	19	Afghanistan, Bulgaria, Czech Republic, Fiji, Gambia, Georgia, Guinea, Hungary, Iraq, Malaysia, Nepal, New Zealand, Philippines, Russian Federation, Singapore, South Africa, Tanzania, West African Monetary Union, Zimbabwe
Central bank mandates indirectly refer to sustainability.	51	Austria, Bahrain, Belgium, Bulgaria, Central African Monetary Union, Colombia, Croatia, Cyprus, Democratic Republic of Congo, Denmark, Egypt, Estonia, European Monetary Union, Finland, France, Germany, Greece, Iceland, Indonesia, Ireland, Israel, Italy, Jordan, Kosovo, Latvia, Liberia, Libya, Lithuania, Luxembourg, Madagascar, Malta, Mauritania, Moldova, Montenegro, Morocco, Myanmar, Netherlands, North Macedonia, Poland, Portugal, Qatar, Romania, Rwanda, Slovak Republic, Slovenia, Solomon Islands, Spain, Sweden, The Bahamas, United Kingdom, Venezuela
Central bank mandates not referring to sustainability.	87	

### 4.2 What can a central bank do for sustainability? The case of green monetary policy.

The green monetary policy represents a proactive approach by central banks to address climate change and environmental issues while fulfilling their mandates for economic and financial stability. By incorporating sustainability considerations into their operations, central banks aim to contribute to the transition to a more sustainable and climate-resilient economy (Boneva et al., 2021) and harmonious development for the future (Guo et al., 2021).

As part of green monetary policy, central banks analyze and assess the potential impacts of climate change on the economy and financial system. They consider both physical risks (e.g., extreme weather events) and transition risks (e.g., policy changes and technological shifts) associated with the transition to a low-carbon economy. Green monetary policy involves taking into account climate-related factors when formulating and implementing monetary policy. This may include considering the implications of climate change on inflation, economic growth, and financial stability.

Central banks may include green bonds in their asset purchase programs as part of their monetary policy operations. Green bonds are issued to finance environmentally friendly projects, and their inclusion in central bank portfolios helps support green investments (Vesna, 2023). Green monetary policy may encourage financial institutions to integrate environmental and climate considerations into their lending and investment decisions. Central banks can use their influence to promote the development of green financial products and incentives for sustainable investments.

Central banks conduct stress tests to assess the resilience of financial institutions and the financial system to climate-related risks. This helps identify potential vulnerabilities and strengthens the financial system's ability to withstand climate shocks (Kolozi et al., 2022). Green monetary policy may involve increasing transparency

and disclosure of climate-related risks and opportunities by financial institutions. This transparency helps investors and stakeholders make informed decisions based on the environmental performance of institutions. Central banks can advocate for and support policies that align with environmental and climate objectives, working in coordination with other government agencies to create an enabling environment for sustainable economic activities.

It is important to note that the implementation of green monetary policy is still relatively new and is evolving rapidly. Different central banks may have varying approaches and priorities based on their mandates, economic conditions, and specific sustainability challenges in their respective countries.

#### **4.3 Case of the Hungarian National Bank**

According to Act CXXXIX of 2013 on the National Bank of Hungary (furthermore: NBH), the primary objective of the NBH shall be to achieve and maintain price stability. Without prejudice to its primary objective, the NBH shall uphold to maintain the stability of the financial intermediary system, increase its resilience and ensure its sustainable contribution to economic growth, and shall support the economic policy of the Government and its policy related to environmental sustainability using the means at its disposal. The environmental sustainability goal entered into force on the 2<sup>nd</sup> of July, 2021. With this amendment, the NBH became the first in Europe whose mandate includes – explicitly – the promotion of environmental sustainability.

The NBH has taken some steps towards promoting green finance and sustainability. For example, launched its green bond purchase program in 2019. As part of this initiative, the NBH started purchasing green bonds issued by domestic banks and financial institutions. These green bonds are specifically designated to finance environmentally friendly and sustainable projects. In addition to the green bond purchase program, the NBH also introduced a green asset purchase program. Through this program, the central bank aims to support the issuance of green bonds and increase the availability of funds for sustainable projects in Hungary. The NBH introduced a preferential capital requirement scheme for banks that provide green mortgages for energy-efficient homes. This initiative is aimed at encouraging the financing of environmentally sustainable housing projects. The NBH developed a Climate Change Strategy that aims to address the challenges posed by climate change and integrate sustainability considerations into its policies and operations. The strategy is focused on promoting sustainable finance and addressing climate-related risks and opportunities. The NBH has been incorporating environmental risk considerations into its supervisory practices. It conducts assessments of climate-related risks and vulnerabilities in the financial system to ensure its resilience to environmental challenges (NBH, 2021).

### **5. Conclusions**

In conclusion, the importance of central banks in the context of sustainability cannot be understated. By embracing sustainability within their mandates and operations, they become catalysts for positive change, helping steer the global economy toward a more sustainable and resilient future. With their unique position of influence, central banks hold the potential to be powerful advocates for sustainability, effectively contributing to the well-being of society and the planet.

Despite this, the empirical analysis of 159 central bank mandates shows that only 19 central banks operate under a mandate that explicitly includes the promotion of sustainable (economic) growth, sustainable development, or a sustainable economy. This means only 12 % of the analyzed central banks have the direct legal mandate to support sustainability. The specific mandates of central banks are often enshrined in national constitutions or legal frameworks. Changing these mandates typically requires legislative or constitutional changes, which can be a complex and time-consuming process. In some cases, there may be political or institutional barriers to amending central bank mandates. Other 51 central banks – 33 % of the analyzed central banks – are tasked to support their government's policy or general economic policy, which may indirectly include the sustainability supporter role. The mandates of 87 central banks – more than 50 % of the analyzed central banks – on the other hand, include neither a direct nor indirect sustainability objective.

As we show, climate risks can very directly impact the traditional core responsibilities of central banks, primarily monetary and financial stability. As a consequence, integration of sustainability or environmental factors into central banks' core policy objectives may not only be necessary to efficiently and successfully safeguard price and financial stability but it would also be covered by mandates that make no explicit or implicit reference to sustainability. A strong legal mandate is necessary for central banks to unleash their potential policy tools, to support sustainability, and smooth the risks arising from the transition. A central bank that does not address climate risks is failing to do its job.

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